FLORENCE COUNTY

PLANNING, BUILDING INSPECTION, ENGINEERING AND CODE ENFORCEMENT DEPARTMENT

July 12, 2013

Mr. Kevin Sheppard, P. E.
SC Department of Transportation
P.O. Box 191
Columbia, SC 29202

RE: FLATS Annual Report FY2013

Dear Mr. Sheppard:

Enclosed with this letter is the FLATS Annual Report for FY 2013.

Please do not hesitate to contact me if you need any additional information or would like to discuss the report in detail. I can be reached at (843) 676-8600 ext.61104.

Sincerely,

Jonathan B. Graham, III
Planning Director

Enclosures: FLATS Annual Report FY 2013

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FLORENCE AREA TRANSPORTATION STUDY ANNUAL REPORT



Fiscal Year 2013

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This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

A-1 ADMINISTRATION

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

To administer the transportation planning program in the Florence Area Transportation Study (FLATS) Metropolitan Planning Organization (MPO) area, including coordinating all activities of the Policy Committee and Study Team, developing narrative reports for citizens and public/private agencies, and providing information liaison activities with government agencies and the public.

Other administrative activities include preparing narrative and expenditure reports, maintaining financial accountability including an annual audit, keeping routine correspondence, and preparing and retaining information related to billing and training.

Results:

The performance of the staff met the goals adequately.

Staff administered two Study Team meetings in FY2012-2013 and maintains all records. The meetings were held on February 15, 2013 and May 31, 2013.

Staff administered three Policy Committee meetings in FY2012-2013 and maintains all records. The meetings were held on July 23, 2012; February 25, 2013 and June 10, 2013.

Staff presented the Resolutions of Support that were required to be executed and explained the urban transportation process to the Council members of the new jurisdictions included in the urbanized area as a result of the 2010 Census during this fiscal year.

The required new Study Area Boundary map and Executed Resolutions as a result of the 2010 Census were presented to the Study Team and Policy Committee during this fiscal year.

Staff provided the administrative support and supervision needed to administer the plans and programs identified in the Unified Planning Work Program (UPWP).

Staff updated the contact lists of Florence Stakeholders to receive FLATS information via e-mail, as required by the Public Participation Process (PPP).

Staff was able to help members of the public and various citizen groups with transportation planning questions.

The FLATS website was updated with a wide variety of information including meeting agendas, minutes, By-laws, the UPWP the Public Participation Process, and the Transportation Improvement Plan (TIP).

Staff attended two South Carolina Chapter of the American Planning Association (SCAPA) conferences during this fiscal year.

Staff participated in three Federal Highway Administration (FHWA) webinars regarding the new Federal Highway Transportation Bill, Moving Ahead for Progress in the 21st Century (MAP-21) during the first quarter of the fiscal year.

Staff participated in a Federal Transit Authority (FTA) webinar regarding MAP-21 during the second quarter of this fiscal year.

Staff participated in a Continuing Education webinar hosted by the South Carolina Association of Counties (SCAC) during the first quarter of the fiscal year. -

Staff continued to receive and review transportation publications throughout the year.

Staff prepared and submitted the four quarterly Planning Law (PL) funding reports to the South Carolina Department of Transportation (SCDOT) as required. Staff maintains a record of each.

Staff continues to research and participate in webinars as they become available to continue training in regards to transportation planning requirements by federal and state officials.

Staff maintained a paper and digital record keeping system for FLATS activities, and made requested items available to the public.

Staff administered the Quarterly Florence Trails Committee meetings and maintains all records.

PROGRESS IN MEETING SCHEDULE

All schedules were met adequately regarding the administrative requirements for the FLATS MPO.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$17,557.00
Cost	$13,191.09

REMAINING BUDGET/ (SHORTFALL)

4,365.91

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- Policy Committee and Study Team Minutes and Public Notices (Attachment 1);
- PL Funds Quarterly Reports (Attachment 2);
- Trails Committee Meeting Minutes (Attachment 3)

A-2 PUBLIC PARTICIPATION

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

Present a system to inform and involve individuals and agencies/groups of transportation planning efforts and the development of transportation plans in the FLATS area.

Results:

Staff administered the appropriate public comment period for public input required for all federal documents prior to presenting to the Study Team and Policy Committee. The documents and the required public comment periods are as follows:

- 2035 Long Range Transportation Plan (30 days)
- FY2014 UPWP (10 days)
- FY2010-2015 TIP Amendments and the FY2015-2018 TIP (10 days)
- Public Participation Process Amendments (45 days)

Staff notified the stakeholders on the FLATS Contact List of FLATS meetings and when updates were being made to the federal documents. This list includes but is not limited to governing officials, citizens, public agencies, representatives of transportation agency employees, private providers of transportation and segments of the community affected by transportation plans programs and projects, minority and low-income groups, elderly and disabled and users of pedestrian and bicycle facilities.

Staff updated the FLATS webpage as documents were approved. The site may be visited via the following website: www.florenceco.org/Planning/flats.htm.

Staff maintains and updates a FLATS binder on display at the Drs. Bruce and Lee Foundation Library to be available for public viewing. This binder includes all FLATS documents.

To provide an additional opportunity to reach the public for their input in the transportation planning process, staff prepared the fifth edition of FLATS Newsletter. This newsletter was handed out at committee meetings, posted on the FLATS webpage and placed at various public locations. Staff notified the stakeholders on the FLATS Contact List that it was available on the website.

Electronic correspondence of transportation planning issues and news continued to be sent to the trails committee and other interested citizens throughout the year.

Staff assisted internal and external customers, as needed, with questions about transportation projects. Citizens are frequently interested in data about the road network in the FLATS area. Staff assisted these customers and other public requests in a timely manner.

PROGRESS IN MEETING SCHEDULES

All schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$20,065.00
Costs	$13,959.17

REMAINING BUDGET/ (SHORTFALL)

$6,105.83

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- FLATS Newsletter – 5th Edition (Attachment 4)

A-3 ENHANCEMENTS

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

To maintain the process for selecting enhancement projects to be included in the Transportation Improvement Program and to be a liaison between the enhancements grant recipients and SCDOT.

Results:

Staff coordinated with the Local Public Agency (LPA) for current projects funded under the previous Federal Highway Transportation Bill, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, (SAFETEA-LU) to verify that each project was on track to meet its completion date. The three remaining projects and their status are as follows:

- The Lucas Street Gateway project:
  STATUS:
  - Complete
- The Red Doe Plantation project:
  STATUS:
  - The revised scope has been approved by SCDOT. The County is working with the architect to revise the drawings in accordance with the revised scope.
- The NoName Creek project:
  STATUS:
  - Per the SCDOT's requirement, the LPA for the project has been instructed to obtain an easement for trail sections in order to move forward with this project.

Staff continues to maintain quarterly status records of the active enhancement projects as listed above.

Staff received an Enhancement application from Francis Marion University (FMU) prior to MAP-21 replacing SAFETEA-LU, but was not able to present it to the Study Team and Policy Committee before MAP-21 became Law. The SCDOT allowed the application to be submitted to the SCDOT to present to the Highway Commission after the FLATS Policy Committee reviewed and approved. This application was submitted to the SCDOT in February, 2013. The SCDOT plans to submit this application to the Highway Commission in July, 2013.

Staff implemented the new MPO Transportation Alternatives Program (TAP) Guidelines as required by MAP-21.

Staff sent notification to applicable entities when the funding cycle for the TAP became available.

Staff will continue to host the quarterly Trails Committee meetings in an effort to identify locations where enhancement funds can be utilized for bike and pedestrian trails or sidewalks.

PROGRESS IN MEETING SCHEDULES

All schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$12,541.00
Costs	$ 8,356.05

REMAINING BUDGET/ (SHORTFALL)

$ 4,184.95

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- Francis Marion University Enhancement Project Application (Attachment 5)

B-1 MAPPING

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

To provide a visual instrument that identifies areas of study and provides a detailed tool for planning and analysis within the FLATS area.

Results:

Staff prepared digital date as requested by the Florence Senior Citizens Associates and the Darlington County Council on Aging representing the location of their current clients. The FTA allocations awarded to these transportation entities are listed in the FLATS TIP.

Staff prepared the new study area boundary map to reflect the new urbanized area per the 2010 Census information during this fiscal year.

In an effort to insure building permits were issued with the appropriate setbacks required, staff requested the anticipated right of way digital data from the SCDOT for the widening of guideshare projects and the Capital Sales Tax projects. This data has been added as a layer for staff's internal use.

Staff began working with local conservation groups on identifying and providing mapping tools to help them on their strategic plans. Their work helps this community grow into a smarter fashion with areas set aside for growth and others for preservation. This approach means less transportation infrastructure has to be built to serve a scattered pattern of growth.

Staff continues to provide digital data to the local transit provider, Pee Dee Regional Transportation Authority, (PDRTA) to assist them in determining locations where increased transit service may be needed for transit-dependent populations.

Staff updated the Map Book Atlas and provided it to PDRTA and other transportation entities as needed.

Mapping staff upgraded desktop and server levels to a higher version of mapping software (ESRI ArcGIS10) to improve Geographic Information Systems (GIS) data editing workflows and improved functionality for web and mobile based applications used for transportation planning.

Staff worked with and will continue to work with the Assessor's Office, GIS Department and Engineering Division to maintain an accurate centerline and parcel map, which is critical in the efficient and effective tracking of trend data in the FLATS area.

Staff continues to utilize internet mapping tools of improved road data in order to build efficient routes to deliver County services. This tool will improve the efficiency of County staff trips, which will cut down road mileage and reduce vehicle emissions.

Staff tracked County building permits, maintained accurate road databases and continue to update

Staff continued to use the new permit system to digitally track growth based on construction and development. By having this data available digitally, staff has been able to overlay this information in a GIS layer and plot it with parcels, centerlines/roads, zoning, etc. This valuable resource helps to show how land use impacts transportation.

Staff continues to provide law enforcement, fire departments, and Emergency Management Systems (EMS) personnel with GIS data to assist in improving safety and security as data is necessary.

Transportation evacuation routes and a strong transportation network are critical for hazard mitigation planning for both natural disasters such as flooding and man-made disasters such as chemical spills. Staff continues to work with the County emergency management staff to update a point file for hazardous material locations and sites that would be affected within the county in order to assist with emergency evacuation notifications and routes.

Staff is continuing to review plats of new subdivisions and digitizing new parcels to better track growth in the FLATS area. Staff will continue to work on this process, as well as developing new techniques to create visualizations and to show trends.

Staff also employed various mapping techniques to begin a parcel specific land use map for the Comprehensive Plan. By establishing future land use based on trends, current land use, growth, the transportation system, and various other factors, modeling for an upcoming Long Range Plan update will certainly be more accurate.

Staff also produced maps throughout the year for various transportation and comprehensive planning related projects.

FLATS mapping staff continued to provide routine data updates to ESRI to refresh the road and other key data layers in their Community Base map program. This is just another way that staff is attempting to get location data to as many people as possible so that they can plan their trips in

the Florence community efficiently, saving wear and tear on our roads and conserving fuel more effectively.

PROGRESS IN MEETING SCHEDULES

All schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$50,163.00
Costs	$36,727.60

REMAINING BUDGET/ (SHORTFALL)

$13,435.40

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- Florence Senior Citizens Associates Client Map (Attachment 6)
- Darlington County Council on Aging Client Map (Attachment 7)
- PDRTA Bus Routes/ Bus Stops Maps (Attachment 8)
- Map Book Atlas Example (Attachment 9)
- Building Permit Data and Map Example (Attachment 10)
- Parcel Data Map Example (Attachment 11)

B-2 AIR QUALITY SURVEILLANCE

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

Track current Federal and State legislation and ozone levels in air quality for the FLATS area in an effort to maintain compliance with the Environmental Protection Agency's National Air Quality Standards

Results:

Staff is coordinating with the County Grants Coordinator to search for available grants or other assistance available in order to propose potential new programs to be proactive in keeping the FLATS area in attainment.

Staff remained in contact with the Department of Health and Environmental Control (DHEC) representatives regarding the Environmental Protection Agency's (EPA's) decision on the National Ambient Air Quality Standards (NAAQS) and continues to coordinate with them regarding air quality monitoring.

Staff continues to research and remain up to date on the current requirements of MAP-21 and the EPA standards for air quality and its impact on the planning process.

Staff continues to attend various seminars and workshops and participate in webinars and conference calls as available regarding air quality and transportation conformity.

Staff continues to research ways to educate our community on EPA's proposal to strengthen the national ambient air quality standards for ground-level ozone and the potential consequences should the FLATS area become non-attainment.

PROGRESS IN MEETING SCHEDULES

All schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$12,541.00
Costs	$ 7,232.35

REMAINING BUDGET/ (SHORTFALL)

$ 5,308.65

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

None

B-3 TRAFFICE SURVEILLANCE

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

Monitor the highway system and collect travel data such as volume and direction of traffic, turning direction, and lane of travel.

Results:

Staff completed the roadway functional classification information for the SCDOT for the FLATS Study Boundary Area during this fiscal year.

Staff is working with and providing information as needed for the FLATS area to the SCDOT to assist in the development of their Statewide Multi-modal plan. As this plan develops, staff will use the plan when considering future projects.

Staff prepared traffic analysis reports and reviews on numerous projects throughout the year. In addition, formal traffic reviews are being studied as a possible requirement for various development levels in our area.

Staff received public request locations for roadway and intersection improvements that would be appropriate for a FLATS project. Staff provides this information to the Study Team and Policy

Committee as received. This information will be maintained to include in the LRTP and TIP as funds are available to proceed with a project.

Staff provided Average Annual Daily Traffic (AADT) information to citizens, county agencies and officials as requested this fiscal year.

Staff prepared traffic reviews and compiled building permit data for various projects, rezoning and congestion modeling. This data helps to show how land use changes are affecting the transportation system.

Staff continues to keep the local freight companies aware of transportation related projects and continually request their input on areas of concern for freight traffic.

Staff maintained traffic count and Level of Service maps and will continue to work with new data as it is available.

Staff continued to communicate the needs of and public request for roadway improvements or signalization timing coordination during peak times to the local SCDOT office as necessary.

Staff updated crash data from included jurisdictions in support of the long-range transportation plan.

Staff worked with traffic counts for various projects and helped make land use decisions in the FLATS area.

PROGRESS IN MEETING SCHEDULES

All stated schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$25,082.00
Costs	$14,820.00

REMAINING BUDGET/ (SHORTFALL)

$ 10,262.00

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

None

C-1 PLAN AND PROGRAM DEVELOPMENT AND MAINTENANCE

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

To maintain the FLATS program through development of the UPWP, TIP, and Long Range Transportation Plan and to comply with federal regulations as they relate to metropolitan

transportation planning. In addition, staff will maintain and update the Florence County's Comprehensive Plan elements as required.

Results:

Several documents were prepared and/or amended and adopted by the FLATS Policy Committee this fiscal year. Listed below are the documents along with the Policy Committee approval dates:

- 2035 Long Range Transportation Plan (Approved by the FLATS Policy Committee on July 23, 2012)
- FLATS New Study Area Boundary Map (Approved by the FLATS Policy Committee on February 25, 2013)
- Executed Resolutions from the jurisdictions included in the urbanized area as a result of the 2010 Census (Approved by the FLATS Policy Committee on February 25, 2013)
- By-Law Amendments (Approved by the FLATS Policy Committee on February 25, 2013)
- FY2010-2015 TIP Amendments (Amendments were made to this document twice during this fiscal year. Approval dates by the FLATS Policy Committee were on July 23, 2012 and February 25, 2013)
- FY2014-2019 TIP (Approved by the FLATS Policy Committee on June 10, 2013)
- FY2014 UPWP (Approved by the FLATS Policy Committee on June 10, 2013)
- Public Participation Process Amendments (Approved by the FLATS Policy Committee on June 10, 2013)

Staff prepared, maintained and presented the required quarterly PL funding reports to SCDOT this fiscal year.

PROGRESS IN MEETING SCHEDULESs

As a result of the 2010 Census, the FLATS Study Area Boundary increased. The SCDOT required MPOs to have a new study area boundary map, executed Resolutions of Support from the jurisdictions included in the urbanized area and new By-Laws if they required amendments to them by March 30, 2013. Staff administered this information for approval as required and submitted this information to the SCDOT on February 25, 2013.

All schedules were met.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$25,082.00
Costs	$12,335.10

REMAINING BUDGET/ (SHORTFALL)

$12,746.90

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- FLATS 2035 Long Range Transportation Plan (LRTP) (Attachment 12);
- New Study Area Boundary Map (Attachment 13);
- Executed Resolutions For New Urbanized Areas (Attachment 14);
- FLATS By-Laws (Attachment 15);
- FY2010-2015 Transportation Improvement Plan (TIP) Financial Sheet amendments approved during two separate Policy Committee Meetings and the FY2014-2019 TIP approved during the last quarter of this fiscal year (Attachment 16);
- FY2014 Unified Planning Work Program (UPWP) (Attachment 17);
- FLATS Public Participation Process (PPP) (Attachment 18);

C-2 SOCIO-ECONOMIC AND LAND USE DATA

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

To gather and maintain data and information to be used in transportation planning

Results:

Staff briefly began a corridor study for one particular corridor that serves as a gateway into the City. Intersections and other roadway conditions are in need of improvements for safety particularly regarding the freight community. Staff met with the Grand Strand Area Transportation Study (GSATS) MPO to review their corridor overlay studies to begin this process. In the upcoming fiscal year, staff plans to hire a consultant for corridor overlay studies for several gateways into the City.

Staff received several request for amendments to the future land use map of the Comprehensive Plan this fiscal year. Staff researched and determined if the amendment request was in compliance with the surrounding land uses and provided staff's recommendation of approval or deny to the Florence County Planning Commission.

Staff collected and tracked socio-economic and land use data throughout the year. Databases were updated and are maintained to show the location and type of development throughout our area. Staff has continued to plot data digitally as well. By looking at this data by Traffic Analysis Zones (TAZ) and overlaying roads, including new roads, we can see where growth is occurring. This data is useful in the development of the long range plan and in the development of Comprehensive Plan elements.

While each element affects the land use element, the relation between land use element and the transportation element will address interaction of multi-modal forms of transportation and increase efficiency of natural resource use. Staff began updating various elements as required for the five year review and ultimately the ten year update to the Comprehensive Plan.

Staff updated and maintains zoning, land use and project development databases for use to direct traffic modeling.

Staff also continued to work in all areas of growth, from the development stages and working to ensure accurate location of new roads in our database files to the final stages of tracking this information by plotting it and changing trends in our land use map.

Staff updated and maintains a database of Planning Commission items. This database contains parcel numbers that can easily be related back to the digital parcel layer. This information can then be related to the TAZs and show trends in zonings and re-zonings which indicate growth and the types of growth that are occurring.

Staff updated the monthly foreclosures in our area to establish comparable trends for future reference. Monitoring the housing market can prove to be of great interest to builders as well as buyers in addition to updates to the Land Use element.

Staff continues to work on the improvement of GIS layers to provide land use analysis at the parcel level.

PROGRESS IN MEETING SCHEDULES

All schedules were met in a timely fashion.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$50,163.00
Costs	$35,554.55

REMAINING BUDGET/ (SHORTFALL)

$14,608.45

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

- Florence County Foreclosure Report and Map (Attachment 19)

C-3 PUBLIC TRANSPORTATION PLANNING

COMPARISON OF ACTUAL PERFORMANCE TO STATED OBJECTIVES

Stated Objective:

Support and assist PDRTA, the local transit agency, with GIS mapping and related services in a way that is useful and beneficial to their needs. In addition, support and assist three additional

transportation agencies included within the FLATS Study Area Boundary with GIS mapping and related services in a way that is also useful and beneficial to their needs.

Results:

Staff provided updated road/centerline information as well as economic development information to assist PDRTA with their current services.

Staff updated PDRTA's bus routes and bus stop locations during this fiscal year. During this fiscal year, PDRTA has had a substantial downsize in their staff and elimination of routes. Staff is in constant communication with the PDRTA and will be updating their service data in the upcoming fiscal year.

Staff initiated quarterly meetings with the PDRTA and the Pee Dee Council of Governments (PDCOG) to keep them up to date on transportation planning activities and to stay abreast of any assistance needed by the FLATS staff.

Staff contacted the PDRTA to obtain their Federal Transit allocations to ensure this information was included in the FLATS TIP.

Staff provided data as requested to three additional transportation agencies within the FLATS Study Area Boundary. These entities are the Florence Senior Citizens Associates, The Florence County DSN Board and the Darlington County Council on Aging. Staff maintained communication with these entities to make sure their Small Urban Transit Funding allocated for this fiscal year was included in the FLATS TIP.

Staff also makes population maps available. By providing PDRTA with maps of identified populations, they may be able to improve service and update their fixed routes while potentially adding new services and stop locations.

Staff continues to assign parcel-specific addresses. As part of GIS, staff will work to assign an address to each parcel in Florence County. This will help PDRTA locate users more efficiently.

Staff has direct contact with PDRTA on a continual basis and will keep them apprised of project activities in an attempt to help them locate users more efficiently.

PROGRESS IN MEETING SCHEDULES

All schedules were met in a timely fashion.

COMPARISON OF BUDGETED AMOUNTS TO ACTUAL COSTS INCURRED

Budgeted	$37,623.00
Costs	$19,500.60

REMAINING BUDGET/ (SHORTFALL)

$18,122.40

APPROVED PLANNING PROGRAM REVISION

None

OTHER PERTINENT SUPPORTING DATA

None

FLATS FY2013 Annual Report
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Attachments:

1) Policy Committee and Study Team Minutes and Public Notices
2) PL Funds Quarterly Reports
3) Trails Committee Meeting Minutes
4) FLATS Newsletter
5) Francis Marion University Enhancement Project Application
6) Florence Senior Citizens Association Client Map
7) Darlington Council on Aging Client Map
8) PDRTA Bus Routes/Bus Stops Maps
9) Map Book Atlas Example
10) Building Permit Data and Map Example
11) Parcel Data Map Example
12) 2035 Long Range Transportation Plan (LRTP)
13) New Study Area Boundary Map
14) Executed Resolutions for New Urbanized Areas
15) By-Laws
16) FY2010-2015 and FY2014-2019 Transportation Improvement Plan (TIP) Financial Sheets
17) FY2014 Unified Planning Work Program (UPWP)
18) Public Participation Process (PPP)
19) Florence County Foreclosure Report and Map

Attachment 1

Policy Committee and Study Team

Minutes and Public Notice Affidavits

FLATS POLICY COMMITTEE MEETING
July 23, 2012
MINUTES

Voting Members Present:	**Non-Voting Members Present:**
Senator Hugh Leatherman	Chuck MacNeil
Councilman Glynn Willis	Drew Griffin
Sherwin Welch	Drew Chaplin
Mayor Stephen Wukela	Dennis Townsend
Mayor Ashby Gregg	Thomas Robinson

Study Team Members Present:	**Staff Present:**
Michelle Shepherd, SCDOT	Debi Matthews
Kevin Sheppard, SCDOT	Renee Proctor
Michael Bethea, SCDOT	Jay Graham
David Gray, SCDOT	
Jessica Hekter, FHWA	
Phillip Lookadoo	

Senator Leatherman called the meeting to order.

The first item of business on the agenda was to approve the minutes from the June 6, 2011 meeting. Glynn Willis made a motion to approve and Mayor Wukela made a second motion. Vote carried unanimously.

The second item of business was the annual election of Chairman and Vice-Chairman. Sherwin Welch made a motion to re-elect Senator Leatherman as Chairman. Mayor Wukela made a second motion. Vote carried unanimously. Mayor Gregg nominated Sherwin Welch to serve as Vice-Chairman. Mayor Wukela made a second motion. Vote carried unanimously.

The third item of business was to present the new committee members:

- Drew Griffin, Manager, The City of Florence, to succeed David Williams on the non-voting Policy Committee;
- Charles “Chuck” MacNeil, Executive Director, PDRTA, to succeed Janice Baroody on the non-voting Policy Committee and Study Team;
- Thomas Robinson, Administrator, Florence County, to succeed Richard Starks on the non-voting Policy Committee;
- Jody Lane, Chairman, Florence County Planning Commission, to succeed Peter Knoller on the non-voting Policy Committee and Study Team;
- David Gray, Regional Planning Manager, SCDOT-Office of Mass Transit, to succeed Jim Frierson on the Study Team;

- Jay Graham, Director, Florence County Planning and Building Inspections Department, to succeed Kevin Griffin on non-voting Policy Committee and Study Team.

Debi Matthews presented the first item of old business. The final three chapters for the 2035 LRTP were presented (Chapter 5-Future Roadway Element, 10-Financial Plan & 11-Implementation Plan). Debi briefly presented the highlights from each chapter. Chapters 1, 2, 3, 4, 6, 7, 8 & 9 were adopted by the Policy Committee during their September 27, 2010 meeting. Debi advised that the Study Team has recommended approval and action is needed by the Policy Committee. Motions were made on chapters 5, 10 & 11 as follows:

- Chapter 5 – Mayor Wukela made a motion to approve. Glynn Willis made a second motion. Vote carried unanimously;
- Chapter 10 – Mayor Wukela made a motion to approve. Glynn Willis made a second motion. Vote carried unanimously;
- Chapter 11 – Mayor Wukela made a motion to approve. Sherwin Welch made a second motion. Vote carried unanimously.

Debi advised the committee that a 30 day public comment period was held on the 2035 entire LRTP document from January 23, 2012 through February 20, 2012. No comments were received. Debi advised that the Study Team has recommended approval of the entire document and action is needed by the Policy Committee. Glynn Willis made a motion to approve the entire document. Mayor Wukela made a second motion. Vote carried unanimously.

The second item of old business was given by Debi.

- Update on Bentree Lane/Holly Circle. It is the second ranked widening project. Functional classification has been amended and it is now eligible for federal funding. It is currently maintained by the City of Florence. SCDOT and the City of Florence will discuss a road exchange for SCDOT to provide a 20% match. Discussion is ongoing.

The first item of new business was given by Debi.

- The FY2013 Unified Planning Work Program (UPWP) identifies the transportation planning activities conducted by the FLATS Metropolitan Planning Organization (MPO). This satisfies the annual update requirement. FLATS will receive $159,409 for FY2012. We should have roughly $41,245 to add to this amount from FY2012. The Federal Government pays 80% and Florence County pays 20%.

Debi advised that the 10 day public comment period was held for this document from May 7, 2012 through May 17, 2012. No comments were received. The Study Team has recommended approval of the entire document and action is needed by the Policy Committee. A motion was made by Glynn Willis and a second by Mayor Wukela to approve the document. Vote carried unanimously.

The second item of new business was given by Debi Matthews.

- Presented the amendments to the FY2010-2015 TIP Financial Statement. The following amendments were presented:

- **Guideshare Project: (S. Cashua Drive)**
- FY2012 - $700,000 allocated for Preliminary Engineering and $4,300,000 for ROW;
- FY2014 - $6,700,000 allocated for construction;
- Annual Guideshare allocations remain at $2,667,000;
- FY2015 balance is approximately $1,000.
- **Enhancement funds:**
- $118,000 allocated for FY2012;
- Approximately $354,000 Available (FY2010-FY2012);
- **Capital Sales Tax Projects:**
- The Pine Needles Road expenditure and allocated funding has been added back into the TIP for information purposes. The total expenditures as of 4/30/11 is $17,676,490. This information is not included in the TIP cost.
- FY2012 allocations have been updated for each project;
- US378 – FY2013 $38,757,000 allocated for construction; and FY2014 $18,241,000 allocated for construction;
- US51 – FY2013 $29,588,000 allocated for construction.
- **Federal Transit Administration for FY2012:**
  PDRTA:
- $668,000 CA and $440,000 OP for Urban Area Formula Program (Section 5307);
- $350,000 CA for Vehicle Acquisition (Section 5309);
- $80,000 OP for (JARC) Job Access Reverse Commute Program (Section 5316);
- $153,000 CA for New Freedom Program (Section 5317).
  Florence Senior Citizens Association FY2012 Allocations:
- $ 60,000 PS for Elderly & Persons with Disabilities Program (Section 5310).
  Florence Co. DSN Board FY2012 Allocations:
- $37,000 PS for Elderly & Persons with Disabilities Program (Section 5310).

Debi advised that there were no public comments during the 10-day public comment period for these amendments. The public comment period was held May 7, 2012 through May 17, 2012. Debi advised that the Study Team has recommended approval and action by the Policy Committee is necessary. Mayor Wukela made a motion to approve and Glynn Willis made a second motion to approve the TIP amendments. Vote carried unanimously.

The Senator would like to use Transportation Enhancement funds to get something going at the I-20/I-95 interchange. Debi advised the committee that she had spoken with Cathy Rice at SCDOT and we can apply through the Adopt-An-Interchange program for funds for this interchange. We can apply for up to $400,000 annually with this

program. The maintenance would be up to the City because they own most of this area. The Senator thinks that both County and City would have to be involved. Drew Griffin with the City of Florence stated that this area is defined. GE is in the County. Parcel lines define this area. He will get with Debi to share the ownership of the interchange area on their maps. Mayor Wukela stated that the operational costs going forward are a significant element and City and County should be mindful going forward. The committee asked if the $400,000 had to be split between different applicants. Debi said she did not think so. The entire $400,000 can be applied for, but she will verify with Cathy Rice at SCDOT.

Senator asked SCDOT how the penny sales tax money was coming in. Michelle stated that there were $95.5m in collections.

The third item of new business was to update the committee regarding the new 2010 Census Urbanized Areas and MPO-TMA Designations. Jessica Hekter with FHWA presented a PowerPoint presentation to explain these procedures and steps to be completed by the Policy Committee by March 2013. (A copy of this presentation is included at the end of these minutes.

The Senator asked Jessica if we have new areas that need to be represented. Jessica responded that Debi will answer that question in her presentation but it does include the City of Darlington and Town of Timmonsville. Senator also asked if FLATS has the option to expand the boundary area. Jessica responded that we do but there is no guarantee of additional monetary benefit. The Senator asked if it would enhance our money and Jessica relied no. Senator asked who ran the scenarios and Jessica replied SCDOT. Senator asked if we were on track with documents that needed to be completed to SCDOT by August and Debi replied yes. Senator wanted to know if an area did not want to come in to the MPO could they choose not to. Jessica responded that since the 2010 Census has designated them as being included in the urbanized area, they must sign a Resolution of support as part of the MPO. However, they do *not* have to be any of the FLATS committees if they do not choose to.

Debi presented maps to the committee regarding the proposed new Study Area Boundary. The first map showed the current FLATS study area boundary, along with the 2010 Census urbanized area. The second map included the 2010 Census urbanized area and projected a one mile ETJ around the urbanized area for the proposed new study area boundary. Some areas around the urbanized area are a little more than the one mile ETJ. FHWA recommended a complete Traffic Analysis Zone (TAZ) be included if part of it was affected by the one mile ETJ. Debi advised that the Study Team made no recommendation except to refer the map to the Policy Committee for their decision.

The Senator again asked if the addition of these areas would allow us more money. Debi said that the potential was there but not a guarantee. Jessica with FHWA responded that it would be speculation due to the addition of a new MPO in SC. We now have

eleven MPO's that Guideshare funds will be split between. Debi stated that the new FLATS Study Area Boundary shapefile information needs to be presented to SCDOT by August and asked for a recommendation from the Policy Committee. The Senator stated that we really don't have a choice. Sherwin Welch made a motion to approve the new study area boundary and Glynn Willis made a second motion. The vote carried was unanimously.

Other discussion:

The first update was for South Cashua Drive from Michelle Shepherd.

- Seventy people attended the public hearing and there were thirty comments mostly regarding traffic signals and sidewalks. They are currently developing the plan to include sidewalks. There will be a new traffic signal at McCowan Dr. but McCowan and Parkland will not be realigned. There will be one light at each street and timing will be set for these two. There will be another public hearing this fall after the environmental document has been approved by FHWA. The Right of Way phase will begin this winter and construction in 2014. Michelle stated that the environmental sensitive areas have to be mitigated somewhere else. Sherwin Welch asked why the sidewalk and bike paths could not be combined. Michelle stated that ROW does not allow for that. It will be a shared lane and will not be marked. Experience shows that marking is less safe. Glynn Willis said he has been contact from many business residents regarding how much time they will have to leave properties. They want to be in compliance with SCDOT, but would like to remain open for as long as they can. Michelle stated that would be discussed early on in the process. Senator asked that Michelle have the ROW department at SCDOT to contact Glynn Willis.

Michelle Shepherd gave a Sales Tax update.

- Michelle stated that the Sales Tax Program has collected $95.5m to date. The RFP process has been completed for all projects. Now they have to coordinate with the Army Corp of Engineers for final mitigation. Construction of Highway 378, Highway 76, and TV Road will begin next spring or summer. SCDOT meets with the Corp again tomorrow. The ROW phase for all projects is well under way for the above projects and construction for a portion of Highway 51 will begin in winter of 2013/2014.

Chuck MacNeil with PDRTA gave an update.

- Chuck expressed his concern for lack of non-federal revenues with Medicaid transportation. PDRTA is addressing funding opportunities for the local match. They are trying to reduce operating expenses that are necessary for a viable and efficient transit throughout the six counties. Initiation to Francis Marion University had a tremendous start last year. PDRTA anticipates significant growth in that service.

Sherwin Welch gave a CTC update.

- Mr. Welch stated that CTC funds committed are $6,798,000. Local projects are Oakland Avenue, James Jones Avenue and Dargan Street and others throughout the county. A big public concern is Oakland Avenue. This project is let in July and may be awarded in August per Dennis Townsend with SCDOT.

The final item on the agenda was public comments: There were none.

There being no further comment, the meeting was adjourned.

FLATS POLICY COMMITTEE MEETING
FEBRUARY 25, 2013
MINUTES

Voting Members Present:
Senator Hugh Leatherman
Councilman Glynn Willis
Sherwin Welch
Mayor Stephen Wukela
Mike Wooten
Kris Crawford
Councilman Waymon Mumford

Study Team Members Present:
Chris Gossett, SCDOT
Kevin Sheppard, SCDOT
Michael Bethea, SCDOT
David Gray, SCDOT
Jessica Hekter, FHWA
Phillip Lookadoo

Non-Voting Members Present:
Chuck MacNeil
Drew Griffin
Rusty Smith
Dennis Townsend
Jay Graham

Staff Present:
Debi Matthews
Renee Proctor

Guest Speakers:
John Kispert
Ralph Davis
Ernie Boughman

Senator Leatherman called the meeting to order.

The first item of business on the agenda was to approve the minutes from the July 23, 2012 meeting. Glynn Willis made a motion to approve and Sherwin Welch made a second motion. Vote carried unanimously.

The second item of business was the annual election of Chairman and Vice-Chairman. Glynn Willis made a motion to re-elect Senator Leatherman as Chairman, Commissioner Wooten made a second motion. Election approved by acclamation. Sherwin Welch withdrew his name this year for Vice-Chair and nominated Mayor Wukela to serve as Vice-Chairman. Election approved by acclamation.

Debi Matthews presented the third item of business involving the Bylaw amendments as a result of Congressional Redistricting and the 2010 Census New Urbanized areas. The Transportation Plan Advisory Group has been removed from the document. Florence County is now in District 7. Under the voting Policy Committee members, the #5 has been changed to #7 for the SCDOT Transportation Commissioner. The Study Team membership now includes a Councilmember from the City of Darlington and a Councilmember from the Town of Timmonsville representing the two new urbanized areas. A representative must be included on one of the committees for any new urbanized area as required by FHWA. Phillip Lookadoo's title has also been amended

from the City of Florence Director of Urban Planning and Development to the Director of Planning, Research and Development. The last amendment is a typographical error on page five from *of* to *or*. Representative Crawford made a motion to approve and Sherwin Welch made a second motion. Vote carried unanimously.

Debi presented the fourth item of business, which was to review the documents due to SCDOT by March, 2013 in response to the 2010 Census. The documents include the new Study Area Boundary Map as approved at the July 23, 2012 meeting, the executed Resolutions of Support from the City of Darlington and the Town of Timmonsville, and the FLATS Policy Committee Resolution endorsing the adjustment to the Study Area Boundary and any amendments to the By-Laws. In addition to the above referenced documents, Debi advised the committee that the By-Laws as previously approved with amendments would also be included in the packet of documents to be sent to SCDOT. Mayor Wukela made a motion to approve and Representative Crawford made a second motion. Vote carried unanimously.

Debi presented the fifth item of business.

- FLATS accrued approximately $354,000 through the Transportation Enhancement Program under SAFETEA-LU;
- The Transportation Enhancement Program has been eliminated under the new Federal Surface Transportation Bill, MAP-21;
- Initially staff was advised, if the SAFETEA-LU funds had not been obligated to a project before the enactment of MAP-21, the funds would no longer be available to the MPO;
- SCDOT has since advised if an MPO had a project application that was caught in the middle of the transition of SAFETEA-LU and the enactment of MAP-21, SCDOT will present the application to the Commission for their review for potential funding;
- FLATS staff received an application from Francis Marion University requesting these funds, but the application was not presented to the committee before the enactment of MAP-21;

Senator Leatherman asked what would happen to this money if the project is not approved. Debi replied that SCDOT could utilize the funds for another project anywhere in the state.

This FMU project cost is $318,000 and the local match from FMU is $63,600. FMU is requesting 254,400 from FLATS. Representative Crawford wanted to know if this project could be amended and Debi replied that it could not. SCDOT is to be the LPA for this project if it is approved to move forward. Debi introduced Ralph Davis with FMU whom explained the drawing of the project. This project involves landscaped medians and crosswalks for safety concerns crossing from and to the athletic complex. Ernie Boughman with URS Corporation, the engineer representing FMU, stated that the portion of roadway is a five lane section with a continuous center turn lane and the

capacity on a roadway like this can carry in the upper 30,000 vehicles per day. Currently it carries about 5,600 a day. They are trying to slow traffic down with the medians. Senator Leatherman wanted to know if they could put speed bumps there. Ernie replied that this is a truck route of roughly 10% of the volume of traffic so any raised types of devices are not allowed for this type traffic. The question was also asked if rumble strips could be installed. Ernie replied that there have been several recommendations but this is just the initial phase. A raised crosswalk and a round-a-bout were also an alternative. Senator Leatherman wanted to know where the trucks seem to be coming from. Ernie replied that a truck study was not done for this phase, but his thought was the Papermill and possibly the lumber company further down Francis Marion Highway. As long as it is a SC route, trucks are allowed. Senator Leatherman asked Commissioner Wooten to get with SCDOT to see if they would allow the tapered up and down strips in the future. Speed limit was 45 but has been reduced to 35 per John Kispert with FMU.

Dennis Townsend concurred that 10% of the volume is conservative for truck traffic. Representative Crawford asked if construction of this will close traffic and Dennis replied that it would not.

Waymon Mumford suggests that FMU should look at an overhead crosswalk or an enclosed catwalk due to safety issues. He thinks too much landscaping in the median could obstruct the view and could be a safety liability.

Senator Leatherman wants to approve this based on asking DOT if they can install rumble strips or possibly moving away from the crosswalks and install the tapered up and down in the future. Representative Crawford made a motion to move as amended with the request. Sherwin suggested that an underground tunnel would be cheaper. Commissioner Wooten stated that there is a big safety issue with those because no one wants to walk in them at night. He also stated that no one wants to climb the stairs to go over a crosswalk. Commissioner Wooten made a second motion and the vote passed unanimously based on feedback from SCDOT on potential funding of the project.

Debi presented the sixth item of business which was the FY2010-2015 TIP amendments.

- Guideshare Project: (S. Cashua Drive)
  - FY2013 - $2,000,000 allocated for R/O/W;
  - FY2014 - $2,300,000 allocated for R/O/W and $3,000,000 for Construction;
  - FY2015 - $3,700,000 allocated for Construction;
  - Guideshare Allocation reduced from $2,667,000 to $2,487,000 beginning FY2013;
  - FY2014-2019 TIP is due to SCDOT by the end of June.
- Enhancement funds:

- Transportation Enhancement Program (SAFETEA-LU) - Francis Marion University will be added to this section if Policy Committee approves before submitting TIP to SCDOT;

- Next TIP Update, Transportation Enhancement Program section will be changed to the Transportation Alternatives Program as a result of (MAP-21). Capital Sales Tax Projects:
  - US378 –$112,278,000 allocated for construction in FY2013;
  - US76 - $25,370,000 allocated for construction in FY2013;
  - S-26 (TV Road) - $24,743,000 allocated for construction in FY2013;
  - US51 – $10,249,000 allocated for right-of-way in FY2013 and $111,985,000 allocated for construction in FY2014;
  - 301 ByPass/S-107 (Alligator Road) - $5,300,000 allocated for preliminary engineering in FY2013 and 10,000,000 allocated for right-of-way in FY 2015.

Federal Transit Administration:

- PDRTA FY2013 Amendments:
  - (Section 5307) $195,000 CA, $500,000 OP and $290,000 PM;
  - (Section 5309) $350,000 CA not obligated in FY2012, Moved to FY2013;
  - (Section 5316) $80,000 OP not obligated in FY2012, Moved to FY2013;
  - (Section 5317) $153,000 CA not obligated in FY2012, Moved to FY2013;

Senator Leatherman would like to see the 301 bypass move forward. The survey has been done and the design will begin this summer followed by ROW acquisition and construction per Chris Gossett. Senator Leatherman asked Chris to come back to the next meeting to report on the progress of this project.

Senator Leatherman wanted to know why the funds that were allocated to PDRTA in 2012 were not used in 2012. Debi stated that PDRTA did not have the matching funds to use them in 2012. She asked Mr. MacNeil with PDRTA if her answer was correct. Mr. MacNeil concurred. Senator Leatherman wanted to know how much of a match was required. Mr. MacNeil stated that operating is a 50/50 match and capital is 80/20. Mr. MacNeil stated that they had to terminate their Medicaid Transportation Provider contract, which will become effective around April 12th. The Medicaid portion was a big part of their match funds. Debi advised that PDRTA's allocated funds must be included in the TIP in order for PDRTA to utilize.

Debi stated that no comments were received on the TIP Amendments during the 10-day public comment period. Representative Crawford made a motion to approve and Glynn Willis made a second motion. Vote carried unanimously.

Representative Crawford stated that he is concerned about the Medicaid portion of PDRTA's problem and what it will do to the ER business. Senator Leatherman asked Mr. MacNeil to contact his staff to see what could be done at the state level to help PDRTA with matching funds.

For the seventh item of business, Debi advise the committee that The SCDOT Commission voted to require MPO's to allocate 20% of their net Guideshare Funds after debt service to Resurfacing or System Preservation projects beginning in FY2013. The resurfacing projects must be in the National Highway System (NHS). A NHS map for the Florence area was provided to the committee. The projects that these funds will be allocated to will eventually be required in the TIP, but the SCDOT has not determined how we need to show this at this time.

She introduced Kevin Sheppard with SCDOT to explain further. Kevin concurred that the information presented by Debi was correct and that this allocation is a mandate of roughly about $315,000 annually for the FLATS MPO. SCDOT is looking at a three year window. Instead of allocating a project annually, one project can be chosen to utilize three years of the allocated debt service at a time. The only two roadways within the FLATS boundary that resurfacing funds can be utilized on are US 52 and US 76. This allocation can also be used for intersection improvement projects in our area. Senator Leatherman stated that he has a problem with MPOs being required to utilize a portion of their local Federal Guideshare funds to resurface the NHS highways. He would like to discuss further with Commissioner Wooten.

Commissioner Wooten asked Kevin if he knew the limitations on the intersection improvements. Kevin stated that as long as they were federal aid eligible, the funds could be allocated to them.

Debi advised that she would be working with the local DOT office to obtain a list of resurfacing and intersection improvement projects to bring back to the committee.

The eight item of business as presented by Debi was the new Transportation Alternatives Program (TAP) as a result of MAP-21. This program replaces the Transportation Enhancement Program (TEP) under the previous Bill, SAFETEA-LU. The TEP allocated a specific amount of enhancement funds to the MPO annually. The TAP does not. It is a statewide 80/20 competitive grant program. SCDOT will accept applications all year. An applicant can apply for up to $400,000 per project. Several projects can be submitted for the FLATS area during the year. SCDOT has an eight criteria ranking list that they go by in reviewing the project applications. FHWA will also have to approve the project. The TAP applications will come directly to Debi and she will present them to SCDOT. As SCDOT approves projects, she will be advised and this information will need to be included in the TIP and presented for information only to the committees. No action is required. Debi mentioned that the Adopt an Interchange has also been eliminated under MAP-21.

- Categories allowed for the TAP are:
  - Bike and Pedestrian Facilities (Trails or sidewalks);
  - Pedestrian Lighting or Signals;
  - Sidewalk Benches;
  - Bike Ramps;
  - Curb Ramps;
  - Landscaping can be included in any of the above referenced projects, but not as an exclusive landscaping project.

Debi advised that the Adopt-an-Interchange Program has also been eliminated under MAP-21. Senator Leatherman wanted to know if this meant they could not apply for funds for improvements like the interchange in Manning. Debi concurred, not under the Adopt-an-Interchange Program. She advised that she has been told by SCDOT that if operational changes were being done on an interchange, then landscaping could be included, but she was not sure at what extent. Senator Leatherman asked that staff identify what would qualify for a project like this and submit to the Policy Committee.

Representative Crawford asked that the committee be advised about the project applications received before submitting them to the SCDOT.

Debi presented the list of new Committee Members as the ninth item of business:

- Rusty Smith, Administrator, Florence County, non-voting Policy Committee;
- James T. Schofield, Florence County Council, voting Policy Committee;
- Waymon Mumford, Florence County Council, voting Policy Committee;
- David Hobbs, Chairman, Florence County Planning Commission, non-voting Policy Committee and Study Team;
- Mike Wooten, SCDOT Transportation Commissioner, District 7, voting Policy Committee;
- Levonne Powell, PDCOG, Study Team;
- Dyan R. Cohen, Councilmember, City of Darlington representative, Study Team (New Urbanized Area);
- James Askins, Councilmember, Town of Timmonsville representative, Study Team (New Urbanized Area);

The tenth item of business was project updates from SCDOT by Chris Gossett. There was a public hearing on October 9th with about 35 people for the S. Cashua project. They received about twenty comments primarily regarding business parking. Five businesses will be relocating and one residential. For about a half mile corridor, there will be a lot of impacts. Mayor Wukela asked if there was any remedy and Chris replied that there is none other than the ROW acquisition. The Lessees will get some relocation assistance. There are other parking negotiations in this strip mall such as relocating the parking to the side or behind the business if room is available. The ROW went from 4.3m to 6.3m including relocation costs.

Chris stated that there were some changes that were able to be made to the design as a result of the comments received at the two public hearings regarding S. Cashua. Another request was to put a light at Jefferson Drive and SCDOT has agreed to do so which will cost about $75,000 to $80,000 in construction.

Representative Crawford asked Chris Gossett to keep him informed on a regular basis as this project goes along. He has asked SCDOT staff to keep him informed and it has not been done. He is getting information from the impacted business owners, which leave those of us trying to guide this project at a deficit. He would like a little more granular information as this project goes along. He has continually asked that SCDOT staff look at the signal timing on the lights and to the best of his knowledge he has never got closure on this. Senator Leatherman asked Chris to meet with Representative Crawford regarding his concerns. Chris concurred.

Chris continued with updates on the Capital Sales Tax Projects. US 378, sections one and two, US76 and TV Rd. permits have been submitted to the US Corp of Engineers and a final mitigation plan with additional information submitted just last week on February 20th. SCDOT expects to have the first set of the permits approved in the April time frame. TV Rd looks like it will be ready first because it is under a general permit and not an individual permit with the Corp which is a lower level of review. This will have to go in front of Florence County Council because of the way the referendum was written.

Senator Leatherman asked what the time frame for contract was for TV Rd. Chris stated May for TV Rd. and June-July for US 76 and US 378. Commissioner Wooten asked if they had to be built in the order they were approved in the sales tax referendum. Chris stated they are in order by priority in the referendum and they are supposed to be LET in that order. County legal staff is currently looking into whether County Council can change the order of the projects. Chris is to appear before Florence County Council at their March meeting. Commissioner Wooten stated that under state law he did not think that County Council could make the change. Councilman Mumford asked who could make the change and Commissioner Wooten replied that the referendum would have to be presented again to the voters. Senator Leatherman stated that he would like all three projects contracted and LET at the same time to avoid the problem. Chris with SCDOT does not foresee a problem with this.

The Hwy51 public hearing was February 5th with 250 people attending and 12 written comments received. Some shifting of alignments has been done since the comments were received to accommodate these people. Commissioner Wooten commented that this public hearing was one of the friendliest public hearings he has attended.

Chris mentioned regarding the $90m additional funds Senator Leatherman has been able to acquire to finish these projects; he understands there is one more step at the Joint Bond Review Committee to approve that.

Next Sherwin Welch gave an update for the County Transportation Committee (CTC):

- Mr. Welch stated that the CTC has 3.5m obligated for paving and resurfacing throughout Florence County and hoping to get more this month.

Next Chuck MacNeil with PDRTA gave an update:

- Chuck has been spending the last sixteen months alerting the stakeholders about the current economic model that supports their services and the fact that they are able to access federal and state funds but need local match money. That model has not been sustainable for a while and they have essentially hit their fiscal cliff. At a special meeting earlier this month, the PDRTA Board of Directors voted to end their contract with the Medicaid broker for the state and he has served them with 60-days' notice. In addition PDRTA had to end other contracts with local service agencies such as the Council on Aging, Disabilities and Special Needs Board, Hope Health and other such agencies that similarly with the Medicaid situation the revenue we earn directly from those agencies does not support the true cost of our service. As these contracts wind down in the next 30 to 90 days, PDRTA will essentially pair down its organization and only be providing fixed route scheduled bused services in the urban areas, Lake City and Marion to Myrtle Beach. The future will be predicated upon any opportunity they have to find new dedicated local revenue sources that can be used to leverage state and federal funds and hopefully be able to continue to support services in the urbanized area. PDRTA has seen ridership double in the last two years. They are approaching about .25m trips annually. The demand for service is there.

  Senator Leatherman wanted to know if they have looked at increasing fares. Chuck replied that they have and will continue to do so. Sadly the net gain we get in terms of revenue does not do much to address the problem. If we were to charge the true cost of the trip to the rider, it would be cost prohibited. No one would be able to afford to ride. Mayor Wukela added that PDRTA can't use their fares to match the federal and state dollars, which is the real problem with fare revenue. According to federal regulations, they can only offset the true cost by the fare revenue that they receive. They cannot use that revenue as a local matching source.

The final item on the agenda was public comments: There were none.

There being no further business, the committee made a motion for the meeting to adjourn.

FLATS POLICY COMMITTEE MEETING
JUNE 10, 2013
MINUTES

Voting Members Present:
Senator Hugh Leatherman
Councilman Glynn Willis
Sherwin Welch
Mayor Stephen Wukela
Commissioner Mike Wooten
Councilman James Schofield
Councilman Waymon Mumford

Study Team Members Present:
Chris Gossett, SCDOT
Kevin Sheppard, SCDOT
Michael Bethea, SCDOT
David Gray, SCDOT
Phillip Lookadoo
Levonne Powell

Non-Voting Members Present:
Chuck MacNeil
Jay Graham
Rusty Smith
Dennis Townsend

Staff Present:
Debi Matthews
Renee Proctor

Guest Speakers:

Senator Leatherman called the meeting to order.

The first item of business on the agenda was to approve the minutes from the February 25, 2012 meeting. Mr. Willis made a motion to approve and Mr. Wooten made a second motion. Vote carried unanimously.

The second item of business was the FY2014 – 2019 Transportation Improvement Plan financial sheet.

- Guideshare Project: (S. Cashua Drive)
  - FY2014 - $4,300,000 allocated for R/O/W and $4,000,000 for Construction;
  - FY2015 - $4,400,000 allocated for Construction;
  - Advancement Payback line item added with an annual payback of approx. $1.6M to begin in FY2016 for the SCDOT advancement;
  - $0 balance through FY2019.
- Example of 20% Guideshare Allocation Section provided by the SCDOT Planning Department. No action required on this section. Discussion was later in the meeting.

- Transportation Alternatives Program Section Added – No Projects To Report
- Capital Sales Tax Projects:
  - US 51 Pamplico Highway:
    - FY2014 - $111,985,000 allocated for construction
  - 301 ByPass/S-107 (Alligator Road):
    - FY2014 - $10,000,000 allocated for R/O/W;
    - FY2015 - $45,500,000 allocated for Construction.
- Federal Transit Administration:
  - PDRTA FY2013 Allocations were presented and approved at the February 25, 2013 Policy Committee meeting. This update has one amendment for the 5307 Program:
    - Initially $195,000 (CA) changed to $485,000. (March 21, 2013 STIP Revision #41)
- Additional FY2013 Amendments:
  - Florence Senior Citizens Association:
    - (5310 Program) $10,000 - Operations;
  - Florence County DSN Board:
    - (5310 Program) $45,000 - Capital;
  - Darlington County Council on Aging:
    - (5310 Program) $45,000 - Capital;
    - (5317 Program) $26,000 - Operations.

No comments were received during the 10-day public comment period from May 17th through May 27th. Study Team Recommends Approval.

Senator Leatherman asked Mr. Wooten to explain the 20% allocation section in the TIP. Mr. Wooten turned it over to Dennis Townsend with DOT because this decision was made by the Commission prior to him being on there. Dennis briefly explained the Commission's Policy and the Senator expressed his concern that SCDOT was taking 20% of the FLATS funding and telling us how it must be used. He suggested to Mr. Wooten that he continue to relay his feelings to the Commission. Mr. Wooten agreed to do so.

Mr. Mumford asked if we have the money for the TV Rd widening. The Senator stated that we were waiting on the Corp of Engineers. Chris with SCDOT gave an update on the estimated monies at this time. The projection is that we will have the funds for the TV Rd. project and others but we will not know for sure until the bids come in.

Mr. Schofield reported that we have collected $111M from the penny tax towards the $148M and there are six more quarters to go. It should come in between $142M and $144M. There is also $7.953M in interest accrued.

Mr. Wooten stated that these projects must be bid in the order as on the ballot. If there is a problem with one, it holds up all others.

Mayor Wukela asked if there was not enough money to complete the list, what would happen with those that were not funded. Mr. Wooten replied that those projects could be placed back on the ballot if there was a renewal for the penny sales tax.

Mr. Schofield stated that his understanding is if there is a shortage of funding for the next project on the ballot and it has been bid, SCDOT would have to come back to County Council. Mr. Wooten agreed and Senator Leatherman stated that it would be up to the people to decide.

Mr. Wooten stated that there is a movement right now for SC to take over the permitting program from the Corp which would then be the responsibility of DHEC. It would only require a letter from the Governor to the Corp of Engineers. This would significantly speed up the permitting process. Mr. Wooten continued that they were going through a change of command the middle of this month where they will be getting a new Colonel so they've got to start the training process anew. Colonel Chamberlin is being transferred to the Pentagon. They will have to start that relationship building with the new Colonel.

With no further discussion on the TIP, a motion and a second was received. The vote carried unanimously.

Debi Matthews presented the third item of business which was the project list for the 20% Guideshare Allocation Requirement.

- Potential resurfacing and intersection projects attached (Blue Paper) and map of locations (White Paper):
  - The SCDOT Highway Commission adopted a policy in August, 2012, requiring MPOs and COGs to utilize 20% of their guideshare allocations for resurfacing of federally eligible state-owned roads or for intersection improvement projects.
  - The SCDOT Planning Department is responsible for preparing the allocation guidelines and presenting them to the MPOs and COGs.
  - The resurfacing projects must be on the National Highway System resurfacing list. Resurfacing projects are ineligible if not included on this list. These projects can be chosen in any order;
  - Any intersection improvement project chosen must be in the Long Range Transportation Plan (LRTP) before funds can be allocated towards it. The projects listed are prioritized by ACT 114 by the SCDOT, and need to be chosen in this order unless FLATS can justify why a lower ranked project should be done first. Other intersection projects within the FLATS Study Area Boundary can be ranked by ACT 114 and added to this list.

The Senator wanted to know how long it would take us to accomplish the projects at the top of the list. Debi asked Kevin to please explain. Kevin explained that the have added the section to the TIP so MPOs can see what their requirement is for each fiscal year. Kevin called their attention to the section on the TIP to explain. The FY2013 figure was derived from taking the guideshare allocation minus the debt service so that the 20% is less for you. What they are looking at is a three year average at any given time that needs to be accomplished in the FLATS area. So right now we are in FY2013, what they are looking for is an average totaling the $317,000, $318,000 and $319,000 for FY2013-2015 within those three years. By looking at the list Debi provided, if the committee chooses to do the first resurfacing project which is the 76 connector, the proposed cost estimate is $330,000. As you see that would eclipse your FY2013 requirement because it is more than the $317,000. He continued to show the fields on the spreadsheet that the figures would go in. Kevin also explained to make things more complicated; they have done a rolling average. FY2013-2015 would have a rolling average. Once we move into FY2014, then that average covers FY2014-2016, then we move into FY2015 it covers FY2015-2017. It's a moving target. For instance, if you were to choose the $330,000 and the first intersection project which is $750,000 that is well over a million dollars so you will have satisfied the 20% resurfacing requirement that the Commission has asked you to satisfy.

The Senator asked where the money comes from and Kevin stated that it comes from our Guideshares. The latitude for resurfacing is that you can choose any on the list. However, the intersection projects must be chosen in order because of Act 114. Debi has also sent Kevin two more projects that are in the Long Range Transportation Plan that will need to be ranked also. The locations are Palmetto and Cheves and safety and access management improvements at the Five Points intersection. The Senator feels that we should be able to spend our 20% of on streets that we choose instead of on NHS routes or US roads.

Kevin said that along with the FY2014-2019 TIP that the committee just approved, between now and August the SCDOT will take this information back to the Commission in September when the new STIP becomes effective at the end of the federal fiscal year, (September 30th). So beginning October 1st the new STIP at the DOT will show FY2014-2019 and what they want to do is populate those fields as what FLATS identified as their priority. The SCDOT will be focusing on a three year average so if the committee does not do anything in FY2013, you're ok, but if you put it all in FY2014 then you're good through FY2015 or possibly into FY2016.

The Senator responded to Mr. Wooten that he has a lot of concerns about this new Policy. Mr. Wooten stated that he believes with the shortfall of funds the Commission was looking at opportunities to help meet the federal match. The Commission thought they'd give the MPOs the opportunity to assist by taking what the Feds allocated to them and putting it towards the federal match. This would allow the DOT to get as much money into the highway system as possible under the revenue stream that they

had at the time. Mr. Wooten stated that he will bring this up at the Commission next week.

Debi presented the fourth item of business which was the FY2014 Unified Planning Work Program (UPWP).

The UPWP provides the annual details regarding the FLATS MPO staff's planning activities and identifies a program of work for reimbursement under annual planning grants received under the FHWA and FTA programs.

- FY2014 Planning Funds total is $158,584 ($126,867 Federal & $31,717 County 20% Local Match)

The 10-day public comment period was held from May 17th through May 27th with no comments being received. On May 31st, staff received comments from the Federal Highway Administration (FHWA) requesting more detailed information regarding the previous and anticipated planning activities. These updates will not affect the concept of the document and no additional public comment period is necessary. The updated document must be completed by June 30th.

Study Team recommends approval contingent upon staff updating the document as advised by the FHWA. Mr. Welch made a motion and Mayor Wukela seconded. The vote carried unanimously.

Debi presented the fifth item of business which was updates to the Public Participation Process.

The Public Participation Process is a guideline for the FLATS MPO to ensure opportunities for the public to express their views on transportation issues and to become active participants in the decision-making process. Updates to the PPP were previously approved June, 2011.

- Current Updates:
  - Added MAP-21 Information as Applicable
  - Updated Study Area Boundary Map

No public comments received on document during the 45-day public comment period of April 12th through May 27th. Study Team Recommends Approval. Mayor Wukela made a motion and Mr. Welch seconded. The vote carried unanimously.

The sixth item of business, Debi gave the Enhancement Projects Update.

- **Lucas Street Gateway** - Project is 50% complete. The City of Florence anticipates completion by mid May.
- **Red Doe Plantation** - The revised scope for the project has been approved by SCDOT. The County is working with the architect to revise the drawings in accordance with the revised scope. The revised drawings and bid documents will be sent to SCDOT for approval by the end of May.

- **NoName Creek Trail** – The SCDOT requires an easement for trail sections on the Wal-Mart property in order to move forward with this project. The City of Florence is attempting to obtain this document for SCDOT.
- **Francis Marion University Improvements to Highway 327** - Application will be reviewed by SCDOT Commission in July.

The seventh item of business was SCDOT Updates by Chris Gossett. South Cashua project is in the ROW acquisition process. He has had a lot of discussion with the business owners on S. Cashua about impacts. The SCDOT has looked at some of the recommendations the business owners have come up with and to meet all the design criteria and carry the amount of traffic through there, the SCDOT recommends we stay with the scope of the project that was approved at the last Policy Committee meeting.

The Capital Sales Tax projects, Hwy378, US76 and TV Rd are ready to go as soon as the Corp approves the mitigation and permits. As soon as they get the permits SCDOT will hold a special letting for these projects. From the time they get a permit, it will be six weeks until they receive bids on the projects.

The eighth item were updates from the CTC and PDRTA. Mr. Welch gave an update for the County Transportation Committee (CTC):

- Mr. Welch stated that they are trying to stretch the money just as far as they can to help the County. The needs are far greater than the money.

Next Chuck MacNeil with PDRTA gave an update:

- PDRTA is in the final stages of downsizing. They have eliminated 70% of their service. He continues to work with the communities for additional funding to sustain their current level of fixed route services. There is clearly a demand for this service. They are exceeding a quarter of a million trips per year. About 45% of those riding are accessing jobs and 20% accessing educational opportunities. The next few weeks of the budgeting cycle will tell where they are going the next fiscal year.

  Senator Leatherman inquired about the buildings on the Florence property. He asked if renting or leasing the current buildings would help their money situation and Chuck agreed that it would. Chuck also stated that they are in the process of reducing the size of their fleet from 105 to about 40. Chuck stated that they are currently following the lead of the federal government on how to properly proceed on the sale of properties.

  Mayor Wukela stated that the City has increased their funding to PDRTA by about 75% which was due to a deduction of travel reimbursement to the City Council Members.

The ninth item was a response to questions asked by the Committee at the February meeting.

Q: What kind of landscaping Interchange Projects are allowed under the MAP-21 Transportation Alternatives Program (TAP)?

A: Exclusive Landscaping Interchange Projects are no longer allowed under the MAP-21 TAP. In addition, no other programs currently will allow exclusive interchange landscaping improvements.

Q: Can the FLATS Policy Committee decide which Transportation Alternatives Program (TAP) applications received will be presented to SCDOT?

A: Yes. As applications are approved by SCDOT, they are ranked with other applications received throughout the State. SCDOT approved projects must be listed in the Transportation Improvement Plan (TIP).

The tenth item of business was the FLATS Newsletter. This is another outlet that the MPO uses to reach the public and inform them of what we do. This newsletter will be placed at various locations for the public to view.

The final item on the agenda was public comments: There were none.

There being no further business, the committee made a motion for the meeting to adjourn.

FLATS STUDY TEAM MEETING
FEBRUARY 15, 2013
MINUTES

Members Present:

Chris Gossett
David Hobbs
David Gray
Michael Bethea
Cathy Rice
Chuck MacNeil
James Askins
Phillip Lookadoo
Levonne Powell
Dyan Cohen
Mark Pleasant
Herb Cooper
Doug Reimold
Jay Graham

Staff Present

Debi Matthews
Renee Proctor

The first item of business was to review the minutes from the previous June 8, 2012 meeting. Chuck MacNeil made a motion to approve and Michael Bethea seconded. Vote carried unanimously.

The next item was amendments necessary to FLATS Bylaws. The Transportation Plan Advisory Group information has been omitted from the document. Florence is now in District 7, so the #5 has been changed to #7 for the SCDOT Transportation Commissioner under the voting member section. Study Team membership now includes a Councilmember from the City of Darlington and a Councilmember from the Town of Timmonsville. Phillip Lookadoo with the City of Florence brought to our attention that his correct title is Director of Planning, Research and Development. There was one typographical error noted on page five. Phillip Lookadoo made a motion to approve and Doug Reimold made a second motion. Vote carried unanimously.

The third item of business was the 2010 Study Area Boundary packet due to SCDOT by March, 2013. The packet includes the new study area boundary map as approved by the Policy Committee at their July 23, 2012 meeting, executed resolutions from the new urbanized areas (the City of Darlington and the Town of Timmonsville), the Policy Committee Resolution once executed by Senator Leatherman and the amended Bylaws once approved by the Policy Committee. Jay Graham made a motion to approve and Michael Bethea seconded. The vote carried unanimously.

The fourth item of business was an application from Francis Marion University for an enhancement project requesting SAFEATEA-LU enhancement funds.

- FLATS accrued approximately $354,000 through the Transportation Enhancement Program under SAFETEA-LU;
- The Transportation Enhancement Program has been eliminated under the new Federal Surface Transportation Bill, MAP-21;
- Initially staff was advised, if the SAFETEA-LU funds had not been obligated to a project before the enactment of MAP-21, the funds would no longer be available to the MPO;
- SCDOT has now advised if an MPO had a project application that was caught in the middle of SAFETEA-LU and the enactment of MAP-21, SCDOT will present the application to the Commission for their review for potential funding;

- FLATS staff received an application from Francis Marion University requesting these funds, but the application was not presented to the committee before the enactment of MAP-21;

Chris Gossett made a motion to present it to the Policy Committee and Levonne Powell seconded. The vote carried unanimously. This project will have to be approved by the SCDOT Commission to move forward.

The fifth item of business was FY2010-2015 TIP amendments.

- Guideshare Project: (S. Cashua Drive)
  - FY2013 - $2,000,000 allocated for R/O/W;
  - FY2014 - $2,300,000 allocated for R/O/W and $3,000,000 for Construction;
  - FY2015 - $3,700,000 allocated for Construction;
  - Guideshare Allocation reduced from $2,667,000 to $2,487,000 beginning FY2013;
  - FY2014-2019 TIP is due to SCDOT by the end of June. Updated TIP will be presented to the committee at next meeting.
- Resurfacing Allocation (New Section)
  - The SCDOT Commission voted to require MPO's to allocate 20% of their net Guideshare Funds after debt service to Resurfacing or System Preservation projects beginning in FY2013. This amount comes to an annual amount of approximately $318,000. Mark Sheppard with SCDOT explained this new section at this time, which is the sixth item of business on the agenda. His explanation was as follows:

The resurfacing projects must be on the list of resurfacing projects from the local DOT office (Ray George, Contact) in addition to being on the National Highway System (NHS) map. The only highways within the FLATS study area boundary on the NHS map are US52 and US76. The allocation can also be utilized on intersection improvement projects on the local DOT's intersection improvement list. Another option is potentially piggy backing on a bridge project on a NHS project within the FLATS area. The allocation does not have to be done annually. A project can be chosen to use a three year average. Our process should be to coordinate with the district DOT, make a list of all potential projects, get each project cost, verify that it is in our LRTP and the Study Team choose a project to recommend to the Policy Committee. If the project is not in the LRTP, the LRTP will have to be amended to include project prior to allocation of the funds.

- Enhancement funds:
  - Transportation Enhancement Program (SAFETEA-LU) - Francis Marion University will be added to this section if Policy Committee approves before submitting TIP to SCDOT;
  - Next TIP Update, Transportation Enhancement Program Eliminated - Replaced with Transportation Alternatives Program as a result of (MAP-21).
- Capital Sales Tax Projects:
  - US378 –$112,278,000 allocated for construction in FY2013;
  - US76 - $25,370,000 allocated for construction in FY2013;
  - S-26 (TV Road) - $24,743,000 allocated for construction in FY2013;
  - US51 – $10,249,000 allocated for right-of-way in FY2013 and $111,985,000 allocated for construction in FY2014;

- 301 Bypass/S-107 (Alligator Road) - $5,300,000 allocated for preliminary engineering in FY2013 and 10,000,000 allocated for right-of-way in FY 2015.

Federal Transit Administration:

- PDRTA FY2013 Amendments:
  - (Section 5307) $195,000 CA, $500,000 OP and $290,000 PM;
  - (Section 5309) $350,000 CA not obligated in FY2012, Moved to FY2013;
  - (Section 5316) $80,000 OP not obligated in FY2012, Moved to FY2013;
  - (Section 5317) $153,000 CA not obligated in FY2012, Moved to FY2013;

No comments were received on the TIP Amendments during the 10-day public comment period. Jay Graham made a motion to present it to the Policy Committee and Mike Bethea seconded. The vote carried unanimously.

Debi also asked Mark Sheppard if Guideshare funds could be used for sidewalks as this question was asked of her from Dyan Cohen. Mark said it could, but the project would have to be in the LRTP.

Jay Graham wanted to know if the money could be used for bike paths and Phillip Lookadoo wanted to know if bike lanes would fall into a gray area. Mark will get back to us but the project would have to be in the LRTP. It is probably under the Bike and Pedestrian Element.

The seventh item of business was the explanation of the new Transportation Alternative Program (TAP) by Herb Cooper.

- Replaces Transportation Enhancement Program as a result of MAP-21;
- Statewide Competitive Grant Program – 80/20 program;
- Applicant can apply for up to $400,000 per project;
- SCDOT will accept multiple applications per year within the FLATS Study Area Boundary;
- SCDOT will accept applications year round;
- Applications are presented to FLATS staff. Staff sends to SCDOT for review. SCDOT has an 8 criteria ranking system. FHWA must also review the application;
- If a project is approved, SCDOT will advise staff. Project is required to be included in TIP. (Staff will advise committees of inclusion in TIP, however, no action will be necessary from committees.)

- Categories allowed:
  - Bike and Pedestrian Facilities;
  - Pedestrian Lighting or Signals;
  - Sidewalk Benches;
  - Bike Ramps;
  - Curb Ramps;
  - Landscaping can be included in any of the above referenced projects, but not as an exclusive landscaping project.

The Adopt-an-Interchange Program has also been eliminated under MAP-21.

The eighth item of business was the introduction of new Committee Members.

- Rusty Smith, Administrator, Florence County, non-voting Policy Committee
- James T. Schofield, Florence County Council, voting Policy Committee

- Waymon Mumford, Florence County Council, voting Policy Committee
- David Hobbs, Chairman, Florence County Planning Commission, non-voting Policy Committee and Study Team
- Michael Wooten, SCDOT Transportation Commissioner, District 7, voting Policy Committee
- Levonne Powell, PDCOG, Study Team
- Dyan R. Cohen, Councilmember, City of Darlington representative, Study Team (New Urbanized Area)
- James Askins, Councilmember, Town of Timmonsville representative, Study Team (New Urbanized Area)

The ninth item of business was SCDOT project updates. Chris Gossett stated that the No-Name Creek enhancement project has been put on hold until they receive the necessary easement to access part of the Wal-Mart property.

There will be five or six businesses relocating due to the S. Cashua project. Negotiations will be made with the property owners not to the renters. However, the renters will be allocated a portion of ROW funds. The ROW estimate has increased from 4.3m to 6m. There may be a negative balance in one year. The design is 95% approved. The accident rate in this area is four times the national average. By 2035, there will be 35% more traffic expected on S. Cashua.

The tenth item of business was updates from PDCOG and PDRTA.

- The COG is developing a Transportation Advisory Commission to their Board. Their next project on the list is SC-9.
- Chuck MacNeil gave a brief report of the current funding problems that PDRTA is experiencing. They have terminated their contract with Medicaid and will possibly have to cut their staff by 70%. They are desperately in need of any possible funding, either private or other in order to keep the five Florence routes running.

Debi announced that there would be another Policy Committee meeting in June so the Study Team would meet again in May.

There being no further discussion, a motion was made by Chris Gossett to adjourn and Dyan Cohen made a second motion. Carried unanimously.

FLATS STUDY TEAM MEETING
MAY 31, 2013
MINUTES

Members Present:		**Staff Present**
Chris Gossett (via conf. call)	Levonne Powell	Debi Matthews
David Hobbs	Doug Reimold	Renee Proctor
David Gray	Drew Chaplin	
Michael Bethea	Jay Graham	
Rodney Tucker		
Chuck MacNeil		
James Askins		
Phillip Lookadoo		

The first item of business was to review the minutes from the February 15, 2012 meeting. Phillip Lookadoo made a motion to approve and Jay Graham seconded. Vote carried unanimously.

The second item of business was to review the FY2014-2019 TIP amendments.

- Guideshare Project: (S. Cashua Drive)
  - FY2014 - $4,300,000 allocated for R/O/W;
  - FY2014 - $4,000,000 allocated Construction;
  - FY2015 - $4,400,000 allocated for Construction;
  - Advancement Payback line item added with an annual payback of approx. $1.6M to begin in FY2016 for the SCDOT advancement;
  - FLATS will have a $0 balance to spend on another project at least through FY2019.
- The second section is an example of the spreadsheet provided by the SCDOT Planning Department regarding the 20% guideshare allocation process for information only. This discussion is later in the minutes.
- Transportation Alternatives:
  - Currently there are no projects to report.
- Capital Sales Tax Projects:
  - US 51 Pamplico Highway:
    - FY2014 - $111,985,000 allocated for construction
  - 301 ByPass/S-107 (Alligator Road):
    - FY2014 - $10,000,000 allocated for R/O/W;
    - FY2015 - $45,500,000 allocated for Construction.
- Federal Transit Administration:
  - PDRTA FY2013 Allocations were presented and approved at the February 25, 2013 Policy Committee meeting. This update has one amendment for the 5307 Program:
    - Initially $195,000 (CA) changed to $485,000. (March 21, 2013 STIP Revision #41)
- Additional FY2013 Amendments under the Federal Transit Section:
  - Florence Senior Citizens Association:
    (5310 Program) $10,000 - Operations;
  - Florence County DSN Board:

(5310 Program) $45,000 - Capital;
- Darlington County Council on Aging:
  (5310 Program) $45,000 - Capital;
  (5317 Program) $26,000 - Operations.

No comments received during the 10-day public comment period of May 17th through May 27th. Lavonne stated that the $45,000 for DSN should be capital as it is for a vehicle purchase. Debi will confirm and change before the Policy Committee meeting. Phillip made a motion to approve and Lavonne seconded. The vote carried unanimously.

- Resurfacing Allocation (New Section)
  - The SCDOT Highway Commission adopted a policy in August, 2012, requiring MPOs and COGs to utilize 20% of their guideshare allocations for resurfacing of federally eligible state-owned roads or for intersection improvement projects.
  - The SCDOT Planning Department is responsible for preparing the allocation guidelines and presenting them to the MPOs and COGs.
  - The resurfacing projects must be on the National Highway System resurfacing list. Resurfacing projects are ineligible if not included on this list. These projects can be chosen in any order;
  - Any intersection improvement project chosen must be in the Long Range Transportation Plan (LRTP) before funds can be allocated towards it. The projects listed are prioritized by ACT 114 by the SCDOT, and need to be chosen in this order unless FLATS can justify why a lower ranked project should be done first. Other intersection projects within the FLATS Study Area Boundary can be ranked by ACT 114 and added to this list.

Phillip inquired as to how the projects on this list were chosen. Mike Bethea stated that the local DOT submitted these projects from a list they had. These intersections were chosen due to accidents, troubled spots, safety reasons and also public requests. Phillip asked about the intersection at Palmetto and Church. Michael stated that it could be added to the list but would have to be ranked by SCDOT. Phillip also mentioned that he would be interested in adding the intersection at Cheves and Palmetto. Jay concurred with Phillip. Phillip also mentioned Bentree as an addition to the list.

Jay wanted to know if the list could be changed at this level before going to the Policy Committee. Michael mentioned that GSATS added other projects to their list. The municipalities were given an opportunity to add projects. Debi will get with Kevin Sheppard to verify additions to the intersection list are possible. Debi would like to discuss this again at the Study Team meeting in late summer or early fall. We will need to choose a project or projects to submit to the SCDOT Planning Department to figure out the financials for the TIP. Michael stated that GSATS came up with an in-house ranking system that involved assigned points for each category such as volume, safety, etc. Debi will talk with Mark at GSATS to get a copy of their in-house ranking information.

Phillip wanted to know if the money could be used for work other than just resurfacing. Jay said he thought he had read more detailed work could be done. Michael said it could.

i.e. This is how it is stated in the Commission Policy as presented to the MPOs:

"**System Preservation** – Activities on the State Highway System (NHS) to include resurfacing, pavement reconstruction, and pavement preservation (including chip seal, full depth reclamation, and other treatments that are federally eligible)."
"**Highway Improvements limited to**: Intersection and approach work including turn lanes and roundabouts."

Drew brought to the attention that the first two resurfacing projects should be West Evans instead of East. This was noted and will be changed.

Debi explained the guideshare allocation process as best she understood:

The SCDOT Planning Department has requested some flexibility in implementing the policy. The Highway Commission has concurred. These guidelines are still a work in progress.

- The 20% annual allocation for FLATS is approximately $319,000, beginning in FY2013;
- An MPO can choose to allocate funds annually or a three year average (rolling) towards a project;
- At minimum, a three year rolling average for FLATS of $319K must be allocated towards a project by FY2015;
- Another three year average (rolling) would then be required to be allocated towards a project for fiscal years 2014-2016, 2015-2017, etc.;
- SCDOT has suggested that a 2 or 3 year rolling average begin with the current fiscal year (2013) with the contracting being done and beginning with the letting cycle in fiscal year 2014.

The third item of business was amendments to the TIP narrative. This document is an explanation of the financial sheet and how the MPO works. Map-21 has been added and also the new FLATS study area boundary. Chuck commented that he thinks transit has been omitted from the document and should be added. Debi agreed. She will get with Chuck to discuss information to include regarding transit. Phillip made a motion contingent on the transit additions, and Doug seconded. The vote carried unanimously.

The fourth item of business was to review the 2014 (UPWP), Unified Planning Work Program. This document provides a detail of the MPO staff planning activities. We will be receiving $158,584 this year, $126,867 from FHWA and $31,717 Local share. No public comments were made during the 10 day public comment period from May 17th through May 27th. Lavonne made a motion and Jay seconded. The vote carried unanimously.

The fifth item was the amendments to the Public Participation Process. This is the MPO'S guideline for public awareness. This was last updated in 2011. Map-21 was included and the new study area boundary map. The 45 day public comment period was April 12 – May 27, 2013. No comments were received. Drew made a motion to recommend and Michael seconded. The vote was carried unanimously.

Debi advised that all of the documents that required public comment periods were placed at the Library, in the lobby at the Planning and Building Inspections office and on the FLATS webpage with a link to Debi's e-mail for comments. Phillip inquired if we were still using Facebook as an outlet to reach the public. Debi responded that we had discontinued it at this time, but may start

back in the future. We are attempting to post information on the BLOG but time has not allowed for that lately.

The sixth item of business presented was information only. Debi received a request by the Savannah Grove Community Action League for FLATS to utilize its guideshare funds to pave Ballpark Road. Per the SCDOT, FLATS cannot utilize guideshare funds on any roadway that is not federally eligible (meaning an arterial or a collector). Ballpark Road is a local Road. Debi will send a response back to the Savannah Grove Community Action League. Debi has researched and as best she can tell, this would be the responsibility of the County Public Works Department. No action required - for information only.

The seventh item of business was an update on the enhancement projects:

- **Lucas Street Gateway** - Project is 50% complete. The City of Florence anticipates completion by mid-May.
- **Red Doe Plantation** - The revised scope for the project has been approved by SCDOT. The County is working with the architect to revise the drawings in accordance with the revised scope. The revised drawings and bid documents will be sent to SCDOT for approval by the end of May.
- **NoName Creek Trail** – The SCDOT requires an easement for trail sections on the Wal-Mart property in order to move forward with this project. The City of Florence is attempting to obtain this document for SCDOT.
- **Francis Marion University Improvements to Highway 327** - Application will be reviewed by SCDOT Commission in July.

The eight item of business was an update from Chris Gossett on the Sales Tax projects and South Cashua. They just moved into the right of way phase of the Cashua project. The ROW cost went from $4m to $6.3M. The numbers will be approved and added to the STIP. The original $4M has been allocated and approved.

The first two sections of the US378 sales tax project, US76 and TV Road project are ready to go to construction as soon as they have permits. It has been 1.5 year process trying to get them form the Army Corp of Engineers. The projects will not LET until end of summer or a little later. There have been comments and mitigation with the Corp on permits. The final packet was submitted to them May 3rd and they have not responded to SCDOT. Pamplico Hwy project is in ROW. Property owners have not been contacted. All public comments have been responded to as of today. Alligator Road has been surveyed.

Phillip asked if there was any money allowed for utility relocation. Chris stated that County Council has approved payment out of County funds for County municipalities.

Debi asked Chris when they needed the agreement on S. Cashua between the City of Florence and SCDOT that Tony sent to her. Chris said the SCDOT would need it before construction could begin. Debi will follow-up on the agreement with the City.

Jay asked if Chris was going to report anything to the Policy Committee on the meeting with the business owners. He does not intend to, but will if asked. The intersection improvements that were requested will not change the project.

The ninth item of business was updates from PDCOG and PDRTA:

- Lavonne stated that the COG's Transportation Advisory Commission will hold their first meeting Monday, June 10th. Districts four and five will be represented.
- Chuck MacNeil stated that he is going through the budget process. They have cut their staff by 70%. It remains to be seen what will happen in the next fiscal year. They are trying to keep the six route scheduled services and the complimentary ADA services. Ridership continues to sky rocket and has more than doubled on some services. Hope to have better news to report at the next meeting.

The tenth item was other discussion. There was none.

The eleventh item of business was the FLATS Newsletter which is done annually and distributed to various locations. Phillip asked that we send him one electronically.

There being no further discussion, a motion was made by Phillip to adjourn and Michael made a second motion. The vote carried unanimously.

Morning News

Carolina Publishing Group

AFFIDAVIT OF INSERTION

STATE OF SOUTH CAROLINA
COUNTY OF FLORENCE

Personally appeared before me
Carrie Lloyd
The Legal Clerk for the Morning News, a daily newspaper published in the City of Florence, County of Florence, and the State of South Carolina said that the attached advertisement was published on

and 6/20/12
as shown by the files as said company.
Carrie Lloyd

Sworn and subscribed before me this 21st day of June, 2012

Janice B. Richardson NS
Notary Public South Carolina

Commissions expires: MY COMMISSION EXPIRES DECEMBER 16, 2019

NOTICE OF FLATS POLICY COMMITTEE MEETING

The Florence Area Transportation Study (FLATS) Policy Committee will hold a meeting at 10:30 A.M. on Monday, July 23, 2012 at the Florence City/County Complex, Room 803. (PUBLIC HEARING) The items for discussion include:

- 2035 Long Range Transportation Plan (LRTP)
- FY2013 Unified Planning Work Program (UPWP)
- FY2013-2018 Transportation Improvement Plan (TIP)
- Updated FLATS Boundary Study Area

The documents for discussion are located on the Florence County Planning and Building Inspections website at www.florencecco.org/offices/planning/flats/. Should you have any questions, please call (843) 656-1503. The TIP process is being used to meet the Public Participation requirements for the Pee Dee Regional Transportation Authority Program of Projects.

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Morning News

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AFFIDAVIT OF INSERTION

STATE OF SOUTH CAROLINA
COUNTY OF FLORENCE

Personally appeared before me

Carrie Lloyd

The Legal Clerk for the Morning News, a daily newspaper published in the City of Florence, County of Florence, and the State of South Carolina said that the attached advertisement was published on

and 1/28/13
as shown by the files as said company.

Carrie Lloyd

Sworn and subscribed before me this 20 day of Feb., 2013

NS
Notary Public South Carolina

Commissions expires: My Commission Expires December 21, 2022

CARLITA PATTERSON
NOTARY PUBLIC
SOUTH CAROLINA
COMMISSION EXPIRES
DEC. 21, 2022

NOTICE OF FLATS POLICY COMMITTEE MEETING

The Florence Area Transportation Study (FLATS) Policy Committee will hold a meeting at 10:30 A.M. on Monday, February 25, 2013 at the Florence City/County Complex, Room 803. (PUBLIC HEARING) The items for discussion include:

- FY2010-2015 Transportation Improvement Plan (TIP) Amendments
- Bylaws' Amendments
- 2010 FLATS Study Area Boundary Documents

The TIP is available for viewing and comment beginning Monday, January 28th through Thursday, February 7th. The document can be reviewed Monday through Friday between the hours of 8:30 a.m. and 5:00 p.m. at the Florence County Planning & Building Inspections Department located at 518 S. Irby St., at the Drs. Bruce and Lee Foundation Library Reference Desk located at 509 S. Dargan St., or online at www.florenceco.org/offices/planning/flats/. Please submit any comments to: FLATS, 518 S. Irby Street, Florence, SC 29501 or call (843)676-8600. The TIP process is being used to meet the Public Participation requirements for the Pee Dee Regional Transportation Authority Program of Projects.

Morning News

Carolina Publishing Group

AFFIDAVIT OF INSERTION

STATE OF SOUTH CAROLINA
COUNTY OF FLORENCE

Personally appeared before me
Carrie Lloyd

The Legal Clerk for the Morning News, a daily newspaper published in the City of Florence, County of Florence, and the State of South Carolina said that the attached advertisement was published on

and 4/10/13
as shown by the files as said company.
Carrie Lloyd

Sworn and subscribed before me this 10th day of May, 2013

NS
Notary Public South Carolina

Commissions expires: My Commission Expires December 21, 2022

CARLITA PATTERSON NOTARY PUBLIC SOUTH CAROLINA COMMISSION EXPIRES DEC. 21, 2022

NOTICE OF FLATS POLICY COMMITTEE MEETING

The Florence Area Transportation Study (FLATS) Policy Committee will hold a meeting at 10:30 A.M. on Monday, June 10, 2013 at the Florence City/County Complex, Room 803. (PUBLIC HEARING) Items for discussion include:

- Public Participation Process Amendments (PPP)
- FY2014-2019 Transportation Improvement Plan (TIP) Financial Sheet and Narrative
- FY2014 Unified Planning Work Program (UPWP)

The documents for discussion are available for viewing and comment Monday through Friday between the hours of 8:30 a.m. and 5:00 p.m. at the Florence County Planning & Building Inspections Department located at 518 S. Irby St., at the Drs. Bruce and Lee Foundation Library Reference Desk located at 509 S. Dargan St., or online at www.florenceco.org/offices/planning/flats/. The document's public comment dates are as follows:

- PPP – April 12th through May 27th
- TIP – May 17th through May 27th (Guideshare Projects Section and Federal Transit Administration Section, Programs 5307, 5309, 5310, 5316 and 5317).
- UPWP – May 17th through May 27th

Please submit any comments to: FLATS, 518 S. Irby Street, Florence, SC 29501 or call (843)676-8600. The TIP process is being used to meet the Public Participation requirements for the Pee Dee Regional Transportation Authority Program of Projects.

th Carolina 29501-0528
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Attachment 2

PL Funds Quarterly Reports

***Federal Highway Administration-PL Funds**

FY 2013

First Quarter (July 2012 – September 2012)

Federal ID # 57-6000351

Invoice# FLATS093012

Florence Area Transportation Study

Quarterly Summary

A-1 Administration

Staff presented the final three chapters of the FY2035 LRTP and the document as a whole to the Policy Committee this quarter. The Policy Committee approved the final three chapters, then the document as a whole during their July 23, 2012 public meeting.

Staff presented the DRAFT of FY2013 UPWP to the Policy Committee this quarter. The Policy Committee approved this document during their July 23, 2012 public meeting.

Staff presented the DRAFT of the amendments to the FY2010-2015 TIP to the Policy Committee this quarter. The Policy Committee approved the amendments during their July 23, 2012 public meeting.

Staff presented the proposed 2010 FLATS Study Area Boundary map to the Policy Committee this quarter. The Policy Committee approved this map during their July 23, 2012 public meeting.

Staff began working on amendments necessary to the FLATS By-Laws as a result of the 2010 Census new urbanized areas announcement.

Staff began working on amendments to the Public Participation Process (PPP) as a result of the new study area boundary adopted and the enactment of MAP-21.

Staff drafted Resolutions of Support to be signed by the two urbanized areas included in the FLATS area as a result of the 2010 Census announcement.

Staff and The City of Florence have met on several occasions to discuss a potential Overlay district for W. Palmetto Street. Staff has identified ownership of dilapidated or abandoned signs. The next step will be to contact the owners for action requesting replacement or removal.

Staff attended the SCAPA conference in Lexington this quarter.

Staff participated in three FHWA webinars regarding Map21 this quarter.

Staff participated in a Continuing Education webinar hosted by the South Carolina Association of Counties (SCAC) this quarter.

Staff continues to update the FLATS webpage as necessary.

Staff continues to maintain records of all FLATS activities, including correspondence, and quarterly reports. Staff organized meetings for technical, public and advisory groups that conduct FLATS business.

Staff continued to work on the self-certification review topics.

A-2 Public Participation

Staff continues to maintain a FLATS contact list per the Public Participation Process. Several new stakeholders were added and updated this quarter. As transportation-related issues arise, appropriate stakeholders are notified of upcoming meetings. Likewise, these groups are updated with meeting outcomes.

Staff held the appropriate public comment periods on the updates to all federal documents.

Staff advertised thirty days in advance for the 7/23/12 Policy Committee meeting, and listed documents to be presented in the advertisement, in addition to the proposed new FLATS Study Area Boundary.

Staff updated FLATS documents as amended at various public locations.

Staff continues to assist internal and external customers, as needed, with questions about transportation, population and building permits located in the FLATS jurisdiction. Citizens are frequently interested in data about the road network in the FLATS area. Staff assisted these customers and other public requests in a timely manner.

Electronic correspondence of transportation planning issues and news continued to be sent to the trails committee/interested citizens list throughout the quarter.

A-3 Enhancement Projects

Staff met with the FLATS Policy Committee chairman to respond to his questions regarding the Enhancement application received from Francis Marion University. Staff is waiting on information from SCDOT regarding the potential changes in the Transportation Enhancement Program as a result of MAP-21 to see if this project still qualifies and if the remaining SAFETEA-LU funds in the TIP can be utilized for it. SCDOT's response will determine if the application will be presented to the Study Team and Policy Committee.

Florence County is the local public agency (LPA) for the Red Doe Plantation Enhancement project. County Administration has received all bids for the proposed project and all are more than the amount of FLATS enhancement funds applied for. SCDOT has accepted a request by the owners for an extension on the project while it is being re-scoped.

The Lucas Street project is being advertised again through the public bid process following changes and revisions as requested by SCDOT. SCDOT did grant the City conditional approval of the Revised Plans and Specifications & Estimate (PS&E) package for the project in order to move the project along. The City has completed all revisions requested by SCDOT and has submitted for final approval. SCDOT letter of notification for final approval has not been received.

SCDOT has agreed to be the LPA for the Hobby Lobby connector, (NoName Creek Project) per the request of The City of Florence. The City is still trying to get the easement for trail sections on Wal-Mart property in order to move forward with the project.

Staff continues to host the quarterly Florence Trails Committee meetings. The Committee continues to research possible locations for new bike/pedestrian trails or other options to utilize enhancement funds. In addition to focusing on the projects in the FLATS Florence Area Bikeway Master Plan, the committee continues to focus on areas of need for sidewalks or sidewalk improvements keeping handicap accessibility in mind.

B-1 Mapping

Utilizing improved road data, internet mapping tools build efficient routes to deliver County services. Routing tools improve the efficiency of County staff trips reducing road mileage and, in turn, also reducing vehicle emissions. In conjunction, additional review is underway on the digital roads layer to verify that address ranges within the file are highly accurate and also that the road surface types are identified correctly.

A project was started to collect and estimate additional data on the GIS Roads layer within the FLATS area. This included estimating speeds limits and surface types that have not been added yet and the location of all stop signs, traffic signals and yield signs. This data can be utilized in a variety of ways, but, initially, will be used in the routing capabilities of the GIS network to help show users the most efficient routes to take within the Florence area.

The address point project continues to be updated. Staff devotes several hours per-day reviewing and correcting the address point information. Accurate addresses are important in plotting data for estimating demographics and in improving traffic flow as more staff and citizens navigate to their destinations more accurately in the FLATS area. This data will be utilized for the long-range transportation model.

Staff continues to review plats of new subdivisions and digitizing new parcels to better track growth in the FLATS area. Staff will continue to work on this process, as well as develop new techniques to create visualizations and show trends which will be featured in the annual report. Florence County requires digital data submission from developers of all major subdivisions in Florence. In addition to the property boundaries on the digital plans, major infrastructure elements such as roadways and utilities are also included on the digital data plans thus reducing staff time and improving quality of resulting GIS data files. Digital submission improves accuracy of growth information for better estimates of population demographics used in Traffic Analysis Zones.

Development of Right-of-way (ROW) feature class is now underway. The new ROW file will show designed SCDOT ROW along road projects now in development and/or construction. Planners will use the new ROW file in-house within ArcGIS desktop and Pictometry software systems. Information about road ROW will be useful for planners as a tool to aid in determining building setbacks and suitability for both zoning and land use designations along project areas.

New tools are now operational and used in both ArcMap and via the web that improve vehicle routing and provide multi-year aerials services. Updates have been made to the E-911 website as mapping services move toward the use of Java Script APIs. The new interactive mapping services improve functionality for field point data collection and real-time reporting. The GIS staff is beginning to test a Java Script application that it has developed to estimate actual speeds on FLATS roads. This data will also be used in calculating times with the GIS network used for routing.

Transportation evacuation routes and a strong transportation network are critical for hazard mitigation planning for both natural disasters such as flooding and man-made disasters such as chemical spills. Using an ArcGIS Java Script application created by the County, emergency management staff updated a point file for hazardous material locations and sites that would be affected within the county in order to assist with emergency evacuation notifications and routes. The application was written in such a way that the staff was able to do all of their work in the office instead of traveling several hundred miles of roads in the county to develop point locations.

Staff continues to provide GIS data, as necessary, to law enforcement, E911 Dispatch, fire departments, and emergency management personnel to assist in improving safety and security activities. Coordinated efforts with Florence Emergency Management Division and other key Florence community officials were made when working together on the Hazard Mitigation and community risk vulnerability analysis for Florence and the Pee Dee region. Key efforts focused on trend analysis of hurricane, tornado and other major storms that impact the community. Staff developed a project specific web application, used during the review process, allowing the Hazard Mitigation workgroup an opportunity to visually review and comment on key facilities and key community resources.

Staff recently completed a hazardous materials sites location point file for Florence County in order to assist with emergency evacuation notification and routes.

Efforts continue to enhance the new web applications by using Flex and Java API's and existing GIS layers. Upgraded web-mapping applications will be provided in a more user defined format based on specific needs within the sites. The new applications will improve web sites' usability for more effective use. For example, users can find locations and plan their routes more efficiently.

Recently, staff completed a new web application for Emergency Management Services (EMS) that plots dispatch calls on a mobile enabled mapping service in ArcGIS Online. The new tool will empower both EMS decision makers and staff to select the best possible response route and team when managing an emergency. Empowered decision makers can then respond to an emergency with the most efficient, time saving route while assuring proper use of limited resources.

Staff from a regional medical center recently contacted Florence County to assist with the preparation of a wall map. The map will be used as a visual display to aid patient transporters in determining distance by mile from the medical facility to other key facilities throughout the region offering specialized patient care. This service is a benefit to the Florence and surrounding Pee Dee Regional community in reducing travel time for patient medical services.

Coordinated work with the Pee Dee RTA continues for the mapping staff. Several meetings have occurred. Working directly with the director of the local RTA, mapping staff have revised the current RTA routes to reflect changes within the community that utilize this public transportation resource. Fewer routes are now available so the remaining routes have been expanded to pick-up areas that have been identified as key locations now utilized by the citizens of Florence County. Development of digital GIS routes, mapbooks and maps were made available to RTA to assist with this project.

Staff continues to provide maps for citizens, including road maps.

Mapping staff continue to make all necessary upgrades to desktop and server levels to a higher version of mapping software (ESRI ArcGIS 10 with service pack 4) to improve GIS data editing workflows and improved functionality for web and mobile based applications used for transportation planning.

The mapping department of Florence County recently submitted key data layers (roads, address points, etc) to ESRI's Community Base map program. The resulting base map has been developed and approved for public use. ESRI will host the Florence GIS Data base map service via their servers. This service is expected to be available effective November 1, 2012. The service is available to the public for use in mapping and web programs such as ArcGIS Desktop, ArcGIS Server, ArcGIS Online, ArcGIS webservices including several popular API's such as JavaScript, Silverlight, Flex and HTML5. The mapping staff will provide routine data updates to ESRI to refresh the road and other key data layers. This is just another way that Florence GIS is attempting to get location data to as many people as possible so that they can plan their trips in the Florence community efficiently, saving wear and tear on our roads and conserving fuel more effectively.

Development is completed on a downtown Florence website. In conjunction with existing economic development efforts within the downtown, the new site will help the community and potential clients to visualize and navigate within downtown Florence. With redevelopment efforts underway, promoting re-development of curr4ently built-up sectors of the urban landscape as opposed to construction of businesses and housing in the areas not yet developed cuts down on urban sprawl and reduces traffic problems that may occur in the future.

Recently, staff started development of an oversized wall map to provide a visual resource for Planning staff and citizens visiting the office. The wall map provides a street index and associated grid of all streets throughout Florence County's 800 + square miles of land area. This is another resource to reduce staff time and improve citizen response in determine

locations of facilities and streets thereby potentially reducing wasted drive time and road miles traveled in search of a road or facility.

B-2 Air Quality

Staff continues to coordinate with DHEC regarding air quality monitoring.

Staff continues to research and remain current on the requirements of SAFETEA-LU and the Environmental Protection Agency (EPA) standards for air quality and its impact on the planning process.

Staff continues to attend other various seminars and workshops and participate in webinars and conference calls as available regarding air quality and transportation conformity.

Staff continues to research ways to educate our community on EPA's proposal to strengthen the national ambient air quality standards for ground-level ozone and the potential consequences should the FLATS area become non-attainment.

Staff continues to research and document information for a potential tree preservation policy to enhance air quality. Staff maintains, in addition to the FLATS Contact lists, a list of individuals and organizations that would be directly affected by a Tree Preservation Policy for their input.

Additional procedures and guidelines will be required for FLATS projects should the area's status be in non-attainment. Staff continues to research these procedures and guidelines as stated in the South Carolina Conformity SIP.

B-3 Traffic

Staff completed the roadway functional classification information and returned to SCDOT as requested.

Staff attended the SCDOT Multi-Modal Transportation Plan meeting this quarter.

SCDOT met with the Policy Committee chairman to discuss the following two issues regarding the S. Cashua widening project: SCDOT is recommending a signal light at Jefferson Drive be included in the project, which would add an additional $75,000 to the cost of the project. SCDOT has advised that FHWA likely will not approve the environmental document if sidewalks are not included in the project scope, which would terminate further development of the project. The cost of sidewalks would add an additional $320,000 to the cost of the project. This information will be presented to the committee at their next meeting for feedback to SCDOT.

Staff continues to discuss questions and comments from citizens regarding the proposed widening of S. Cashua Drive this quarter. Public comments were forwarded to SCDOT for their consideration during the Preliminary Design phase.

Staff maintains public request locations for roadway improvements that would be appropriate for a FLATS project. Staff provides this information to the Study Team and Policy Committee as applicable.

Staff continues to communicate the needs of and public request for roadway improvements or signalization timing coordination during peak times to the local SCDOT office as necessary.

Staff continues contact with local Freight companies for areas of concern for freight traffic.

Staff continues to research and identify areas of improvement to be included in the next Long Range Transportation Plan.

Staff continues to compile crash data from included jurisdictions in support of the long-range transportation plan.

Staff continues to provide Average Annual Daily Traffic (AADT) information to citizens, county agencies and officials as requested.

Staff prepared traffic reviews and compiled building permit data for various projects, rezoning and congestion modeling. This data will help show how land use changes will affect the transportation system. Staff worked with traffic counts for various projects and helped make land use decisions in the FLATS area.

Staff continues to work with the local transit authority on ways to share transit information with third party tools such as Google Maps. In addition, we continue to work with the authority in updating their routes.

C-1 Plan and Program Development and Maintenance

Staff presented the draft of the final three chapters of the 2035 LRTP to the Policy Committee during this quarter. Staff administered the 30-day public comment for the final three chapters and the document as a whole. These chapters in addition to the entire document were approved by the Policy Committee during their July 23, 2012 meeting.

Staff presented the draft of the FY2013 UPWP to the Policy Committee during this quarter. The 10-day public comment period was administered. The Policy Committee approved the document during their July 23, 2012 meeting.

Staff presented the amendments to the FY2010-2015 TIP to the Policy Committee during this quarter. The 10-day public comment period was administered prior to presenting. The Policy Committee approved the amendments during their July 23, 2012 meeting.

Staff presented maps outlining new urbanized area per the 2010 Census information received from SCDOT and the proposed study area boundary to the Policy Committee during this quarter. The Policy Committee approved it during their July 23, 2012 meeting.

Staff began working on amendments that would be necessary to the FLATS By-Laws as a result of the 2010 Census new urbanized areas announcement.

Staff began working on amendments to the Public Participation Process (PPP) as a result of the 2010 Census new urbanized areas announcement and the enactment of MAP-21.

Staff continues to prepare, maintain and submit quarterly PL funding reports to SCDOT as required.

Staff continues to research and participate in webinars as they become available to continue training in regards to transportation planning requirements by federal and state officials.

Records of FLATS activities have been maintained.

C-2 Socio-Economic Data

Staff began research for a potential corridor overlay project specifically for Highway 76 East. Staff researched the cost to bury power lines for a portion of the corridor, videoed the corridor took pictures of dilapidated or abandoned signs, determined the tax map number where the signs were located, marked locations on a parcel based map and developed a spreadsheet listing obtained information regarding the sign.

Staff is coordinating with the City of Florence on potential Adopt-An-Interchange projects for the five I-95 interchanges entering Florence. Staff is currently waiting on SCDOT to advise what the changes will be in the Adopt-An-Interchange program as a result of MAP-21.

Staff continues to maintain zoning, land use and project development databases for use to direct traffic modeling.

Staff continues to maintain existing and future land use maps on a parcel by parcel basis. Staff amends the existing land use maps as amendments are approved by governing officials.

Staff continues to maintain a database of Planning Commission items. This database contains parcel numbers that can easily be related back to the digital parcel layer. This information can then be related to the TAZs and show trends in zoning and rezoning which indicate growth and the types of growth that are occurring.

Staff continues to map foreclosures in our area and compile data that may be useful in comparing trends statewide. This data will be used to track trends in foreclosures as well as other data correlations.

Staff continues to work on the improvement of GIS layers to provide land use analysis at the parcel level.

C-3 Transit Planning

Staff met with PDRTA and PDCOG staff to discuss if an amendment or administrative change was necessary to the TIPs and STIP regarding the funding amount allocated to them in FY2011 and FY2012. It was determined that the STIP and the TIP were correct and no changes were necessary.

Staff continues to provide PDRTA updated road/centerline information as new roads are developed or changes to existing roads.

Staff continues to provide updates to the County Road Atlas to PDRTA.

Staff prepared several specific area maps as requested by PDRTA.

Staff maintains an internet mapping website, which PDRTA can utilize to locate addresses, find major building, identify subdivisions/industries, and pinpoint other landmarks. This information will assist PDRTA as identify ridership for new routes.

Staff continues to update bus route and stop signage locations maps and provide other digitized information as requested by PDRTA.

Staff has direct contact with PDRTA on a continual basis and will keep them apprised of project activities in an attempt to help them locate users more efficiently.

Staff will continue to work with PDRTA as required.

Note: This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

***Federal Highway Administration-PL Funds**

FY 2013

Second Quarter (October 2012 – December 2012)

Federal ID # 57-6000351

Invoice# FLATS123112

Florence Area Transportation Study

Quarterly Summary

A-1 Administration

Staff mailed packets which included a letter of explanation, Resolution of Support and FLATS information to the two new urbanized areas as a result of the 2010 Census. Staff offered to present this information to their Council as requested.

Staff presented the above referenced information to the Timmonsville Town Council.

Staff met with GSATS MPO to review their Corridor Overlay Studies. FLATS MPO and The City of Florence will be working together to develop corridor overlays for several gateways into the City.

Staff attended the SCAPA conference in Pawleys Island this quarter.

Staff participated in an FTA webinar regarding Map21 this quarter.

Staff continues to update the FLATS webpage as necessary.

Staff continues to maintain records of all FLATS activities, including correspondence, and quarterly reports. Staff organized meetings for technical, public and advisory groups that conduct FLATS business.

Staff continued to work on the self-certification review topics.

A-2 Public Participation

Staff continues to maintain a FLATS contact list per the Public Participation Process. Several new stakeholders were added and updated this quarter. As transportation-related issues arise, appropriate stakeholders are notified of upcoming meetings. Likewise, these groups are updated with meeting outcomes.

Staff updated FLATS documents as amended at various public locations.

Staff continues to assist internal and external customers, as needed, with questions about transportation, population and building permits located in the FLATS jurisdiction. Citizens are frequently interested in data about the road network in the FLATS area. Staff assisted these customers and other public requests in a timely manner.

Electronic correspondence of transportation planning issues and news continued to be sent to the trails committee/interested citizens list throughout the quarter.

A-3 Enhancement Projects

Staff has been advised by the SCDOT Enhancement Department that the accrued enhancement funds from SAFETEA-LU are eliminated since the funds were not obligated to a project prior to MAP-21. Staff advised Francis Marion University, who had submitted an application for these funds, but it had not been presented to the Policy Committee.

Florence County is the local public agency (LPA) for the Red Doe Plantation Enhancement project. County Administration has received all bids for the proposed project and all are more than the amount of FLATS enhancement funds applied for. SCDOT has accepted a request by the owners for an extension on the project while it is being re-scoped. The re-scoping process continues.

The City of Florence received the Construction Award Concurrence Approval from SCDOT for the Lucas Street Intersection Gateway project. The City is moving forward with this project.

SCDOT has agreed to be the LPA for the Hobby Lobby connector, (NoName Creek Project) per the request of The City of Florence. The City is still trying to get the easement for trail sections on Wal-Mart property in order to move forward with the project.

Staff continues to host the quarterly Florence Trails Committee meetings. The Committee continues to research possible locations for new bike/pedestrian trails or other options to utilize enhancement funds. In addition to focusing on the projects in the FLATS Florence Area Bikeway Master Plan, the committee continues to focus on areas of need for sidewalks or sidewalk improvements keeping handicap accessibility in mind.

B-1 Mapping

Utilizing improved road data, internet mapping tools build efficient routes to deliver County services. Routing tools improve the efficiency of County staff trips reducing road mileage and, in turn, also reducing vehicle emissions. In conjunction, additional review is underway on the digital roads layer to verify that address ranges within the file are highly accurate and also that the road surface types are identified correctly.

A project to collect and estimate additional data on the GIS Roads layer within the FLATS area continues. This includes estimating speeds limits and surface types that have not been added yet and the location of all stop signs, traffic signals and yield signs. This data can be utilized in a variety of ways, but, initially, will be used in the routing capabilities of the GIS network to help show users the most efficient routes to take within the Florence area.

The address point project continues to be updated. Staff devotes several hours per-day reviewing and correcting the address point information. Accurate addresses are important in plotting data for estimating demographics and in improving traffic flow as more staff and citizens navigate to their destinations more accurately in the FLATS area. This data will be utilized for the long-range transportation model.

Staff continues to review plats of new subdivisions and digitize new parcels to better track growth in the FLATS area. Staff will continue to work on this process, as well as develop new techniques to create visualizations and show trends which will be featured in the annual report. Florence County requires digital data submission from developers of all major

subdivisions in Florence. In addition to the property boundaries on the digital plans, major infrastructure elements such as roadways and utilities are also included on the digital data plans thus reducing staff time and improving quality of resulting GIS data files. Digital submission improves accuracy of growth information for better estimates of population demographics used in Traffic Analysis Zones.

Development of Right-of-way (ROW) feature class continues. The new ROW file will show designed SCDOT ROW along road projects now in development and/or construction. Planners will use the new ROW file in-house within ArcGIS desktop and Pictometry software systems. Information about road ROW will be useful for planners as a tool to aid in determining building setbacks and suitability for both zoning and land use designations along project areas.

Tools are now operational and used in both ArcMap and via the web that improve vehicle routing and provide multi-year aerials services. Updates have been made to the E-911 website as mapping services move toward the use of Java Script APIs. The new interactive mapping services improve functionality for field point data collection and real-time reporting.

Transportation evacuation routes and a strong transportation network are critical for hazard mitigation planning for both natural disasters such as flooding and man-made disasters such as chemical spills. Using an ArcGIS Java Script application created by the County, emergency management staff updated a point file for hazardous material locations and sites that would or could be impacted by hazards within the County. This new data and information will assist with emergency evacuation notifications and routes to the citizens, businesses and visitors of Florence County. The application was written in such a way that the staff was able to do all of their work in the office instead of traveling several hundred miles of roads in the county to develop point locations. With work completed for mapped points, the application is now a comprehensive tool used in Emergency Management to route natural or made-made disasters.

Staff continues to provide GIS data, as necessary, to law enforcement, E911 Dispatch, fire departments, and emergency management personnel to assist in improving safety and security activities. Coordinated efforts with Florence Emergency Management Division and other key Florence community officials were made when working together on the Hazard Mitigation and community risk vulnerability analysis for Florence and the Pee Dee region. Key efforts focused on trend analysis of hurricane, tornado and other major storms that impact the community. Therefore, staff efforts were specifically focused on the development of a specific web application, used during the review process, which allows the Hazard Mitigation workgroup an opportunity to visually review and comment on key facilities and key community resources.

Efforts continue to enhance the new web applications by using JavaScript API's and existing GIS layers. Upgraded web-mapping applications will be provided in a more user defined format based on specific needs within the sites. The new applications will improve web sites' usability for more effective use. For example, users can find locations and plan their routes more efficiently. In addition to developing new tools to collect transportation GIS data, modifications are constantly being made to adapt to rapidly changing technology. ESRI was promoting the

use of the Flex API up to around two years ago. Now adobe has decided not to continue support of Flex. Therefore, the GIS Department is upgrading its online websites to use JavaScript API to improve site usability across many types of mobile devices and desktop internet browsers.

Staff continues to enhance and utilize a new web application for Emergency Management Services (EMS) plots dispatch calls on a mobile enabled mapping service in ArcGIS Online. The tool empowers both EMS decision makers and staff to select the best possible response route and team when managing an emergency. Empowered decision makers can then respond to an emergency with the most efficient, time saving route while assuring proper use of limited resources.

Coordinated work with the Pee Dee RTA continues for the mapping staff. Working directly with the director of the local RTA, mapping staff have revised the current RTA routes to reflect changes within the community that utilize this public transportation resource. Fewer routes are now available so the remaining routes have been expanded to pick-up areas that have been identified as key locations now utilized by the citizens of Florence County. Development of digital GIS routes, map-books and maps were made available to RTA.

Staff continues to provide maps for citizens, including road maps and enhanced web and mobile applications

Mapping staff continue to make all necessary upgrades to desktop and server levels to a higher version of mapping software (ESRI ArcGIS 10.1) to improve GIS data editing workflows and improved functionality for web and mobile based applications used for transportation planning.

The mapping department of Florence County recently submitted key data layers (roads, address points, etc) to ESRI's Community Base map program. The resulting base map has been developed and approved for public use. ESRI is now hosting the Florence GIS road data base map service for public consumption via their servers within the Community Base Maps Program. The service is available to the public for use in mapping and web programs such as ArcGIS Desktop, ArcGIS Server, ArcGIS Online, ArcGIS web-services including several popular API's such as JavaScript, Silverlight and HTML5. The mapping staff will provide routine data updates to ESRI to refresh the road and other key data layers. This is just another way that Florence GIS is attempting to get location data to as many people as possible so that they can plan their trips in the Florence community efficiently, saving wear and tear on our roads and conserving fuel more effectively.

Work continues on the development of an oversized wall map to provide a visual resource for Planning staff and citizens visiting the office. The wall map provides a street index and associated grid of all streets throughout Florence County's 800 + square miles of land area. This is another resource to reduce staff time and improve citizen response in determine locations of facilities and streets thereby potentially reducing wasted drive time and road miles traveled in search of a road or facility.

Staff is working with local conservations groups on identifying and providing mapping tools to help them on their strategic plans. Their work helps this community grow into a smarter fashion with areas set aside for growth and others for preservation. This approach means less transportation infrastructure has to be built to serve a scattered pattern of growth.

B-2 Air Quality

Staff continues to coordinate with DHEC regarding air quality monitoring.

Staff continues to research and remain current on the requirements of SAFETEA-LU and the Environmental Protection Agency (EPA) standards for air quality and its impact on the planning process.

Staff continues to attend other various seminars and workshops and participate in webinars and conference calls as available regarding air quality and transportation conformity.

Staff continues to research ways to educate our community on EPA's proposal to strengthen the national ambient air quality standards for ground-level ozone and the potential consequences should the FLATS area become non-attainment.

Staff continues to research and document information for a potential tree preservation policy to enhance air quality. Staff maintains, in addition to the FLATS Contact lists, a list of individuals and organizations that would be directly affected by a Tree Preservation Policy for their input.

Additional procedures and guidelines will be required for FLATS projects should the area's status be in non-attainment. Staff continues to research these procedures and guidelines as stated in the South Carolina Conformity SIP.

B-3 Traffic

Staff continues to review the SCDOT Multi-Modal Transportation Plan webpage and will be participating in the next meeting.

SCDOT has completed their summary from the public hearing and public comments received regarding the proposed widening of S. Cashua Drive this quarter. This information will be presented at the next Policy Committee meeting next quarter.

Staff maintains public request locations for roadway improvements that would be appropriate for a FLATS project. Staff provides this information to the Study Team and Policy Committee as applicable.

Staff continues to communicate the needs of and public request for roadway improvements or signalization timing coordination during peak times to the local SCDOT office as necessary.

Staff continues contact with local Freight companies for areas of concern for freight traffic.

Staff continues to research and identify areas of improvement to be included in the next Long Range Transportation Plan.

Staff continues to compile crash data from included jurisdictions in support of the long-range transportation plan.

Staff continues to provide Average Annual Daily Traffic (AADT) information to citizens, county agencies and officials as requested.

Staff prepared traffic reviews and compiled building permit data for various projects, rezoning and congestion modeling. This data will help show how land use changes will affect the transportation system. Staff worked with traffic counts for various projects and helped make land use decisions in the FLATS area.

Staff continues to work with the local transit authority on ways to share transit information with third party tools such as Google Maps. In addition, we continue to work with the authority in updating their routes.

C-1 Plan and Program Development and Maintenance

Staff continues to update federal documents as required.

Staff mailed packets which included a letter of explanation, Resolution of Support and FLATS information to the two new urbanized areas as a result of the 2010 Census. Staff offered to present this information to their Council as requested.

Staff presented the above referenced information to the Timmonsville Town Council.

Staff attended the SCAPA conference in Pawleys Island this quarter.

Staff participated in an FTA webinar regarding Map21 this quarter.

Staff continues to prepare, maintain and submit quarterly PL funding reports to SCDOT as required.

Staff continues to research and participate in webinars as they become available to continue training in regards to transportation planning requirements by federal and state officials.

Records of FLATS activities have been maintained.

C-2 Socio-Economic Data

Staff met with GSATS MPO to review their Corridor Overlay Studies. FLATS MPO and The City of Florence will be working together to develop corridor overlays for several gateways into the City.

Staff maintains the research information collected for a potential corridor overlay project for Highway 76 East to proceed once funds are available.

Staff continues to coordinate with the City of Florence on potential projects for the five I-95 interchanges entering Florence to proceed once funds are available.

Staff continues to maintain zoning, land use and project development databases for use to direct traffic modeling.

Staff continues to maintain existing and future land use maps on a parcel by parcel basis. Staff amends the existing land use maps as amendments are approved by governing officials.

Staff continues to maintain a database of Planning Commission items. This database contains parcel numbers that can easily be related back to the digital parcel layer. This information can then be related to the TAZs and show trends in zoning and rezoning which indicate growth and the types of growth that are occurring.

Staff continues to map foreclosures in our area and compile data that may be useful in comparing trends statewide. This data will be used to track trends in foreclosures as well as other data correlations.

Staff continues to work on the improvement of GIS layers to provide land use analysis at the parcel level.

C-3 Transit Planning

Staff is meeting with PDRTA and PDCOG staff on a quarterly basis for potential assistance with projects or programs.

Staff continues to provide PDRTA updated road/centerline information as new roads are developed or changes to existing roads.

Staff continues to provide updates to the County Road Atlas to PDRTA.

Staff prepared several specific area maps as requested by PDRTA.

Staff maintains an internet mapping website, which PDRTA can utilize to locate addresses, find major building, identify subdivisions/industries, and pinpoint other landmarks. This information will assist PDRTA as identify ridership for new routes.

Staff continues to update bus route and stop signage locations maps and provide other digitized information as requested by PDRTA.

Staff has direct contact with PDRTA on a continual basis and will keep them apprised of project activities in an attempt to help them locate users more efficiently.

Staff will continue to work with PDRTA as required.

Note: This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

***Federal Highway Administration-PL Funds**

FY 2013

Third Quarter (January 2013 – March 2013)

Federal ID # 57-6000351

Invoice# FLATS33113

Florence Area Transportation Study

Quarterly Summary

A-1 Administration

Staff prepared the amendments to the 2010-2015 TIP, administered the appropriate public comment period and presented to the FLATS Study Team and Policy Committee.

Staff prepared the amendments to the ByLaws as a result of the 2010 Census to include a representative for the two new urbanized areas and the new study area boundary and presented to the Policy Committee at their February 25, 2013 meeting. Amendments were approved by the Policy Committee.

Staff presented the required documents due to SCDOT by March 2013 as a result of the 2010 Census to the Study Team and Policy Committee. The Policy Committee approved documents at their February 25, 2013 meeting. The packet included the 2010 Study Area Boundary Map, the three executed Resolutions and the amended Bylaws. In addition GIS data for the new study area boundary was supplied to SCDOT.

Staff forwarded documents to SCDOT as a result of the 2010 Census on February 25, 2013.

Staff began updates to the FY2014 UPWP.

Staff participated in an FTA webcast regarding New Starts.

Staff participated in an FHWA webinar titled “TIFIA Federal Credit Assistance Program Overview”.

Staff participated in an FHWA web conference titled “Invest 1.0 System Planning Module”.

Staff continues to organize Policy Committee and Study Team meetings and present documentation accordingly.

Staff continues to make revisions to required Federal documents and reports as required.

Staff continues to update the FLATS webpage as necessary.

Staff continues to maintain records of all FLATS activities, including correspondence, and quarterly reports.

Staff organized meetings for technical, public and advisory groups that conduct FLATS business.

Staff continued to work on the self-certification review topics.

Staff continues to host the quarterly Florence Trails Committee meetings.

A-2 Public Participation

Staff continued preparing amendments to the Public Participation Process. The new study area boundary map and MAP-21 information was documented.

Staff administered the appropriate public comment period for all federal documents presented to the Policy Committee at their meeting this quarter.

Staff began developing the fourth edition of the FLATS Newsletter for public distribution.

Staff continues to maintain a FLATS contact list per the Public Participation Process. Several new stakeholders were added and updated this quarter. As transportation-related issues arise, appropriate stakeholders are notified of upcoming meetings. If necessary, these groups are updated with meeting outcomes.

Staff updated FLATS documents as amended at various public locations.

Staff continues to maintain records of public attendance and public comments for FLATS meetings and FLATS documents.

Staff continues to assist internal and external customers, as needed, with questions about transportation, population and building permits located in the FLATS jurisdiction. Citizens are frequently interested in data about the road network in the FLATS area. Staff assisted these customers and other public requests in a timely manner.

Electronic correspondence of transportation planning issues and news continued to be sent to the trails committee/interested citizens list throughout the quarter.

A-3 Enhancement Projects

FLATS staff received an enhancement application that was caught in the middle between SAFETEA-LU and the enactment of MAP-21. SCDOT advised staff to present the project to the Policy Committee and if approved, they will present to the Transportation Commission to see if it can still be funded. If not, it will need to be presented under the new Transportation Alternatives Program. Staff presented this application from Francis Marion University to the Policy Committee during this fiscal year.

Florence County is the local public agency (LPA) for the Red Doe Plantation Enhancement project. County Administration has received all bids for the proposed project and all are more than the amount of FLATS enhancement funds applied for. SCDOT has accepted a request by the owners for an extension on the project while it is being re-scoped. The re-scoping process continues.

The City of Florence received the Construction Award Concurrence Approval from SCDOT for the Lucas Street Intersection Gateway project. The City continues construction on this project.

SCDOT is the LPA for the Hobby Lobby connector, (NoName Creek Project). An easement for the trail sections on the Wal-Mart property is needed in order to move forward with the project. The City of Florence is attempting to obtain this document for SCDOT.

Staff continues to host the quarterly Florence Trails Committee meetings. The Committee continues to research possible locations for new bike/pedestrian trails or other options to utilize enhancement funds. In addition to focusing on the projects in the FLATS Florence Area Bikeway Master Plan, the committee continues to focus on areas of need for sidewalks or sidewalk improvements keeping handicap accessibility in mind.

B-1 Mapping

Utilizing improved road data, internet mapping tools build efficient routes to deliver County services. Routing tools improve the efficiency of County staff trips reducing road mileage and, in turn, also reducing vehicle emissions. In conjunction, additional review is underway on the digital roads layer to verify that address ranges within the file are highly accurate and also that the road surface types are identified correctly.

A project to collect and estimate additional data on the GIS Roads layer within the FLATS area continues. This data can be utilized in a variety of ways, but, initially, will be used in the routing capabilities of the GIS network to help show users the most efficient routes to take within the Florence area.

The address point project continues to be updated. Staff devotes several hours per-day reviewing and correcting the address point information. Accurate addresses are important in plotting data for estimating demographics and in improving traffic flow as more staff and citizens navigate to their destinations more accurately in the FLATS area. This data will be utilized for the long-range transportation model.

Staff continues to review plats of new subdivisions and digitize new parcels to better track growth in the FLATS area. Staff will continue to work on this process, as well as develop new techniques to create visualizations and show trends which will be featured in the annual report. Florence County requires digital data submission from developers of all major subdivisions in Florence. In addition to the property boundaries on the digital plans, major infrastructure elements such as roadways and utilities are also included on the digital data plans thus reducing staff time and improving quality of resulting GIS data files. Digital submission improves accuracy of growth information for better estimates of population demographics used in Traffic Analysis Zones.

Development of a Right-of-way (ROW) feature class is now complete. The new ROW file shows designed SCDOT ROW along road projects now in development and/or construction. Planners will use the new ROW file in-house within ArcGIS desktop and Pictometry software systems. Information about road ROW is useful for planners as a tool to aid in determining building setbacks and suitability for both zoning and land use designations along project areas.
Tools are now operational and used in both ArcMap and via the web that improve vehicle routing and provide multi-year aerials services. Updates have been made to the E-911 website as mapping services move toward the use of Java Script APIs. The new interactive mapping services improve functionality for field point data collection and real-time reporting.

Transportation evacuation routes and a strong transportation network are critical for hazard mitigation planning for both natural disasters such as flooding and man-made disasters such as chemical spills. Using an ArcGIS Java Script application created by the County, emergency management staff updated a point file for hazardous material locations and sites that would or could be impacted by hazards within the County. This new data and information will assist with emergency evacuation notifications and routes to the citizens, businesses and visitors of Florence County. The application was written in such a way that the staff was able to do all of their work in the office instead of traveling several hundred miles of roads in the county to develop point locations. With work completed for mapped points, the application is now a comprehensive tool used in Emergency Management to route natural or made-made disasters.

Staff continues to provide GIS data, as necessary, to law enforcement, E911 Dispatch, fire departments, and emergency management personnel to assist in improving safety and security activities. Coordinated efforts with Florence Emergency Management Division and other key Florence community officials were achieved when working together on the Hazard Mitigation and community risk vulnerability analysis for Florence and the Pee Dee region. Key efforts focused on trend analysis of hurricane, tornado and other major storms that impact the community. Therefore, staff efforts were specifically focused on the development of a specific web application, used during the review process, which allows the Hazard Mitigation workgroup an opportunity to visually review and comment on key facilities and key community resources.

Advanced efforts continue to enhance the new web applications by using JavaScript API's and existing GIS layers. Upgraded web-mapping applications will be provided in a more user defined format based on specific needs within the sites. The new applications will improve web sites' usability for more effective use. For example, users can find locations and plan their routes more efficiently. In addition to developing new tools to collect transportation GIS data, modifications are constantly being made to adapt to rapidly changing technology. The GIS Department is upgrading its online websites to use of the more current JavaScript API technology to improve site usability across many types of mobile devices and desktop internet browsers.

Staff continues to enhance and utilize a new web application for Emergency Management Services (EMS) plots dispatch calls on a mobile enabled mapping service in ArcGIS Online. The tool empowers both EMS decision makers and staff to select the best possible response route and team when managing an emergency. Empowered decision makers can then respond to an emergency with the most efficient, time saving route while assuring proper use of limited resources.

Coordinated work with PDRTA continues for the mapping staff. Working directly with the director of PDRTA, mapping staff has revised the current routes to reflect changes within the community that utilize this public transportation resource. Fewer routes are now available so the remaining routes have been expanded to pick-up areas that have been identified as key

locations now utilized by the citizens of Florence County. Development of digital GIS routes, map-books and maps were made available to PDRTA.

Staff continues to provide maps for citizens, including road maps and enhanced web and mobile applications.

GIS Mapping staff continues to make all necessary upgrades to desktop and server levels to a higher version of mapping software (ESRI ArcGIS 10.1) to improve GIS data editing workflows and improved functionality for web and mobile based applications used for transportation planning.

The GIS mapping department of Florence County recently submitted key data layers (roads, address points, etc.) updates to ESRI's Community Base map program. The resulting base map has been developed and approved for public use. ESRI is now hosting the Florence GIS road data base map service for public consumption via their servers within the Community Base Maps Program. The service is available to the public for use in mapping and web programs such as ArcGIS Desktop, ArcGIS Server, ArcGIS Online, ArcGIS web-services including several popular API's such as JavaScript, Silverlight and HTML5. The mapping staff will provide routine data updates to ESRI to refresh the road and other key data layers. This is just another way that Florence GIS is attempting to get location data to as many people as possible so that they can plan their trips in the Florence community efficiently, saving wear and tear on our roads and conserving fuel more effectively.

Work continues on the development of an oversized wall map to provide a visual resource for Planning staff and citizens visiting the office. The wall map provides a street index and associated grid of all streets throughout Florence County's 800 + square miles of land area. This is another resource to reduce staff time and improve citizen response in determining locations of facilities and streets thereby potentially reducing wasted drive time and road miles traveled in search of a road or facility.

Staff is working with local conservation groups on identifying and providing mapping tools to help them on their strategic plans. Their work helps this community grow into a smarter fashion with areas set aside for growth and others for preservation. This approach means less transportation infrastructure has to be built to serve a scattered pattern of growth.

B-2 Air Quality

Staff continues to coordinate with DHEC regarding air quality monitoring.

Staff continues to research and remain current on the requirements of MAP-21 and the Environmental Protection Agency (EPA) standards for air quality and its impact on the planning process.

Staff continues to attend other various seminars and workshops and participate in webinars and conference calls as available regarding air quality and transportation conformity.

Staff continues to research ways to educate our community on EPA's proposal to strengthen the national ambient air quality standards for ground-level ozone and the potential consequences should the FLATS area become non-attainment.

Staff continues to research and document information for a potential tree preservation policy to enhance air quality. Staff maintains, in addition to the FLATS Contact lists, a list of individuals and organizations that would be directly affected by a Tree Preservation Policy for their input.

Additional procedures and guidelines will be required for FLATS projects should the area's status be in non-attainment. Staff continues to research these procedures and guidelines as stated in the South Carolina Conformity SIP.

B-3 Traffic

Staff continues to review the SCDOT Multi-Modal Transportation Plan webpage and will be participating in the next meeting.

Attended the SCDOT public hearing for the FLATS Guideshare project, S. Cashua Drive.

Several S. Cashua Drive business owners, who will have to relocate as a result of this widening project, requested a meeting with SCDOT representatives to discuss potential alternative designs. Staff attended meeting with SCDOT.

Provided information to citizens as requested regarding the proposed widening of S. Cashua Drive. Public comments were forwarded to SCDOT for their consideration during the Preliminary Design phase;

Attended the SCDOT public hearing for US-51 Pamplico Highway Capital Sales Tax widening project;

Staff maintains public request locations for roadway improvements that would be appropriate for a FLATS project. Staff provides this information to the Study Team and Policy Committee as applicable.

Staff continues to communicate the needs of and public requests for roadway improvements or signalization timing coordination during peak times to the local SCDOT office as necessary.

Staff continues contact with local Freight companies for areas of concern for freight traffic.

Staff continues to research and identify areas of improvement to be included in the next Long Range Transportation Plan.

Staff continues to compile crash data from included jurisdictions in support of the long-range transportation plan.

Staff continues to provide Average Annual Daily Traffic (AADT) information to citizens, county agencies and officials as requested

Staff prepared traffic reviews and compiled building permit data for various projects, rezoning and congestion modeling. This data will help show how land use changes will affect the

transportation system. Staff worked with traffic counts for various projects and helped make land use decisions in the FLATS area.

Staff continues to work with the local transit authority on ways to share transit information with third party tools such as Google Maps. In addition, we continue to work with the authority in updating their routes.

C-1 Plan and Program Development and Maintenance

Staff began the updates to the elements of the Florence County Comprehensive Plan for the ten-year update requirement.

Prepared and presented the amendments to the FY2010-2015 TIP to the Study Team and Policy Committee.

Prepared and presented amendments to the FLATS ByLaws as a result of the 2010 Census to the Study Team and Policy Committee.

Prepared and presented the required documents due to SCDOT by March 2013 as a result of the 2010 Census to the Study Team and Policy Committee. The Policy Committee approved documents at their February 25, 2013 meeting. The packet included the 2010 Study Area Boundary Map, the three executed Resolutions and the amended Bylaws. In addition GIS data for the new study area boundary was supplied to SCDOT;

Provided the above referenced documents as a result of the 2010 Census to SCDOT on February 25, 2013;

Staff continues to update federal documents as required.

Staff mailed packets which included a letter of explanation, Resolution of Support and FLATS information to the two new urbanized areas as a result of the 2010 Census. Staff offered to present this information to their Council as requested.

Staff continues to prepare, maintain and submit quarterly PL funding reports to SCDOT as required.

Staff continues to research and participate in webinars as they become available to continue training in regards to transportation planning requirements by federal and state officials.

Records of FLATS activities have been maintained.

C-2 Socio-Economic Data

Researched and documented information for E. Palmetto Street regarding abandoned or dilapidated signs. Sent letters out to parcel owners where signage was located to have removed or repaired.

Began preparing a list of resurfacing and intersection projects within the FLATS area where 20% of annual Guideshare funds can be allocated to as required by the Transportation Highway Commission;

Began project examining the corridors into the City to potentially establish Entrance Overlay Districts. The purpose of this District would be to improve the aesthetics such as building design and façade, visual character and to provide for and promote orderly development and redevelopment (E. Palmetto Street; W. Palmetto Street; S. Irby Street; and N. Irby Street);

Began project researching the main three I-95 interchanges that promote entrances into Florence for intersection improvements (I-95 & US76; I-95 and I-20; I-95 and US52);

Staff continues to coordinate with the City of Florence on potential projects for the five I-95 interchanges entering Florence to proceed once funds are available.

Staff continues to maintain zoning, land use and project development databases for use to direct traffic modeling.

Staff continues to maintain existing and future land use maps on a parcel by parcel basis. Staff amends the existing land use maps as amendments are approved by governing officials.

Staff continues to maintain a database of Planning Commission items. This database contains parcel numbers that can easily be related back to the digital parcel layer. This information can then be related to the TAZs and show trends in zoning and rezoning which indicate growth and the types of growth that are occurring.

Staff continues to map foreclosures in our area and compile data that may be useful in comparing trends statewide. This data will be used to track trends in foreclosures as well as other data correlations.

Staff continues to work on the improvement of GIS layers to provide land use analysis at the parcel level.

C-3 Transit Planning

Staff is meeting with PDRTA and PDCOG staff on a quarterly basis for potential assistance with projects or programs.

Staff provided mapping updates to PDRTA in order to develop new routes and identify ridership.

Staff continues to provide PDRTA updated road/centerline information as new roads are developed or changes to existing roads.

Staff continues to provide updates to the County Road Atlas to PDRTA.

Staff prepared several specific area maps as requested by PDRTA.

Staff maintains an internet mapping website, which PDRTA can utilize to locate addresses, find major building, identify subdivisions/industries, and pinpoint other landmarks. This information will assist PDRTA to identify ridership for new routes.

Staff continues to update bus route and stop signage locations maps and provide other digitized information as requested by PDRTA.

Staff has direct contact with PDRTA on a continual basis and will keep them apprised of project activities in an attempt to help them locate users more efficiently.

Staff will continue to work with PDRTA as required.

Note: This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

***Federal Highway Administration-PL Funds**

FY 2013

Fourth Quarter (April 2013 – June 2013)

Federal ID # 57-6000351

Invoice# FLATS063013

Florence Area Transportation Study

Quarterly Summary

A-1 Administration

Staff organized and presented documentation at one Policy Committee and one Study Team meeting during this quarter.

Staff maintained minutes, resolutions, agreements, correspondence and all FLATS records including quarterly reports.

Staff provided the administrative support and supervision needed to administer the plans and programs identified in the UPWP.

Staff updated the FLATS webpage with four federal documents that were amended and approved by the Policy Committee during this quarter. (FY2014-2019 TIP, FY2014 UPWP, FLATS By-Laws and the Public Participation Process)

Staff distributed the FY2014-2019 TIP to public officials to inform them of projects that FLATS Guideshare funds are being utilized towards.

Staff distributed the FY2014 UPWP to public officials to inform them of planning activities and costs associated with FY2014.

Staff administered the quarterly Florence Trails Committee meeting.

A-2 Public Participation

Staff administered the appropriate public comment period for all federal documents as outlined in the Public Participation Process (PPP) prior to presenting them to the Study Team and Policy Committee at their meetings this quarter.

Staff added new stakeholders to the FLATS contact list per the Public Participation Process. As the Policy Committee meetings were scheduled, the stakeholders on this list were notified of the meeting.

In addition to FLATS documents being available on the FLATS website and at the Planning and Building Inspections Department, staff has the documents on display at the local library for public review. Staff updated the four documents approved during the Policy Committee meeting this quarter at all locations. (FY2014-2019 TIP, FY2014 UPWP, FLATS By-Laws and the Public Participation Process)

Staff maintained records of public attendance and public comments for FLATS Study Team and Policy Committee meetings and FLATS documents for this quarter.

As an additional avenue to reach the public for their input in the transportation planning process, staff prepared its annual FLATS Newsletter. This newsletter was posted on the FLATS webpage and staff advised stakeholders on the FLATS Contact list that it was available. Staff also placed hard copies of the newsletter in various public places within Florence County.

A-3 Transportation Enhancement Program

Staff coordinated with the LPA for each current project funded under SAFETEA-LU to verify that each project was on track to meet its completion date. A status update on the three current projects was presented to the Study Team and Policy Committee during this quarter.

Staff implemented the new MPO Transportation Alternatives Program (TAP) Guidelines as required by the new Federal Surface Transportation Bill, MAP-21.

Staff sent notification to applicable entities for the upcoming funding cycle for the TAP.

Staff continues to maintain quarterly status records of active enhancement projects funded under SAFETEA-LU.

Staff continues to host the quarterly Florence Trails Committee meetings in an effort to identify locations for new bike/pedestrian trails or other options to utilize enhancement funds. In addition, the committee continues to focus on areas where sidewalks or sidewalk improvements are needed keeping handicap accessibility in mind.

B-1 Mapping

Staff prepared digital data as requested for the Florence Senior Citizens Associates and the Darlington County Council on Aging representing the location of their current clients.

In an effort to make sure building permits were issued with the appropriate setbacks required, staff requested the anticipated right of way digital data from the SCDOT for the widening of guideshare projects and the Capital Sales Tax projects. This data has been added as a layer for staff's internal use.

Staff reviewed plats of new subdivisions and digitized new parcels to continue tracking growth in the FLATS area. Staff will continue to work on this process, as well as develop new techniques to create visualizations and show trends.

Staff worked with and will continue to work with the Assessor's Office, GIS Department and Engineering Division to maintain an accurate centerline and parcel map, which is critical in the efficient and effective tracking of trend data in the FLATS area.

Staff began a project to collect and estimate additional data on the GIS Roads layer with the FLATS area. The data being collected includes estimating speed limits, new surface types and the location of stop signs, traffic signals and yield signs.

Staff provided digital data, as requested to law enforcement, E911 Dispatch, fire departments and emergency management personnel to assist in improving safety and security activities.

Staff provided digital data, as requested to PDRTA to assist them in determining locations where increased transit service may be needed for transit-dependent populations.

Staff tracked County building permits, maintained accurate road databases and continue to update county-wide address digital data.

Staff assisted the SCDOT in updating the Traffic Analysis Zones and functional classification to the roadways in the FLATS Study Area Boundary.

Staff developed an oversized wall map to provide a visual resource for staff and citizens visiting the office. The map provides a street index and associated grid of all streets within the FLATS Study Area Boundary in additional to throughout Florence County.

B-2 Air Quality Surveillance

Staff continues to coordinate with DHEC regarding air quality monitoring.

Staff continues to research and remain current on the requirements of MAP-21 and the Environmental Protection Agency (EPA) standards for air quality and its impact on the planning process.

Staff continues to participate in air quality training and monitor relevant air quality data in order to present to the governing officials the importance of adopting ordinances and offering programs to enhance air quality in the FLATS area.

Staff is coordinating and will continue to coordinate with the County Grants Coordinator to assist staff in researching grants and other assistance available in order to propose potential new programs to County Council to be proactive in keeping the FLATS area in attainment.

Staff continues to attend transportation conformity training as available to provide basic information about conformity requirements and the relationship of the transportation and air quality planning processes. Remaining current with transportation conformity regulations will prepare staff on interagency collaboration and working effectively in resolving conformity issues should FLATS be declared a non-attainment area.

Staff continues to research ways to educate our community on EPA's proposal to strengthen the national ambient air quality standards for ground-level ozone and the potential consequences should the FLATS area become non-attainment.

B-3 Traffic Survellience

Staff continues to work with the SCDOT on the Statewide Multi-modal Transportation Plan as it is being developed. As this plan develops, staff will use the plan when considering future projects.

Staff prepared traffic reviews and compiled building permit data for various projects, rezoning and congestion modeling. This data helps to show how land use changes are affecting the transportation system.

Staff received public request for intersection improvements within the FLATS area. Staff will present to the Study Team and Policy Committee at the next meetings.

Staff continues to research and identify areas of improvement to be included in the next Long Range Transportation Plan.

Staff continues to compile crash data from included jurisdictions in support of the long-range transportation plan.

Staff continues to provide Average Annual Daily Traffic (AADT) information to citizens, county agencies and officials as requested.

C-1 Documentation Development and Maintenance

Staff completed the FY2014-2019 TIP amendments, satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting.

Staff completed the 2014 UPWP, satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting.

Staff updated the Public Participation Process to include the new study area boundary information and MAP-21. Staff satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting.

Staff continues to update federal documents as required.

C-2 Socio-Economic and Land Use Data

Staff reviewed new site plans and subdivision plats to evaluate the timing and location of land use changes taking place in the FLATS study area. Changes in land use could initiate adjustments in socioeconomic data and have other impacts on the transportation system.

Staff worked with SCDOT to update the TAZ for the FLATS area.

Staff reviewed and updated the functional classification data for the FLATS area and submitted to the SCDOT.

Staff continued tracking foreclosures in our area to establish comparable socioeconomic trends for future reference. A map of the various areas and charts for monthly and yearly comparison has been created and is available as requested.

Staff prepared a list of resurfacing and intersection projects within the FLATS area where 20% of annual Guideshare funds are required to be allocated towards. This information was

provided by the local DOT office. Staff presented this list to the Study Team and Policy Committee this quarter. A project will be chosen during meetings next quarter.

Staff continues to maintain zoning, land use and project development databases for use to direct traffic modeling.

Staff continues to maintain a database of Planning Commission items. This database contains parcel numbers that can easily be related back to the digital parcel layer. This information will be related to the TAZs and show trends in zoning and rezoning which indicate growth and the types of growth that are occurring.

C-3 Public Transportation Planning

FLATS Staff initiated quarterly meetings with PDRTA and the PDCOG to keep them up to date on transportation planning activities and to stay abreast of any assistance needed by the FLATS staff.

The Florence Senior Citizens Association's Office of Public Transit allocation for Small Urban Transit Funding for the FFY2013 apportionment was added to the Federal Transit Administration section of the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. The following FTA funding information was provided:

- Program 5310 - $10,000 Operations

The Florence County DSN Board's Office of Public Transit allocation for the Small Urban Transit Funding for the FFY2013 apportionment was added to the Federal Transit Administration section of the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. The following funding information was provided:

- Program 5310 - $45,000 Capital

The Darlington County Council on Aging's Office of Public Transit allocation for Small Urban Transit Funding for the FFY2013 apportionment was added to the Federal Transit Administration section of the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. The following funding information was provided:

- Program 5310 - $45,000 Capital
- Program 5317 - $26,000 Operations

The PDRTA has had a substantial downsize in their staff and changes in their routes and stops over the last fiscal year. Staff will be meeting with PDRTA staff next quarter to discuss the changes needed in their routes and stops digital data.

Note: This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.S. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

Attachment 3

Trails Committee Meeting Minutes

FLORENCE TRAILS ELECTRONIC COMMITTEE MINUTES
July 17, 2012

The first item on the agenda was to review the minutes from the April meeting. Elvie made a motion to approve the minutes and Mark made a 2nd motion. Carried unanimously.

Old Business:

Chuck Pope with the City of Florence gave the following updates.

- Enhancement Grant Projects
  - ✓ Lucas Street Intersection Gateway --- project scope of work has been revised (original scope bid proposals were over budget) and is being reviewed by SCDOT. The City plans to re-bid (August) the project work as soon as SCDOT has completed and approved the revised scope of work.
  - ✓ No Name Creek Trail Asphalt Project --- still trying to get the easement for trail sections on Wal-Mart property in order to move forward with the project (hopeful to have this easement by the end of August).

- ACS / Magnolia Mall Trail --- ACS representatives are continuing to work with Mall officials to get permission for trail expansion in order to connect to the Florence Trail System.

- Stockade --- Property is in process on being gifted to the Friends of the Florence Stockade and should be presented to City Council in the next couple of months.

- City Sidewalks --- The City is working with various neighborhood groups and downtown merchants through URS Engineering Consultants in order to develop a plan for improvements in these areas. Improvement plan should be completed in the next month and presented to City Council.

Lori Phillips with DHEC gave the following update:

- State-level DHEC has been granted funding to establish the Healthy SC Initiative, which is a collaboration of many state-level organizations including Eat Smart Move More SC. Healthy SC Initiative has awarded grants to local communities to address healthy eating, active living, and smoke free living. There were no funded groups in Florence County in the first round of funding. There is a local group of dietitians and farmers interested in applying for the next round of funding (Fall 2012).

There was no other business.

FLORENCE TRAILS COMMITTEE
October 16, 2012
MINUTES

Members Present:
Drew Griffin
Chuck Pope
Phillip Lookado
Dean Lisenby
Jonathan McKnight

Staff Present:
Debi Matthews
Renee Proctor

Guest:

We failed to review the minutes from the last meeting, so we will review them along with this meeting's minutes in January.

Old Business Discussion:

Chuck gave an update on the trails.

- SCDOT accepted the low bid for the **Lucas Street project**. They are in the process of awarding the contract.
- The City is waiting on the signed version easement from SCDOT for the **NoName Creek Project**. SCDOT will not accept the recorded Plat where the portion of the trail around the Wal-Mart area was deeded to the City. They want a fee simple easement. Chuck has been in contact with Kris Crawford to see if he can get a document like SCDOT wants from the contacts he dealt with when they gave the $1,500 grant for use on the trail. SCDOT is also saying the entire trail must be ADA compliant, which Chuck does not recall being the case on other trails. Tony Edwards with SCDOT has given the City this information. Debi will call Tony.

Debi's conversation with Tony: The fee simple deed from Lowes was acceptable by the SCDOT right-of-way personnel. The right-of-way personnel need a similar document for the Wal-Mart section for the right-of-way to be certified. This is a Federal requirement. The majority of the trail needs to be ADA compliant. The only area that does not have to be is the Wal-Mart area, which they can start to build when the appropriate r/o/w document is received. There are not enough funds to complete the grading for the remainder of the trail that must be ADA compliant, so Tony is suggesting the City apply for additional funds to complete the remainder. The ADA requirements are both horizontal (sloped at 20% to keep water from standing) and vertical (the hills have to maintain a 5% grade going up and down).

New Business Discussion:

Other:

- Debi asked if anyone knew what we could do to promote interest in the Trails Committee.

- Drew thinks that we should have a five to ten year implementation plan. FLATS may provide some of the money but he thinks that we should partner with other organizations. It should be a fit friendly community. To make this happen we need to partner with businesses with the same interest. The City has partnered with the American Heart Association, Harvest Hope and the United Way. There are twenty miles of trails that need to be connected.

Another good contact would be Sarah Shelley with the Eastern Carolina Community Foundation and also the Eat Smart Move More group.

Drew will talk with Jim Canup at McLeod EAP. Dean also suggested Janice Watt. He thinks that The Raines group may also be helpful as motel owners in the area.

It was discussed that we should try to hold annual events with the assistance of the businesses interested to promote the trails not only for health and wellness, but from an Economic Development aspect.

Jonathan said that any opportunity to have a function involving kids on the trails will promote a family interest.

Dean stated that one goal for ACS next year is ***Living Consciously***.

There being no further discussion, the meeting was adjourned and we took a short walk on the trail behind ACS. There are fourteen acres behind their business. There is a high lane and then a loop with one way in and one way out. The high lane is next to Beaver Creek. The employees of ACS are lucky to have this great place to walk.

FLORENCE TRAILS COMMITTEE
JANUARY 15, 2013
MINUTES

Members Present:
Darlene Buchanan
Chuck Pope
Bruce Mallick
Mark Lott
Jonathan McKnight
Elvie Eaddy
Joey Skipper

Staff Present:
Debi Matthews
Renee Proctor

Guest:

A motion was made by Chuck to accept the minutes for the July and October meetings. Bruce seconded and all approved.

Old Business Discussion:

Chuck gave an update on the trails.

- Representative Crawford is still working on the Walmart easement. SCDOT wants Walmart to sign a written agreement. If all works out, they plan to asphalt the Hobby Lobby section of the trail.
- The City has hired a contractor for the Lucas Street gateway project. Work will begin on 1/28th and will include new curb and gutters with plantings on the east and west side. Reichenbach Ford owns the west side and gave the City an easement to put some landscaping on this property. This project should be completed in June.
- The Neighborhood Plan that the City Planning Department is working on is still being developed for East, North and Northwest neighborhoods in Florence. They plan to have trail connectors, landscaping and lights. They hope to begin the project in early spring.
- The entrance to Williams Heights Neighborhood past Williams Middle School has received a gateway sign, walking trail and picnic area with tables. The trail is about ¼ mile in length and outlined with cobblestones. The request for this project came from Scotty Davis with the Community Services Department.

New Business Discussion:

Other:

- Darlene brought to our attention that June 1st is National Trails Day. The City is partnering with Jimmy at McLeod's Health and fitness to have an early morning run. The City wants to partner with different groups for a maintenance cleanup day after the run. They have spoken with a sorority in East Florence that may be interested. Please contact her or Chuck if you know anyone that may like to sponsor this clean-up with maybe a cookout or refreshments offered afterwards. Mark suggested the Scouts. We will discuss further at our April Trails meeting.

- Darlene shared that she needs everyone to be her eyes and ears and let her know if we are aware of anything on the trails that is in need of repair. We must keep them safe.

- Chuck also stated that they want to tie the trails into the E-911 system. They would post signage that would identify the different areas of the trail in case of emergency.
- Jonathan would like to see (Christmas) lights displayed on the main Ebenezer trail at night as a community awareness project. Chuck stated that the cost would be the elements to light and if the City would be funding, he thought they would be more inclined to have something like this in the Downtown area potentially after the revitalization project has been completed. Elvie suggested that Freedom Florence may be a good site for light displays with a children's theme since Science South is there. Lynches River Park was also a suggestion. All agreed that it is something to think about.

- Debi announced that the SCDOT Transportation Enhancement Program (TEP) and Adopt an Interchange Program have been eliminated as a result of the new Federal Surface Transportation Bill (MAP-21). The FLATS MPO was allocated a specific amount of enhancement funds through the TEP annually that has been utilized in the past for trails and beautification projects. The Transportation Alternative Program (TAP) replaced the TEP. The TAP is a Statewide competitive grant program, which can be applied for year round. However, the SCDOT Enhancement Department does not know the specifics on how much will be available to apply for or when the process will begin. She will advise the committee once she has obtained this information. The only categories for the TAP are Bike and Pedestrian or Safe Routes to School. The Bike and Pedestrian category only allows funding for trails, sidewalks, pedestrian lighting and potentially landscaping for a sidewalk project. No exclusive landscaping projects are allowed for funding.

- Debi stated that Herb Cooper with SCDOT Enhancement Dept. will present this information on the Transportation Alternative Program funding to the FLATS Policy Committee at their meeting in February. He may have more information at that time on how much funding will be available and when the process will begin. She invited all to attend.

- Chuck stated that they are building a new breezeway downtown on Dargan St. in between Royal Knight Formal Wear and the drug store.
- Chuck asked who decides what streets are to be resurfaced by the County Transportation Commission (CTC), chaired by Sherwin Welch, and if we know what streets are scheduled for this year. Joey stated that he was pretty sure the CTC decides which streets their funds will be utilized for. Debi advised that Mr. Welch normally gives a report during the FLATS Policy Committee meeting on the projects they have scheduled.

- Chuck asked if sidewalks would be included in the S. Cashua widening project. Debi concurred that they would be included. Mark asked if bicycle lanes would be included. Debi will check with SCDOT to see if the right lane will be widened to accommodate bicyclists and advise the committee. However, if this is included in the project, SCDOT will not stripe this area as a designated bicycle lane.
- All agreed that the Trails Committee meetings should continue to be on the third Tuesday of each quarter at 12:30pm. The remaining meeting dates are 4/16th, 7/16th and 10/15th.

There being no further discussion, the meeting was adjourned.

FLORENCE TRAILS COMMITTEE
APRIL 16, 2013
MINUTES

Members Present:	**Staff Present:**
Darlene Buchanan	Debi Matthews
Chuck Pope	Renee Proctor

A motion was made by Darlene to accept the minutes for the January meeting. Chuck seconded and they were approved.

Old Business Discussion:

Chuck gave an update on the trails.

- Representative Crawford is still working on the Walmart easement for the No Name Creek project.
- The Lucas Street Gateway project is 50% complete and should be finished the middle of May.
- The Neighborhood Plan that the City Planning Department has been working on is being finalized.
- The Irby/Cedar Street project is currently being landscaped and should be completed the middle of May also. This is a much smaller version of the Lucas Street Gateway project.
- The City of Florence is currently getting SCDOT encroachment permits for the Blue Trails. Then they will go to bid on three launch areas and portages.

New Business Discussion:

Other:

- Darlene brought to our attention that June 1st is National Trails Day. The City is partnering with Jimmy Tassios at McLeod's Health and Fitness to have an early morning 5K run. There are five groups that have volunteered to clean up the trails. Anyone is welcome to participate. Hopefully there will be a sponsor for food or snacks. Cleanup will start at 8:00am and the 5k will start at 10:00am. A press release will be forthcoming about this event.
- Darlene stated that Academy Sports will be moving into the old Pepsi building on David McLeod Blvd. and are interested in supporting the trails and doing something on the trail section at their new location.
- Chuck stated that they want to tie the trails into the E-911 system. They would post signage that would identify the nearest access points in case of emergency for fire and EMS.
- Chuck also stated that they were looking into updating and printing the trails brochure.
- Elvie asked by email that we discuss Jonathan's idea of Christmas lights somewhere on the trails. With so few attending the meeting, we chose to discuss in further detail at the next meeting.

- Also, Mark Lott sent a link by email of a road swap article from the Greenville News. It describes the swapping of road ownership to increase the possibility of adding connector trails. Again, we chose to discuss this topic in further detail at our next meeting. Hopefully there will be better attendance.

The next Trails Committee meeting will be July 16th.

There being no further discussion, the meeting was adjourned.

Attachment 4

FLATS Newsletter – Fifth Edition

ISSUE 05 June 2013

Newsletter for the Florence area metropolitan planning organization

FLATSPress

WHAT IS FLATS?

The Federal Highway Act of 1962 established the requirement for transportation planning in urban areas throughout the country. This Act is the federal authorizing legislation for expenditure of funds through Federal Surface Transportation Bills to Metropolitan Planning Organizations (MPO). An MPO is defined in Federal Transportation Legislation (23 USC 134(b) and 49 USC 5303 (b)) as the designated local decision making body that is responsible for carrying out the metropolitan transportation planning process. An MPO must be designated for each urban area with a population of more than 50,000 people as designated by the Bureau of Census.

Congress created MPOs in order to ensure that existing and future expenditures of governmental funds for transportation projects and programs are based on a continuing, cooperative and comprehensive ("3-C") planning process.

The Florence Area Transportation Study (FLATS) is the MPO for the urbanized Florence area. There are currently eleven MPOs in the State of South Carolina. The FLATS MPO Study Area Boundary includes The City of Florence, Town of Quinby, City of Darlington, Town of Timmonsville and surrounding unincorporated areas of Florence and Darlington counties. The total population for the FLATS Study Area Boundary is 124,316. The federal funds for transportation related improvement projects can only be utilized within the FLATS Study Area Boundary.

The primary responsibilities of any MPO are to 1) develop a Long-Range Transportation Plan, which is, at a minimum, a 25-year transportation vision for the planning area; 2) develop a financially constrained Transportation Improvement Plan, which is the agreed upon list of specific projects for which federal funds are anticipated; and 3) develop a Unified Planning Work Program, which identifies the annual transportation activities that are to be undertaken in support of goals, objectives and actions established in the Long Range Transportation Plan.

The Florence County Planning Department serves as staff for the FLATS MPO. The FLATS MPO is currently monitored by two committees. These committees are comprised of elected and appointed officials representing local, state and federal governments or agencies having interest or responsibility in comprehensive transportation planning. The FLATS Policy Committee is the official decision making body that establishes policies for the overall conduct of the MPO, adopts plans and programs and approves study recommendations. The FLATS Study Team, which is established by the Policy Committee, provides recommendations to the Policy Committee on technical methods, procedures and standards that are used in the development of transportation plans and programs. Membership of both committees is prescribed by the FLATS By-Laws.

The FLATS MPO is required to update and maintain Federal documents in order to remain compliant with federal regulations as outlined in the Federal Surface Transportation Bill. The previous Federal Surface Transportation Bill signed into Law on October 1, 2009 (P.L. 111-68) was (SAFETEA-LU) Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. The current Bill is (MAP-21) Moving Ahead for Progress in the 21st Century Act. MAP-21 was signed into Law on July 6, 2012 (P.L. 112-141).

FY 2013-2014

The Florence Area Transportation Study (FLATS) is the metropolitan planning organization servicing a population of 124,316 from within two counties. The FLATS Study Team provides recommendations to the Policy Committee which has final local approval and authority. This committee consists of voting and non-voting members.

VOTING

Senator Hugh Leatherman, Chair
South Carolina Senate District 31

Steven J. Wukela, Vice –Chair
Mayor, City of Florence

Representative Kris Crawford
South Carolina House District 63

Waymon Mumford
Councilman, Florence County

Ashby Gregg
Mayor, Town of Quinby

James T. Schofield
Chairman, Florence County Council

Mike Wooten
Commissioner, SCDOT Seventh Congressional District

Sherwin Welch
Chair, County Transportation Council

Glynn Willis
Councilman, City of Florence

NON-VOTING

Charles MacNeil, *Director, Pee Dee Regional Transportation Authority*

John Walsh
State Highway Engineer, SC Department of Transportation

David Hobbs
Chair, Florence County Planning Commission

Bob Lee
Division Administrator, Federal Highways Administration

Jay Graham, *Director*
Florence County Planning

Tom Kinard
Chair, Pee Dee Regional Airport Authority

Rusty Smith
Administrator, Florence County

Dennis Townsend
Administrator, SCDOT Engineering District 5

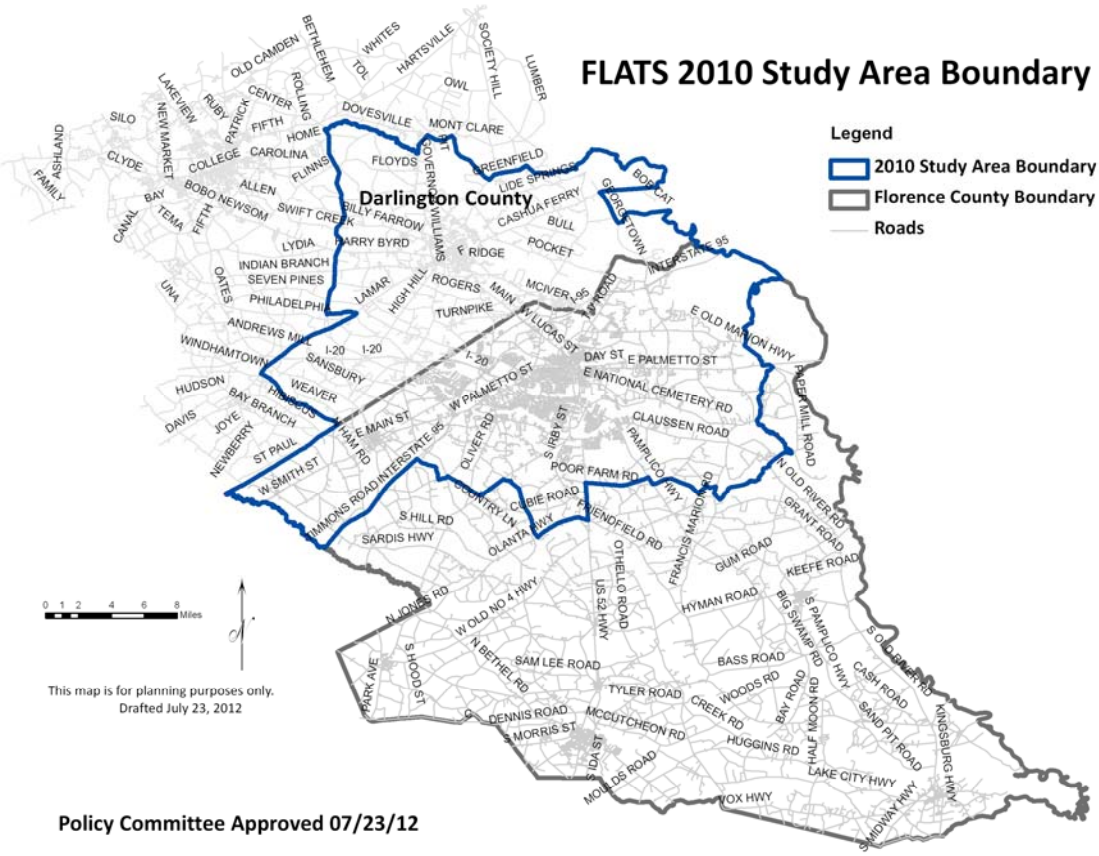
Drew Griffin
Manager, City of Florence

Drew Chaplin
Chair, City of Florence Planning Commission

Updates and/or amendments to each document must be presented to the Study Team for their recommendation to the Policy Committee for final approval. A specific comment period as outlined in the FLATS Public Participation Process Plan is held for each document prior to presenting to the Study Team and Policy Committee.

The FLATS Federal documents remain updated and are available for public viewing on the Florence County website at http://www.florenceco.org/offices/planning/flats/, at the Florence County Planning and Building Inspections Department, located at 518 S. Irby Street and in the FLATS County Planning binder at the Drs. Bruce and Lee Foundation Library reference desk, which is located at 509 S. Dargan Street.

The FLATS MPO maintains a FLATS Distribution List and notifies all individuals electronically of upcoming committee meetings and other transportation related issues within the FLATS Study Area Boundary. Contact the Planning Services Department at (843) 656-1503 to be included in this list.



Attachment 5

Francis Marion University

Enhancement Project Application

FRANCIS MARION UNIVERSITY

John J. Kispert
Vice President for
Business Affairs

December 12, 2011

Florence Area Transportation Study Policy Committee
Attn: Ms. Debi Matthews
518 South Irby Street
Florence, SC 29501

RE: Roadway Improvements to SC Highway 327
for Francis Marion University

Dear Ms. Matthews:

As you know, Francis Marion University is constructing an athletic complex adjacent to SC 327 near the southwest quadrant of the intersection of SC 327 and US 76. SC 327 forms a boundary between the main campus and the new athletic complex, and we anticipate large numbers of pedestrians will soon begin crossing SC 327 to attend events at the complex. Francis Marion University recently hired URS/BP Barber to complete the Francis Marion Road Pedestrian Access and Safety Study to investigate potential safety improvements along the SC 327 corridor to allow for a safe flow of pedestrian and vehicular traffic. A copy of that study was previously provided to you and to the SCDOT District Engineering Administrator.

One of the study's recommendations that we would like reviewed by the FLATS Study Team and FLATS Policy Committee for FLATS funding assistance includes construction of a streetscape to enhance pedestrian and vehicular safety and beautify the corridor. Specifically, the streetscape includes the following:

- Landscaped median with turn lane allowances to be constructed in the existing center median
- Decorative crosswalks
- Pedestrian actuated warning flashers

Attached is an application requesting SCDOT Enhancement Grant funds for this project. We are requesting consideration of this project for the current cycle of enhancement funding.

Francis Marion University proposes to utilize an existing engineering agreement with URS|BP Barber to provide survey, design, and permitting assistance to refine the conceptual streetscape planning accomplished to date. These services will produce construction plans and specifications and an SCDOT encroachment permit. URS|BP Barber will coordinate with the appropriate SCDOT Regional Production Group staff to develop documents ready for SCDOT letting. At that point, URS|BP Barber's services will cease. The University will request SCDOT to be our Local Public Agency (LPA) to assist with letting the project, provide construction engineering and inspection, materials testing/confirmation, and construction administration. We have included in our project costs a 15% fee for SCDOT to provide these services.

Box 100547, Florence, South Carolina 29501-0547 • (843) 661-1110 FAX (843) 661-1484
email - jkispert@fmarion.edu
An Affirmative Action/Equal Opportunity Institution

We feel that these improvements will greatly enhance the safety of the corridor for both motorists and pedestrians alike, while appropriately coordinating the flow of each mode of travel. If you have any questions, or if I can provide any additional information, please contact me at (843)661-1110.

Sincerely,

John J. Kispert

John J. Kispert

Attachment: (1) Application

Print Form



Application

South Carolina Department of Transportation

Transportation Enhancement Application

Applicant Information

Applicant:	Francis Marion University	Date:	December 09, 2011
Address:	P. O. Box 100547	Phone:	(843) 661-1100
City:	Florence	State:	SC ZIP: 29502
Contact Person:	Ralph Davis	Title:	Dir. of Facilities Management
Contact Email:	rdavis@fmarion.edu		

Project Information

Name of Project: Francis Marion University Highway 327 Enhancement Project

Project Description: Streetscape improvements along SC 327 near the Alumni Drive entrance to FMU

Length & Termini: (ie: where does the project begin & end?)
The project encompasses approximately 1,050 linear feet of SC 327 (Francis Marion Road), beginning approximately 300 feet north of Alumni Drive, and extending to the south to Patriot Drive.

County: Florence County Code: 21

House District: 59 Senate District: 30 Congressional District: 6

Project Category

(check only those activities that will be funded with Enhancement funds)

- ☐ Provisions of facilities for bicyclists
- ☒ Provisions of facilities for pedestrians
- ☒ Landscaping and other scenic beautification (streetscaping)

MAIL ORIGINAL AND SIX (6) COPIES OF APPLICATION TO:

Projects Outside Metropolitan Planning Area:

South Carolina Department of Transportation
Transportation Enhancement Office, Room 424
Post Office Box 191
Columbia, SC 29202-0191

Projects Within Metropolitan Planning Area: FLATS

Florence County Planning Department
518 South Irby Street
Florence, SC 29501

Minimum Requirements for Proposal **PLEASE ANSWER THE FOLLOWING IN THE SPACES PROVIDED**

A. ELIGIBILITY DEMONSTRATION: "See attached" is **NOT** acceptable

1. Does project conform to applicable requirements of the Americans with Disabilities Act and any other state or federal laws concerning accessibility?

☒ Yes ☐ No

2. What is the project's relationship to the Intermodal Transportation System? Refer to Page 3.

☒ Function ☐ Proximity ☐ Impact

Explain how the project meets the eligibility requirements:

Francis Marion University is currently constructing a new athletic complex located south of US 76/301 (East Palmetto Street) and immediately west of SC 327 (Francis Marion Road). The athletic complex is separated from the FMU main campus by SC 327. The University expects this new facility to become a destination for both pedestrian and vehicular traffic once athletic events commence. This project is envisioned to meet both functional and proximal eligibility criteria. The project's functionality will benefit the pedestrians attempting to cross SC 327 between the athletic complex and main campus by providing safety provisions such as enhanced crosswalks, pedestrian actuated warning signals, pavement markings and signage, sidewalks with curb ramps, and refuge opportunities within a landscaped median. Motorists traveling SC 327 will benefit as well. The presence of the proposed pedestrian features will condition motorists' expectations for where pedestrian crossings can be encountered, furthering the corridor's overall safety. Provisions for left turn lanes in the center median will maintain the existing level of access.

Additionally, the project provides proximal benefits that contribute to the beautification of the SC 327 corridor. A landscaped center median is proposed to replace portions of the existing paved center median between the main campus and athletic complex. The proposed street trees within an elevated "green" median will greatly enhance the character of the corridor. The landscaping will suggest to motorists that they have arrived at a destination, providing a measure of traffic calming influence.

B. PROJECT DESCRIPTION: "See attached" is **NOT** acceptable

Describe all necessary work needed to complete the proposed project. Description should reflect only activities checked under project category:

SC 327 is a five lane roadway with no sidewalks and limited pedestrian features, and a posted speed limit of 45 miles per hour. The construction of Francis Marion University's new athletic complex will dramatically increase pedestrian crossings over SC 327, and the University desires to make the corridor as safe as possible given the looming connectivity soon to be required from both sides of the highway. In June 2011, Francis Marion University completed the Francis Marion Road Pedestrian Access and Safety Study to evaluate methods to increase the safety of the corridor for pedestrians, while maintaining acceptable vehicular level of service.

One of the Study's recommendations is the implementation of a streetscape project to enhance both the safety and aesthetics of the corridor. This streetscape project includes the installation of a landscaped center median, complete with concrete curb and gutter, street trees, grass, and mulch, in order to transform the space that currently exists as a continuous paved center median. The project will also install ADA-compliant concrete sidewalks and curb ramps, and includes two pedestrian actuated warning signals and enhanced crosswalks. Supportive measures, including pavement markings and signage will also be required.

Necessary construction activities will include traffic control, demolition, concrete work, planting mix/topsoil import, tree installation, grassing, and the placement of pavement markings/signage. Additionally, the installation of the pedestrian activated warning signals will require strain poles, associated cables, and electrical connections.

C. MAPS, PLANS, & PHOTOGRAPHS:

☐ INSERT IMAGE

Attach project location map(s), project boundary map and site plans. Include photographs of the existing site and/or facility if applicable:

See attached Conceptual Streetscape plan, dated November 2011.

D. PROJECT COST: "See attached" is **NOT** acceptable

Itemize all project elements and costs. List item, description, quantity, unit price, amount, etc. If "**Traffic Control" does not appear as a separate cost item, then indicate how it will be accomplished.** (Enter total project cost in Section I - Line 1, Page A-9.) Itemize below:

ITEM	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
1.	160	CY	Earthwork (Fill)	$25.00	$4,000.00
2.	1	LS	Enhanced Crosswalk	$2,500.00	$2,500.00
3.	2	EA	Pedestrian Actuated Warning Signal	$12,500.00	$25,000.00
4.	4	EA	Curb Ramps	$1,500.00	$6,000.00
5.	1,025	LF	5' Wide Concrete Sidewalk	$40.00	$41,000.00
6.	60	SF	Detectable Warning Surface	$45.00	$2,700.00
7.	900	LF	Landscaped Median	$250.00	$225,000.00
8.	1	LS	Pavement Markings	$2,500.00	$2,500.00
9.	4	EA	Road Signage	$250.00	$1,000.00
10.	475	SY	Fine Grading	$4.00	$1,900.00
11.	1	AC	Grassing	$1,500.00	$1,500.00
12.	1	LS	Striping	$1,000.00	$1,000.00
13.	1	LS	Traffic Control	$12,500.00	$12,500.00
				Subtotal:	$326,600.00
				20% Contingency:	$65,320.00
				Construction Total:	$391,920.00
				LPA/CEI Services by SCDOT (15% Fee):	$58,750.00
				Total Project Cost:	$450,670.00

NOTE:
Landscaped Median unit cost includes the following:
Pavement Demo $15/LF; Select Fill $15/LF; Curb/Gutter $40/LF; Asphalt Patch $30/LF; Concrete Paving $10/LF; Landscaping $45/LF ($40,500 total); Topsoil/Mulch $20/LF. Subsurface drainage $75/LF.
Total = $250/LF

Landscaping includes:

1. 8 ea Zelkova Trees, 2 1/2" caliper @ $500/ea = ... $ 4,000.00
2. 8 ea Red Maple Trees, 2 1/2" caliper @ $500/ea = ... $ 4,000.00
3. 80 ea Shrubs @ $50/ea = ... $ 4,000.00
4. 210 ea ground cover plants @ $10/ea = ... $ 2,100.00
5. 16 ea Tree Gator Bags @ $50/ea = ... $ 800.00
6. 80 cy Mulch @ $50/cy = ... $ 4,000.00
7. 7,200 sy Sod Grassing @ $3/sf = ... $21,600.00

Total Landscaping = $40,500.00

Note: Once detailed landscaping design is completed, we will submit to SCDOT landscape architect for approval of all species/design.

ENGINEERING FEE NOTE:

Engineering design fees are not shown above. However, FMU will contract with URS or another qualified firm and pay the associated fees. URS/BP Barber will coordinate with the appropriate SCDOT Regional Production Group staff to develop documents ready for SDCOT letting.

E. PROPERTY OWNERSHIP:

For all projects on SCDOT right of way, include with your application either a copy of the approved SCDOT Encroachment Permit or a letter from your SCDOT County Maintenance Office or SCDOT District Office indicating your project appears feasible in concept with specific details to be worked out in an Encroachment Permit.

Identify ownership of ALL property involved in the project. If additional property must be acquired to complete the project, identify ownership and value of property, either purchases or donated.

The proposed streetscape improvements are located entirely within SCDOT rights-of-way, or on the property of Francis Marion University.

F. LOCAL SUPPORT:

Attach letters from donors or sponsors committing non-federal share of project costs, commitment or support from sponsors, local government officials and regional organizations. Letter of approval from local jurisdiction if other than applicant. Describe local support for the proposal:

Non-MPO Applicants are to also document opportunities for public participation in the development of this project.

Not Applicable

G. PROJECT MAINTENANCE & MANAGEMENT PLANS:

Describe maintenance and management of the project, including the expected source of funds to support activities:

Extensive landscaping projects must include the installation of an irrigation system. Provide details for the long-term maintenance.

Maintenance of the landscaping will be provided by Francis Marion University grounds maintenance personnel, and will include tree pruning and grass mowing. The existing facilities management budget will absorb the additional expenses. No irrigation is proposed; instead, trees will be installed with irrigation bags, and will be watered at regular intervals until established. Once the tree root systems are established, the irrigation bags will be removed, and the trees will be monitored and maintained. Trees that are damaged or diseased will be removed and replaced at the expense of the University.

H. ENVIRONMENTAL ASSESSMENT:

Attach any previously prepared environmental documentation to this application. If no previously approved environmental documentation is available, the applicant must complete necessary studies if any, and have them approved prior to project implementation. This requirement does not apply if the application is for planning or feasibility studies only. Indicate below any impact the project is expected to cause.

	IMPACT	
	YES	NO
Displacement of residences or businesses	☐	☒
Disruption of neighborhoods	☐	☒
Impacts agricultural or recreational lands	☐	☒
Impacts historical/archaeological sites	☐	☒
Impacts wetlands, streams/lakes, floodplains	☐	☒
Within coastal zone	☐	☒
Endangered species	☐	☒
Air/water quality	☐	☒
Noise	☒	☐
Hazardous waste site	☐	☒

Any county, state, and/or federal permits required will have to be secured by the applicant prior to contract signing. These may include Army Corps of Engineers, Office of Coastal Resource Management, Coast Guard, Federal Energy Regulatory Commission, County Sediment and Erosion Control and Stormwater Management Ordinance, or State Budget and Control Board.

Explain any potential environmental issues:

Implementation of the project may lead to elevated noise levels during construction. This increase in noise will be temporary, and once the project is completed, noise levels will return to normal values.

I. FUNDS REQUESTED, LOCAL MATCH AND SOURCE:

LINE 1 - Total project cost (From page A-5, Section D) $ 450,670.00

LINE 2 - Funds requested by applicant $ 360,536.00

(80% of Line 1, not to exceed the $400,000 maximum)

Is project within a Metropolitan Planning Organization?
(MPO) boundary? ☒ Yes ☐ No

If yes, is the project in the Transportation Improvement Program?
TIP? ☐ Yes ☒ No

MPO: FLATS Amount in TIP for project $ 0.00

LINE 3 - Local Match (subtract Line 2 from Line 1) $ 90,134.00

List source of match and amount from each:

A: Francis Marion University General Funds $ 90,134.00

B: $ 0.00

C: $ 0.00

D: $ 0.00

E: $ 0.00

TOTAL (Should be equal to Line 3) $ 90,134.00

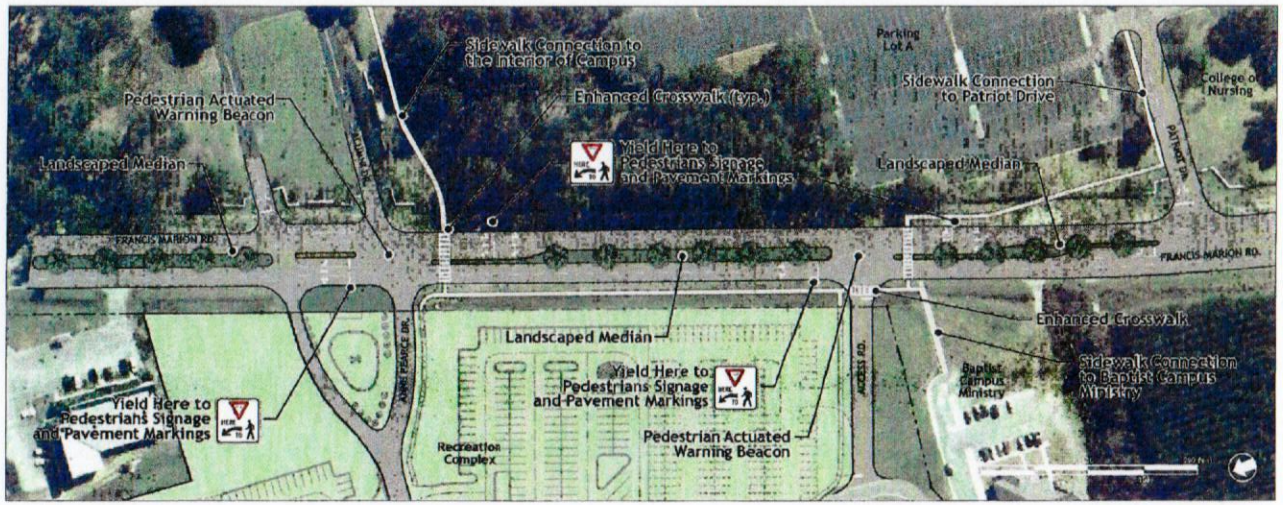
J. CERTIFICATION:

The undersigned has authority to sign on behalf of the applicant and certifies that the applicant has legal authority to enter into contract to implement this project and that all information provided is complete and accurate to their best knowledge.

SIGNATURE 06/10/2013 DATE

Director of Facilities Management TITLE (843) 661-1100 PHONE NUMBER

Ralph Davis PRINTED NAME



NORTH

0' 50' 100'
GRAPHIC SCALE

NOT APPROVED
THESE PLANS HAVE NOT BEEN APPROVED BY ALL JURISDICTIONAL AGENCIES AND SHOULD NOT BE USED FOR CONSTRUCTION.

REVISIONS

NO	DESCRIPTION	DATE	BY

APPROVALS: PROJECT ENG. | DESIGNED BY | DRAWN BY | CHECKED BY | APPROVED

DATE

SIGNATURE

BP Barber
Engineering • Expedience • Excellence
COLUMBIA • GREENVILLE • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: CONCEPTUAL STREETSCAPE

DATE: NOVEMBER 2011 | SCALE: 1"=50'

PROJECT: ROADWAY IMPROVEMENTS TO SC HWY 327 PREPARED FOR FRANCIS MARION UNIVERSITY
FLORENCE COUNTY SOUTH CAROLINA

DRG. IMAGE: SKETCH PLAN
H.B. NO.
KEY: 35.375-997
PROJECT NO.: 41422240

SHEET 1 OF 1

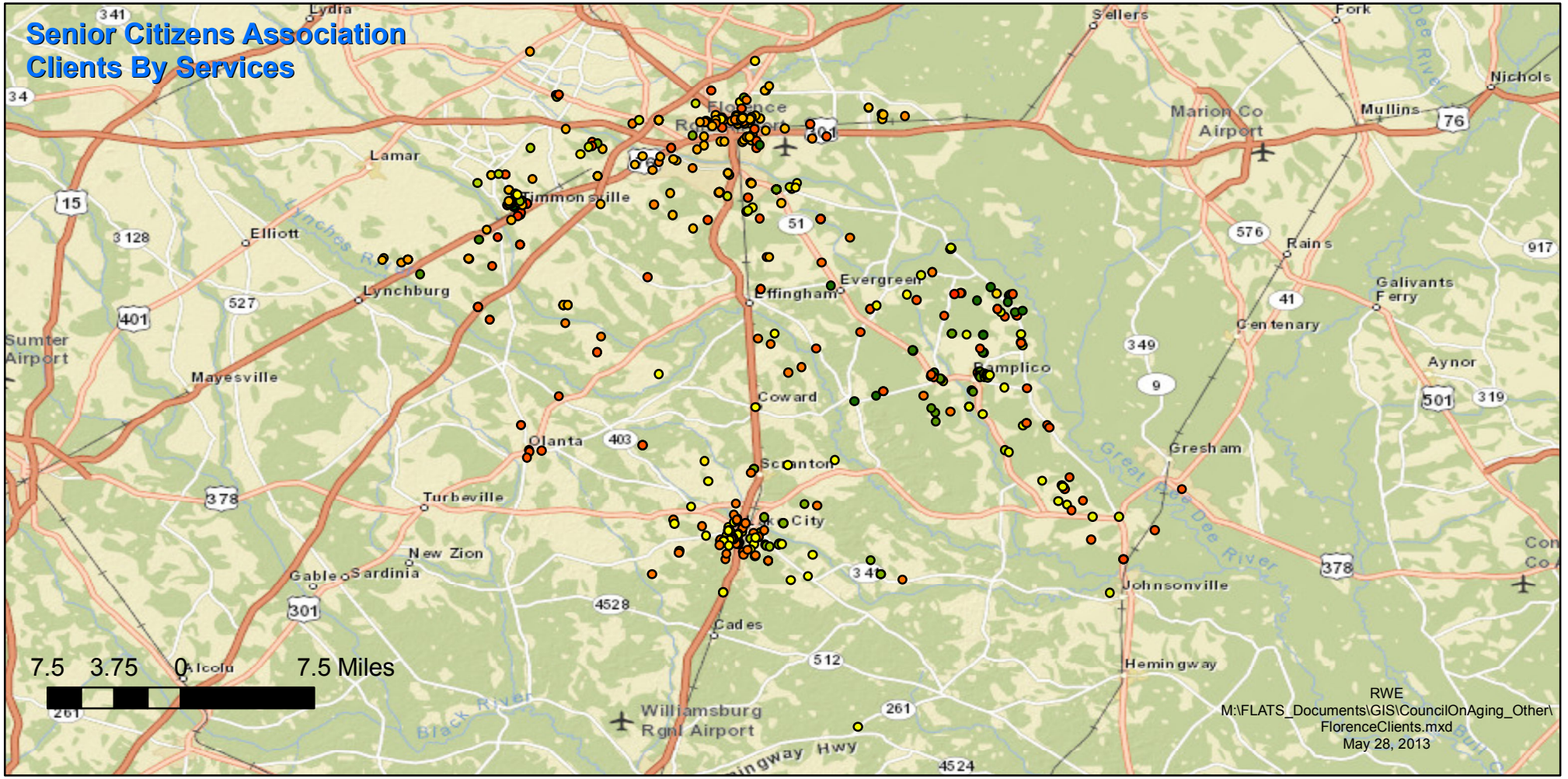
FILE NO 35,829-B88

Attachment 6

Florence Senior Citizens Associates

Client Map

Senior Citizens Association
Clients By Services

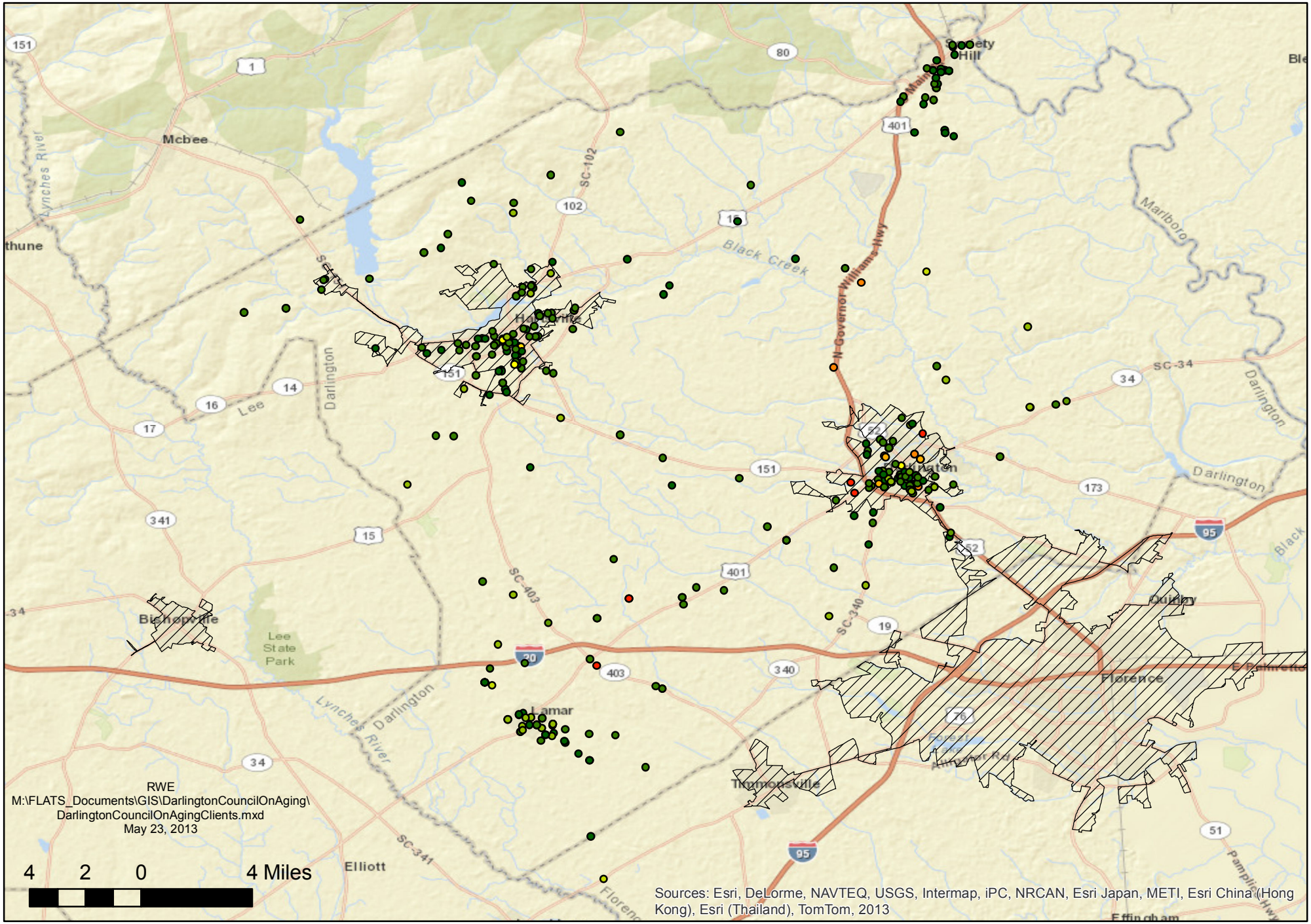


- Florence-Bingo
- Florence-Home Care
- Florence-Home Care; Florence-Transportation
- Florence-Home Delivered Meals
- Florence-Home Delivered Meals - General Revenue -State
- Florence-Home Delivered Meals - General Revenue -State; Florence-Home Care
- Florence-Home Delivered Meals; Florence-Bingo
- Florence-Home Delivered Meals; Florence-Home Care
- Florence-Home Delivered Meals; Florence-Home Care; Florence-Transportation
- Florence-Home Delivered Meals; Florence-Transportation
- Florence-Home Delivered Meals; Florence-Transportation; Pamplico-Group Dining; Pamplico-Physical Fitness
- Florence-Transportation
- Florence-Transportation; Lake City-Group Dining; Pamplico-Group Dining; Pamplico-Physical Fitness
- Florence-Transportation; Pamplico-Group Dining
- Florence-Transportation; Pamplico-Group Dining; Pamplico-Physical Fitness
- Florence-Transportation; Pamplico-Physical Fitness
- Florence-Transportation; Pamplico-Transportation
- Florence-Transportation; Timmonsville-Group Dining
- Florence-Transportation; Timmonsville-Group Dining; Timmonsville-Physical Fitness
- Florence-Transportation; Timmonsville-Group Dining; Timmonsville-Transportation 3B00,3700
- Florence-Transportation; Timmonsville-Group Dining; Timmonsville-Transportation 3B00,3700; Timmonsville-Physical Fitness
- Florence-Transportation; Timmonsville-Physical Fitness
- Florence-Transportation; Timmonsville-Transportation 3B00,3700
- Lake City-Group Dining
- Lake City-Group Dining; Lake City-Physical Fitness
- Lake City-Home Delivered Meals
- Lake City-Physical Fitness
- Pamplico-Group Dining
- Pamplico-Group Dining; Pamplico-Physical Fitness
- Pamplico-Home Delivered Meals - 3C20, HDM
- Pamplico-Home Delivered Meals -General Revenue State
- Pamplico-Home Delivered Meals -General Revenue State; Pamplico-Home Delivered Meals - 3C20, HDM
- Pamplico-Transportation
- Timmonsville-Group Dining
- Timmonsville-Group Dining; Timmonsville-Physical Fitness
- Timmonsville-Group Dining; Timmonsville-Transportation 3B00,3700
- Timmonsville-Group Dining; Timmonsville-Transportation 3B00,3700; Timmonsville-Physical Fitness
- Timmonsville-Home Delivered Meals 3C20, 2101
- Timmonsville-Physical Fitness
- Timmonsville-Transportation 3B00,3700

Attachment 7

Darlington County Council on Aging

Client Map



Darlington County Council on Aging
Clients By Services

- Congregate Meals
- Home Delivered Meals
- Home Delivered Meals; Congregate Meals
- Level I Home Care
- Level I Home Care; Congregate Meals
- Level I Home Care; Home Delivered Meals
- Level I Home Care; Home Delivered Meals; Congregate Meals
- Transportation; Congregate Meals
- Transportation; Home Delivered Meals; Congregate Meals
- Transportation; Level I Home Care; Congregate Meals
- Transportation; Level I Home Care; Home Delivered Meals; Congregate Meals
- UrbanAreas

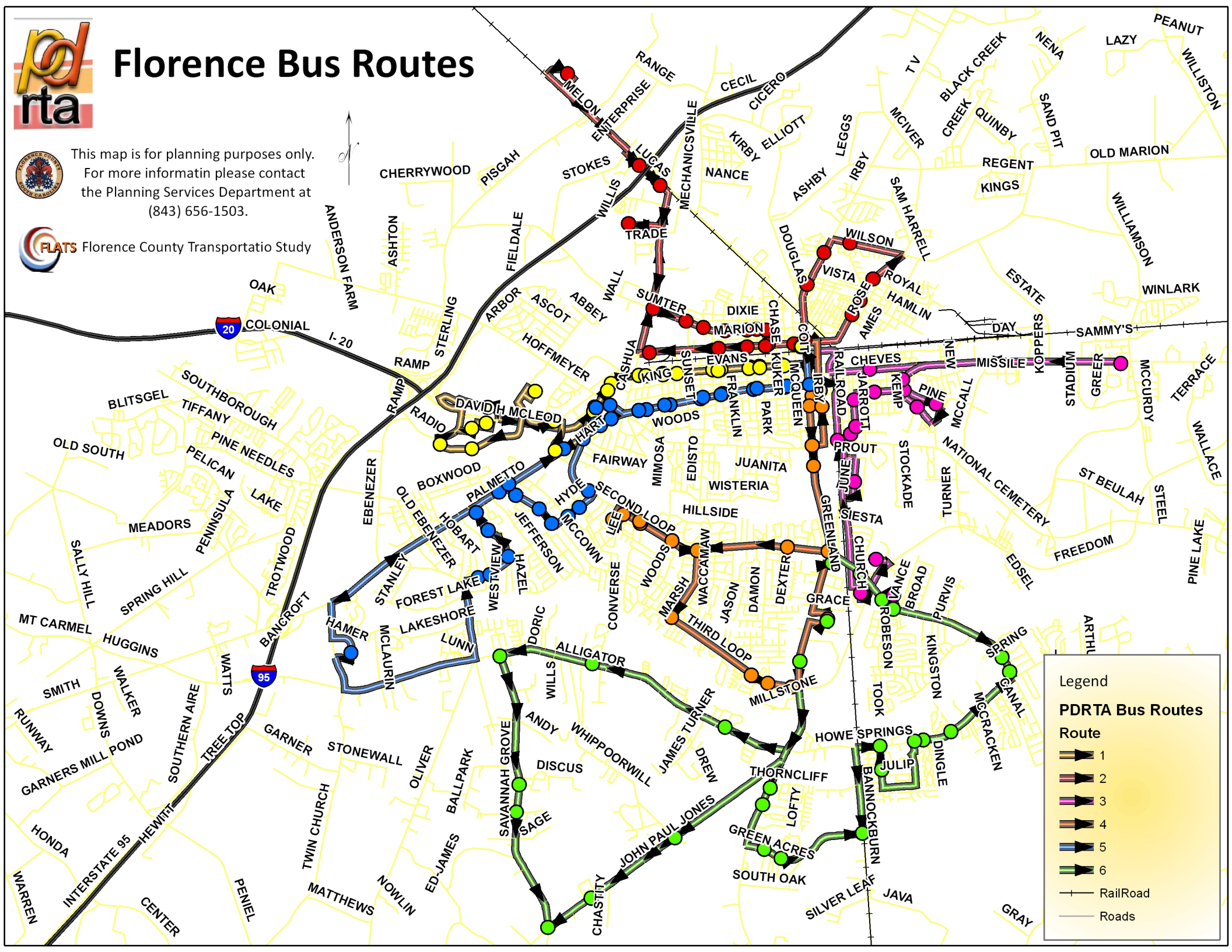
Attachment 8

PDRTA Routes and Bus Stops Maps

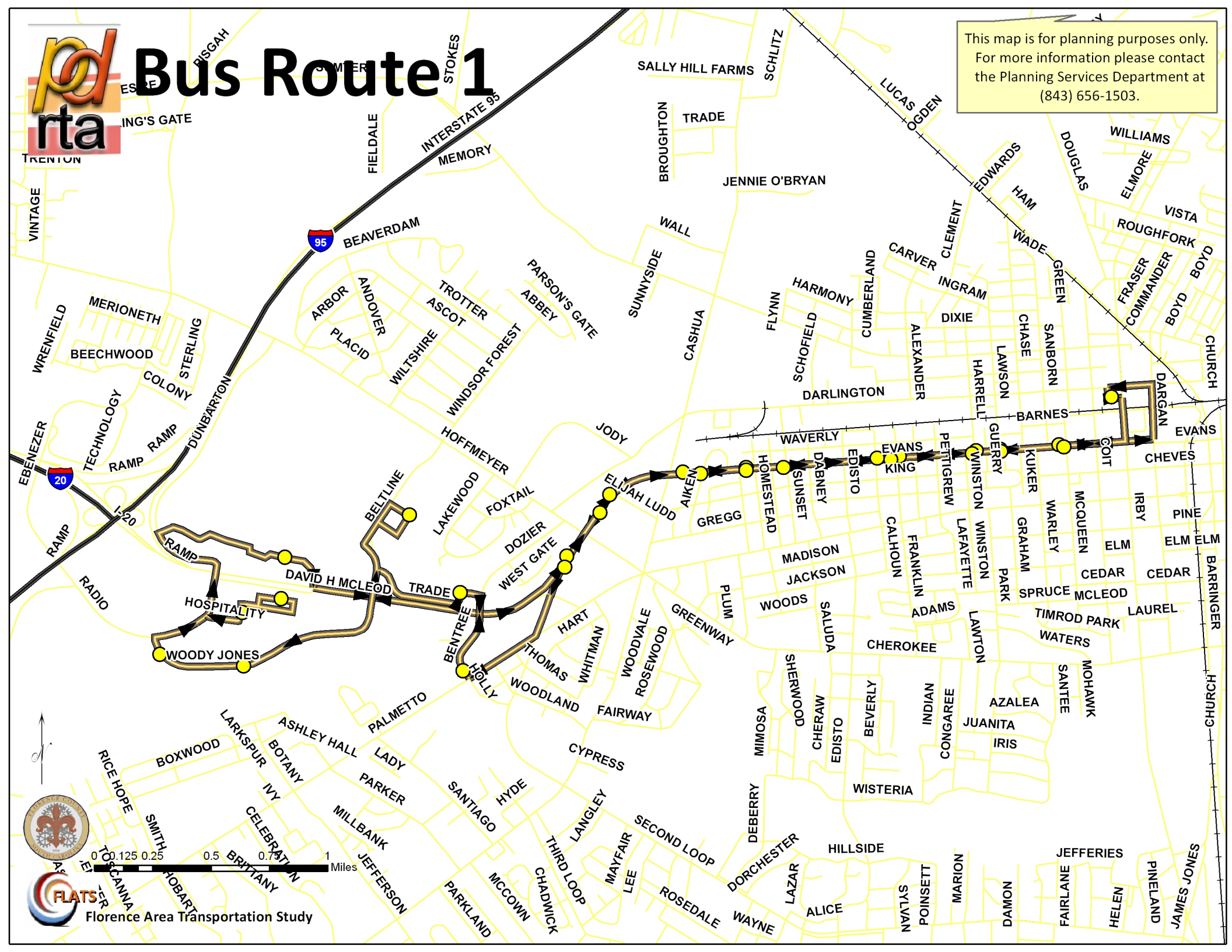
Florence Bus Routes

This map is for planning purposes only. For more informatin please contact the Planning Services Department at (843) 656-1503.

FLATS Florence County Transportatio Study



Bus Route 1

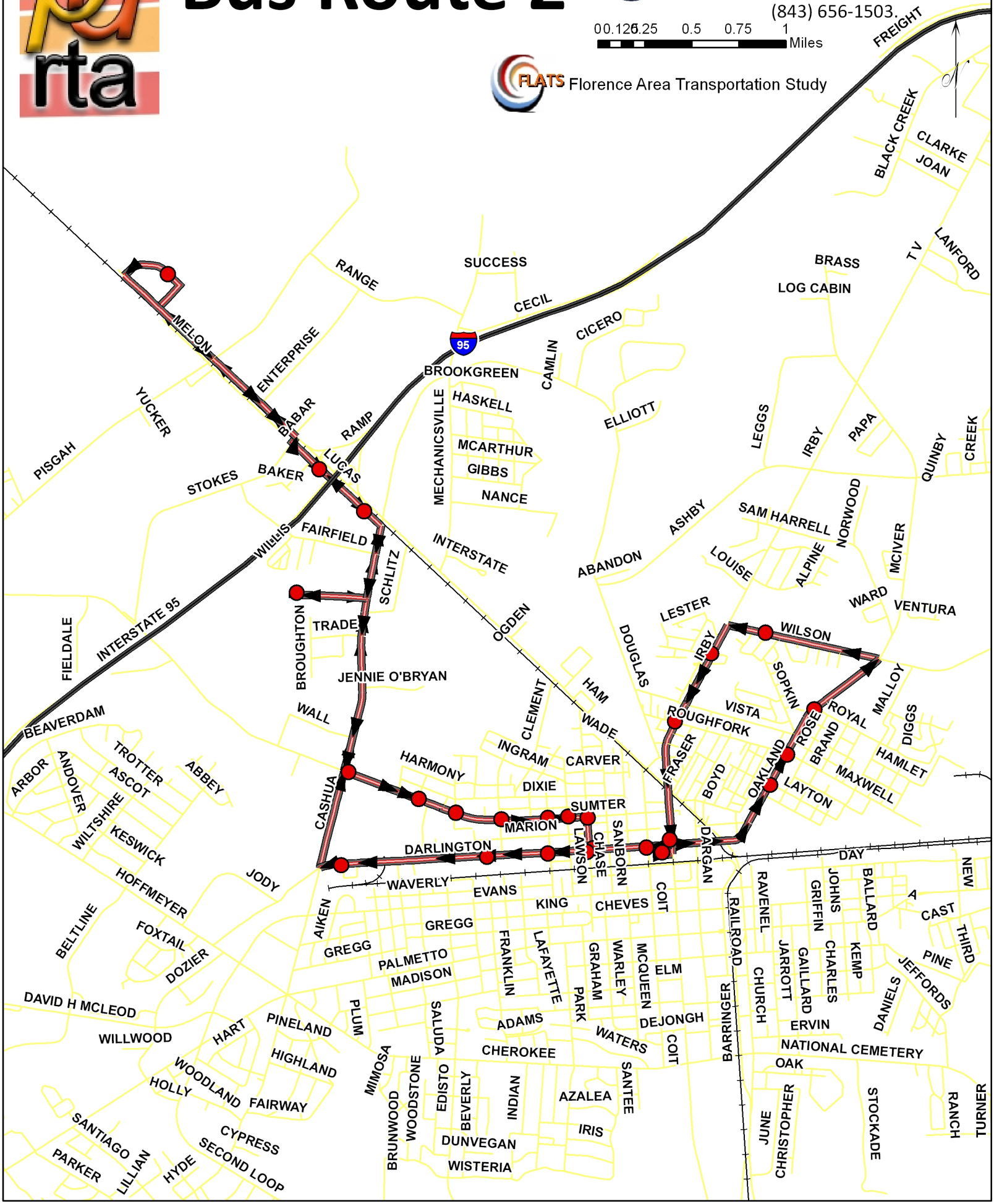

This map is for planning purposes only. For more information please contact the Planning Services Department at (843) 656-1503.
SALLY HILL FARMS
SCHLITZ
LUCAS
OGDEN
BROUGHTON
TRADE
JENNIE O'BRYAN
FIELDALE
INTERSTATE 95
MEMORY
STOKES
BISGAH
TRENTON
VINTAGE
BEAVERDAM
WALL
SUNNYSIDE
CASHUA
PARSON'S GATE
ABBEY
ARBOR
ANDOVER
PLACID
TROTTER
ASCOT
WILTSHIRE
WINDSOR FOREST
MERIONETH
BEECHWOOD
WRENFIELD
STERLING
COLONY
TECHNOLOGY
RAMP
DUNBARTON
EBENEZER
HOFFMEYER
JODY
FLYNN
HARMONY
SCHOFIELD
CUMBERLAND
CARVER
CLEMENT
INGRAM
DIXIE
ALEXANDER
HARRELL
LAWSON
CHASE
SANBORN
GREEN
WADE
HAM
EDWARDS
DOUGLAS
WILLIAMS
ELMORE
VISTA
ROUGHFORK
FRASER
COMMANDER
BOYD
CHURCH
DARLINGTON
BARNES
WAVERLY
DARGAN
EVANS
CHEVES
ELIJAH LUDD
AIKEN
GREGG
HOMESTEAD
SUNSET
DABNEY
EDISTO
EVANS
KING
PETTIGREW
GUERRY
WINSTON
KUKER
COIT
IRBY
PINE
MCQUEEN
WARLEY
GRAHAM
ELM
CEDAR
SPRUCE
MCLEOD
TIMROD PARK
LAUREL
WATERS
BARRINGER
LAKEWOOD
FOXTAIL
BELTLINE
DOZIER
WEST GATE
BENTREE
HOLLY
THOMAS
HART
WHITMAN
WOODVALE
ROSEWOOD
GREENWAY
PLUM
MADISON
JACKSON
WOODS
CALHOUN
FRANKLIN
LAFAYETTE
SALUDA
ADAMS
PARK
CHEROKEE
LAWTON
SHERWOOD
MIMOSA
CHERAW
EDISTO
BEVERLY
INDIAN
CONGAREE
AZALEA
JUANITA
IRIS
SANTEE
MOHAWK
WISTERIA
DEBERRY
HILLSIDE
DORCHESTER
SECOND LOOP
MAYFAIR
LEE
ROSEDALE
WAYNE
ALICE
LAZAR
SYLVAN
POINSETT
MARION
DAMON
JEFFERIES
FAIRLANE
HELEN
PINELAND
JAMES JONES
CHURCH
RAMP
RADIO
I-20
DAVID H MCLEOD
TRADE
HOSPITALITY
WOODY JONES
PALMETTO
ASHLEY HALL
LARKSPUR
BOTANY
LADY
PARKER
CYPRESS
WOODLAND
FAIRWAY
BOXWOOD
RICE HOPE
IVY
SMITH
CELEBRATION
MILLBANK
SANTIAGO
HYDE
LANGLEY
THIRD LOOP
CHADWICK
MCCOWN
PARKLAND
JEFFERSON
HOBART
TOSCANNA
BRITTANY
0 0.125 0.25 0.5 0.75 1 Miles
FLATS
Florence Area Transportation Study

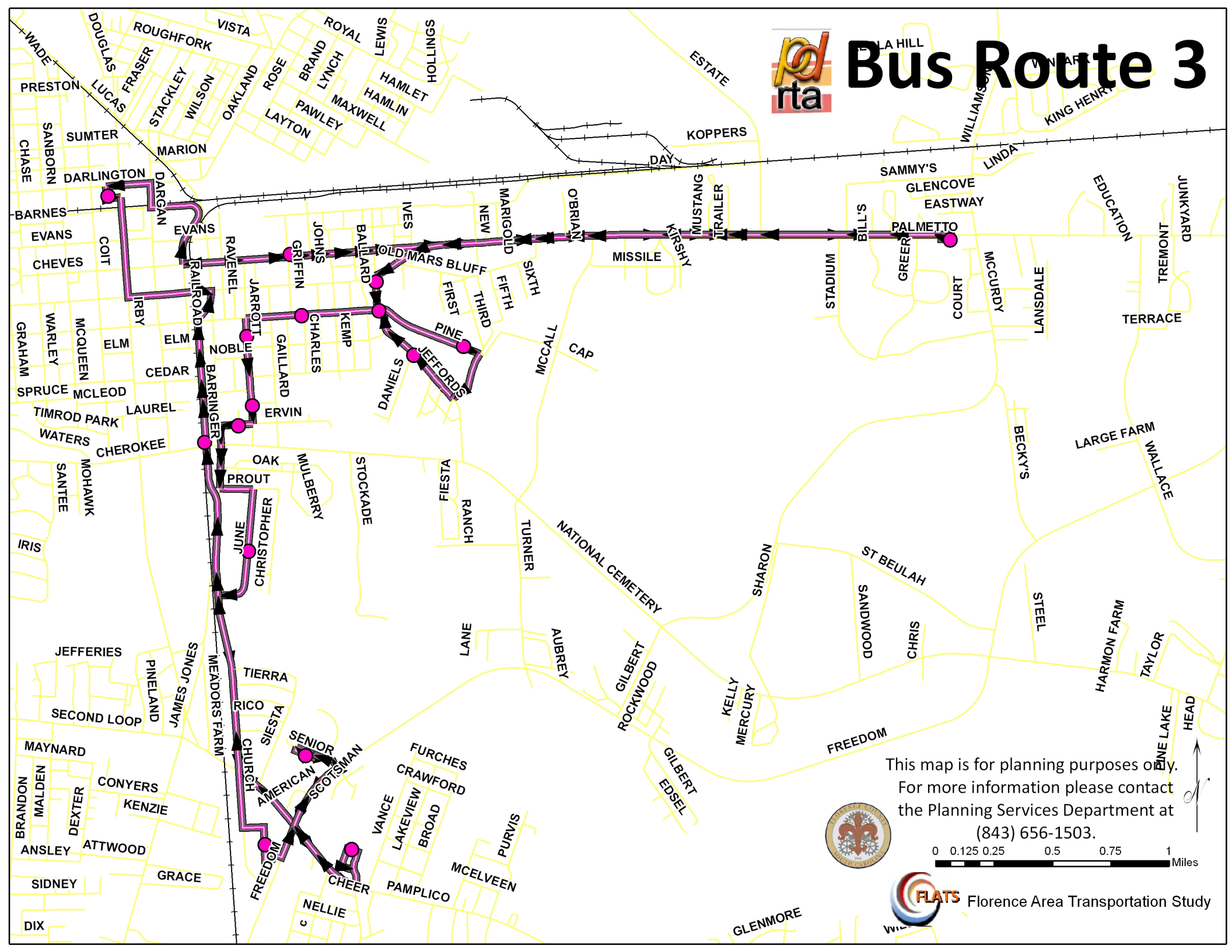
Bus Route 2

This map is for planning purposes only. For more information please contact the Planning Services Department at (843) 656-1503.

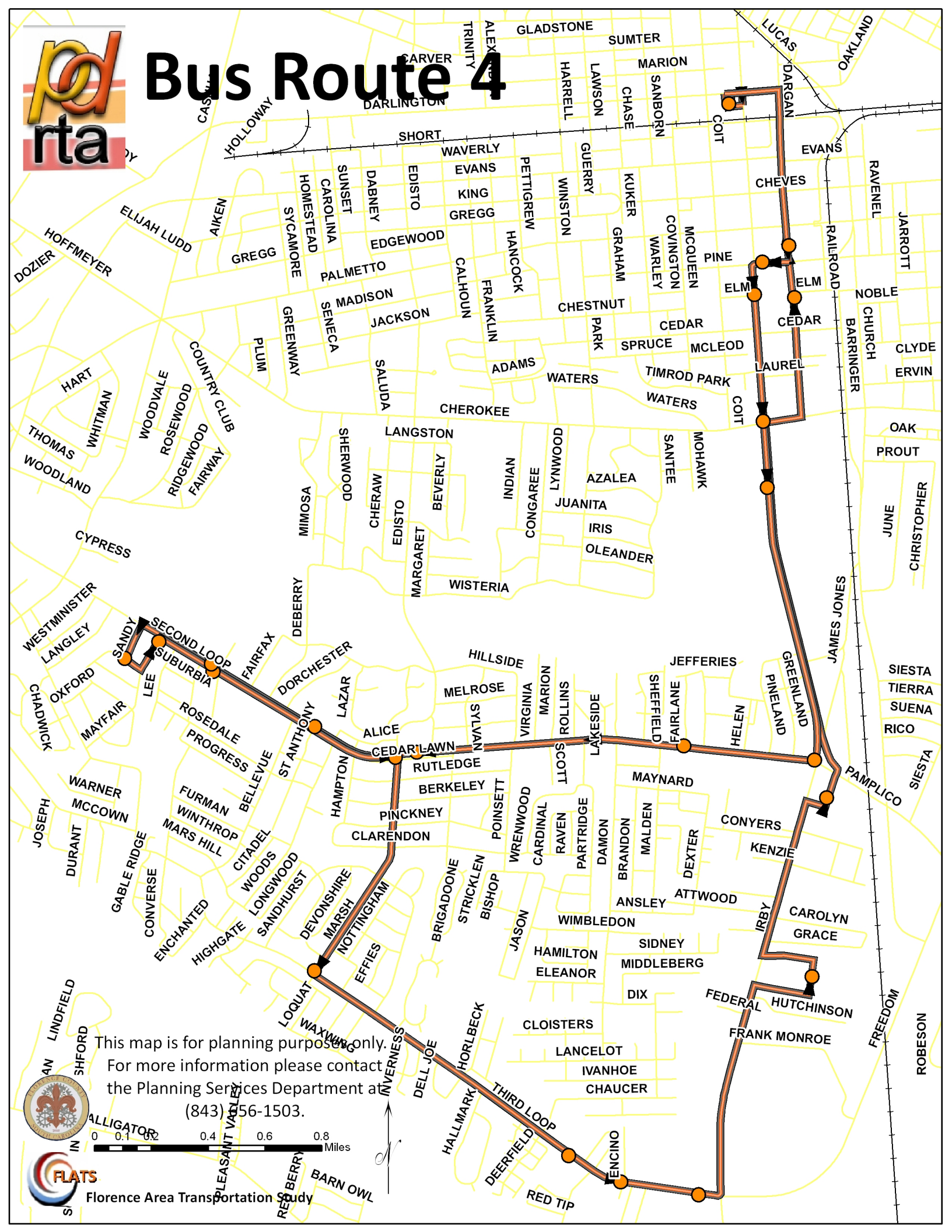
0 0.125 0.25 0.5 0.75 1 Miles

FLATS Florence Area Transportation Study




Bus Route 3
rta
WADE
PRESTON
DOUGLAS
LUCAS
FRASER
ROUGHFORK
STACKLEY
WILSON
VISTA
OAKLAND
ROSE
ROYAL
BRAND
LYNCH
LEWIS
HOLLINGS
HAMLET
HAMLIN
MAXWELL
PAWLEY
LAYTON
ESTATE
KOPPERS
DAY
WILLIAMSON
KING HENRY
SUMTER
MARION
SANBORN
CHASE
DARLINGTON
DARGAN
BARNES
EVANS
CHEVES
COIT
RAILROAD
IRBY
RAVENEL
GRIFFIN
JOHNS
IVES
BALLARD
NEW
MARIGOLD
O'BRIAN
KIRSHY
MUSTANG
TRAILER
BILL'S
PALMETTO
SAMMY'S
GLENCOVE
EASTWAY
EDUCATION
JUNKYARD
TREMONT
TERRACE
LANSDALE
MCCURDY
COURT
GREER
STADIUM
MISSILE
OLD MARS BLUFF
SIXTH
FIFTH
THIRD
FIRST
PINE
JEFFORDS
DANIELS
MCCALL
CAP
JARROTT
NOBLE
CHARLES
KEMP
GAILLARD
ELM
CEDAR
BARRINGER
GRAHAM
WARLEY
MCQUEEN
SPRUCE
MCLEOD
TIMROD PARK
LAUREL
WATERS
CHEROKEE
ERVIN
OAK
PROUT
MULBERRY
STOCKADE
FIESTA
RANCH
TURNER
NATIONAL CEMETERY
SHARON
ST BEULAH
SANDWOOD
CHRIS
STEEL
HARMON FARM
TAYLOR
BECKY'S
LARGE FARM
WALLACE
SANTEE
MOHAWK
IRIS
JUNE
CHRISTOPHER
LANE
AUBREY
GILBERT
ROCKWOOD
KELLY
MERCURY
EDSEL
FREEDOM
PINE LAKE
HEAD
JEFFERIES
PINELAND
JAMES JONES
MEADORS FARM
TIERRA
RICO
SIESTA
SECOND LOOP
MAYNARD
CHURCH
SENIOR
AMERICAN
SCOTSMAN
FURCHES
CRAWFORD
VANCE
LAKEVIEW
BROAD
PURVIS
MCELVEEN
PAMPLICO
CHEER
FREEDOM
NELLIE
GRACE
SIDNEY
ANSLEY
ATTWOOD
DEXTER
MALDEN
BRANDON
CONYERS
KENZIE
DIX
GLENMORE
This map is for planning purposes only.
For more information please contact
the Planning Services Department at
(843) 656-1503.
0 0.125 0.25 0.5 0.75 1
Miles
FLATS
Florence Area Transportation Study

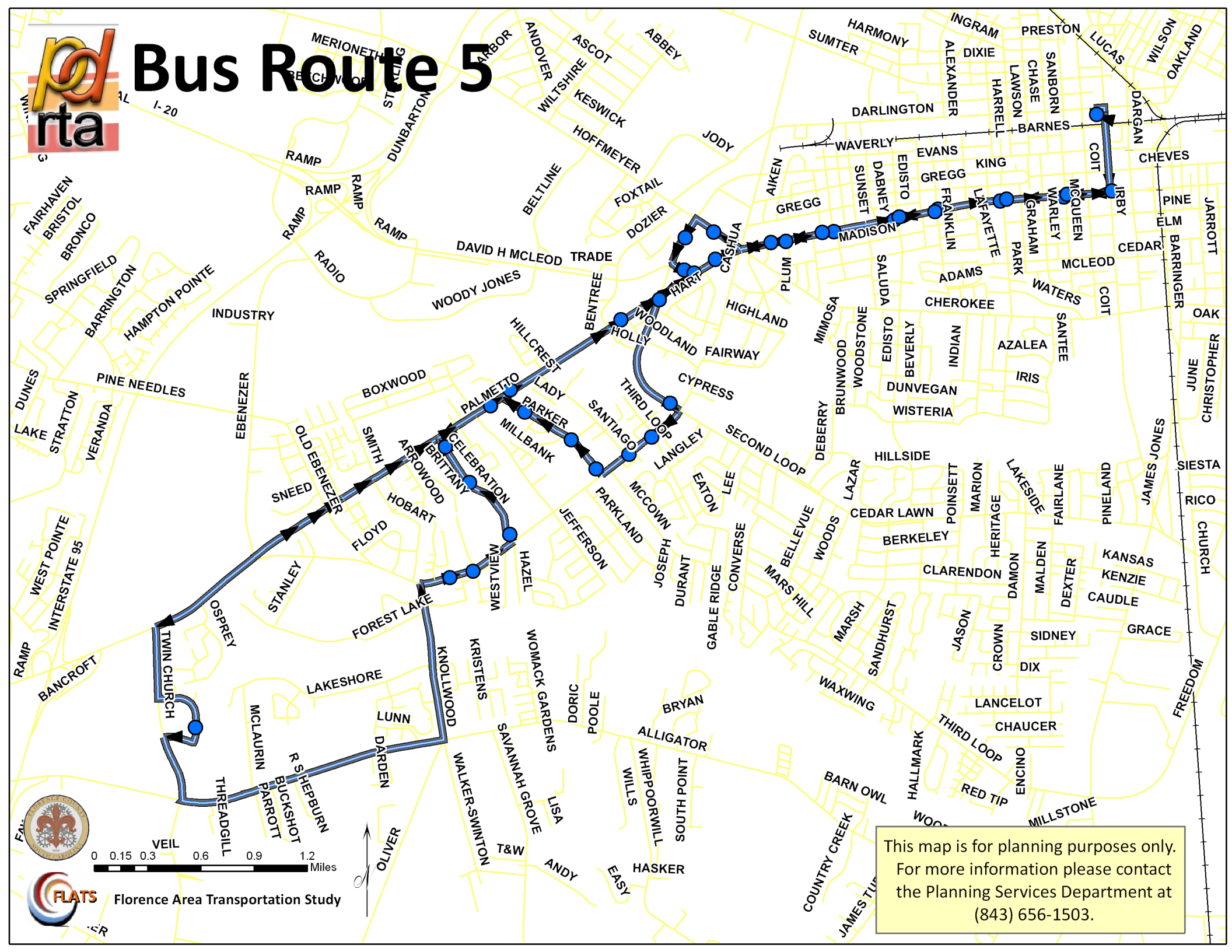
Bus Route 4



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the Planning Services Department at
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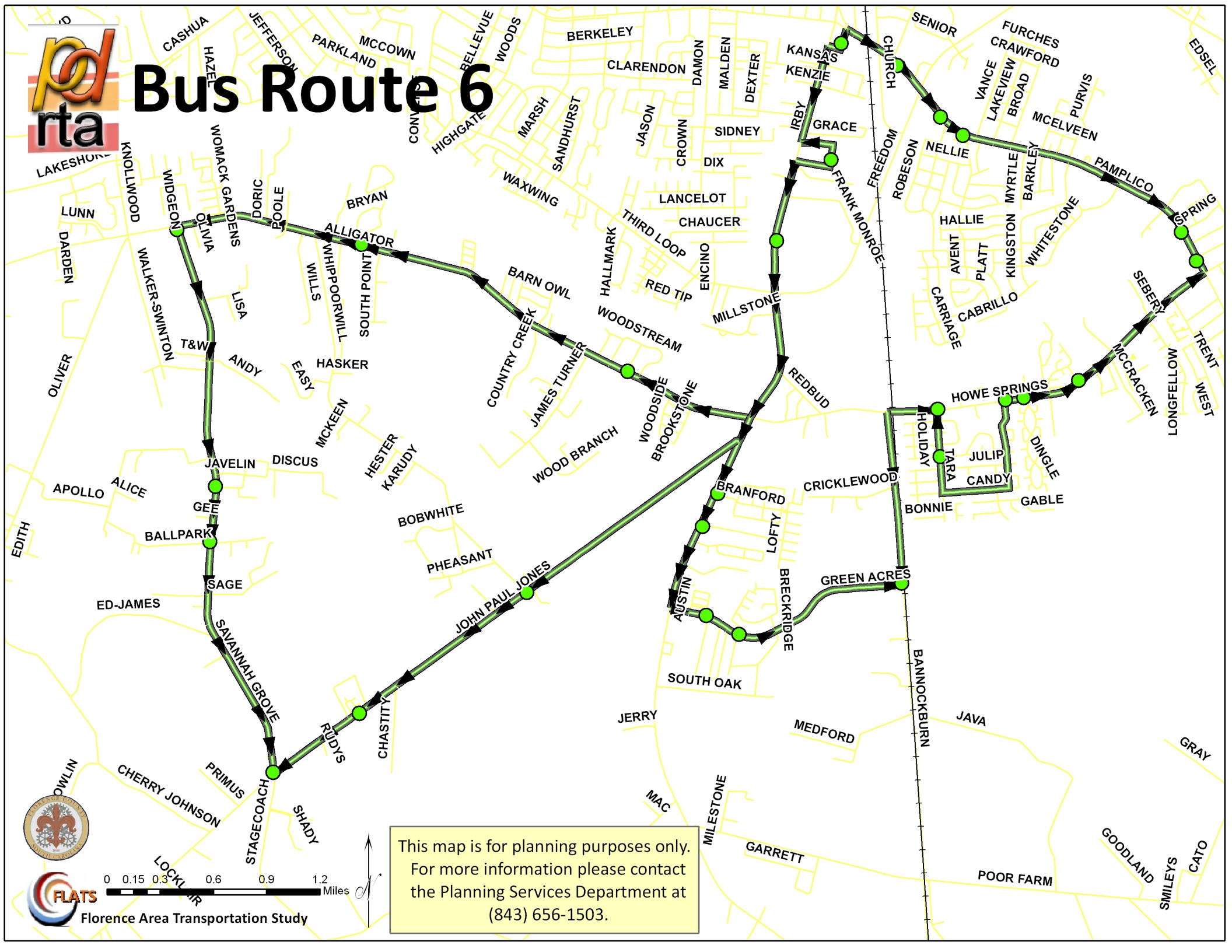
FLATS
Florence Area Transportation Study

Bus Route 5



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Bus Route 6



This map is for planning purposes only. For more information please contact the Planning Services Department at (843) 656-1503.

LakeTran

LAKE CITY
FLORENCE COUNTY
SOUTH CAROLINA



0 0.5 1
Miles

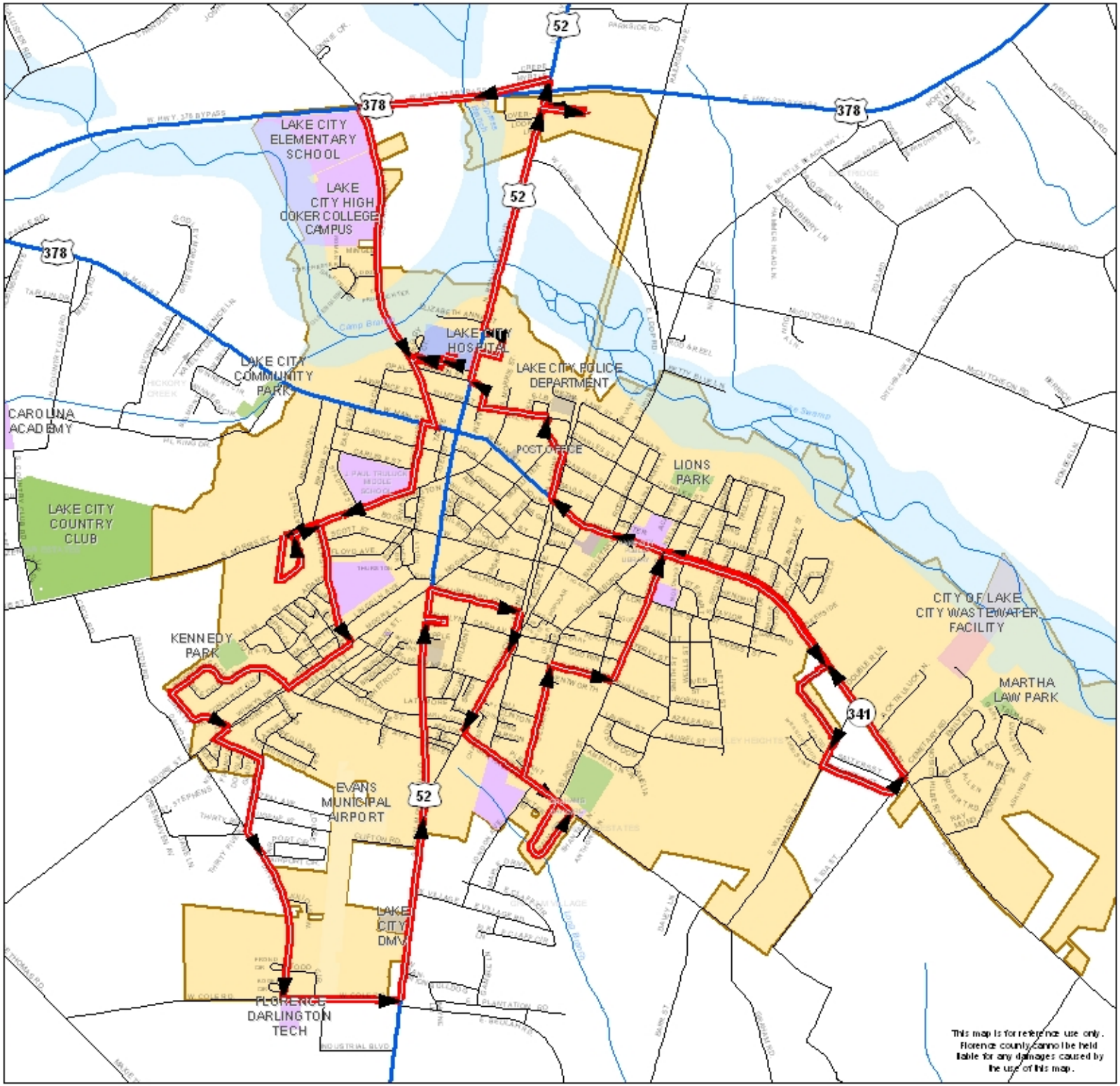
NORTH

MAP CREATED BY:
FLORENCE COUNTY GIS DEPT.
JULY 2012

NOTES:

PDRTA
BE TRANSPORTED

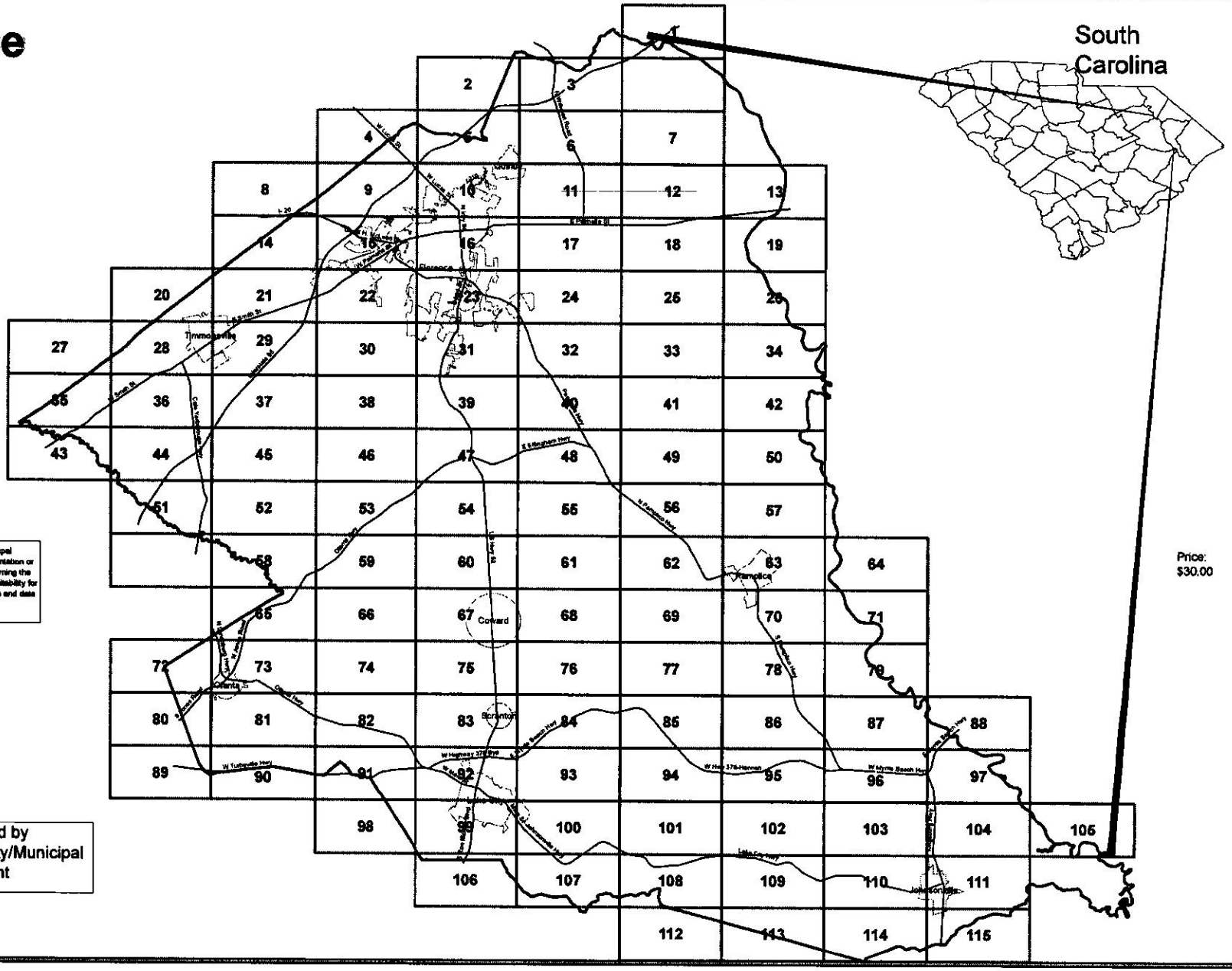




Attachment 9

Map Book Atlas

Florence County Road Map

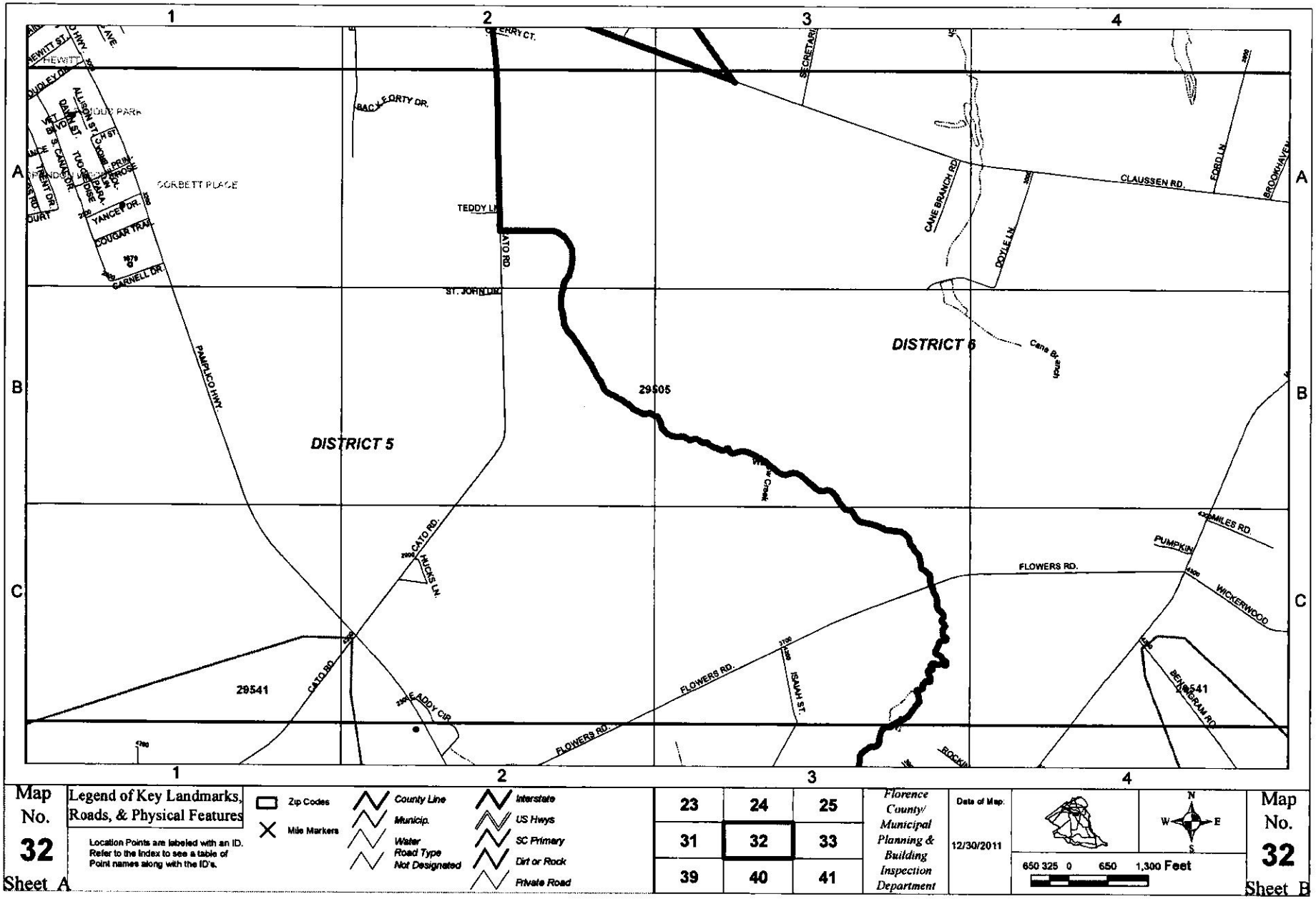


Price: $30.00

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Information Provided by
The Florence County/Municipal
Planning Department

Road-ZipCode Comm.	Range on Map	Map No.-Grids
CASH ROAD; PAMPLICO	2800-3397	87-A1,B1,B2,C2
N CASHUA DR; FLORENCE	170-170	15
N CASHUA DR; FLORENCE	498-772	9
N CASHUA DR; FLORENCE	1054-1926	10
S CASHUA DR; FLORENCE	100-3499	15,22
CASSELMAN ROAD; LAKE CITY	900-1351	84,93
E CAST ST; FLORENCE	1150-1629	16-A4
CASTLE DR; OLANTA	100-199	81-A1
CASTLEBERRY DR; FLORENCE	1200-1223	23-B1
CATERPILLAR LANE; FLORENCE	3000-3151	3-C1
CATFISH ROAD; COWARD	700-899	61-A1
CATFISH CIR; FLORENCE	5500-5579	12-C2
CATFISH DR; PAMPLICO	100-499	62-C3
CATHERINES LANE; LAKE CITY	700-799	84-C2,C3
CATO RD; FLORENCE	2816-2816	24
CATO RD; FLORENCE	2968-4300	32
CATO RD; FLORENCE	4430-4626	40
CATO RD; FLORENCE	4752-4752	39
W CAUDLE AVE; FLORENCE	100-310	23-B2
CAULDERS LANE; PAMPLICO	2600-2851	85-A1
CAVALIER CIR; SCRANTON	1200-1299	82,83
CEAFUS RD; EFFINGHAM	2450-2499	22-C3
CEAFUS ROAD; EFFINGHAM	2400-2449	22-C3
CECIL ROAD; FLORENCE	500-1297	5-B2,C1,C2
CECIL RD; LAKE CITY	650-711	99-A2
CEDAR ROAD; JOHNSONVILLE	1800-2097	96-A3,B3
CEDAR ST; LAKE CITY	300-481	99-A3,B3
E CEDAR ST; FLORENCE	100-199	16-B2,B3
W CEDAR ST; FLORENCE	100-1099	16-B1,B2
CEDAR CREEK LN; FLORENCE	3200-3231	17-B2
CEDAR FALLS LANE; FLORENCE	1600-1617	31-A4
CEDAR GROVE CT; JOHNSONVILLE	350-359	111-C2
CEDAR LAWN CT; FLORENCE	1200-1387	23-A1
CEDARBROOK DR; PAMPLICO	800-1097	70-A2
CEDARWOOD CIR; FLORENCE	1000-1049	14-C3
CELEBRATION BLVD; FLORENCE	1200-1400	15,22
CEMETARY ROAD; LAKE CITY	100-197	99,100
CEMETERY ST; FLORENCE	1200-1299	16-A3
CENTER RD; TIMMONSVILLE	1228-3034	37,45
E CENTER ST; FLORENCE	1700-1799	16-A4
CENTRAL DR; FLORENCE	100-175	15-A4,B4
CENTRAL RD; LAKE CITY	1600-2099	81,90
CENTRAL RD; OLANTA	900-1599	81-A1,B1,B2
CENTURY DR; FLORENCE	3600-3651	14-B4
CHADWICK DR; FLORENCE	2200-2391	22-A4
CHAIN LANE; FLORENCE	4400-4451	40-B4
CHALMERS ROW; FLORENCE	206-229	14-B4,C4
CHAMPIONSHIP DR; FLORENCE	800-899	14-C4
CHANCERY LANE; FLORENCE	1-30	10-A4
CHANCERY CT; FLORENCE	2120-2131	23-B2,C2
CHANCES WAY; COWARD	800-921	61-B2
CHANDLER CIR; FLORENCE	1300-1497	23-C3
CHANDLER ROAD; OLANTA	4200-4696	72,73
CHANDLER MILL ROAD; SCRANTON	100-999	83,92
CHANEY GROVE ROAD; TIMMONSVIL	264-956	36
CHANEY GROVE ROAD; TIMMONSVIL	1055-1226	44
CHANNEL DR; FLORENCE	2200-2204	23,31
CHANTZ CT; FLORENCE	3400-3441	9-B1,B2
E CHAPEL VIEW DR; FLORENCE	100-399	31-B2
CHAPMAN DR; JOHNSONVILLE	300-449	111-B1,B2
CHARITY DR; FLORENCE	2400-2451	24-A1
CHARITY DR; PAMPLICO	800-999	62-B4,C4
CHARLES ST; FLORENCE	400-541	16-A3,B3
CHARLES ST; LAKE CITY	100-513	92-C3,C4
CHARLESTON AVE; LAKE CITY	400-421	99-A3
CHARLESTOWNE BLVD; FLORENCE	900-935	23-C1
CHARLIE CADE ROAD; EFFINGHAM	4200-4897	48,49
E CHARLIE FLOYD ROAD; EFFINGHAM	100-499	47-A3
CHARLOTTE ST; FLORENCE	300-330	16-A3
S CHARLOTTE ST; FLORENCE	421-540	16-A3,B3
CHARLTON PL; PAMPLICO	750-799	86-B2
CHARTERS DR; FLORENCE	3800-3841	14-B4
CHASE ST; FLORENCE	100-1115	10,16
CHASE PARK CIR; FLORENCE	200-399	16-A2
CHASTITY LN; EFFINGHAM	4000-4099	30,38
CHATFIELD DR; FLORENCE	2100-2125	31-A4
CHATHAM PL; FLORENCE	400-481	9-C2
CHATSWORTH LANE; FLORENCE	650-749	9-C3
S CHATWOOD ROAD; LAKE CITY	100-297	91-A4,B4
CHAUCER DR; FLORENCE	600-897	23-C1,C2
CHEAT LANE; COWARD	5900-5951	54-B3
CHEER LANE; FLORENCE	1000-1099	23-B3
N CHELSEA DR; FLORENCE	500-550	9,15
CHERAW DR; FLORENCE	800-1135	16-B1,C1
CHEROKEE RD; FLORENCE	100-1915	15,16
CHERRY LANE; FLORENCE	3000-3099	31-A2
CHERRY ST; LAKE CITY	300-351	99-A3
CHERRY JOHNSON RD; EFFINGHAM	3800-4380	30,38
CHERRYWOOD ROAD; FLORENCE	3200-3495	9-A2
CHERYL CT; FLORENCE	200-213	10-B2
CHESIRE LN; Florence	3102-3119	9-B2
CHESTER ROAD; COWARD	100-499	54-B3,B4
CHESTNUT ST; FLORENCE	400-1020	16-B1,B2
CHESTNUT ROAD; JOHNSONVILLE	400-699	109,113
E CHEVES ST; FLORENCE	100-1515	16-A2,A3,A4
W CHEVES ST; FLORENCE	100-515	16-A2
CHICKADEE CT; FLORENCE	2000-2010	22-B1
CHINABERRY RD; FLORENCE	5100-5597	12-C1,C2
CHINABERRY RD; JOHNSONVILLE	500-1006	87-B3,C2,C3
CHINABERRY RD; PAMPLICO	800-1199	67-A3,B3
CHIPMUNK DRIVE; Timmonsville	5500-5525	46-B2
CHIPPENHAM LANE; FLORENCE	300-481	9,15
CHISOLM TRL; FLORENCE	3200-3799	33-A3,A4,B3,B4,(
CHISOLM TRL; LAKE CITY	1050-1081	84-C2
N CHIVES PROSSER PARK ROAD; JO	100-231	111-B1
CHOATE LANE; FLORENCE	2600-2699	24-C1
CHOMPER CT; FLORENCE	400-430	31-B2
CHRIS AVE; FLORENCE	1400-1551	17,24
E CHRISTMAS CIR; EFFINGHAM	100-199	39-B2
S CHRISTOPHER LANE; FLORENCE	900-1122	16-B3,C3
W CHRISTY LN; Effingham	100-150	39-B2
W CHRISTY LANE; EFFINGHAM	100-199	39-B2,C2
CHUCK CIR; EFFINGHAM	5600-5699	47-A3,A4
CHURCH ST; Johnsonville	100-110	111-A1
CHURCH ST; LAKE CITY	300-313	99-A3
CHURCH ST; OLANTA	100-319	73-C1
CHURCH ALY; PAMPLICO	230-299	63-C2
CHURCH ST; SCRANTON	1600-2249	83-A4,B4
N CHURCH ST; FLORENCE	300-481	10,16
N CHURCH ST; LAKE CITY	100-389	92-B4,C3,C4
S CHURCH ST; FLORENCE	100-1598	16,23
S CHURCH ST.; FLORENCE	1600-1900	23-A3,B3
S CHURCH ST; LAKE CITY	100-545	92,99
CHURCHILL DR; TIMMONSVILLE	910-1099	29-A2
W CHURCHILL PL; FLORENCE	2100-2121	22-A4
CICERO LANE; FLORENCE	2200-2499	5-B2,C2
CINNAMON TREE RD; EFFINGHAM	3600-3699	30-B3,C3
CIRCLE DR; COWARD	4000-4250	67-C4
CIRCLE DR; JOHNSONVILLE	350-599	109,113
CIRCLE DR; PAMPLICO	400-499	63-C1,C2
E CIRCLE LANE; FLORENCE	100-199	5-A4
CITADEL ST; FLORENCE	1800-1931	22,23
CITIZEN LANE; FLORENCE	1400-1425	21-A4
CJ LAKES CIRCLE; Johnsonville	100-499	111-A1,A2,B1,B2
E CLAFF CIR; LAKE CITY	100-299	99-B3
CLAIBORNE PL; FLORENCE	2426-2433	22-A4
CLAREMONT AVE; FLORENCE	1100-1395	16-C1
CLARENDON AVE; FLORENCE	900-1343	23-A1,A2
CLAREVIEW DR; FLORENCE	2200-2349	23-B3,C3
CLARK ROAD; JOHNSONVILLE	600-899	113-A3
CLARK MEMORIAL DR; FLORENCE	486-486	11
CLARK MEMORIAL DR; FLORENCE	560-560	6
W CLARKE RD; FLORENCE	100-199	5-A3,A4
CLARKES LANE; PAMPLICO	800-851	95-C3
CLAUDE ROAD; SCRANTON	1600-1897	74-C3,C4
CLAUDE DOUGLAS CIR; FLORENCE	3330-3479	22-B2,C2
CLAUSSEN ROAD; FLORENCE	2326-3236	24
CLAUSSEN ROAD; FLORENCE	3414-4158	32
CLAUSSEN ROAD; FLORENCE	4322-4720	33
CLAY ROAD; JOHNSONVILLE	1150-1397	96,103
S CLAY FIELD ROAD; JOHNSONVILLE	800-999	110-B2,B3,C3
CLAYMONT CT; FLORENCE	3800-3841	14-B4
CLAYTON CT; FLORENCE	948-999	31-B3
CLEAN LANE; LAKE CITY	1400-1451	84-C2
CLEARBROOK LANE; COWARD	3300-3399	76-B2
CLEARBROOK RD; EFFINGHAM	5016-5278	39
CLEARBROOK RD; EFFINGHAM	5546-6398	47
CLEARWATER CT; FLORENCE	1400-1421	31-A3,A4
CLEARWAY LANE; TIMMONSVILLE	800-899	21-B1
CLEMENT ST; FLORENCE	600-1097	10-B2,C1,C2
CLEVELAND ROAD; EFFINGHAM	2600-2851	30-B3
CLEVELAND ROAD; SCRANTON	1400-1599	83-B3,C3
E CLIFFORD ST; TIMMONSVILLE	100-625	28,29
W CLIFFORD ST; TIMMONSVILLE	100-225	28-A4
CLIFTON ROAD; LAKE CITY	200-299	99-B3
CLINTON ROAD; SCRANTON	1000-1099	83-C2
CLOISTERS DR; FLORENCE	800-937	23-B1,B2
CLOVER ST; LAKE CITY	300-331	99-A2
CLOVER HILL ROAD; SCRANTON	1100-1197	83-B2
CLOVER HILL RD; SCRANTON	1114-1197	83-B2
CLUB ROAD; JOHNSONVILLE	400-551	97-B2
CLUB CIR; LAKE CITY	150-199	92,99
CLUB HOUSE DR; JOHNSONVILLE	400-499	111-C1
CLYDE ST; FLORENCE	500-519	16-B3
CLYDE MCGEE ROAD; TIMMONSVILLE	256-256	53
CLYDE MCGEE ROAD; TIMMONSVILLE	456-456	58
CO GEN ROAD; FLORENCE	7170-7301	26-B2
COATES FARM ROAD; OLANTA	4200-4249	73-C1
COBBLESTONE CT; FLORENCE	1620-1626	21-A4,B4
COBBLESTONE ST; FLORENCE	2799-3100	11-C2
COCKFIELD RD; LAKE CITY	650-1697	84,93
COCKFIELD DR; PAMPLICO	100-119	63-B2
COCKFIELD LANDING ROAD; SCRANT	1250-1351	76-B3
COCOA LANE; FLORENCE	2500-2599	25-C2
COHEN ST; FLORENCE	100-199	16-B3
N COIT ST; FLORENCE	100-650	10,16
S COIT ST; FLORENCE	100-725	16-A2,B2
COKER ST; FLORENCE	400-613	10-C3
COKESBURY CT; FLORENCE	2050-2070	22-B1
COLCHESTER PL; FLORENCE	1000-1015	14-C4
W COLE ROAD; LAKE CITY	122-797	99-C2,C3
COLEMAN ROAD; EFFINGHAM	6800-6961	48-C4
COLEMAN LANE; LAKE CITY	1900-1999	84-B3,B4
E COLEMAN AVE; PAMPLICO	100-119	63-C2
W COLEMAN AVE; PAMPLICO	100-399	63-C2
COLEN ROAD; TIMMONSVILLE	500-699	35-A3,B3
COLIN ROAD; LAKE CITY	1500-1697	82,91
COLLEGE LAKE DR; FLORENCE	4800-5199	12-B1,C1
COLLINS LN; JOHNSONVILLE	100-197	96,97
COLONIAL ROAD; FLORENCE	3606-3848	14
COLONIAL DR; JOHNSONVILLE	100-139	111-B1
COLONIAL DR; TIMMONSVILLE	300-399	29-A1
COLONY LANE; FLORENCE	3100-3199	15-A2
COLTON DR; Florence	3000-3038	17-A3,B3
COLUMBIA AVE; JOHNSONVILLE	300-401	111-C1
COMBRAY CIR; FLORENCE	3001-3151	9-C2
COMMANDER ST; FLORENCE	500-831	10-C2
COMMERCE DR; FLORENCE	2300-2399	15-B4
COMMUNITY LANE; EFFINGHAM	2200-2251	22-B3,C3
COMMUNITY CLUB ROAD; LAKE CITY	1800-1897	84-B4
COMPASS DR; FLORENCE	2800-2999	23,31
CONCORD ROAD; COWARD	400-499	60-C2,C3
CONGAREE DR; FLORENCE	800-1099	16-B1,B2,C1,C2
CONNER DR; FLORENCE	4101-4138	14-B3,B4
CONSTANCE DR; FLORENCE	300-399	5,10
CONSTANTINE DR; FLORENCE	1300-1415	23-A2
CONSTITUTION DRIVE; FLORENCE	2800-2850	22-A3
CONSTITUTION AVE; LAKE CITY	500-610	99-A2
CONVERSE DR; FLORENCE	1700-1930	22-A4,B4
S CONVERSE DR; FLORENCE	2000-2135	22-A4,B4
CONYERS AV; FLORENCE	100-401	23-A2
COOK LANE; JOHNSONVILLE	350-399	109-B2
COOK ROAD; SCRANTON	2550-2550	75
COOKTOWN ROAD; LAKE CITY	400-799	91,98
COOPER ROAD; COWARD	4900-4999	61-B1,C1
COOPER LANE; FLORENCE	200-299	5-A3
COOPER CIR; PAMPLICO	800-899	95-C3
COOPER LANE; TIMMONSVILLE	500-599	28-B4

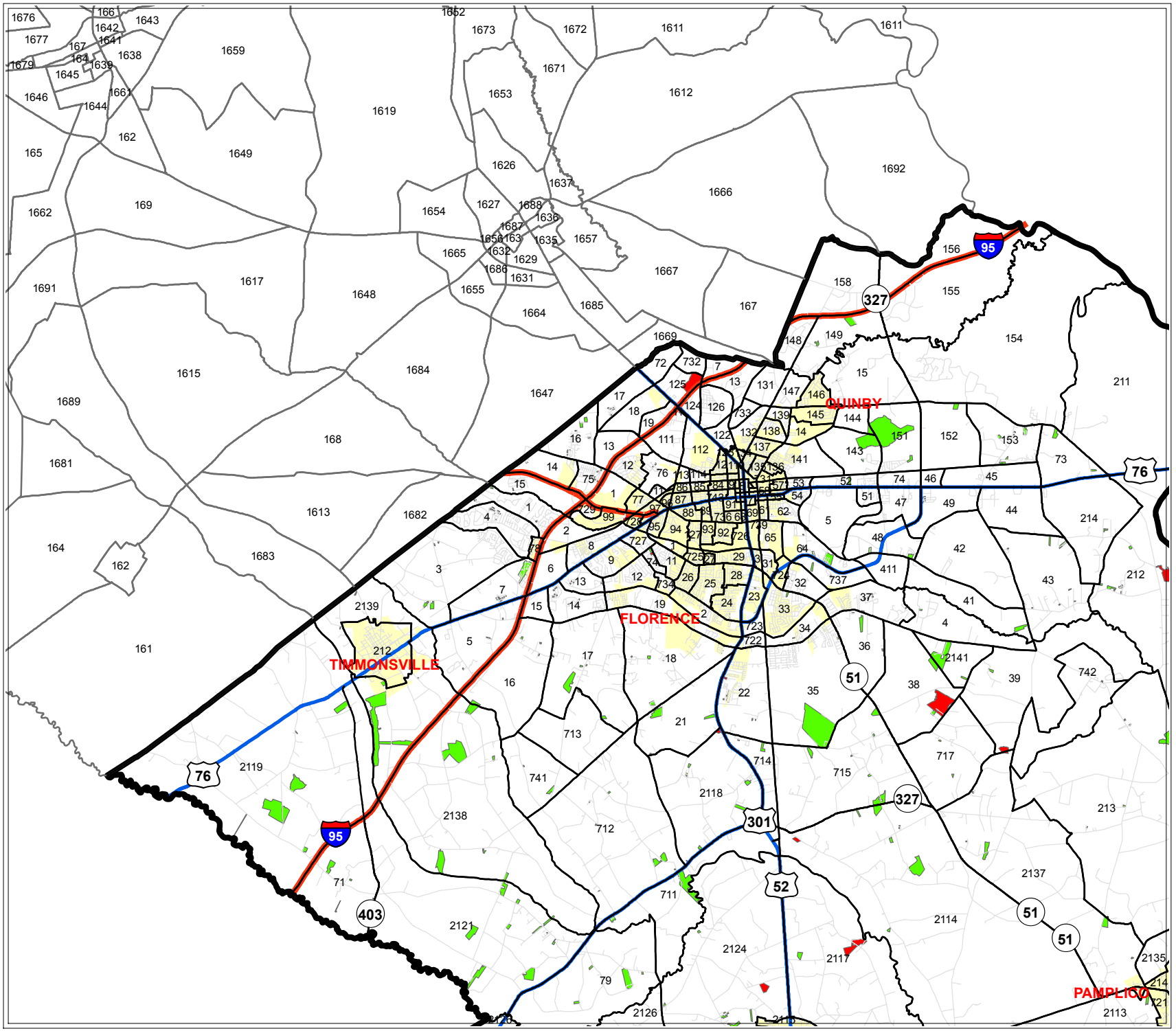


Map No. 32 Sheet A	Legend of Key Landmarks, Roads, & Physical Features									Florence County/ Municipal Planning & Building Inspection Department	Date of Map: 12/30/2011	650 325 0 650 1,300 Feet	Map No. 32 Sheet B
	Location Points are labeled with an ID. Refer to the Index to see a table of Point names along with the ID's.	Zip Codes	County Line	Interstate	23	24	25						
		Mile Markers	Municip.	US Hwys	31	32	33						
			Water	SC Primary									
			Road Type Not Designated	Dirt or Rock	39	40	41						
				Private Road									

Attachment 10

Permit Data and Map

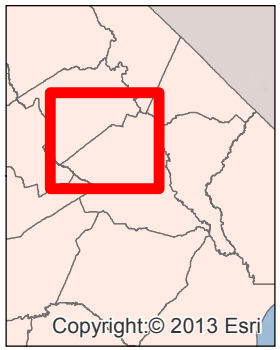
FLATS TAZ's FLORENCE BUILDING PERMITS JULY 2012 - JUNE 2013



Legend

- TAZ Boundaries
- Commercial_712_613
- Residential_712_613

THE PEE DEE



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Reports\Reports_13\Annual Report\
Attachments\13-Permit Data and Map
\Permits_FLATS.mxd
RWE
July 12, 2013

sName	sParcelNum	AppDate	Address	sValue
NEW INSTALLATION	00016-04-138	5/2/2013	1332 BROCKINGTON ST TIMMONSVILLE , SC 29161-	62000
NEW INSTALLATION	03721-02-087	4/15/2013	1711 JEFFRIES CREEK BLVD PAMPLICO , SC 29583-	4000
NEW INSTALLATION	03721-02-055	6/12/2013	1815 JEFFERSON CREEK BLVD PAMPLICO, SC 29583-	61279
NEW INSTALLATION	00355-02-056	10/19/2012	1229 HWY 378-HANNAH PAMPLICO , SC 29583-	7000
NEW SINGLE FAMILY	00241-01-038	11/16/2012	4003 MILAN RD FLORENCE, SC 29506-	90000.00
NEW INSTALLATION	00210-01-115	12/7/2012	2694 CLAUSSEN RD FLORENCE, SC 29505-	72500
NEW SINGLE FAMILY	07611-01-051	4/18/2013	1978 TANAGER DR FLORENCE, SC 29501-	230000.00
NEW SINGLE FAMILY	00117-31-034	1/10/2013	361 GLENDALE SCHOOL RD SCRANTON , SC 29591-	193000
NEW INSTALLATION	00178-01-059	10/4/2012	1603 MCMILLAN LN FLORENCE, SC 29506-	9803.50
NEW INSTALLATION	00156-01-087	10/12/2012	371 OLANTA HWY EFFINGHAM , SC 29541-	30000
NEW INSTALLATION	00067-36-020	6/7/2013	3495 1/2 OLANTA HWY OLANTA, SC 29114-	18000.00
NEW SINGLE FAMILY	15015-01-045	9/25/2012	708 MIDDLEBERG WAY FLORENCE, SC 29505-	180000.00
NEW BUILDING	00371-01-001	7/24/2012	4392 RIVER NECK RD FLORENCE, SC 29506-	6000.00
NEW SINGLE FAMILY	90095-01-039	3/7/2013	216 CAROLYN DR FLORENCE , SC 29505-	123000
NEW SINGLE FAMILY	90129-13-002	2/1/2013	1311 OLD MARS BLUFF RD FLORENCE, SC 29501-	136000.00
NEW INSTALLATION	00206-01-156	9/27/2012	2778 LEOLA HILL DR FLORENCE, SC 29506-	56936.00
NEW INSTALLATION	00154-01-001	1/23/2013	4201 IRBY ST FLORENCE, SC 29505-	2000
NEW INSTALLATION	00247-01-113	11/8/2012	3946 RED BIRD RD FLORENCE, SC 29505-	7000
NEW SINGLE FAMILY	00054-04-139	11/20/2012	4127 BERT LN TIMMONSVILLE, SC 29161-	99000.00
NEW SINGLE FAMILY	05312-01-003	6/11/2013	1619 LAKE WATEREE DR FLORENCE , SC 29501-	230000
NEW SINGLE FAMILY	00101-01-629	10/25/2012	3209 FOREST LAKE DR FLORENCE , SC 29501-	228000
NEW INSTALLATION	00153-01-046	10/8/2012	3959 SOUTHSIDE CIR FLORENCE , SC 29505-	31000
NEW INSTALLATION	00111-01-012	3/1/2013	4784 HALL RD EFFINGHAM, SC 29541-	1000
NEW SINGLE FAMILY	00274-01-313	8/17/2012	5259 HUTTON CT FLORENCE, SC 29506-	117000.00
NEW INSTALLATION	00208-01-022	1/2/2013	1424 CHRIS AV FLORENCE, SC 29506-	9200
NEW INSTALLATION	00225-03-022	10/19/2012	750 1/2 BORKOWITZ RD SCRANTON, SC 29591-	32000.00
NEW SINGLE FAMILY	07306-01-040	12/7/2012	3722 TETBURY ST FLORENCE , SC 29501-	150000
NEW INSTALLATION	00055-04-052	11/21/2012	1434 CENTER RD TIMMONSVILLE , SC 29161-	12000
NEW SINGLE FAMILY	00098-01-004	12/31/2012	3310 HOFFMEYER RD FLORENCE, SC 29501-	135000
NEW INSTALLATION	01791-01-009	3/21/2013	1809 GILBERT DR FLORENCE , SC 29506-	21000
NEW INSTALLATION	00018-04-137	8/7/2012	805 HILL RD TIMMONSVILLE, SC 29161-	28000.00
NEW INSTALLATION	00401-02-034	2/12/2013	1113 OLD RIVER RD PAMPLICO , SC 29583-	35000
NEW INSTALLATION	00210-01-003	4/5/2013	2715 CLAUSSEN RD FLORENCE, SC 29505-	19180.00
NEW INSTALLATION	00257-03-033	3/13/2013	4045 GEORGETOWN RD SCRANTON, SC 29591-	4000
NEW SINGLE FAMILY	07212-01-035	12/31/2012	925 ASHTON DR FLORENCE, SC 29501-	330000
NEW SINGLE FAMILY	05312-01-005	6/11/2013	1623 LAKE WATEREE DR FLORENCE , SC 29501-	193000
NEW INSTALLATION	01551-01-028	7/27/2012	159 KINSWOOD CIR EFFINGHAM, SC 29541-	96000
NEW SINGLE FAMILY	12611-01-057	12/12/2012	3019 RED BERRY CIR EFFINGHAM , SC 29541-	89000
NEW SINGLE FAMILY	00076-01-184	2/6/2013	3377 SHOREBIRD LN FLORENCE , SC 29501-	130000
NEW INSTALLATION	00141-31-141	6/28/2013	1462 CANTEY LN LAKE CITY, SC 29560-	42279
NEW SINGLE FAMILY	01671-01-051	1/30/2013	106 KATELYN DR LAKE CITY , SC 29560-	175000
NEW INSTALLATION	00161-03-017	4/22/2013	841 MALLARD RD COWARD, SC 29530-	9000.00

NEW SINGLE FAMILY	05110-01-197	12/7/2012	4177 RODANTHE CIR FLORENCE, SC 29501-	165000.00
NEW SINGLE FAMILY	10014-01-180	6/28/2013	915 ABBINGTON HALL FLORENCE , SC 29501-	112000
NEW INSTALLATION	04361-05-020	11/5/2012	475 AIKEN ST JOHNSONVILLE, SC 29555-	16000.00
NEW INSTALLATION	00161-03-144	11/6/2012	550 MALLARD RD COWARD, SC 29530-	8000.00
NEW INSTALLATION	00013-04-020	3/18/2013	1828 RAIN STORM RD TIMMONSVILLE, SC 29161-	72999
NEW SINGLE FAMILY	01514-01-003	9/25/2012	448 MILLSTONE RD FLORENCE , SC 29505-	190000
NEW SINGLE FAMILY	05110-01-146	12/20/2012	4174 RODANTHE CIR FLORENCE , SC 29501-	250000
NEW SINGLE FAMILY	00731-11-003	8/21/2012	3807 FLETCHER RD FLORENCE, SC 29501-	204000
NEW SINGLE FAMILY	00131-01-142	10/25/2012	843 OLANTA HWY EFFINGHAM , SC 29541-	275000
NEW SINGLE FAMILY	00382-02-006	9/17/2012	2938 PAMPLICO HWY PAMPLICO, SC 29583-	23000
NEW SINGLE FAMILY	10014-01-130	10/24/2012	816 ABBINGTON HALL FLORENCE , SC 29501-	113355
NEW INSTALLATION	00432-05-040	7/20/2012	443 HUGGINS EADDY RD JOHNSONVILLE, SC 29555-	15000.00
NEW INSTALLATION	00422-05-135	1/31/2013	948 CLAY FIELD RD JOHNSONVILLE, SC 29555-	23000
NEW INSTALLATION	00260-03-095	8/17/2012	2228 OLD GEORGETOWN RD COWARD, SC 29530-	70000.00
NEW INSTALLATION	00390-05-001	2/12/2013	2282 VOX HWY JOHNSONVILLE, SC 29555-	36856
NEW SINGLE FAMILY	15110-01-100	6/26/2013	2660 ENCINO DR FLORENCE, SC 29505-	114000.00
NEW INSTALLATION	00246-01-004	9/14/2012	3992 CLAUSSEN RD FLORENCE , SC 29505-	18000
NEW INSTALLATION	00039-04-001	6/7/2013	2677 HILL RD TIMMONSVILLE, SC 29161-	12000.00
NEW INSTALLATION	00257-02-035	5/17/2013	8756 FRANCIS MARION RD SCRANTON , SC 29591-	3000
NEW SINGLE FAMILY	05110-01-126	8/9/2012	4115 TIFFANY DR FLORENCE, SC 29501-	165000
NEW INSTALLATION	00422-05-117	1/24/2013	837 LAKE CHAPEL RD JOHNSONVILLE , SC 29555-	56000
NEW INSTALLATION	00161-03-080	8/17/2012	831 LYNCH RD COWARD, SC 29530-	2000.00
NEW SINGLE FAMILY	90018-04-002	6/21/2013	433 WHITMAN AV FLORENCE, SC 29501-	175000.00
NEW INSTALLATION	00032-04-172	8/7/2012	430 MT CARMEL RD TIMMONSVILLE, SC 29161-	8000
NEW INSTALLATION	00133-03-031	6/18/2013	1059 OLD NO 4 HWY COWARD, SC 29530-	90156
NEW SINGLE FAMILY	00210-01-253	6/19/2013	2905 WILSHIRE CT FLORENCE , SC 29506-	199000
NEW SINGLE FAMILY	05312-01-006	6/11/2013	1625 LAKE WATEREE DR FLORENCE, SC 29501-	214000.00
NEW SINGLE FAMILY	18016-01-143	3/4/2013	3026 LONGFELLOW DR FLORENCE, SC 29505-	109000.00
NEW INSTALLATION	00283-01-048	3/8/2013	6016 FRANCIS MARION RD EFFINGHAM, SC 29541-	69000
NEW INSTALLATION	00385-02-171	11/5/2012	4262 SHEMINALLY RD PAMPLICO, SC 29583-	1000.00
NEW SINGLE FAMILY	15210-01-062	10/1/2012	3140 BROOKSTONE DR EFFINGHAM, SC 29541-	150000
NEW SINGLE FAMILY	00260-03-042	2/28/2013	2612 UNION SCHOOL RD COWARD , SC 29530-	150000
NEW INSTALLATION	00075-01-003	3/4/2013	1409 MOBLEY LN FLORENCE , SC 29501-	13000
NEW SINGLE FAMILY	05110-01-158	6/3/2013	4150 RODANTHE CIR FLORENCE, SC 29501-	165000.00
NEW SINGLE FAMILY	15110-01-106	7/10/2012	2679 ENCINO DR FLORENCE, SC 29501-	121000
NEW SINGLE FAMILY	00241-01-044	6/18/2013	5024 MILAN RD FLORENCE , SC 29506-	80000
NEW INSTALLATION	00243-01-084	3/4/2013	3549 NATIONAL CEMETARY RD FLORENCE , SC 29506-	12000
NEW SINGLE FAMILY	07216-01-112	8/28/2012	3443 SWEETGRASS DR FLORENCE, SC 29501-	110000
NEW INSTALLATION	00449-05-062	6/11/2013	840 Broken Branch RD Johnsonville, SC 29555-	10000.00
NEW TWO FAMILY	90029-07-001	6/19/2013	1613 LEE DR FLORENCE , SC 29501-	165000
NEW SINGLE FAMILY	05312-01-048	6/11/2013	1638 LAKE WATEREE DR FLORENCE , SC 29501-	231000
NEW SINGLE FAMILY	90027-08-001	5/29/2013	619 FAIRWAY DR FLORENCE, SC 29501-	440000.00
NEW INSTALLATION	90013-04-006	8/7/2012	2424 THIRD LOOP RD FLORENCE, SC 29501-	5000
NEW SINGLE FAMILY	21009-01-011	5/20/2013	2232 NEW FORREST DR FLORENCE , SC 29501-	125000

NEW SINGLE FAMILY	24409-01-012	6/26/2013	3414 SHADOW CREEK RD FLORENCE , SC 29505-	200000
NEW INSTALLATION	00178-01-034	3/4/2013	1305 WOODCREEK LN FLORENCE , SC 29506-	3000
NEW SINGLE FAMILY	00210-01-239	6/26/2013	2902 WILSHIRE CT FLORENCE , SC 29501-	200000
NEW INSTALLATION	00222-03-011	1/29/2013	633 NEW COWARD RD COWARD, SC 29530-	30242
NEW SINGLE FAMILY	00274-01-090	9/14/2012	5047 BAILEY LN FLORENCE , SC 29506-	53000
NEW SINGLE FAMILY	18019-01-029	3/22/2013	3005 THORNBERRY DR FLORENCE, SC 29505-	102000.00
NEW SINGLE FAMILY	00309-01-126	4/4/2013	2317 RED DOE RD FLORENCE, SC 29506-	66000.00
NEW INSTALLATION	90059-02-007	5/29/2013	900 PENNSYLVANIA ST FLORENCE , SC 29501-	15000
NEW INSTALLATION	00078-01-045	3/20/2013	2914 1/2 TWIN CHURCH RD TIMMONSVILLE, SC 29161-	10000
NEW INSTALLATION	00156-01-023	9/25/2012	6222 ANDERSON FIELD RD EFFINGHMA , SC 29541-	25000
NEW SINGLE FAMILY	05110-01-140	8/13/2012	4192 RODANTHE CIR FLORENCE, SC 29501-	170000.00
NEW SINGLE FAMILY	15110-01-090	6/11/2013	2682 ENCINO DR FLORENCE , SC 29505-	110000
NEW INSTALLATION	00111-01-061	11/26/2012	4457 GAYMON RD TIMMONSVILLE , SC 29161-	29000
NEW INSTALLATION	00275-01-063	2/18/2013	5159 CHINABERRY RD FLORENCE, SC 29501-	52900.00
NEW SINGLE FAMILY	15105-01-053	7/17/2012	1930 McClellan ST Florence, SC 29505-	105000
NEW SINGLE FAMILY	15105-01-060	12/31/2012	1923 MCCLELLAN ST FLORENCE , SC 29501-	105000
NEW SINGLE FAMILY	09818-01-047	12/31/2012	499 COVE POINTE DR FLORENCE, SC 29501-	150000
NEW SINGLE FAMILY	90047-04-007	9/13/2012	304 CALHOUN DR FLORENCE , SC 29501-	150000
NEW SINGLE FAMILY	09818-01-032	7/31/2012	465 COVE POINTE DR FLORENCE, SC 29501-	140000
NEW INSTALLATION	00194-31-035	2/14/2013	1840 BOZY RD SCRANTON , SC 29591-	4000
NEW SINGLE FAMILY	05110-01-182	6/28/2013	4147 RODANTHE CIR FLORENCE, SC 29501-	175000
NEW SINGLE FAMILY	00169-31-293	3/13/2013	201 VILLAGE RD LAKE CITY, SC 29560-	110000
NEW INSTALLATION	00294-31-020	4/17/2013	2749 CREEK RD LAKE CITY , SC 29560-	79000
NEW SINGLE FAMILY	09818-01-034	12/31/2012	469 COVE POINTE DR FLORENCE, SC 29501-	150000
NEW BUILDING	00370-01-011	7/24/2012	4396 RIVER NECK RD FLORENCE, SC 29506-	6000.00
NEW SINGLE FAMILY	15105-01-059	10/15/2012	1927 MCCLELLAN ST FLORENCE , SC 29505-	125000
NEW INSTALLATION	00004-04-025	4/19/2013	692 LAMAR HWY TIMMONSVILLE, SC 29161-	1850.00
NEW INSTALLATION	00224-03-024	10/3/2012	2802 UNION SCHOOL RD Coward, SC 29530-	200.00
NEW INSTALLATION	00224-03-024	10/3/2012	2802 UNION SCHOOL RD Coward, SC 29530-	200.00
NEW INSTALLATION	50005-01-003	5/1/2013	259 HUGGINS EADDY ST JOHNSONVILLE, SC 29555-	10000.00
NEW INSTALLATION	00356-02-009	4/22/2013	3924 BEAUDOCK LN PAMPLICO , SC 29583-	73000
NEW SINGLE FAMILY	05312-01-060	3/20/2013	4020 LAKE RUSSELL DR FLORENCE, SC 29501-	230000
NEW INSTALLATION	00339-01-078	8/21/2012	1853 HUG ME CT FLORENCE, SC 29506-	9000
NEW INSTALLATION	00224-03-004	10/12/2012	989 ANDERSON BRIDGE RD SCRANTON, SC 29591-	4500
NEW INSTALLATION	00400-02-036	9/5/2012	1126 RIVER RD PAMPLICO, SC 29583-	6753.50
NEW SINGLE FAMILY	00252-01-065	4/17/2013	3111 GATOR BAY LN EFFINGHAM, SC 29541-	39000.00
NEW SINGLE FAMILY	05110-01-193	4/24/2013	4169 RODANTHE CIR FLORENCE , SC 29501-	165000
NEW SINGLE FAMILY	00011-04-027	12/17/2012	944 THUNDER RD TIMMONSVILLE, SC 29161-	195000
NEW SINGLE FAMILY	05110-01-148	12/31/2012	4170 RODANTHE CIR FLORENCE , SC 29501-	300000
NEW SINGLE FAMILY	05110-01-185	5/17/2013	4153 RODANTHE CIR FLORENCE, SC 29501-	165000.00
NEW INSTALLATION	00062-04-041	1/8/2013	707 SHORTCUT RD TIMMONSVILLE , SC 29161-	500
NEW INSTALLATION	00163-03-042	10/12/2012	855 SALEM RD SCRANTON, SC 29591-	8000.00
NEW INSTALLATION	00154-01-107	10/22/2012	554 SILVER LEAF RD FLORENCE , SC 29505-	6000
NEW INSTALLATION	00211-01-077	3/5/2013	3203 CATO RD FLORENCE, SC 29505-	49108.00

NEW INSTALLATION	00056-04-064	5/3/2013	841 TWIN CHURCH RD TIMMONSVILLE , SC 29161-	8000
NEW INSTALLATION	00053-01-008	3/13/2013	4125 ALLIGATOR RD TIMMONSVILLE, SC 29161-	45000
NEW SINGLE FAMILY	00382-02-006	9/17/2012	2958 PAMPLICO HWY Pamplico, SC 29583-	23000.00
NEW INSTALLATION	00441-05-082	11/14/2012	351 ALBERTS LN JOHNSONVILLE, SC 29555-	70000
NEW INSTALLATION	00440-05-053	1/8/2013	711 POSSOM FORK RD JOHNSONVILLE, SC 29555-	34000.00
NEW SINGLE FAMILY	00411-05-107	8/14/2012	354 Mallard DR Johnsonville, SC 29555-	166246
NEW SINGLE FAMILY	90062-12-003	7/5/2012	909 JACKSON AV FLORENCE, SC 29501-	149000.00
NEW SINGLE FAMILY	90084-09-013	7/5/2012	827 DARGAN ST FLORENCE, SC 29506-	92000.00
NEW SINGLE FAMILY	05110-01-148	12/31/2012	4170 RODANTHE CIR FLORENCE, SC 29501-	300000
NEW SINGLE FAMILY	12611-01-016	12/12/2012	3030 RED BERRY CIR EFFINGHAM , SC 29541-	99000
NEW SINGLE FAMILY	05110-01-149	12/31/2012	4168 RODANTHE CIR FLORENCE, SC 29501-	270000
NEW INSTALLATION	00208-01-022	10/29/2012	2919 NATIONAL CEMETERY RD FLORENCE , SC 29506-	4000
NEW INSTALLATION	00086-01-022	9/13/2012	648 VICTOR WHITE RD TIMMONSVILLE , SC 29161-	21000
NEW INSTALLATION	00202-01-008	10/16/2012	1114 CAMPGROUND RD FLORENCE , SC 29506-	8000
NEW INSTALLATION	00248-01-120	9/11/2012	4131 CAPERS CT FLORENCE , SC 29505-	69000
NEW INSTALLATION	00347-02-001	7/25/2012	344 SEVEN MILE RD PAMPLICO, SC 29583-	87960.00
NEW INSTALLATION	00163-03-029	12/5/2012	774 SALEM RD SCRANTON , SC 29591-	22000
NEW SINGLE FAMILY	00246-01-016	3/26/2013	4513 WILLOW CREEK RD FLORENCE , SC 29505-	148000
NEW INSTALLATION	00154-01-166	4/25/2013	342 GARRETT CIR FLORENCE , SC 29505-	2000
NEW INSTALLATION	00078-01-006	5/29/2013	3809 OLIVER RD TIMMONSVILLE , SC 29161-	4000
NEW INSTALLATION	00274-01-036	1/25/2013	1217 WEATHERFORD FLORENCE, SC 29506-	1500
NEW INSTALLATION	00134-03-039	11/8/2012	1421 OLD NO 4 HWY COWARD, SC 29530-	5000
NEW INSTALLATION	00089-03-017	10/11/2012	2119 BETHEL RD SCRANTON, SC 29591-	0
NEW SINGLE FAMILY	05110-01-134	12/27/2012	4130 TIFFANY DR FLORENCE, SC 29501-	260000
NEW INSTALLATION	00075-01-003	10/8/2012	1432 SPRING BRANCH RD FLORENCE, SC 29501-	14000.00
NEW INSTALLATION	00034-04-094	5/28/2013	215 white ST timmonsville , SC 29161-	34000
NEW SINGLE FAMILY	10014-01-159	7/19/2012	821 BEDDINGFIELD HALL ST FLORENCE, SC 29501-	114000.00
NEW INSTALLATION	00062-04-039	9/26/2012	406 RALPH LANE RD TIMMONSVILLE , SC 29161-	50000
NEW INSTALLATION	00422-05-150	1/31/2013	948 CLAY FIELD RD JOHNSONVILLE, SC 29555-	23000.00
NEW INSTALLATION	00213-01-032	11/26/2012	4322 PAMPLICO HWY FLORENCE , SC 29505-	40000
NEW SINGLE FAMILY	00100-01-226	6/28/2013	1373 MILLBANK DR FLORENCE , SC 29501-	79000
NEW SINGLE FAMILY	00077-01-197	3/15/2013	2652 1/2 VAN HOUTEN DR TIMMONSVILLE, SC 29161-	91000.00
NEW INSTALLATION	00110-01-055	5/22/2013	4586 OAK GROVE RD EFFINGHAM , SC 29541-	11000
NEW INSTALLATION	00082-01-043	2/15/2013	5007 OLIVER RD TIMMONSVILLE, SC 29161-	58900
NEW SINGLE FAMILY	05110-01-147	12/31/2012	4172 RODANTHE CIR FLORENCE, SC 29501-	300000
NEW INSTALLATION	00178-01-034	3/4/2013	1326 WOODCREEK LN FLORENCE, SC 29506-	20190.00
NEW SINGLE FAMILY	05312-01-061	3/20/2013	4022 LAKE RUSSELL DR FLORENCE, SC 29501-	90000
NEW SINGLE FAMILY	10014-01-141	12/7/2012	804 ABBINGTON HALL FLORENCE , SC 29501-	120000
NEW INSTALLATION	00106-01-175	1/15/2013	2813 CUMMINGS RD EFFINGHAM, SC 29541-	1500.00
NEW SINGLE FAMILY	00241-01-045	3/18/2013	5026 MILAN RD FLORENCE, SC 29506-	94000
NEW INSTALLATION	00264-31-057	7/20/2012	848 COW PASTURE RD LAKE CITY, SC 29560-	2000
NEW INSTALLATION	90122-05-010	4/9/2013	1401 1/2 BROAD DR FLORENCE, SC 29505-	5000.00
NEW SINGLE FAMILY	09711-01-068	1/18/2013	3109 GREYSTONE DR FLORENCE , SC 29501-	195000
NEW SINGLE FAMILY	00075-01-180	5/24/2013	1657 RUGBY LN FLORENCE , SC 29501-	175000

NEW INSTALLATION	00153-01-217	1/3/2013	3863	BROOKFIELD RD EFFINGHAM, SC 29541-	15000
NEW SINGLE FAMILY	00210-01-261	4/8/2013	2405	TRILLY LN FLORENCE, SC 29505-	180000
NEW SINGLE FAMILY	09711-01-055	1/18/2013	3165	GREYSTONE DR FLORENCE, SC 29501-	180000.00
NEW INSTALLATION	00284-01-074	1/18/2013	4617	CHARLIE CADE RD EFFINGHAM , SC 29541-	20000
NEW INSTALLATION	00077-01-035	5/1/2013	3796	GARNER RD TIMMONSVILLE, SC 29161-	0
NEW SINGLE FAMILY	10014-01-100	10/22/2012	904	ABBINGTON HALL RD FLORENCE , SC 29501-	207000
NEW SINGLE FAMILY	10014-01-094	5/21/2013	908	EDENBRIDGE HALL ST FLORENCE, SC 29501-	171000.00
NEW SINGLE FAMILY	15013-01-070	11/21/2012	1856	WALTER DR FLORENCE , SC 29501-	209000
NEW INSTALLATION	00131-01-023	11/13/2012	6611	PYGATT RD EFFINGHAM , SC 29541-	3000
NEW SINGLE FAMILY	05312-01-049	6/11/2013	1644	LAKE WATEREE DR FLORENCE , SC 29501-	264000
NEW SINGLE FAMILY	00370-01-011	7/24/2012	4467	RIVER NECK RD FLORENCE, SC 29506-	22000
NEW INSTALLATION	00337-01-071	5/31/2013	924	BRICKHOUSE RD FLORENCE , SC 29506-	32000
NEW INSTALLATION	00279-01-032	6/6/2013	2418	FRANCIS MARION RD FLORENCE, SC 29506-	60000.00
NEW INSTALLATION	00161-03-139	3/4/2013	834	MALLARD RD COWARD, SC 29530-	10900
NEW SINGLE FAMILY	00156-01-088	2/15/2013	117	EFFINGHAM HWY FLORENCE, SC 29541-	600000.00
NEW INSTALLATION	00006-04-029	2/11/2013	822	CARTERSVILLE HWY TIMMONSVILLE , SC 29161-	6000
NEW SINGLE FAMILY	05312-01-017	4/2/2013	1647	LAKE WATEREE DR FLORENCE, SC 29501-	231000
NEW INSTALLATION	00047-03-023	12/11/2012	4128	SWANN RD OLANTA, SC 29114-	34900.00
NEW SINGLE FAMILY	00275-01-049	3/20/2013	514	KEELS RD FLORENCE, SC 29506-	151000
NEW SINGLE FAMILY	15110-01-089	6/26/2013	2684	ENCINO DR FLORENCE, SC 29505-	123000.00
NEW INSTALLATION	01731-01-044	12/7/2012	237	LAUREL LN FLORENCE , SC 29506-	4000
NEW BUILDING	00371-01-001	7/24/2012	4390	RIVER NECK RD FLORENCE, SC 29506-	6000.00
NEW INSTALLATION	00430-05-105	3/27/2013	1272	FOXBAY RD JOHNSONVILLE , SC 29555-	16000
NEW SINGLE FAMILY	00023-04-096	10/3/2012	2690	CARTERSVILLE HWY TIMMONSVILLE, SC 29161-	116000.00
NEW SINGLE FAMILY	10014-01-134	3/19/2013	821	ABBINGTON HALL RD FLORENCE, SC 29501-	150000
NEW TWO FAMILY	90095-01-041	6/26/2013	220	CAROLYN DR FLORENCE, SC 29505-	124000.00
NEW INSTALLATION	00267-31-051	2/4/2013	725	CAMERON RD LAKE CITY , SC 29560-	7000
NEW INSTALLATION	00154-01-073	6/13/2013	624	POOR FARM RD FLORENCE, SC 29505-	500
NEW INSTALLATION	00422-05-012	4/10/2013	210	Rolling Hills DR Johnsonville, SC 29555-	3500.00
NEW SINGLE FAMILY	07514-01-051	1/8/2013	3695	WEST POINTE DR FLORENCE , SC 29501-	136000
NEW INSTALLATION	00422-05-012	9/7/2012	215	ROLLING HILLS DR JOHNSONVILLE, SC 29555-	89000
NEW INSTALLATION	00328-31-076	8/20/2012	3228	FLOWERS RD LAKE CITY, SC 29560-	4000.00
NEW INSTALLATION	00423-05-110	12/11/2012	533	DEERFIELD RD JOHNSONVILLE , SC 29555-	2000
NEW SINGLE FAMILY	00339-01-157	7/24/2012	6728	NATIONAL CEMETARY RD FLORENCE, SC 29505-	170000
NEW INSTALLATION	00308-01-048	12/6/2012	5804	LIBERTY CHAPEL RD FLORENCE, SC 29506-	5500.00
NEW SINGLE FAMILY	10014-01-002	6/19/2013	1090	VIA SALVATORE ST FLORENCE , SC 29501-	133000
NEW INSTALLATION	00131-01-023	6/26/2013	6609 1/2	PYGATT RD EFFINGHAM, SC 29541-	1200
NEW SINGLE FAMILY	09711-01-056	1/18/2013	3161	GREYSTONE DR FLORENCE, SC 29501-	231000.00
NEW INSTALLATION	00110-01-074	6/3/2013	4121	HALL RD TIMMONSVILLE, SC 29161-	5000.00
NEW SINGLE FAMILY	00210-01-234	6/19/2013	2806	WILSHIRE CT FLORENCE , SC 29501-	204000
NEW SINGLE FAMILY	00101-01-640	2/7/2013	3409	LAKESHORE DR FLORENCE , SC 29501-	250000
NEW INSTALLATION	00339-01-174	12/3/2012	1911	CARTER CORNER RD FLORENCE, SC 29506-	31000.00
NEW INSTALLATION	00162-03-031	1/7/2013	504	LYNCH RD COWARD, SC 29530-	7000.00
NEW INSTALLATION	00112-03-117	2/27/2013	1885	OLD NO 4 HWY SCRANTON , SC 29591-	8000

NEW INSTALLATION	00023-04-093	4/26/2013	2925 CALE YARBOROUGH HWY TIMMONSVILLE , SC 29161-	14000
NEW SINGLE FAMILY	10014-01-020	5/28/2013	3216 STRADA ANGELO RD FLORENCE , SC 29501-	140000
NEW INSTALLATION	00057-04-088	10/25/2012	921 WOODVIEW RD TIMMONSVILLE , SC 29161-	25000
NEW SINGLE FAMILY	00100-01-232	6/28/2013	2804 EDGEWARE CT FLORENCE , SC 29501-	90000
NEW INSTALLATION	00068-03-042	9/17/2012	176 MYERS RD OLANTA, SC 29114-	10000
NEW INSTALLATION	50005-02-009	10/11/2012	118 FAIRVIEW CIR JOHNSONVILLE, SC 29555-	13000.00
NEW INSTALLATION	00433-05-037	9/18/2012	614 1/2 LEWIS ST JOHNSONVILLE, SC 29555-	39400
NEW SINGLE FAMILY	07306-01-048	7/9/2012	2986 COTSWOLD ST FLORENCE, SC 29501-	130000
NEW SINGLE FAMILY	01221-01-282	11/7/2012	2500 PARSON'S GATE RD FLORENCE , SC 29501-	194000
NEW SINGLE FAMILY	01221-01-305	3/27/2013	2485 PARSON's GATE AV FLORENCE , SC 29501-	350000
NEW INSTALLATION	00077-01-039	8/17/2012	3975 MCSMITH DR TIMMONSVILLE, SC 29161-	20000.00
NEW INSTALLATION	00351-02-094	12/11/2012	736 CAMPBELL RD PAMPLICO , SC 29583-	4000
NEW SINGLE FAMILY	07514-01-036	5/1/2013	3637 WEST POINTE DR FLORENCE , SC 29501-	130000
NEW SINGLE FAMILY	00241-01-042	1/23/2013	5023 MILAN RD FLORENCE, SC 29506-	88000
NEW INSTALLATION	00440-05-086	4/22/2013	176 JASMINE ST JOHNSONVILLE, SC 29555-	69000
NEW SINGLE FAMILY	09818-01-245	1/24/2013	3010 JAPONICA LN FLORENCE, SC 29501-	85000
NEW INSTALLATION	00377-02-035	11/2/2012	1112 PAMPLICO HWY PAMPLICO, SC 29583-	1000
NEW INSTALLATION	00178-01-034	3/4/2013	1309 WOODCREEK LN FLORENCE , SC 29506-	3000
NEW INSTALLATION	00140-31-214	10/19/2012	251 DANIELS RD LAKE CITY, SC 29560-	28000.00
NEW INSTALLATION	00109-01-059	7/27/2012	2721 NINA DR EFFINGHAM, SC 29541-	4600.00
NEW INSTALLATION	00422-05-116	5/16/2013	837 LAKE CHAPEL RD JOHNSONVILLE , SC 29555-	53000
NEW SINGLE FAMILY	00098-01-187	12/31/2012	460 GLORIA CT FLORENCE , SC 29501-	110000
NEW SINGLE FAMILY	07216-01-117	6/28/2013	3463 SWEETGRASS DR FLORENCE, SC 29501-	130000.00
NEW INSTALLATION	00422-05-135	1/31/2013	948 CLAY FIELD RD JOHNSONVILLE, SC 29555-	23000
NEW INSTALLATION	00178-01-022	11/16/2012	1816 SUNSHINE AV FLORENCE , SC 29506-	18000
NEW INSTALLATION	00434-05-007	5/31/2013	217 WILLOW POND RD JOHNSONVILLE, SC 29555-	33100
NEW SINGLE FAMILY	00241-01-043	5/21/2013	5022 MILAN RD FLORENCE, SC 29506-	97000.00
NEW INSTALLATION	00267-31-056	9/25/2012	410 CAMERON RD LAKE CITY, SC 29560-	5000.00
NEW SINGLE FAMILY	00751-01-141	12/31/2012	876 STRATTON DR FLORENCE , SC 29501-	150000
NEW INSTALLATION	00106-01-215	6/18/2013	5824 COUNTRY LN TIMMONSVILLE , SC 29161-	5000
NEW INSTALLATION	00308-01-042	1/30/2013	1129 FIRETOWER RD FLORENCE , SC 29506-	1000
NEW INSTALLATION	04361-05-076	2/7/2013	554 SPARROW TREE LN JOHNSONVILLE, SC 29555-	7000
NEW INSTALLATION	00406-02-117	8/10/2012	3811 1/2 SANDPIT RD JOHNSONVILLE, SC 29555-	7000.00
NEW INSTALLATION	00339-01-083	5/17/2013	6777 BETHEL RD FLORENCE , SC 29506-	43000
NEW INSTALLATION	00139-31-029	6/25/2013	1023 SAM LEE RD SCRANTON, SC 29591-	14300.00
NEW INSTALLATION	00223-03-002	3/11/2013	1271 ANDERSON BRIDGE RD SCRANTON , SC 29591-	5000
NEW INSTALLATION	00230-31-014	9/14/2012	514 MCDOUGAL RD LAKE CITY, SC 29560-	25000.00
NEW SINGLE FAMILY	07611-01-034	4/17/2013	1830 NIGHTHAWK DR FLORENCE , SC 29501-	250000
NEW SINGLE FAMILY	00241-01-048	12/11/2012	5032 MILAN RD FLORENCE, SC 29506-	80000
NEW SINGLE FAMILY	00441-05-253	10/26/2012	579 GOLFVIEW CIR JOHNSONVILLE , SC 29555-	200000
NEW SINGLE FAMILY	05312-01-004	6/11/2013	1621 LAKE WATEREE DR FLORENCE , SC 29501-	181000
NEW SINGLE FAMILY	00075-01-186	1/31/2013	1651 RUGBY LN FLORENCE, SC 29501-	200000
NEW SINGLE FAMILY	00034-04-164	10/10/2012	832 HONDA WAY ST TIMMONSVILLE , SC 29161-	121000
NEW BUILDING	01251-01-008	11/27/2012	1841 1/2 JOSEPH CIR FLORENCE, SC 29501-	14000

NEW INSTALLATION	00137-03-035	10/23/2012	1314 SALEM RD SCRANTON, SC 29591-	3000
NEW INSTALLATION	00386-05-058	3/18/2013	4368 HUGGINS RD LAKE CITY, SC 29560-	28160
NEW SINGLE FAMILY	07611-01-042	12/27/2012	1963 BATEMAN DR FLORENCE, SC 29501-	113500
NEW SINGLE FAMILY	00084-04-010	2/18/2013	4515 SARDIS HWY TIMMONSVILLE, SC 29161-	125000.00
NEW SINGLE FAMILY	10014-01-112	6/27/2013	917 KENLEY HALL FLORENCE , SC 29501-	191000
NEW INSTALLATION	12710-01-024	10/12/2012	1730 KARUDY CIR EFFINGHAM, SC 29541-	76845.00
NEW SINGLE FAMILY	05110-01-138	2/19/2013	4196 RODANTHE CIR FLORENCE , SC 29501-	210000
NEW SINGLE FAMILY	05110-01-178	3/13/2013	4194 RODANTHE CIR FLORENCE, SC 29501-	165000
NEW INSTALLATION	00191-03-199	1/31/2013	644 FRIENDFIELD RD COWARD, SC 29530-	2500
NEW INSTALLATION	00213-01-096	12/13/2012	4640 SUNNY LN EFFINGHAM , SC 29541-	59000
NEW INSTALLATION	01731-01-044	12/7/2012	237 LAUREL LN FLORENCE , SC 29506-	4000
NEW SINGLE FAMILY	00098-01-128	3/12/2013	3104 WAINWRIGHT CT FLORENCE, SC 29501-	165000.00
NEW SINGLE FAMILY	15110-01-102	8/10/2012	2671 ENCINO DR FLORENCE, SC 29505-	124000
NEW SINGLE FAMILY	90047-08-014	6/28/2013	1224 MADISON AV FLORENCE, SC 29501-	175000.00
NEW INSTALLATION	00112-03-073	10/16/2012	1810 1/2 Old NO 4 HWY SCRANTON, SC 29591-	33000.00
NEW INSTALLATION	00178-01-059	10/4/2012	1603 1/2 MCMILLAN LN FLORENCE, SC 29506-	1000.00
NEW INSTALLATION	00205-01-009	3/28/2013	1113 WILLIAMSON RD FLORENCE, SC 29506-	2500
NEW INSTALLATION	00369-01-003	9/7/2012	7408 TIMBERWOOD RD FLORENCE , SC 29506-	46572.27
NEW INSTALLATION	00243-01-084	3/26/2013	3549 NATIONAL CEMETERY RD FLORENCE, SC 29506-	3900
NEW SINGLE FAMILY	00218-02-058	7/25/2012	7621 FRIENDFILED RD EFFINGHAM, SC 29541-	258000
NEW INSTALLATION	00169-31-040	11/19/2012	309 PLANTATION RD LAKE CITY, SC 29506-	1200
NEW INSTALLATION	00045-03-009	4/29/2013	3970 JIMLYM RD OLANTA, SC 29114-	14000
NEW SINGLE FAMILY	10014-01-095	12/27/2012	904 EDENBRIDGE HALL FLORENCE , SC 29501-	154000
NEW SINGLE FAMILY	00336-01-032	11/9/2012	212 EMMA LN FLORENCE, SC 29506-	205000.00
NEW SINGLE FAMILY	15015-01-019	4/4/2013	724 DIX LN Florence, SC 29505-	155000
NEW SINGLE FAMILY	10014-01-143	11/19/2012	812 ABBINGTON HALL FLORENCE, SC 29501-	114000.00
NEW INSTALLATION	00048-03-024	11/30/2012	1030 WINDRIGHT RD LAKE CITY , SC 29560-	5000
NEW INSTALLATION	00137-03-027	6/28/2013	1976 MCALLISTER MILL RD SCRANTON, SC 29591-	500.00
NEW INSTALLATION	00142-31-205	1/22/2013	1513 PINE BAY RD LAKE CITY , SC 29560-	56000
NEW INSTALLATION	00142-31-205	1/22/2013	1513 PINE BAY RD LAKE CITY , SC 29560-	56000
NEW SINGLE FAMILY	07611-01-045	8/1/2012	2005 CHICKADEE CT FLORENCE, SC 29501-	163000
NEW INSTALLATION	00198-31-102	4/8/2013	382 WALLACE ST LAKE CITY, SC 29560-	39989.00
NEW INSTALLATION	00251-01-030	1/29/2013	6837 COLEMAN RD EFFINGHAM , SC 29541-	126000
NEW INSTALLATION	00153-01-065	9/25/2012	3836 BROOKFIELD RD FLORENCE , SC 29505-	2000
NEW SINGLE FAMILY	15015-01-013	6/28/2013	700 DIX LN FLORENCE , SC 29501-	160000
NEW INSTALLATION	00086-01-122	7/17/2012	3656 BONNYBLUE CT TIMMONSVILLE, SC 29161-	25000.00
NEW INSTALLATION	00441-05-241	3/15/2013	428 1/2 PERSIMMON FORD RD JOHNSONVILLE, SC 29555-	0
NEW INSTALLATION	00243-01-084	5/17/2013	3549 NATIONAL CEMETERY RD FLORENCE , SC 29506-	400
NEW INSTALLATION	00342-02-064	9/28/2012	3044 1/2 OLD RIVER RD FLORENCE , SC 29505-	5500
NEW INSTALLATION	00315-02-044	5/17/2013	1920 DIANE LN EFFINGHAM, SC 29541-	600
NEW INSTALLATION	00423-05-012	3/5/2013	901 VOX HWY JOHNSONVILLE, SC 29555-	15000
NEW INSTALLATION	00178-01-034	3/4/2013	1325 ROCKWOOD LN FLORENCE , SC 29506-	3000
NEW SINGLE FAMILY	00078-01-049	6/3/2013	3807 OLIVER RD Timmonsville, SC 29161-	161000
NEW SINGLE FAMILY	05312-01-067	7/2/2012	1830 LAKE WATEREE DR FLORENCE, SC 29501-	135000.00

NEW SINGLE FAMILY	09711-01-057	1/18/2013	3157	GREYSTONE DR FLORENCE , SC 29501-	195000
NEW INSTALLATION	00086-01-072	9/13/2012	4944	SARDIS HWY TIMMONSVILLE, SC 29161-	25000
NEW SINGLE FAMILY	90067-01-018	10/17/2012	1324	POINSETT DR FLORENCE , SC 29501-	105000
NEW INSTALLATION	00132-01-052	9/6/2012	1422	OLANTA HWY EFFINGHAM, SC 29541-	3000.00
NEW INSTALLATION	00344-02-068	12/21/2012	1019	SEVEN MILE RD PAMPLICO , SC 29583-	91000
NEW INSTALLATION	00166-31-009	4/1/2013	1466	MATTHEWS RD LAKE CITY, SC 29560-	52121.50
NEW INSTALLATION	00440-05-007	4/1/2013	625	POSSOM FORK RD JOHNSONVILLE, SC 29555-	25000
NEW INSTALLATION	00309-01-092	5/31/2013	2106	HERRING PL FLORENCE , SC 29506-	29000
NEW SINGLE FAMILY	09711-01-058	12/7/2012	3153	GREYSTONE DR FLORENCE, SC 29501-	150000
NEW INSTALLATION	00424-05-130	10/16/2012	923	MIDWAY HWY JOHNSONVILLE, SC 29555-	55000.00
NEW INSTALLATION	00018-04-009	2/8/2013	621	CALE YARBOROUGH HWY TIMMONSVILLE , SC 29161-	40000
NEW INSTALLATION	00227-03-123	4/19/2013	1146	CASSELMAN RD SCRANTON , SC 29591-	8000
NEW SINGLE FAMILY	07216-01-107	8/14/2012	3423	SWEET GRASS DR FLORENCE, SC 29501-	110000.00
NEW INSTALLATION	01942-31-084	10/31/2012	115	MAIN ST SCRANTON, SC 29591-	5000
NEW SINGLE FAMILY	00034-04-155	11/26/2012	348	ELLA HENERY CIR TIMMONSVILLE, SC 29161-	49000
NEW SINGLE FAMILY	10014-01-142	12/27/2012	808	ABBINGTON HALL FLORENCE, SC 29501-	113500
NEW INSTALLATION	01731-01-044	4/23/2013	237	LAUREL LN FLORENCE, SC 2956-	8000.00
NEW INSTALLATION	00192-03-002	8/3/2012	4251	CIRCLE DR COWARD, SC 29530-	7000.00
NEW INSTALLATION	00106-01-242	4/11/2013	3132	BAPTIST DR EFFINGHAM, SC 29541-	17000.00
NEW SINGLE FAMILY	00142-31-134	6/6/2013	710	LANCELOT WAY LAKE CITY, SC 29560-	250000
NEW SINGLE FAMILY	00103-01-302	11/19/2012	3634	SAVANNAH GROVE RD EFFINGHAM , SC 29541-	127000
NEW SINGLE FAMILY	15105-01-058	7/9/2012	1931	MCCLELLAN ST FLORENCE, SC 29501-	105000
NEW SINGLE FAMILY	15105-01-061	12/31/2012	1919	MCCLELLAN ST FLORENCE, SC 29505-	105000
NEW SINGLE FAMILY	07506-01-030	4/16/2013	904	RICE PLANTERS LN FLORENCE, SC 29501-	199000
NEW INSTALLATION	00309-01-169	2/21/2013	5961	NATIONAL CEMETERY RD FLORENCE, SC 29506-	800.00
NEW SINGLE FAMILY	05106-01-014	6/28/2013	608	CALUMET CT FLORENCE , SC 29501-	195000
NEW INSTALLATION	00263-31-018	7/20/2012	1259	RODMAN RD SCRANTON, SC 29591-	19750.00
NEW SINGLE FAMILY	05110-01-143	6/28/2013	4180	RODANTHE CIR FLORENCE, SC 29501-	175000.00
NEW INSTALLATION	00138-31-055	10/24/2012	2534	MATTHEWS RD SCRANTON, SC 29591-	3000
NEW SINGLE FAMILY	00059-04-024	12/27/2012	2971	HILL RD TIMMONSVILLE, SC 29161-	8000
NEW SINGLE FAMILY	15110-01-101	6/3/2013	2658	ENCINO DR FLORENCE, SC 29505-	120000.00
NEW INSTALLATION	00239-01-009	1/10/2013	4502	OLD MARION HWY FLORENCE , SC 29506-	7000
NEW INSTALLATION	00022-04-009	7/9/2012	2533	CARTERSVILLE HWY TIMMONSVILLE, SC 29161-	25000.00
NEW SINGLE FAMILY	12611-01-022	12/7/2012	3042	RED BERRY CIR EFFINGHAM , SC 29541-	85000
NEW INSTALLATION	00118-31-022	6/3/2013	1546	DENNIS RD LAKE CITY, SC 29560-	5000
NEW SINGLE FAMILY	09711-01-001	8/13/2012	1402	GILCREST DR FLORENCE, SC 29501-	245000
NEW SINGLE FAMILY	90039-02-009	6/28/2013	1450	DORCHESTER RD FLORENCE, SC 29501-	170000.00
NEW SINGLE FAMILY	07611-01-024	2/20/2013	1971	TANAGER DR FLORENCE, SC 29501-	200000
NEW SINGLE FAMILY	00100-01-230	6/28/2013	1335	MILLBANK DR FLORENCE , SC 29501-	82440
NEW SINGLE FAMILY	15110-01-087	3/14/2013	2688	ENCINO DR FLORENCE , SC 29501-	100000
NEW SINGLE FAMILY	12620-01-026	3/5/2013	3313	SPIRAL LN EFFINGHAM, SC 29541-	115000.00
NEW SINGLE FAMILY	00746-01-033	9/25/2012	3504	WINSLOW CT FLORENCE, SC 29501-	203000.00
NEW SINGLE FAMILY	05110-01-195	12/7/2012	4173	RODANTHE CIR FLORENCE, SC 29501-	165000.00
NEW SINGLE FAMILY	21009-01-010	2/11/2013	2228	NEW FORREST DR FLORENCE, SC 29501-	130000

NEW SINGLE FAMILY	09711-01-040	6/18/2013	3152 GREYSTONE DR FLORENCE , SC 29506-	231000
NEW SINGLE FAMILY	00274-01-299	3/5/2013	5255 HUTTON CT FLORENCE , SC 29506-	121000
NEW INSTALLATION	00204-01-129	4/18/2013	1285 BADGER LN FLORENCE, SC 29506-	2000.00
NEW INSTALLATION	00017-04-047	10/2/2012	602 LINWOOD ST TIMMONSVILLE , SC 29161-	8700
NEW SINGLE FAMILY	10014-01-148	12/27/2012	800 MERRILL HALL FLORENCE, SC 29501-	160000
NEW SINGLE FAMILY	07611-01-050	5/30/2013	1974 TANAGER DR FLORENCE, SC 29501-	163000.00
NEW INSTALLATION	90165-01-003	8/6/2012	3524 STONE LN FLORENCE, SC 29506-	43000
NEW INSTALLATION	00153-01-046	10/23/2012	3955 SOUTHSIDE CIR FLORENCE , SC 29505-	3000
NEW SINGLE FAMILY	00098-01-004	12/31/2012	3318 HOFFMEYER RD FLORENCE , SC 29501-	94000
NEW INSTALLATION	00239-01-009	1/4/2013	4502 OLD MARION HWY FLORENCE, SC 29506-	5000
NEW SINGLE FAMILY	05110-01-022	6/27/2013	4116 RODANTHE CIR FLORENCE, SC 29501-	225000.00
NEW INSTALLATION	00341-01-069	6/21/2013	6605 Old River RD Florence, SC 29505-	30000
NEW INSTALLATION	00063-01-034	12/4/2012	3870 CREEK RD TIMMONSVILLE, SC 29161-	46000
NEW INSTALLATION	00075-01-003	3/5/2013	1212 SPRINGBRANCH RD FLORENCE, SC 29501-	11300
NEW SINGLE FAMILY	00129-01-134	11/16/2012	1847 HILL-HARRELL RD EFFINGHAM, SC 29541-	154000
NEW INSTALLATION	00338-01-091	4/4/2013	6804 LIBERTY CHAPEL RD FLORENCE, SC 29506-	30000.00
NEW SINGLE FAMILY	07506-01-042	6/26/2013	3506 ACRON CT FLORENCE , SC 29501-	281000
NEW INSTALLATION	00183-01-001	2/27/2013	2202 GRAY LN EFFINGHAM, SC 29541-	23900
NEW INSTALLATION	00200-31-020	5/14/2013	839 MOULDS RD LAKE CITY, SC 29560-	39900
NEW INSTALLATION	00306-01-030	10/23/2012	5872 1/2 OLD MARION HWY FLORENCE, SC 29506-	4000.00
NEW SINGLE FAMILY	15015-01-064	7/2/2012	709 MIDDLEBERG WAY FLORENCE, SC 29505-	165000.00
NEW INSTALLATION	00178-01-126	8/27/2012	1327 1/2 QUAIL ARBOR CIR FLORENCE , SC 29506-	7000
NEW SINGLE FAMILY	00245-01-060	10/3/2012	2706 TRIPLE CROWN DR FLORENCE, SC 29505-	146000.00
NEW INSTALLATION	90150-01-035	10/10/2012	2635 PALMETTO ST FLORENCE, SC 29506-	5000
NEW SINGLE FAMILY	05106-01-013	3/19/2013	604 CALUMET CT FLORENCE , SC 29501-	255000
NEW INSTALLATION	00283-01-063	12/5/2012	6121 BARINO LN EFFINGHAM , SC 29541-	3000
NEW INSTALLATION	00155-01-103	3/28/2013	5816 ANDERSON FIELD RD EFFINGHAM , SC 29541-	20000
NEW SINGLE FAMILY	00731-08-002	6/12/2013	3831 DOVER DR FLORENCE, SC 29501-	144000.00
NEW SINGLE FAMILY	10014-01-137	12/31/2012	809 ABBINGTON HALL FLORENCE, SC 29501-	270000
NEW SINGLE FAMILY	00098-01-094	10/22/2012	464 STERLING DR FLORENCE, SC 29501-	177000
NEW INSTALLATION	00342-02-061	2/1/2013	1315 GOLD DR FLORENCE , SC 29505-	300
NEW INSTALLATION	00337-01-079	10/1/2012	1012 BRICKHOUSE RD FLORENCE , SC 29506-	90000
NEW SINGLE FAMILY	09818-01-027	7/31/2012	455 COVE POINTE DR FLORENCE, SC 29501-	140000
NEW SINGLE FAMILY	10014-01-145	12/12/2012	809 MERRILL HALL FLORENCE, SC 29501-	114000
NEW INSTALLATION	00055-04-065	6/28/2013	4416 WOODS LN TIMMONSVILLE, SC 29161-	18000.00
NEW INSTALLATION	00279-01-135	5/9/2013	5140 ANTIQUE CIR FLORENCE, SC 29506-	10000.00
NEW INSTALLATION	00323-02-004	5/16/2013	1460 BASS RD PAMPLICO, SC 29583-	21500.00
NEW INSTALLATION	00424-05-051	7/11/2012	614 MARRIA LN JOHNSONVILLE, SC 29555-	5000.00
NEW SINGLE FAMILY	00387-05-068	11/27/2012	323 HALF MOON RD LAKE CITY, SC 29560-	133000
NEW INSTALLATION	00215-01-063	7/6/2012	2414 EFFINGHAM HWY EFFINGHAM, SC 29541-	82000.00
NEW SINGLE FAMILY	07510-01-009	4/4/2013	1020 OAK BEND LN FLORENCE, SC 29501-	111000.00
NEW INSTALLATION	00036-04-017	12/17/2012	1469 HILL RD TIMMONSVILLE , SC 29161-	4500
NEW SINGLE FAMILY	09817-01-015	2/1/2013	859 OLDFIELD CIR FLORENCE, SC 29501-	231000.00
NEW SINGLE FAMILY	00097-01-094	9/20/2012	1054 GRAY KAT LN FLORENCE, SC 29506-	239000.00

NEW INSTALLATION	00016-04-099	2/28/2013	1112 ROSCO RD TIMMONSVILLE, SC 29161-	8000.00
NEW SINGLE FAMILY	09818-01-048	12/4/2012	498 COVE POINTE DR FLORENCE , SC 29501-	125000
NEW INSTALLATION	00211-01-106	10/31/2012	2314 BROACH ST FLORENCE , SC 29505-	7000
NEW INSTALLATION	00046-03-032	11/13/2012	931 CENTRAL RD OLANTA , SC 29114-	7500
NEW SINGLE FAMILY	21005-01-008	10/16/2012	2209 WAVERLY WOODS DR FLORENCE , SC 29505-	125000
NEW INSTALLATION	00308-01-042	11/26/2012	1129 FIRETOWER RD FLORENCE, SC 29501-	0
NEW INSTALLATION	00143-31-016	5/3/2013	1111 HART LN LAKE CITY, SC 29560-	1500.00
NEW INSTALLATION	00375-02-133	4/9/2013	920 HARDEN RD PAMPLICO, SC 29583-	3500.00
NEW SINGLE FAMILY	15015-01-060	6/7/2013	2001 BUTTERFLY LAKE DR FLORENCE , SC 29505-	212000
NEW INSTALLATION	00264-31-064	1/8/2013	1730 MCCUTCHEON RD LAKE CITY, SC 29560-	35200.00
NEW SINGLE FAMILY	00241-01-027	11/12/2012	4003 LULA CT FLORENCE , SC 29506-	97000
NEW INSTALLATION	00404-02-045	12/20/2012	2938 CASH RD PAMPLCO, SC 29583-	46200.00
NEW INSTALLATION	00032-04-063	9/7/2012	502 MT CARMEL RD TIMMONSVILLE, SC 29161-	10360.00
NEW INSTALLATION	00210-01-018	6/7/2013	2621 CHOATE LN FLORENCE , SC 29505-	51300
NEW INSTALLATION	00112-03-027	11/16/2012	2602 TOWER CIR SCRANTON, SC 29591-	5500.00
NEW TWO FAMILY	90095-01-040	6/26/2013	218 CAROLYN DR FLORENCE, SC 29505-	124000.00
NEW INSTALLATION	00418-02-072	3/14/2013	513 HWY 378-Hannah JOHNSONVILLE, SC 29555-	25300
NEW SINGLE FAMILY	00241-01-041	7/11/2012	5025 MILAN RD FLORENCE, SC 29501-	96000.00
NEW SINGLE FAMILY	00098-01-179	6/28/2013	476 GLORIA CT FLORENCE, SC 29501-	150000.00
NEW SINGLE FAMILY	05110-01-184	5/10/2013	4151 RODANTHE CIR FLORENCE , SC 29501-	165000
NEW SINGLE FAMILY	00241-01-027	8/13/2012	4002 LULA CT FLORENCE, SC 29506-	110000
NEW SINGLE FAMILY	10014-01-151	12/19/2012	812 MERRILL HALL FLORENCE, SC 29501-	116000
NEW SINGLE FAMILY	10014-01-136	12/31/2012	813 ABBINGTON HALL FLORENCE, SC 29506-	270000
NEW SINGLE FAMILY	15210-01-045	5/30/2013	417 BRUSHBROOK DR EFFINGHAM, SC 29541-	140000.00
NEW SINGLE FAMILY	07506-01-030	4/16/2013	904 RICE PLANTERS LN FLORENCE, SC 29501-	199000.00
NEW SINGLE FAMILY	15105-01-054	7/17/2012	1926 MCCLELLAN ST FLORENCE, SC 29505-	105000
NEW SINGLE FAMILY	05312-01-045	6/11/2013	1630 LAKE WATEREE DR FLORENCE, SC 29501-	231000.00
NEW INSTALLATION	00305-01-253	2/13/2013	5509 OLD MARION HWY FLORENCE , SC 29506-	5000
NEW INSTALLATION	00103-01-437	6/25/2013	3817 CHERRY JOHNSON RD EFFINGHAM , SC 29541-	5000
NEW INSTALLATION	00023-04-032	6/19/2013	1518 WAITUS GREEN CIR TIMMONSVILLE, SC 29161-	110000
NEW SINGLE FAMILY	09817-01-023	1/31/2013	834 OLDFIELD CIR FLORENCE, SC 29501-	240000
NEW SINGLE FAMILY	00241-01-037	10/19/2012	4002 MILAN RD FLORENCE , SC 29501-	80000
NEW SINGLE FAMILY	00100-01-231	6/28/2013	1351 MILLBANK DR FLORENCE, SC 29501-	119000.00
NEW SINGLE FAMILY	07611-01-047	9/7/2012	2002 CHICKADEE CT FLORENCE , SC 29501-	199000
NEW SINGLE FAMILY	05312-01-041	4/2/2013	1622 LAKE WATEREE DR FLORENCE, SC 29501-	231000
NEW INSTALLATION	00164-31-016	10/8/2012	2181 TRIFALIA RD SCRANTON, SC 29591-	3000.00
NEW SINGLE FAMILY	05312-01-035	11/6/2012	1817 LAKE WATEREE DR FLORENCE , SC 29501-	244000
NEW SINGLE FAMILY	00283-01-118	5/21/2013	6414 JORDAN RD EFFINGHAM , SC 29541-	130000
NEW INSTALLATION	00108-01-058	3/1/2013	2901 NUGGETT LN TIMMONSVILLE, SC 29161-	500
NEW INSTALLATION	00131-01-182	8/22/2012	1149 OLANTA HWY EFFINGHAM, SC 29541-	72000.00
NEW INSTALLATION	00286-02-083	1/10/2013	1135 TURNER GATE RD PAMPLICO, SC 29583-	19275
NEW INSTALLATION	00128-01-005	2/25/2013	4126 MARVIN FOWLER CIR EFFINGHAM, SC 29541-	5000
NEW INSTALLATION	00224-03-062	6/26/2013	3374 BAYBERRY RD SCRANTON, SC 29591-	70909.00
NEW SINGLE FAMILY	00241-01-029	8/24/2012	4004 LULA CT FLORENCE, SC 29506-	105000

NEW SINGLE FAMILY	05110-01-132	6/21/2013	4126 Tiffany DR Florence, SC 29501-	255000
NEW SINGLE FAMILY	07216-01-113	6/6/2013	3447 SWEETGRASS DR FLORENCE , SC 29501-	110000
NEW SINGLE FAMILY	09818-01-029	12/20/2012	459 COVE POINTE DR FLORENCE, SC 29501-	140000
NEW SINGLE FAMILY	10014-01-160	3/19/2013	817 BEDDINGFIELD HALL RD FLORENCE, SC 29501-	150000
NEW INSTALLATION	00360-05-076	3/13/2013	2333 VOX HWY JOHNSONVILLE, SC 29555-	3000
NEW SINGLE FAMILY	00100-01-238	6/28/2013	2805 EDGEWARE CT FLORENCE, SC 29501-	90000.00
NEW INSTALLATION	00166-31-202	6/17/2013	1211 MATTHEWS RD LAKE CITY, SC 29560-	5000.00
NEW SINGLE FAMILY	05110-01-194	7/5/2012	4171 RODANTHE CIR FLORENCE, SC 29501-	170000.00
NEW INSTALLATION	00178-01-034	3/4/2013	1301 WOODCREEK RD FLORENCE , SC 29506-	3000
NEW INSTALLATION	90119-02-008	4/30/2013	659 DANIELS ST FLORENCE , SC 29506-	46000
NEW INSTALLATION	00243-01-084	12/5/2012	3549 NATIONAL CEMETARY RD FLORENCE , SC 29506-	10000
NEW INSTALLATION	00131-01-166	8/28/2012	6759 1/2 PYGATT RD EFFINGHAM, SC 29541-	2000
NEW SINGLE FAMILY	15015-01-023	6/18/2013	709 DIX LN FLORENCE , SC 29505-	170000
NEW SINGLE FAMILY	15110-01-099	2/20/2013	2664 ENCINO DR FLORENCE, SC 29505-	110000
NEW SINGLE FAMILY	90172-01-029	5/8/2013	1355 LAZAR PL FLORENCE , SC 29501-	425000
NEW SINGLE FAMILY	00104-01-207	7/9/2012	4120 CHERRY JOHNSON RD EFFINGHAM, SC 29541-	180000.00
NEW INSTALLATION	00061-04-044	9/12/2012	210 SHORTCUT RD TIMMONSVILLE, SC 29161-	200.00
NEW INSTALLATION	00154-01-213	9/10/2012	572 SILVER LEAF RD FLORENCE, SC 29505-	35000
NEW SINGLE FAMILY	05312-01-063	12/11/2012	1810 LAKE WATEREE DR FLORENCE, SC 29501-	180000.00
NEW SINGLE FAMILY	00388-05-064	6/20/2013	1852 LAKE CITY HWY JOHNSONVILLE, SC 29555-	155000.00
NEW INSTALLATION	00188-03-111	7/25/2012	211 NEELY MATHEWS RD COWARD, SC 29530-	10000
NEW SINGLE FAMILY	15210-01-038	7/11/2012	3124 BROOKSTONE DR EFFINGHAM, SC 29541-	160000
NEW INSTALLATION	00216-01-051	12/13/2012	6609 PHILLIP DR EFFINGHAM, SC 29541-	29800
NEW INSTALLATION	00178-01-022	1/14/2013	1300 APRIL ST FLORENCE , SC 29506-	14000
NEW INSTALLATION	00216-01-066	11/5/2012	2820 1/2 LEBANON RD EFFINGHAM, SC 29541-	22300.00
NEW INSTALLATION	00018-04-003	2/1/2013	735 HILL RD TIMMONSVILLE , SC 29161-	3000
NEW INSTALLATION	00232-31-041	11/21/2012	1290 1/2 BRAGDON RD LAKE CITY, SC 29560-	27000.00
NEW SINGLE FAMILY	05106-01-011	4/16/2013	605 CALUMET CT FLORENCE, SC 29501-	300000.00
NEW INSTALLATION	00214-01-109	5/7/2013	2810 POOR FARM RD FLORENCE, SC 29505-	23000.00
NEW SINGLE FAMILY	02771-01-006	6/20/2013	1457 MARION GREEN RD FLORENCE , SC 29506-	154000
NEW INSTALLATION	00047-03-020	5/29/2013	4132 1/2 SWAN RD OLANTA, SC 29114-	29500
NEW SINGLE FAMILY	00100-01-233	6/28/2013	2808 EDGEWARE CT FLORENCE , SC 29501-	90000
NEW INSTALLATION	00141-31-149	6/27/2013	350 CHANDLER MILL RD LAKE CITY, SC 29560-	59421.00
NEW INSTALLATION	00127-01-259	4/1/2013	2307 DISCUS LN EFFINGHAM, SC 29541-	0
NEW INSTALLATION	00351-02-058	6/19/2013	1010 CAMPBELL RD PAMPLICO , SC 29583-	47900
NEW INSTALLATION	00178-01-034	3/4/2013	1327 WATERMARK RD FLORENCE , SC 29506-	3000
NEW SINGLE FAMILY	00354-02-046	6/4/2013	3171 BAY RD PAMPLICO , SC 29583-	232000
NEW SINGLE FAMILY	90029-02-034	5/8/2013	1595 VALPARAISO DR FLORENCE, SC 29501-	80000
NEW SINGLE FAMILY	07510-01-088	10/15/2012	3520 EGRET DR FLORENCE, SC 29501-	175000.00
NEW INSTALLATION	00167-31-061	5/30/2013	802 HWY 378 BYPASS LAKE CITY , SC 29560-	9000
NEW SINGLE FAMILY	04915-01-027	6/24/2013	379 SAHALEE LN FLORENCE , SC 29501-	675000
NEW SINGLE FAMILY	00274-01-316	5/17/2013	5255 STEEN DR FLORENCE, SC 29506-	105000.00
NEW INSTALLATION	00440-05-120	8/8/2012	150 JASMINE ST JOHNSONVILLE, SC 29555-	35000
NEW SINGLE FAMILY	10014-01-149	12/27/2012	804 MERRILL HALL HWY FLORENCE , SC 29501-	154000

NEW SINGLE FAMILY	00101-01-702	12/31/2012	3035 WATERFOWL WAY FLORENCE, SC 29501-	450000
NEW INSTALLATION	00339-01-027	3/12/2013	6819 BETHEL RD FLORENCE, SC 29506-	7500
NEW INSTALLATION	00305-01-257	3/22/2013	5510 OLD MARION HWY FLORENCE, SC 29506-	8000
NEW INSTALLATION	90150-01-035	7/9/2012	2635 PALMETTO ST FLORENCE, SC 29506-	6000
NEW SINGLE FAMILY	07514-01-026	1/3/2013	3613 TROTWOOD DR FLORENCE , SC 29501-	129000
NEW INSTALLATION	00267-31-044	11/21/2012	415 CAMERON RD LAKE CITY, SC 29560-	4500
NEW INSTALLATION	00085-04-006	9/11/2012	121 CLYDE MCGEE RD TIMMONSVILLE, SC 29161-	900
NEW SINGLE FAMILY	21005-01-014	4/17/2013	2133 WAVERLY WOODS DR FLORENCE , SC 29505-	125000
NEW SINGLE FAMILY	07216-01-121	4/9/2013	3479 SWEETGRASS DR FLORENCE, SC 29501-	140000.00
NEW SINGLE FAMILY	07306-01-042	6/13/2013	3725 TETBURY ST FLORENCE, SC 29501-	112000.00
NEW SINGLE FAMILY	10014-01-163	5/21/2013	805 BEDDINGFIELD HALL ST FLORENCE, SC 29501-	171000.00
NEW INSTALLATION	00377-02-040	10/24/2012	943 PAMPLICO HWY PAMPLICO , SC 29583-	37000
NEW INSTALLATION	00178-01-034	3/4/2013	1338 ROCKWOOD LN FLORENCE, SC 29506-	20190
NEW SINGLE FAMILY	01221-01-297	11/20/2012	708 BLACKFRIARS CT FLORENCE, SC 29501-	269000.00
NEW SINGLE FAMILY	00279-01-157	4/12/2013	2755 FRANCIS MARION RD FLORENCE, SC 29506-	180000.00
NEW INSTALLATION	00012-04-001	11/9/2012	1220 WOOD PECKER RD TIMMONSVILLE, SC 29161-	7000.00
NEW INSTALLATION	00178-01-034	3/4/2013	1303 WOODCREEK LN FLORENCE, SC 29506-	20190.00
NEW INSTALLATION	00161-03-124	1/23/2013	345 MALLARD RD COWARD, SC 29530-	6000
NEW SINGLE FAMILY	07506-01-005	12/3/2012	917 RICE PLANTERS LN FLORENCE , SC 29501-	275000
NEW SINGLE FAMILY	09711-01-030	1/18/2013	3106 GREYSTONE DR FLORENCE, SC 29501-	264000.00
NEW INSTALLATION	00116-31-099	3/13/2013	1584 OLANTA HWY SCRANTON, SC 29591-	18400
NEW SINGLE FAMILY	15110-01-080	6/3/2013	2686 ENCINO DR FLORENCE, SC 29505-	120000.00
NEW INSTALLATION	00103-01-139	4/5/2013	2508 JAVELIN CIR EFFINGHAM, SC 29541-	55000
NEW SINGLE FAMILY	00370-01-011	7/24/2012	4469 RIVER NECK RD FLORENCE, SC 29506-	22000
NEW INSTALLATION	80005-02-019	2/26/2013	320 RAE ST LAKE CITY, SC 29560-	1659
NEW INSTALLATION	00030-04-042	7/16/2012	4720 HOLLYBERRY LN TIMMONSVILLE, SC 29161-	68000
NEW SINGLE FAMILY	00249-01-015	4/30/2013	4151 PLANER RD EFFINGHAM, SC 29541-	190000.00
NEW SINGLE FAMILY	05312-01-037	3/20/2013	1827 LAKE WATEREE DR FLORENCE, SC 29501-	170000
NEW SINGLE FAMILY	21009-01-016	4/9/2013	2217 NEW FORREST DR FLORENCE, SC 29505-	125000.00
NEW INSTALLATION	03721-02-093	3/4/2013	1735 JEFFERIES CREEK BLVD PAMPLICO, SC 29583-	4000.00
NEW SINGLE FAMILY	05110-01-150	7/24/2012	4166 RODANTHE CIR FLORENCE, SC 29501-	163000
NEW SINGLE FAMILY	09818-01-237	1/24/2013	3011 JAPONICA LN FLORENCE, SC 29503-	85000
NEW INSTALLATION	00103-01-335	11/7/2012	3363 MADDIE LN TIMMONSVILLE , SC 29161-	4000
NEW INSTALLATION	00136-03-084	6/4/2013	1422 WYLIE RD SCRANTON, SC 29591-	7000.00
NEW INSTALLATION	00161-03-084	11/8/2012	3230 RAINBOW RD SCRATON, SC 29591-	2000.00
NEW INSTALLATION	90123-07-018	7/9/2012	1310 PAMPLICO HWY FLORENCE, SC 29505-	54880.00
NEW INSTALLATION	00407-02-022	12/12/2012	140 PICKENS RD JOHNSONVILLE, SC 29555-	30000
NEW SINGLE FAMILY	05110-01-144	11/5/2012	4178 RODANTHE CIR FLORENCE, SC 29501-	250000.00
NEW INSTALLATION	00191-03-001	1/18/2013	520 FRIENDFIELD RD COWARD , SC 29530-	500
NEW SINGLE FAMILY	18009-01-043	5/21/2013	2709 CARRIAGE LN FLORENCE , SC 29505-	275000
NEW INSTALLATION	00154-01-001	9/11/2012	4201 IRBY ST FLORENCE , SC 29505-	13000
NEW BUILDING	00370-01-011	7/24/2012	4398 RIVER NECK RD FLORENCE, SC 29506-	6000.00
NEW INSTALLATION	00010-04-001	9/7/2012	420 CHANEY GROVE RD TIMMONSVILLE, SC 29161-	1000.00
NEW SINGLE FAMILY	18019-01-002	12/28/2012	3004 THORNBERRY DR FLORENCE, SC 29505-	75000

NEW INSTALLATION	00308-01-053	2/1/2013	5909 SUPERIOR LN FLORENCE, SC 29506-	1000.00
NEW SINGLE FAMILY	00075-01-198	5/22/2013	1652 RUGBY LN FLORENCE, SC 29501-	154000.00
NEW INSTALLATION	00213-01-070	9/14/2012	4722 CATO RD EFFINGHAM, SC 29541-	5000.00
NEW INSTALLATION	00129-01-027	10/4/2012	903 SIDEWINDER LN EFFINGHAM , SC 29541-	1000
NEW INSTALLATION	00178-01-034	3/4/2013	1325 WOODCREEK LN FLORENCE, SC 29506-	20190.00
NEW SINGLE FAMILY	09818-01-051	11/12/2012	492 COVE POINT DR FLORENCE, SC 29501-	130000
NEW SINGLE FAMILY	09711-01-032	8/14/2012	3114 GREYSTONE DR FLORENCE, SC 29501-	190000.00
NEW INSTALLATION	00018-04-116	8/16/2012	764 1/2 JAMES ST TIMMONSVILLE, SC 29161-	28000
NEW BUILDING	90130-01-045	2/19/2013	638 1/2 DANIELS ST FLORENCE, SC 29506-	2000
NEW INSTALLATION	00030-04-044	3/19/2013	1330 SALLY HILL RD TIMMONSVILLE , SC 29161-	35000
NEW INSTALLATION	00215-01-007	8/10/2012	2911 EFFINGHAM HWY EFFINGHAM, SC 29541-	7000.00
NEW SINGLE FAMILY	00280-01-101	10/19/2012	4451 PECAN GROVE RD FLORENCE , SC 29505-	212000
NEW SINGLE FAMILY	07216-01-116	12/28/2012	3459 SWEETGRASS DR FLORENCE, SC 29501-	121000
NEW INSTALLATION	00143-31-017	3/15/2013	1138 HART LN LAKE CITY, SC 29560-	0
NEW INSTALLATION	00131-01-023	1/9/2013	6609 PYGATT RD EFFINGHAM, SC 29541-	4800
NEW INSTALLATION	00349-02-037	4/10/2013	342 PAMPLICO HWY PAMPLICO , SC 29583-	9000
NEW INSTALLATION	70002-01-014	8/8/2012	717 SMITH ST TIMMONSVILLE, SC 29161-	67000
NEW SINGLE FAMILY	09818-01-238	8/14/2012	3013 JAPONICA LN FLORENCE, SC 29501-	35000.00
NEW INSTALLATION	00240-01-006	3/22/2013	711 WILLISTON RD FLORENCE , SC 29506-	5000
NEW INSTALLATION	90119-03-008	8/14/2012	630 HOWARD ST FLORENCE, SC 29506-	1000.00
NEW SINGLE FAMILY	00097-01-097	6/28/2013	1063 GRAY KAT LN FLORENCE , SC 29501-	251000
NEW INSTALLATION	00337-01-027	11/26/2012	920 BRICK HOUSE RD FLORENCE, SC 29506-	18000
NEW INSTALLATION	00178-01-056	7/31/2012	901 TURNER RD FLORENCE, SC 29506-	1000.00
NEW SINGLE FAMILY	90047-08-015	6/28/2013	1222 MADISON AV FLORENCE, SC 29501-	175000.00
NEW SINGLE FAMILY	01221-01-239	10/16/2012	612 HONOR CV FLORENCE, SC 29501-	650000.00
NEW SINGLE FAMILY	07216-01-115	9/10/2012	3455 SWEETGRASS DR FLORENCE , SC 29501-	105000
NEW INSTALLATION	00449-05-047	10/22/2012	930 POSSOM FORK RD JOHNSONVILLE, SC 29555-	28000.00
NEW INSTALLATION	00183-01-015	9/19/2012	1660 POOR FARM RD EFFINGHAM, SC 29541-	78669.00
NEW SINGLE FAMILY	15110-01-091	5/21/2013	2680 ENCINO DR FLORENCE , SC 29505-	110000
NEW INSTALLATION	00240-01-006	1/3/2013	711 WILLISTON RD FLORENCE, SC 29506-	500
NEW INSTALLATION	00357-31-024	11/1/2012	3731 HUGGINS RD LAKE CITY, SC 29560-	1000.00
NEW INSTALLATION	00103-01-345	12/11/2012	3212 OLIVER RD TIMMONSVILLE , SC 29161-	70000
NEW SINGLE FAMILY	05312-01-040	4/2/2013	1620 LAKE WATEREE DR FLORENCE, SC 29501-	264000
NEW INSTALLATION	00081-04-039	9/14/2012	4608 LANGSTON RD TIMMONSVILLE, SC 29161-	44300.00
NEW SINGLE FAMILY	07306-01-030	4/16/2013	3846 BECKFORD ST FLORENCE , SC 29501-	140000
NEW INSTALLATION	00214-01-141	3/20/2013	2552 POOR FARM RD EFFINGHAM, SC 29541-	1400.00
NEW INSTALLATION	00341-01-070	6/21/2013	6609 Old River RD Florence, SC 29505-	40000
NEW INSTALLATION	00449-05-066	8/10/2012	856 BROKEN BRANCH RD JOHNSONVILLE, SC 29555-	78000
NEW INSTALLATION	00411-05-067	1/23/2013	423 CIRCLE DR JOHNSONVILLE , SC 29555-	1000
NEW SINGLE FAMILY	00018-04-116	8/27/2012	764 JAMES ST TIMMONSVILLE, SC 29161-	110000.00
NEW SINGLE FAMILY	00241-01-047	9/25/2012	5030 MILAN RD FLORENCE , SC 29506-	101000
NEW SINGLE FAMILY	00098-01-130	5/13/2013	3108 WAINWRIGHT CT FLORENCE , SC 29501-	251000
NEW SINGLE FAMILY	09818-01-022	12/27/2012	418 STERLING DR FLORENCE, SC 29501-	125000
NEW SINGLE FAMILY	15110-01-098	9/11/2012	2666 ENCINO DR FLORENCE, SC 29505-	121000.00

NEW SINGLE FAMILY	00098-01-004	12/31/2012	3316 HOFFMEYER RD FLORENCE , SC 29501-	130000	
NEW INSTALLATION	00348-02-024	7/17/2012	231 LYNHURST RD PAMPLICO, SC 29583-	8000	
NEW INSTALLATION	00222-03-073	1/29/2013	4160 DURANGO RD COWARD, SC 29530-	17000	
NEW SINGLE FAMILY	00018-04-009	1/14/2013	621 CALE YARBOROUGH HWY TIMMONSVILLE, SC 29161-	99000.00	
NEW SINGLE FAMILY	18016-01-147	3/4/2013	3100 LONGFELLOW DR FLORENCE, SC 29505-	100000.00	
NEW INSTALLATION	00180-01-277	12/7/2012	2978 LAMB RD FLORENCE, SC 29505-	25000.00	
NEW INSTALLATION	00417-02-100	2/6/2013	751 ST. LUKE CHURCH RD JOHNSONVILLE, SC 29555-	58057	
NEW INSTALLATION	00261-03-086	5/20/2013	1212 MCKNIGHT RD SCRANTON, SC 29583-	2000	
NEW BUILDING	00067-36-035	3/28/2013	3505 OLANTA OLANTA, SC 29114-	22000.00	OLANTA FIRE DEPARTMENT
NEW BUILDING	00185-01-120	7/30/2012	6501 FRIENDFIELD EFFINGHAM, SC 29541-	30000.00	CARL ALTMAN
NEW BUILDING	00147-01-067	8/16/2012	1000 CLEMENT FLORENCE, SC 29501-	42000	DEFAULT
NEW BUILDING	00152-01-058	5/30/2013	3668 IRBY FLORENCE , SC 29505-	3000	none
NEW BUILDING	00219-03-008	5/30/2013	5442 OLD GEORGETOWN COWARD , SC 29530-	4000	none
NEW BUILDING	00247-01-102	3/28/2013	4370 ROCKING CHAIR FLORENCE , SC 29505-	121000	EXPORT BOXES
NEW BUILDING	90029-01-024	8/2/2012	2051 SECOND LOOP FLORENCE, SC 29501-	501000	DOLLAR GENERAL
NEW BUILDING	00370-01-011	7/24/2012	4457 RIVER NECK FLORENCE, SC 29506-	41000	none
NEW BUILDING	00099-01-121	12/27/2012	900 WOODY JONES FLORENCE, SC 29501-	4971000.0(	HOME 2 SUITES BY HILTON
NEW BUILDING	00370-01-011	7/24/2012	4465 RIVER NECK FLORENCE, SC 29506-	55000	none
NEW BUILDING	00282-01-006	11/5/2012	4930 PLANER EFFINGHAM, SC 29541-	58000.00	CHARLES INGRAM LUMBER CO
NEW BUILDING	00179-01-037	10/31/2012	555 PAMPLICO FLORENCE , SC 29505-	1384000.0(	PAMPLICO DIALYSIS
NEW BUILDING	00160-03-090	1/14/2013	480 1\2 C W ROBINSON COWARD, SC 29530-	50000	DEFAULT
NEW BUILDING	01941-04-002	10/19/2012	2215 US HWY 52 SCRANTON , SC 29591-	330000	MCGEE MINI STORAGE
NEW BUILDING	00179-01-042	9/18/2012	680 SENIOR FLORENCE , SC 29505-	620000	FLORENCE PEDIATRIC DENTISRTY
NEW BUILDING	00407-02-089	6/21/2013	4389 Mill House Johnsonville, SC 29555-	14000	none
NEW BUILDING	00154-01-006	2/4/2013	140 MCLAUGHLIN EFFINGHAM, SC 29541-	10000	PEE DEE READY MIX
NEW BUILDING	00154-01-006	10/19/2012	140 MCLAUGHLIN EFFINGHAM, SC 29541-	25000	PEE DEE READY MIX
NEW BUILDING	00434-05-042	7/17/2012	221 Willow Pond JOHNSONVILLE, SC 29555-	66000	DEFAULT
NEW BUILDING	00099-01-052	10/3/2012	2617 DAVID MCLEOD FLORENCE , SC 29501-	350000	CHIPOTLE MEXICAN GRILL
NEW BUILDING	00099-01-041	6/28/2013	2300 DAVID H MCLEOD FLORENCE , SC 29501-	12000000.(	Academy Sports
NEW BUILDING	01211-01-069	1/24/2013	1908 LUCAS FLORENCE, SC 29501-	750000.00	MCDONALDS
NEW BUILDING	90014-01-039	12/12/2012	2400 THIRD LOOP FLORENCE , SC 29501-	450000	grace baptist church
NEW BUILDING	00179-01-037	1/4/2013	555 PAMPLICO FLORENCE, SC 29505-	750000	DEFAULT
NEW BUILDING	00196-31-002	7/20/2012	295 LOOP LAKE CITY, SC 29560-	1200000.0(	MURPHY EXPRESS
NEW BUILDING	00370-01-011	9/24/2012	4459 RIVER NECK FLORENCE , SC 29501-	61000	BATH HOUSE
NEW BUILDING	00053-04-093	10/5/2012	4714 FRALEY TIMMONSVILLE, SC 29161-	293000	DEFAULT
NEW BUILDING	00367-01-011	4/5/2013	1800 PAPERMILL FLORENCE, SC 29506-	30000.00	JOHNSON CONTROL
NEW BUILDING	90073-08-002	5/15/2013	600 DARLINGTON FLORENCE, SC 29501-	396000.00	DIXON FURNITURE
NEW BUILDING	00151-01-009	7/13/2012	240 FRANK MONROE FLORENCE, SC 29505-	0	FBT WEIGHT ROOM
NEW BUILDING	90035-09-001	2/25/2013	1551 PALMETTO FLORENCE , SC 29501-	15000	SUNDAE HOUSE
NEW BUILDING	00109-01-022	6/24/2013	3403 OLANTA TIMMONSVILLE , SC 29161-	500000	HOWE SPRINGS FIRE DEPT
NEW BUILDING	00120-01-058	10/26/2012	1500 OTIS FLORENCE, SC 29501-	40000	OTIS ELEVATOR PHASE 1
NEW BUILDING	90102-20-001	6/25/2013	701 CHEVES FLORENCE, SC 29506-	2800000.0(	MCLEOD CONCOURSE UPFIT

Attachment 11

Parcel Data Map


LAKOTA
KENZIE
90081-01-015
1705 S IRBY ST
90080-01-048 198
A CONYERS AV
90081-01-028
90081-01-017
118 W KENZIE AV
90081-01-043
1723 S IRBY ST
90081-01-014
1725 S IRBY ST
90081-01-013
90081-01-042
90081-01-033
90081-01-034
90081-01-011
209 W CAUDLE AV
90081-01-010
205 W CAUDLE AV
90081-01-009
201 W CAUDLE AV
90081-01-008
121 W CAUDLE AV
90081-01-007
113 W CAUDLE AV
90081-01-006
109 W CAUDLE AV
90081-01-020
105 W CAUDLE AV
CAUDLE
90081-01-004
90081-01-032
102 W CAUDLE AV
90081-01-031 1811
1-5 S IRBY ST
ATTWOOD
52
IRBY
90081-01-004
90081-01-022
121 TOLEDO RD
90081-01-025
90081-01-029
90081-01-003
1913 S IRBY ST
TOLEDO
90095-01-001
1902 S IRBY ST
CAROLYN
90095-01-003
117 E GRACE DR
90095-01-030 114
E CAROLYN AV
90095-01-004
90095-01-032 202
A E CAROLYN AV
90095-01-033 204
A E CAROLYN AV
90095-01-035 208
B E CAROLYN AV
90095-01-007
207 E GRACE DR
90095-01-037 212
A E CAROLYN AV
90095-01-038 214
A E CAROLYN AV
90095-01-040 218
A E CAROLYN AV
90095-01-041 220
A E CAROLYN AV
90095-01-005
110 E GRACE DR
GRACE
90095-01-002 303
APT A-B E GRACE DR
90095-01-013 305
A E GRACE DR
90095-01-014
311 E GRACE DR
90095-01-017 308
E CAROLYN AV
90095-02-001
330 E GRACE DR
90095-02-002
328 E GRACE DR
90095-01-010 321
APT A-B E GRACE DR
90095-01-016 319
APT A-B E GRACE DR
00150-01-077 116
A-H TOLEDO RD
00150-01-058
110 TOLEDO RD
00150-01-123
2007 S IRBY ST
00150-01-015 114
A-H TOLEDO RD
00150-01-100
2019 S IRBY ST
90095-02-022
2000 S IRBY ST
90095-02-021 116
A E GRACE DR
90095-02-020 120
B E GRACE DR
90095-02-019
90095-02-018
90095-02-017
90095-02-016
206 E GRACE DR
90095-02-015
210 E GRACE DR
90095-02-014
212 E GRACE DR
90095-02-013 216
A E GRACE DR
90095-02-012
90095-02-010
222 E GRACE DR
90095-02-009
306 E GRACE DR
90095-02-008
310 E GRACE DR
90095-02-007
312 E GRACE DR
90095-02-006 316
A E GRACE DR
90095-02-005
318 E GRACE DR
90095-02-004
322 E GRACE DR
90095-02-042
00150-01-108
2023 S IRBY ST
00150-01-080
2027 S IRBY ST
90095-02-045
2016 S IRBY ST
90095-02-039
2014 S IRBY ST
00150-01-007
90095-02-048 2020 S IRBY ST
00150-01-089
90094-01-007
1724 A S IRBY ST
90094-01-004
1702 S IRBY ST
BUSINESS PARK
SOUTH VILLAGE
SOUTH VILLAGE
90094-01-037
90094-01-026
1724 S IRBY ST
90094-01-036
90094-01-032
1738 S IRBY ST
90094-01-013
1730 S IRBY ST
90094-01-033
1814 S IRBY ST
90094-01-016
1814 S IRBY ST
90094-01-031

Attachment 12

2035 Long Range Transportation Plan (LRTP)

Approved Final



2035 FLATS Long Range Transportation Plan

Final Report

Prepared for:

Florence Area Transportation Study
Metropolitan Planning Organization
Florence, South Carolina

Prepared by:

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Acknowledgements

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The 30-day mandatory public comment period for the 2035 LRTP was held from January 23, 2012 through February 20, 2012. No public comments were received. **The *2035 LRTP* was adopted by the FLATS Policy Committee on July 23, 2012.**

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Chapter 1

Background & Overview

In the mid-1800s, the town of Florence was founded at the crossroads of two rail lines. Today, the community stands at a different kind of crossroads, faced with limited funds for transportation projects and competing priorities. It's a problem that growing communities across the country must confront. Since the early 1900s, population growth in the Florence area has outpaced state and national averages. The region must plan for and provide appropriate transportation infrastructure to support this sustained growth while maintaining the quality of life that has fueled population growth and expansion of the economy in the region. The *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) has evolved from an inclusive process rooted in an understanding of the community's existing and future needs. The basis of this understanding begins with a brief review of the area's history.

A Brief History of the Florence Area

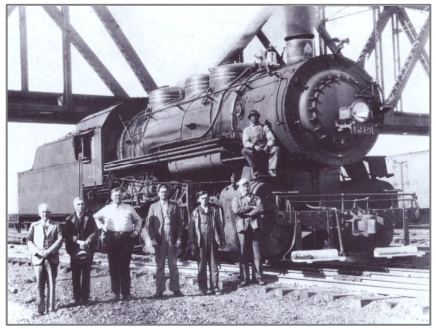
Times were tough for the earliest settlers of the area that would become Florence County. These settlers mostly arrived from Pennsylvania and relied on the network of rivers for transportation. The remote area, its isolation from both church and state, and the lack of basic education led some to denounce these settlers as immoral, wicked, and rude. In actuality, the locals simply were making the best of a difficult environment, surviving on the land by hunting, fishing, and farming. In many ways, the area's modest start helped shape the southern way-of-life long-time locals and newcomers continue to enjoy today.



West Evans Street, 1921

The Florence area — including its economy, development patterns, and way of life — was shaped by the same events that formed the American South. Leading up to the Revolutionary War, the economy of the Pee Dee region began to flourish on the strength of agriculture. Exports during this time included cattle and horses, lumber, and Indigo. The rivers served as the region's earliest freight corridors, as merchants relied on the waterways to ship their goods.

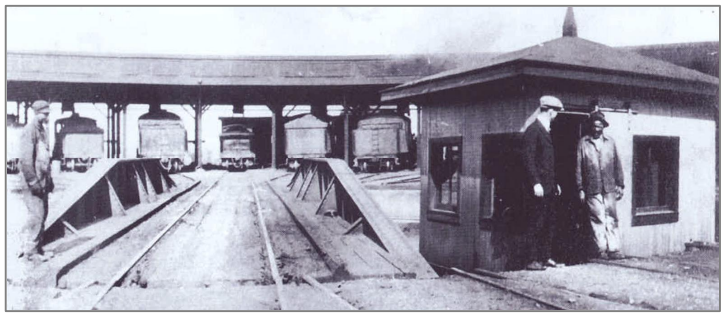
Despite the area's proximity to Charleston, the Revolutionary War had minimal affect on the landscape. However, other events had a profound impact on the growth of the Pee Dee region. The 1783 invention of the cotton gin further shifted the economy and agricultural focus in the region to cotton. But the lack of transportation continued to hamper growth. This changed in the mid 1800s with the arrival of the railroad.



Atlantic Coast Line Railroad, 1921

Eventually, three railroads were constructed in the Pee Dee region, all of which intersect in what today is known as Florence. The city of Florence began with a railroad depot, an inn, and a 577-acre land grant from the state. Even in name, the city acknowledges the critical role the railroad has played in its history. The Florence name comes from Florence Henning Harlee, daughter of General W.W. Harlee who was president of the Wilmington and Manchester Railroad. When the first map of Florence was created in 1860, the town included seven streets and 96 lots. Following the Civil War, the area's primary employer was the Northeastern Railroad. Growth in the town and region was based on its status as trade center for agricultural products from the surrounding Pee Dee River Basin.

Image Source: Images of Florence



Atlantic Coast Line Railroad, 1921

The transformation to a 20th century region was made easier due to the area's status as a rail and transportation center. With the onset of motor vehicles and air facilities, additional modes began to compete for users, infrastructure, and funding. Gilbert Field was created in the 1920s and served as Army Air Base and major training site during World War II. Automobiles and airplanes did little to dampen the city's rail industry leading up to the war, and in the 1940s the city was the state's largest rail station with 14 passenger trains and 48 freight trains passing through every day.

The automobile's presence was obvious in the 1960s and 1970s as the construction of I-95 and I-20 ushered in a new era as a crossroads community. The timing of many factors — including new-found wealth as the economy shifted away from agriculture, mass-produced affordable housing, and the burgeoning interstate highway system — paved the way for demographic shifts on a scale not seen in the area's history. The middle class shunned the city for automobile-oriented suburbs, requiring significant changes in transportation infrastructure. Suburban development and the construction of local streets put pressure on the region's arterial roadways. It's a pressure that continues today as residents in the city and countryside rely on the automobile to take them from their homes to work, school, and other community activities. The roadway system became the main focus for transportation growth as the City of Florence became the focus for business, health care, education, and cultural opportunities for the Pee Dee region.

The time to plan is now.

Transportation gives the Florence area a significant advantage in a competitive marketplace. The city is positioned at the intersection of two key interstate highways (I-95 and I-20) and major US highways (US 52 and US 76). The region boasts a major switching yard for CSX Railroad and direct rail service to the southeast's major ports (Charleston, SC and Wilmington, NC). With daily commercial services from Florence Regional Airport and passenger rail service offered by Amtrak, the residents and businesses of the Pee Dee region have many choices.

The challenge is to maintain this strategic advantage by making thoughtful decisions regarding the future of transportation in the region. The local desire for bicycle and pedestrian amenities reflects the need for a multimodal modal transportation system for local, regional, and national travel. Given the increasing competition for limited transportation funds, the time is now to outline a list of priorities and develop an implementation plan to see those projects to completion.

The Purpose of the Updated Plan

As a central element of daily life and something that affects everyone, transportation represents a critical component of an area's social and man-made infrastructure. The long range transportation plan is the community's comprehensive guide to developing a regional transportation system that accommodates not only the current mobility needs of residents but also looks to the future to anticipate where new needs will arise. The LRTP is a financially constrained plan, meaning it identifies projects and programs that can reasonably be implemented within the years of the plan. In response to federal mandates and the desires of local residents, this *2035 LRTP* addresses all modes of transport including automobile, bicycle, pedestrian, transit, air, rail, and freight movements.

The long range transportation plan is shaped by several elements, primarily federal legislation, but also the direction of state and local agencies. The *2035 LRTP* is governed by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005.

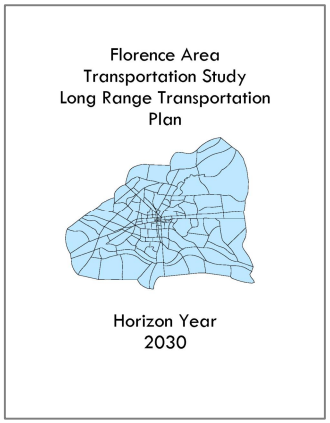
Image Source: Images of Florence

SAFETEA-LU Planning Factors

SAFETEA-LU improves upon earlier legislation by addressing the challenges the modern transportation system faces — safety, security, traffic congestion, intermodal connectivity, freight movement, and environmental protection. To further guide the planning process, SAFETEA-LU set forth eight planning factors that agencies must consider when developing their plans. These planning factors include:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
2. Increase the safety of the transportation system for motorized and non-motorized users
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase the accessibility and mobility of people and freight
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system

The *2035 LRTP* represents the culmination of a multi-level partnership between local, state, and federal policy-makers and the citizens, business owners, and stakeholders most impacted by transportation decisions. The plan updates the region's existing long range transportation plan and will be used in a variety of ways. First, the plan identifies key regional transportation decisions that were based on community needs. Second, it provides critical information to be considered in the prioritization and funding of projects in developing the Transportation Improvement Program (TIP). Finally, it fosters multimodal transportation decisions, and as a result, ensures consistency among competing modes.



For air quality attainment areas, the federal government requires an LRTP to be updated every five years to reflect the region's changing needs and priorities. The *2035 LRTP* builds upon the 2030 Plan, which was adopted in June 2006. Since launching the metropolitan planning process in 1970, the federal government has required a cooperative, continuous, and comprehensive planning framework for making transportation investment decisions in metropolitan areas. The Florence Area Transportation Study Metropolitan Planning Organization (MPO) includes the City of Florence, Town of Quinby, and unincorporated areas of Florence County. In addition, a small area of unincorporated Darlington County lies within the MPO boundary.

Figure 1.1 illustrates the study area.

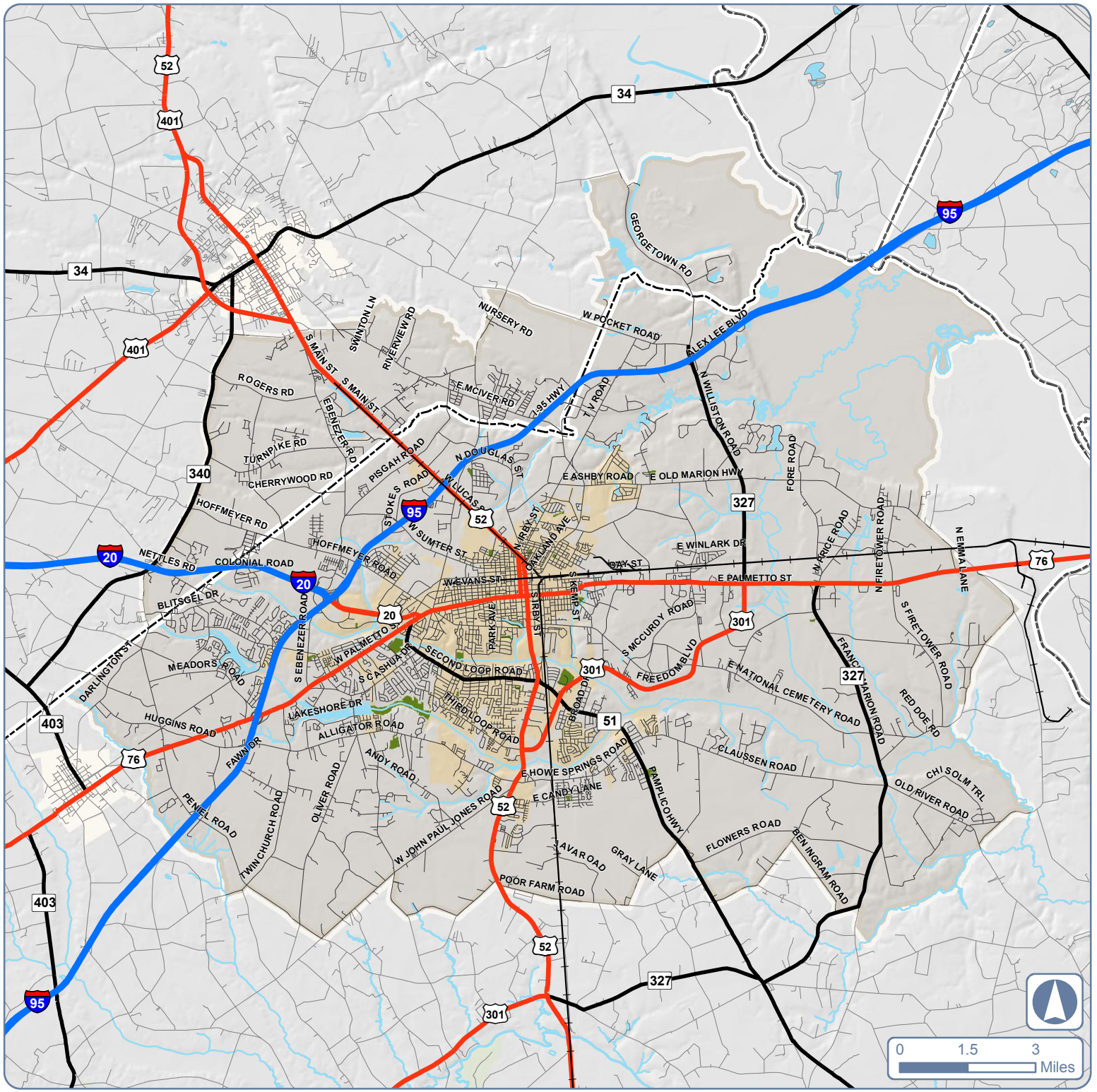


Figure 1.1

Study Area Map

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

Plan Organization

Typical long range transportation plans include a description of the vision for the region and a detailed list of policies, operational strategies, and projects to achieve the vision. The *2035 LRTP* integrates these two parts through the presentation of a series of elements dedicated to specific modes of travel. But each element was not created in isolation. Instead, analysis and recommendations for the elements have been created in tandem to produce a series of actions that lead to an integrated intermodal transportation system that efficiently moves people and goods within and beyond the Florence area.

The recommendations presented in this plan represents the collective vision of a safe, multimodal, and interconnected transportation system that supports continued economic development without compromising the natural, historic, and social resources vital to the area's sustainability. In addition to this initial chapter, the following elements complete the *2035 LRTP*:

Ch. 2 – Introduction & Vision
Introduces the planning process, including a detailed review of public outreach events and a summary of previous planning efforts. Describes the vision of the plan and discusses various goals within the context of the eight SAFETEA-LU planning factors.

Ch. 3 – Social & Environmental
Examines the environmental justice, social, and environmental characteristics of the Florence area in order to provide a spatial frame of reference to assess the relative impacts of recommended projects on the community.

Ch. 4 – Existing Roadway
Reviews status of existing roadway system to better identify needs and priorities for planning improvements. Evaluates roadway system in terms of functional classification, corridor operations, and traffic safety and crash history.

Ch. 5 – Future Roadway
Summarizes future roadway conditions under various scenarios. Evaluates each project's impact on resources, congestion, safety, security, and benefits to the transportation system. Presents a toolbox of access management and context sensitive design strategies.

Ch. 6 – Bicycle & Pedestrian
Evaluates existing bicycle and pedestrian system and recommends facilities to expand the network of sidewalks, on-street bicycle facilities, and off-street paths. Recommends education, encouragement, and enforcement programs to promote safe and efficient travel.

Ch. 7 – Transit
Inventories existing public transportation and demand-response services. Addresses type, location, and frequency of services as well as the need for ancillary facilities.

Ch. 8 – Freight & Aviation
Documents existing infrastructure and key issues related to freight (highway and rail) and aviation. Examines how the movement of freight will be impacted by proposed roadway improvements. Identifies key corridors for both motor and rail freight.

Ch. 9 – Land Use
Highlights two focus areas representative of varying development patterns and intensities. Documents the causational relationships between transportation and land use. Recommends basic plans, programs, and policies for implementing the preferred scenario throughout the area.

Ch. 10 – Financial Plan
Evaluates potential funding sources, revenues, and probable costs for recommendations. Accounts for new SAFETEA-LU standards for incorporating inflation into cost and revenue projections. Creates a set of interim year recommendations and 2035 horizon year recommendations.

Ch. 11 – Implementation Plan
Presents priorities and an action for implemented multimodal recommendations. Includes an action plan to assist local decision-makers and planning staff in taking the necessary steps to implement the *2035 LRTP*.



Chapter 2

Introduction & Vision

Transportation has long been the driving force behind economic and population growth in the Florence area. Today more than ever, elected officials, local staff, and citizen advocates must join together in planning appropriate transportation infrastructure that guides growth in a way that enhances the quality of life in the region. Challenges to planning such infrastructure include deficiencies in existing roads, lack of interconnectivity between developments, natural barriers such as wetlands, and disconnect between land use and transportation decisions.

As it is with other areas in the state and nation, a balanced multimodal transportation network is critical for the sustaining the successes Florence and the surrounding areas have enjoyed over the last few decades. Decision-makers face tough choices as they develop a blueprint to overcome these challenges. In the past, transportation planning focused improvements on the network of highways and major roads. We now recognize such improvements can help only so much. Strategic investment in major roadways must be balanced with improvements to the bicycle, pedestrian, transit, rail, and freight network to keep people and goods moving, allow better access and mobility for residents and visitors, and enhance the way of life in the Pee Dee region.

The *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) addresses expected growth in the Florence and Quinby as well as the surrounding unincorporated land in Florence and Darlington Counties. The plan proposes a multimodal transportation network that fosters continued growth while preserving the natural, cultural, and social fabric of the region. The plan incorporates new planning factors established in the most recent federal transportation authorization legislation. At times, the *2035 LRTP* looks beyond the extents of the roadway to determine the effects of growth on the built environment. The intent is to develop strategies that begin to balance the land use and transportation equation.

This chapter describes the long range transportation planning process, presents the public outreach results, and defines the vision and goals of the *2035 LRTP*.

Planning Process

Transportation planning at its best is a collaborative process led by local staff and citizens invested in their community; it involves key stakeholders and the general public. The planning process should be rooted in a public involvement platform that gathers, processes, and applies a diversity of opinions from residents, the business community, and civic groups. Public outreach for the *2035 LRTP* occurred through a variety of small- and large-group meetings and an assortment of media. Two principles of public outreach were adhered to:

1. Citizens have a personal understanding of the transportation network and planning decisions have a direct impact on their daily lives.
2. Groups can share in the collective vision for a project even as they hold differing opinions on how this vision should be fulfilled.

With respect to these two principles, the planning process for the *2035 LRTP* was designed to create an open dialogue about the needs of current and future residents, visitors, and business owners.



Public Outreach

Most successful planning projects begin with an inclusive process of strong citizen involvement. For the *2035 LRTP*, the underlying principle for understanding local dynamics was collaborative planning and consensus building. Local staff and the project team worked hand-in-hand with the public throughout the planning process. Along the way, several overarching issues emerged:

- *We can't continue to build 4 lane roads to nowhere.*
- *We need to shift new construction money to bikeways, better signal coordination, and local improvements for efficiency and safety.*
- *We must make it safe for kids to walk or bike to school.*
- *We can support public transportation, and it contributes to the community even if everyone doesn't use it.*
- *We should improve street aesthetics within the goal of multimodal transportation.*
- *We must come up with a way to encourage what we like, discourage what we don't, and improve what we can.*
- *We can't disregard previous planning efforts.*
- *We have to create a plan that can be implemented with the political and financial constraints we'll face over the next 30 years.*
- *We need to acknowledge the role freight and commerce has played in our region's history and must find ways to enhance the freight network.*

These issues as well as others surfaced during the various channels of public outreached detailed on the following pages.

Transportation Plan Advisory Committee

At the outset of the project, a group of community representatives was selected to act as a sounding board throughout the planning process. The Transportation Plan Advisory Committee (TPAC) formed as a dedicated group of local officials, staff, stakeholders, and citizens to ensure the plan recognized previous planning efforts and incorporated the assorted perspectives found throughout the planning area. The TPAC was instrumental in formulating the vision and goals for the plan and ensuring the final product respected the vision and goals. The TPAC accepted the following mission:

> *The Transportation Plan Advisory Committee will provide guidance to the Project Team in the development of a multimodal transportation plan that adheres to good planning practices and encourages sustainable development by integrating transportation and land use decisions. The Plan — built upon a collaborative process between state and local governments — will effectively engage the community to create a comprehensive planning tool that directs future transportation decisions in the FLATS study area.*





Beginning with a kick-off meeting on March 25, 2009, the TPAC met periodically during the plan development phase to fulfill its mission and assist the project team. The TPAC examined existing deficiencies and potential solutions for biking, walking, using transit, driving, and moving freight. In addition to serving as a sounding board for project team ideas, the committee participated in visioning and mapping exercises, provided feedback to the project team, and spearheaded the promotion of other public involvement efforts.

The first meeting of the TPAC served as a kick-off meeting, at which the committee reviewed the basics of the long range transportation planning process and discussed the highs and lows of transportation in the Florence area. Following a discussion of the study background and brief introductions of the committee members and project team, the group participated in an issues identification exercise. This portion of the meeting prompted a conversation about the overarching challenges facing the area. While some of these challenges have sprouted since the 2030 LRTP was adopted, others were identified as long-standing issues within the community. Areas of concern centered on major bottleneck points and areas of safety concern, such as 5-Points, South Irby Street, and Second Loop Road. The committee also noted the need to coordinate the LRTP with other planning efforts specific to the different elements of the plan (bicycle and pedestrian, transit, freight, land use).

During the meetings that followed the initial kick-off meeting, the TPAC continued to explore these issues as well as potential challenges specific to the modal elements of the *2035 LRTP*. The short feedback loops provided through these regularly scheduled meetings ensure the project team never veered to far from the direction preferred by the TPAC.

Stakeholder Interviews

With well-designed meetings and multiple opportunities for interaction, the TPAC and general public can provide good insight into the planning issues facing the Pee Dee region. But for more specialized attention to specific matters affecting the development and implementation of the long range transportation plan, key stakeholders had to be targeted. At the outset of the planning process, the project team in consultation with local staff identified a list of stakeholders.

Conversations with these stakeholders provided insight into a variety of issues spanning the social, political, economic, and transportation spectrums. Numerous stakeholder interviews were conducted as part of the *2035 LRTP* planning process. Feedback gathered through these conversations helped validate background information collected through discussions with the TPAC and the results of other public outreach efforts. The information also helped the project team prepare a list of initial recommendations. Some of the comments included:

- Most residential growth is moving south and west.
- There is a lack of major east-west connections. Connectivity needs to be a major message of the plan.
- We need to make our city and region more bicycle friendly to everyone – young and old, experienced and inexperienced.
- Hoffmeyer Road is a growth corridor but it's very disconnected.
- Our industrial base is a blessing and a curse.
- Five Points warrants some attention.
- The biggest challenge for the airport is the runway length.
- US 52 (Irby Street) downtown needs a facelift.

Public Workshops

Citizens interact with the transportation system in a variety of ways. Given these unique experiences, they understand the strengths and weaknesses of the transportation system and feel the impact of transportation decisions on a daily basis. A well-publicized and properly designed outreach effort allows local planners and the project team to tap into this special knowledge. The *2035 LRTP* included the following two workshops, each of which had specific objectives.

Workshop # 1 – Visioning

The first public workshop, held May 12, 2009 at the Drs Bruce and Lee Main Library, was interactive and designed to develop project goals, identify issues and concerns, and generate ideas and potential solutions. The evening began with an overview presentation during which the project team outlined the planning process, introduced background information, and set the stage for the interactive sessions that formed the core of the workshop. Following the presentation, those in attendance expressed concerns and needs in a large group setting. Comments from this part of the evening were transcribed on large easel boards. Attendees then gathered in small groups around maps to discuss the opportunities and needs of the area. The comments spanned all the elements of the transportation plan as well as issues related to existing and future land use. Scenes from the first public workshop are shown to the right.

Comments received during the first round of workshops were used throughout the planning process while evaluating existing conditions and developing potential recommendations for facilities, programs, and policies. Some of these comments are shown on the following page. Prior to finalizing the plan, the project team hosted another public workshop as described later in the chapter.



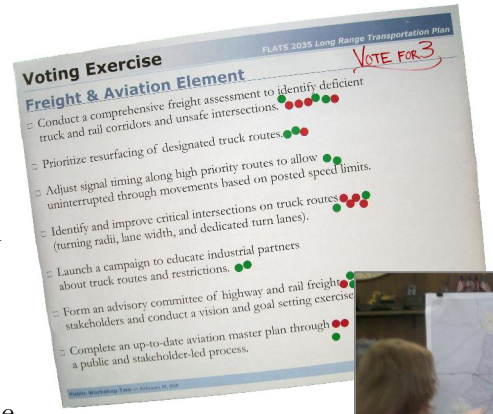
What We Heard:

- At all costs, I avoid 5 Points.
- The access road from Irby to Pamplico Hwy is horrible.
- Important to make heavy investment in bikeways that people could safely use on main commuter hubs.
- As US 301 bypass develops use access management to limit driveways.
- Lots more trees, please!
- Put bike lanes on Hoffmeyer Rd.
- Please take a serious look at underground utilities.
- Consider an ordinance that requires long-term (5+ years) land owners of unimproved property fronting a major high-use street to plant substantial greenspace.
- I support sidewalks and bike-friendly streets.
- With bike lanes on busy roads, Florence could be quite a good city for bikes as transportation. It is reasonably compact.
- We need a better city layout and more density before public transportation can be a priority.
- Where do I find out about bus routes?



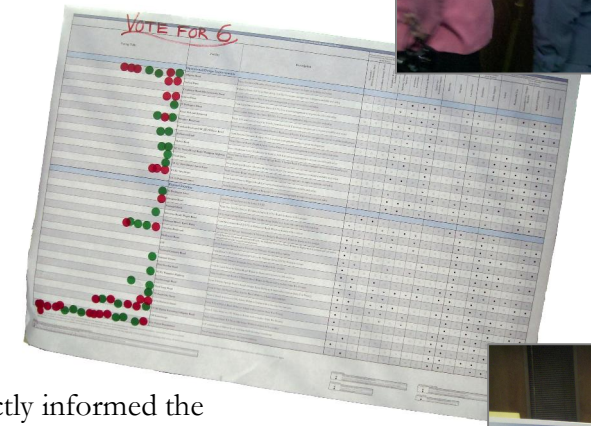
Workshop # 2 – Feedback

Comments received during the first workshop formed the basis of the updated plan. Prior to submitting a draft plan of recommended facilities, programs, and policies, the project team again assembled with the public to discuss preliminary recommendations. The second workshop occurred at the Florence County Council Chambers from 5:30 p.m. to 7:30 p.m. February 18, 2010. At this workshop, the public reviewed the multimodal recommendations and discussed scenarios for two selected land use focus areas in the community. The workshop offered the public a final opportunity to engage the project team in a more formal environment.













The project team conducted a brief overview presentation that highlighted the feedback received from the first public workshop and public questionnaire before introducing recommendations various modes. Following a large group question and answer session, attendees were tasked with voting for their preferred recommendations by placing dots on posters that described recommendations for the major elements of the plan: roadway, bicycle and pedestrian, transit, and freight and aviation. The results of the voting exercise directly informed the evaluation matrix presented in **Chapter 5** and helped the project team prioritize recommendation for each mode as discussed in **Chapter 11**.

Overall, some of the plan's recommendations were adjusted based on the information provided at the workshop. By the time the draft plan was completed, the community had devised a shared vision for their area and multiple ways to fulfill it.

Public Questionnaire

A public questionnaire distributed to TPAC members and the public provided valuable information on various transportation issues and helped determine the community's perception of the transportation network. The questionnaire included general questions as well as questions specific to individual elements of the LRTP. Other questions challenged respondents to choose among transportation priorities and funding opportunities. While the questionnaire was not intended to be a scientifically valid survey, the responses proved helpful in assessing the transportation system and compiling multimodal recommendations. More than 90 questionnaires were completed. In addition, several responses to the questionnaire were received through the Florence County Planning blog (http://florenceco.blogspot.com/).

Demographic Trends

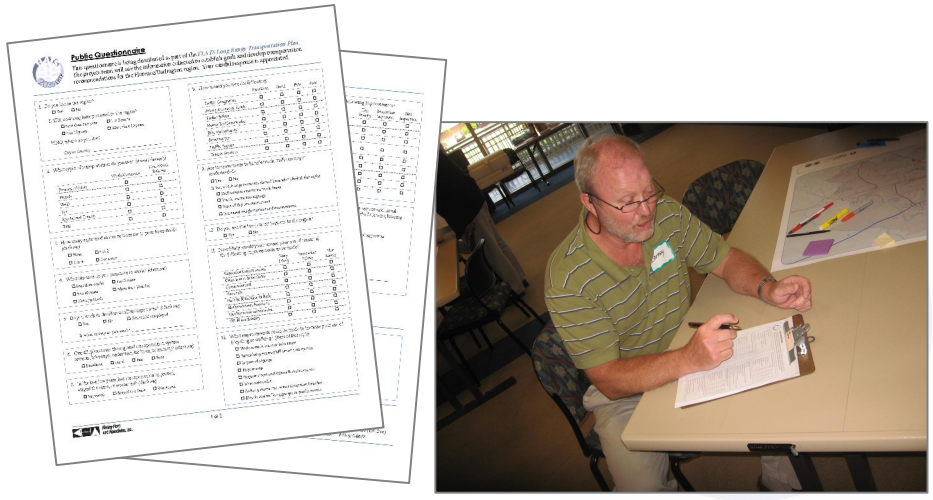
Demographic questions are helpful not only to gain insight into who is completing the questionnaires but also to understand who is attending the workshops and providing feedback on the maps and in large-group discussions. These questions revealed the following about respondents:

- 71% have lived in the region more than 10 years
- 98% use personal vehicles to get to work;
  11% bike to work (more than one response allowed)
- 62% use personal vehicles for non-work related trips;
  34% bike and 46% walk for these trips
- 66% have one or two registered vehicles in their household; 1% do not have a registered vehicle
- 31% commute 5 to 10 miles to work;
  32% commute more than 10 miles
- 90% work in the area; 8% are retired or unemployed

General Trends

The questionnaires validated the trends that emerged through other public outreach channels. According to the questionnaires, the perception of the transportation system mostly is fair or poor. More than 75% rated the transportation system in the study area as fair or poor. Only 2% of respondents rated the transportation system as excellent. When asked if transportation has gotten better, stayed the same, or gotten worse in the last few years, slightly more than 45% of the questionnaires indicated things have stayed the same. More than a quarter of those participating indicated things have worsened. In addition to these quantitative questions, the questionnaire also asked the public to list three roads in the Florence region in need of access management improvements. The top three choices included Palmetto Street, Irby Street, and Second Loop Road.

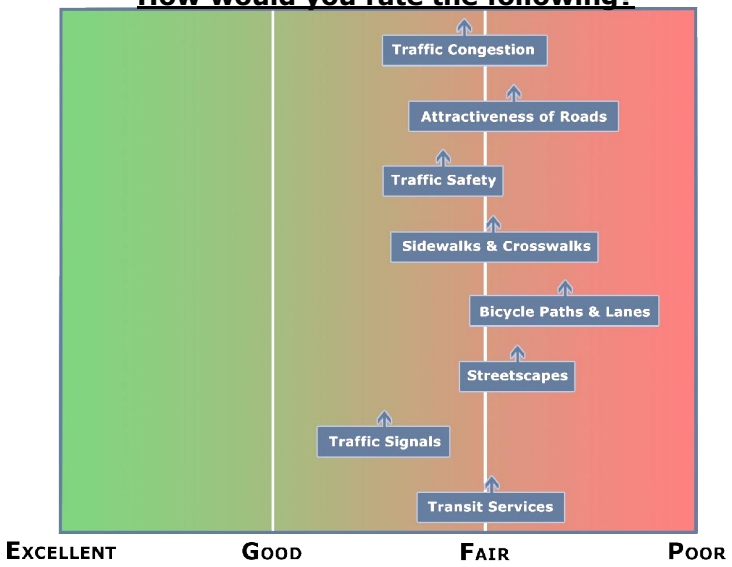
The graphs on the following page illustrate some of the trends as expressed through the public questionnaire. Additional results specific to individual elements are detailed in the appropriate chapters of this report.



Overall, please rate the regional transportation system (streets, bikeways, pedestrian facilities, or transit).



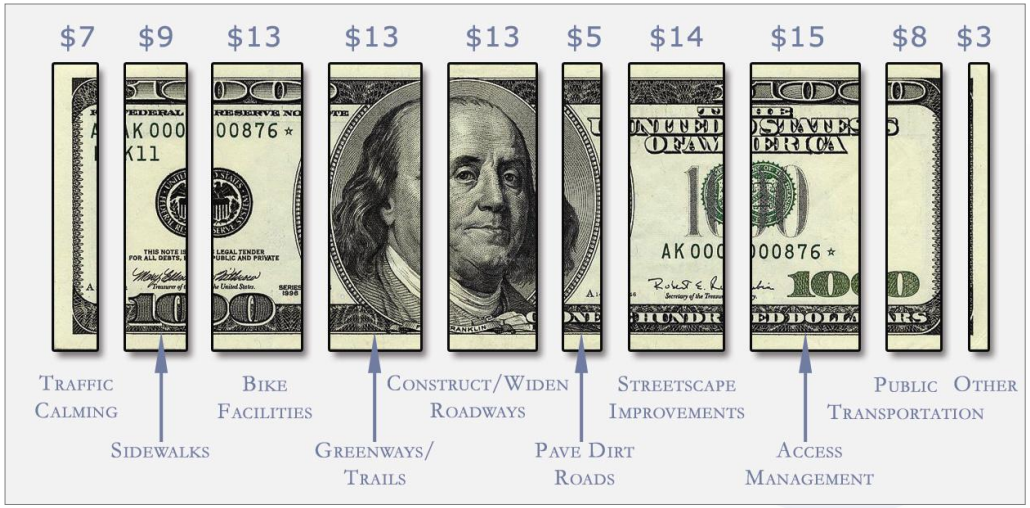
How would you rate the following?



In the last few years, has transportation improved, stayed the same, or worsened?



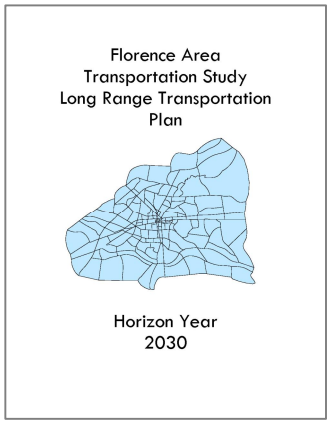
If you had $100 to spend on transportation improvements, how would you spend it?



Previous Planning Efforts

Several plans and programs have preceded the *2035 LRTP*. To recognize a level of efficiency, the *2035 LRTP* should be coordinated with other state, regional, county, and local plans and/or policies that impact planning efforts within the area. In particular, the updated plan must recognize the planning process and outcomes of the previous plan (Horizon Year 2030). This section summarizes a general review of transportation plans prepared within the region. This list does not constitute all of the previous planning efforts. It does, however, review a few of the key documents that have informed the development of the *2035 LRTP*. The land use focus area planning process conducted as part of this plan and described in detail in **Chapter 9** includes a review of local land use plans and policies as described in that chapter.

2030 FLATS Long Range Transportation Plan



The *2030 Florence Area Transportation Study Long Range Transportation Plan* was adopted by the MPO June 13, 2006. This plan was developed and adopted through the efforts of the FLATS Study Team that included representatives from the South Carolina Department of Transportation, Florence County, and the Pee Dee Council of Governments. The study team projected future year level of service on network roads and developed a list of congestion management strategies aimed to alleviate areas congestion. Other features include sections dedicated to bicycle and pedestrian, transit, freight, and air quality. The plan concludes with a financial plan. The 2030 LRTP provides the foundation upon which the *2035 LRTP* builds.

Florence County Capital Project Sales Tax Road Projects

On November 7, 2006, Florence County voters approved a One-Cent Capital Project Sales Tax for roads for up to seven years. This penny tax went into effect on May 1, 2007 and is estimated to generate $148 million over the seven years. When combined with a grant from the State Infrastructure Bank of $250 million, $398 million will be available for the following road projects (listed in prioritized order):

1. Pine Needles Rd: Widen from Southborough Rd to South Ebenezer Rd
2. US 378: Widen from US 52 near Lake City to SC 41 in Kingsburg
3. US 76: Widen from I-95 to Main St in Timmonsville
4. TV Rd: Widen from Wilson Rd to I-95
5. Pamplico Hwy: Widen from Claussen Rd to US 378 in Kingsburg
6. US 301 Bypass: Complete bypass from US 76 near Timmonsville to the intersection of US 52/301 and Howe Springs Rd

Florence Area Bikeway Master Plan

The *Florence Area Bikeway Master Plan* was prepared for the FLATS in October 2004. The plan documents the bicycling needs of the community, identifies the necessary improvements, and prioritizes the recommendations based on potential usage, geographic coverage, and cost. The central component of the planning process was a Bicycle Summit, which brought together stakeholders to learn the benefits of bicycle-friendly community and discuss the needs and issues facing bicyclists in the Florence area. The result was a host of on- and off-street recommendations presented as a series of fact sheets. In addition to the recommended facilities, the plan also discusses necessary policies and strategies to develop a local environment supportive of bicycling.

Vision and Goals

The vision for the *2035 LRTP* was developed in collaboration with the Transportation Plan Advisory Committee and validated through public outreach. The Vision, which is intended to guide the planning process, is as follows:

> **We envision a growing community serviced by a safe and sustainable transportation system that provides real choice among modes of travel. Our transportation system contributes to an enhanced quality of life by providing attractive connections between destinations for motorists, bicyclists, pedestrians, and transit users without compromising cultural and environmental resources, and it supports the efficient movement of people and goods at both the local and regional scale.**

The eight SAFETEA-LU planning factors described in **Chapter 1** represent one way federal officials can assess how a transportation plan addresses the unique needs of today's complex transportation systems. In order to reinforce the connection between the federal legislation and the *2035 LRTP*, the plan's goals are grouped according to the eight planning factors. However, it should be noted that some goals address more than one planning factor.



Source: Images of Florence

East Evans Street in the 1920s

Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

- Improve access to downtown Florence for people and freight.
- Integrate into the planning process the general aviation needs of the region as a way to attract additional economic activity.

Increase the safety of the transportation system for motorized and non-motorized users.

- Provide a safe traveling experience for all users by implementing safety measures at high priority crash locations and improving facilities for bicyclists and pedestrians.

Increase the security of the transportation system for motorized and non-motorized users.

- Implement a flexible transportation system that aids the response to and recovery from natural and manmade disasters.
- Develop long-term strategies to protect the safety of employees and patrons of the Pee Dee Regional Transportation Authority.

Increase the accessibility and mobility of people and for freight.

- Enhance freight mobility to and from key industrial areas.
- Develop a comprehensive set of typical cross sections that illustrate effective congestion management and context-sensitive solutions that balance local accessibility with regional mobility.

Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

- Integrate land use and transportation policies to limit impacts to sensitive land, focus development in prime locations, encourage trips by modes other than personal automobiles, and enhance the region's quality of life.
- Minimize direct and indirect environmental impacts of the transportation system by first considering improvements to the existing system before selecting strategic locations for newly constructed facilities.
- Support mixed-use development to encourage biking and walking, in turn improving the Florence area's environment and the health of its citizens.
- Utilize planning tools to preserve areas along streambeds and restore and maintain air quality status for the FLATS area.

Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

- Connect homes, parks, community activity centers, employment hubs, and other key destinations to one another through a coordinated network of bicycle facilities and off-road trails.
- Promote a pedestrian-friendly environment by filling gaps and improving connectivity throughout the sidewalk system and to key destination or activity nodes.
- Create a system of interconnected streets to improve mobility and distribute traffic efficiently and appropriately by purpose and function.

Promote efficient system management and operation.

- Encourage streetscape and traffic calming features in roadway designs for collector and residential streets.
- Outline how local policy can encourage a network of Complete Streets that operate efficiently as conduits of travel and elements of public space.
- Identify opportunities to integrate Intelligent Transportation Systems (ITS) as part of an overall transportation management strategy.

Emphasize the preservation of the existing transportation system.

- Develop a plan that maximizes benefits to the transportation system while minimizing costs.
- Recognize that the area's most important transportation corridors must balance the needs of adjacent property owners dependent upon access to the roadway with the needs motorists, bicyclists, and pedestrians.

2035 FLATS LRTP

As mentioned in **Chapter 1**, the recommendations that form the essence of this plan represent the collective vision for a safe, multimodal, and interconnected transportation system that supports continued economic development without compromising the natural, historic, and social resources vital to the area's sustainability. The elements that follow, beginning with existing roadway conditions and concluding with an implementation plan, adhere to this vision.



Chapter 3

Social & Environmental Resources

Introduction

Long before interstate highways — or even railroads — crisscrossed the Florence region, a network of navigable rivers and streams served as the area's main mode of transportation. The rivers, fertile lands, and abundant forests allowed the agrarian economy to prosper. But as the economy shifted and transportation evolved, the natural features of the Pee Dee region began to compete with transportation infrastructure. Without proper controls and adequate planning, the natural, social, and cultural resources of the Florence area are sure to lose this battle. In the last several decades, the Federal government has placed increasing emphasis on the role transportation planning plays in conserving the environment, preserving our neighborhoods, and protecting our quality of life.

This chapter considers the social and environmental resources of the Florence area and provides a series of maps that illustrate the distribution of minority, Hispanic, and low-income populations and document natural and cultural resources. When overlaid with proposed transportation projects, this information provides a frame of reference to help assess the relative impacts of these projects on the community. Information introduced in this chapter is included in the evaluation matrix explained in **Chapter 5**. This matrix assesses the relative impacts of roadway projects according to environmental justice and environmental mitigation concerns.





Environmental Justice

Environmental justice has been a federal requirement since recipients of federal funds were required to certify nondiscrimination following the Civil Rights Act of 1964. A 1994 Presidential Executive Order required all federal agencies to make environmental justice part of their missions. The law was enacted to avoid the use of federal funds for projects, programs, or other activities that generate disproportionate or discriminatory adverse impacts on minority or low-income populations. The U.S. Department of Transportation (USDOT) promotes environmental justice as an integral part of the long range transportation planning process as well as individual project planning and design.

According to the USDOT, environmental justice requires the understanding and incorporation of the unique needs of distinct socioeconomic groups in order to create transportation projects that fit harmoniously within the framework of their communities without sacrificing safety or mobility. The environmental justice assessment incorporated in the *LRTP* is based on three fundamental principles derived from guidance issued by the USDOT:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- Ensure all potentially affected communities' full and fair participation in the transportation decision-making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Existing Considerations

The assessment of environmental justice issues for the *2035 LRTP* began by analyzing the geographic distribution of minority and low-income populations. Using the most recent data available through the U.S. Census Bureau, the project team created a series of maps showing the location of these communities at the smallest possible level of census geography (block group or block). These maps were presented at the first TPAC meetings as well as the first public workshop to allow a better understanding of how these populations may have shifted in the years since the census was recorded. In fact, some changes are expected to have occurred since the data was compiled by the U.S. Census Bureau. Identifying these communities is an important step to ensure the transportation recommendations of the *2035 LRTP* properly disperses both the benefits and negative impacts.

U.S. Census Estimates

Because the next decennial census will not occur until April 2010, the *2035 LRTP* relies on data compiled in 2000 to show minority, Hispanic, and low-income populations at the block and block group level. However, the U.S. Census Bureau releases estimates for several social, economic, and housing characteristics. A comparison of the 2000 census and 2007 estimates indicate the following changes in minority, Hispanic, and low income populations for the Florence Urban Area. Data was compared for this Census geography because its area best represents the LRTP study area.

- The urban area's population increased 4.5% to 70,448.
- The percentage of the urban area's population that was minority increased 4.6% (40.1% in 2000 to 44.7% in 2007).
- The percentage of the urban area's population that was Hispanic showed a small increase — from 1.0% in 2000 to 1.2% in 2007.
- The percentage of individuals below poverty in the urban area increased from 15.1% to 16.5%.

Minority Population

Figure 3.1 shows the distribution of the region's minority population. Locations with higher percentages of minority residents include north and east of downtown Florence, south of Howe Springs Road, and east of Oliver Road.

Hispanic Population

Figure 3.2 illustrates the distribution of the Hispanic population throughout the Florence MPO area. Because the area has a relatively low Hispanic population, the few locations with concentrations of Hispanics are dispersed throughout the region. The highest concentration of populations greater than 25% Hispanics is south of Hoffmeyer Road in the western portion of the study area.

Impoverished Population

Figure 3.4 shows the locations in the study area with higher percentages of persons living in poverty. This information, presented at the census block group level, indicates that low-income populations are concentrated near the City of Florence as well as to the west of Williston Road.

Purpose of the Screening Process

Careful planning and early consideration can manage impacts to these communities more effectively. Input received through public involvement and discussions with local staff influenced the selection and, when necessary, the alignment of future transportation projects. The environmental justice screening conducted for the *2035 LRTP* did not attempt to quantify specific impacts. Instead, it guided the development of an equitable plan in terms of benefits and costs. The screening identifies projects that due to proximity potentially can affect communities of special interest. More detailed analysis will be needed prior to funding and construction specific transportation projects.

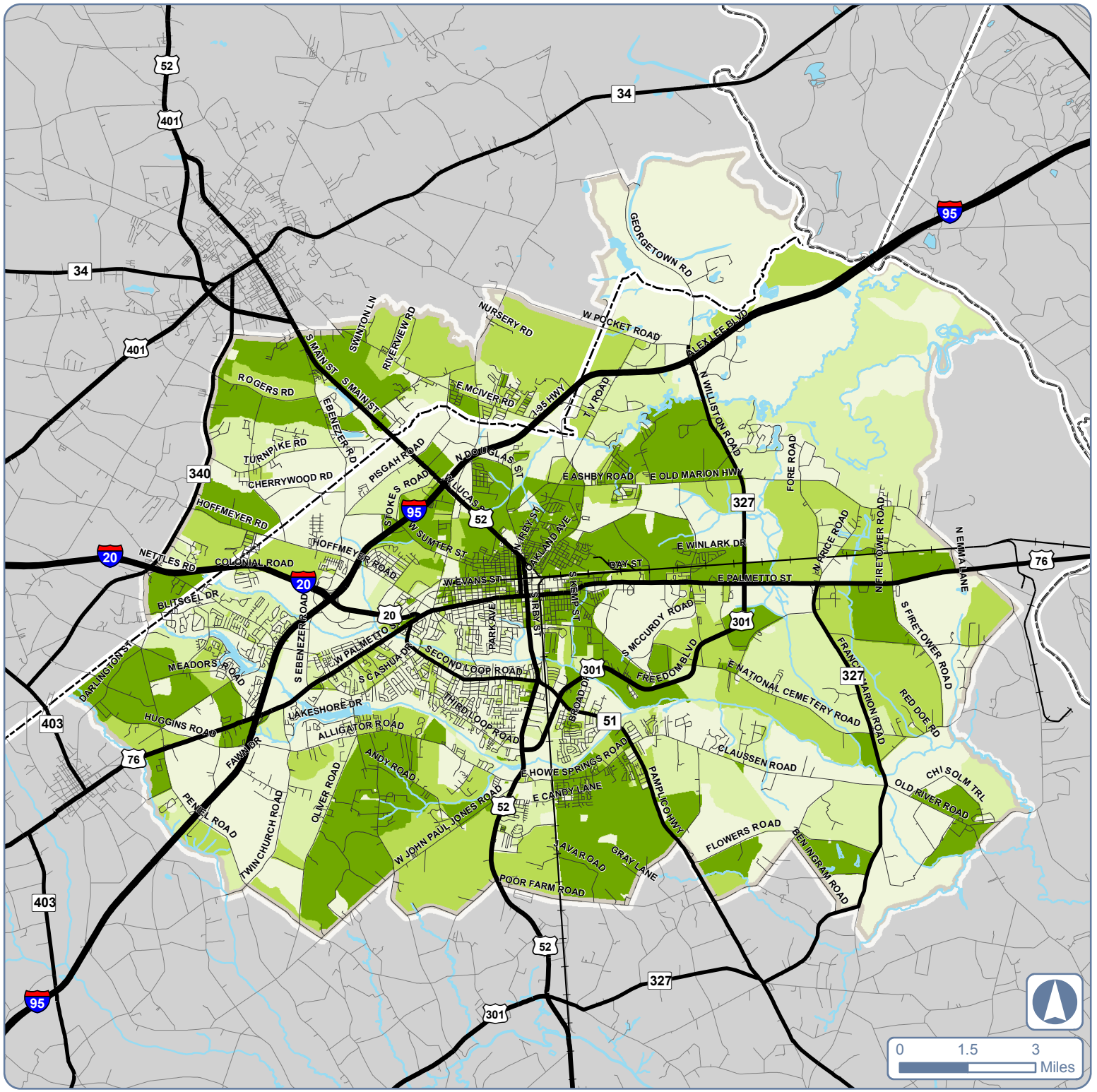


Figure 3.1

Minority Population

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- FLATS Boundary
- County Boundary

Percent Minority

- Less than 10%
- 10% to 25%
- 25% to 50%
- More than 50%

Notes:

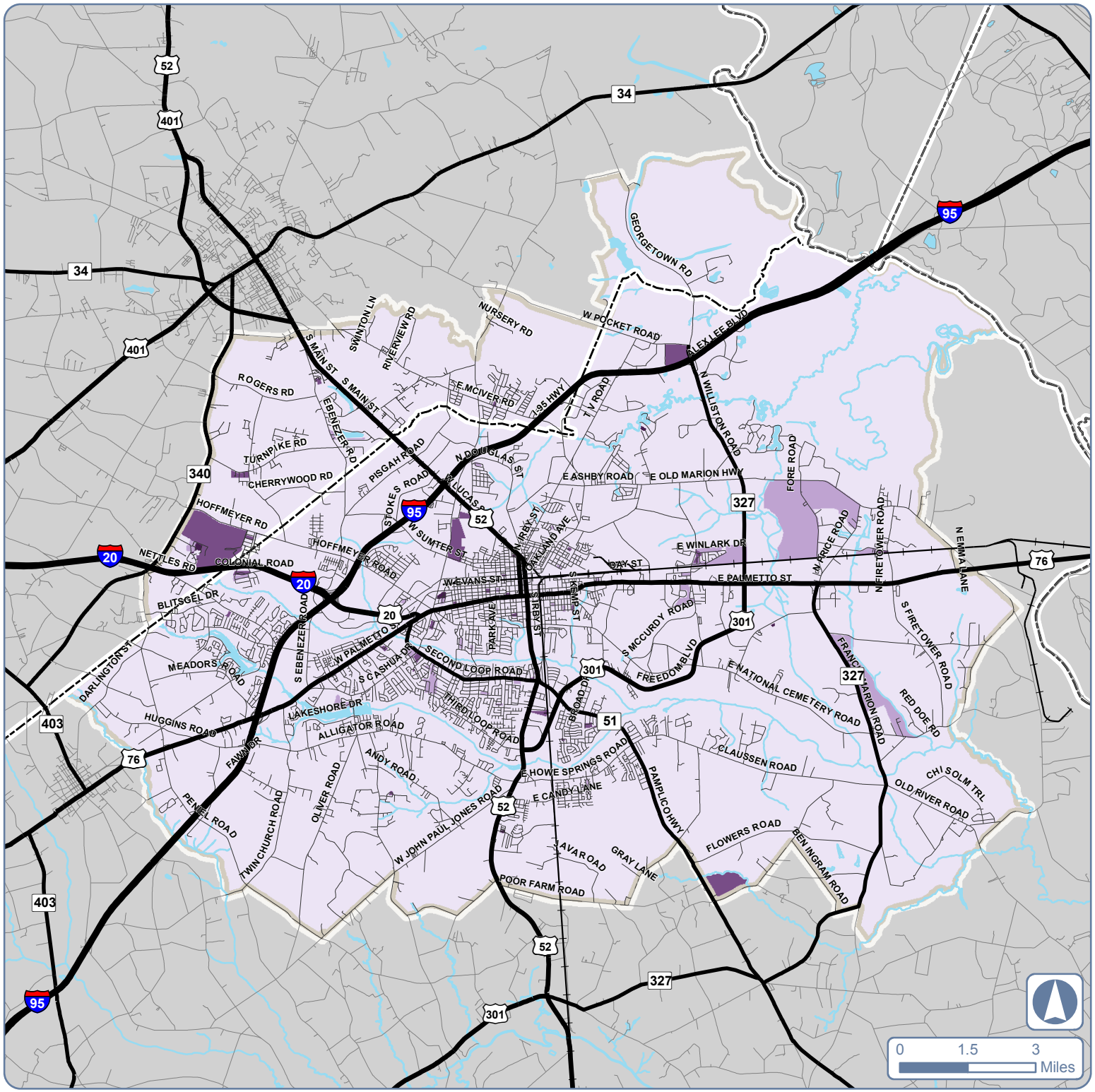
- Data shown at the census block level based on the 2000 Census.
- Percentages shown for each census block does not account for the total population in the block. That is, a block with less people may reveal higher percentages of minorities despite having fewer minorities overall.

2035 LRTP

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Figure 3.2

Hispanic Population



Notes:

- Data shown at the census block level based on the 2000 Census.
- Percentages shown for each census block does not account for the total population in the block. That is, a block with less people may reveal higher percentages of Hispanics despite having fewer Hispanics overall.

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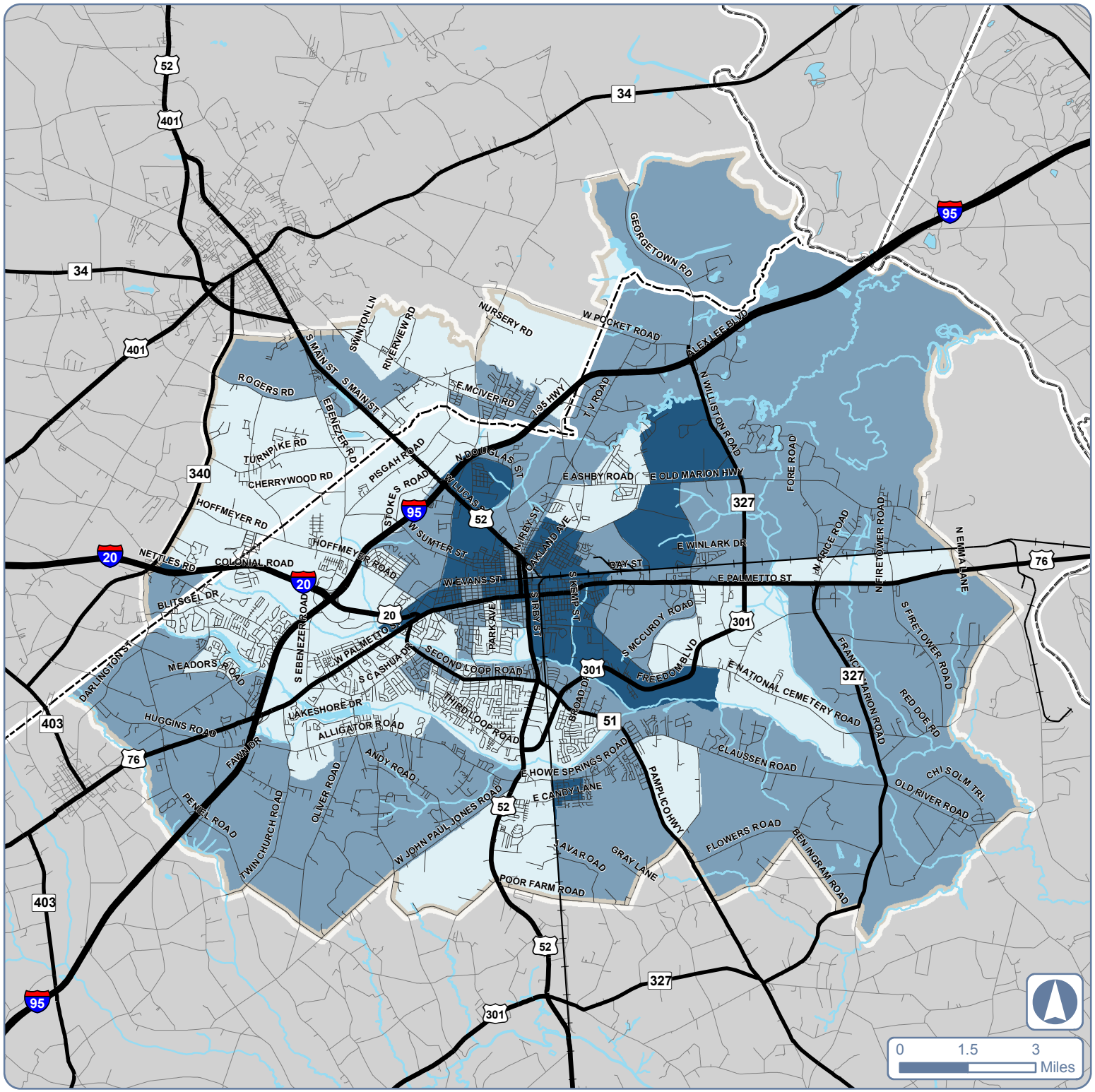


Figure 3.3

Persons Below Poverty

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- FLATS Boundary
- County Boundary

Percent Below Poverty

- Less than 10%
- 10% to 25%
- More than 25%

Notes:

- Data shown at the census block group level based on the 2000 Census.
- Percentages shown for each census block group does not account for the total population in the block group. That is, a block with less people may reveal higher percentages of impoverished persons despite having fewer impoverished persons overall.

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Environmental Assessment

When the President signed SAFETEA-LU into law in August 2005, the Federal government affirmed its commitment to environmental mitigation. The transportation bill required MPOs to consult with Federal and state agencies to develop possible environmental mitigation activities for incorporation into transportation projects identified in long range transportation plans. The Transportation Plan Advisory Committee (TPAC) included representatives from FHWA (environmental), the South Carolina Department of Natural Resources, and various individuals representing local planning interests.

To fulfill SAFETEA-LU requirements, it is important to understand the definition of mitigation according to Federal regulation. Mitigation:

- Avoids the impact altogether by not taking a certain action or parts of an action.
- Minimizes the impact by limiting the degree or magnitude of the action and its implementation.
- Rectifies the impact by repairing, rehabilitating, or restoring the affected environment.
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the action.
- Compensates for the impact by replacing or providing substitute resources or environments. (Source: 40 CFR 1508.20)

An ordered approach to mitigation starts with an understanding of the affected environment and assesses transportation effects throughout project development. To be most effective, mitigation must start at the beginning of the NEPA process and play a role in the development and analysis of alternatives.

Because long range transportation planning is regional in scope, the environmental mitigation discussion that follows does not focus on each individual project of the *2035 LRTP*. Instead, this section provides maps and a general summary of environmentally sensitive areas for consideration. As mentioned, the evaluation matrix in **Chapter 5** introduces project-level analysis of potential impacts to the environment.



Image Source: Bing.com

I-95 crossing the Great Pee Dee River

Existing Considerations

Growth in the Florence area provides new opportunities but also creates new challenges as public and private entities try to balance the need for additional developable land and associated infrastructure with the preservation of natural resources. At the center of this balancing act is the importance of finding stability among the competing interests in development, mobility, and commerce and the desire for a high quality of life that includes clean air and water, environmental preservation, and recreational opportunities.

Natural Resources

Natural resources abound in the Florence area, including rivers, streams, and wetlands. While the role of rivers in the area has changed since the earliest settlers used them as primary transportation corridors, their beauty and importance remain. Recent growth has pitted the area's natural resources against the roads and infrastructure designed to accommodate rising population and business interests. The inventory of natural resources is more than just placing features on a map. The project team considered the location of rivers, streams, wetlands, and floodplains in the development of preliminary alignments for various projects. Some projects such as new location roadways required avoidance of these resources where possible. Other projects such as multiuse trails were located along natural resources to take advantage of the area's green infrastructure and connect activity centers. The most prominent features include:

- **Great Pee Dee River** — Forms the eastern boundary of Florence County
- **Back Swamp** — Covers the northeastern portion of the MPO area
- **Jeffries Creek** — Stretches across the MPO area and bisects the City of Florence from east to west near Second Loop Road
- **Middle Swamp** — Bisects the southern portion of the city from east to west

Many of the area's parks take advantage of these and other natural resources. The City of Florence operates 16 neighborhood parks that total more than 600 acres, including several miles of trails. Major parks in the city include:

- **Freedom Florence Recreation Complex** — 100-acre multipurpose recreation park with championship caliber softball fields, multipurpose fields, a Gymnastics center, a lake, and jogging trails — located off Pamplico Highway
- **Jeffries Creek Park** — 55-acre park featuring nature trails and a playground — located between Edisto Drive and DeBerry Boulevard
- **McLeod Park** — 51.5-acre park filled with nature trails, picnic areas, lighted baseball fields, volleyball and basketball courts, and a skateboard facility — located on Santiago Drive
- **Timrod Park** — 18-acre park with administrative offices, lighted tennis courts, picnic areas, interpretive nature trails, and fitness courses — located on Timrod Park Drive

In 2009, the Southern Environmental Law Center named the Great Pee Dee River to its Top Ten Most Endangered List, a listing of the ecological, scenic, and cultural riches at stake in the south. As new infrastructure is constructed to accommodate additional residents and business opportunities, it will be critical to manage and minimize impacts to the natural environment in the Florence area. **Figure 3.4** illustrates the occurrence of important environmental features such as rivers, streams, wetlands, and floodplains. The map also shows the location of parks in the MPO area.

Cultural Resources

Cultural and community resources in the area include schools, libraries, community centers, and hospitals. These locations provide popular destinations for citizens and visitors of all ages as well as important community landmarks and critical service facilities. **Figure 3.5** shows the location of these resources. Though not shown on these maps, churches also offer important cultural and community services. As projects are considered for implementation, officials must bear in mind any impacts that might affect these important community features.



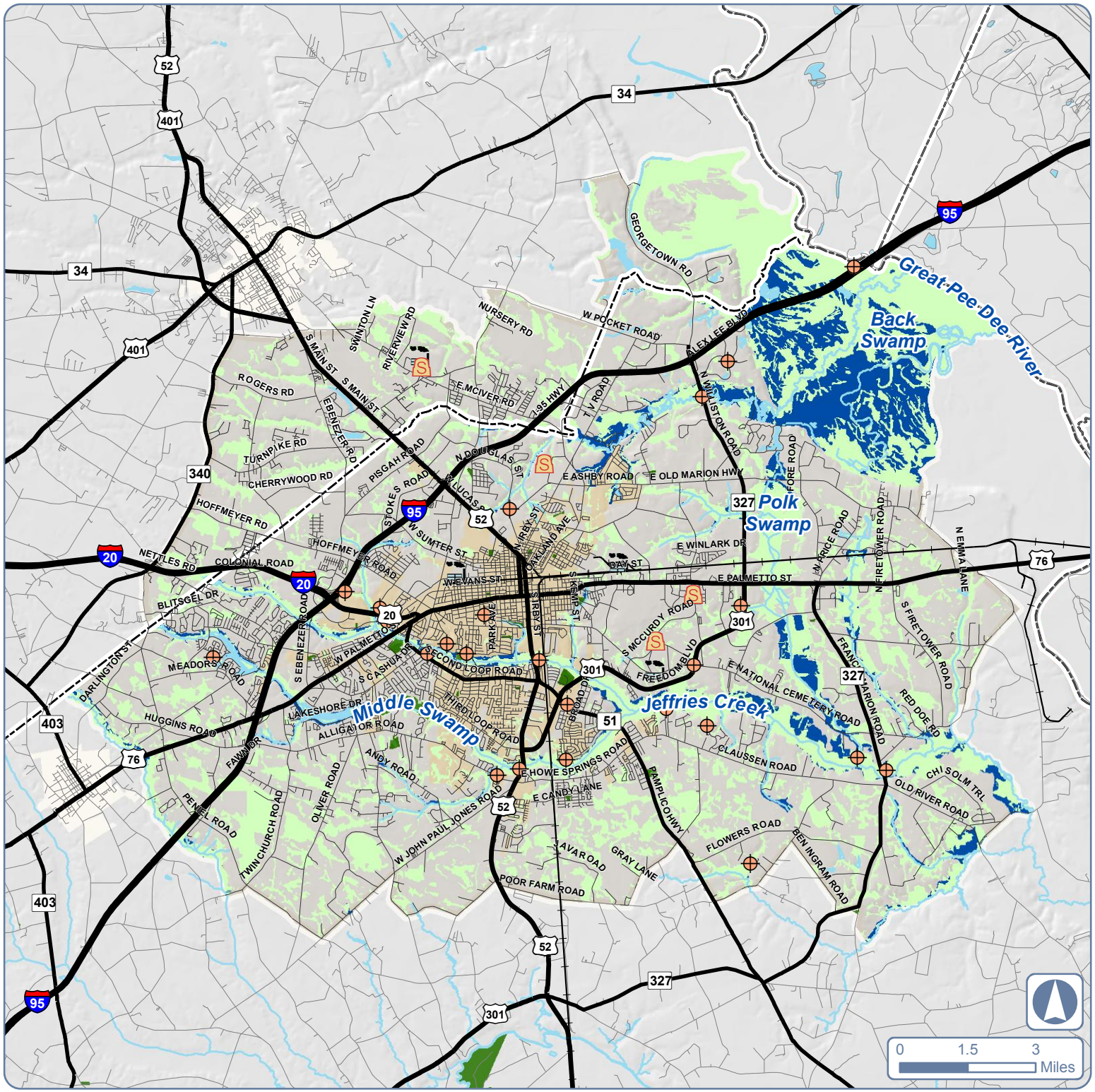


Figure 3.4

Natural Resources

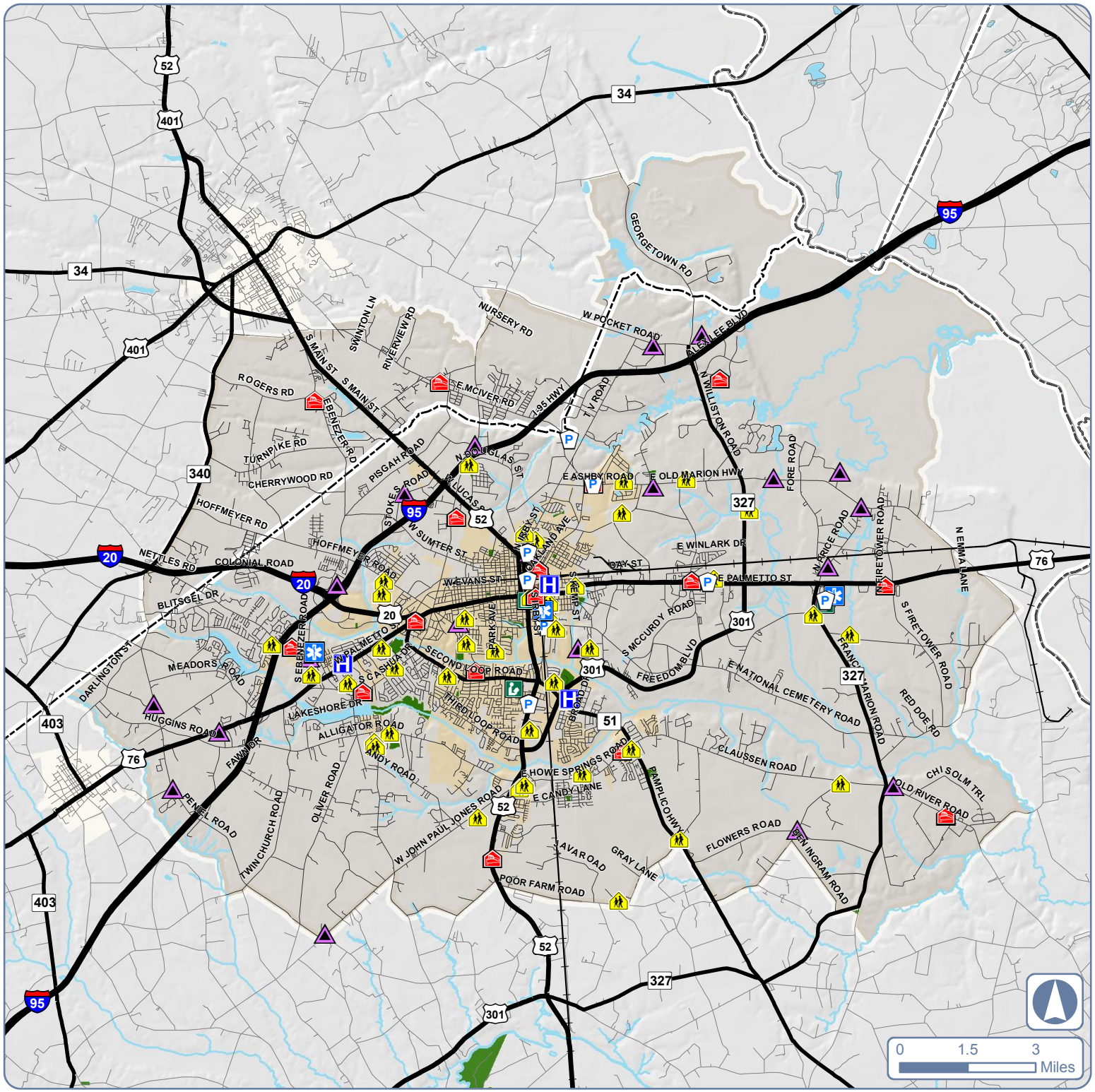
- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- Wetland
- Floodplain
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary
- 401 Certification Site
- Solid Waste Landfill
- Air Regulated Facility

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Figure 3.5

Cultural Resources



- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Historic District
- Hospital
- Fire Station
- EMS Station
- Police Station
- Library
- School
- Historic Site

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Planning Integration

More so than most infrastructure initiatives, transportation projects can disrupt communities and significantly impact natural resources. Today's transportation planning process includes a system of checks and balances designed to mitigate unfair and disproportionate impacts of these projects on a community. The Federal government requires the planning process be cooperative, continuous, and comprehensive to ensure disadvantaged communities receive fair consideration regarding the benefits and impacts of transportation projects. The planning process for the *2035 LRTP* included a review of social and environmental resources to evaluate system-wide and project-specific impacts. This information ensures proposed transportation projects do not lose sight of the plan's goal to respect the environmental resources and cultural fabric of the region.

As described in the Future Roadway Element (**Chapter 5**), the Roadway Project Total Benefit and Impact Matrix considers potential impacts to environmental, social, and cultural resources and therefore inserts the these issues into the selection process. The matrix helps identify major impacts that diminish a project's feasibility. However, the screening and subsequent matrix is not intended to replace a more thorough evaluation for each project as it progresses. For most projects, more detailed environmental assessments will be needed as the project is developed.



Environmental Mitigation

Protecting and enhancing the environment is a concern shared throughout the transportation community. SAFETEA-LU planning factors provide guidance to protect the environment, identify the need for integrating the planning and environmental processes, and promote a streamlined process for reviews and permitting. By doing so, the legislation emphasizes environmental mitigation. Early integration of the planning and environmental review and approval processes makes it more likely that transportation projects can be implemented in a timely and environmentally sensitive manner.

The coordinated effort of *2035 LRTP* supports the protection and enhancement of the environment and sets the stage for the streamlined process outlined by NEPA regulations. Although the integration will vary by project, every effort should be made to initiate the environmental assessment and mitigate environmental concerns as early in the project developmental phase as practical.

National Environmental Policy Act (NEPA)

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970 and establishes national environmental policy and goals to protect, maintain, and enhance the environment. All transportation project utilizing federal funds must include a NEPA review to ensure proper environmental considerations occur.

The NEPA process involves detailed investigation of environmental impacts of a transportation-related project, usually occurring prior to the engineering and design stage of project development. Issues identified for mitigation are addressed and integrated into the engineering of the project. The NEPA evaluation may result in one of three levels of assessment, depending on the severity of the impact:

- **Categorical Exclusion** — This first level allows a project to be categorically excluded from detailed environmental analysis if it meets criteria previously determined by a federal agency as having no significant environmental impact. Several agencies have developed lists of actions normally categorically excluded from environmental evaluation under their NEPA regulations.
- **Environmental Assessment/Finding of no significant impact (EA/FONSI)** — For the second level, a federal agency prepares a written environmental assessment (EA) to determine if the project would significantly affect the environment. If it will not, the agency issues a finding of no significant impact (FONSI). The FONSI may address ways the agency can mitigate potential significant impacts.
- **Environmental Impact Statement (EIS)** — If the EA determines significant environmental consequences may occur, an EIS is prepared. An EIS is a more detailed evaluation of the proposed action and alternatives. The EIS process includes the opportunity for the public, other federal agencies, and outside parties to provide comments during preparation as well as once the draft EIS is completed. (If a federal agency anticipates the project may have a significant impact or if the project is environmentally controversial, the agency may choose to prepare an EIS without first preparing an EA.) Once the EIS is finalized, a federal agency prepares a public record of its decision that addresses the findings of the EIS, including how consideration of alternatives weighed into the agency's decision.

Conclusion

As potential transportation recommendations are identified, the Florence area must consider the social and environmental resources unique to the area as well as the rivers, streams, wetlands, and other natural features. But screening social and environmental resources is more than just good practice, it's a federal requirement. These screenings help identify and either mitigate or avoid significant impacts resulting from implementing recommendations. Identifying potential impacts helps balance the often competing interests of improving mobility and preserving the Florence area's important social and environmental resources. The earlier these features are identified, the more likely sustainable solutions will arise to minimize or avoid impacts and reduce unnecessary delays and expenses throughout the implementation of the project.

Florence's commitment to environmental mitigation is evidenced by the inclusive planning process described in **Chapter 2** coupled with the screening presented in this chapter and the evaluation matrix explained in **Chapter 5**. The MPO recognizes every project will not require the same type or level of mitigation. For example, roadway projects (new roadway construction and to a lesser degree widening projects) involve major construction while smaller projects such as intersection improvements and resurfacing involve minor construction. The mitigation efforts chosen for a specific project will depend on the severity of the impact.



Chapter 4

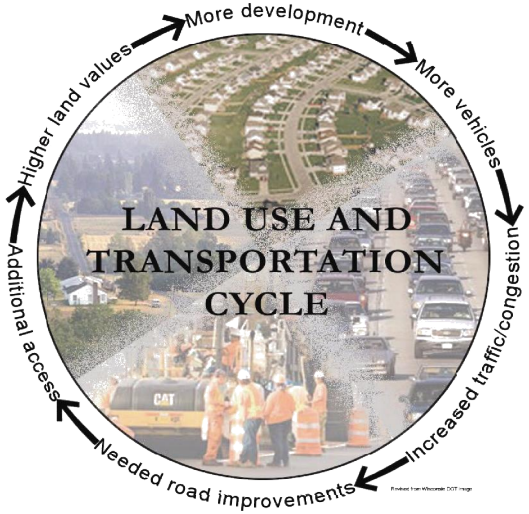
Existing Roadway Conditions

Introduction

The City of Florence originally was founded as a crossroads community for the burgeoning railroad system. Florence still fills the role of a crossroads community today, with Interstates 95 and 20 converging nearby. Chartered in 1871, Florence continues to serve as a hub for northeastern South Carolina. Florence's historic downtown is laid out on a grid of interconnected streets originally focused on the now abandoned railroad corridor running through the center of the city. Traveling outward from the city's historic core, the urban fringe continues to develop in a typical suburban and rural pattern and at a much lower density than the historic downtown. Suburban areas of Florence extend beyond the boundaries of Florence County into Darlington County.

The Existing Roadway Conditions chapter of the *2035 FLATS Long Range Transportation Plan (2035 LRTP)* evaluates the existing transportation system to better identify needs and priorities for the purposes of planning. The discussion of existing roadway conditions is organized into the following sections:

- Transportation Corridors and Activity Centers
- Public Perception
- Functional Classification
- Corridor Operations
- Planning Precedent



Transportation Corridors & Activity Centers

As residential, commercial, and industrial growth occurs and more vehicles take to the road, roadway improvements are needed to reduce traffic congestion and improve safety. These roadway improvements often enhance access, thus raising land values and attracting more development. The circular diagram below illustrates this continuing cycle of influence between land use and transportation.

The interaction between activity centers and the transportation corridors that link them to other centers is important, as are the mobility choices provided within the center. Often neighborhoods and activity centers rely on few transportation corridors to provide essential links between home, school, employment, shopping, social, and recreational destinations. The extent to which these origins and destinations blend into multi-purpose activity centers has a dramatic effect on a person's ability to choose between modes for their trip. In many cases, the range of trip alternatives (walk, bike, drive, or transit) also influences the overall perception of a community. **Table 4.1** summarizes three types of activity centers and provides local examples.

The level of success for corridors within and between activity centers largely depends on the street's intended function. A unique challenge for the future will be to balance the area's mobility needs with other priorities. Often, traffic mobility has been given priority without regard for other considerations such as the function of the street, corridor relationship to land use, urban design, and the promotion of alternate modes.

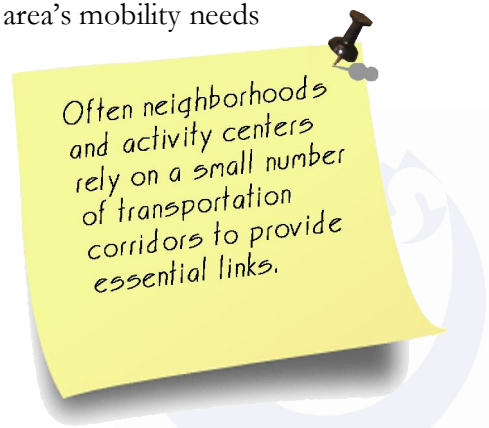


Table 4.1 – Activity Centers

Center Type	Characteristics
Regional Activity Center	
Local Example ▪ Downtown Central Business District Transportation Corridor ▪ Irby Street ▪ US 76/Palmetto Street	▪ Large-scale, transit-supportive center of employee-intensive land uses ▪ Core areas contain large-scale and high intensity urban land uses supported by and serving communities within the region ▪ Accessed by interstates/freeways, principal arterials, and public transportation ▪ Served by municipal water and sewer ▪ Higher residential densities ▪ Balance between residential/non-residential land uses
Community Activity Center	
Local Example ▪ Florence Mall Shopping Center Transportation Corridor ▪ 2nd Loop Road	▪ Include a combination of retail, personal services, civic, educational, and social uses ▪ Core areas contain medium-scale development that serve the day-to-day needs and activities of the core area occupants and the surrounding neighborhoods ▪ Accessed by principal arterials and public transportation ▪ Served by municipal water and sewer ▪ Medium density residential areas ▪ Land use mix is approximately 60% residential and 40% non-residential
Neighborhood Activity Center	
Local Example ▪ Quinby Business Core Transportation Corridor ▪ Ashby Road	▪ Mostly residential with a mixed-use core that serves as a focal point for the neighborhood and provides retail and service needs ▪ Accessed by major and minor arterials with integrated collector street access ▪ Mixture of low and medium density residential areas ▪ Transit service provided or desired

A unique challenge in creating a successful transportation system for the Florence region is blending connectivity and access functions with preservation of natural features and the unique character of the metropolitan area. Neighborhoods and smaller communities within the region may have different needs and priorities. While recognizing these differences, it is important not to lose focus of the practical concept of overall connectivity. This concept particularly is relevant as it relates to people's desires to make safe and efficient trips not only by driving but also by walking, bicycling, or using public transportation. The discussion of complete streets in **Chapter 5** sets the stage for the region to balance the mobility and access functions of the transportation system through the multimodal recommendations detailed in **Chapters 6, 7, and 8**.

Multimodal Integration – "Complete Streets"

The Florence region recognizes the need to integrate bicycles, pedestrians, transit, and automobiles into the context of the roadway network. Florence County ordinances require sidewalk construction along certain street classifications. Subdivision requirements also call for street trees to be provided in new subdivisions. These ordinances are resulting in the gradual creation of a more multimodal-friendly network.

At this time, only a portion of the roads in the Florence region contain additional multimodal provisions. Pedestrian and transit facilities are most prevalent in the downtown Florence area. Through the *2035 LRTP*, areas will be identified where enhancements to the multimodal amenities of the streets will be of the greatest value.

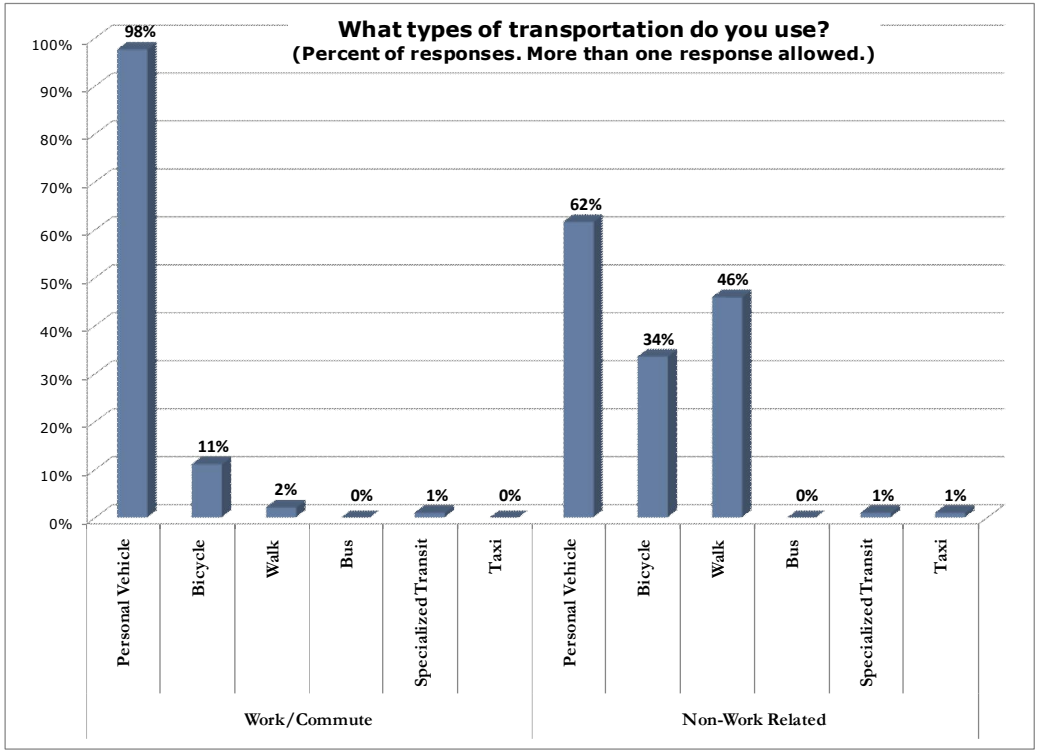
Public Perception

Traffic problems may not always be a product of congestion. Some problems are created by confusing roadway geometry, lack of alternative travel choices, or general frustrations caused by difficult commutes. These problems cannot be measured with traditional traffic analysis methods. The nature of these problems is best identified by going to the source of the frustration: the driving public.

The public outreach events for the *2035 LRTP* included a public questionnaire distributed to determine perceptions of the existing transportation system and the community's appetite for potential improvements. Questions ranged from average commuting distance to the willingness to fund additional projects. The charts and tables in this section provide a sampling of the public's feelings toward existing traffic conditions.

Transportation Use

Personal automobiles continue to be the primary mode choice in the region, especially for work related commuting. Non-work related trips have begun to achieve a more multi-modal balance, with walking and cycling trips reaching a much higher percentage of the trips generated. Few respondents use transit for work or recreational travel.



Transportation Issues

While efforts (particularly in the City of Florence) have been expended to improve the bicycle and pedestrian opportunities in the area, questionnaire respondents continue to consider these facilities inadequate. The questionnaire revealed a variety of transportation issues. For example, by asking respondents to rate features/conditions of the transportation network, the project team was able to identify specific amenities that need improvement. The results suggest amenities such as streetscaping, attractiveness of the roads, and transit services need to be enhanced. The need to address these issues was reinforced through other public outreach channels, including discussions with the TPAC, stakeholder interviews, and public workshops.

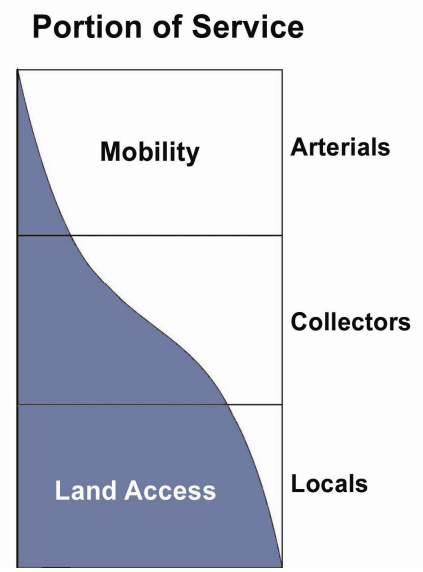
Access Management

Questionnaire respondents were asked to identify the roads in the Florence region that could most benefit from access management strategies. As mentioned in **Chapter 2**, the top three roads were Palmetto Street, Irby Street, and Second Loop Road. Other streets identified included Cashua Drive, Cherokee Road, Evans Street, and Third Loop Road.

Functional Classification

The classification of streets into several "functional" categories aids in communication among policy makers, planners, engineers, and citizens for expanding the transportation system. The functional classification system groups streets according to the land use served (or to be served) and provides a general designation of the type of traffic each street is intended to serve. The street functional classification system primarily defines the street in terms of roadway design and character, as well as operational features for the movement of vehicles.

Two major considerations for classifying arterials from neighborhood streets are access and mobility. The primary function of local or neighborhood streets is to provide access. These streets are intended to serve localized areas or neighborhoods, including local commercial and mixed-use land uses (i.e. low speeds, low volumes, short distances). Local streets are not intended for use by through traffic. The primary function of arterials is mobility. Limiting access points (intersections and driveways) on arterials enhances mobility. Too much mobility at high speeds limits access by pedestrians and bicyclists. The arterial is designed with the intent to carry more traffic than is generated within its corridor (i.e. higher speeds, higher volumes, longer distances).



Once streets have been classified into these functional categories, they can be further classified to reflect the character of the surrounding landscape. This urban or rural context adds an additional layer of design considerations. For example, an arterial in an urban setting may exhibit different features — curb and gutter, lighting, or bicycle and pedestrian facilities — that are not always present in a rural setting.

Classifying the Florence region's street system required close examination of the roles that each street performs in the overall transportation system. Existing plans, as well as quantitative and qualitative classification criteria, also helped in the development of the hierarchy of streets within the study area transportation system. The existing public street network in this region is divided into several functional classifications, including arterials, collectors, and locals. **Figures 4.1 and 4.1a** illustrate the functional classifications for the MPO's roadway network according to the regional travel demand model developed by SCDOT for the Florence MPO.









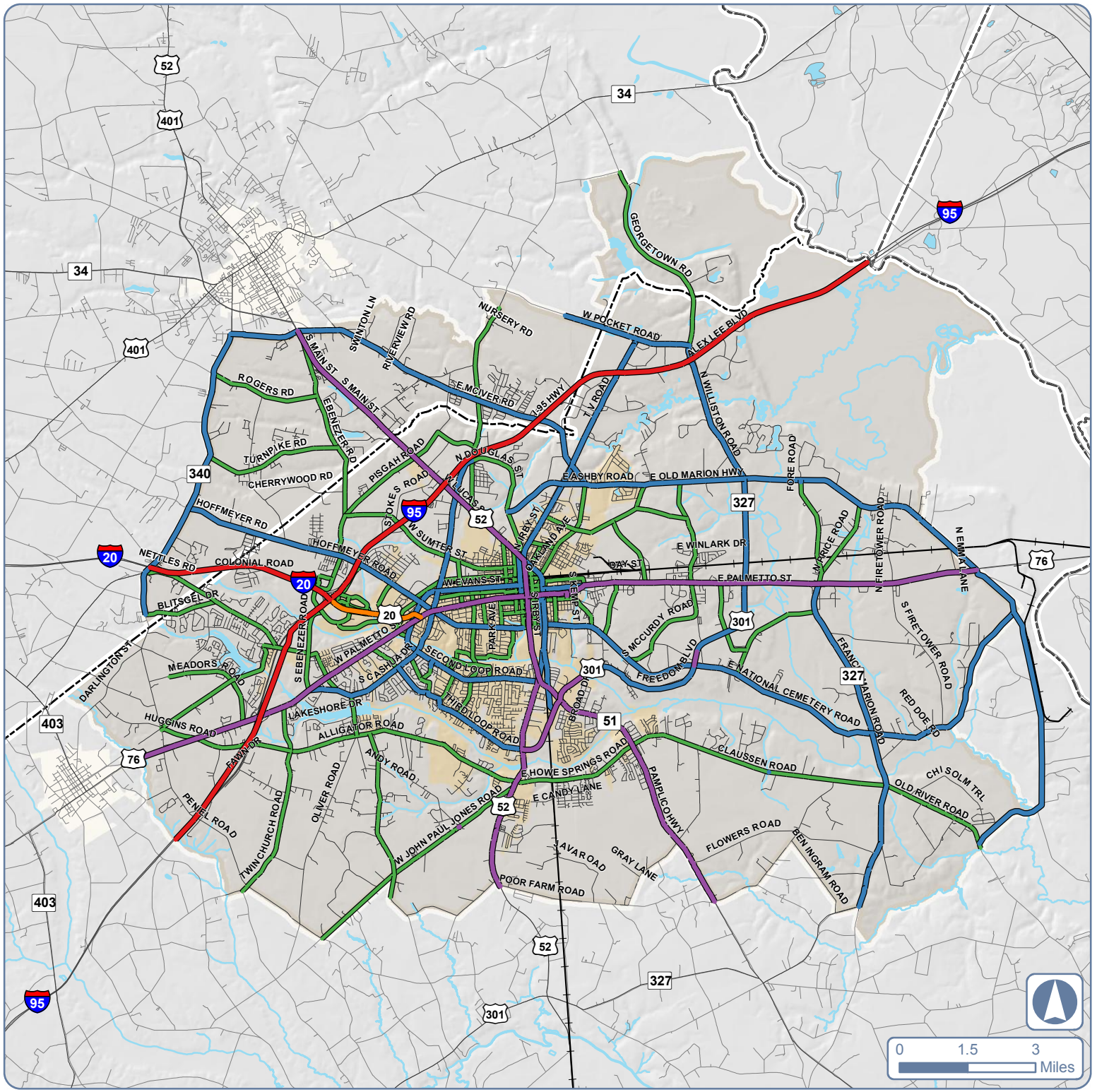


Figure 4.1

Functional Classification

Functional Classification

- Arterial: Freeway
- Arterial: Expressway
- Arterial: Major
- Arterial: Minor
- Collector
- Local
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

*The Functional Classifications are based on the regional travel demand model developed by SCDOT for the Florence metropolitan area.

FLATS 2035 LRTP

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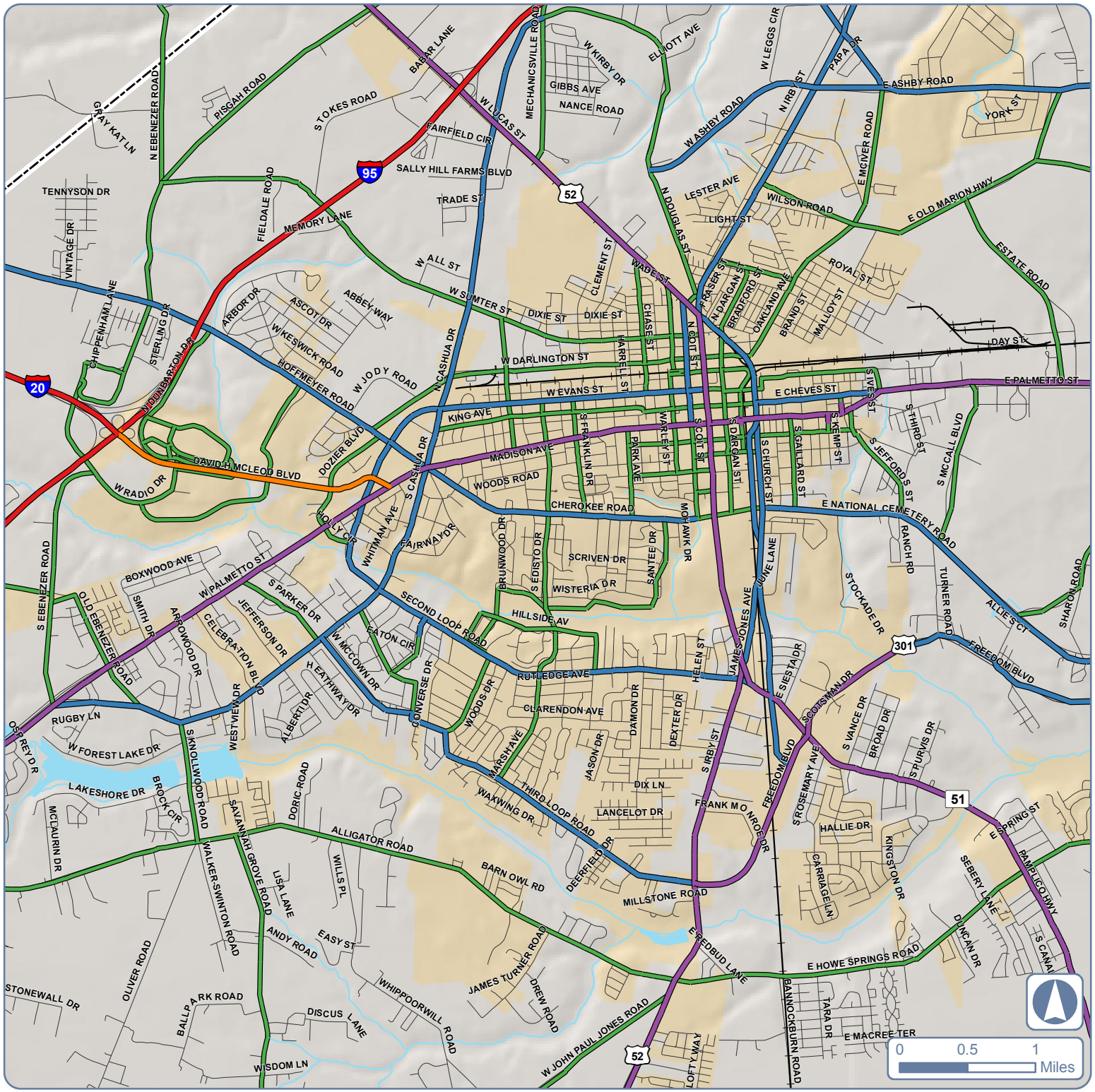


Figure 4.1a

Functional Classification

Inset: City of Florence

Functional Classification

- Arterial: Freeway
- Arterial: Expressway
- Arterial: Major
- Arterial: Minor
- Collector
- Local
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

*The Functional Classifications are based on the regional travel demand model developed by SCDOT for the Florence metropolitan area.

2035 LRTP

Kimley-Horn and Associates, Inc.

Arterials

Arterials provide high mobility, operate at higher speeds (45 mph and above), provide significant roadway capacity, have a great degree of access control, and serve longer distance travel. Arterials can be subdivided into categories that include facilities with full access control such as freeways and expressways as well as major and minor arterials. Arterials usually connect to one another or to collector streets. Very few arterials connect to local streets.

Expressways and Freeways

Expressways and freeways provide the most mobility and least access (since access is only available at interchanges). Expressway /freeway facilities typically serve longer distance travel and support regional mobility. The state funds roadway improvement and maintenance on these facilities. The Florence area is served by Interstates 95 and 20. Interstate 95 runs between Miami, FL and the Canadian border, connecting major urban areas such as New York City, Boston, and Washington, D.C. along the way. Florence serves as the eastern terminus for I-20, which intersects nine other interstates on its trek from west Texas to Florence.



I-95

Major Arterials

Major arterials typically have tightly controlled access and few, if any, individual site driveways. These facilities serve medium to longer distance travel and connect minor arterials and collector streets to freeways and other higher type roadway facilities. Generally, roadway improvements and maintenance on major arterials are funded by the state. Major arterials within the Florence region include US 52 (Irby Street), US 76 (Palmetto Street), and SC 51 (Pamplico Highway).



East Palmetto Street



Pamplico Highway

Minor Arterials

Minor arterials primarily serve a mobility function but often have more closely spaced intersections, some individual site driveways, and generally lower design and posted speeds compared to other arterials. The minor arterial network is primarily intended to serve local travel demand. These roadways connect to other minor arterials, to major arterials, and to collector streets. Minor arterials provide a higher level of access to adjacent land uses than major arterials and typically have lower traffic volumes. For the most part, minor arterials are maintained by the state, but the cost of improvement may be the responsibility of local governments.

Minor arterials in the Florence Area include two-lane undivided and multi-lane roads with little or no paved shoulders. They typically have occasional left-turn lanes at intersections and major driveways and have posted speed limits ranging from 35 mph to 45 mph. Other characteristics may include sidewalks, signalized intersections, and on-street parking (in residential areas and the centralized business district). Minor arterials in the Florence area include Second Loop Road, Hoffmeyer Road, and National Cemetery Road.



Cheves Street



TV Road

Collectors

Collectors typically provide less overall mobility, operate at lower speeds (less than 35 mph), have more frequent and greater access flexibility with adjacent land uses, and serve shorter distance travel than arterials. Collectors provide critical connections in the roadway network by bridging the gap between arterials and locals. Thus, the majority of collector streets connect with one another, with local streets, and with non-freeway/expressway arterials.



Edisto Drive

The primary purpose of the collector street system is to collect traffic from neighborhoods and distribute it to the system of major and minor arterials throughout an area. In general, collector streets have two lanes and often have exclusive left-turn lanes at intersections with major and minor arterials and less frequently at intersections with other collector streets. Collector streets rarely are constructed and funded by the state. Responsibility for collector streets usually falls to the local government and the development community for funding, design, and construction. In the Florence area, collector streets have a wide range of physical characteristics, some of which are attributable to the neighborhoods in which they exist. Though different, the one commonality is that of providing good connectivity.

Examples of collector streets in the Florence area include Alligator Road, Sumter Street, and McCurdy Road.

Locals

Local facilities provide greater access and the least amount of mobility. These facilities typically connect to one another or to collector streets and provide a high level of access to adjacent land uses/development (i.e., frequent driveways). Locals serve short distance travel and have low posted speed limits (25 mph to 35 mph). Most roadways within the Florence area are classified as locals.



Combray Circle



Quail Point Road

Corridor Operations

Regional Mobility

The Florence area benefits from having multiple options for regional mobility. This mobility is anchored by I-95 and I-20, which connects Florence with many major eastern cities. In addition, routes such as US 52, US 76, and US 301 serve as critical inter and intra-regional transportation corridors, connecting points in the Florence area such as downtown Florence, the Florence Regional Airport, and McLeod Regional Medical Center with cities across the Carolinas.



I-20 west of I-95

US 76 (East Palmetto Street) near Firetower Road



Image Sources: Bing.com

Congested Corridors

Congestion along corridors is related to numerous factors but often results from bottlenecks, primarily at intersections, along the corridor. Aside from individual bottleneck locations in corridors, congestion also occurs when too many people use a route that already operates at or over-capacity.

Average Annual Daily Traffic

Traffic volumes signify the total number of vehicles traveling along a roadway segment on an average day. **Figures 4.2 and 4.2a** illustrate 2007 average annual daily traffic (AADT) volumes on study roadways in Florence and Darlington Counties. The area's highest traffic volume of 49,000 vehicles per day occurs on I-95 between I-20 and US 52. Through the study area, volumes on I-95 range between 30,000 and 49,000 vehicles per day (vpd), while volumes on I-20 average around 25,000 vpd. Other notable corridors with traffic volumes in excess of 20,000 vpd include segments of US 52, SC 51, and US 76. Overall, traffic volumes on facilities classified as collector streets are lower than those on minor arterials, and traffic volumes on minor arterials are lower than those on principal arterials. This tendency reflects the purpose and function of each roadway class design and location.



West Palmetto Street

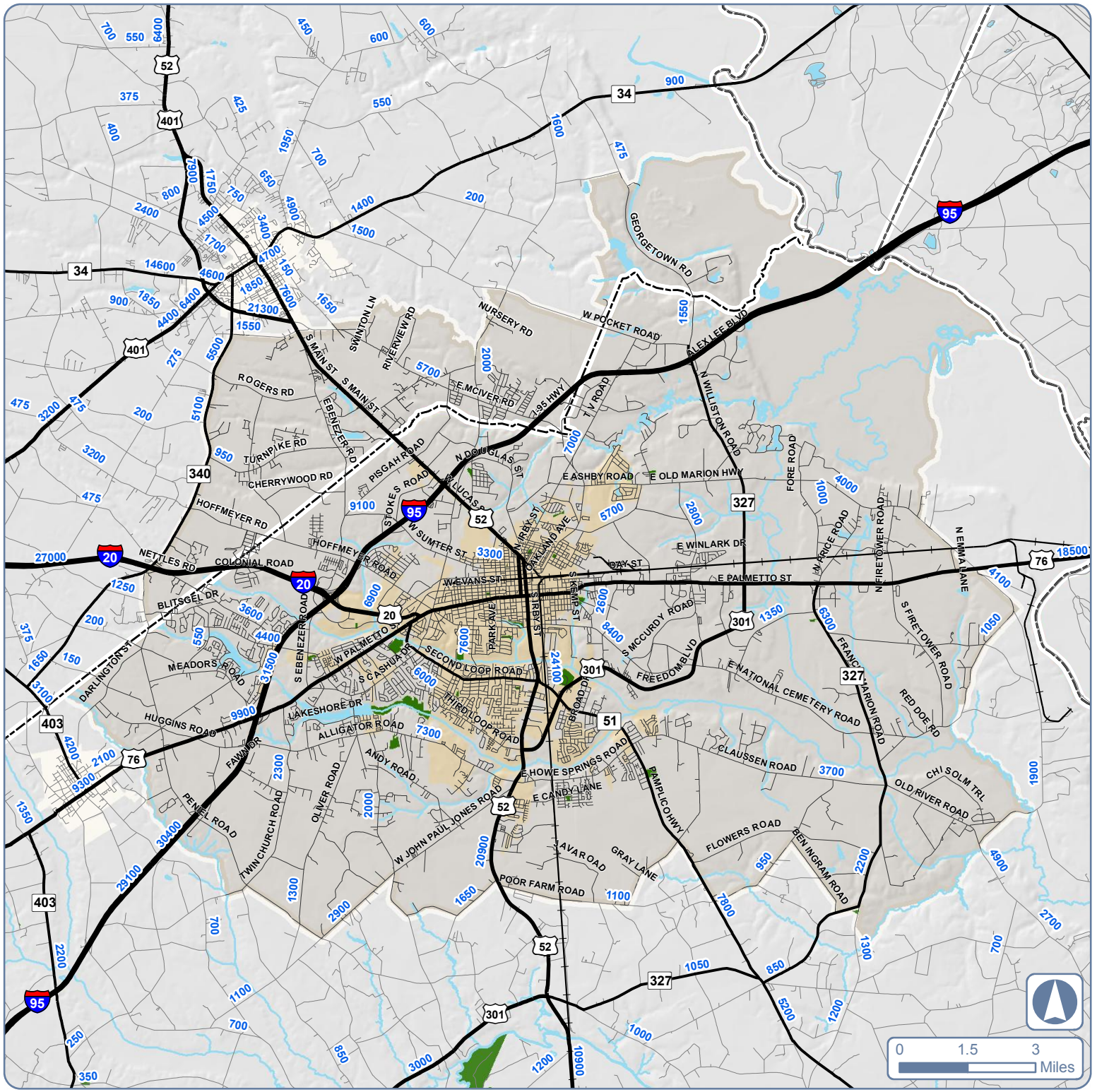


Figure 4.2

Average Annual Daily Traffic (AADT)

- ### 2007 AADT
- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary

2035 LRTP

Kimley-Horn and Associates, Inc.

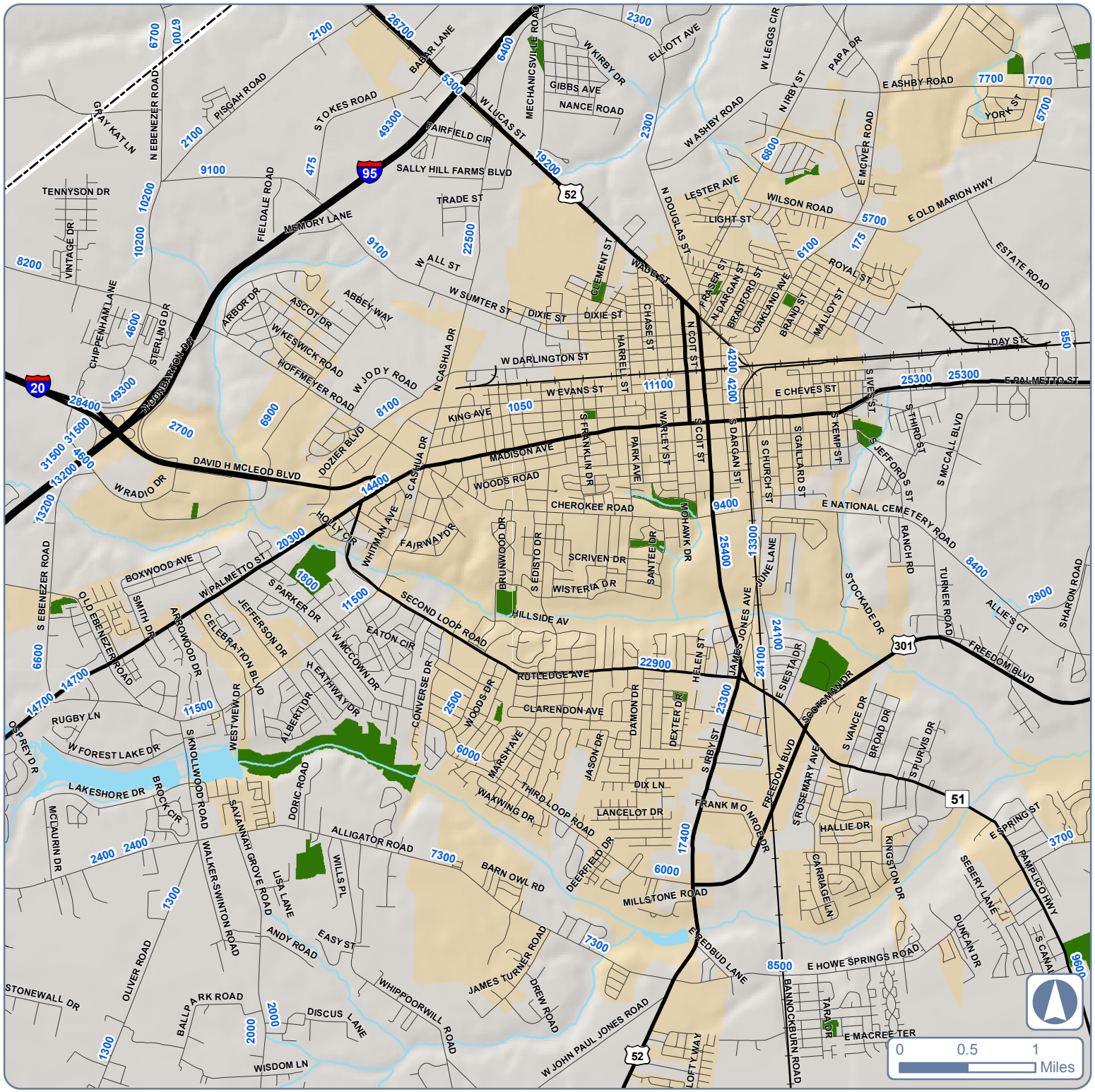


Figure 4.2a

Average Annual Daily Traffic (AADT)

Inset: City of Florence

- ### 2007 AADT
- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary

2035 LRTP

Kimley-Horn and Associates, Inc.

Level of Service

Traffic volumes alone should not be used to determine congested corridors because this measurement does not take into account functional classification and roadway capacity. A better measurement is volume-to-capacity (V/C) ratios. V/C ratios are calculated by dividing the traffic volume of a roadway segment by the theoretical capacity of the roadway. The resulting universal measurement standardizes traffic analysis and provides a benchmark for levels of congestion. Typically V/C ratios are grouped into one of the following categories:

- **LOS A or B** – *Well below capacity* (V/C = less than 0.6) – Roadways operating with a V/C ratio less than 0.60 operate with no congestion during peak travel periods. This level of service usually occurs on rural or local streets.
- **LOS C** – *Approaching capacity* (V/C = 0.6 to 0.8) – As the V/C nears 0.8, the roadway becomes more congested. These roadways operate effectively during non-peak hours but may be congested during morning and evening peak travel periods.
- **LOS D** – *At Capacity* (V/C = 0.8 to 1.0) – Roadways operating at capacity are somewhat congested during non-peak periods, with congestion building during peak periods. A change in capacity due to incidents impacts the travel flow on corridors operating within this V/C range. Roadways in this category most efficiently balance corridor operations with cost of instrastructure.
- **LOS E** – *Slightly Over Capacity* (V/C = 1.0 to 1.2) – Roadways operating with V/C ratios between 1.0 and 1.2 experience heavy congestion during peak periods and moderate congestion during non-peak periods. Changes in capacity can have major impacts on corridors and may create gridlock conditions.
- **LOS F** – *Well Over Capacity* (V/C = greater than 1.2) – Roadways in this category represent the most congested corridors in the study area. These roadways are congested during non-peak hours and most likely operate in stop-and-go gridlock conditions during the morning and evening peak travel periods.

Figure 4.3 shows the roadways in the Florence area that fall into the final three categories for the 2007 base year. The V/C ratios computed for these roadways is based on output from the Florence Area Travel Demand Model, which predicts volumes and movement on the transportation system based on development patterns, mode choice, and a preferred routing based on trip length, speed, and friction. Roadways identified as congested in **Figure 4.3** were part of the foundation for determining future improvements intended to alleviate congestion and improve the overall transportation system.

Existing Conditions

As shown in **Figure 4.3**, traffic growth throughout the area combined with insufficient increases in roadway capacity has resulted in traffic congestion on area roadways. Corridors with the most notable congestion in the 2007 model base year include US 52 near the I-95 interchange, portions of Pine Needles Road and Ebenezer Road southeast of I-95, Palmetto Street west of the Five Points intersection, and Second Loop Road. Due to the unavailability of additional crossing opportunities, even smaller facilities such as Knollwood Road face congestion issues.

Existing + Committed Conditions

Figure 4.4 depicts traffic congestion in 2035 for the FLATS area. To establish an appropriate baseline for this future projection, existing roadways were combined with committed projects. For this region, the committed projects include projects scheduled to be funded through the Florence County Sales Tax initiative (discussed later in this chapter). This scenario helps illustrate what needs of the system beyond the projects currently slated for improvement.

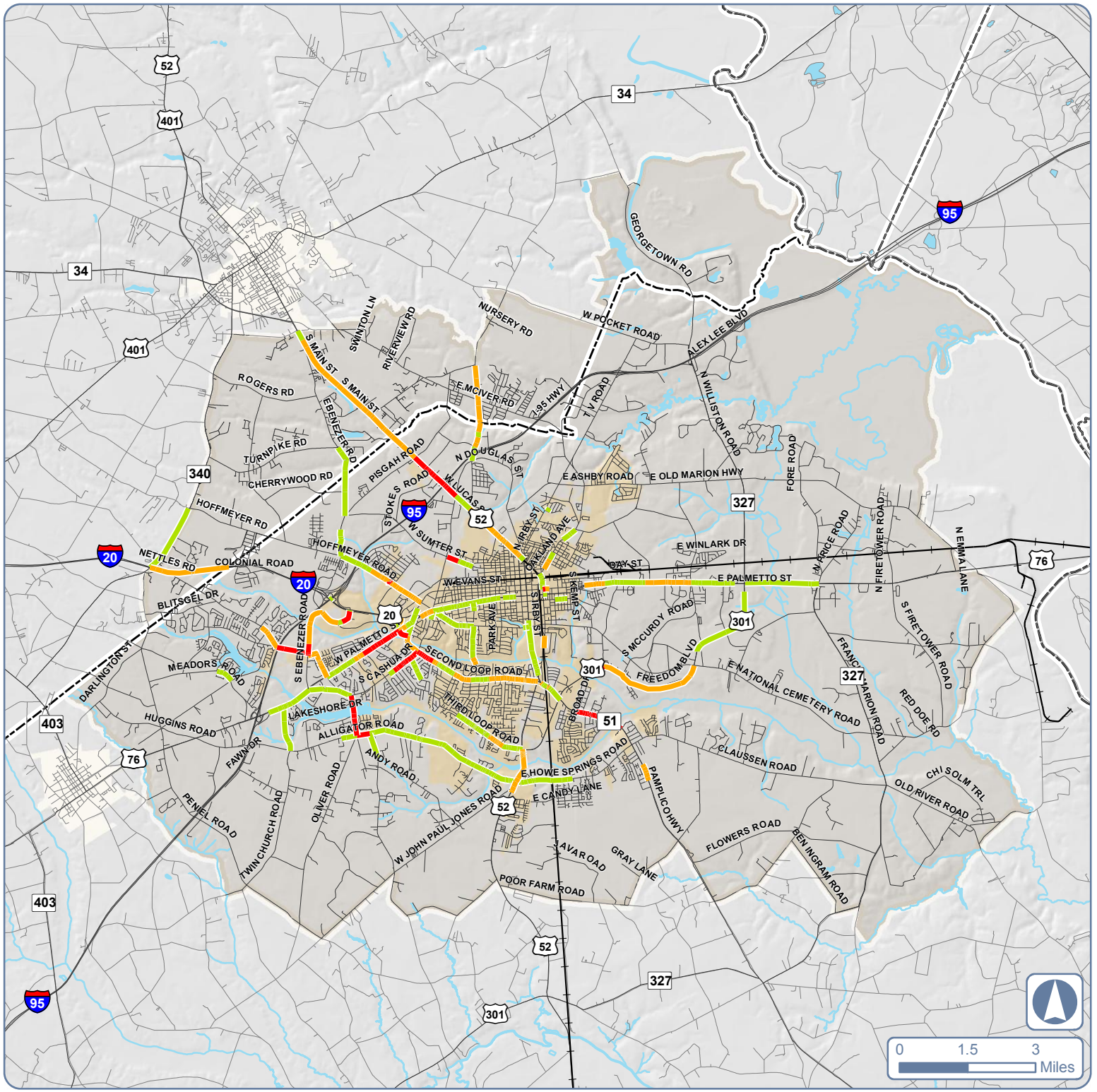


Figure 4.3

2007 Congested Corridors

Level of Service

- LOS D (At Capacity)
- LOS E (Over Capacity)
- LOS F (Well Over Capacity)
- Other Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

FLATS 2035 LRTP

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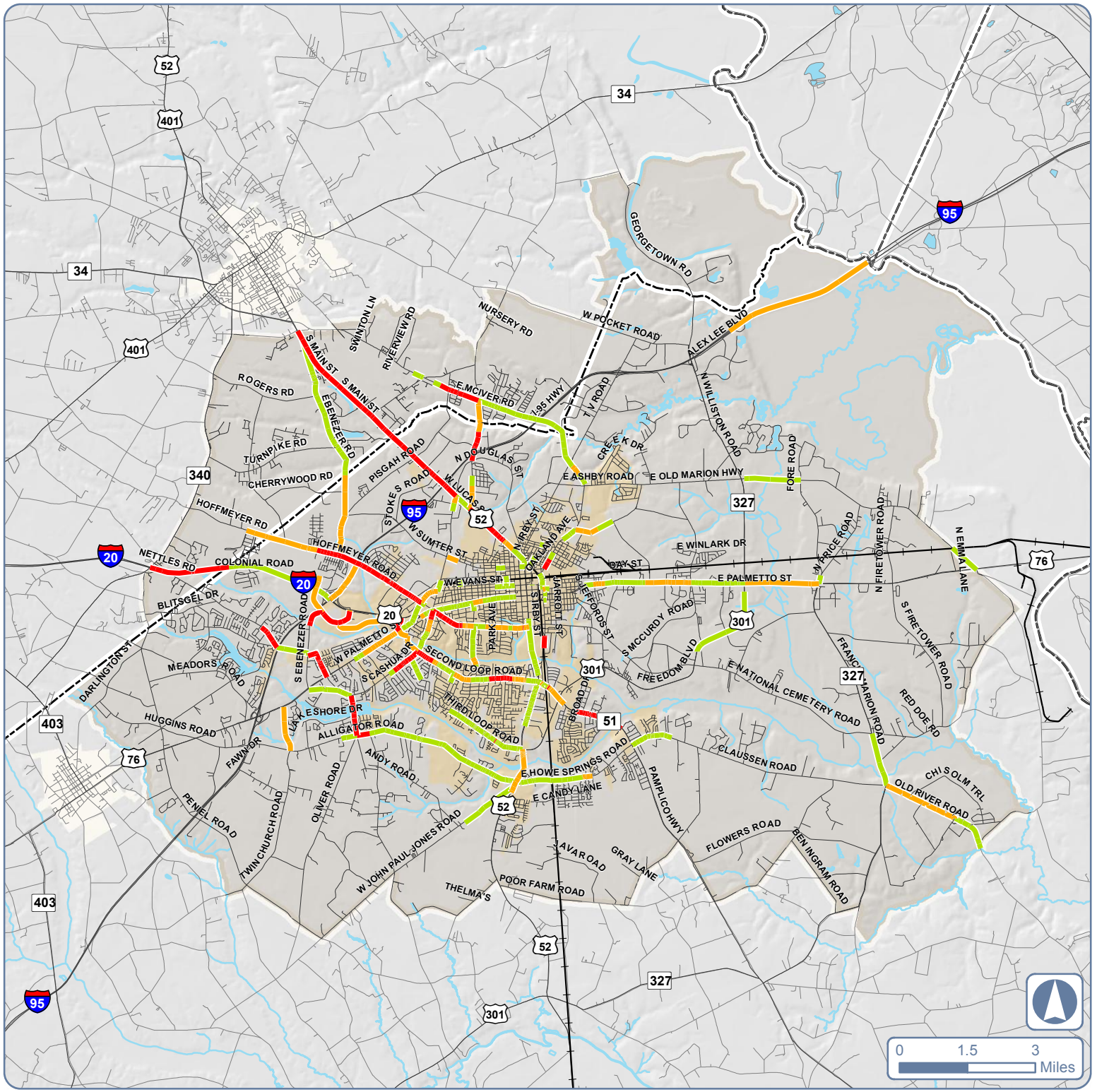


Figure 4.4

2035 Congested Corridors, E+C Conditions

Level of Service

- LOS D (At Capacity)
- LOS E (Over Capacity)
- LOS F (Well Over Capacity)
- Other Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

Level of Service Trends

When **Figures 4.3 and 4.4** are compared, additional congestion become evident in the western portion of the region. In the 2035 E+C conditions illustrated in **Figure 4.4**, facilities such as Hoffmeyer Road, Colonial Road, and Ebenezer Road all show new congestion issues. The northern portion of the study area starts to exhibit congestion on facilities such as McIver Road, Charleston Road, and US 52 (Lucas Street). Increased pressure on I-95 also can be noted as congestion becomes apparent on portions of this roadway. However, reduced congestion as a result of committed projects can be seen on corridors such as Alligator Road.



Hoffmeyer Road

US 52 (Lucas Street)



Planning Precedent

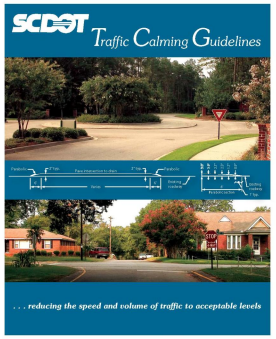
As discussed in **Chapter 2**, several plans and standards have been put in place to study the future of this region's transportation network. This section discusses those documents with direct applicability to the existing and future roadway system.

Existing Guidelines

Several state and local documents provide guidance for roadways in the Florence region. Prior to formulating recommendations, it is important to examine these documents to understand opportunities and restrictions posed by the applicable guidelines. In addition to the guiding documents described below, the Transportation for Communities – Advancing Projects through Partnerships (TCAPP) program is under development at the federal level. TCAPP serves "to integrate collaborative practices into the long-range transportation process that is implemented under the federal planning regulations." The Decision Guide provides supporting information in the form of a framework through which decisions should be made.

SCDOT Traffic Calming Guidelines

These guidelines identify tools for use in traffic calming and also provide an approach for implementation. Traffic calming measures such as speed humps, raised crosswalks and raised intersections, traffic circles and roundabouts, raised landscaped medians, road closures, lane width reductions, and traffic control devices are all discussed in this guidance document. Basic rules of thumb for implementing traffic calming measures are discussed, such as:



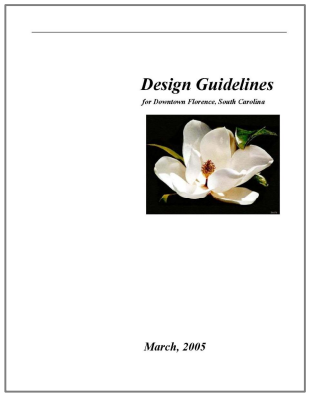
- Measures not eligible within the SCDOT right of way: speed bumps and chicanes, or other measures, such as installation of curbed areas that reduce the total two way travel area to less than 20 feet in width. These are not considered appropriate measures based on safety and accessibility and should not be proposed for installation within the State's right of way. (The local government may exercise the option to remove the roadway from the State's system, if the appropriate criterion is met.)
- Traffic calming measures are not eligible if they compromise roadway safety, based on limited sight distance, severe grades, or other engineering judgment. (The SCDOT may recommend other measures. Approval will only be given if safety is not compromised.)
- Traffic calming measures are not eligible if the petition requiring 75% support or city/county council approval cannot be obtained. (There may be some solutions acceptable to one portion of the impacted area that is not acceptable to another portion of the impacted area. Citizen support of the project is necessary for a successful program.)

SCDOT Access and Roadside Management Standards

SCDOT first developed their Access and Roadside Management Standards (ARMS Manual) in 1991, with the most recent update occurring in 2009. This manual outlines driveway spacing, placement, and design criteria. In addition, this manual provides criteria for requiring Traffic Impact Studies from prospective developments.



Design Guidelines for Downtown Florence



In 2005, a set of design guidelines were developed for Downtown Florence. These guidelines address not only building form and characteristics but also the concept of complete streets and steetscaping. It divides the downtown area into distinct sections (Historic, Redevelopment, etc.) and provides standards for design in each. These standards provide guidance for a downtown street system that serves all travel modes, in addition to catering to the surrounding commercial and residential land uses. Updated guidelines are expected soon.

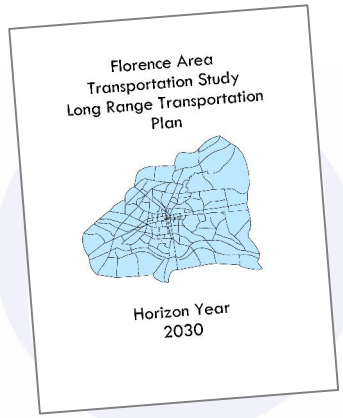
Previous Plans

Previous planning efforts in the FLATS area have been undertaken, yielding a series of roadway recommendations. The analysis done to reach these recommendations will be considered in the 2035 LRTP for context and as a building block toward the final street network priorities established herein.

2030 FLATS LRTP

In the 2030 LRTP, a set of roadway projects was identified for capacity improvements. These improvements included:

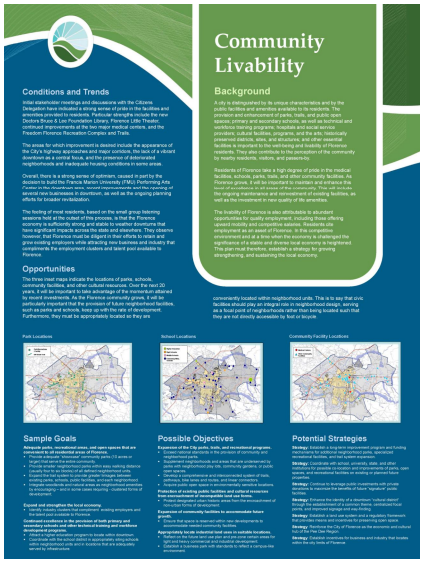
- West Radio Drive/South Ebenezer Road/North Ebenezer Road Phase I (David McLeod Boulevard to South Ebenezer Road)



- West Radio Drive/South Ebenezer Road/North Ebenezer Road Phase II (Palmetto Street to West Radio Drive)
- West Radio Drive/South Ebenezer Road/North Ebenezer Road Phase III (Hoffmeyer Road to West Radio Drive)
- I-95 (US 76 to I-20)
- South Cashua Drive (Second Loop Road to US 76)
- Ashby Road Extension (North Cashua Drive to Douglas Street)
- Darlington Street Extension (Hoffmeyer Road to Beltline Drive)
- Oakland Avenue (Wilson Road to West Lucas Street)

In addition to these capacity improvements, US 52 has been identified for enhancement and beautification.

Comprehensive Plans



At this time, work is in progress for both the City of Florence and the Florence County Comprehensive Plans. Information from the *2035 LRTP* will be used to develop the transportation element of the Florence County Comprehensive Plan. A thoroughfare element is being developed for the City of Florence Comprehensive Plan. Coordination between the LRTP process and this Comprehensive Planning process has been initiated in an effort to streamline the recommendations coming from each. Street network recommendations will be considered with regard to these documents in order to support and enhance the land use planning in the area.

Sales Tax

Chapter 2 includes an overall description of the Florence County One-Cent Capital Project Sales Tax. The projects identified as a part of this sales tax comprise the committed project list for this LRTP. (www.florenceco.org/RoadProjects/) The following projects are identified to be funded through the sales tax (in prioritized order):

1. Pine Needles Road: Widen from Southborough Road to South Ebenezer Road
2. US 378: Widen from US 52 near Lake City to SC 41 in Kingsburg
3. US 76: Widen from I-95 to Main Street in Timmonsville
4. TV Road: Widen from Wilson Road to I-95
5. Pamplico Highway: Widen from Claussen Road to US 378 in Kingsburg
6. US 301 Bypass: Complete bypass from US 76 near Timmonsville to the intersection of US 52/US 301 and Howe Springs Road

Figure 4.5 shows the alignments and locations of these projects.

Next Steps

As a crossroads community facing increasing challenges to efficiently moving people and goods, the people of Florence recognize the need to understand existing conditions and outline effective strategies to carry forward in the future. The Future Roadway Element (**Chapter 5**) summarizes future roadway conditions and systematically evaluates the impact of recommended projects on natural and manmade resources, congestion, safety, and security. The chapter also assesses each project's potential benefit to the transportation system. A portion of the chapter is dedicated to a toolbox of access management and context sensitive design strategies.

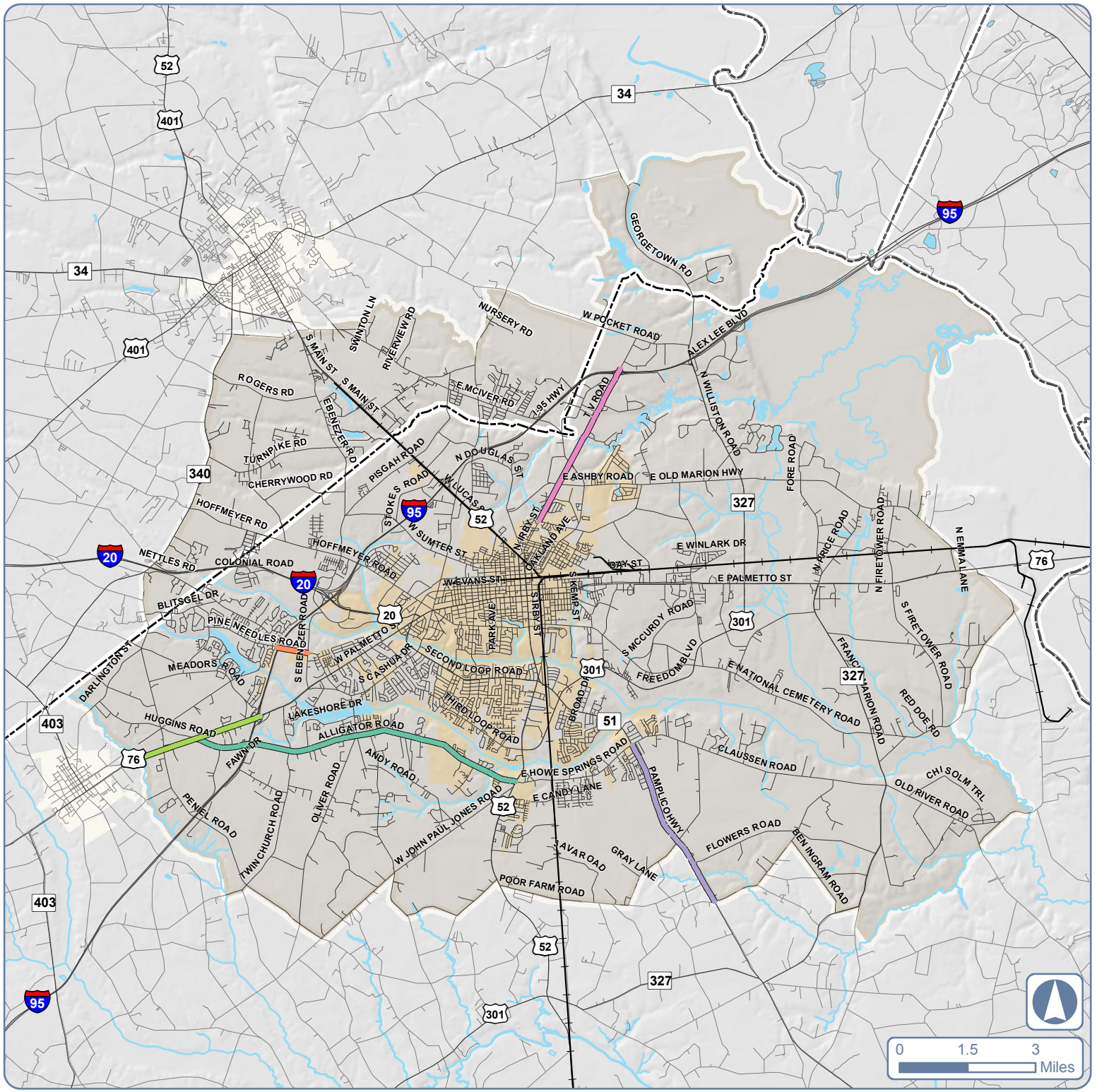


Figure 4.5

FLATS Area Sales Tax Projects

Sales Tax Projects

- Alligator Road/301 Bypass
- Pine Needles Road
- SC 51
- TV Road/Irby Road
- US 76
- Other Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

*The Florence County sales tax projects located within the FLATS MPO area represent the committed projects for the region.

FLATS 2035 LRTP

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Chapter 5

Future Roadway Element

Introduction

Since the first map of Florence was created in 1860, much has changed in the rural crossroads community. But local leaders continue to face the same pressure to create a transportation system that can efficiently move both people and goods. Today's challenge is complicated by the limited funds for transportation projects and competing priorities at the local, state, and federal level. The *2035 FLATS Long Range Transportation Plan (2035 LRTP)* takes into account changing demographics, emerging trends, local desires, and available resources to transform a vision for a balanced transportation network into a realized future. To their credit, local officials have acknowledged that focusing all resources on building roads to combat congestion will do little to address region-wide needs. Instead, the *2035 LRTP* does more with less by focusing on maximizing the existing network and making strategic investments on the highest priority projects.

The Future Roadway Element of the 2035 LRTP provides a detailed look at recommendations, including the construction and widening of arterials, improving access management, and enhancing the collector street network. The chapter also considers safety and security and introduces complete streets concepts. Based on the evaluation matrix presented in this chapter, the recommended roadway projects are placed into the financially constrained or vision plan as described in **Chapter 10**. The chapter concludes with a series of cross sections that illustrate the desire for streets that move people and goods efficiently.

Recommendations

The Existing Roadway Element (**Chapter 4**) outlines the needs and priorities of the region's network of highways and streets. The chapter documents how future demand on the roadway system will hamper the local efforts to provide mobility for people and freight within and through the Pee Dee region. Coupled with the existing natural, man-made, and financial barriers to building new roads, more emphasis has been placed on maximizing the region's existing infrastructure. The recommendations that follow — representing the shared work of local staff, stakeholders, and the TPAC — have been vetted through the public during the second workshop on February 18, 2010.

Arterials

Arterial recommendations are grouped into three categories: Existing Road Widening, Access Management Improvements (i.e. operational/ design improvements), and New Location Construction. The recommendations emphasize the protection of existing roadways through the inclusion of landscaped medians and improved access management design. That is, if a corridor warrants widening or other capacity improvements, a median may be proposed to improve safety, control access, and to enhance the corridor aesthetics.

Although recommendations are detailed below for specific corridors, other improvements (spot safety, bicycle and pedestrian, transit, and freight) can be found within the multimodal recommendations in other chapters of the *2035 LRTP*. And while all of these projects will not appear in the fiscally constrained plan, all projects represent candidates for inclusion in the vision plan.

Existing Road Widening

Existing corridors that require more work than access management solutions alone to solve congestion and safety issues may require widening. The corridors listed below represent facilities currently operating over capacity or projected to be over capacity within the planning horizon of the *2035 LRTP*. These facilities are grouped by their ultimate cross section:

6-Lane Divided Freeway

- **I-95** — David H McLeod Blvd. (I-20 Bus.) to W Palmetto St. (US 76)

5-Lane

- **S Cashua Dr.** — Second Loop Rd. to Knollwood Dr.
- **W Darlington St.** — N Cashua Dr. to Hoffmeyer Rd.

4-Lane Divided

- **Alligator Rd.** — Palmetto St. (US 76) to S Irby St. (US 52)

  Note: Due to the constraints along Alligator Road, this congestion issue will be addressed through the proposed US 301 Bypass (sales tax project).

- **Bentree Ln./Holly Cir.** — David H McLeod Blvd. (I-20 Bus.) to Second Loop Rd.
- **Hoffmeyer Rd.** — Anderson Farm Rd. to N Ebenezer Rd.
- **Hoffmeyer Rd.** — Anderson Farm Rd. to Timmonsville Hwy. (Darlington County – SC 340)
- **National Cemetery Rd.** — S Church St. to Stockade Dr.
- **Pine Needles Rd.** — Southborough Rd. to Ebenezer Rd.
- **Pisgah Rd./Ebenezer Rd.**— Presbyterian Rd. to Hoffmeyer Rd.

  Note: Darlington County supports the extension of improvements to Hoffmeyer Road beyond the FLATS MPO boundary, ending at Lamar Highway (US 401).

- **Radio Dr./Ebenezer Rd.** — David H McLeod Blvd. (I- 20 Bus.) to near Industry Blvd.
- **SC 51/Pamplico Hwy.** — E Howe Springs Rd. to Kate's Garden Ln.
- **Southborough Rd.** — N Sally Hill Rd. (Darlington County) to Pine Needles Rd.
- **TV Rd./Irby St.** — I-95 to Wilson Rd.
- **US 76/Palmetto St.** — E Main St. (in Timmonsville) to I-95

3-Lane

- **N Ebenezer Rd.** — Pisgah Rd. to Main Street (Darlington County – US 52)

  Note: The widening of this segment of Ebenezer Road to a three lanes should accommodate future residential growth along the corridor. However, turn pockets and 2-lane divided cross section may be preferred in strategic locations. This recommendation assumes no improvements are necessary to the bridge over Palmetto Shores Lake.

- **Oakland Ave.** — E Lucas St. to Wilson Rd.
- **Third Loop Rd.** — S Marsh Ave. to S Irby St.

Intersection/Interchange Improvements

Two intersection/interchange projects were identified and evaluated.

- **Five Points Roundabout** — The conversion of this intersection into a two-lane roundabout is discussed in detail as part of the access management section of this chapter.
- **I-95 at McIver Rd. Interchange** — A new half cloverleaf interchange is recommended to improve access to Darlington and relieve stress at Lucas Street (US 52).

Access Management Improvements

Access management improvements typically occur within the existing right-of-way and include converting a two-way left-turn lane into a landscaped median or implementing other access management strategies. Although these improvements will increase the capacity of the roadway to a degree, the main outcome of the projects will be greater access and mobility and enhanced traffic safety. Streetscaping and intersection-level improvements can also be considered to enhance the performance of these corridors. The following roadway segments are recommended for access management improvements.

- **Alligator Rd.** — Knollwood Rd. to S Irby St. (US 52)
- **N Cashua Dr.** — W Palmetto St. (US 76) to Lucas St. (US 52) near Darlington
- **Charleston Rd.** — I-95 to Pocket Road (Darlington County)

  Note: Darlington County has identified the South Charleston Road corridor for future conservation and preservation. Access management for this corridor should work toward achieving this goal.
- **E Cheves St.** — S Church St. to E Palmetto St. (US 76)
- **W Darlington St.** — N Cashua Dr. to N Irby St. (US 52)
- **David H McLeod Blvd.** — I-95 northbound ramps to Woody Jones Blvd.
- **Ebenezer Rd.** — Hoffmeyer Rd. to Radio Dr.
- **Five Points Intersection**
- **Hoffmeyer Rd.** — N Ebenezer Rd. to S Cashua Dr.
- **Irby St. (US 52)** — W Lucas St. (US 52) to Alligator Rd.
- **Main St. (Darlington County)/W Lucas St (US 52)** — N Ebenezer Rd. (Darlington County) to N Irby St.
- **McIver Rd. (Darlington County)** — Charleston Rd. to I-95 (Darlington County)
- **Palmetto St. (US 76)** — Second Loop Rd. to Freedom Blvd.
- **Second Loop Rd./Pamplico Hwy. (SC 51)** — W Palmetto St. (US 76) to Howe Springs Rd./Claussen Rd.

New Location Construction

Building larger facilities such as new freeways or major arterials has become less frequent as the cost of construction (in terms of right-of-way acquisition, materials, and labor) has risen while funding has declined. With these trends expected to continue, facilities recommended to be constructed on new alignment must provide significant congestion relief and/or safety improvements with few alternative options. For this reason, the majority of roadways recommended for construction in the FLATS MPO area will occur at the collector street level. These new roadways, as described in detail in a subsequent section, will be funded by the private sector as land is developed. The only new location facility recommended as part of the *2035 LRTP* is an extension of Brofford Drive from Alligator Road to Third Loop Road. This two-lane facility will provide a new crossing of Middle Swamp. Since this is an extension of a local road, this project is not currently an eligible project for federal funding. This local project is awaiting study for inclusion into federal eligibility. It is assumed for the purposes of this plan that the project will be deemed eligible for federal funding at a later date.

The project team discussed with local officials, city and county planners, and the general public an alternative to widening Alligator Road. The selection of a preferred corridor (noted as the US 301 Bypass in the one-cent sales tax) will require detailed review of potential alignments and their impacts on environmental, social, and cultural resources. The selection of a preferred corridor is recommended to be completed in the short-term implementation phase of the *2035 LRTP* following a detailed corridor alignment study. This study should precede any widening of the existing roadway. Prior to the acquisition of right-of-way of the final alignment, a more extensive NEPA process likely will be required.

Overlays

Some corridors are identified as candidates for overlay districts. Access management overlay districts would control the types and patterns of future growth allowed along the selected corridor. This action should protect the mobility along the corridor by reducing conflict points while ultimately making it better equipped to handle new development. Corridors identified for access management overlay districts include:

- Howe Springs Road between Pamplico Highway (SC 51) and Irby Street (US 52)
- Williston Road (SC 327)/Freedom Boulevard between I-95 and S Irby Street (US 52)

Corridors recommended for rural preservation overlay districts have the potential for growth but residents and local officials want to preserve the corridor's rural characteristics (viewsheds, historic sites, cultural resources, agriculture, etc.). Ideally, corridors targeted for rural preservation overlay districts have larger parallel facilities that could accommodate additional traffic. Two corridors were selected as candidates for rural preservation overlay districts as part of the Florence County Comprehensive Plan. The northern terminus of the Old River Road corridor from Francis Marion Road (SC 327) to Myrtle Beach Highway (US 378) enters the FLATS MPO area.

Collectors

As discussed in **Chapter 4**, the role of a collector street in a balanced transportation system is to collect traffic from neighborhoods and distribute it to the network of arterials. As such, these streets provide relatively less mobility but higher overall accessibility compared to higher level streets. The lower design speeds and multimodal amenities also make these streets attractive for bicyclists and pedestrians. The proper design and spacing of collector streets is critical to ensuring the balanced transportation network envisioned by the residents and local officials in the FLATS region.

Policy Considerations

The design of the collector street network must respect present and future conditions, the public's vision for the future, and how the network can best balance the natural environment, connectivity, access, mobility, and safety.

Natural Environment

With the presence of water features such as Jeffries Creek, Black Creek, Middle Swamp, and a network of significant wetlands in the area, local planners face challenges related to the natural environment. The local geography impacts land use and transportation decisions and affects how the community grows (via suitable land and potential for water and sewer connections), where streets can be constructed and maintained, and where connections between streets can be made. Collector streets, as part of the development process, must respect the natural environment.

Street Spacing and Access

Local officials also must consider street spacing guidelines that promote the efficient development of an expanding transportation system. Ultimately, these street spacing guidelines could be used as "rules of thumb" during the development review process. Different spacing standards are necessary for different development types and intensities. Understanding this principle, a theoretical model largely influenced by land use intensity ranges shows the desired collector street spacing for different intensities (See **Table 5.1**.). In addition to these recommended street spacing standards, individual driveway access to collector streets should be limited to local streets when possible.

Table 5.1 – Collector Street Spacing Standards

Land Use /Type of Collector Street	Intensity (dwelling units per acre)	Access Function	Approximate Street Spacing
Very Low Intensity Residential	Less than 2	High	3,000 to 6,000 feet
Low Intensity Residential	2 to 4	High	1,500 to 3,000 feet
Medium and High Intensity Residential	More than 4	High	750 to 1,500 feet
Activity Center	Mixed-use	Medium	750 to 1,500 feet

Land Use Intensity	Very Low Intensity	Low Intensity	High Intensity
			
Street Spacing	3,000' to 6,000'	1,500' to 3,000'	750' to 1,500'

Design Elements

As most communities' largest collection of public space, streets need to reflect the values of the community and reinforce a unique "sense of place" to be enjoyed by citizens — whether in urban, suburban, or rural contexts. This is especially true for a collector street system that serves as the backbone for local mobility, property access, and non-vehicular transportation modes.

Recently, municipalities across the country have started implementing "complete streets" as one way to transform their transportation corridors from vehicle-dominated roadways into community-oriented streets that safely and efficiently accommodate all modes of travel — not just motor vehicles. The complete street movement as described later in this chapter does not advocate a one size fits all approach — a complete street in an urban area may look quite different from a complete street in a more rural area. However, both facilities are designed to balance mobility, safety, and aesthetics for everyone using the travel corridor. Furthermore, design considerations supportive of complete streets include elements in both the traditional travel corridor (i.e., the public realm) as well as adjacent land uses (i.e., the private realm) for reinforcing the desired sense of place.



Future Collector Street Network

The arterial recommendations listed previously represent only the higher-level facilities recommended in this plan. Collector streets are recommended throughout the FLATS area to improve the general connectivity of the regional road network. The collector street system provides critical connections by bridging the gap between arterials and locals. Collectors gather traffic from neighborhoods and distribute it to the system of major and minor thoroughfares throughout the area. Recommended collector streets have been established to provide additional connections for areas in the periphery of the region that might expect additional future growth. Other recommended collector streets near or within the City of Florence seek to connect existing development and provide other connection opportunities to relieve congestion on surrounding arterials.

Ultimately, the collector streets shown are representative of connections rather than actual alignments. At the time of development, private land owners would work with developers and affected jurisdictions to determine alignments best suited to all parties. No funding from the LRTP will be allocated to the construction of these streets.

The collector streets are envisioned to have two lanes and often have exclusive left turn lanes at intersections with principal and minor arterials and less frequently at intersections with other collectors. The actual design of a collector street will depend upon the surrounding land use context. The typical cross sections for collector streets also are included at the conclusion of this chapter.

The future collector street network developed based on the policy considerations discussed above and the vision and goals and objectives described in **Chapter 2** is shown in the Recommended Improvement Map described on the following page.

Recommendations Maps

Recommended Cross Section Map

The Recommended Cross Section Map (**Figure 5.1**) shows the typical cross section of roadways in the FLATS MPO area. Example cross sections are shown in more detail in the complete streets section that concludes this chapter.

Recommended Improvement Map

While the Recommended Cross Section Map shows what the streets will look like and how they will function, it is important to identify the improvements necessary to reach the preferred vision. The Recommended Improvement Map (**Figure 5.2**) shows the required improvements to the transportation system.

The recommendations listed here represent the long-term vision of the LRTP. The vision plan includes the highway recommendations developed to alleviate congestion, improve access or mobility, and address public concerns. However, only a small portion of this vision plan will be included in the financially constrained plan. This financially constrained plan will be discussed in more detail in **Chapter 10**.

Future Travel Conditions

Future travel conditions on the region's roadways can be examined under a variety of conditions. The Existing Plus Committed (E+C) condition scenario documents 2035 congestion levels if projects underway or with funds appropriated to them are added to existing roadway facilities. The Vision Plan condition includes all recommended projects regardless of funding allocation. The Vision Plan condition reflects future congestion if all non-collector street roadway projects recommended in the plan are implemented. Further discussion of the congestion levels attained through the financially constrained plan is contained in **Chapter 10**.

2035 Existing Plus Committed Conditions

Prior to developing the funded and vision plan projects, future congestion levels were analyzed based on adding only committed projects to the existing transportation network. These conditions are described in **Chapter 4** and illustrated in **Figure 4.4**. While the sales tax initiative is helping alleviate congestion on some key arterials, many roadways will still operate at capacity or over capacity in 2035. Congestion also worsens, primarily in the western portion of the study area due to the lack of proposed improvements as well as the expected growth in this area.

2035 Funded Plan Conditions

Figure 5.3 displays the level of service if the financially constrained projects using current funding methods only are constructed by 2035. When the congested corridors in this section are compared to the congestion levels shown if only the One-Cent Sales Tax projects are constructed, there are several notable improvements and changes. As expected, congestion levels decrease on the funded corridors (S Cashua Drive and Bentree Lane). However, significant congestion issues remain in other areas.

2035 Vision Plan Conditions

The Vision Plan builds on the financially constrained project list by adding a wish list of projects. These projects also are described in **Chapter 10**. The Vision Plan conditions map shows how the committed projects, funded projects, and wish list projects address deficiencies. As expected, the Vision Plan provides the most improvement to the area's congested roadways. **Figure 5.4** illustrates level of service for 2035 following the construction of the vision projects. Congestion decreases are observed throughout the region, with many fewer roadways well over capacity.

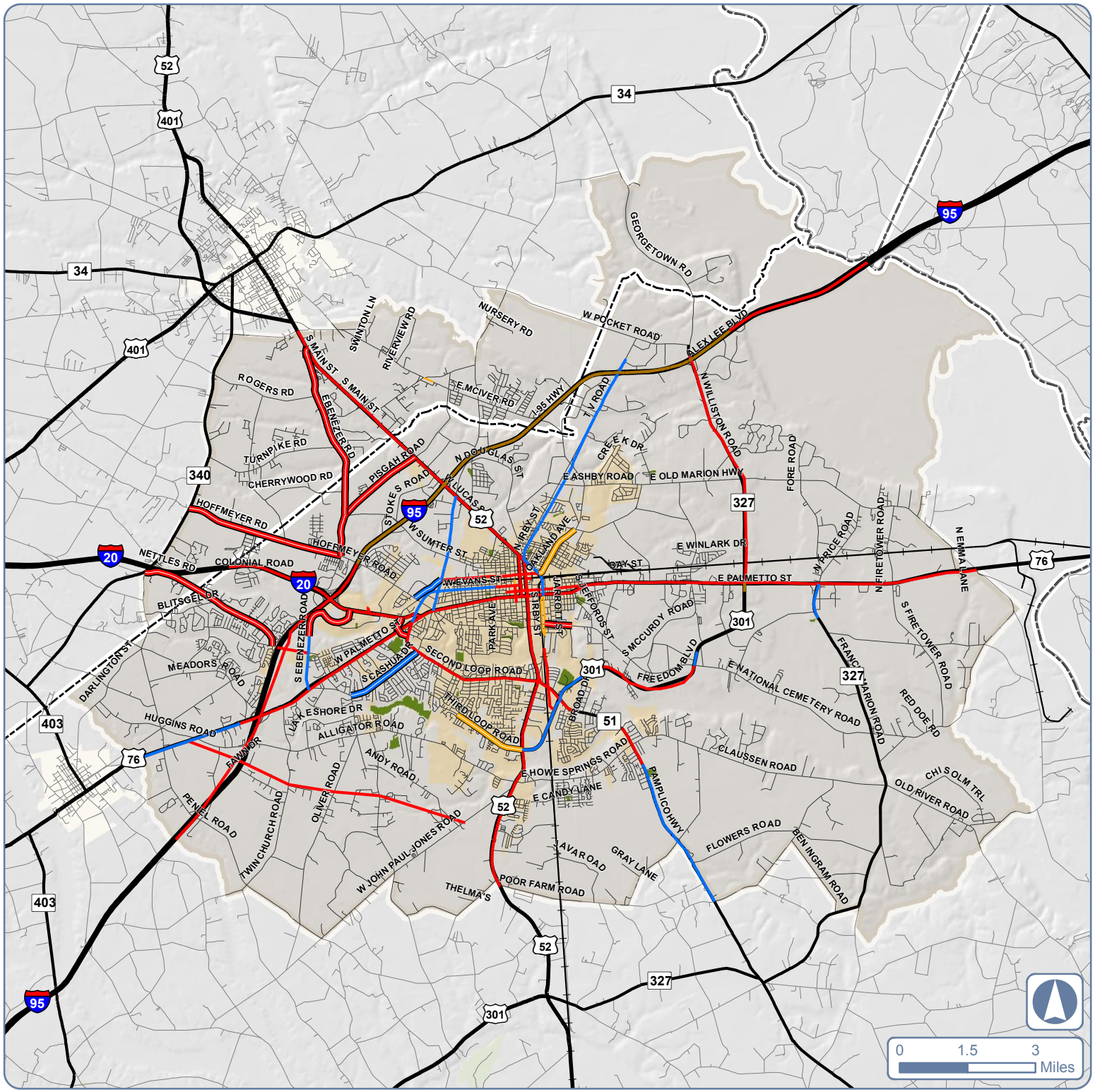


Figure 5.1

Recommended Cross Section Map

Recommended Cross Section

- 6-Lane Freeway
- 5-Lane
- 4-Lane Divided
- 3-Lane

Laneage

- 6 Lanes
- 5 Lanes
- 4 Lanes
- 3 Lanes

Note:
Sales Tax projects are shown as completed.

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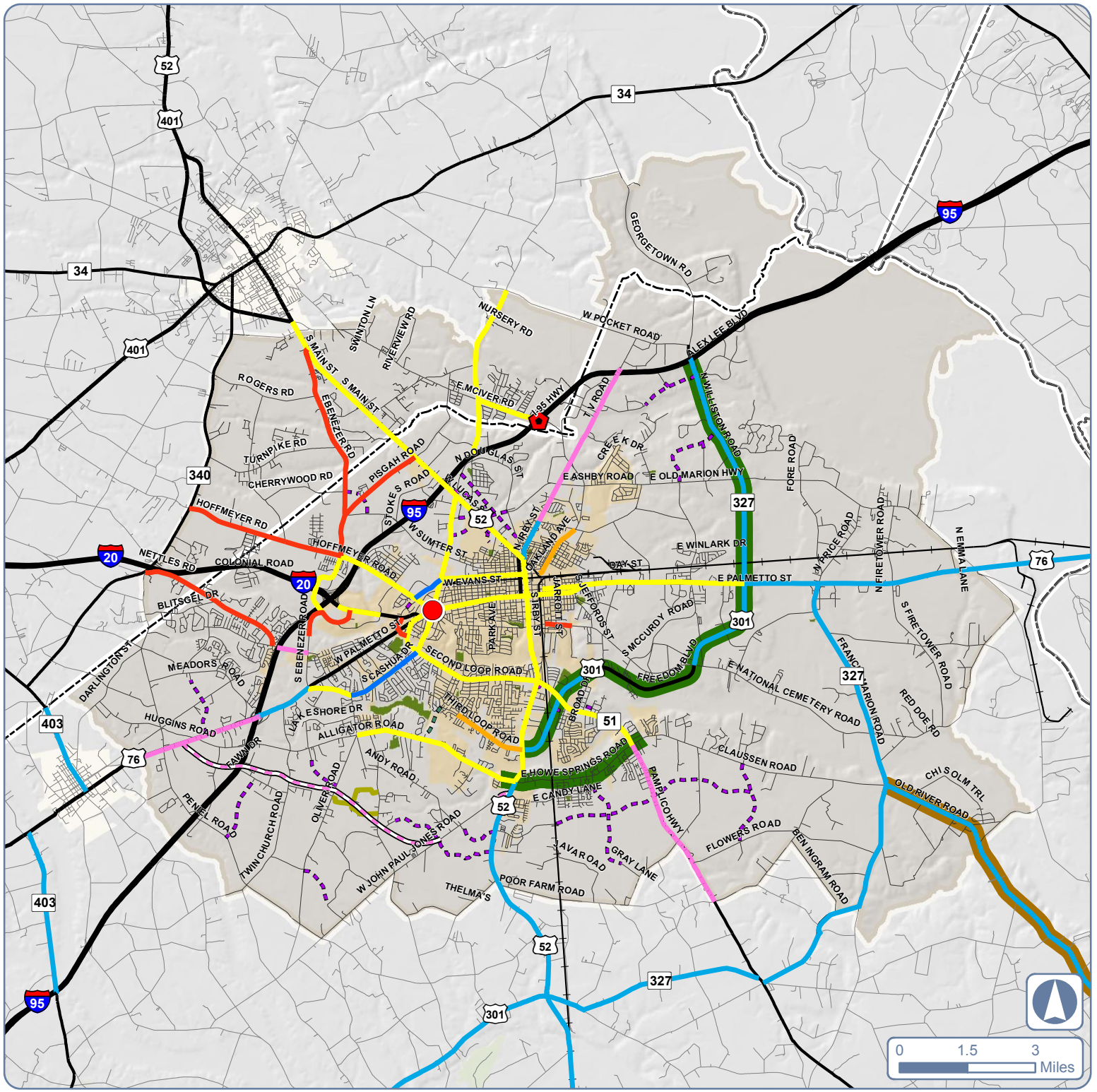


Figure 5.2

Recommended Roadway Improvements

Intersection Improvements

- Proposed Interchange
- Proposed Roundabout

Widening Projects

- 3-Lane
- 4-Lane Div.
- 5-Lane
- 6-Lane Freeway

Other Projects

- Sales Tax Project
- Access Management
- Shoulder Treatment
- Pave - 2-Lane

New Roadways

- Collector Street
- 2-Lane Roadway
- 4-Lane Div. Roadway (ST)

Overlays

- Access Management
- Rural Preservation

Note: Recommendations extending beyond the FLATS MPO boundary correspond to the Transportation Element of the Florence County Comprehensive Plan.

FLATS 2035 LRTP

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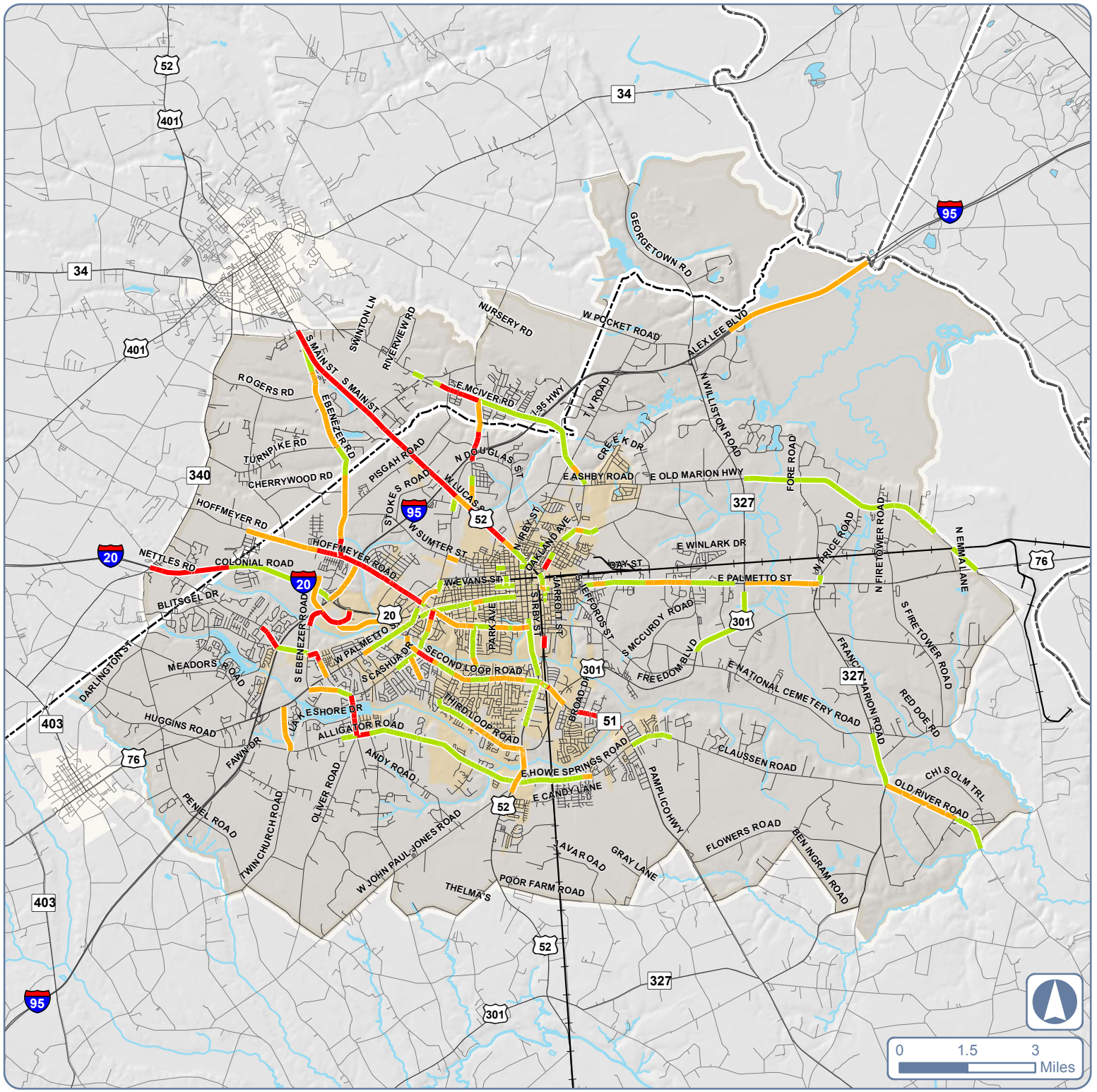


Figure 5.3

2035 Congested Corridors, Funded Plan Conditions

Level of Service

- LOS D (At Capacity)
- LOS E (Over Capacity)
- LOS F (Well Over Capacity)
- Other Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

FLATS 2035 LRTP

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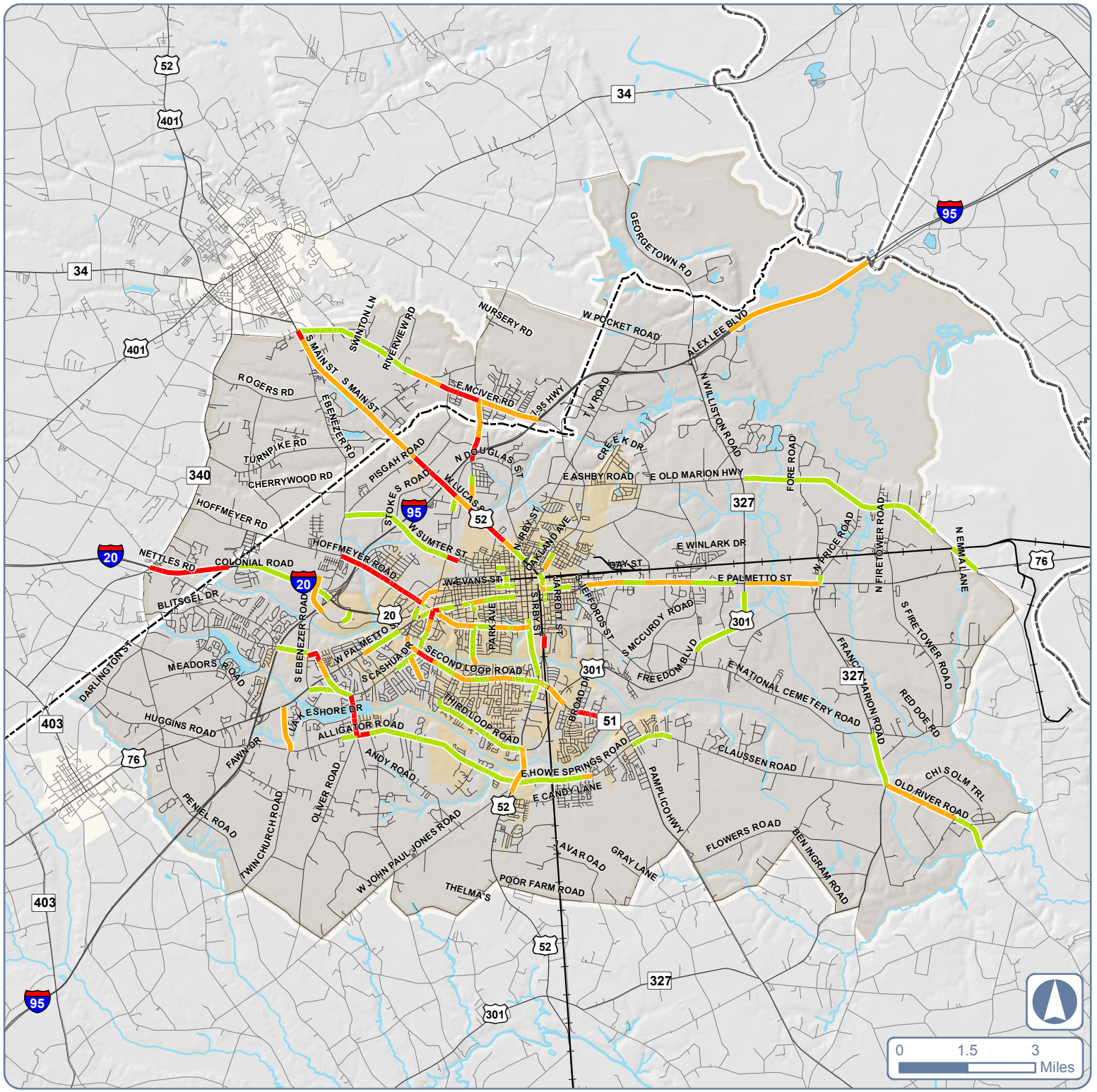


Figure 5.4

2035 Congested Corridors, Vision Plan Conditions

Level of Service

- LOS D (At Capacity)
- LOS E (Over Capacity)
- LOS F (Well Over Capacity)
- Other Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary

FLATS 2035 LRTP

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Safety and Security

With the adoption of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the federal government established safety and security as independent planning factors for consideration in long range transportation plans. This plan seeks to evaluate transportation safety and security while making recommendations for future improvement.

Safety and Transportation Planning

According to the information provided on the SCDOT website, South Carolina currently has the eighth highest fatality rate in the nation. In the first two months of 2010, Florence County had 5 traffic fatalities, tying as the sixth highest county fatality rate in the nation. As a result, it is essential to look at potential solutions for mitigating some of these issues in the FLATS region.

For safety fully to be integrated into the transportation planning process, it must be a focus at all levels of planning — from the US Department of Transportation to local neighborhoods. At the federal level, SAFETEA-LU has established this focus. Other programs at the state and federal level target work zones, older drivers, bicyclists, and pedestrians. Through the LRTP process, residents of the FLATS area highlighted safety concerns that face all travel modes. The following guidelines are presented to ensure safety remains a core component of transportation planning in the FLATS MPO.

Engineering

The roadway recommendations presented in this plan represent a series of engineering enhancements that should improve easier traffic flow while increasing safety for all users. The MPO also has emphasized safety planning by incorporating a crash analysis and ranking system into the LRTP to identify high priority crash locations throughout the planning area. General engineering strategies to maximize safety include: improving highway and road design guidelines; implementing corridor-based access management strategies; identifying appropriate intersection improvements to mitigate crashes; constructing a coordinated network of on-street bicycle facilities and off-street trails; designing streets to be pedestrian-friendly; designating appropriately designed streets for truck freight; and maintaining adequate standards for railroad crossings.

Enforcement

At the public workshops, many attendees express concern for the lack of enforcement of traffic laws. Enforcement activities typically include ways to monitor and maintain the appropriate behaviors of road users (motorists, bicyclists, pedestrians, and transit users). These activities usually include law enforcement participation, task forces, and partnerships with organizations dedicated to improving safety. Safety initiatives being pursued at the state and federal level include "Click It or Ticket", "Booze It & Lose It", and "R U Buckled". The MPO can partner with state agencies and local governments to support enforcement programs in the planning area.

Education

Education programs can target all age groups and skill levels to effectively encourage the safe use of the transportation system. These programs can be incorporated into activities at schools, churches, tasks forces, local organizations, and government-sponsored events. Often, education campaigns work in concert with enforcement. Reaching children through education programs is an important way to support lifelong habits of safely using the transportation system. Safe Routes to School programs educate children on the proper use of sidewalks, bicycle facilities, and roadways. Finally, education programs can enhance the attitude toward safety.

Emergency Services

Ensuring safe access to homes and businesses by emergency personnel is a critical element of safety within the transportation system. When the public speaks about safety, they often mention the need for ambulances and fire trucks to quickly respond to incidents. For crashes, timely response is essential to reducing the severity injuries. The roadway recommendations presented in this plan will have a positive impact on emergency response times. These improvements will encourage an interconnected network of streets that provides route choices and reduced congestion. In addition, improving the signal system and ITS deployment will improve safety.

Security and Transportation Planning

Emphasizing security during the transportation planning process helps identify and implement ways to improve security and mitigate imminent threats. For the Transportation Element, this effort is tied closely to the 2035 FLATS LRTP. The MPO has the advantage of considering security at a regional level, which is a logical first step to ensuring protection at the local level. While general strategies can be formulated at the regional level and the MPO can create multimodal recommendations that enhance security, implementation for many strategies will be the responsibility of local organizations. In the FLATS region, key security considerations include evacuation routes for coastal communities, the evacuation of affected areas by sensitive facilities (such as the H.B. Robinson nuclear plant in Hartsville, SC), protection of freight corridors, the maintenance of bridges, and the safeguard of transit operations. A selection of these considerations is described in more detail below. Each of the considerations should continue to be a focus of the FLATS Policy Committee.

Four Categories of Security

Security measures typically fall into one of four categories: prevention, protection, redundancy, and recovery.

- **Prevention** mainly limits access to ensure the safety of the transportation system.
- **Protection** — in coordination with prevention elements — focuses on vulnerable components of the transportation system such as bridges and rail corridors.
- **Redundancy** within the transportation network creates identifiable alternative routes in the event of an incident. Redundancy most often refers to an interconnected street network, though similar methods should be extended to the bicycle and pedestrian network, transit system, and rail corridors.
- **Recovery** refers to both the initial response during an emergency and long-term activities that aid in the return of normal operations.

Emergency Response and Fire Protection

Natural or man-made community emergencies can occur at any time. Florence and Darlington County Emergency Management Departments are responsible for overall coordination of county, state, and volunteer agencies before, during, and after an emergency. In addition to the county EMS departments, elements of emergency response and fire protection in the FLATS area include municipal and county fire departments, Florence County and Darlington County Sheriff Offices, and police departments for the City of Florence and Francis Marion University.

Evacuation Routes and Shelters



Natural emergencies such as earthquakes, hurricanes, and tropical storms potentially could affect the FLATS MPO area. According to the South Carolina Department of Natural Resources (SCDNR), approximately 70 percent of the earthquakes in South Carolina occur in the Coastal Plain and most are clustered around areas slightly west and north of Charleston. According to the South Carolina Emergency Management Division (SCEMD), South Carolina is one of the most vulnerable states in the nation to be impacted. Six of the state's counties have coastlines along the Atlantic Ocean. The most likely impact is associated with the evacuation of coastal communities prior to a tropical storm or hurricane. **Figure 5.5** illustrates the hurricane evacuation routes and designated emergency shelters in the FLATS MPO area.

Freight Considerations

The Railroads and Highways for National Defense program, with the support of the USDOT, ensures the nation's rail and highway infrastructure can support defense emergencies. The Strategic Rail Corridor Network (STRACNET) consists of 38,800 miles of rail lines important to national defense and provides service to 193 defense installations whose mission requires rail service.

Truck Freight — The South Carolina Truck Weight Law (SC Code: 56-5-4130 and 4160) allows 20,000 lbs. single axle plus 10% tolerance (22,000 lbs.) on all roads except interstate highways. There is no tolerance on Interstates. SC Code: 56-5-4140 explains the statutory limits on the gross weight of a vehicle or combination of vehicles, operated or moved upon any interstate, highway or section of highway. These limits are divided into seven categories depending on a single or combination of vehicles and the number of axles.

Rail Freight — According to 2008 data collected for the hazardous materials commodity flow study for Florence County, the number of hazardous material carloads shipped through Florence County was 12,376. The hazardous material shipped via rail most frequently was Environmentally Hazardous Substances and Liquid, N.O.S. Compared to data presented in a 1998 study, the total number of shipments of hazardous materials through Florence County has increased by 1,507 carloads per year.

Transit Considerations

The Federal Transit Administration requires the Pee Dee Regional Transportation Authority (PDRTA) to spend a minimum of 1% of all federal dollars received on security, though PDRTA typically exceeds this requirement. In the last year, they have added new security cameras and systems at all three of their facilities. They have real time GPS tracking on all of their revenue service and maintenance vehicles and have system-wide cellular phones permanently mounted in all vehicles. Each driver has bluetooth to make/answer calls when not inside the vehicles.

Automated fare boxes are now on all fixed route transit vehicles alleviating the drivers' need to handle cash. Fare cards also are available. PDRTA's newer buses have interior advertising space that can display notices about suspicious packages and other suspicious activity on buses and how to report it. PDRTA also is considering security cameras for the current fixed bus routes. If feasible, these will be added to their next federal grant. In October 2009, PDRTA was awarded a new contract for vehicle scheduling and dispatching software, maintenance software, and AVL (automatic vehicle location). On-board computers will be installed in all vehicles. The AVL system has a "panic button" that the driver can use to alert police in the event of an emergency.

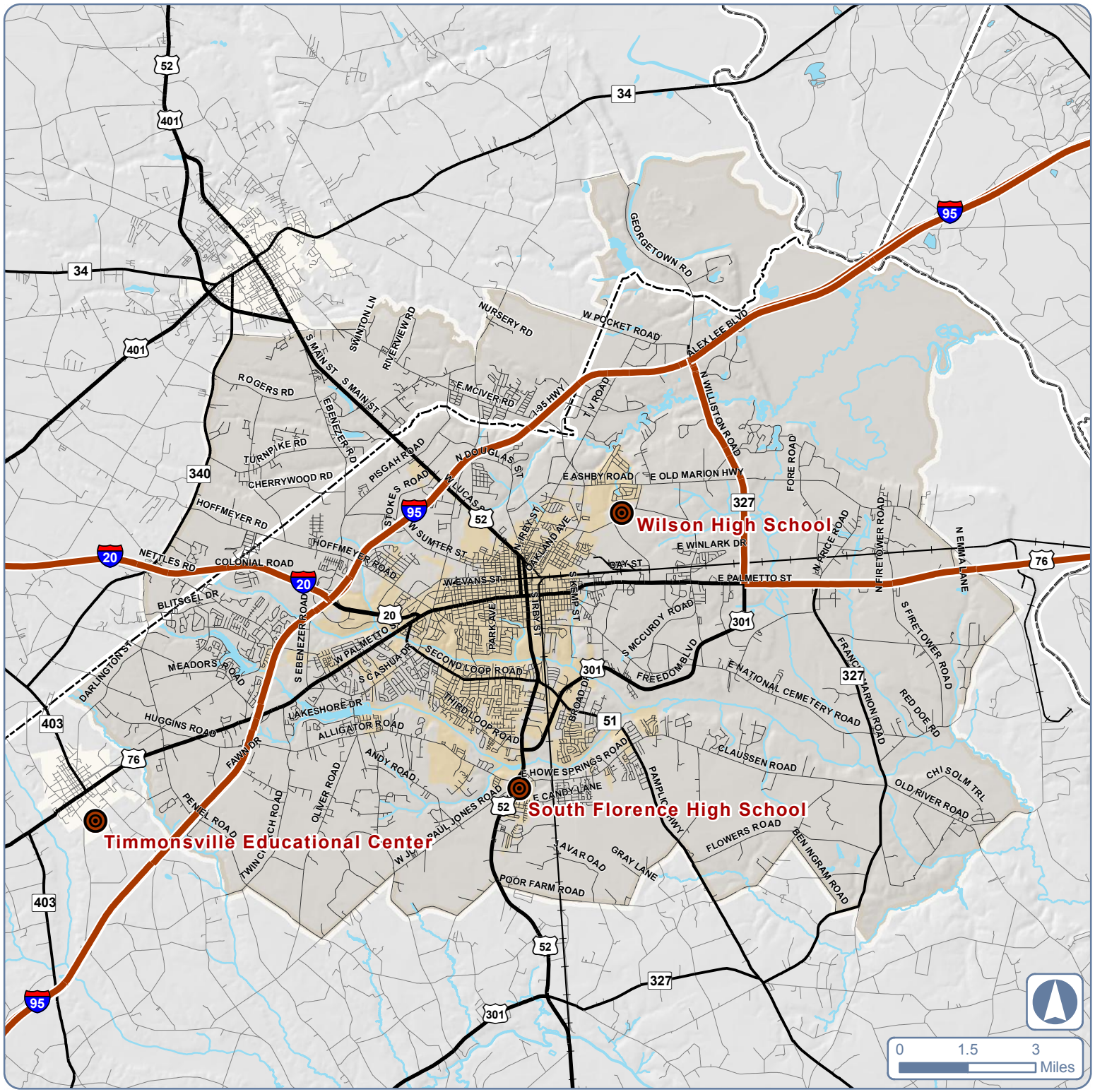


Figure 5.5

Evacuation Routes

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Evacuation Route
- Evacuation Shelter

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Traffic Safety Analysis

Analysis of crash history along with an examination of existing traffic patterns are an integral part in determining locations where safety improvement countermeasures can benefit both motorists and the community as a whole. Traditionally, crash analysis includes the study of crash frequency and crash type at each location. Crash analysis for the *2035 LRTP* will focus on severity in respect to traffic volume while identifying the intersections where mitigation is most critical.

The crash analysis in this section will be used to identify a set of preliminary countermeasures for five priority crash locations. To allow for effective implementation of safety countermeasures for these study intersections as well as other high-priority crash locations, it is recommended that the FLATS region or member jurisdictions consider establishing a dedicated annual funding source to make safety improvements or to serve as a local match for federal or state safety funds.

Data for crash analysis was obtained from the SCDOT State Traffic Safety Engineering office. A summary of this data is shown in **Tables 5.2 and 5.3**. The data represents the highest ranked intersections based on crash data collected between January 1, 2005 and December 31, 2009. The crash analysis focused on 73 intersections in the FLATS area over the 5-year period. Relevant data considered for each location included total crashes, fatalities, crash types, average annual daily traffic (AADT), and average crash rates for the area. Intersections identified as having abnormally high crash rates for their respective traffic volumes are ranked according to the highest crash rate using the Rate Quality Control Method. Crashes ranked by Equivalent Property Damage Only Rate (a measure of severity with respect to traffic volumes) are shown in **Table 5.3.** The locations are identified in **Figure 5.6.**

Contributing factors to a location's high crash frequency can include intersection design, access considerations, and traffic congestion. Many of the locations identified with high crash frequencies were also areas exhibiting elevated congestion levels. Since this relationship exists between traffic congestion and crash frequency, proposed roadway projects seeking to reduce traffic congestion should be recognized as having secondary safety benefits. Driveway access in proximity to intersections also can contribute to crash frequency by increasing the unexpected conflict points near the intersection.

The following section seeks to study some of the worst-performing intersections in the FLATS area and presents recommendations for potential countermeasures based on the priority ranking system and field review.

Table 5.2 – High Priority Crash Locations — Rate Quality Control Ranking										
RQC Rank	**EPDO Rank**	**Street 1**	**Street 2**	**Total Crashes**	**Fatal**	**Injury**	**PDO**	**Intersection AADT**	**EPDO**	**EPDO Rate**
1	7	Palmetto St.	Williamson Rd.	68	0	41	46	25,350	390.4	15.40
2	8	Knollwood Rd.	Alligator Rd.	28	0	15	20	9,900	146	14.75
3	6	David H McLeod Blvd.	Woody Jones Blvd.	51	0	36	38	20,600	340.4	16.52
4	29	National Cemetery Rd.	Jeffords St.	27	0	5	23	9,825	65	6.62
5	12	Irby St.	Freedom Blvd.	65	0	30	51	28,650	303	10.58
6	37	Lucas St. Frontage	I-95 SB Ramp Connector	27	0	4	24	10,000	57.6	5.76
7	25	E Howe Springs Rd.	Bannockburn Rd.	22	0	5	18	8,600	60	6.98
8	22	Ebenezer Rd.	Industry Blvd.	30	0	9	24	13,200	99.6	7.55

The Rate Quality Control Method is explained below with an excerpt from the Highway Safety Engineering Studies Procedural Guide, a publication of the U.S. Department of Transportation Federal Highway Administration:

"The rate quality control method employs a statistical test to determine if the accident rate at a location is significantly higher than accident rates at other locations with similar characteristics." "The rationale for using the rate quality control method is to eliminate high accident rate locations that are high due to random fluctuation." "It is assumed that the locations have been grouped by roadway class such as intersections, bridges, multilane, limited access, rural two-lane, etc. The statistical test is based on the assumption that the number of accidents at a location follow a Poisson distribution. The normal approximation to the Poisson distribution is used to calculate the critical accident rate as shown below:

$$R_c = R_a + K \sqrt{\frac{R_a}{M}} \quad \frac{1}{2M}$$

Where: R_c = Critical accident rate for a spot (accidents per million vehicles)

R_a = Average accident rate for locations with similar characteristics

M = Millions of vehicles entering the spot during the analysis period

K = The probability, 1 – P, of the critical rate being exceeded by chance. Typical values of K are 2.576 for P = 0.005 and 1.645 for P = 0.05. (Used for this study)"

Table 5.3 – High Priority Crash Locations — Crash Severity Ranking										
EPDO Rank	**RQC Rank**	**Street 1**	**Street 2**	**Total Crashes**	**Fatal**	**Injury**	**PDO**	**Intersection AADT**	**EPDO**	**EPDO Rate**
1	67	John Paul Jones Rd.	Stagecoach Rd.	6	3	4	2	4,900	266	54.29
2	30	Willow Creek Rd.	Pamplico Hwy.	14	2	15	7	8,750	286.6	32.75
3	14	Knollwood Rd.	Lakeshore Dr.	18	0	19	8	8,800	167.6	19.05
4	34	Palmetto St.	Francis Marion Rd.	18	2	6	14	12,900	218	16.90
5	9	McIver Rd.	Ashby Rd.	24	0	21	14	11,300	190.4	16.85
6	3	David H McLeod Blvd.	Woody Jones Blvd.	51	0	36	38	20,600	340.4	16.52
7	1	Palmetto St.	Williamson Rd.	68	0	41	46	25,350	390.4	15.40
8	2	Knollwood Rd.	Alligator Rd.	28	0	15	20	9,900	146	14.75
9	39	Poor Farm Rd.	Irby St.	24	1	18	13	20,325	241	11.86
10	22	Palmetto St.	Ebenezer Rd.	34	0	30	18	23,750	270	11.37
11	15	Cherokee Rd.	Irby St.	54	0	41	33	34,950	377.4	10.80
12	5	Irby St.	Freedom Blvd.	65	0	30	51	28,650	303	10.58
13	37	Mallard Ln.	Cashua Dr.	16	0	13	11	11,500	120.2	10.45
14	11	Palmetto St.	Holly Cir.	41	0	24	28	23,500	229.6	9.77
15	16	Old Marion Hwy.	Williston Rd.	27	0	15	18	15,550	144	9.26
16	10	Cashua Dr.	Third Loop Rd.	27	0	13	18	13,900	127.2	9.15
17	17	Lucas St. Frontage	I-95 NB Ramp Connector	19	0	9	14	10,000	89.6	8.96
18	29	Cashua Dr.	Second Loop Rd.	42	0	35	27	36,250	321	8.86
19	26	Douglas St.	Mechanicsville Rd.	19	0	11	12	11,900	104.4	8.77
20	18	Palmetto St.	Twin Church Rd.	27	0	13	19	15,850	128.2	8.09

EPDO Rate is a measure of severity using equivalent property damage only (EPDO) and average annual daily traffic at each intersection. The EPDO was determined for these intersections using the following formula:

EPDO = 76.8 (F) + 8.4 (I) + PDO, with "F" representing the number of fatalities, "I" representing the number of injuries, and "PDO" representing property damage only collisions at the intersection.

The EPDO Rate is then determined by dividing by the AADT and multiplying by one thousand.

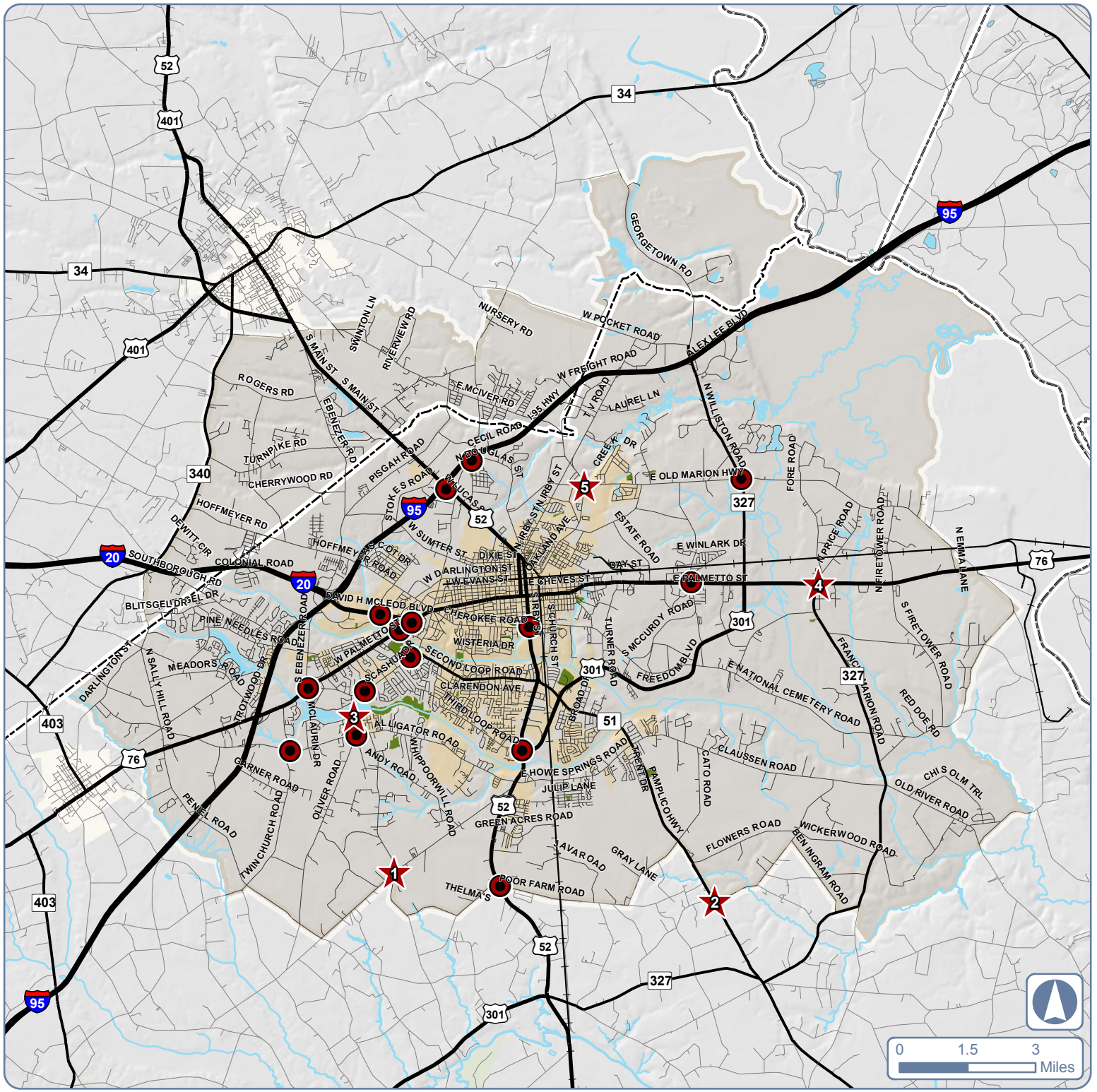


Figure 5.6

Crash Analysis Map

Based on Severity (EPDO Rate)

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary

Priority Crash Locations

- Top 5 Crash Location
- Top 20 Crash Location

For a detailed description of the crashes shown on this map, see Table 5.3 in Chapter 5.

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Priority Locations

A preliminary review of crash history was performed for the top two intersections based on the severity rankings and the top three intersections based on the rate quality control method. Field investigations helped confirm existing conditions, identify design features, and observe driver behavior. These observations provided insight to potential patterns and revealed conditions that could be enhanced through geometric changes or enhancements to traffic control. For each location a list of crash statistics, potential causational factors and recommended countermeasures are included.

John Paul Jones Road & Stagecoach Road
(Severity Rank #1)

The intersection of John Paul Jones Road and Stagecoach Road/ Savannah Grove Road experienced only six total crashes over the 5-year analysis period (2005-2009). The total number of crashes at this location is relatively low; however, crash severity is very high, as only two of the six collisions consisted of property damage only. The other four crashes included three fatalities and four injuries. This intersection was the only intersection in the study area to experience three fatalities over the 5-year period. The most severe crash type at this location was angle collisions, which is responsible for three of the six crashes including all three fatalities and two injuries.



Based on the crash data analysis and visual observation during the field work, potential causes for crashes at this location include reduced sight distance due to intersection skew and the horizontal curvature of Savannah Grove Road/Stagecoach Road. These sight distance issues may inhibit drivers from seeing vehicles traveling on the opposite roadway. Reduced sight distance due to horizontal curvature on Savannah Grove Road/Stagecoach Road may inhibit motorists' view of the stop sign as well.

Due to the crash severity at this location, several safety countermeasures already have been deployed at this location. These include:

- Stop sign ahead warning signs on all four approaches.
- Flashing warning lights above the intersection on all four approaches.
- Conversion to a four-way stop controlled intersection, with flashing warning lights on the northbound and southbound stop signs.

Based on visual observation and the prevailing crash pattern at the intersection, the following countermeasures are also recommended at this intersection.

- Analyze the success of existing countermeasures listed above.
- Realignment of Savannah Grove Road/Stagecoach Road to remove the intersection skew and develop angles between intersection legs that are closer to 90 degrees.
- Advisory speed limits in the intersection area to reduce vehicle speed and raise awareness at the intersection.
- Rumble strips on all four approaches to raise motorist awareness in the area.

Willow Creek Road & Pamplico Highway
(Severity Rank #2)

The intersection of Willow Creek Road and Pamplico Highway experienced 14 total crashes over the 5-year analysis period (2005-2009). Severity was very high at this location as 7 of the 14 collisions involved an injury or fatality. A total of 15 injuries and 2 fatalities occurred over the analysis period. The most severe crash type involved angle collisions which account for 50% of the crashes. Both fatalities and 10 of the 15 injuries occurred due to angle collisions.

Based on crash data analysis and visual observation during the field work, potential causes for crashes at this location include:

- Driver inattention and failure to yield right-of-way by vehicles traveling on Willow Creek Road.
- Vehicles traveling at high speeds on Pamplico Highway.



Based on these visual observations and the prevailing crash pattern at the intersection, the following potential countermeasures are recommended at this location:

- Stop sign ahead warning signs.
- Advisory speed limits on all four approaches.
- Rumble strips on all four approaches to raise motorist awareness in the area.

Palmetto Street & Williamson Road
(Quality Control Rank #1 / Severity Rank #7)

The intersection of Palmetto Street and Williamson Road experienced 68 total crashes over the 5-year analysis period (2005-2009). There were 41 injuries at this location, which account for 33 of the 68 collisions. No fatalities had occurred at this intersection. Angle crashes were the most common crash type as 38 out of 68 crashes (56%) were angle crashes. Angle type crashes tend to have greater severity which is shown in the fact that 25 of the injuries at this location occurred in angle collisions.



Based on crash data analysis and visual observation during the field work, potential causes for crashes at this location include:

- Vehicles failing to yield right-of-way when performing left-turn movements from eastbound and westbound Palmetto Street (US 76) to Williamson Road.
- Excessive speed of vehicles on Palmetto Street (US 76).
- Multiple driveways within proximity to the intersection may initiate angle and rear-end crashes.

Based on these visual observations and the prevailing crash pattern at the intersection the following potential countermeasures are recommended at this location:

- Change left-turn signal phasing to protected-only phasing in order to prevent left-turn angle collisions.
- Close unnecessary driveways near the intersection.

Knollwood Road & Alligator Road
(Quality Control Rank #2 / Severity Rank #8)

The intersection of Knollwood Road and Alligator Road experienced 28 total crashes over the 5-year analysis period (2005-2009). In all, 15 injuries occurred in 8 of the 28 collisions (29%). There were no fatalities at this intersection. Angle collision types were the most common at this location and accounted for 20 of the 28 collisions (71%). Angle collisions are generally more severe than other crash types, which was the case at this intersection where all 15 injuries occurred during angle collisions.



Based on crash data analysis and visual observation during the field work, potential causes for crashes at this location include:

- Vehicles failing to yield right-of-way when turning left from eastbound and westbound Alligator Road.
- Vehicles failing to yield right-of-way when performing left-turn movements from southbound Knollwood Road and northbound Walker Swinton Road.
- Failure to yield right-of-way by vehicles making westbound right-turns from Alligator Road to Knollwood Road. These vehicles may have the opportunity for increased speed with the channelized movement and yield sign.
- Driver confusion due to only 100 feet of spacing between the intersection of Alligator Road & Knollwood Road and Oliver Road & Knollwood Road.

Based on these visual observations and the prevailing crash pattern at the intersection, the following potential countermeasures are recommended at this location:

- Add protected-permitted signal phasing for the eastbound and westbound left-turn movements.
- Use stop control instead of yield control for the westbound channelized right-turn movement or remove channelization.
- Realign Oliver Road to allow for more acceptable spacing between the two intersections.

David H McLeod Boulevard & Woody Jones Boulevard
(Quality Control Rank #3 / Severity Rank #6)

The intersection of David H McLeod Boulevard and Woody Jones Boulevard experienced 51 total crashes over the 5-year analysis period (2005-2009). A total of 36 injuries occurred in 13 of the 51 crashes (25%). There were no fatalities at this location. The two most prevalent crash types include angle collisions and rear end collisions. Angle collisions accounted for 22 crashes (43%) and 22 injuries (61%). Rear end collisions accounted for 20 crashes (39%) and 12 injuries (33%). Angle collisions were obviously the most severe; however, rear end collisions at this location were also fairly severe.



Based on crash data analysis and visual observation during the field work, potential causes for crashes at this location include:

- Limited intersection spacing between frontage roads and David H McLeod Boulevard.
- Vehicles traveling at high speeds on David H McLeod Boulevard.

Based on these visual observations and the prevailing crash pattern at the intersection, the following potential countermeasures are recommended at this location:

- Remove frontage road access on Woody Jones Boulevard just north of the study intersection. Ample access is provided through Trade Court further north.
- Move business driveways on Woody Jones Boulevard further to the south to improve spacing between the study intersection and major traffic generators.
- Install stop light ahead warning signs on David H McLeod Boulevard.

Roadway Project Prioritization

In order to best understand how to allocate the region's limited financial resources, it is important to establish priorities for widening, new location, and intersection improvement projects. In order to create a balanced set of priorities, project evaluations need to go beyond traffic impacts to consider cultural, environmental, economic, multimodal, and land use considerations. Recognizing the need to create a balanced prioritization to establish project rankings, the State of South Carolina passed Act 114 in 2007. Act 114 added Sections 57-1-370 and 57-1-460 to the South Carolina Code of Laws. These sections provide details of the ranking process to be used by SCDOT, as well as its affiliated MPOs and councils of government (COGs).

As noted in the beginning of this chapter, there are a variety of access management, widening, new location, and intersection/interchange improvements recommended for the FLATS region. Per the direction of SCDOT, this prioritization process was used to determine the rankings of regionally significant projects that could potentially receive funding from FLATS guideshare money. Access management and intersection safety projects are by their nature smaller projects that would not be considered as regionally significant. As a result, these projects are not assessed using the SCDOT ranking criteria. Recommended improvements to the Interstate network would be funded through other mechanisms than regional guideshare money, and as a result are also not included in the regional project rankings. The widening and new location projects included in the current one-cent sales tax were also not included in the project ranking, since they were evaluated at an earlier time when being considered for inclusion in the sales tax referendum.

With these considerations in mind, emphasis was placed on ranking the proposed widening projects in the FLATS region. There is only one new location project (Brofford Drive Extension) proposed as a part of the 2035 LRTP. Similarly, there is only one intersection improvement project (Five Points Roundabout) being proposed that could be considered as a recipient of guideshare funds. As a result, rankings are not necessary to establish priorities in these categories.

The next page contains a detailed description of the ranking criteria established by SCDOT for the purposes of prioritizing roadway widening projects. SCDOT's methodology provides the flexibility for MPOs or COGs to infuse some of their locally-specific criteria into the ranking criteria. After discussion with FLATS staff and the FLATS Policy Board, it was determined that the statewide criteria were suitable for use in the region without additional modification.

Table 5.4 shows the weighting factors, project information, and rankings for the proposed roadway widening projects. All the projects are shown in order of their SCDOT-determined rankings. **Figure 5.7** shows these roadway widening projects in priority order.

The purpose of the process is not to determine the explicit impact of a project, but rather simply to identify resources or communities in proximity to recommendations. A more detailed analysis, including a field survey, will be necessary to determine specific impacts on a project-by-project basis when individual project studies are begun.

Statewide MPO/COG Priority Ranking *(source: South Carolina Department of Transportation)*

In cooperation with the state's metropolitan planning organizations (MPOs) and council of governments (COGs), SCDOT has developed processes for ranking road widening and intersection improvements.

SCDOT will maintain a statewide list of ranked widening projects using criteria consistent with Act 114. The statewide list provides a uniform process for evaluating project priorities within each MPO, COG, as well as a statewide basis. MPOs and COGs have the discretion of using the statewide list to establish local priorities or they may use criteria consistent with Act 114, in addition to other criteria that address local desires and/or concerns related to transportation improvements.

The statewide list considers criteria in Act 114 in the following manner:

- Financial Viability – considered as a quantifiable criterion based on estimated project cost and estimated 20-year maintenance cost in relation to the current vehicle miles of travel. The criterion is weighted at 10% of the total project score.
- Public Safety – considered as a quantifiable criterion based on accident data. The criterion is weighted at 15% of the total project score.
- Potential for Economic Development – considered as a quantifiable criterion based on an assessment of short-term, intermediate, and long-term development potential as a result of the proposed improvement. The criterion is weighted at 10% of the total project score.
- Traffic Volume and Congestion – considered as a quantifiable criterion based on current traffic volumes and the associated level-of-service condition. The criterion is weighted at 35% of the total project score.
- Truck Traffic – considered as a quantifiable criterion based on current volume and average daily truck traffic estimates. The criterion is weighted at 10% of the total project score.
- Pavement Quality Index – considered as a quantifiable criterion based on pavement condition assessments. The criterion is weighted at 10% of the total project score.
- Environmental Impact – considered as a quantifiable criterion based on an assessment of potential impacts to natural, social, and cultural resources. The criterion is weighted at 10% of the total project score.
- Alternative Transportation Solutions – considered independently of ranking process. Transit propensity is evaluated based on surrounding population and employment characteristics to support transit service as a potential alternative or in addition to a proposed improvement.
- Consistency with Local Land Use Plans – considered independently of ranking process. A determination of consistency will be made during the long-range plan development process.

Table 5.4 - Roadway Widening Project Total Benefit and Impact Matrix

Project ID	Route	Route Name	County	Project Limits	Route Type	BMP	EMP	Length	Project Cost Estimate	Maintenance Cost ($/lane mile)	Maintenance Costs Over 20 Years	Resurfacing Costs Over 20 Years	Financial Viability/Life Cycle Cost ($/VMT)	Dept. of Commerce Economic Score
1	S-29	S Cashua Drive	Florence	Second Loop Road to Knollwood Drive	2	4.44	6.39	1.95	$ 11,500,000	$ 2,129	$ 415,128	$ 1,443,000	$ 634	1
2	S-829	Bentree Lane/Holly Circle	Florence	David H McLeod Boulevard (I-20 Bus) to Second Loop Road	2	0.00	0.53	0.53	$ 3,100,000	$ 2,129	$ 90,264	$ 313,760	$ 587	0
3	S-1060	Radio Drive/Ebenezer Road	Florence	David H McLeod Boulevard (I-20 Bus) to near Industry Boulevard	2	0.00	1.90	1.90	$ 8,229,000	$ 2,129	$ 323,587	$ 1,124,800	$ 472	2
4	S-49	N Ebenezer Road	Darlington/ Florence	Pisgah Road to Main Street (US 52)	2	0.00	4.09	4.09	$ 12,272,000	$ 1,823	$ 447,389	$ 1,815,960	$ 462	2
5	S-588	Third Loop Road	Florence	S Marsh Avenue to S Irby Street	2	0.00	1.70	1.70	$ 5,278,000	$ 2,129	$ 217,144	$ 754,800	$ 593	1
6	S-24	Oakland Avenue	Florence	E Lucas Street to Wilson Road	2	0.10	1.42	1.32	$ 4,030,000	$ 2,129	$ 168,861	$ 586,968	$ 575	1
7	S-167	W Darlington Street	Florence	N Cashua Drive to Hoffmeyer Road	2	0.00	0.70	0.70	$ 4,017,000	$ 2,129	$ 149,020	$ 518,000	$ 676	1
8	S-13	Hoffmeyer Road	Florence	Anderson Farm Road to N Ebenezer Road	2	0.40	1.70	1.30	$ 12,428,000	$ 2,129	$ 221,401	$ 769,600	$ 1,376	0
9	S-13	National Cemetery Road	Florence	S Church Street to Stockade Drive	2	6.83	7.43	0.60	$ 3,211,000	$ 2,129	$ 102,185	$ 355,200	$ 838	0
10	S-19	Hoffmeyer Road	Darlington/ Florence	Anderson Farm Road to Timmonsville Highway (SC 340)	2	0.00	2.40	2.40	$ 6,565,000	$ 1,823	$ 350,035	$ 1,420,800	$ 837	0
11	S-54	Southborough Road	Darlington/ Florence	N Sally Hill Road to Pine Needles Road	2	0.00	3.40	3.40	$ 18,005,000	$ 1,823	$ 495,883	$ 2,012,800	$ 2,806	0
12	S-112	Pisgah Road/Ebenezer Road	Florence	Presbyterian Road to Hoffmeyer Road	2	1.40	4.48	3.08	$ 15,366,000	$ 2,129	$ 524,551	$ 1,823,360	$ 1,307	2

Table 5.4 - Roadway Widening Project Total Benefit and Impact Matrix

Project ID	Route	Route Name	County	Project Limits	Environ. Score	Functional Classification	Existing Laneage	Improved Laneage	Capacity	2009 AADT	V/C Ratio	PQI	% Trucks	Truck AADT	Safety Score	Viability Rank	Viability %	Financial Viability Score	V/C Rank	V/C %	V/C Score	Truck Rank	Truck %	Truck Score	Overall Score	Overall Statewide Rank
1	S-29	S Cashua Drive	Florence	Second Loop Road to Knollwood Drive	3	Urban - Minor Arterial	2	5	8,600	10,800	1.256	2.22	11%	1188	5	7	0.583	3	2	0.167	5	2	0.167	5	3.922	1
2	S-829	Bentree Lane/Holly Circle	Florence	David H McLeod Boulevard (I-20 Bus) to Second Loop Road	3	Urban - Collector	2	4	8,600	11,261	1.309	3.68	11%	1239	4	9	0.750	4	1	0.083	5	1	0.083	5	3.918	2
3	S-1060	Radio Drive/Ebenezer Road	Florence	David H McLeod Boulevard (I-20 Bus) to near Industry Boulevard	4	Urban - Collector	2	4	8,600	10,780	1.253	2.91	11%	1186	3	11	0.917	5	3	0.250	4	3	0.250	4	3.641	3
4	S-49	N Ebenezer Road	Darlington/ Florence	Pisgah Road to Main Street (US 52)	3	Rural - Major Collector	2	3	8,600	7,700	0.895	2.27	9%	693	3	12	1.000	5	4	0.333	4	5	0.417	3	3.377	4
5	S-588	Third Loop Road	Florence	S Marsh Avenue to S Irby Street	3	Urban - Collector	2	3	8,600	6,200	0.721	3.82	11%	682	5	8	0.667	4	6	0.500	3	7	0.583	3	3.282	5
6	S-24	Oakland Avenue	Florence	E Lucas Street to Wilson Road	2	Urban - Collector	2	3	8,600	6,300	0.733	2.59	11%	693	5	10	0.833	5	5	0.417	3	5	0.417	3	3.159	6
7	S-167	W Darlington Street	Florence	N Cashua Drive to Hoffmeyer Road	4	Urban - Principal Arterial	2	5	14,600	9,900	0.678	2.67	9%	891	5	6	0.500	3	8	0.667	2	4	0.333	4	2.917	7
8	S-13	Hoffmeyer Road	Florence	Anderson Farm Road to N Ebenezer Road	4	Urban - Minor Arterial	2	4	10800	7500	0.694	3.18	6%	450	4	2	0.167	1	7	0.583	3	8	0.667	2	2.668	8
9	S-13	National Cemetery Road	Florence	S Church Street to Stockade Drive	3	Urban - Minor Arterial	2	4	10,800	7,300	0.676	3.32	6%	438	5	4	0.333	2	9	0.750	2	9	0.750	2	2.482	9
10	S-19	Hoffmeyer Road	Darlington/ Florence	Anderson Farm Road to Timmonsville Highway (SC 340)	4	Urban - Minor Arterial	2	4	10,800	4,150	0.384	3.29	6%	249	3	5	0.417	3	11	0.917	1	11	0.917	1	1.929	10
11	S-54	Southborough Road	Darlington/ Florence	N Sally Hill Road to Pine Needles Road	3	Urban - Local/Collector	2	4	8,600	2,150	0.250	3.89	6%	129	4	1	0.083	1	12	1.000	1	12	1.000	1	1.839	11
12	S-112	Pisgah Road/Ebenezer Road	Florence	Presbyterian Road to Hoffmeyer Road	3	Rural - Major Collector	2	4	8,600	4,400	0.512	1.80	9%	396	3	3	0.250	2	10	0.833	1	10	0.833	1	1.780	12

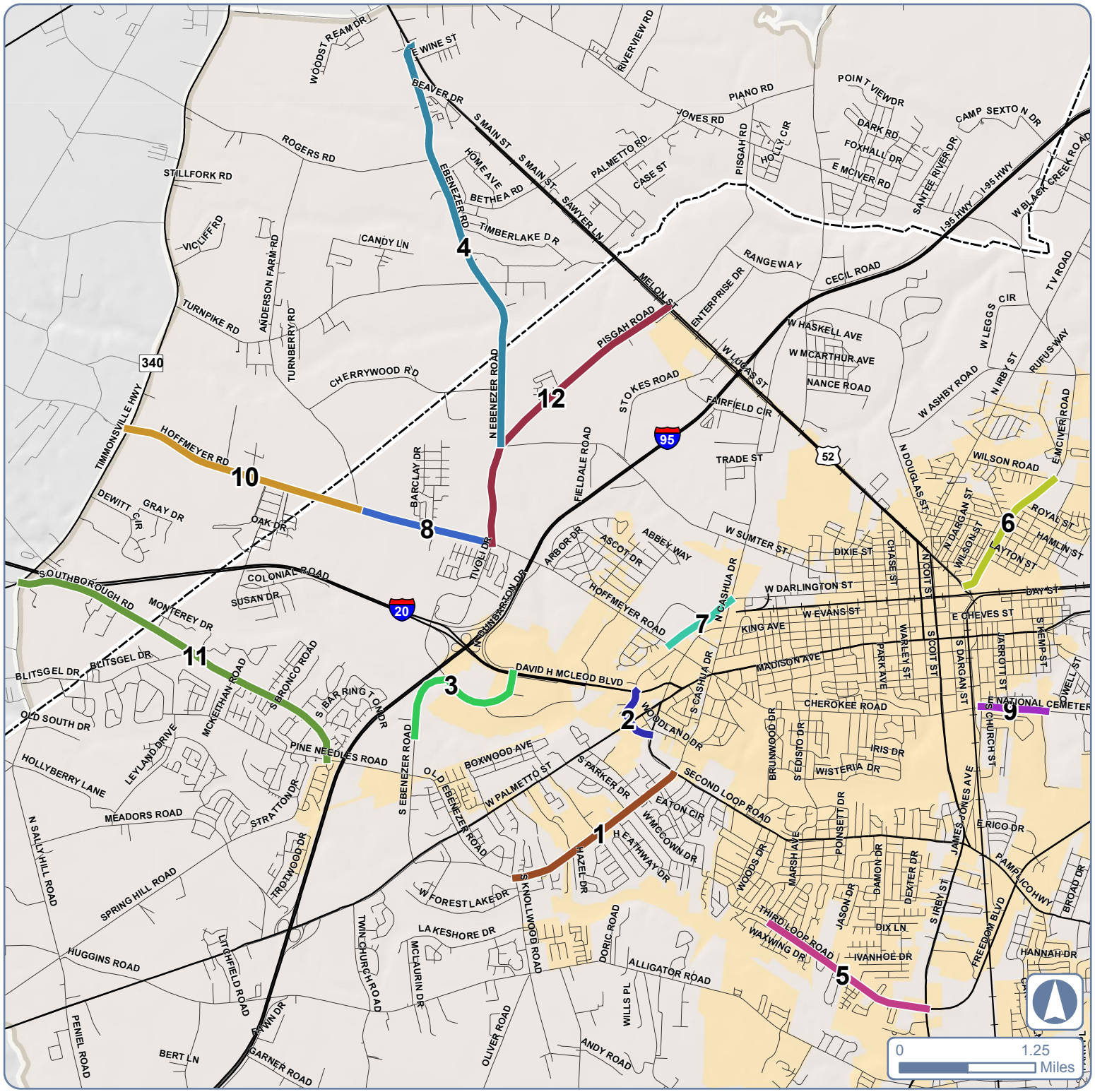


Figure 5.7

Prioritized Roadway Widening Improvements

Project ID

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Note:
Recommendations shown are widening projects only.

2035 LRTP

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Access Management

According to the FHWA, access management "provides access to land development while simultaneously preserving the flow of traffic on the surrounding system in terms of safety, capacity, and speed." The Access Management Manual states that access management results from a cooperative effort between state and local agencies and private land owners to systematically control the "location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway."

The ability of motorists to travel through a given roadway segment is essential for both transportation system efficiency and economic development. Access management balances the needs of motorists using a roadway with the needs of adjacent property owners dependent upon access to the roadway. Poor access management, the function and character of major roadways can deteriorate and adjacent properties can suffer from declining property values and high turnover. This concern is greatest along developed (or developing) corridors such as US 52 and US 76. The limited funds available for transportation investments make access management an even more important consideration.

Access Management Overview

Poor access management directly affects the livability and economic vitality of commercial corridors, ultimately discouraging potential customers from entering the area. A corridor with poor access management lengthens commute times, creates unsafe conditions, lowers fuel efficiency, and increases vehicle emissions. Corridors with poor access management often have increased crashes between motorists, pedestrians, and cyclists; worsening efficiency of the roadway; congestion outpacing growth in traffic; spillover cut-through traffic on adjacent residential streets; and limited sustainability of commercial development.

Table 5.5 describes a few of the benefits of access management.

Table 5.5 – Benefits of Corridor Access Management

User	Benefit
Motorists	▪ Fewer delays and reduced travel times ▪ Safer traveling conditions
Bicyclists	▪ Safer traveling conditions ▪ More predictable motorist movements ▪ More options in a connected street network
Pedestrians	▪ Fewer access points and median refuges increase safety ▪ More pleasant walking environment
Transit Users	▪ Fewer delays and reduced travel times ▪ Safer, more convenient trips to and from transit stops in a connected street and sidewalk network
Freight	▪ Fewer delays and reduced travel times lower cost of delivering goods and services
Business Owners	▪ More efficient roadway system serves local and regional customers ▪ More pleasant roadway corridor attracts customers ▪ Improved corridor aesthetics ▪ Stable property values
Government Agencies	▪ Lower costs to achieve transportation goals and objectives ▪ Protection of long-term investment in transportation infrastructure
Communities	▪ More attractive, efficient roadways without the need for constant road widening

Access Management Strategy Toolkit

Site Access Treatments

Improvements that reduce the total number of vehicle conflicts should be a key consideration during the approval of redeveloped sites along corridors identified for access management programs. Site Access Treatments include the following:

- Improved On-Site Traffic Circulation
- Number of Driveways
- Driveway Placement/Relocation
- Cross Access

Improved On-Site Traffic Circulation

One way to reduce traffic congestion is to promote on-site traffic circulation. Pushing back the throat of an entrance, as shown in the figures below, helps to avoid spillback onto the arterial. This action improves both the safety and efficiency of the roadway. A minimum separation of 100 feet should be provided to prevent internal site operations from affecting an adjacent public street, ultimately causing spillback problems. Approximate construction cost varies and usually is the responsibility of private development.



Number of Driveways

Only the minimum number of connections necessary to provide reasonable access should be permitted. For those situations where outparcels are under separate ownership, easements for shared access can be used to reduce the number of necessary connections. Reducing the number of access points also decreases the number of conflict points, making the arterial safer and more efficient. Approximate construction cost varies and is usually the responsibility of private development.

Driveway Placement/Relocation

Driveways located close to intersections create and contribute to operational and safety issues. These issues include intersection and driveway blockages, increased points of conflict, frequent/unexpected stops in the through travel lanes, and driver confusion as to where vehicles are turning. Driveways close to intersections should be relocated or closed, as appropriate. As a best planning practice, no driveway should be allowed within 100 feet of the nearest intersection.



Cross Access

Cross access is a service drive or secondary roadway that provides vehicular access between two or more continuous properties. Such access prevents the driver from having to enter the public street system to travel between adjacent uses. Cross access can be a function of good internal traffic circulation at large developments with substantial frontage along a major roadway. Similarly, backdoor access occurs when a parcel has access to a parallel street behind buildings and away from the main line. When combined with a median treatment, cross access and backdoor access ensure that all parcels have access to a median opening or traffic signal for left-turn movements.



Median Treatments

Segments of a corridor with sufficient cross access, backdoor access, and on-site circulation may be candidates for median treatments. A median-divided roadway improves traffic flow, reduces congestion, and increases traffic safety — all important goals of access management. While medians restrict some left-turn movements, overall traffic delays are reduced by removing conflicting vehicles from the mainline. Landscaping and gateway features incorporated into median treatments improve the aesthetics of the corridor, in turn encouraging investment in the area. Median treatments include the following:

- Non-Traversable Median
- Median U-Turn Treatment
- Directional Cross (Left-Over Crossing)
- Left-Turn Storage Bays
- Offset Left-Turn Treatment

Non-Traversable Median



These features are raised or depressed barriers that physically separate opposing traffic flows. Inclusion in a new cross-section or retrofit of an existing cross-section should be considered for multi-lane roadways with high pedestrian volumes or collision rates as well as in locations where aesthetics are a priority. A non-traversable median requires sufficient cross and backdoor access.

The advantage of non-traversable medians include increased safety and capacity by separating opposing vehicle flows, providing space for pedestrians to find refuge, and restricting turning movements to locations with appropriate turn lanes. Disadvantages include increased emergency vehicle response time (indirect routes to some destinations), inconvenience, increased travel distance for some movements, and potential opposition from the general public and affected property owners. To overcome some of these disadvantages, sufficient spacing and location of u- and left-turn bays must be identified. Approximate construction cost varies.

Median U-Turn Treatment



These treatments involve prohibiting or preventing minor street or driveway left turns between signalized intersections. Instead, these turns are made by first making a right turn and then making a u-turn at a nearby median opening or intersection. These treatments can increase safety and efficiency of roadway corridors with high volumes of through traffic, but should not be used where there is not sufficient space available for the provision of u-turn movements. The location of u-turn bays must consider weaving distance, but also not contribute to excessive travel distance.

Advantages of median u-turn treatments include reduced delay for major intersection movements, potential for better two-way traffic progression (major and minor streets), fewer stops for through traffic, and fewer points of conflict for pedestrians and vehicles at intersections. Disadvantages include increased delay for some turning movements, increased travel distance, increased travel time for minor street left turns, and increased driver confusion. Approximate construction cost is $50,000 to $60,000 per median opening.

Directional Crossover (Left-Over Crossing)



When a median exists on a corridor, special attention must be given to locations where left turns are necessary. A left-over is a type of directional crossover that prohibits drivers on the cross road (side street) from proceeding straight through the intersection with the main road, but allows vehicles on the mainline to turn left onto the cross road. Such designs are appropriate in areas with high traffic volumes on the major road and lower volumes of through traffic on the cross road, particularly where traffic needs to make left turns from the main line onto the minor street. A properly implemented left-over crossing reduces delay for through-traffic and diverts some left-turn maneuvers from intersections. By reducing the number of conflict points for vehicles along the corridor, these treatments improve safety.

Left-Turn Storage Bays

Where necessary, exclusive left-turn lanes/bays should be constructed to provide adequate storage space exclusive of through traffic for turning vehicles. The provision of these bays reduces vehicle delay related to waiting for vehicles to turn and also may decrease the frequency of collisions attributable to lane blockages. In some cases, turn lanes/bays can be constructed within an existing median. Where additional right-of-way is required, construction may be more costly.

Offset Left-Turn Treatment

Exclusive left-turn lanes at intersections generally are configured to the right of one another, which causes opposing left-turning vehicles to block one another's forward visibility. An offset left-turn treatment shifts the left-turn lanes to the left, adjacent to the innermost lane of oncoming through traffic. In cases where permissive left-turn phasing is used, this treatment can improve efficiency by reducing crossing and exposure time and distance for left-turning vehicles. In addition, the positive offset improves sight distance and may improve gap recognition. In locations with sufficient median width, this treatment can be easily retrofitted. Where insufficient right-of-way width exists, the construction of this treatment can be difficult and costly. As a result, approximate construction costs vary.



Intersection and Minor Street Treatments

The operation of signalized intersections can be improved by reducing driver confusion, establishing proper curb radii, and ensuring adequate laneage of minor street approaches. Intersection and Minor Street Treatments include the following:

- Skip Marks (Dotted Line Markings)
- Intersection and Driveway Curb Radii
- Minor Street Approach Improvements

Skip Marks (Dotted Line Markings)

These pavement markings can reduce driver confusion and increase safety by guiding drivers through complex intersections. Intersections that benefit from these lane markings include offset, skewed, or multi-legged intersections. Skip marks are also useful at intersections with multiple turn lanes. The dotted line markings extend the line markings of approaching roadways through the intersection. The markings should be designed to avoid confusing drivers in adjacent or opposing lanes.

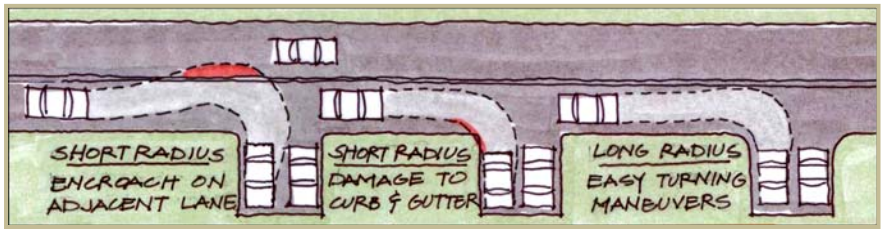
Minor Street Approach Improvements

At signalized intersections, minor street vehicular volumes and associated delays may require that a disproportionate amount of green time be allocated to the minor street, contributing to higher-than-desired main street delay. With laneage improvements to the minor street approaches, such as an additional left-turn lane or right-turn lane, signal timing often can be re-allocated and optimized.

Intersection and Driveway Curb Radii

Locations with inadequate curb radii may cause turning vehicles to use opposing travel lanes to complete their turning movement. Inadequate curb radii may cause vehicles to "mount the curb" as they turn a corner and cause damage to the curb and gutter, sidewalk, and any fixed objects located on the corner. This maneuver also can endanger pedestrians standing on the corner. Curb radii should be adequately sized for area context and likely vehicular usage.





One-Way Frontage Roads

Many older major roadway corridors have two-way service roads along both sides of the street. Converting these service roads to one-way with slip ramps has the potential to improve their safety and efficiency — decreasing the number of intersection conflict points from 96 (two-way) to 36 (one-way) at minor road intersections and also reducing confusion at intersections. If applied, the addition of "back door" collector street access will be needed prior to one-way conversion. Approximate construction cost is $1,000,000 per mile.

Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) provide numerous benefits when implemented as part of an overall transportation management strategy. ITS solutions use communications and computer technology to manage traffic flow in an effort to reduce crashes, mitigate environmental impacts such as fuel consumption and emissions, and reduce congestion from normal and unexpected delays. Successful systems include a variety of solutions that provide surveillance capabilities, remote control of signal systems components, seamless sharing of traveler information with the public, and even allow emergency vehicles to have priority to proceed safely through signalized intersections. Intelligent Transportation Systems include:

- Signalization
- Progressive-Controlled Signal System
- Dynamic Message Signs (DMS)
- Closed Circuit Television Traffic Monitoring
- Emergency Vehicle Preemption

Signalization

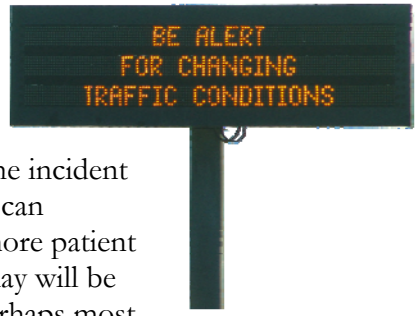
The volume of traffic attracted to some side streets or site driveways is more than can be accommodated acceptably under an unsignalized condition. Delays for minor street movements as well as left-turn movements on the main street may create or contribute to undue delays on the major roadway and numerous safety issues. The installation of a traffic signal at appropriate locations can mitigate these types of issues without adversely affecting the operation of the major roadway provided they are spaced appropriately. Approximate construction cost is $60,000 per signal.

Progressive-Controlled Signal System

A progressive-controlled signal system coordinates the traffic signals along a corridor to allow vehicles to move through multiple signals without stopping. Traffic signals are spaced appropriately and synchronized so when a vehicle is released from one intersection the signal at the next intersection will be green by the time the vehicle reaches it.

Adaptive signal control involves continuously collecting automated intersection traffic volumes and using the volumes to alter signal timing and phasing to best accommodate actual — real-time — traffic volumes. Adaptive signal control can increase isolated intersection capacity as well as improve overall corridor mobility by up to 20% during off-peak periods and 10% during peak periods. Approximate construction cost is $250,000 per system and $10,000 per intersection in addition to 25% of capital costs in training, etc.

Dynamic Message Signs (DMS)



Dynamic Message Signs alert vehicles of congestion or incidents. DMS units give general alerts, such as "congestion ahead" or specific details on the location of the incident or predicted travel times so motorists can mentally prepare. Often, drivers are more patient if they can anticipate how long the delay will be or how far the congestion spreads. Perhaps most importantly, DMS informs drivers who can choose alternate travel routes during heavy congestion, thereby reducing the volume on the freeway, the likelihood of additional incidents, and the average travel time for the system as a whole.

Closed Circuit Television Traffic Monitoring



Closed Circuit Television (CCTV) cameras primarily are used on interstate facilities and major arterials to provide visual traffic volume and flow information to traffic management or monitoring centers. These centers use this information to deploy incident response patrols/equipment and to provide roadway travel delay information to motorists. By having visual roadway information, traffic management centers are able to identify incidents quickly and respond appropriately and efficiently, helping to reduce the effect of incidents on a single location or on multiple roadways. Approximate construction cost is $20,000 per location.

Emergency Vehicle Preemption

This strategy involves an oncoming emergency or other suitably equipped vehicle changing the indication of a traffic signal to green to favor the direction of desired travel. Preemption improves emergency vehicle response time, reduces vehicular lane and roadway blockages, and improves the safety of the responders by stopping conflicting movements. Approximate construction cost is $5,000 to $7,000 per intersection plus $2,000 per equipped vehicle.

Corridors and Solutions

While acknowledging some access management strategies are better suited to one corridor type than another, **Table 5.6** lists four popular cross sections with local examples and potential access management strategies for each corridor type.

Access Management Corridors

Studies of the effects of access management on traffic operations indicate the techniques help increase safety, maintain desired speed, and reduce delays. Several corridors were identified by local staff, the TPAC, the general public as experiencing congestion and unsafe travel conditions. Many of these corridors have been selected for access management improvements as shown in **Figure 5.2**. The 2035 FLATS LRTP also reviewed in detail three corridors and one intersection:

- Palmetto Street (US 76/US 301) between Ballard Street and North Williamson Road/McCurdy Road
- Pamplico Highway (SC 51) between Irby Street and Howe Springs Road/Claussen Road
- Lucas Street (US 52) between I-95 and Edwards Circle
- Five Points intersection

The following sections illustrate potential strategies to alleviate congestion, improve safety, and enhance aesthetics for these areas.

Table 5.6 – Types of Corridors and Potential Solutions

Cross Section	Access Management Strategy	
Five Lanes (Predominantly Retail Land Uses) Local Example ▪ Segments of Pamplico Hwy (SC 51) ▪ Second Loop Rd	▪ Adaptive signal control ▪ Median U-turn treatment ▪ Non-traversable median treatment ▪ Offset left turn treatment ▪ Emergency vehicle preemption ▪ Driveway throat length	▪ Intersection / driveway curb radii ▪ Left-turn storage bays ▪ Minor street approach improvement (left-turn lane and right-turn lane) ▪ Consolidate driveways/cross access ▪ Driveway placement/relocation
Four-Lane Divided with Landscaped Median Local Example ▪ Williston Rd ▪ Segments of Lucas St (US 52)	▪ Adaptive signal control ▪ Median U-turn treatment ▪ Offset left turn treatment ▪ Intersection / driveway curb radii ▪ Signalization (driveways) ▪ Left-turn storage bays	▪ Minor street approach improvement (left-turn lane and right-turn lane) ▪ Emergency vehicle preemption ▪ Driveway throat length ▪ Consolidate driveways/cross access ▪ Driveway placement/relocation
Four-Lane Undivided Local Example ▪ Segments of Palmetto St (US 76) ▪ Coit St	▪ Adaptive signal control ▪ Offset left turn treatment ▪ Intersection / driveway curb radii ▪ Signalization (driveways) ▪ Left-turn storage bays	▪ Minor street approach improvement (left-turn lane and right-turn lane) ▪ Emergency vehicle preemption ▪ Driveway throat length ▪ Consolidate driveways/cross access ▪ Driveway placement/relocation
Four-Lane with Service Roads and Partially Controlled Access Local Example ▪ Segments of Lucas St (US 52) ▪ Segments of David McLeod Blvd	▪ Adaptive signal control ▪ CCTV traffic monitoring ▪ Non-traversable median treatment	▪ One way frontage road system with skip ramps ▪ Emergency vehicle preemption

Palmetto Street (US 76/US 301)





Palmetto Street between Ballard Street and North Williamson Road/McCurdy Road is currently a four lane roadway. The majority of this section has a center two way left turn lane, but portions of the corridor have a grassy median. This corridor not only serves as a regional linkage, it also connects significant activity centers such as the Florence Regional Airport and Francis Marion University. Along the corridor, there is a mix of commercial and residential uses. A portion of the road near the airport also has a frontage road serving adjacent commercial uses.

Currently, this corridor is approaching capacity. Congestion levels are anticipated to increase by 2035, with some sections at capacity. However, there are several opportunities to make improvements to the corridor that would not involve a significant capacity expansion. The access management plan for this corridor (**Figure 5.8**) highlights several different improvement types, such as driveway closures, intersection improvements, bicycle and pedestrian enhancements, median installation, and cross access for future developments.

Some of the most significant improvements include:

- **Intersection improvements at Palmetto Street and McCurdy Road.** These improvements are focused on enhancing the intersection for pedestrians and bicyclists, and include high visibility crosswalks, pedestrian countdown signals, and pedestrian-level lighting.
- **Grade-separated railroad crossing between Cromwell Drive and O'Brian Road.** This railroad bridge is no longer in service. However, since this grade separation and route already exists, this rail corridor could potentially be explored for conversion using the Rails to Trails initiative. This route could not only serve some of the non-motorized traffic along Palmetto Street, but would also connect to the residential neighborhoods to the south.
- **Cheves Street and Palmetto Street intersection redesign.** This intersection was first identified as a priority for redesign through the Traffic and Parking Analysis for McLeod Regional Medical Center Expansion. This intersection is skewed, which may cause confusion and safety issues. The intersection redesign would redirect Cheves Street so that it ties into Palmetto Street at a 90-degree angle. Additionally, medians would be put in place along both sides of Palmetto Street to help minimize conflicting turning movements and direct people to the new intersection. Some pavement removal would take place with the elimination of minor street connections.
- **Signal timing on Palmetto Street.** This corridor is a major route that could benefit from a signal timing plan. This would allow signals along the corridor to function as one unit, and maximize the free flow time for drivers along the corridor.

Figure 5.8 — Palmetto Street (US 76/US 301) Access Management Strategies

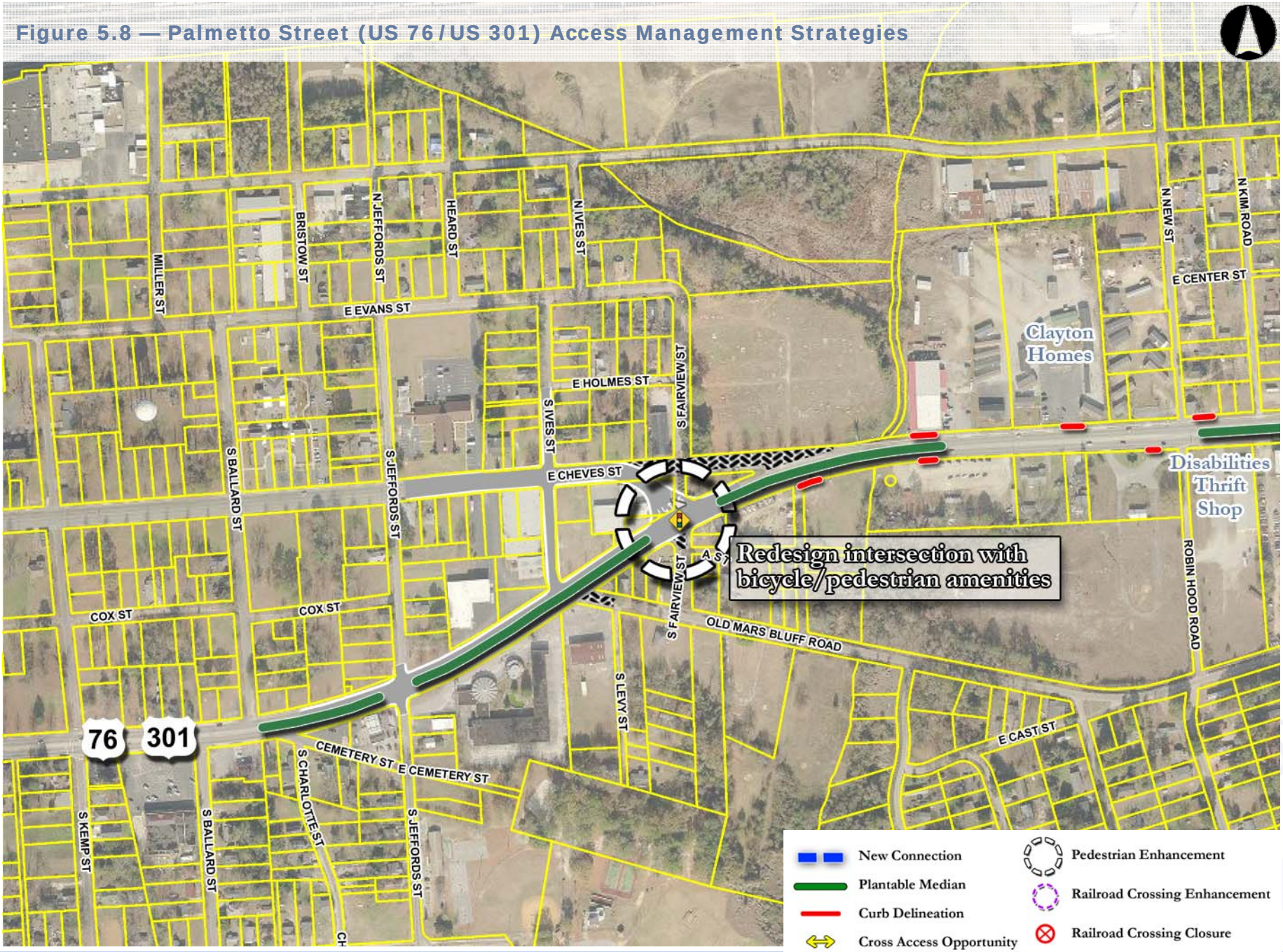


Figure 5.8 — Palmetto Street (US 76 / US 301) – continued

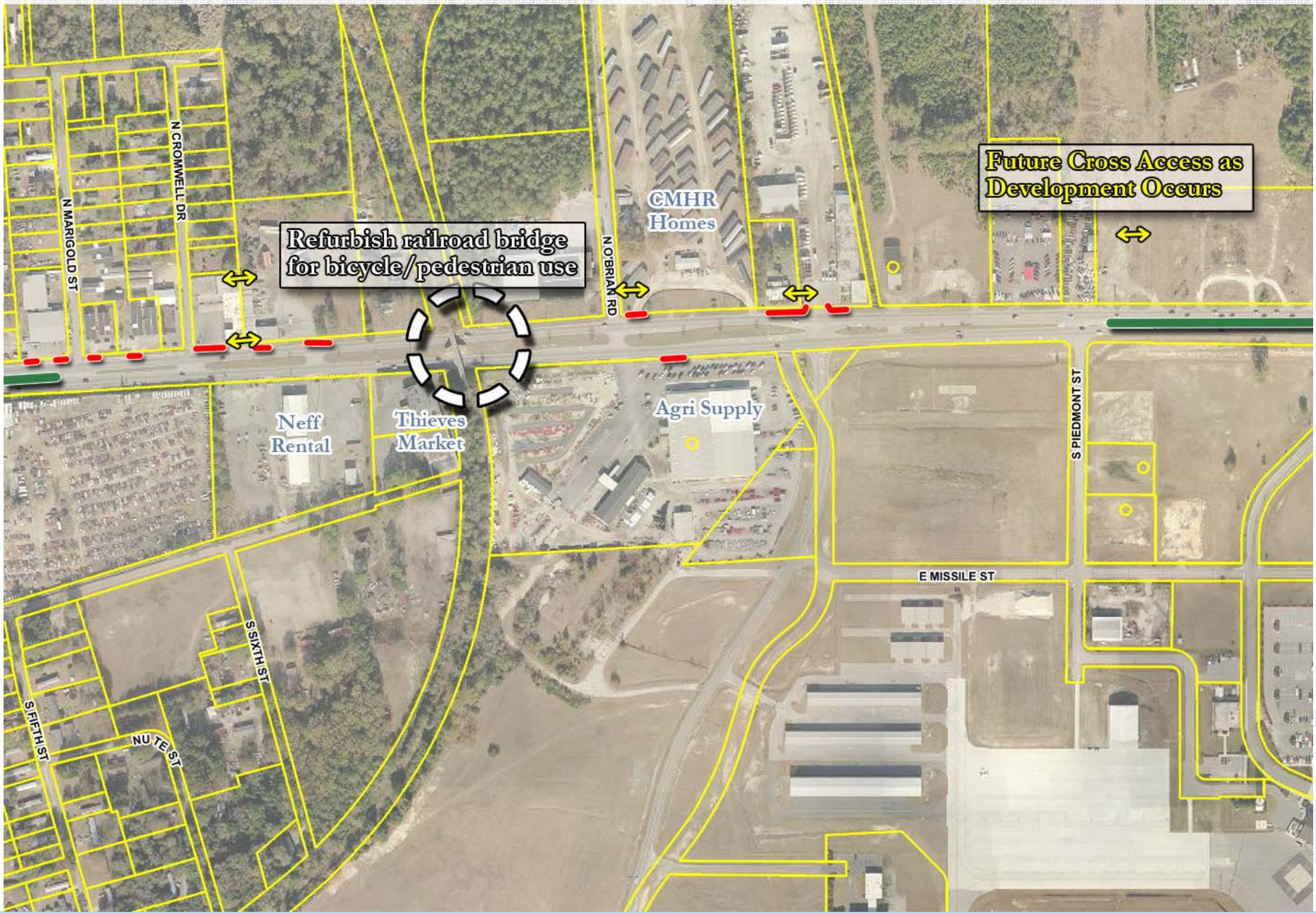


Figure 5.8 — Palmetto Street (US 76/US 301) – continued

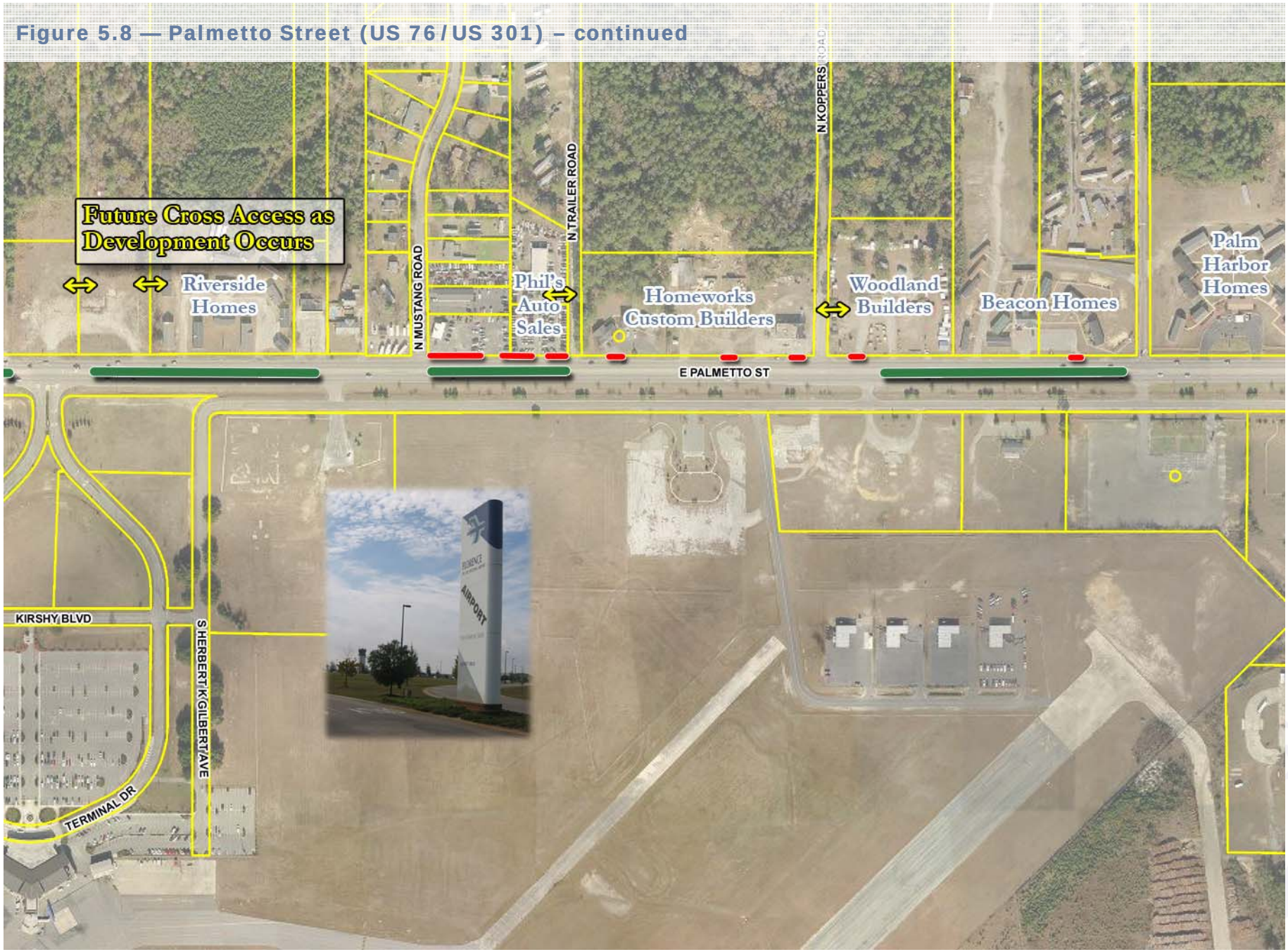
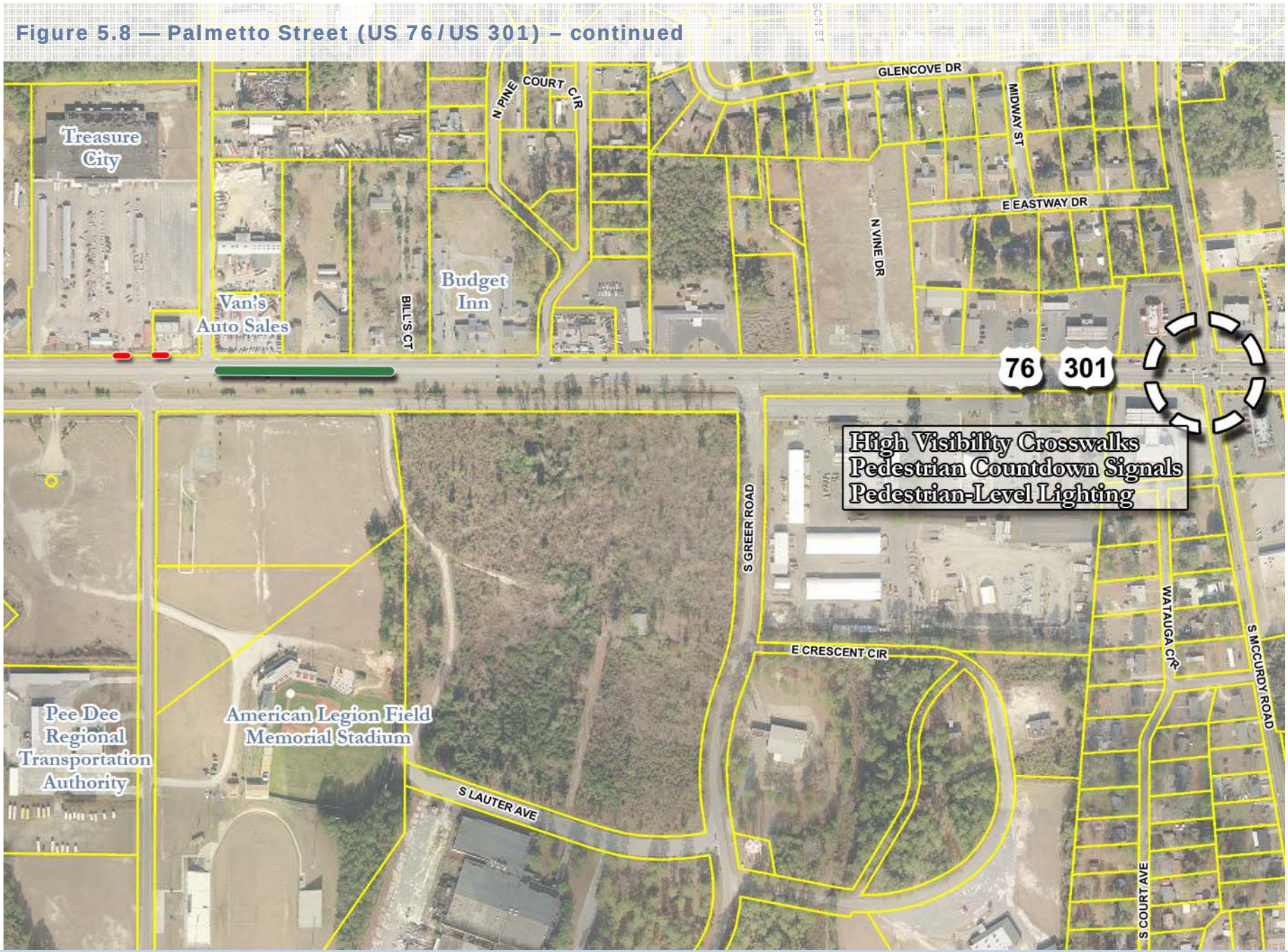


Figure 5.8 — Palmetto Street (US 76/US 301) – continued



Pamplico Highway (SC 51)

Pamplico Highway between Irby Street and Howe Springs Road/Claussen Road is a five lane roadway with a center two way left turn lane. This corridor is a state route that provides connections to several municipalities to the south, and is an important link between the City of Florence and the rest of the county. This section of the corridor links several neighborhoods, serves commercial uses, functions as the primary point of access for the Carolinas Hospital, and provides a link to the Freedom Florence Recreational Complex.

Portions of this corridor are already exceeding capacity, with particular pressure being applied to the section between Broad Drive and Blass Drive. In the future, congestion is expected to increase, with the most significant increases exhibited on the western side of the corridor. To address these concerns, the access management plan (**Figure 5.9**) proposes a set of median additions, driveway closures, collector street linkages, and intersection improvements to enhance the functionality and performance of the corridor.

Some of the key recommendations include:

- **Improvements to the intersection of Pamplico Highway and Irby Street.** Turning movements into and out of the businesses near this intersection cause confusion and can generate delay at the intersection. The installation of medians surrounding this intersection will lead to these site driveways serving only right-in/right-out movements. Enhanced site interconnectivity, elimination of poorly placed driveways, and a collector street connection in the southeast quadrant will help traffic move more efficiently around and between these businesses.
- **Intersection improvements at Pamplico Highway and Freedom Boulevard and at Church Street and Freedom Boulevard.** In order to eliminate the conflicting turn movements from the neighboring commercial developments, medians are recommended for installation at the Pamplico Highway/Freedom Boulevard intersection. These medians will continue with strategic openings throughout the corridor. In order to provide alternatives for traffic in this area, a new collector street linkage is proposed between Montclair Way and Freedom Boulevard. This connection would link with Church Street, and a new traffic signal would be recommended to serve this intersection (assuming appropriate signal warrants can be met).
- **Pedestrian improvements at the intersections of Pamplico Highway with Pine Forest Drive and Howe Springs Road/Claussen Road.** To help the corridor better serve non-motorized traffic, intersection enhancements such as high visibility crosswalks, pedestrian countdown signals, and pedestrian-level lighting are recommended.
- **Signal timing on Pamplico Highway.** The numerous traffic signals on this corridor would perform much more efficiently if signal timing plans were implemented. Signal timing would also need to be coordinated with Carolinas Hospital to ensure that emergency traffic management was adequately provided.





Figure 5.9 — Pamplico Highway (SC 51) Access Management Strategies

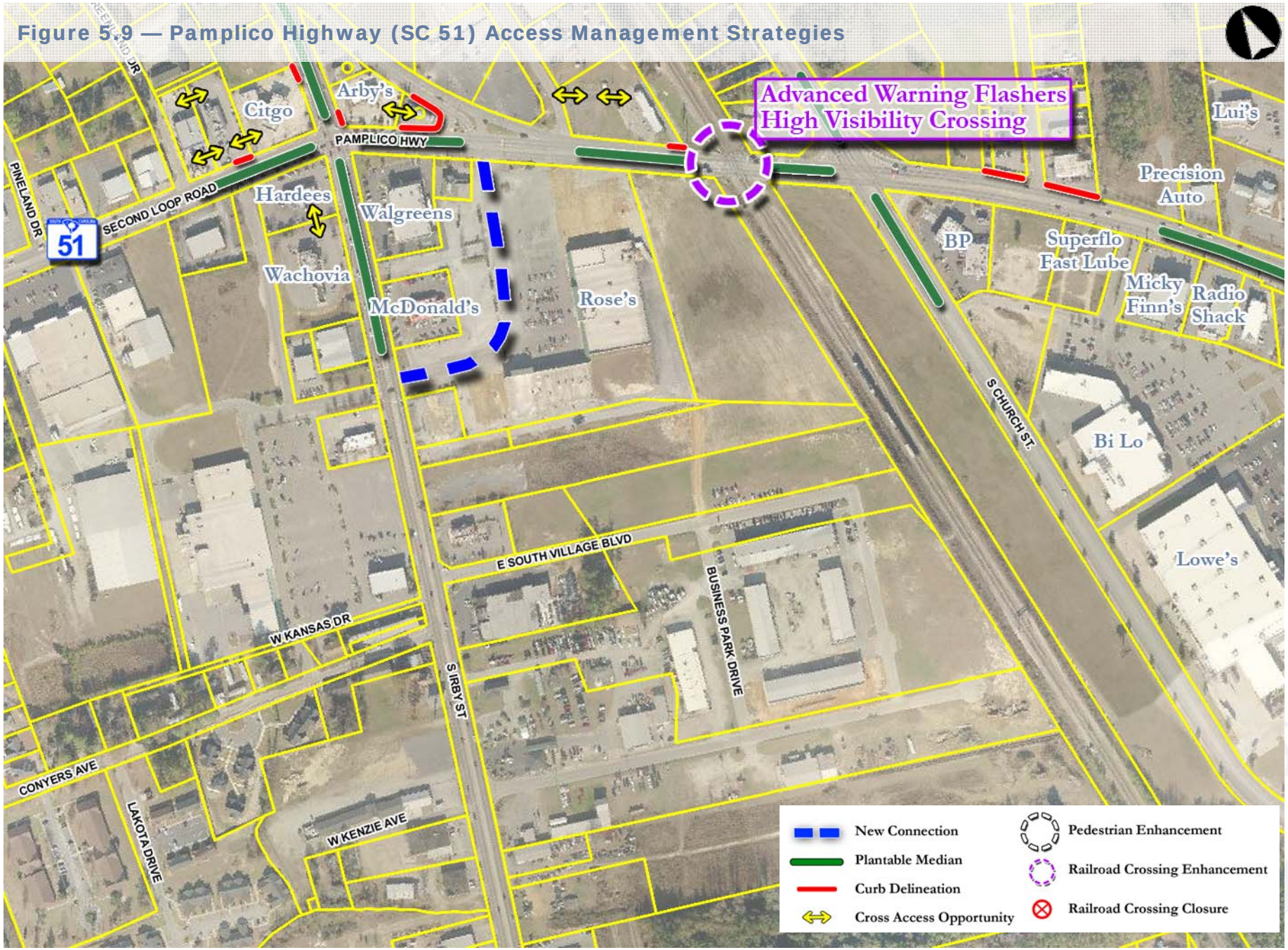


Figure 5.9 — Pamplico Highway (SC 51) – continued

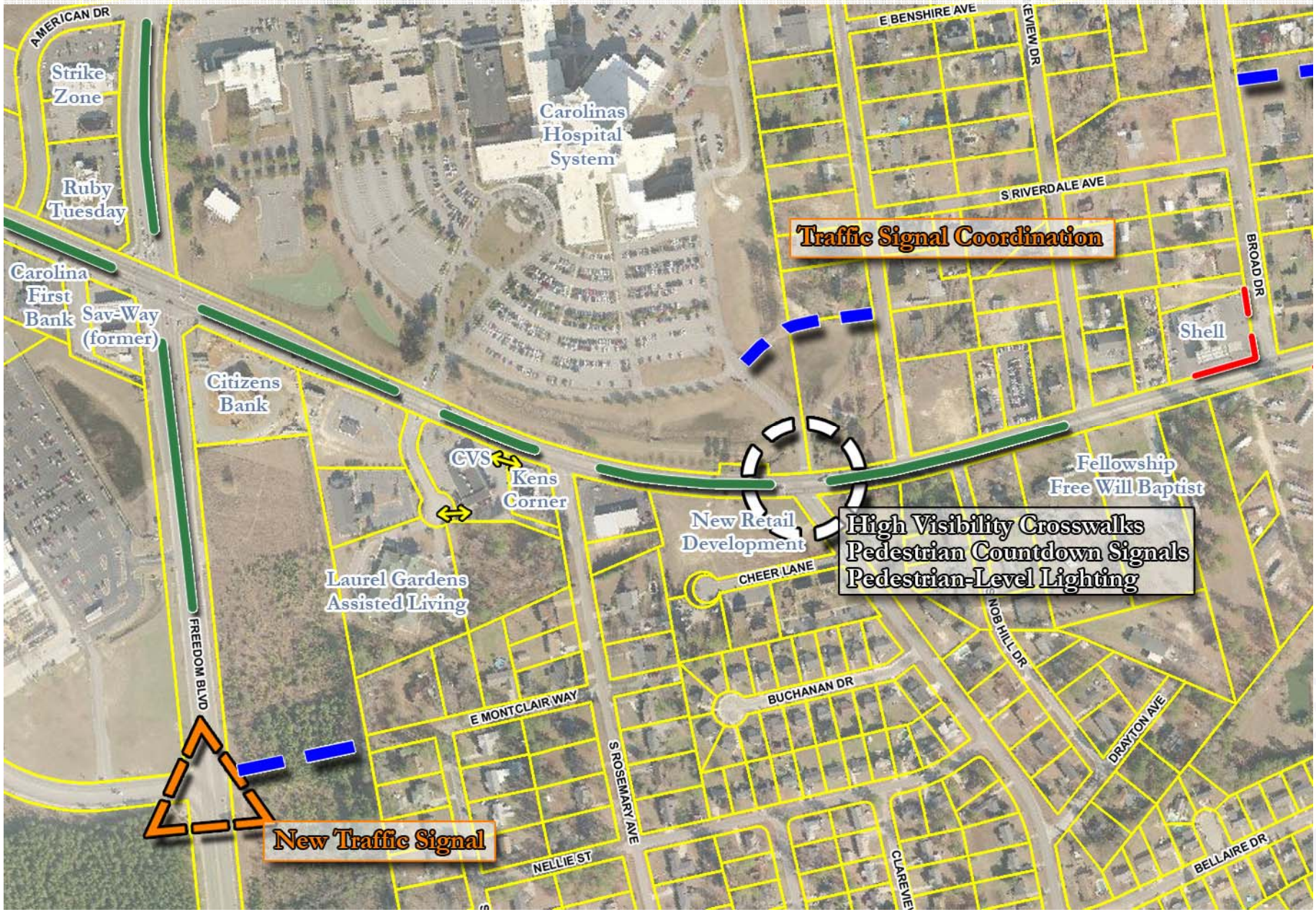


Figure 5.9 — Pamplico Highway (SC 51) – continued

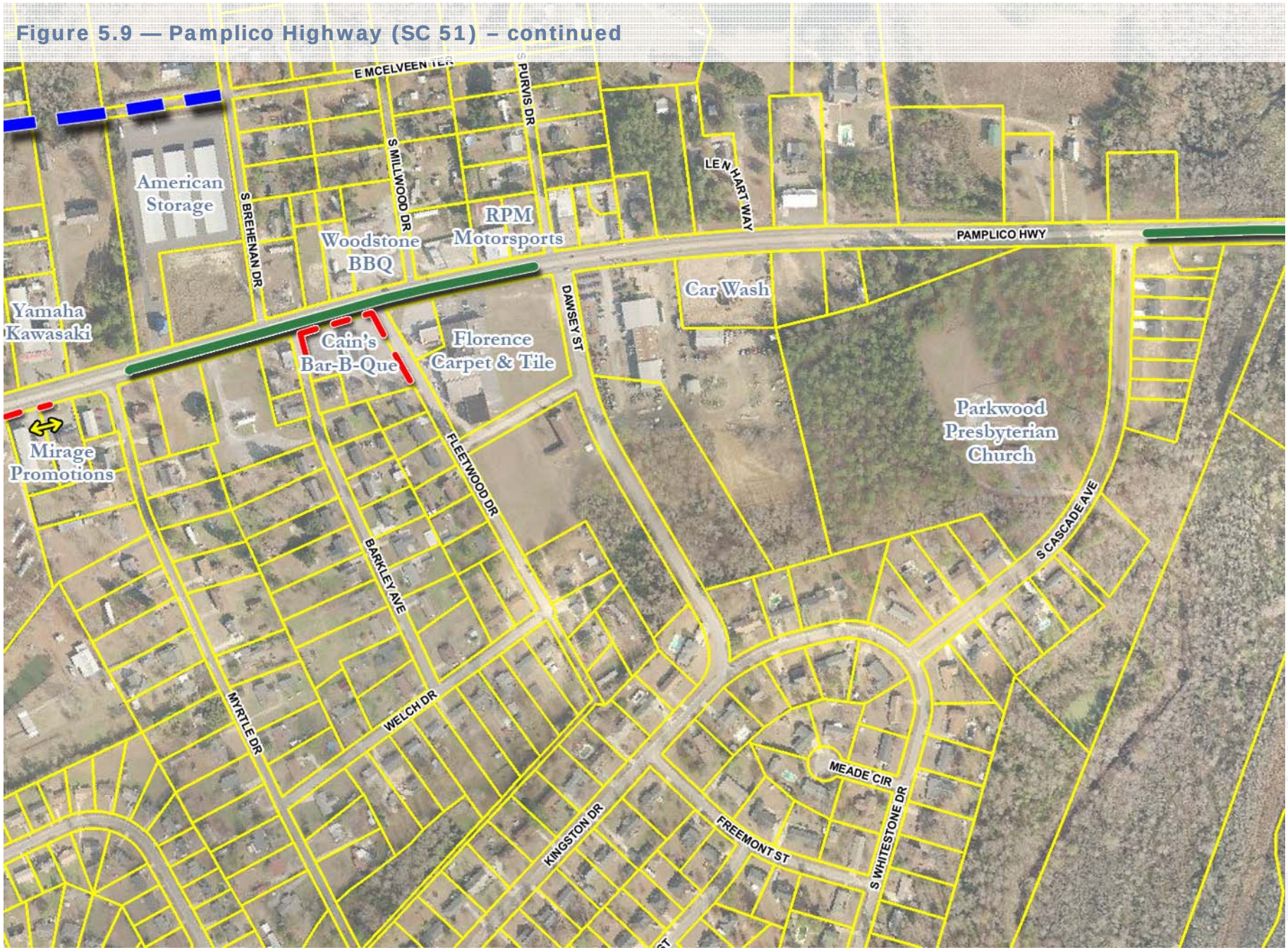
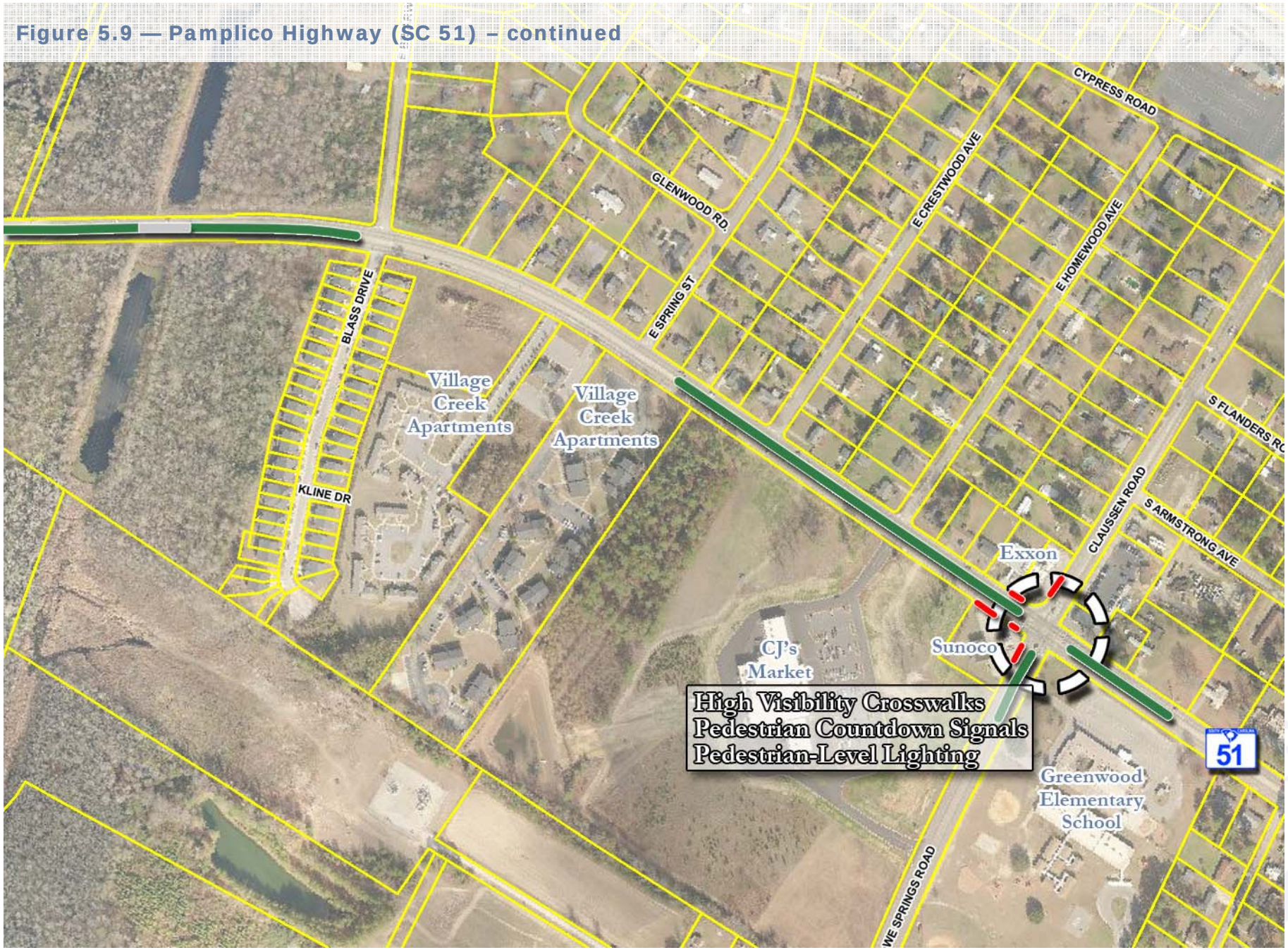


Figure 5.9 — Pamplico Highway (SC 51) – continued



Lucas Street (US 52)

Lucas Street is a five lane roadway between I-95 and Edwards Circle, and a four lane undivided roadway between Edwards Circle and Irby Street. Lucas Street is also designated as US 52 in this section. US 52 connects downtown Florence with suburbs and neighboring communities to the north and south. US 52 is also an important federal highway that runs from the Canadian border in North Dakota to Charleston, SC. Within the studied portion of this corridor, Lucas Street serves a mix of commercial and industrial uses and parallels a railroad track. With the adjacent land uses of this corridor as well as the connections it provides, this corridor has a heavy presence of freight traffic. Members of the public have also commented on aesthetic issues along the corridor such as unattractive signage and intersection treatments.

At this time, the Lucas Street corridor is operating at capacity. Congestion along this section of the corridor is expected to increase significantly in the future, with the corridor operating above capacity by 2035. With the presence of the US route, frontage roads, and interactions with business and the railroad, safety will also continue to be a primary concern on this corridor. To address these issues, the access management plan (**Figure 5.10**) includes a set of intersection and crossing improvements, back-door collector street connections, aesthetic enhancements, median treatments, and driveway closures.





Specific notable recommendations include:

- **New collector street extending Vista Street between Douglas Street and Cashua Drive.** This 2-lane collector street would help provide a parallel route to Lucas Street and back door connection opportunities for businesses along the north side of the corridor. Additional connections would be made to link this road with existing facilities, enhancing the opportunities to use this facility as an alternate route. This new facility would follow an existing easement, reducing right-of-way takings and conflicts. A multi-use path is proposed for construction along this roadway to serve non-motorized traffic that wants to access the Lucas Street area.
- **Railroad crossing enhancements.** Enhanced rail crossings are recommended at Cashua Drive, Schlitz Drive, Mechanicsville Road, Chase Street, and Irby Street. Improvements such as actuated gates and high visibility crossings are recommended to improve the look and functionality of the railroad crossings in these locations.
- **Railroad crossing closures at minor driveways.** Confining railroad crossing opportunities can improve safety, allowing more important crossings to receive additional maintenance funds and by minimizing conflict point opportunities. The crossings recommended for closure serve either vacant property or are secondary site driveways.
- **Signing regulations for the Lucas Road corridor.** Signage regulations are recommended for this corridor. Regulation can be done in the form of citywide ordinance measures, or through the formulation of an overlay district on this corridor to regulate and enhance the appearance of signage.

Figure 5.10 — Lucas Street (US 52) Access Management Strategies

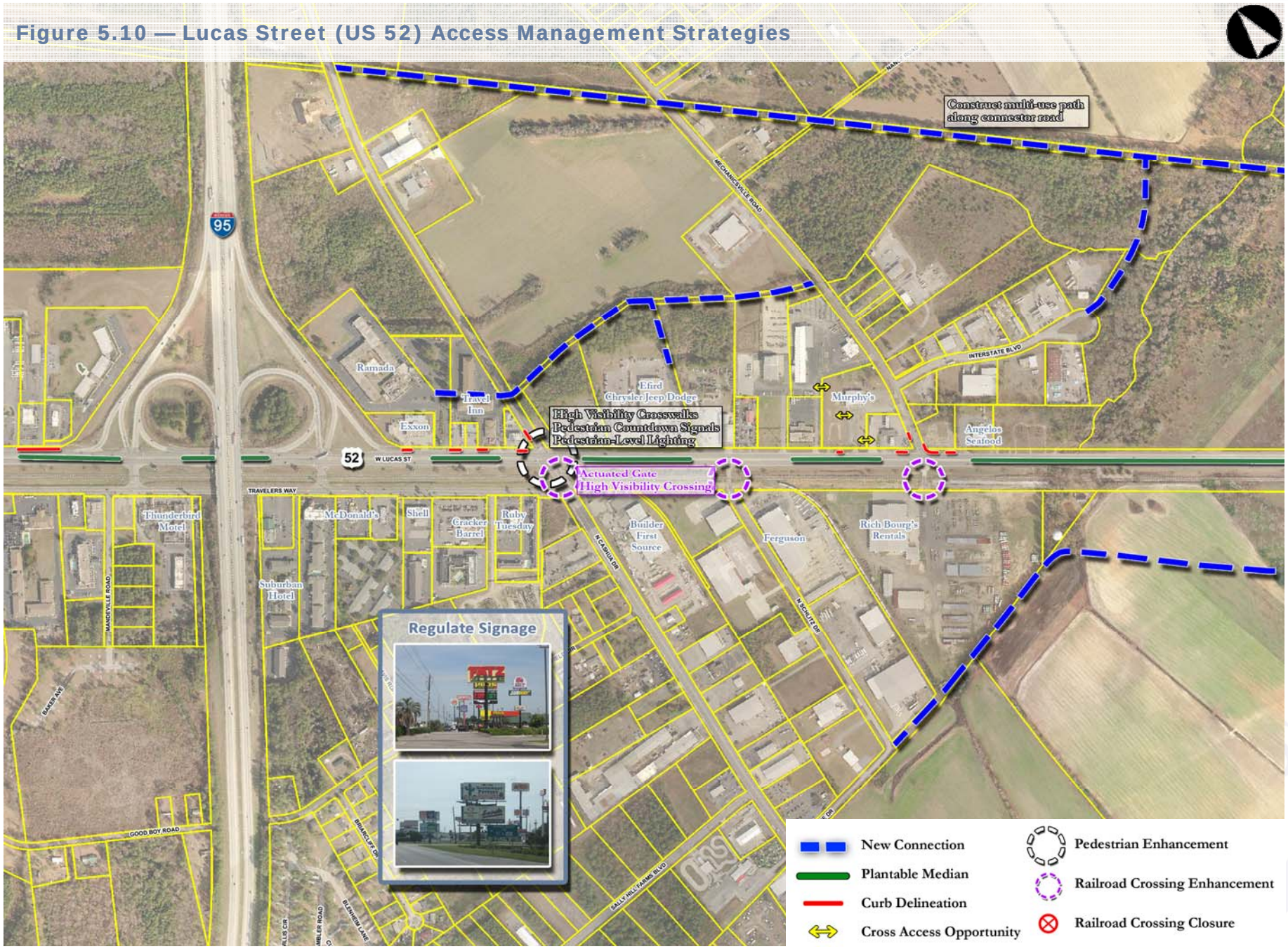
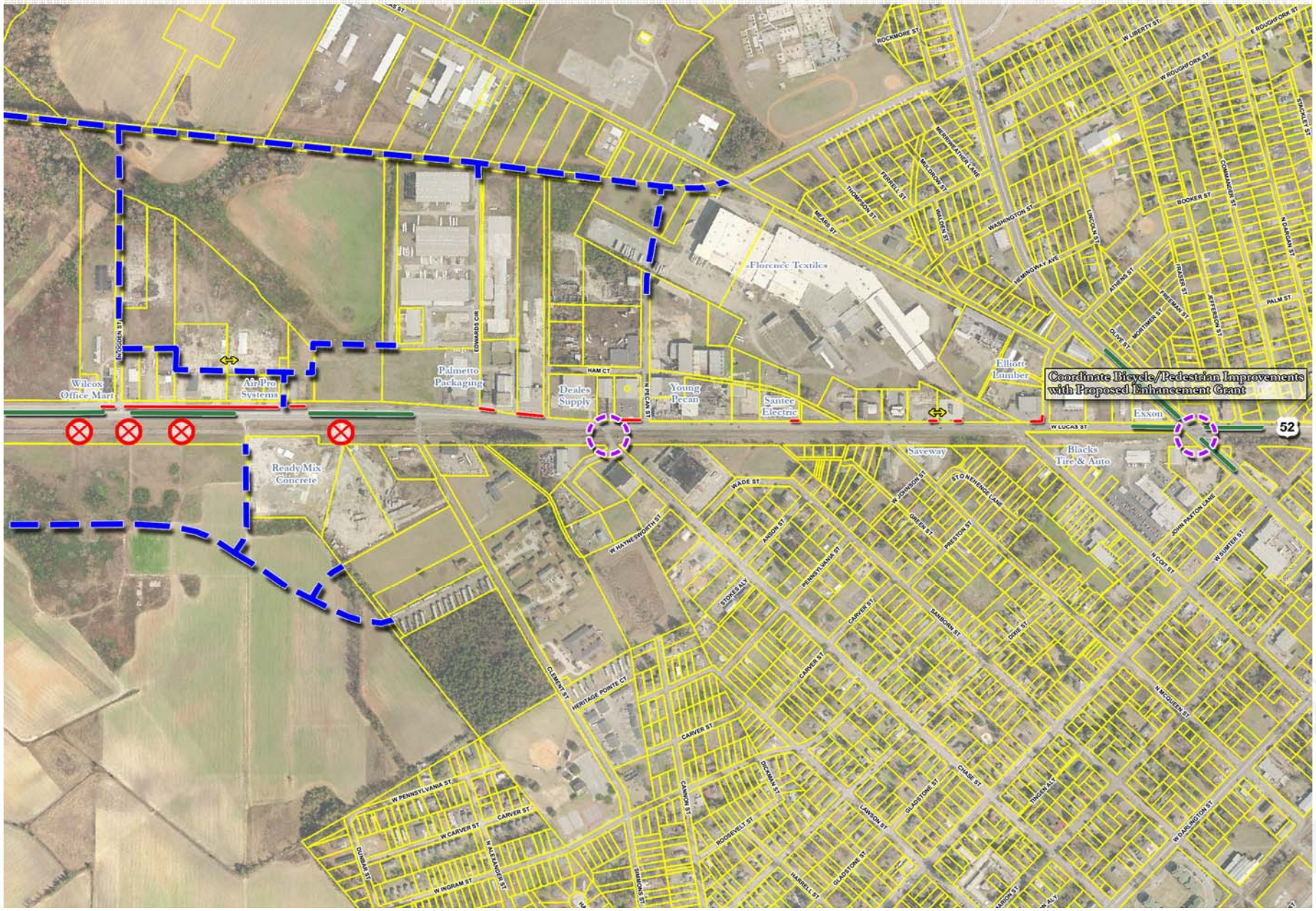


Figure 5.10 — Lucas Street (US 52) – continued



Five Points

The intersection of Cashua Drive, Palmetto Street (US 76), Cherokee Road, and Hoffmeyer Road — known locally as Five Points — consistently is recognized by members of the public as one of the worst transportation issues in the FLATS MPO area. Despite its name, the intersection accommodates movements from six roadway approaches. Additionally, it serves the Florence Mall shopping center and several other retail centers. This intersection currently is controlled using an eight-phase signal and has permitted-protected left-turn arrows on the southeast-bound Hoffmeyer approach and the northwest-bound Cherokee approach.







Members of the Florence County planning staff counted traffic volumes and turning movements at this intersection on June 2, 2009 for both the AM and PM peak hours. Using the data collected, a traffic analysis was conducted to assess the intersection level of service during these times. During both the AM and PM peak hours, traffic operated at LOS E, meaning the intersection was operating at capacity. Additional traffic growth expected in future years for this intersection will make the intersection operate over capacity, increasing congestion and delay.

To address the issues facing Five Points, two different approaches were considered. The first approach examined a range of access management strategies to reduce congestion and enhance safety. The second approach involved a new concept for the intersection, consisting of a two-lane roundabout.



Access Management Strategies

One of the issues facing the Five Points intersection is the prevalence of driveways and curb cuts in proximity to the intersection. The access management approach consolidates or better defines several business driveways in the area. Rather than cutting access to businesses from roads entering the intersection, this approach eliminates duplicate driveways near the intersection that pose safety issues and creates safer driveway locations where motorists can anticipate turning movements.

The presence of two-way left-turn lanes all the way to the intersection on several approaches creates an additional safety issue. The presence of these lanes makes it unclear where motorists may be turning, causing conflicts between vehicles turning into businesses and vehicles turning at the intersection. The access management approach recommends the installation of concrete or landscaped medians for short portions of Palmetto Street, Hoffmeyer Road, and Cashua Drive. These medians would be installed near the intersection, and business driveways in locations with the proposed medians would only allow right-in right-out movements.

While some business owners may be concerned about the median and consolidated driveways making it difficult for customers to get to their businesses, the access management approach includes several measures to mitigate this concern.

- Improved site interconnectivity links adjacent businesses to allow customers to travel between businesses without using the main road. Other benefits include allowing patrons to walk between businesses and helping businesses capture customers from surrounding complementary land uses.
- An improved collector street network around the intersection would allow vehicles to use side roads and back door access points to businesses. In some cases, patrons could avoid Five Points entirely. Roads slated for improvement near Five Points include Rainbow Drive, Gregg Avenue, and potentially Revell Drive and Pineland Road.

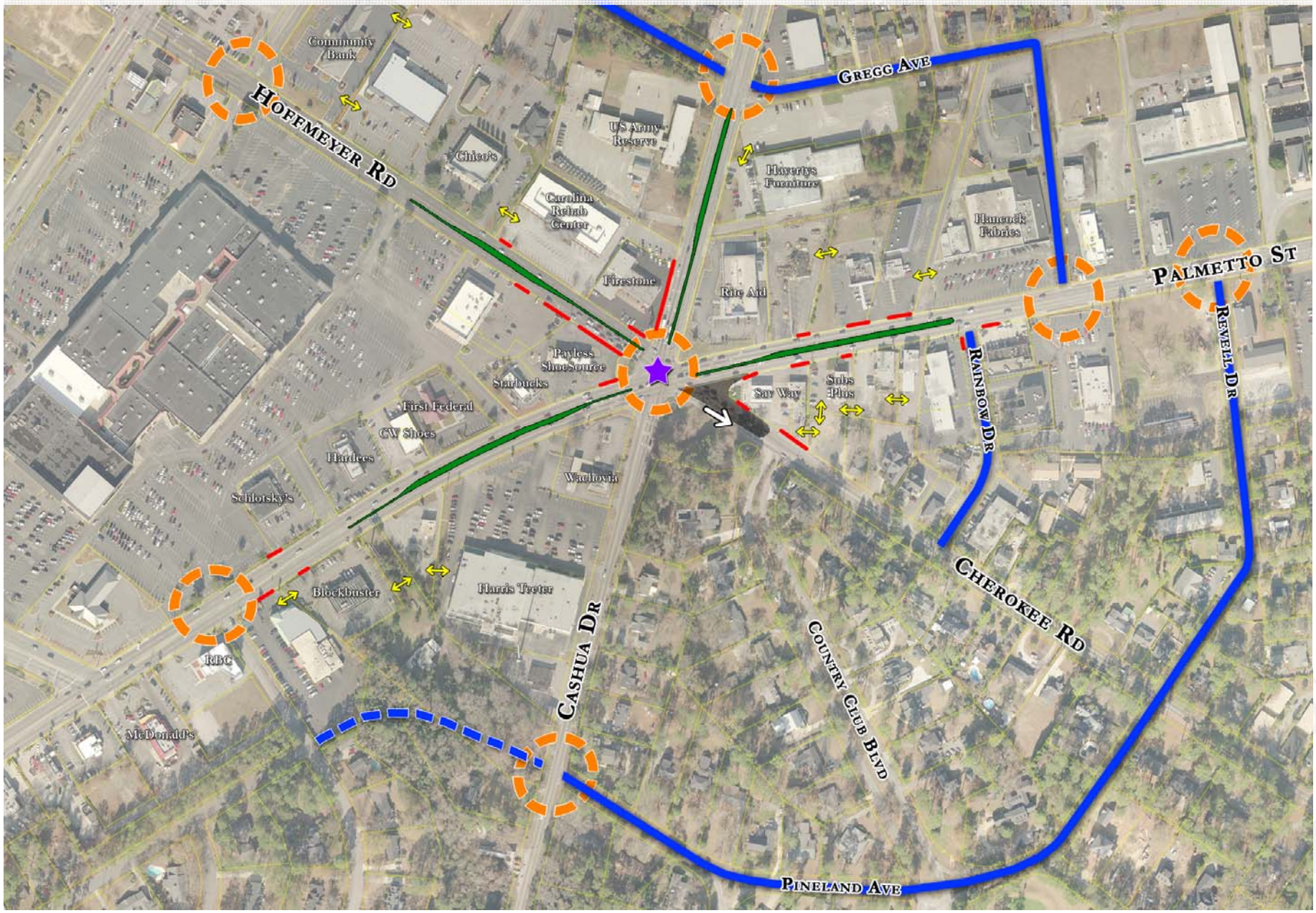


Access management improvements around Five Points also consider bicycle and pedestrian accessibility. Currently, it is very difficult for a bicycle or pedestrian to travel safely through Five Points. A series of bicycle and pedestrian enhancements should be considered not only at this intersection but also at other key crossings in the area. The enhancements of the surrounding collector streets also could be an asset for non-motorized travelers that want to avoid this intersection.

Perhaps the most significant recommendation in the access management alternative is prohibiting vehicles from entering the intersection via Cherokee Road. Cherokee Road is a major connecting corridor for the City of Florence. However, it also is an established residential area and boasts one of the more aesthetically pleasing corridors in the region. While this recommendation eliminates outbound traffic from Cherokee, inbound movements are allowed to continue. The recommended collector street improvements will help outbound traffic divert into other roads. With this roadway removed, the operation of the intersection improves significantly, resulting in a 30 second delay reduction and an intersection LOS C.

The recommendations shown in this alternative are included as **Figure 5.11**.

Figure 5.11 — Five Points — Access Management Strategies



Roundabout Alternative

Roundabouts are becoming more widely accepted and commonplace throughout South Carolina. Florence and Darlington Counties are on record as supporting these improvements in lieu of traffic signals at appropriate intersections. At this time, no roundabouts are located within the FLATS MPO area. For the Five Points intersection, a typical one-lane roundabout would not be sufficient to address the high traffic demands in this area. Instead, the proposed two-lane roundabout would allow more vehicles to enter the roundabout as other vehicles circle. The two-lane roundabout would easily accommodate trucks.

For the roundabout alternative to function effectively, the connection to Cherokee Road likely would be eliminated, though the necessary additional analysis would consider the viability of keeping an exiting lane onto Cherokee from the roundabout. The existing large footprint of the Five Points intersection mitigates most of the right-of-way concern associated with constructing the roundabout. If the center of the roundabout is shifted slightly southeast from the center of the current intersection, the design should not significantly infringe upon existing development in four of the five corners. The fifth corner between Cherokee Road and Cashua Drive currently is home to a small pocket park. The current preliminary design takes a small portion of this park. However, the aesthetic features within and surrounding the roundabout could help mitigate the reduction of this landscaped area. A conceptual rendering of the footprint and approaches of this roundabout are shown in **Figure 5.12**.

The installation of a two-lane roundabout has a dramatic effect on the overall performance of the Five Points intersection. With the roundabout in place, both AM and PM peak hour movements are projected to operate at LOS A, the lowest delay category. The elimination of this signal will allow more continuous movements.

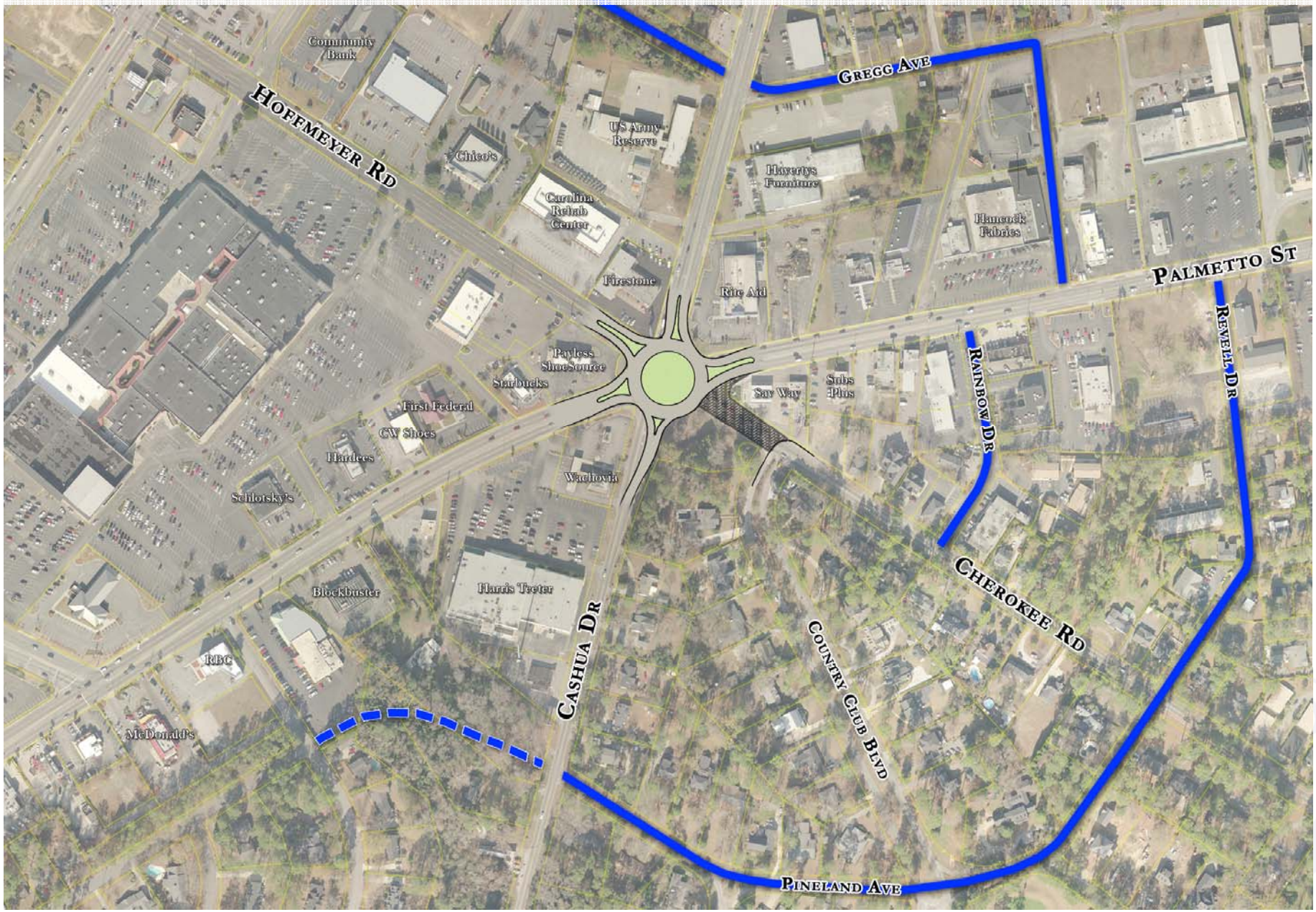
For the roundabout to operate most effectively, some of the access management solutions mentioned previously should be implemented. Enhanced back-door connectivity, driveway consolidation or delineation around the intersection, and installation of medians near the intersection approaches make the roundabout system safer and more effective.







Figure 5.12 — Five Points — Roundabout Alternative



Corridor Signal Timing

Synchronizing the timing of traffic signals along a corridor is one of the most cost effective strategies to maximize roadway capacity. In addition to reducing traveler stops and delay, coordinated traffic signal timing can reduce vehicle emissions and improve safety.

Timing Options

Several options exist for providing traffic signal synchronization. A selection of commonly used options is organized below from least complex to most complex.

GPS Time Sync

Installing global positioning system (GPS) receivers at traffic signals does not provide communication to or between traffic signals but does provide a very basic means of synchronizing traffic signals. To coordinate a corridor, clocks in the signal controllers must be kept in sync with one another. Without a means to keep the clock in each signal controller at the exact time, the clocks will drift due to factors such as an unreliable power source or old electrical components. During signal timing implementation, each signal controller is assigned an offset, relative to the controller's internal clock. Even a few seconds of drift within these internal clocks will compromise the coordination along the corridor. By installing a GPS receiver at each location, the signal controllers are able to regularly synchronize their internal clocks against a common and very reliable time source using GPS signals.

The pros of installing GPS receivers include their low cost, (typically less than $1,000 each), high reliability, and low maintenance. The cons are that GPS receivers do not provide any means of communication between the traffic signals, so it is not possible to make signal timing adjustments without physically entering the information into each signal controller in the field.

Closed-Loop Systems

Simple "closed-loop systems" coordinate a number of signals along a corridor. In a closed-loop system, one of the signal controllers is designated as the master and the remaining are slaves. The master controller uses any number of communications means to "talk" to each of the slaves and synchronize the clocks, change timing parameters, or check their status. The master controller can be accessed remotely and signal timing parameters at all of the traffic signals in the closed-loop system can be modified through communication with the master.

Dial-Up Telephone

A basic means for communicating with the low-bandwidth signal controllers in a closed-loop system is using dial-up telephone modems. Dial-up modems are relatively inexpensive (about $400 each) and easily installed and configured. However, they require the installation of telephone service to the signal (usually about $500 in upfront cost) and a monthly service agreement with the telephone provider (usually about $40 a month based on normal usage).

Twisted Pair Copper Cable / Fiber Optic Cable

Options for providing an agency-owned hard-wire connection between signals primarily are twisted pair copper cable and fiber optic cable. The cable typically is installed either overhead on existing utility poles or underground in new conduit. At the end of each type of cable, modems must be integrated with the signal controllers to transmit and receive data. Generally, twisted pair modems are less expensive than fiber optic modems, but the prices for fiber optic modems have been decreasing over the past decade. Typical costs for twisted pair copper and fiber optic cable installations are shown in **Table 5.7**.

Table 5.7 – Cable Costs			
Type of Cable	**Overhead Installation**	**Underground Installation**	**Modem**
Twisted Pair Copper	$7/ft	$17/ft	$500/signal
Fiber Optic	$5/ft	$15/ft	$1,200/signal

The pros of hard-wire connections include that they are agency-owned rather than leased, more secure than other forms of communication, and provide a higher bandwidth than other forms of communication. The con is the high initial installation costs. Compared to copper, fiber optic cables have a much higher bandwidth and are quickly becoming the standard medium of choice for traffic signal communications.

Wireless Radio

A final option for signal communications within a closed-loop system is wireless radio, typically over a 900 MHz frequency. This option involves installing equipment and an antenna at each signal and transmitting data over an unlicensed frequency. The quality of the communications often can be dictated by the presence of interfering radio devices and poor sight lines between antennas. For this reason, a radio and site survey is performed prior to installation to determine the feasibility of a radio system. A wireless radio system costs approximately $6,000 per link including all antennas and equipment, with each repeater (if needed) costing approximately $5,000. The pros of wireless radio are the cost savings over hard-wire (especially over long distances) and the low environmental impact. The cons are the effort required to properly configure the system and the susceptibility to outside interference that can lead to unreliability.

Closed Loop Systems in the FLATS MPO Area

All traffic signals in the Florence area are maintained by SCDOT. SCDOT uses dial-up telephone modems to communicate with signals that are part of closed-loop systems and most of the signals use Type 170 controllers. If an existing system needs retiming, either a formal request can be submitted to SCDOT or a third party can be engaged by the city, county, or MPO to develop and implement new timings plans subject to SCDOT review.

A summary follows of corridors for which potential signal timing improvements were identified. A recommended course of action for the corridors also is provided.

Irby Street — Downtown to Third Loop Road

The primary corridor identified for potential signal timing improvements was Irby Street from downtown Florence south to Third Loop Road — a section that consists of approximately 15 signals. Based on discussions with SCDOT, most of these signals currently are in closed-loop systems that run east-west along cross streets rather than north-south along Irby Street as follows:

- **Irby Street at Lucas Street:** Part of a closed-loop system along Lucas Street that runs from Coit Street to Pine Street
- **Irby Street from Darlington Street to Pine Street:** Part of the downtown closed-loop system that runs along Palmetto Street from Warley Street to Dargan Street
- **Irby Street at Cherokee Road/National Cemetery Road and at Hallmark Square Shopping Center:** Both are part of a closed-loop system that includes 4 or 5 other signals along Cherokee Road/National Cemetery Road
- **Irby Street at Sebrell Street:** Not coordinated with other signals
- **Irby Street from James Jones Avenue to Wakefield Avenue (South Park Shopping Center):** Part of a closed-loop system along 2nd Loop Road/Pamplico Highway that extends east to Pine Forest Drive

- **Irby Street at Wal-Mart Shopping Center:** Not coordinated with other signals
- **Irby Street at Third Loop Road:** Not coordinated with other signals

To provide coordination along a corridor, each traffic signal along the corridor must have the same cycle length and the signals must be close enough together to allow a platoon of vehicles to progress between the signals. Over long distances, platoons of vehicles naturally become dispersed and the benefit of coordination is diminished. Based on the number of existing closed loop systems in place along Irby Street and the distances between these systems, it is unlikely that each of these smaller systems can be synchronized with each other to provide improved flow along the entire length of Irby Street. The signal at Sebrell Street, however, is located approximately 1,000 feet from James Jones Avenue. Therefore, it is recommended that SCDOT consider providing communication to this signal and connecting it to the closed-loop system at Pamplico Highway.

As a new traffic signal is installed along Irby Street, consideration should be given to connecting the new signal(s) to the existing closed loop systems along the corridor and connecting adjacent closed loop systems to each other to improve traffic flow along Irby Street.

Other Corridors

Additional high-priority corridors that have been identified for potential signal timing improvements include the following. While no specific recommendations for providing coordination on these corridors is provided, improvements may be possible at each of the individual traffic signals. Numerous parameters are used when programming a traffic signal even when it is not running in coordination. Where concerns regarding the operations at an individual intersection or series of intersections exist, a traffic analysis may be warranted to investigate improvements to the signal parameters.

Cashua Drive from Palmetto Highway to Second Loop Road

The only signals on this section of Cashua Drive are at Palmetto Highway and Second Loop Road. Given the mile spacing and the number of street and driveway connections along Cashua Drive, it is unlikely that coordinating these two signals would provide a measurable benefit to the traveling public.

Second Loop Road from Palmetto Highway to Woods Drive

The only signals on this section of Second Loop Road are at Palmetto Highway and Cashua Drive. Given the spacing between these two intersections, it is unlikely that coordinating these two signals would provide a measurable benefit to the traveling public.

Pamplico Highway from Irby Street to Howe Springs Road

An existing signal system on Pamplico Highway extends from Irby Street east to Pine Forest Drive. At more than 1.5 miles from Pine Forest Drive, the signal at Howe Springs Road is too far away to be coordinated with the rest of this system.

Palmetto Street from Griffin Street to McCurdy Road

The only existing signals on this section of Palmetto Street are at Griffin Street and McCurdy Road. Given the approximately 3-mile spacing and the number of street and driveway connections along Palmetto Street, it is unlikely that coordinating these two signals would provide a measurable benefit to the traveling public. However, a new traffic signal at Cheves Street currently is under consideration. If this signal is installed, consideration should be given to connecting it to the signal at Griffin Street as well as other signals on Cheves Street.

David McLeod Blvd from I-20 to Palmetto

This section of David McLeod Boulevard is coordinated from Radio Drive to Evans Street.

Downtown Florence Signal Coordination

At this time, all of the signals within the downtown Florence area operated as actuated or pretimed signals within a coordinated system. However, there may be opportunities for retiming certain corridors to perform more efficiently. Roadways such as Cheves Street, Evans Street, Darlington Street, Dargan Street, and Coit Street could be candidates for such retiming. However, the lower traffic volumes compared to other regional arterials and the availability of alternate routes make these facilities a lower priority than the others in this list.

Complete Streets

"Complete streets" describes the transformation of vehicle-dominated thoroughfares in urban and suburban areas into community-oriented streets that safely and conveniently accommodate all modes of travel, not just motorists. Inclusion of complete streets in the *2035 LRTP* is a response to public feedback, from the planning process for this plan as well as previous plans conducted by the city and county. Discussions with the general public, members of the TPAC, local staff, and stakeholders confirmed support for these initiatives. A single voice emerged to express concern for the often inhospitable environment for pedestrians and bicyclists on area roadways. These users currently are not fully accommodated by roads in the Florence area. Complete street projects consider the multimodal elements found throughout the *2035 LRTP*, including:

- Access management to improve public safety (**Chapter 5**)
- Safer and more convenient walkways, sidewalks, and crosswalks (**Chapter 6**)
- Safer and more convenient bikeways (**Chapter 6**)
- Integration of transit (**Chapter 7**)
- Consideration of freight needs (**Chapter 8**)

Implementing Complete Streets

Transforming arterials into complete streets is complicated and requires a diverse range of skill sets and broad support from the community. Fortunately, other metropolitan areas have success stories that have been translated into guiding documents. The most detailed guidance comes from a joint effort of the Institute of Transportation Engineers and Congress for the New Urbanism. With funding from the USDOT and the U.S. Environmental Protection Agency, best practices have been published as *Context-Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*.

Successful complete street transformations require community support and leadership as well as coordination between various disciplines. Common goals for complete streets are economic revitalization, business retention and expansion, and public safety. Typical skill sets needed to retrofit complete streets include urban planning, urban design, landscape architecture, roadway design, utility coordination, traffic engineering, transportation planning, transit planning, architecture, graphic art, and land redevelopment.

Guiding Principles

The most important aspects of a successful complete streets program include the following principles:

- Achieve community objectives.
- Blend street design with the character of the area served.
- Capitalize on a public investment by working diligently with property owners, developers, economic development experts, and others to spur private investment in the area. A typical return-on-investment of $3 private for every $1 of public investment should be expected. Often, the ratio is 10:1 or more.
- Design in balance so traffic demands do not overshadow the need to walk, bicycle, and ride transit safely, efficiently, and comfortably. The design should encourage people to walk.
- Empower citizens to create their own sense of ownership in the success of the street and its numerous characters.

Caveats

Street transformations, however, require tremendous effort by numerous stakeholders. Several factors contribute to the successful implementation of a complete street transformation, including:

- **An interconnected network of major and minor streets with some redundancy in traffic capacity on parallel major streets.** Concern over a loss of traffic capacity can be tempered with surplus capacity elsewhere.
- **A demonstrated and well-defined problem that can be addressed with a complete street transformation.** The community should agree that the problem demands a solution and enough citizens feel compelled to show up, stand up, and speak up in support. It never will be possible to get everyone to agree with each detail of the new design, but near universal agreement on the problem definition is critical.
- **A non-profit group to create an agenda for change.** During the early phases of the transformation project, a non-profit group can help facilitate change and participate in design meetings to make sure that designers continue to pursue solutions and decisions that will ultimately achieve the community objective.

Policy Support

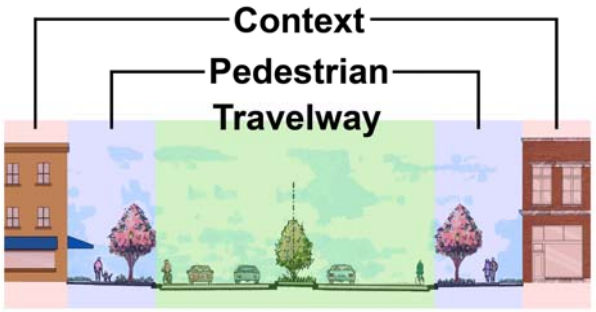
Beyond the support provided through the *2035 LRTP*, other important policy documents that should reflect complete street policies or enabling language include:

- City or County Comprehensive Plans
- Area Plans
- Park Master Plans (if adjacent to the corridor)
- Economic Revitalization/ Development Strategies

Street Realms

The following sections include an overview of how four distinct street realms foster interaction between different modes of travel and adjacent land uses. Included in this discussion is how the built environment and the different ways people travel directly influence the livability of a corridor. The Future Roadway Element concludes with a series of illustrative cross sections depicting different street types.

As described on the following pages, complete streets can be viewed in terms of four basic zones or realms: the **context**, **pedestrian**, **travelway**, and **intersection realms**.



Context Realm

The context realm of a complete street is defined by the buildings that frame the major roadway. Identifying distinct qualities of the context realm requires focusing on four areas: building form and massing, architectural elements, transit integration, and site design. Consideration should be given to all of the following, with modifications as appropriate to fit the specific context of the area.

Building Form and Massing

To enhance an already high-quality street design and help create a complete street, new buildings should be located close enough to the street that they frame the public space



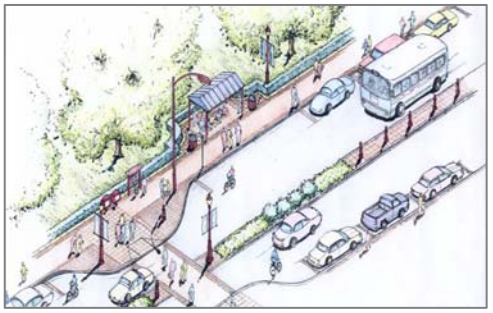
enjoyed by pedestrians. In more urban areas, these buildings should be located directly behind the sidewalk. Buildings with stairs, stoops, or awnings may even encroach into the pedestrian realm to provide visual interest and access to the public space. Suburban environments that must incorporate setbacks for adjacent buildings should limit this distance to 20 feet or less and avoid off-street parking between buildings and the pedestrian realm.

Larger setbacks in these suburban areas will diminish the sense of enclosure afforded to the pedestrian and move access to the buildings farther away from the street. In both environments, new building heights should measure at least 25% of the corridor width. For example, a 100-foot wide roadway right-of-way should be framed by new buildings that are at least 25 feet high (a typical two-story building) on both sides with facades that are at most 20 feet from the edge of right-of-way.

Architectural Elements

Careful placement and design of new buildings adjacent to the major roadway offer opportunities for meaningful interaction between those traveling along the corridor and those using the corridor for other purposes. These opportunities are greatly enhanced when restaurants, small shops and boutiques, residential units, and offices are located adjacent to the street. Building scale and design details incorporated into individual buildings foster a comfortable, engaging environment focused on the pedestrian. Common building design treatments generally favored in a pedestrian environment include awnings, porches, balconies, stairs, stoops, windows, appropriate lighting, promenades, and opaque windows.

Transit Integration



Areas targeted for high-quality transit service must be supported through land use and zoning policies that support transit-oriented development and reflect the benefits of increased access to alternative modes of travel. Policy examples include appropriate densities and intensities for supporting transit use, parking ratios that reflect reduced reliance on the automobile, and setback and design guidelines that result in pedestrian-supportive urban design. In addition, potential transit service identified for transportation corridors within the community should consider the land use, density/intensity, and urban design characteristics of the surrounding environment before selecting proposed technologies or finalizing service plans.

Site Design

The complete street truly is integrated into the surrounding environment when the interface between the site and the street is complementary to the pedestrian environment created along the entire corridor. Access to the site should be controlled through a comprehensive access management program to minimize excessive driveways that create undesirable conflicts for traveling pedestrians. Buildings with entrances facing the street or nearby on the sides of buildings, further defined by interesting landscape and architectural elements incorporated into the entrance area, should reinforce a positive pedestrian experience. Public paths through sites should be provided to shorten blocks longer than 600 feet.

Pedestrian Realm

The pedestrian realm of a complete street extends between the outside edge of sidewalk and the face-of-curb located along the street. Safety and mobility for pedestrians within this realm relies on the presence of continuous sidewalks along both sides of the street built to a sufficient width for accommodating the street's needs as defined by the environment. For example, suburban settings will require different widths than downtown settings. The quality of the pedestrian realm also is greatly enhanced by the presence of high-quality buffers between pedestrians and moving traffic, safe and convenient opportunities to cross the street, and consideration for shade and lighting needs.

The pedestrian realm may consist of up to four distinct functional zones: frontage zone, throughway zone, furnishing zone, and edge zone. The **frontage zone** is located near the back of the sidewalk and varies in width to accommodate potential window shoppers, stairs, stoops, planters, marquees, outdoor displays, awnings, or café tables. The **throughway zone** provides clear space for pedestrians to move between destinations and varies between 6 and 16 feet wide, based on the anticipated demand for unimpeded walking areas. The **furnishing zone** provides a key buffer between pedestrians and moving traffic. It generally measures at least 8 feet wide to accommodate street trees, planting strips, street furniture, utility poles, sign poles, signal and electrical cabinets, phone booths, fire hydrants, bicycle racks, or retail kiosks targeted for the pedestrian realm. The **edge zone** is incorporated into the pedestrian realm concurrent with the presence of on-street parking to allow sufficient room for opening car doors.

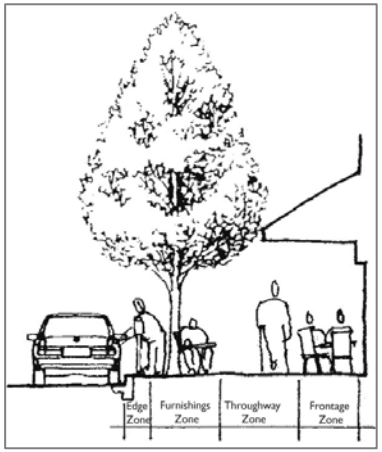


Image Source: CD+A

Incorporation of one or more of these function zones in the pedestrian realm of a street generally is based on the context of the surrounding built environment. For example, a more urban, downtown environment will include all four zones in the pedestrian realm and could measure up to 24 feet wide. The pedestrian network located in a more suburban setting may omit one or more of the function zones listed above, resulting in an overall minimum width of 11 feet.

Recommended design elements for promoting a healthy pedestrian realm generally focus on one of four areas of concentration: pedestrian mobility, quality buffers, vertical elements, and public open space. Together, these best practices (as described in *Context-Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities*) can be implemented in both urban and suburban environments, to varying degrees, for promoting healthy pedestrian environments.

Pedestrian Mobility

The presence of a comprehensive, continuous pedestrian network serves as the foundation for fostering a walkable community that supports active transportation and mode choice. Sidewalks generally provide clear zones of 6 to 8 feet wide to accommodate pedestrian travel. In more urban environments, amenities in the frontage zone and furniture zone will greatly increase the overall width of the corridor when compared with more suburban settings. Mid-block pedestrian crosswalks should be incorporated into the urban fabric as needed to ensure convenient crossing opportunities are provided approximately every 300 feet for maximum efficiency and safety within the pedestrian system. As a general rule, mid-block crossings should be considered on two-lane urban streets when the block length is greater than 500 feet and the posted speed limit for the travel lanes does not exceed 40 miles per hour.

Quality Buffers





Providing separation between pedestrians and moving traffic greatly enhances the character of the pedestrian realm. The amount of separation incorporated into the pedestrian realm may vary based on the building context or on streets with different travel speed and/or traffic volume characteristics. In downtown areas, parallel or angled on-street parking provides sufficient distance (8 to 18 feet) for separating pedestrian and vehicle traffic. Likewise, landscape planting areas (typically 5 feet wide) incorporated into urban or suburban environments provide adequate lateral separation for pedestrians. In urban areas, street trees may be placed in tree wells within an overall hardscaping surface instead of using suburban-style grass areas.

Vertical Elements

Vertical elements traditionally incorporated into the pedestrian realm include street trees, pedestrian-scale street lighting, and utilities. Street trees provide necessary shade to pedestrians and soften the character of the surrounding built environment. Trees should be spaced 15 to 30 feet apart, be adapted to the local environment, and fit the scale and character of the surrounding area. Pedestrian-scale street lighting incorporated into the pedestrian realm should consider metal halide fixtures mounted 12 to 20 feet high. Metal halide produces a truer, white-light compared with bluish light produced by Mercury vapor streetlights or yellow-orange produced by sodium streetlights. Metal halide streetlights produce lighting conditions where faces more easily can be recognized and the perception of public safety and security is enhanced. Utilities should not interfere with pedestrian circulation or block entrances to buildings, curb cuts, or interfere with sight distance triangles. In some cases, burying utilities underground avoids conflicts and clutter caused by utility poles and overhead wires. However, relocation of overhead utilities to tall poles on just one side of the roadway can be a cost-effective aesthetic alternative to burial of utilities in a duct bank under the road.



Public Open Space

The pedestrian realm serves a dual purpose within the built environment, acting as both a transportation corridor and a public open space accessible to the entire community. As a result, specific design elements incorporated into the pedestrian environment should reinforce this area as a public space. Properly planned, these design elements could provide opportunities for visitors to enjoy the unique character of the corridor in both formal and informal seating areas. Public art and/or specialized surfaces and materials introduced into the pedestrian realm are appreciated by slower moving pedestrians. In more urban areas, street furniture and/or outdoor cafes provide opportunities that foster community ownership in the pedestrian realm, such as people watching. Furthermore, building encroachments in downtown areas, such as stairs and stoops, provide interesting points of access to the pedestrian realm. Lastly, awnings and canopy trees provide shade, which is a welcomed relief during the summer.

Travelway Realm

The travelway realm is defined by the edge of pavement or curb line that traditionally accommodates the travel or parking lanes needed to provide mobility for bicycles, transit, and automobiles sharing the transportation corridor. Recommended design elements incorporated into the travelway realm attempt to achieve greater balance between travel modes sharing the corridor and favor design solutions that promote human scale for the street and minimize pedestrian crossing distance. Recommendations for the travelway realm focus on two areas of consideration: modes of travel and medians.

Multimodal Corridors

Balance between travel modes within the same transportation corridor fosters an environment of choice for mobility that could lead to reduced congestion on major roadways and a healthier citizenry. On a complete street, safe and convenient access to the transportation network for bicycles, transit, and automobiles is afforded within the travelway realm. Travel lanes for automobiles and transit vehicles should measure between 10 and 11 feet wide, depending on the target speed, to manage travel speeds and reinforce the intended character of the street. Parking lanes incorporated into the travelway realm should not exceed 8 feet in width (including the gutter pan) and may be protected by bulb-outs evenly spaced throughout the corridor. Bus stops located along the corridor should be well-designed to include benches and shelters that comfort patrons waiting for the bus. On-street bicycle lanes (typically 4 feet wide) should be considered when vehicle speeds range from 35 to 45 miles per hour. Wide outside lanes may be preferred on other streets. To avoid situations where citizens with only basic bicycle skills may be attracted to a corridor, designated bicycle routes on parallel corridors may be the best option when speeds on the major street exceed 45 mph. According to state law, bicyclists are considered vehicles and are permitted on all corridors except freeways and access-controlled highways.

Median Treatments

Medians often are incorporated into the travelway realm to provide dedicated left-turn lanes, opportunities for landscaping, and pedestrian refuge at crossings. Medians generally vary between 8 and 16 feet wide, depending on their intended application and the limitations of the surrounding built environment. Medians also reinforce other access management solutions provided within the travelway to reduce the number of conflict points and maintain the human scale intended for the complete street.

In addition to center medians, other access management solutions incorporated into the travelway realm should limit the number of individual driveways along the corridor and avoid the use of right-turn deceleration lanes. Together, these improvements will reduce the overall pedestrian crossing distance for the travelway and improve the safety for pedestrians traveling inside the pedestrian realm.



Intersection Realm

Evaluating potential changes for the intersection realm of a street requires careful consideration of the concerns of multiple travel modes that could meet at major intersections within the transportation system. Recommendations for improving the multimodal environment in and around these major intersections focus on two areas of the facility: operations and geometric design.

Geometric Design

Geometric design of an urban intersection should reinforce the operational characteristics of a traffic signal or roundabout. With traffic signals, this includes the introduction of curb extensions, or bulb-outs, to shorten pedestrian crossing distance and protect on-street parking near the intersection. Curb return radii designed for signalized intersections should be 15 to 30 feet to control turning speed around corners. At roundabouts, special consideration should be given to entry and exit speeds, pedestrian refuge in the splitter islands, and assigning predictability to the intersection for pedestrians, bicycles, and vehicles. Both intersection treatments may consider special pavement markings to distinguish pedestrian areas or bicycle lanes, although these surfaces need to be stable, firm, and slip resistant. Additional consideration should be given to maintaining adequate sight triangles in the intersection, addressing the treatment of bicycle lanes through the intersection, and compliance with federal requirements per the American with Disabilities Act for crosswalk and curb ramp design.

Operations and Safety

In terms of operations, traffic signals or roundabouts are the two most appropriate applications for traffic control devices that also could maintain the pedestrian scale of the street reinforced in the context, pedestrian, and travelway realms. The merits of a traffic signal rather than a roundabout for intersection control should be determined on a case-by-case basis after considering key issues such as desired traffic speed, availability of right-of-way, anticipated traffic patterns, and the context of the built environment surrounding the intersection. In general, small signalized intersections may be safer for pedestrians than roundabouts. However, studies of intersection widening always should consider a roundabout. Crash histories support the premise that roundabouts typically have less injury-inducing crashes than large signalized intersections. Furthermore, the slower vehicle speeds associated with most roundabouts result in less injury-inducing crashes when pedestrians are hit by a vehicle.

Recommended Cross Sections

Typical cross-sections that incorporate complete streets concepts are provided on the following pages. The cross sections illustrate complete streets that provide safe and convenient travel for all modes. These streets may require designs that differ from the status quo to create a transportation network that respects the needs of pedestrians, bicyclists, and motorists. Right-of-way for these streets ranges from less than 50 feet for a two-lane collector to nearly 120 feet for a six-lane divided freeway. Within the right-of-way, the sidewalks and landscaping strips shown in the cross sections are wider than presently found in FLATS MPO area. As a result, these recommendations will need to be carefully evaluated by agencies initiating roadway projects.

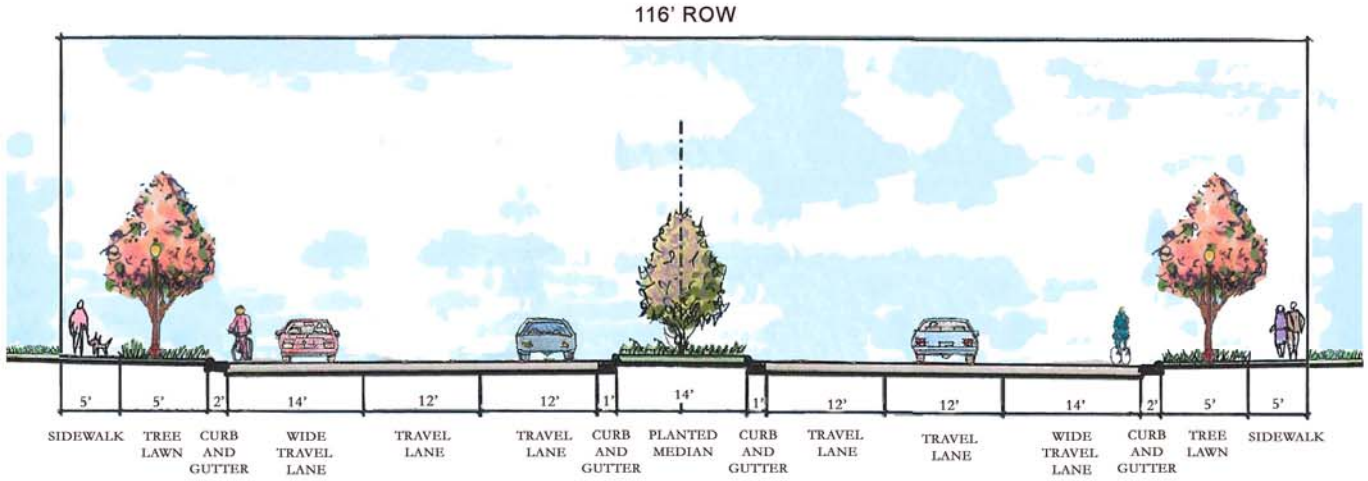
Table 5.8 describes the multimodal building blocks of street typology for the streets illustrated in the cross sections. A few of the illustrative cross sections include alternatives for bicycle facilities. The type of bicycle facility for these corridors should be determined on a case-by-case basis after considering the surrounding land uses and anticipated skill level of bicyclists on the corridors.

Table 5.8 – Elements of Street Typology

	Roadway Context	Access/ Mobility	Travel Lanes	Center Treatment	Bicycle Facilities	Pedestrian Facilities	Roadway Capacity
Principal Arterials							
6-Lane Divided w/ Wide Outside Lanes *116' Right-of-Way / 96' Roadway Width*	Urban/ Suburban	High mobility	2 - 14' 4 - 12'	14' planted median (1' curb/gutter)	14' wide outside lanes	5' sidewalks, both sides	35,000 to 50,000
4-Lane Divided w/ Wide Outside Lanes *96' Right-of-Way / 76' Roadway Width*	Urban/ Suburban	High mobility	2 - 14' 2 - 12'	14' planted median (1' curb/gutter)	14' wide outside lanes	5' sidewalks, both sides	28,000 to 40,000
4-Lane Divided w/ Bike Lanes *96' Right-of-Way / 76' Roadway Width*	Urban/ Suburban	High mobility	4 - 12'	14' planted median (1' curb/gutter)	4' bike lanes, both sides	5' sidewalks, both sides	28,000 to 40,000
5-Lane w/ Wide Outside Lanes *88' Right-of-Way / 68' Roadway Width*	Urban/ Suburban	High mobility	2 - 14' 2 - 12'	12' two-way left-turn lane	14' wide outside lanes	5' sidewalks, both sides	28,000 to 40,000
Minor Arterials							
4-Lane Divided w/ Multi-Use Path *88' Right-of-Way / 68' Roadway Width*	Urban/ Suburban	Moderate mobility	4 - 12'	14' planted median (1' curb/gutter)	10' multi-use path, one side	10' multi-use path, one side	28,000 to 40,000
2-Lane Divided w/ 8' Parallel Parking *78' Right-of-Way / 58' Roadway Width*	Urban	Moderate access/ Moderate mobility	2 - 12'	12' planted median (1' curb/gutter)	Use travel lane	5' sidewalks, both sides	12,000 to 20,000
3-Lane *64' Right-of-Way / 44' Roadway Width*	Suburban	High access/ Moderate mobility	2 - 14'	12' two-way left-turn lane	14' wide outside lanes	5' sidewalks, both sides	12,000 to 20,000
Collectors							
2-Lane Divided w/ Bike Lanes *70' Right-of-Way / 50' Roadway Width*	Suburban	Moderate access/ Moderate mobility	2 - 12'	12' planted median (1' curb/gutter)	4' bike lanes, both sides	5' sidewalks, both sides	12,000 to 20,000
2-Lane w/ Bike Lanes *56' Right-of-Way / 36' Roadway Width*	Urban/ Suburban	High access/ Moderate mobility	2 - 12'	None	4' bike lanes, both sides	5' sidewalks, both sides	9,000 to 14,000
2-Lane w/ Wide Outside Lanes *56' Right-of-Way / 36' Roadway Width*	Urban/ Suburban	High access/ Moderate mobility	2 - 14'	None	14' wide outside lanes	5' sidewalks, both sides	9,000 to 14,000
2-Lane *48' Right-of-Way / 28' Roadway Width*	Urban/ Suburban	High Access	2 - 12'	None	Use travel lane	5' sidewalks, both sides	9,000 to 14,000
Rural 2-Lane w/ Multi-Use Path *56' Right-of-Way / 36' Roadway Width*	Rural	High Access	2 - 12'	None	10' multi-use path, one side or 4' paved shoulder		9,000 to 14,000

Principal Arterial: 6-Lane Divided with 16' Median

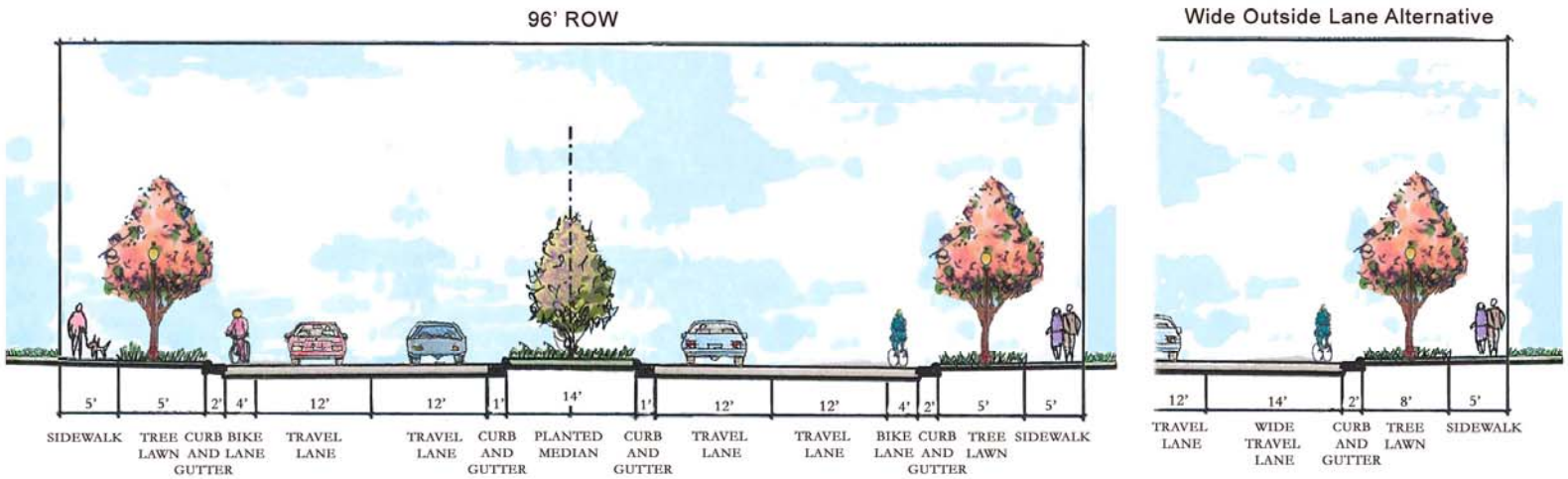
(6-Lane Divided with Raised Median, Wide Outside Lanes, Sidewalks, Landscaping)



Design Features	
Functional Classification	Principal Arterial
Roadway Context	Urban / Suburban
Access/Mobility	High Mobility
Right-of-Way Width	116'
Roadway Width	96' including 6 travel lanes, planted median, and curb and gutter
Traffic Lanes	4 12' travel lanes, 2 14' travel lanes)
On-Street Parking	None
Bicycle Facilities	14' wide outside lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	14' planted with 1' curb and gutter
Tree Lawn	5', both sides
Roadway Capacity	35,000 to 50,000 vehicles per day

Principal Arterial: 4-Lane Divided with 16' Median

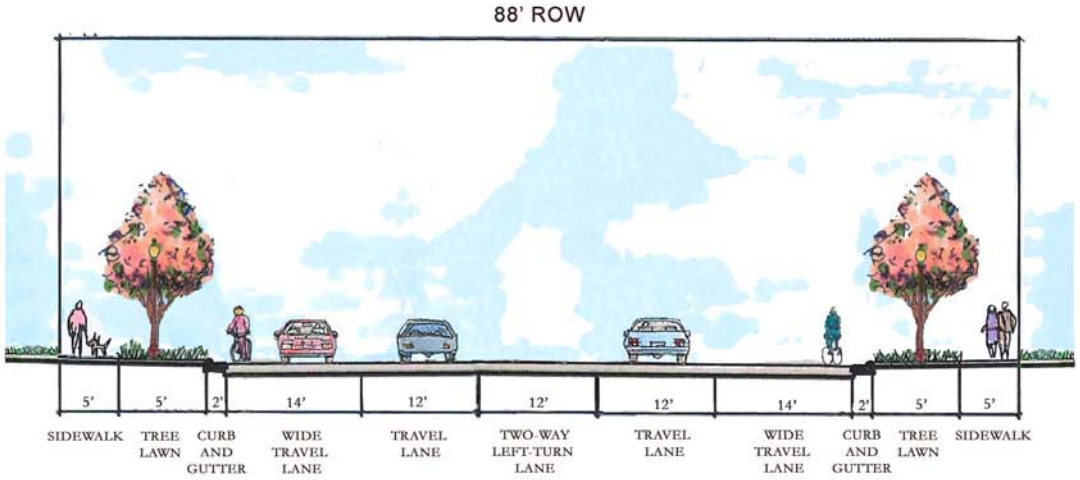
(4-Lane Divided with Raised Median, Bike Lanes, Sidewalks, Landscaping)



Design Features	
Functional Classification	Principal Arterial
Roadway Context	Urban / Suburban
Access/Mobility	High Mobility
Right-of-Way Width	96'
Roadway Width	76' including 4 travel lanes, bike lanes, planted median, and curb and gutter
Traffic Lanes	4 12' travel lanes (WOL alternative: 2 12', 2 14')
On-Street Parking	None
Bicycle Facilities	4' bike lanes or 14' wide outside lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	14' planted with 1' curb and gutter
Tree Lawn	5', both sides
Roadway Capacity	28,000 to 40,000 vehicles per day

Principal Arterial: 5-Lane

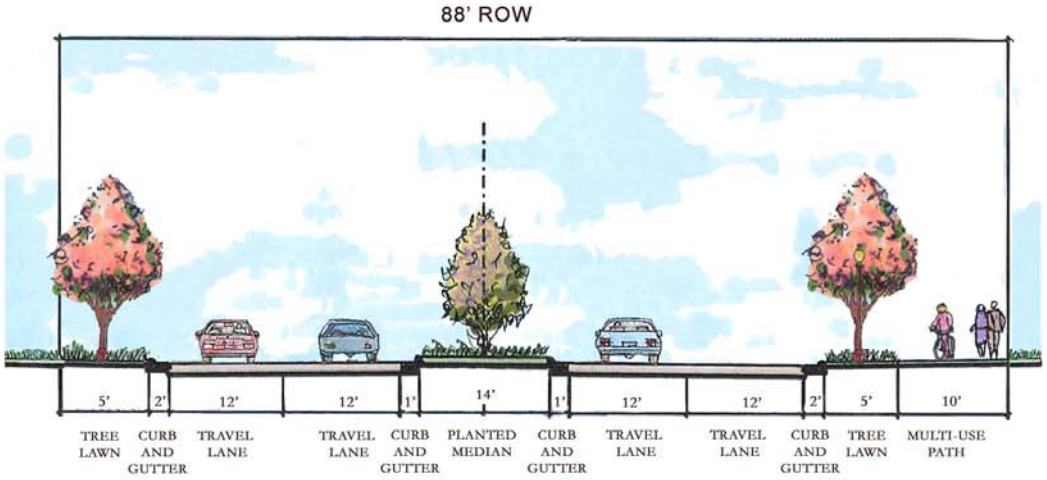
(5-Lane with Wide Outside Lanes, Sidewalks, Landscaping)



Design Features	
Functional Classification	Principal Arterial
Roadway Context	Urban / Suburban
Access/Mobility	Moderate Mobility / Moderate Access
Right-of-Way Width	88'
Roadway Width	68' including 4 travel lanes, two-way left-turn lane, and curb and gutter
Traffic Lanes	2 12' travel lanes, 2 14' travel lanes
On-Street Parking	None
Bicycle Facilities	14' wide outside lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	None
Tree Lawn	5', both sides
Roadway Capacity	28,000 to 40,000 vehicles per day

Minor Arterial: 4-Lane Divided with 16' Median

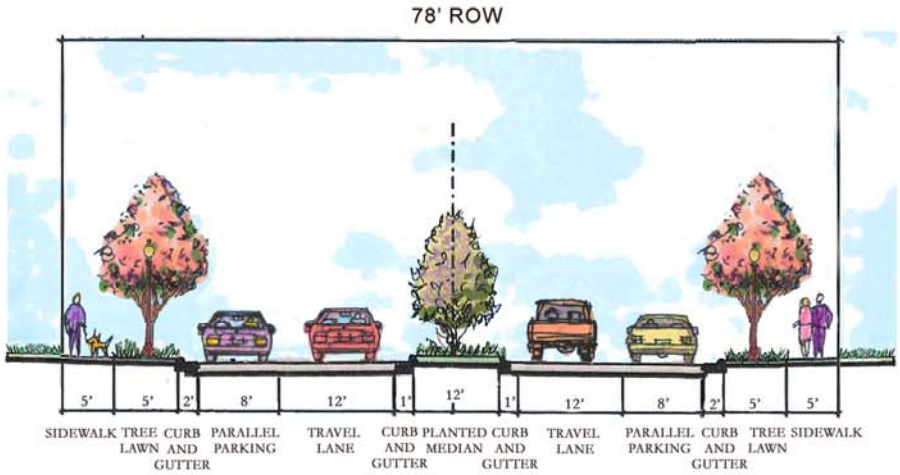
(4-Lane Divided with Raised Median, Multi-Use Path, Landscaping)



Design Features	
Functional Classification	Minor Arterial
Roadway Context	Urban / Suburban
Access/Mobility	High Mobility
Right-of-Way Width	88'
Roadway Width	68' including 4 travel lanes, planted median, and curb and gutter
Traffic Lanes	4 12' travel lanes
On-Street Parking	None
Bicycle Facilities	10' multi-use path, one side
Pedestrian Facilities	10' multi-use path, one side
Median	14' planted with 1' curb and gutter
Tree Lawn	5', both sides
Roadway Capacity	28,000 to 40,000 vehicles per day

Minor Arterial: 2-Lane Divided with Parking

(2-Lane Divided with Raised Median, Parallel Parking, Sidewalks, Landscaping)



Design Features	
Functional Classification	Collector
Roadway Context	Urban
Access/Mobility	Moderate Access / Moderate Mobility
Right-of-Way Width	78'
Roadway Width	58' including 2 travel lanes, parallel parking, planted median, and curb and gutter
Traffic Lanes	4 12' travel lanes (WOL alternative: 2 12', 2 14')
On-Street Parking	8' parallel, both sides
Bicycle Facilities	None
Pedestrian Facilities	5' sidewalks, both sides
Median	12' planted with 1' curb and gutter
Tree Lawn	5', both sides
Roadway Capacity	12,000 to 20,000 vehicles per day

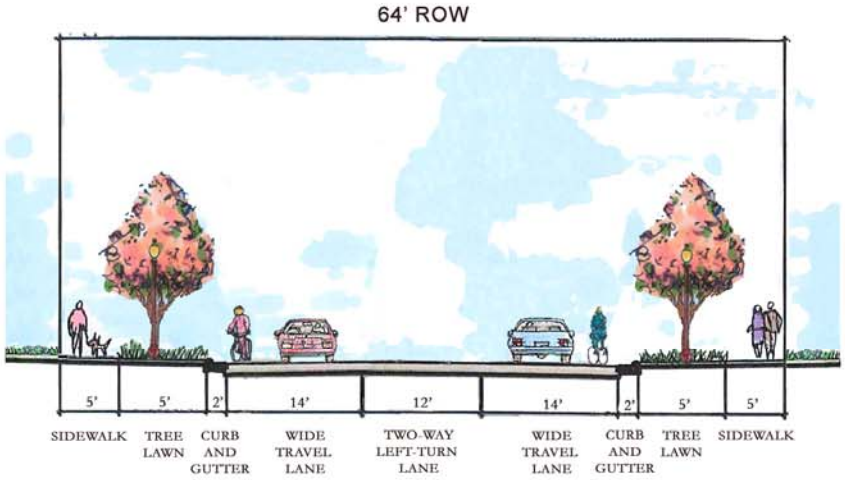
Notes

› The use of curb and gutter versus swale ditch will depend upon the street's proximity to development and the natural environment.

› The type (i.e. residential, commercial, rural, etc.) will depend on the adjacent land use served.

Minor Arterial: 3-Lane

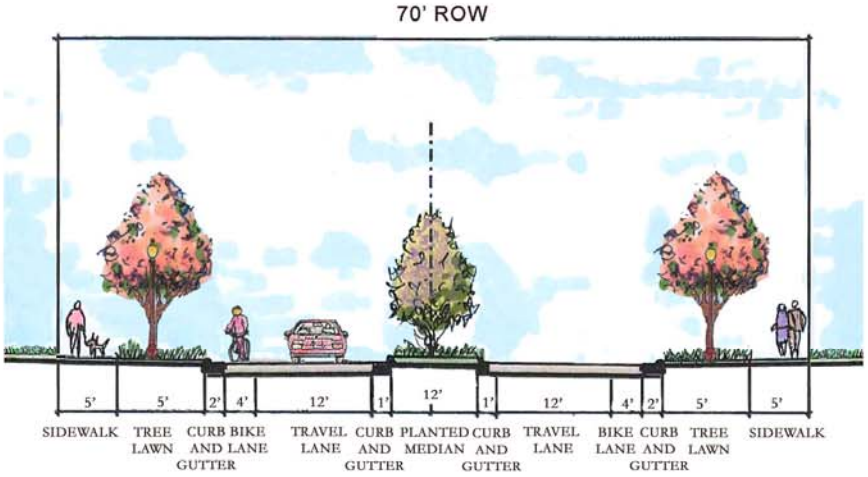
(3-Lane with Wide Outside Lanes, Sidewalks, Landscaping)



Design Features	
Functional Classification	Minor Arterial
Roadway Context	Urban / Suburban
Access/Mobility	Moderate Mobility / High Access
Right-of-Way Width	64'
Roadway Width	44' including 4 travel lanes, two-way left-turn lane, and curb and gutter
Traffic Lanes	2 14' travel lanes
On-Street Parking	None
Bicycle Facilities	14' wide outside lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	None
Tree Lawn	5', both sides
Roadway Capacity	12,000 to 20,000 vehicles per day

Collector: 2-Lane Divided with Bike Lanes (14' Median)

(4-Lane Divided with Raised Median, Bike Lanes, Sidewalks, Landscaping)

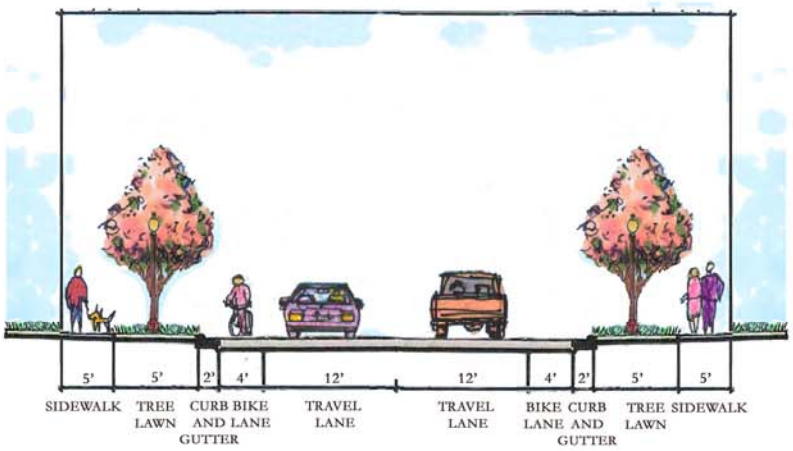


Design Features	
Functional Classification	Collector
Roadway Context	Suburban
Access/Mobility	Moderate Access / Moderate Mobility
Right-of-Way Width	70'
Roadway Width	50' including 2 travel lanes, bike lanes, planted median, and curb and gutter
Traffic Lanes	2 12' travel lanes
On-Street Parking	None
Bicycle Facilities	4' bike lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	12' planted with 1' curb and gutter
Tree Lawn	5', both sides
Roadway Capacity	12,000 to 20,000 vehicles per day

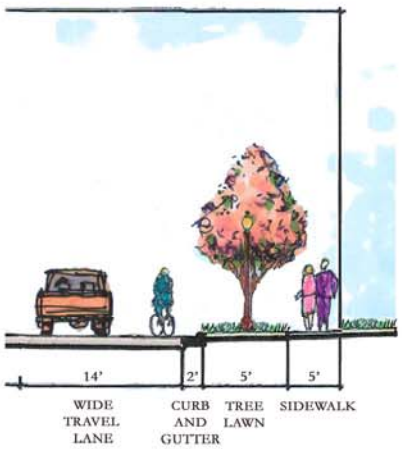
Collector: 2-Lane with Bicycle Facilities

(2-Lane, Bike Lanes, Sidewalks, Landscaping)

56' ROW



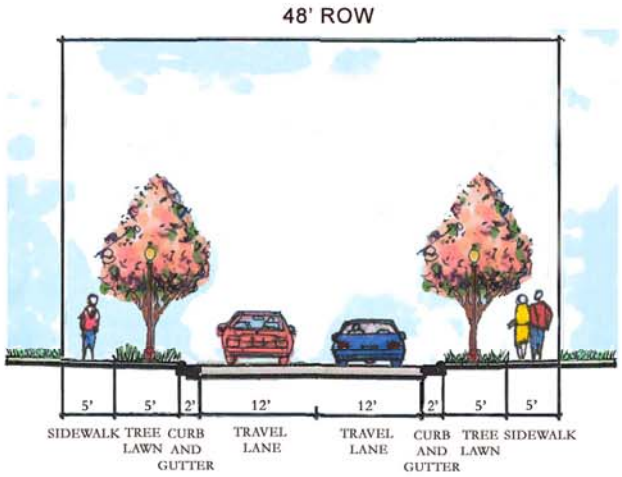
Wide Outside Lane Alternative



Design Features	
Functional Classification	Minor Arterial
Roadway Context	Urban / Suburban
Access/Mobility	High Access / Moderate Mobility
Right-of-Way Width	56'
Roadway Width	36' including 2 travel lanes, bike lanes, and curb and gutter
Traffic Lanes	2 12' travel lanes (WOL alternative: 2 12', 2 14')
On-Street Parking	None
Bicycle Facilities	4' bike lanes or 14' wide outside lanes
Pedestrian Facilities	5' sidewalks, both sides
Median	None
Tree Lawn	5', both sides
Roadway Capacity	9,000 to 14,000 vehicles per day

Collector: 2-Lane

(2-Lane, Sidewalks, Landscaping)



Design Features	
Functional Classification	Collector
Roadway Context	Urban / Suburban
Access/Mobility	High Access
Right-of-Way Width	48'
Roadway Width	28' including 2 travel lanes and curb and gutter
Traffic Lanes	2 12' travel lanes
On-Street Parking	None
Bicycle Facilities	None
Pedestrian Facilities	5' sidewalks, both sides
Median	None
Tree Lawn	5'
Roadway Capacity	9,000 to 14,000 vehicles per day

Notes

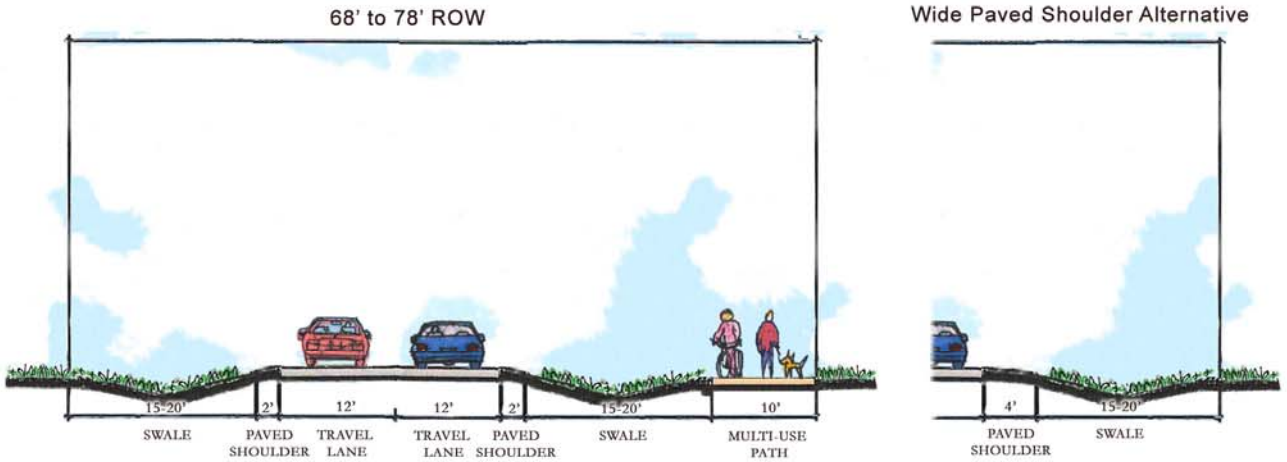
› An alternative to this cross section could include two 14' travel lanes with a 5' sidewalk on one side.

› The use of curb and gutter versus swale ditch will depend upon the street's proximity to development and the natural environment.

› The type (i.e. residential, commercial, rural, etc.) will depend on the adjacent land use served.

Rural Collector: 2-Lane with Multi-Use Path

(2-Lane, Multi-Use Path, Swale)



Design Features	
Functional Classification	Collector
Roadway Context	Rural
Access/Mobility	High Access
Right-of-Way Width	68' to 78'
Roadway Width	28' including 2 travel lanes, paved shoulders
Traffic Lanes	2 12' travel lanes
On-Street Parking	None
Bicycle Facilities	10' multi-use path, one side
Pedestrian Facilities	10' multi-use path, one side
Median	None
Tree Lawn	15' to 20' swale, both sides
Roadway Capacity	9,000 to 14,000 vehicles per day



Chapter 6

Bicycle and Pedestrian Element

Introduction

Throughout the nation, densely populated areas turn to cycling and walking as a viable means of transportation. Sometimes commuters find cycling more efficient, affordable, and convenient than traveling by automobile on congested urban streets. Even in Florence, the planning process for the *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) revealed local residents commute by bike to work at Francis Marion University. Although most people in the region and across the United States choose to travel by automobile, cycling and walking remains the only option for some people. For this reason, transportation plans no longer focus solely on roadway solutions.

The benefits of cycling and walking are well documented. Taking trips by bike or on foot improves the environment, promotes good health, saves money, eases the burden on roadways, and enhances the livability of a community. Many people choose to bike or walk for one or more of these reasons. For children, persons with disabilities, many elderly, and those who cannot afford an automobile, transit, bicycling, and walking may be their only option for many daily trips.

Members of the TPAC, residents, and stakeholders agreed the need exists to improve facilities for bicyclists and pedestrians. And despite the diversity of backgrounds represented through the public outreach efforts, a consensus was reached that programs are needed to balance the area's transportation network. The bicycle and pedestrian element serves as an educational tool — explaining the types of bicycle users and facilities, describing various pedestrian facilities, and discussing the interaction between these two modes and the larger transportation network. It also provides a toolbox of recommendations based on the "Five E's of Bicycle and Pedestrian Planning," promotes connections to key activity centers using a variety of facility types, and supports these facilities with programs and policies that educate, encourage, enforce, and evaluate the active and safe use of facilities.

The Florence Area Transportation Study completed a Bikeway Master Plan in 2004. The *2035 LRTP* is not intended to replace the Bikeway Master Plan but rather to expand on the recommendations of the plan and provide guidance for its implementation through the process. The bicycle and pedestrian element of the LRTP has evolved as product of community input and outreach, including coordination with members of the TPAC, SCDOT, local stakeholders, local officials, and the general public. This chapter begins with an overview of facility and program opportunities and a description of existing conditions. The chapter concludes with a set of proposed bicycle and pedestrian recommendations.



Five E's of Bicycle & Pedestrian Planning

The comprehensive package of projects and programs recommended for Florence rely on the Five E's of Bicycle and Pedestrian Planning. Addressing these five interrelated components helps create a transportation network that balances the needs of bicyclists, pedestrians, and motorists.

- **Engineering** — Engineering refers to the network of pathways that must be planned, designed, and constructed. A well-planned bicycle and pedestrian system can enhance user safety and enjoyment and may increase the attraction of each mode.
- **Education** — Once the pathways are in place, new and experienced cyclists and pedestrians must be made aware of their locations and the destinations that can be reached by using them. Bicyclists, pedestrians, and motorists must be educated on the "rules of the road" to ensure everyone's safety while operating on and adjacent to the bicycle and pedestrian facilities.
- **Encouragement** — People need to be encouraged to bicycle and walk. Encouragement should become easier as the network of pathways makes the Florence area more bicycle and pedestrian-friendly. As these facilities are constructed, encouragement is critical to justify their investment.
- **Enforcement** — To ensure safety of all users and the long-term sustainability of the bicycle and pedestrian system, the formal and informal "rules of the road" must be heeded by all.
- **Evaluation** — Periodic evaluation in the bicycle and pedestrian network is warranted. This analysis typically focuses on the amount of cycling and walking taking place in the community, the crash and fatality rate when pedestrians and cyclists are involved in traffic crashes, and ways the community works to improve these numbers. Local residents should be included in the evaluation of the area's programs and facilities.

Users and Facilities

To develop and integrate the Bicycle & Pedestrian Element into the LRTP, the types of users and facilities must be understood.

Bicycle Users

Types of users can be described in terms of trip purpose and skill level. Different reasons for taking to the street on bike or foot, combined with the varying levels of skill, require a bicycle and pedestrian plan that is flexible and responsive.

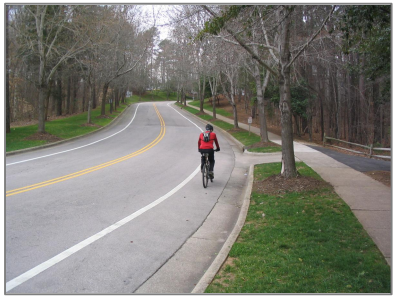
Types of Users by Trip Purpose

Bicycling and walking often falls into two distinct types of travel:

1. **Utilitarian, non-discretionary travel.** Often, children, persons with disabilities, and many elderly are not able to drive. In addition, some households simply cannot afford an automobile. According to the 2000 Census, approximately 11% of all households in the region do not have a vehicle available. This percentage is higher than both the state and national averages. For those unable to drive and persons living in households with no vehicles, the only option for daily necessary trips may be transit, bicycling, and walking.
2. **Recreational, discretionary travel**. As mentioned above, walking and bicycling are excellent methods of exercise, helping residents to establish a healthy lifestyle while enjoying the livability of their communities. Walking and bicycling for fun is increasing in popularity as Americans realize the benefits of these activities.

Both types of travelers require a complete network of bicycle and pedestrian facilities as well as programs that educate and encourage current and future users.

Types of Users by Riding Skill



Advanced Cyclists are usually the most experienced on the road and can safely ride in typical arterial conditions of higher traffic volume and speeds. Most advanced cyclists prefer shared roadways in lieu of striped bike lanes and paths but may be more willing to accept striped bike lanes when the street gutter is cleaned regularly. Although this group represents approximately 20% of all cyclists, they account for nearly 80% of annual bicycle miles traveled.

Basic Cyclists are less secure in their ability to ride in traffic without special accommodations. They usually are casual or new adult/teenage riders who typically prefer multi-use paths or bike lanes on collector or arterial streets. Such facilities reduce basic cyclists' exposure to fast-moving and heavy traffic. Surveys of the cycling public indicate that about 80% of cyclists can be categorized as basic cyclists.

Child Cyclists have a limited field of vision while riding and generally keep to the neighborhood streets, sidewalks, and greenways. On busier streets, this group likely stays on sidewalks or off-street facilities that protect them from traffic. In Florence, cycling on sidewalks is permitted everywhere except downtown. While riding on sidewalks should be discouraged, the comfort level of child cyclists' warrant riding on sidewalks provided they yield to pedestrians.



Bicycle Facilities

Like drivers, cyclists gain experience over time by riding. As cyclists ride and gain more experience operating in traffic, they graduate from basic to advanced cyclists. This transition ensures that the needs of all three types of cyclists must be constantly evaluated and accommodated. To make sure adequate amenities are available to users of all skill levels, the facilities identified here should be incorporated into roadway projects in Florence.

Facility Design References

Two guideline documents should be referenced during the actual design of bicycle and pedestrian facilities:

- *AASHTO Guide for the Development of Bicycle Facilities*—Referred to as the Bicycle Guide, this is a federal document which sets forth the current design practices accepted by FHWA. This document discusses planning, design, operations, and maintenance issues associated with bicycle facilities. With respect to design, it addresses with dimensions, grades, cross slopes, radii, acceleration rates, deceleration rates, and sight distances. The Bicycle Guide is not intended to establish strict standards. It provides "sound guidelines that are valuable in attaining good design sensitive to the needs of both bicyclists and other highway users" (p2).
- FHWA *Manual on Uniform Traffic Control Devices (MUTCD)*—Unlike the AASHTO Bicycle Guide, the MUTCD does constitute a standard. Failure to comply with the MUTCD can result in being denied federal funds and makes liable non-compliant jurisdictions in the event of a crash. The MUTCD addresses standards for signing, striping, markings, signals, islands, and traffic work zone devices (e.g., cones and barricades). It provides information on what symbols may be used on signs and when sign text can vary from the signs provided. The color, width, types and applications of striping are defined in detail. It also provides dimensions and shapes of pavement markings and pavement lettering.

On-Street Bicycle Facilities

On-street bike facilities are designated by striping, signing, and pavement markings on the public right-of-way for the preferential or exclusive use of bicyclists. The type of on-street facility recommended depends on the roadway classification and characteristics. Several types of on-street facilities can be used in conjunction with another to create a well developed bicycle network. These facilities are described in **Table 6.1.**

Table 6.1 On-Street Bicycle Facility Overview

Striped Bike Lanes **Description** ▪ Exclusive-use area adjacent to the outermost travel lane ▪ Typical width: 4' to 5'		**Target User** ▪ Basic and Intermediate Cyclists **Estimated Cost** ▪ $18,000 per mile (striping only)
Wide Outside Lane **Description** ▪ Extra width in outermost travel lane ▪ Best on roadways with speed limits of 35 mph or higher and moderate to high daily traffic volumes ▪ Typical width: 14' outside lane preferred		**Target User** ▪ Advanced Cyclists **Estimated Cost** ▪ $18,000 per mile (striping only)
Multi-Use Path **Description** ▪ Separated from traffic and located in open space (greenway) or adjacent to road with more setback and width than sidewalks (sidepath) ▪ Typical width: 10' preferred; 8' in constrained areas		**Target User** ▪ All Cyclists; Pedestrians **Estimated Cost** ▪ $600,000 per mile (includes clearing, grubbing, grading, and construction)
Paved Shoulders **Description** ▪ Extends the service life of the road by reducing edge deterioration ▪ Connects signed routes and rural roads to more urbanized areas ▪ Provides greater level of safety and comfort for bicyclists ▪ Typical width: 4' (no minimum width required)		**Target User** ▪ Advanced Cyclists **Estimated Cost** ▪ $500,000 per mile (assumes 4' paved shoulder during resurfacing)

Shared Roadways

Shared roadways are streets and roads where bicyclists can be served by sharing the travel lanes with motor vehicles. Usually, these are streets with low traffic volumes and/or low speeds, which do not need special bicycle accommodates in order to be bicycle-friendly.

Signed Bicycle Routes

Signed routes will be an integral part of the bicycling network in the Florence area. These facilities are an inexpensive way to guide riders to more bicycle-friendly roads. They can be used with any facilities listed above, including roads with bicycle lanes, shared roadways, and multi-use paths. The traffic and geometry of a road are important considerations when determining the location of a signed route. In addition, the functionality of the route for the purpose it was intended (e.g., scenic route or utilitarian connector) is a necessary component in the decision-making process.

SHARE THE ROAD signs (MUTCD W11-1 warning sign with Q28-1 subplate) can be used to alert drivers to the presence of bicyclists. They are typically considered when one or more of the following criteria are met:

- Safety problems exist and the roadway cannot be improved with bicycle lanes
- Bicycling volumes are high
- A conflict of obvious courtesy problem exists between vehicle and bicycle traffic sharing the road.





BIKE ROUTE signing (MUTCD D11-1 sign with D1-1b subplate) is another treatment which can be implemented to improve conditions for bicyclists. BIKE ROUTE signs help guide bicyclists to preferred routes—roads with lower motor vehicle traffic speeds, fewer trucks, or lower volumes. Typically they are supplemented with destination and distance signing.

Special signs should be designed to guide bicyclists along the recommended routes. These signs should incorporate their own colors and logos so that they can be recognized easily and help advertise the route to potential bicyclists, and should include the name of the route being utilized.

Other Bicycle Facilities and Amenities

Design considerations should also be given to ancillary bicycle facilities and amenities such as bike racks, bikes on buses, and bike amenities at transit stops, and bike-friendly drainage inlets. Additional descriptions of ancillary facilities are provided in the recommendations identified later in this chapter.



Pedestrian Facilities

Analysis and development of recommendations in this chapter involved reviewing pedestrian facility design guidelines for sidewalks and walkways, curb ramps, marked crosswalks and enhancements, and transit stop treatments.

Sidewalks and Walkways

The Federal Highway Administration (FHWA) defines sidewalks as "walkways that are parallel to a street or highway" and walkways as "pedestrian paths, including plazas and courtyards." The FHWA recommends that sidewalks and walkways be designed with the following characteristics in mind:

- Wide pathways with minimal obstacles or protruding objects
- Clearly defined pedestrian furniture and frontage zones
- Moderate grades and cross slopes
- Rest areas outside of pedestrian zone
- Minimal changes in level
- Firm, stable and slip resistant surfaces
- Good lighting

The Institute of Traffic Engineers (ITE), the American Association of State Highway and Transportation Officials (AASHTO), and FHWA all recommend a minimum width of 5 feet for a sidewalk or walkway to allow two people to pass comfortably or walk side-by-side, and they prefer 4 to 6-foot buffer zones be provided to separate pedestrians from the street. For those with mobility impairments, sidewalks and walkways should be designed to minimize grades and cross slopes. FHWA recommends that the grade and cross slope not exceed 5% and 2%, respectively, wherever possible.

Curb Ramps

For persons with disabilities, curb ramps provide critical access between the sidewalk and street. While allowing for site-specific designs for curb-ramps, FHWA suggests the ramp provide a level land area, be within the marked crosswalk area, avoid large changes of grade, and be distinguishable from surrounding terrain. The Federal Americans with Disabilities Act (ADA) mandates curb ramps at all intersections and mid-block locations where pedestrian crossings exist.

Marked Crosswalks and Enhancements

Marked crosswalks indicate the optimal location for pedestrians to cross a street. While crosswalks usually are installed at signalized intersections, mid-block crosswalks are becoming more popular. Where a higher level of pedestrian visibility is needed, the following enhancements can be incorporated into the crosswalk and street design:

- **Raised Crosswalk**. A raised crosswalk elevates the roadway by 3 to 6 inches, in effect reducing the speed of automobiles and providing increased visibility for high pedestrian-traveled areas. Raised crosswalks must be well-lit and well-marked to allow motorists to detect them at night and during inclement weather.
- **Pedestrian Refuge Island**. These raised islands in the center of a street protect pedestrians from vehicles. At such crossings, pedestrians can concentrate on one direction of traffic at a time by crossing to the center island and waiting for a gap in traffic to complete the trip across the street.
- **Curb Extensions**. Curb extensions can be placed at intersections or mid-block crossings. They extend the sidewalk into the street to improve pedestrian safety by calming traffic, increasing driver awareness of pedestrian activity, and shortening the crossing distance for pedestrians. When combined with landscaping, curb extensions can compensate for overly wide streets and improve the streets character.

Transit Stop Treatments

Most transit trips require pedestrian or bicycle connections. In addition to having well-planned routes, a good transit system provides riders with safe, accessible stops. The design of transit stops should be tailored to the number of riders and provide a buffer from vehicle traffic, sheltered seating, trash cans, bicycle parking, and clear signage that includes route information. To encourage active use of the transit system, a network of sidewalks and paths should connect high-volume transit stops to popular destinations. Pedestrian-level lighting along these paths improves visibility and increases safety for users.

Multi-Use Facilities

Some facilities are designed to accommodate both bicyclists and pedestrians. These multi-use facilities separate non-motorized users from automobile traffic.

Multi-Use Paths on Independent Alignments

Multi-use paths—or shared use trails—are becoming quite popular, not only with bicyclists, but also with many non-motorized transportation device users across the country. They can provide a high-quality bicycling experience in an environment that is protected from motorized traffic because they are constructed in their own corridor, often within open-space area. Multi-use paths can be paved and should be a minimum of 10-feet wide. Their width may be reduced to 8 feet if there are physical or right-of-way constraints. Additional width should be considered for areas with difficult terrain or heavy-traffic.

Multi-use paths are, in effect, little roads and should be designed with clearance requirements, minimum radii, stopping sight distance requirements, and other criteria just as roadways are designed. Additionally designers must comply with the MUTCD and AASHTO Bicycle Guide when designing these facilities.

Although paths should share geometric and operational design guidelines with roadways, they require a greater consideration of amenities. Shade and rest areas with benches and water sources should be designed along multi-use paths. Where possible, vistas should be preserved. Way finding signs (e.g., how far to the library or the next rest area, or directions to restrooms) are important for non-motorized users. These types of design considerations can help make a multi-use path more attractive to potential users.

Sidepaths/Wide Sidewalks

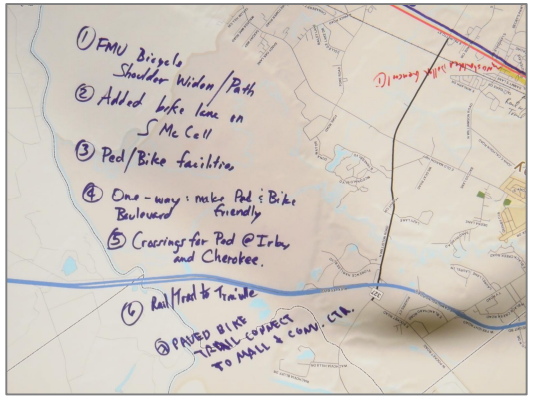
A sidepath is essentially a multi-use path that is oriented alongside a road. These AASHTO Guide to Development of Bicycle Facilities strongly cautions those contemplating a sidepath (or wide sidewalk) facility to investigate various elements of the roadway corridor environment and right-of-way before deciding upon a final design. AASHTO provides nine cautions/ criteria (pp34-35) for designing sidepaths. Research confirms that bicycle/motor vehicle crash rates can be higher for bicyclists riding on a sidepath compared to riders on the roadway. Crashes between motor vehicles and bicyclists on sidepaths can occur when motorists falsely expect bicyclists to yield at all cross streets and driveways. Likewise, stopped vehicles entering or exiting side streets or driveways may block the bicyclists' path. However, careful design can mitigate some of these concerns.

Some high-volume, high-speed roadways exist where sidepaths are the best bicycle facility that can be provided without very costly changes to the roadway corridor. In these cases, it may be desirable to provide a sidepath. This decision must consider the magnitude of intersecting driveway and roadway conflicts. If possible, sidepaths should be provided on both sides of the roadway to encourage bicyclists to ride in the same direction as adjacent traffic. The long-term strategy on these roadways should be to widen the road or narrow the lanes to provide additional space for bicyclists in on-street bike lanes or shoulders.

Assessment & Recommendations

As discussed earlier, bicycling and walking falls into two distinct types of travel: utilitarian (non-discretionary) travel and recreational (discretionary) travel. Bicycling and walking are important modes of transportation in Florence and throughout the Pee Dee region, and these modes are available to people of all ages and socioeconomic backgrounds. In urban areas such as downtown Florence, the modes are efficient and convenient ways to travel. And throughout the region, recreational bicycling is gaining in popularity as expert and novice cyclists take to the scenic rural roads. Regardless of the trip purpose, bicycling and walking provide a high level of independence, flexibility, and freedom of choice relative to where you want to go and when you want to get there.

As roads become more congested, cities increasingly seek better ways to move people from place to place. Because roads cannot be expanded infinitely, other facilities such as bikeways, sidewalks, and transit are important to foster transportation options. A complete network of bicycle and pedestrian facilities as well as programs that educate and encourage current and future users is necessary for bicycling and walking to reach its potential as a transportation alternative in the Florence area. The assessment and recommendations that follow are based on the public outreach feedback received during the *2035 LRTP* planning process as well as the outcome of the 2004 Bikeway Master Plan.



Public Outreach Efforts

Local officials must consider how projects and programs support a spectrum of planning factors. The recommended projects, programs, and initiatives that form the Bicycle & Pedestrian Element:

- Support economic vitality
- Increase safety and security of the transportation system
- Increase accessibility and mobility of people
- Protect and enhance the environment
- Foster connectivity across and between modes
- Emphasize preservation of the existing transportation system.

During public outreach, a passionate and vocal group of bicycle and pedestrian enthusiasts expressed concern for biking and walking in Florence and outlined a collective vision for a more livable community. The vision focused on connecting key activity points such as downtown, libraries, parks, retail areas, Francis Marion University, the performing arts center, and medical facilities. Specific comments included:

- The downtown network generally has good connectivity but lacks proper lighting and is poorly maintained in some locations.
- Consider building trails within the electric utility right-of-way.
- Add bike facilities along Palmetto Street connecting from west of Florence to Francis Marion University.
- Pamplico Highway and Second Loop Road need improvements.
- We need to improve bike/ped crossings near Magnolia Mall.
- Make 5 Points safer for bicyclist and pedestrians.

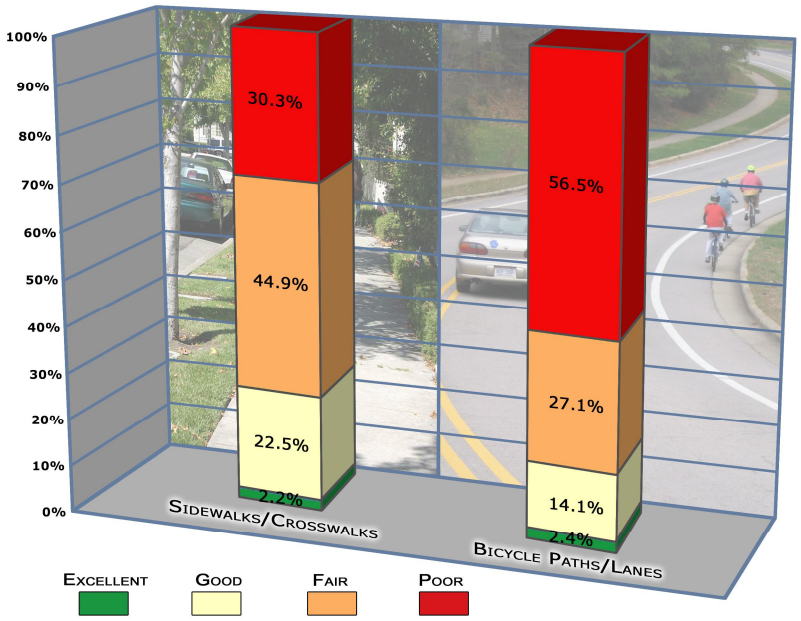
In most cases, their concerns about gaps in the network and unsafe conditions were validated by previous planning efforts (such as the 2004 Bikeway Master Plan) and a review of existing conditions.

Questionnaire Results

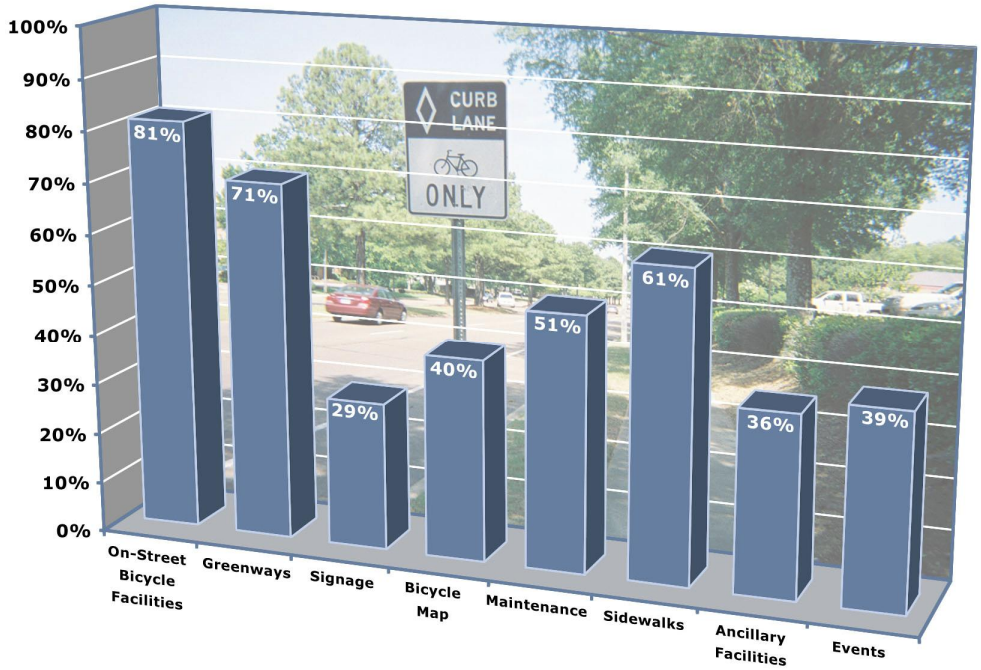
The public questionnaire distributed as part of the long range transportation plan asked participants to rate various elements of the transportation system including bicycle and pedestrian facilities. Sidewalks were rated "fair" or "poor" by 75% of respondents and bicycle facilities were rated "fair" or "poor" by 84% of respondents. Furthermore, only two people gave sidewalks a rating of excellent and no one said the bikeway network was excellent. Only one respondent rated sidewalks and bicycle facilities as excellent.

In addition, the public questionnaire asked participants what improvements could be made to increase their use of bicycling and walking. As shown in the chart below, the majority of answers pointed to on-street bicycle facilities, greenways, and sidewalks. This supports the notion of "if you build it, they will come."

How would you rate the following in the area?



What improvements could be made to increase your use of bicycling or walking?



Bicycle Network

Bicyclists can share multi-use paths with pedestrians or choose to mix with vehicular traffic on roadways. Therefore, bicycle facilities can range from no accommodation for bicyclists to striped bike lanes and off-road multi-use paths. The target user for each application and the unique circumstances of the particular roadway help determine the most appropriate bicycle treatment. For example, on roadways with relatively low automobile volumes and slow travel speeds, experienced bicyclists often feel comfortable riding in traffic with no specific bicycle facilities provided. Marked bicycle facilities or adjacent bicycle paths are desirable as traffic volumes and travel speeds become higher.

Policy Review

Adopted policy and planning documents and programs have an on-going effect on bicycling in the Florence MPO area. The Florence County zoning ordinance encourages construction of greenways (defined as linear belts linking residential areas with other open space areas). Greenways can include bicycle paths, footpaths, and bridle paths, and connecting greenways between residences and recreational areas is encouraged. Maintenance is limited to a minimum of removal and avoidance of hazards, nuisances, or unhealthy conditions.

Existing Bicycle Facilities

The bicycle network in Florence and the surrounding area is limited. Less than 4 miles of wide outside lanes exist, and the region does not have any bicycle lanes. Of the priorities identified in the 2004 Bikeway Master Plan, only portions of the Rail Trail Spur have been completed. The Rail Trail Spur is a 10-foot multi-use path. Although a high priority project for improving connectivity to important destinations, including West Florence High School, the length of new trail added to the current network has been minimal (less than 2.0 miles).

City of Florence Trail System

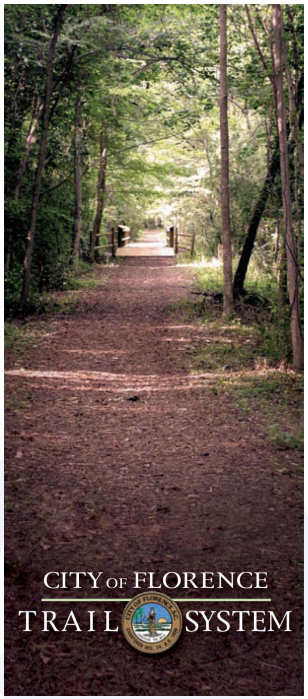
In 2004, the Florence City Council with support of the Parks, Beautification and Leisure Services Commission established a vision for protecting natural corridors and open space within the City of Florence. The vision was to utilize natural features to link natural areas, parks, cultural features, and historic sites for conservation, recreation, and alternative transportation. The key link in the system is Jeffries Creek, which serves as a potential green necklace around the City. The following description of the trail system is included in a brochure produced by the City of Florence. The brochure map is shown on page 6-12.

Trail Connections

The Florence Trail System is comprised of three distinct groupings of trails, each with its own identity and complex of features. Each group of connecting trails or "connections" is shown on the map, along with information on the features being linked together.

Rail Trail Connections

This grouping consists of approximately 10 miles of trails, and provides for individual health and fitness, recognition of environmentally significant areas, opportunities for social interaction in an outdoor environment and introspective experiences. Health and fitness was the primary focus of the original "Rails-to-Trails" facility. Here a hard-surfaced trail provides a venue for personal or group exercise in a pleasing outdoor setting.



An important component of the original Rails-to-Trails was the development of urban transportation modes to supplement the traditional use of vehicular traffic on highways. The first phase of this group of trails, commonly called the Rail Trail, was completed in 2002 and provided the basis for future alternative routes. Alternative transportation opportunities are now provided to the Civic Center, area hotels, restaurants and retail establishments, Lowe's and Hobby Lobby, as well as West Florence High School and residential neighborhoods.

The Veterans Park Trail, in conjunction with the park, provides unique opportunities for personal reflection or meditation. Partnerships with Byrd Properties, Inc. have enabled the City to preserve a significant block of Jeffries Creek wetlands between the creek and Woody Jones Boulevard. The trail traverses this natural area and terminates at the Veterans Park. At the trail's terminus, the Veterans Park invites the public to consider the lives and sacrifices of military personnel who served in uniform during the 20th century.

Urban Connections

This grouping of urban streetways focuses on the connections of city parks to the emerging cultural center in downtown Florence. The parks, strategically located in residential neighborhoods, provide both athletics-based recreation and an opportunity for urban residents to enjoy walking and picnicking in natural settings.

The downtown areas showcase a renaissance of arts and culture that is symbolized by new buildings and new energy for the Florence Downtown. The Florence County Library relocated to its current site on Dargan Street in 2005. In addition to standard library offerings, a wealth of information is available on the history of the City of Florence, Florence County and the Pee Dee area. The Florence Little Theatre, Florence's oldest arts-based performance group, constructed a new building and relocated to Dargan Street in 2008. Francis Marion University's Performing Arts Center, to be constructed downtown, will not only house the University's new music and arts majors, but will also provide the Greater Florence community with a high-capacity auditorium for cultural events and artistic performances. This premier facility will advance the image of the downtown area and act as another catalyst for future development.

Freedom Florence Connections

History, education, environmental protection and recreation may be encountered and appreciated along approximately eight miles of these east Florence trails. This connection corridor runs generally north-south, with Levy Park Community Center located at the northern terminus and an athletics-based recreation facility, Freedom Florence Recreational Complex, at the southern terminus. In between, however, the user will find connections to a wide variety of information and experiences.

Environmental protection is highlighted at two locations – the Pye Branch SWIM project area and the City's wastewater management facility. At the SWIM project, users can observe environmentally degraded wetlands which are being restored by the City to a more natural condition. Coupled with the City's planned wastewater management facility, which is projected to be completed by 2012, the Florence community will share in, and benefit from, environmental technologies that minimize energy use and odors, reduce waste and reclaim stormwater and wastewater. In educational partnerships with organizations like Science South on Jeffries Creek, the community, especially school classes, will be able to gain an appreciation of water management and its communal benefits.

As with the Veterans Park, the Florence Stockade and the adjoining U.S. National Cemetery give the user an opportunity to quietly consider the struggles and suffering inherent in military conflicts. While the Stockade and National Cemetery came into being during the Civil War, veterans from all wars since that time have been, and are still being, interred here.


THE FLORENCE TRAIL SYSTEM
Special Thanks to:
• Florence Oak Council
• HRM Florence LLC
& TMB Florence LLC
• Peart-Robin Inc.
• Lowe's Home Center
• Naturally Outdoors/ Bicycle World
• McLeod Health
• Wal-Mart
• Affordable Suites
• Mrs. Bridge & Lee Foundation
• Bird Properties, Inc. LLC
• Florence School District One
• Pepsi Cola Bottling Company of Florence, S.C.
• Sertoma Club
• S.C.P.R.T.
• S.C.D.O.T.
• Dr. D. Edward Floyd & Family
• Friends of the Florence Stockade
• Goforth, Brown & Associates
Rail Trail Connections
1. Cypress Knee Loop
2. Hoffmeyer Connector
3. Knights Trek Loop
4. Live Oak Connector
5. McLeod Crossings
6. No Name Creek Trail
7. Rail Trail
8. Rutledge Manor Trail
9. Sneed School Trail
10. Veterans Park Trail
Urban Connections
11. Iola Jones Park Connector
12. Jeffries Creek Loop
13. Levy Park Connector
14. Maple Park Connector
15. McLeod Park Connector
16. Northwest Park Connector
17. South Connector
18. Timrod Park Connector
Freedom Florence Connections
19. Cemetery Trail
20. Deer Track Loop
21. Freedom Trail
22. Sarratt's Mill Pond Trail
23. Mckeown Loop
24. Rifle Pit Trail
25. Stockade Trail
26. Triple Oak Trail
27. Wood Duck Trail
Fitness Trails
28. Carver Fitness Trail
29. Leatherman Ctr. Fitness Trail
30. Levy Fitness Trail
31. Northside Fitness Trail
32. Northwest Fitness Trail
33. South Park Fitness Trail
34. Timrod Park Fitness Trail
=Parking
Hoffmeyer
Cashua
Darlington
Evans
Maple Park
David H. McLeod
Palmetto
Cherokee
Second Loop
Third Loop
Pamplico
Freedom
Oakland
Irby
Woods
Ebenezer
Pine Needles
Florence Civic Center
Magnolia Mall
Wal-Mart
Veterans Park
Rail Trail
Rutledge Manor
Sneed Middle School
Live Oak Park
McLeod Health & Fitness
Naturally Outdoors
McLeod Park
Jeffries Creek Park
Timrod Park
Little Theatre
Library
National Cemetery
Lester Park
North West Park
North Side Park
City County Complex
Iola Jones Park
Levy Park
Recreational Complex
Freedom Florence
South Park
Friendship Park
Arts & Cultural District
Downtown
I-20
I-95

Proposed Bicycle Facilities

On-street facilities such as bicycle lanes, wide outside lanes/paved shoulders, and signed routes should be carefully coordinated depending upon the intended character of the street and anticipated experience level of cyclists. These facilities should be supplemented with multi-use paths where appropriate. The importance of improving the bicycle network was clear based on the response to the funding question on the questionnaire distributed as part of the planning process. Of $100 to invest in the transportation network, residents allocated a total of $26 for bicycle facilities (on-street and greenways/trails.



Bikeway Master Plan (2004) Priorities

As part of the Bikeway Master Plan, multiple public summits were held. These summits, along with a thorough review of transportation challenges in the area, led to a set of recommendations. The plan lists the recommendations by the following priority levels:

High Priority

- **Darlington Street Bikeway**
  (signed bike route, shoulder/bike lane, off-street bike path)
- **Rail Trail Spur** (multi-use path)
- **South Rail Trail Extension** (multi-use path)
- **Parks Connector** (bike lane, signed bike route, striped shoulder)
- **McLeod Park Bikeway** (multi-use path)
- **Downtown Connector**
  (bike lane, signed bike route, wide outside lane)

Medium Priority

- **Church Street Bikeway** (wide outside lane)
- **Palmetto Connector** (shoulder/bike lane, signed bike route)
- **Third Loop Connector**
  (signed bike route, striped bike lane/ shoulder, wide outside path)
- **Freedom Florence Bikeway** (multi-use path)
- **Francis Marion Connector** (signed bike route)
- **South Cashua Bikeway** (signed bike route)

Low Priority

- **North Rail Trail Extension** (multi-use path)
- **Lynches River Connector** (striped shoulder)
- **Northeast Connector**
  (wide outside lane, striped shoulder, signed bike route)

Recommended Bicycle Network

The recommended bicycle network includes a coordinated group of on-street facilities and off-street paths. These facilities are shown in **Figures 6.1** and **6.1a**. On-street facilities such as bicycle lanes, paved shoulders, and wide curb lanes should be carefully located depending upon the intended character of the street and anticipated experience level of cyclists. These facilities should be supplemented with multi-use paths where appropriate. In total, the recommended bicycle facilities equal nearly 90 miles of on-street improvements and nearly 11 miles of off-street multi-use paths. Signed bike routes and wide outside lanes/paved shoulders comprise the majority of on-street bike facility recommendations. The improvements include facilities proposed as part of the 2004 Bikeway Master Plan as well as recommendations developed through the public involvement efforts of the *2035 LRTP* and subsequent analysis.

Connectivity should be an integral part in all residential and commercial developments. Where connections for motor vehicles are not provided, multi-use paths can provide connections within and shortcuts through neighborhoods (.e.g., connecting two cul-de-sac streets). Many of the recommendations presented in throughout this chapter could be implemented by the private sector during the land development process. In addition to requiring these facilities, adopted city and county policies should specify the private sector's role in financing and/or constructing these projects.

The construction of on-street bicycle facilities and sidewalks can occur as stand-alone enhancement projects or can be incorporated into public and private infrastructure projects. The second option may be more time- and cost-effective. Infrastructure projects include roadway widening, regular street maintenance, utility work, and new road construction. Adopted city and county policies should require that these projects provide new bicycle and pedestrian facilities.

Striped Bicycle Lanes

A striped bicycle lane is recommended for three corridors in Florence totaling 3 miles:

- **E. Cheves Street** — S. Dargan Street to E. Palmetto Street
- **S. Dargan Street** — E. Cheves Street to National Cemetery Road
- **Park Avenue** — W. Palmetto Street to Wisteria Drive

The one-mile corridor on East Cheves Street corresponds with roadway improvements recommended as part of the McLeod Regional Medical Center Main Campus Master Plan. The eastern terminus of the bicycle lane will occur at a redesigned intersection of Cheves Street and Palmetto Street. At this point, cyclists traveling eastbound toward the airport can utilize a combination of bicycle facilities, including multi-use paths and wide outside lanes to reach Francis Marion University.

The recommended bicycle lanes on South Dargan Street and Park Avenue correspond with recommendations from the 2004 Bikeway Master Plan. The South Dargan Street bicycle lane will improve connections for bicyclists to the Doctors Bruce and Lee Foundation Library, McLeod Medical Center, and downtown Florence. The wide pavement that exists along the corridor will permit restriping for a bike lane without having to widen the road. The proposed facility on Park Avenue is part of a larger effort to provide access to Jeffries Creek Park, Lucas Park, and Timrod Park as well as to schools on Wisteria Drive.

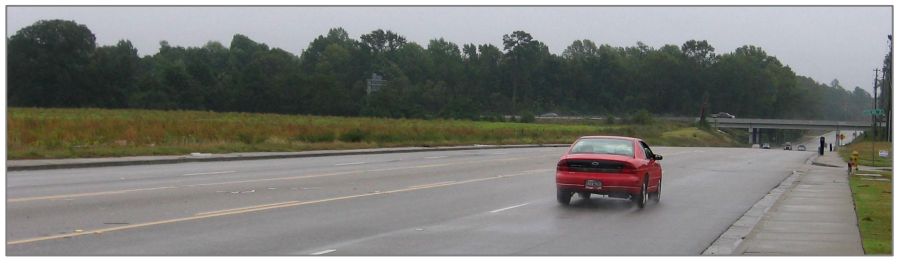


The eastern terminus of the East Cheves Street bicycle lane will connect to a planned sidepath at the redesigned intersection with East Palmetto Street.

Wide Outside Lanes/Paved Shoulders

The recommended wide outside lanes and paved shoulders provide extra room for bicyclists and motorists without having to exclusively dedicate pavement to bicyclists. The type of treatment in this category will depend on the presence of curb and gutter. Where curb and gutter is or will be provided, a wide outside lane is recommended. Along rural routes with swale drainage, a paved shoulder is the preferred treatment. Paved shoulders not only will serve bicyclists but also will serve pedestrians when a sidewalk is not present and provide a vehicle refuge for distressed vehicles and a buffer for truck traffic traveling on these routes.

The recommendations help complete the bicycle network by connecting to other existing and recommended facilities. Currently, 3.8 miles of existing wide outside lanes are provided within the bicycle network. This measurement does not account for all wide outside lanes or paved shoulders in the study area, but instead accounts for the existing facilities along key links in the bicycle network. Cherokee Road, National Cemetery Road, Oakland Avenue, Alligator Road, and Howe Springs Road account for a portion of the 40.5 miles of recommended wide outside lanes/paved shoulders.



Wide Outside Lane on Hoffmeyer Road

Signed Bike Routes

As an inexpensive facility to guide riders to bicycle-friendly roads, signed routes are an integral part of the recommended bicycle network. The recommended signed routes were selected to encourage bicyclists to travel on lower volume routes, both within city limits and in rural areas. Bicyclists will benefit from the increased motorist attention to them as they move from one signed facility to higher level facilities such as striped bike lanes or wide outside lanes. More than 46 miles of signed routes are recommended, including portions of Second Loop Road, Pamplico Highway, Cashua Drive, and Darlington Street.











Multi-Use Paths

In the public questionnaire, 71% of respondents identified improvements to the greenway network as a reason they would increase their amount of bicycling and walking. Multi-use paths serve bicyclists and pedestrians and protect users from traffic. These facilities include greenways and sidepaths. Approximately 11.9 miles of new multi-use paths are proposed, located along the Pye Branch in eastern Florence, Jeffries Creek west of Florence, and East Palmetto Street. In some locations, the recommended multi-use paths overlap with the City of Florence Trail System.



Bicycle Loops

The network of on- and off-street bicycle facilities provides the opportunity to create a system of bicycle loops. Recommended loops consist primarily of on-street facilities, but they utilize off-street multi-use paths when possible. These loops can be examined from the perspective of individual routes or as an overall interconnected system. The idea is to provide an interconnected system of bike facilities that cater to all levels of experience. Loop routes could even be named or color-coded and displayed at strategic locations throughout the MPO area to provide current information to users and enhance the awareness of cycling in the region. The six recommended bicycle loops vary in size and are shown in **Figure 6.2**. The loops include:

- **Cherokee Loop** — 6.1 miles
- **Downtown Loop** — 7.8 miles
- **Francis Marion Trail** — 21.6 miles
- **Monticello Mile** — 11.5 miles
- **Palmetto Pathway** — 16.8 miles
- **Quinby Pathway** — 16.6 miles

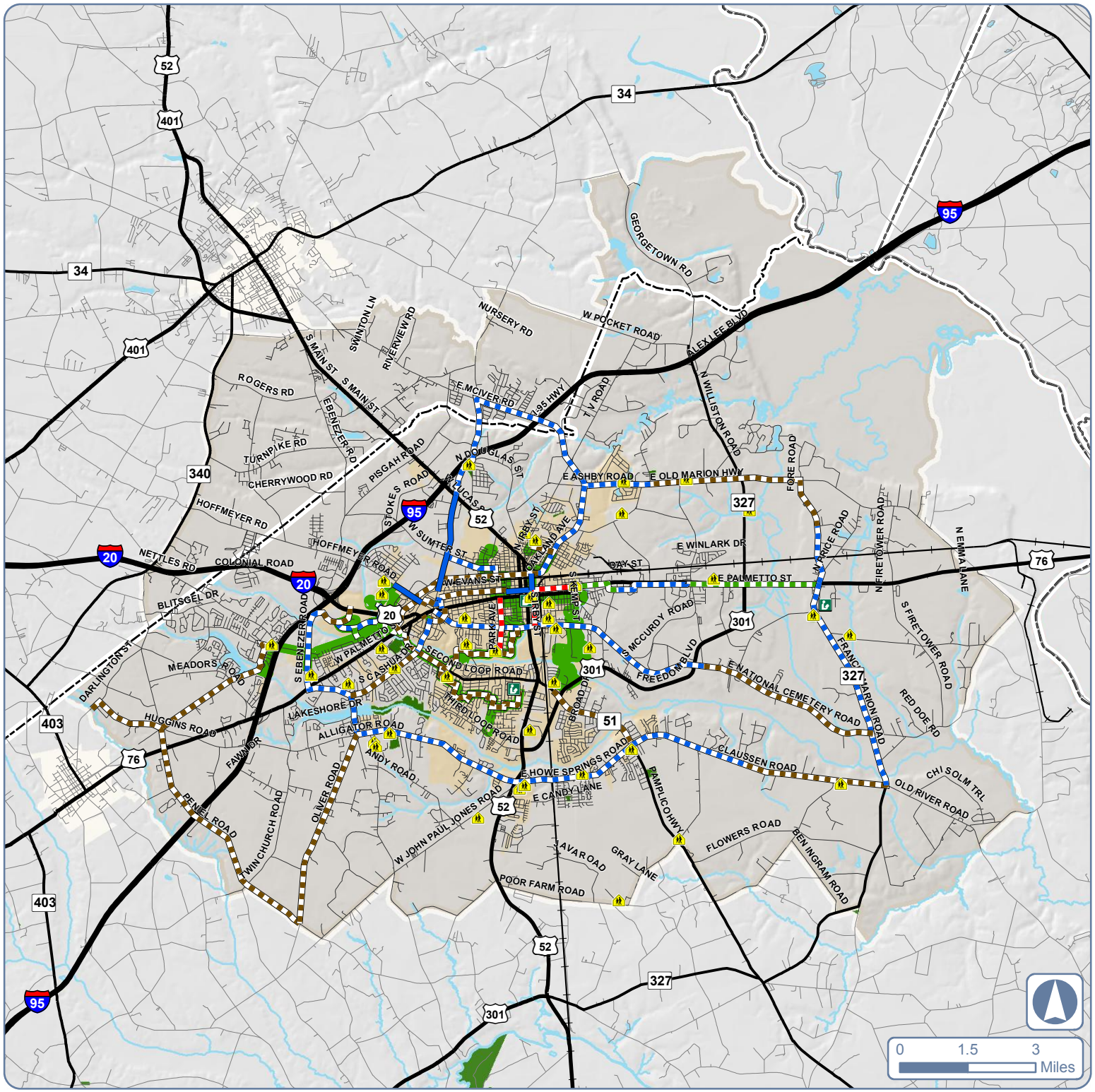


Figure 6.1

Existing and Recommended Bicycle Facilities

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Library
- School

Existing

- Wide Outside Lane
- Florence Trail System

Recommended

- Bicycle Lane
- Wide Outside Lane/ Paved Shoulder
- Signed Route
- Multi-Use Path

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

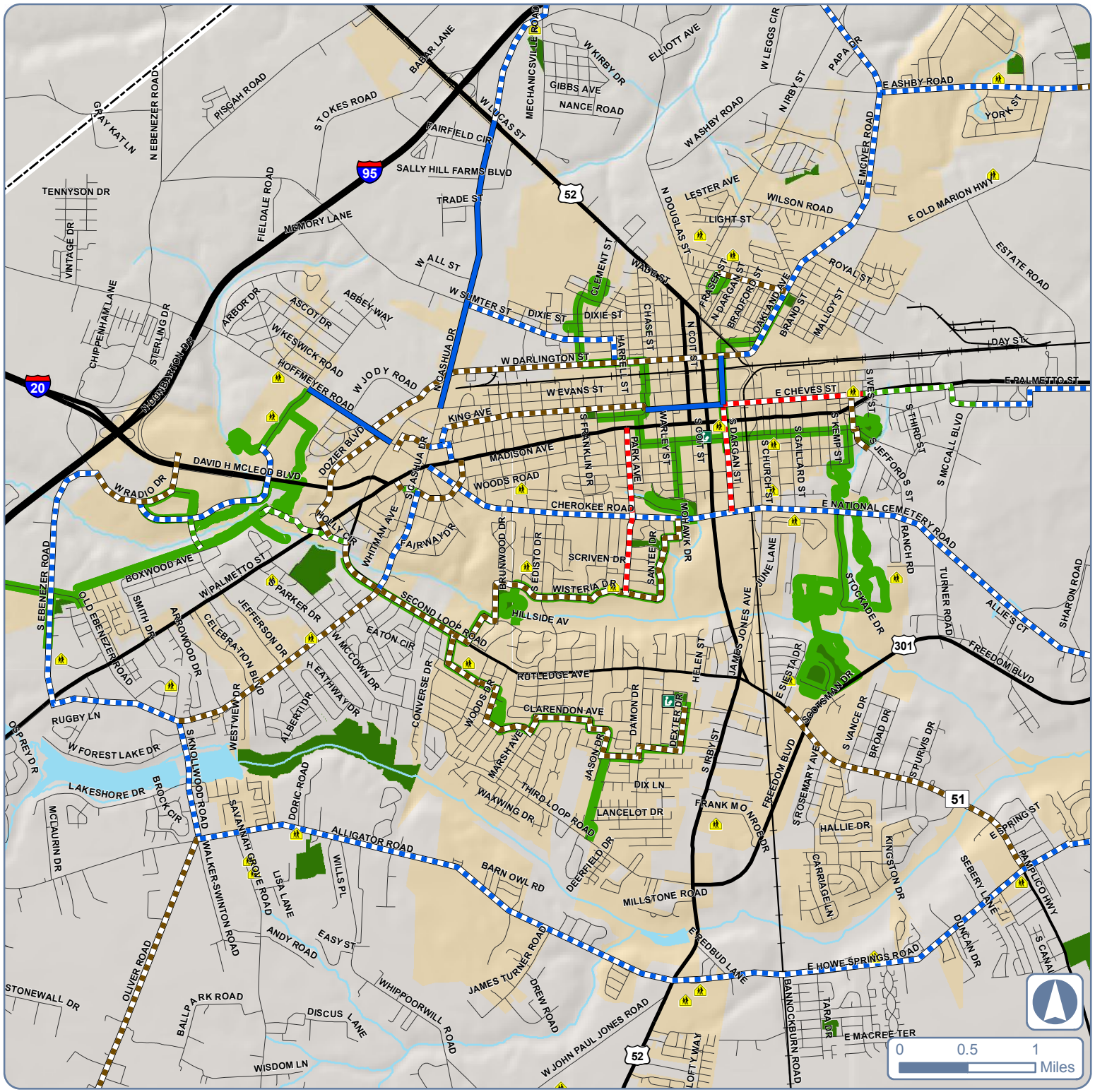


Figure 6.1a

Existing and Recommended Bicycle Facilities

Inset: City of Florence

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Library
- School

Existing

- Wide Outside Lane
- Florence Trail System

Recommended

- Bicycle Lane
- Wide Outside Lane/ Paved Shoulder
- Signed Route
- Multi-Use Path

2035 LRTP

Kimley-Horn and Associates, Inc.

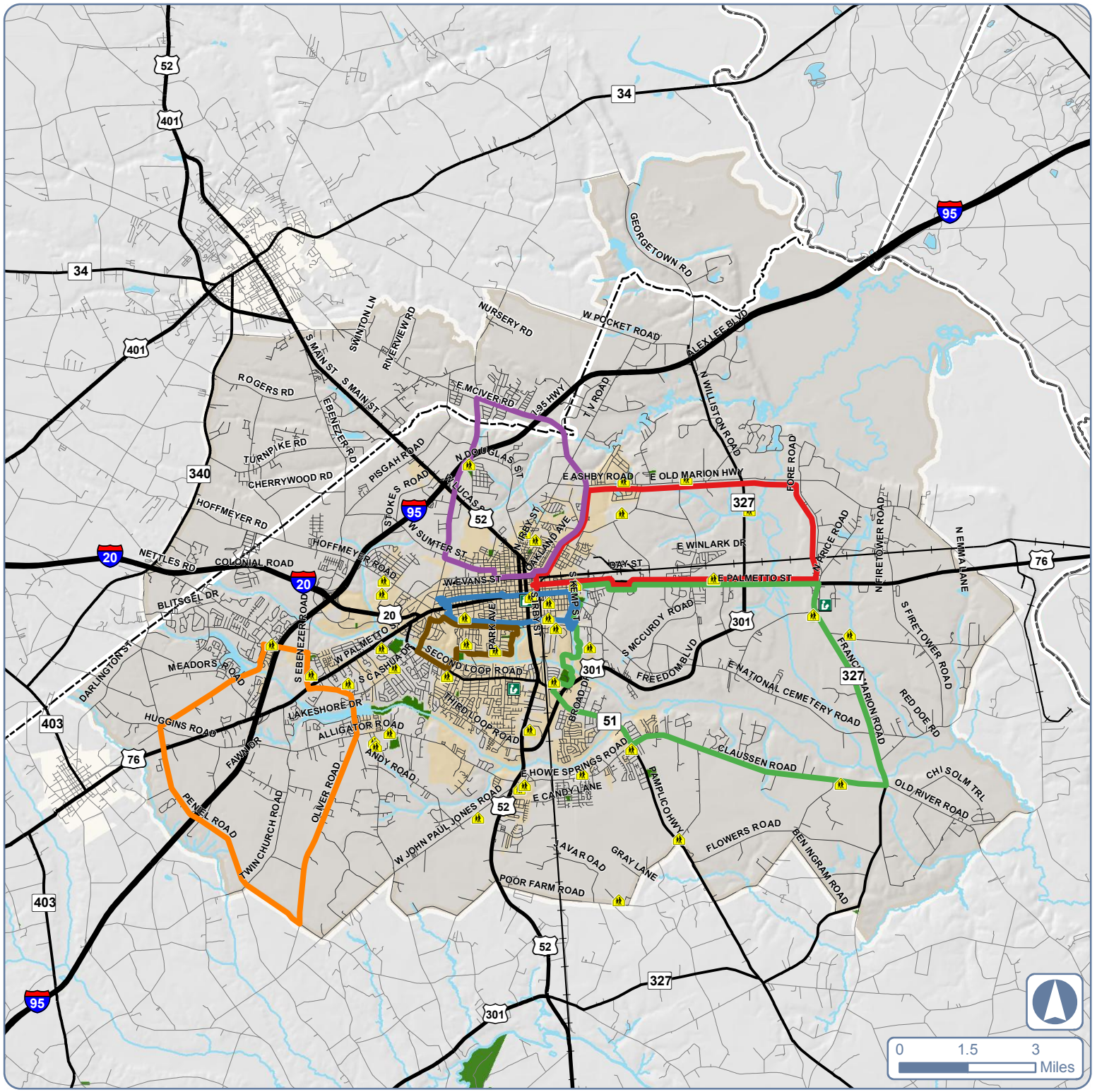


Figure 6.2

Recommended Bicycle Loops

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Library
- School

Recommended Loops

- Cherokee Loop
- Downtown Loop
- Francis Marion Trail
- Monticello Mile
- Palmetto Pathway
- Quinby Pathway

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

Pedestrian Network

Walking is a key element to a healthy community's transportation system. Every trip begins and ends as a walking trip; yet walking is often a forgotten mode during the planning process. When a proper pedestrian environment exists, walking offers a practical transportation choice with benefits for individuals and their communities. Features that contribute to making communities more walkable include a healthy mix of land uses, wide sidewalks, buffers between the edge of pavement and the sidewalk and trees to shade walking routes. Slowing traffic, narrowing streets to reduce pedestrian crossing distance and incorporating pedestrian infrastructure (i.e., signage, crosswalks, and adequate pedestrian phasing at signals) into future roadway design plans also ensure walkability.

The availability of pedestrian facilities and amenities plays an important role in encouraging the use of alternative modes of travel to the automobile. In addition to shifting trips from automobile to foot, the success of transit and other alternative travel modes depends greatly on the state of pedestrian facilities and amenities.

Existing Sidewalks

For walking to be considered a realistic alternative, conditions must be favorable for pedestrian use. Sidewalk deficiencies and a largely inhospitable pedestrian environment contribute to a reliance on the automobile even for shorter trips. The most walkable areas in Florence are in the downtown area. Here, pedestrians benefits from a relatively complete sidewalk network and a better mix of human-scaled features to engage pedestrian attention. Beyond the downtown area, however, sidewalks located along major arterials have insufficient buffer areas between pedestrian and fast-moving traffic. Buildings are set back further from the sidewalk, contributing to an inhospitable pedestrian environment.

Policy Review

Just as for the bicycle network, adopted policy and planning documents and programs have an on-going effect on safe and convenient sidewalks in the Florence MPO area. The construction of new developments (residential and non-residential) facilitates the construction of pedestrian infrastructure. The subdivision ordinance (Chapter 28.6) requires sidewalks be installed for all subdivisions that require new street construction.

- Pedestrian paths may be constructed in lieu of sidewalks, but must have a walking surface at least six feet wide constructed with asphalt, concrete, hard-packed gravel, or approved alternative material. In addition, the path must fit the criteria detailed in the Subdivision Ordinance Appendix.
- Where the path is behind or between lots, there must be at least seven feet of vegetated buffering space on each side of the path, measured perpendicularly from the edge of the path.
- Where the path runs adjacent to and parallel to a street, there must be at least four feet of vegetated buffering space between the edge of the path and the hard surface of the street.
- Completed pedestrian paths must be transferred to and accepted by Florence County for maintenance and ownership.

The County zoning ordinance (Chapter 30) also requires sidewalks not less than three feet in width be provided along the front property line of each project building in a townhome community.



Proposed Pedestrian Facilities

Sidewalks are necessary elements in urban areas that have higher land use densities and more pedestrian activity. Sidewalks downtown and in activity centers should be wide enough to provide at least a 5-foot-wide clear width for walking, plus a furniture zone next to the street (for benches, waste receptacles, poles, street trees, and newspaper racks). Consideration also should be given to an edge zone next to buildings. This area would allow space for plants and people to stand while window-shopping or café tables if adjacent business owners want to offer sidewalk service to their customers. This minimum sidewalk width in a downtown retail area is 12 feet.

In other areas, a network of sidewalks on one side of the street, multi-use paths, and trails should serve pedestrians. In general, sidewalk widths should be a minimum of 5 feet in residential neighborhoods with at least a 5-foot wide buffer to the travel way. Sidewalks adjacent to the street without a buffer should be discouraged because of the discomfort it creates for pedestrians.

In the public survey, a majority of respondents identified walkable neighborhoods and commercial centers as a top priority for improvements. 61% of respondents also thought that sidewalks could improve the bicycle and pedestrian network. On average, if respondents were given $100 to improve the transportation network, they would invest $9 in sidewalks. New sidewalks should eliminate gaps in the current sidewalk network and connect existing downtown pedestrian facilities to key destinations in the area.

Pedestrian Accessibility Nodes

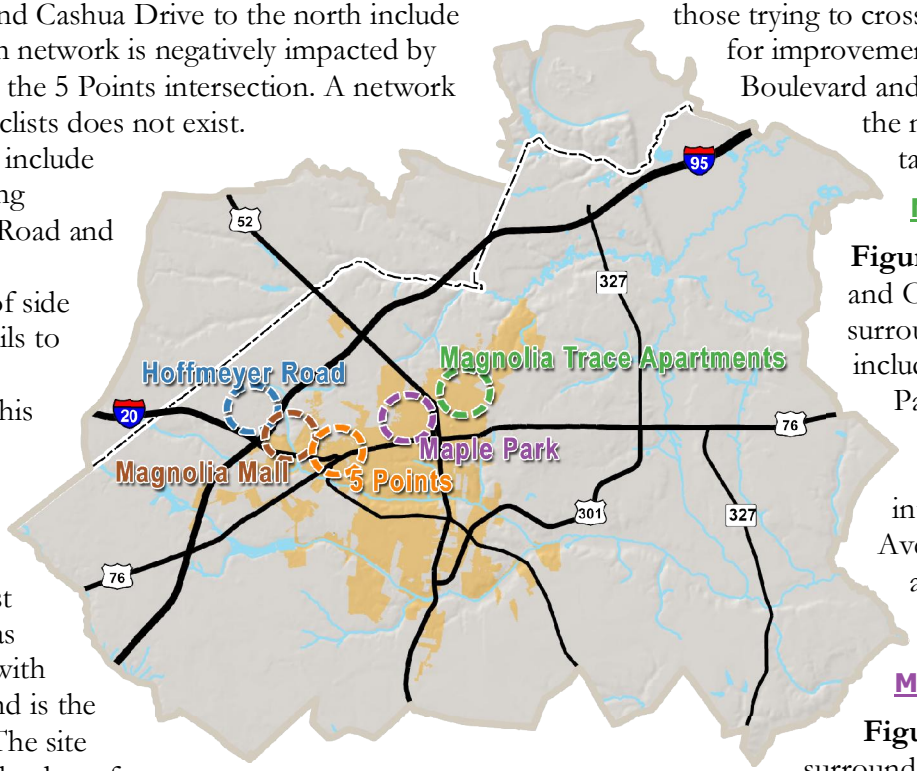
Some pedestrian recommendations are shown as part of the access management corridors and complete street concepts presented in the Future Roadway Element (**Chapter 5**). Improvements of these types should be considered at locations facing similar issues throughout the region. To further define representative pedestrian strategies, the project team with assistance from the TPAC and local stakeholders developed a series of Pedestrian Accessibility Nodes. **Figures 6.3** to **6.7** depict different examples of improvements that can be made to the pedestrian network across the region. Due to the extensive data collection required to prepare a comprehensive set of pedestrian recommendations for each facility within the entire Florence region, a representative approach was undertaken to provide illustrative recommendations.

Five nodes were selected across the region, representing a variety of municipalities and conditions. Each node was centered on one or more activity centers that would potentially draw pedestrian traffic. On each diagram, two circles are drawn around this activity center. The ¼-mile radius represents an approximately five-minute walk for the average pedestrian, while the ½-mile radius represents approximately a ten-minute walk. Therefore, areas within these circles can reasonably expect to generate pedestrians to the activity center.

To address pedestrian needs for each node, several prevailing themes emerged. First, closing gaps in the network of pedestrian facilities should be a priority in order to promote the best use of the existing network. This will prevent pedestrians from being stranded without access to facilities or amenities when the sidewalk terminates. Next, pedestrian access to activity centers from residential areas or other activity centers should be considered. Finally, maintenance of existing and any future pedestrian facilities should be performed regularly in order to maximize the effectiveness of the current infrastructure.

5 Points

Figure 6.3 shows the 5 Points area where Palmetto Street, Cashua Drive, Hoffmeyer Road, and Cherokee Road intersect in western Florence. The ½-mile walking radius includes a variety of retail stores and restaurants as well as neighborhoods along Cherokee Road. While Palmetto Street and Cashua Drive to the north include sidewalks, the pedestrian network is negatively impacted by the unsafe conditions at the 5 Points intersection. A network of safe facilities for bicyclists does not exist. Recommendations here include consistently incorporating sidewalks on Cherokee Road and Hoffmeyer Road and establishing a network of side streets and off-street trails to redirect bicyclists and pedestrians away from this congested intersection.



Hoffmeyer Road

Figure 6.4 shows area of Hoffmeyer Road west of I-95. This location has several neighborhoods with varying income levels and is the site of a future school. The site also borders one of the land use focus areas described in detail in **Chapter 9**. Recommendations at this location include extending the sidewalk on the south side of Hoffmeyer Road to the west, improving connectivity to the future school from adjacent neighborhoods, and improving intersections along Hoffmeyer Road.

Magnolia Mall

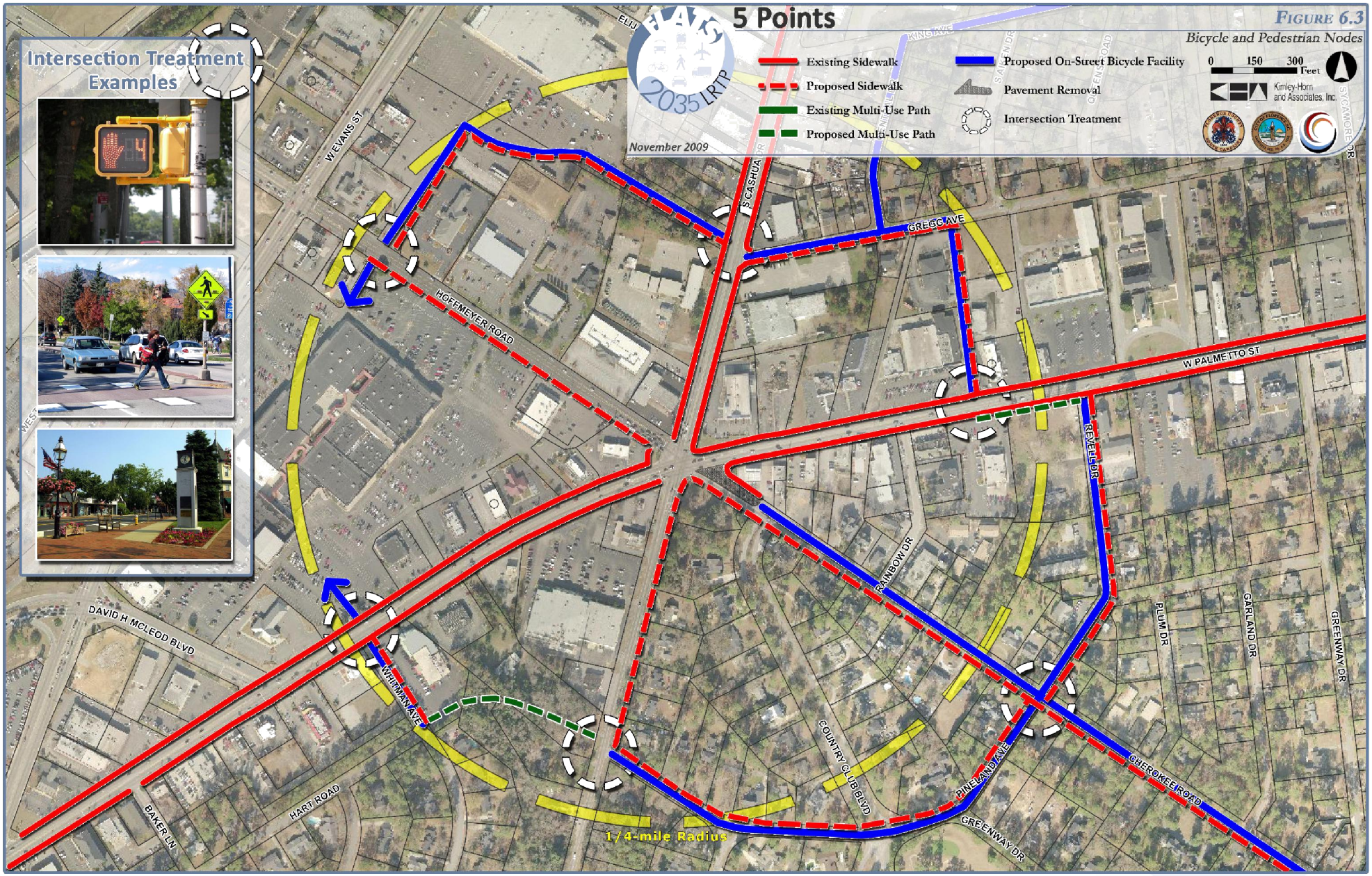
Figure 6.5 is centered on Magnolia Mall. The ½-mile walking radius captures the retail areas south of David McLeod Boulevard, the Florence Convention Center, and West Florence High School. The area currently is inhospitable to bicyclists and pedestrians, particular those trying to cross David McLeod Boulevard. The main objective for improvements is to create a safe crossing of David McLeod Boulevard and to develop a consistent network that connects the neighborhoods, retail area, and the school while taking advantage of the abandoned rail corridor.

Magnolia Trace Apartments

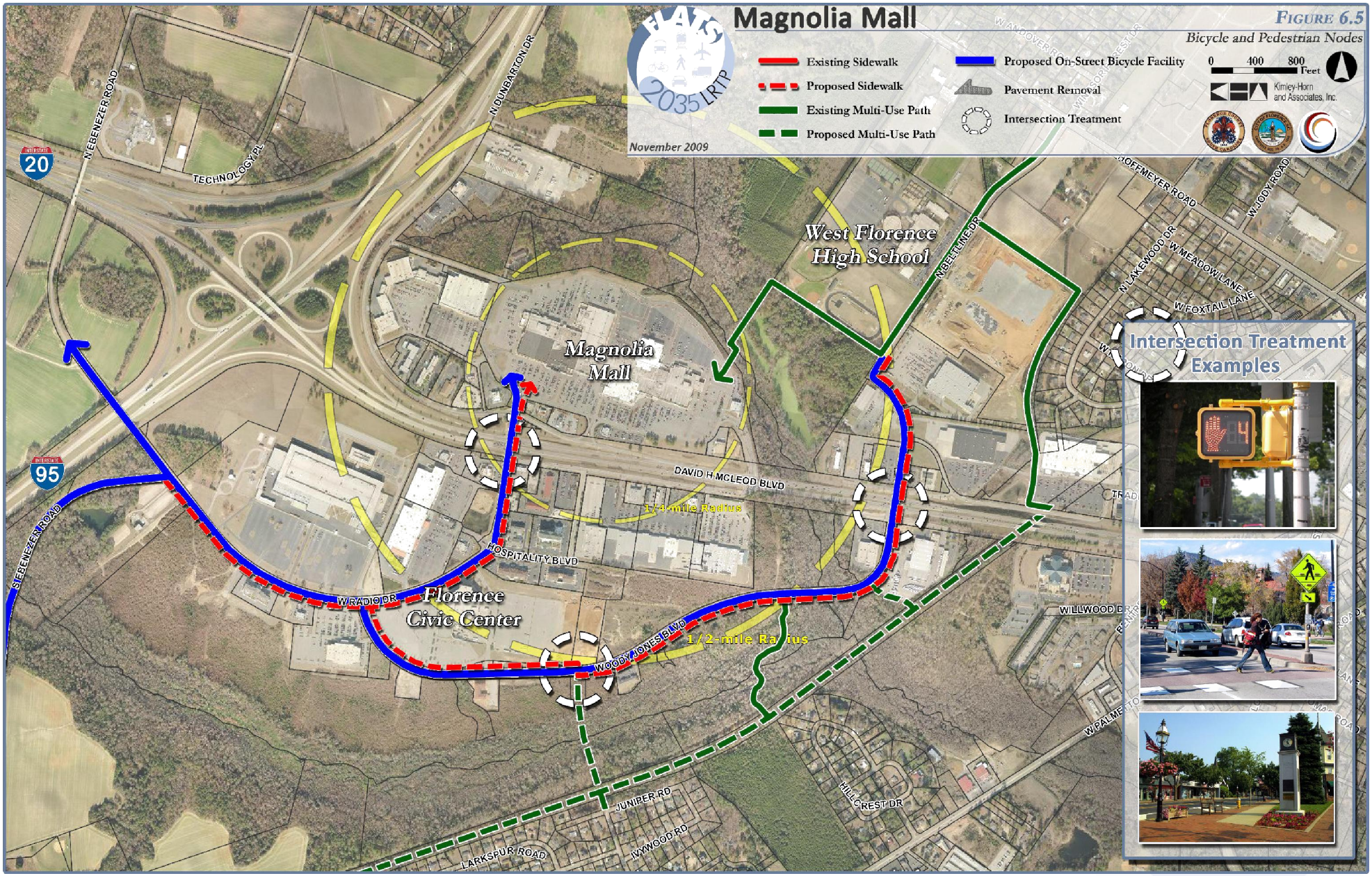
Figure 6.6 centers on the intersection of Royal Street and Oakland Avenue and includes the area surrounding Magnolia Trace Apartments. This area includes neighborhood amenities such as Iola Jones Park and smaller retail stores. As a result, recommendations focus on establishing pedestrian connections at two unsafe intersections and extending sidewalks along Sopkin Avenue, Royal Street, and Oakland Avenue. In addition, a proposed sidewalk on Old Marion Highway will connect homes to a new school.

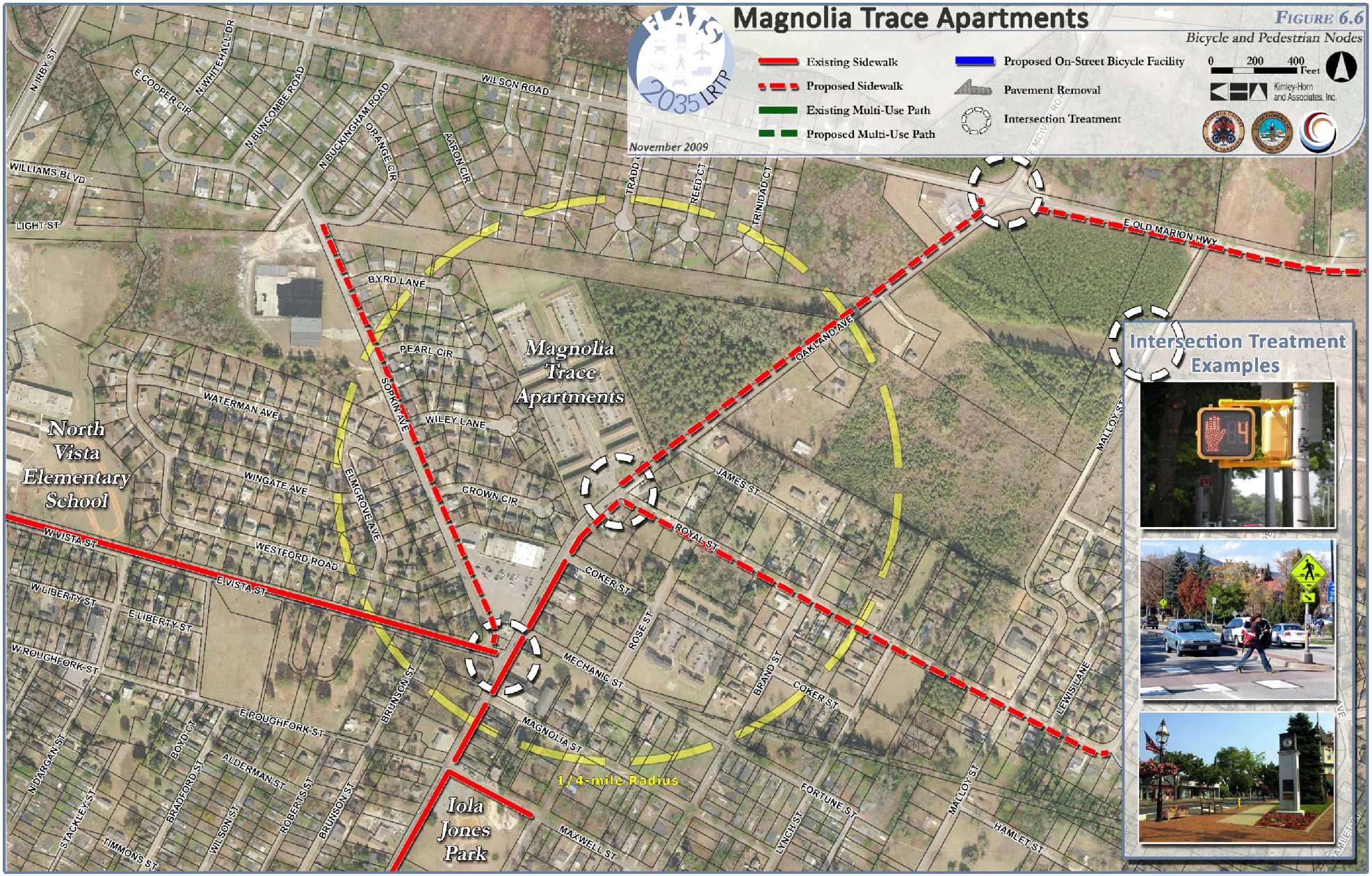
Maple Park

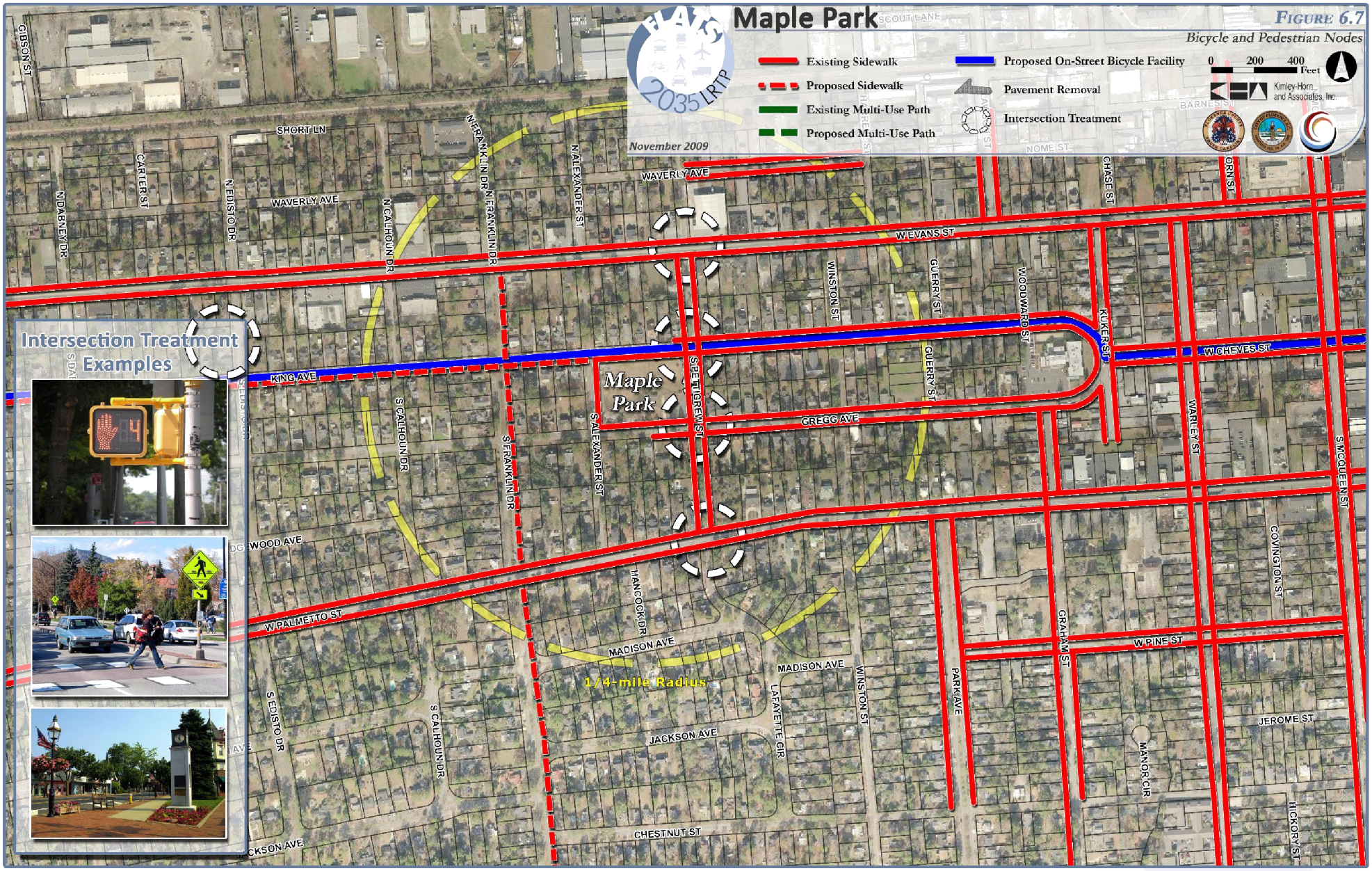
Figure 6.7 focuses on the Maple Park and the surrounding neighborhoods. The area benefits from a traditional grid street network and compared to the other pedestrian accessibility nodes has an excellent pedestrian network. Recommendations for this area target improvements to South Franklin Drive, a north-south corridor through the area, and King Avenue, an east-west route connecting to Maple Park. In addition, an on-street bicycle facility is proposed for King Avenue and West Cheves Street.


5 Points
FIGURE 6.3
Bicycle and Pedestrian Nodes
November 2009
Existing Sidewalk
Proposed Sidewalk
Existing Multi-Use Path
Proposed Multi-Use Path
Proposed On-Street Bicycle Facility
Pavement Removal
Intersection Treatment
0 150 300 Feet
Kimley-Horn and Associates, Inc.
Intersection Treatment Examples
1/4-mile Radius
HOFFMEYER ROAD
GREGG AVE
W PALMETTO ST
REVELL DR
RAINBOW DR
PLUM DR
GARLAND DR
GREENWAY DR
CHEROKEE ROAD
PINELAND AVE
COUNTRY CLUB BLVD
DAVID H MCLEOD BLVD
WHITMAN AVE
HART ROAD
BAKER LN
WEVANS ST
S CASHUA DR
SYCAMORE DR


Hoffmeyer Road
FIGURE 6.4
Bicycle and Pedestrian Nodes
February 2010
Existing Sidewalk
Proposed Sidewalk
Existing Multi-Use Path
Proposed Multi-Use Path
Proposed On-Street Bicycle Facility
Pavement Removal
Intersection Treatment
0 250 500 Feet
Kimley-Horn and Associates, Inc.
Intersection Treatment Examples
1/2-mile Radius
1/4-mile Radius
Harllee Village Concept Plan
HOFFMEYER ROAD
TEABERRY DR
SWEETGRASS DR
ASTER DR
LUPINE DR
DUNHILL CT
VINTAGE DR
QUAIL POINTE DR
BELLINGHAM CT
CHATHAM PL
CHIPPENHAM LANE
MERIONETH ROAD
HARBOROUGH CT
TIVOLI DR
COMBRAY CIR
EBENEZER ROAD
WRENFIELD ROAD
BAYBERRY CIR
WINDOVER RD
BEECHWOOD ROAD
COVE POINTE DR
STERLING DR
COLONY LANE
N DUNEARTON DR
INTERSTATE 95


Magnolia Mall
FIGURE 6.5
Bicycle and Pedestrian Nodes
November 2009
Existing Sidewalk
Proposed Sidewalk
Existing Multi-Use Path
Proposed Multi-Use Path
Proposed On-Street Bicycle Facility
Pavement Removal
Intersection Treatment
0 400 800 Feet
Kimley-Horn and Associates, Inc.
West Florence High School
Magnolia Mall
Florence Civic Center
1/4-mile Radius
1/2-mile Radius
Intersection Treatment Examples
N EBENEZER ROAD
TECHNOLOGY PL
N DUNBARTON DR
DAVID H MCLEOD BLVD
HOSPITALITY BLVD
W RADIO DR
WOODY JONES BLVD
N BELTLINE DR
HOFFMEYER ROAD
W JODY ROAD
N LAKEWOOD DR
W MEADOW LANE
W FOXTAIL LANE
WILLWOOD D
W PALMETTO
JUNIPER RD
IVYWOOD RD
LARKSPUR ROAD
HILLCREST DR
20
95


Magnolia Trace Apartments
FIGURE 6.6
Bicycle and Pedestrian Nodes
November 2009
Existing Sidewalk
Proposed Sidewalk
Existing Multi-Use Path
Proposed Multi-Use Path
Proposed On-Street Bicycle Facility
Pavement Removal
Intersection Treatment
0 200 400 Feet
Kimley-Horn and Associates, Inc.
2035 LRTP
Intersection Treatment Examples
Magnolia Trace Apartments
North Vista Elementary School
Iola Jones Park
1/4-mile Radius
WILSON ROAD
E OLD MARION HWY
OAKLAND AVE
JAMES ST
ROYAL ST
COKER ST
MECHANIC ST
MAGNOLIA ST
E ROUGHFORK ST
W ROUGHFORK ST
E VISTA ST
W VISTA ST
W LIBERTY ST
E LIBERTY ST
WESTFORD ROAD
WINGATE AVE
WATERMAN AVE
WILEY LANE
PEARL CIR
B.Y.RD LANE
CROWN CIR
SOPKIN AVE
ELMGROVE AVE
BRUNSON ST
ROSE ST
BRAND ST
LEWIS LANE
MALLOY ST
FORTUNE ST
LYNCH ST
HAMLET ST
MAXWELL ST
TIMMONS ST
STACKLEY ST
WILSON ST
ROBERTS ST
ALDERMAN ST
BRADFORD ST
BOYD CT
N DARGAN ST
N BUNCOMBE ROAD
N BUCKINGHAM ROAD
ORANGE CIR
AARON CIR
TRADD CT
REED CT
TRINIDAD CT
E COOPER CIR
N WHITEHALL DR
N IRBY ST
WILLIAMS BLVD
LIGHT ST


Maple Park
FIGURE 6.7
Bicycle and Pedestrian Nodes
November 2009
Existing Sidewalk
Proposed Sidewalk
Existing Multi-Use Path
Proposed Multi-Use Path
Proposed On-Street Bicycle Facility
Pavement Removal
Intersection Treatment
0 200 400 Feet
Kimley-Horn and Associates, Inc.
Intersection Treatment Examples
Maple Park
1/4-mile Radius
GIBSON ST
SHORT LN
CARTER ST
N DABNEY DR
N EDISTO DR
WAVERLY AVE
N CALHOUN DR
N FRANKLIN DR
N ALEXANDER ST
W EVANS ST
CHASE ST
WINSTON ST
GUERRY ST
WOODWARD ST
KUKER ST
W CHEVES ST
KING AVE
S CALHOUN DR
S FRANKLIN DR
S ALEXANDER ST
S PETIGREW ST
GREGG AVE
WARLEY ST
S MCQUEEN ST
COVINGTON ST
W PALMETTO ST
HANCOCK DR
MADISON AVE
W PINE ST
GRAHAM ST
PARK AVE
LAFAYETTE CIR
S EDISTO DR
JACKSON AVE
MANOR CIR
JEROME ST
CHESTNUT ST
HICKORY ST

Ancillary Facilities

The results of the public questionnaire revealed 36% of respondents would increase their use of bicycling or walking if more ancillary facilities (parking, restrooms, water fountains, benches) were provided. This is one example of how a complete system requires more than just the recommended on-street bicycle facilities, sidewalks, and multi-use paths. Ancillary facilities often are low-cost measures designed to enhance the functionality and safety of the bicycle and pedestrian network. Ancillary facilities include the physical components of education, encouragement, and enforcement programs recommended throughout this chapter.

Traffic Calming

The importance of traffic calming increases as motorists find short cuts around congested roads and intersections. Even the best planned street networks fall prey to unwanted cut-through and speeding traffic. Traffic calming includes a variety of tools to slow speeds, reduce cut-through traffic, and improve the appearance of the street while increasing safety for pedestrians, bicyclists, and motorists. Best practices for traffic calming are widely published, but the greatest programs include specific measures and general methods tailored to local travel patterns and citizen expectations. As high speeds and changing travel habits continue to threaten bicyclists and pedestrians, Florence and the surrounding area needs traffic calming plans for unsafe roadways.



Source: PedBikeImages.com

Raised Crosswalk

Signage and Mapping Projects

More than 29% of respondents to the questionnaire identified new signage and 40% identified a bicycle map as measures that would increase their bicycling and walking in the study area. Signage and mapping projects educate and encourage the active use of the bicycle and pedestrian network.

Comprehensive Route Systems

To maximize the use of the new and retrofitted facilities, users must know the location of routes, accessible destinations, connections to other routes, and provisions along the way. A route signage plan is recommended to include information on the direction and distance to destinations spaced so bicyclists receive periodic confirmation that they remain on the correct route. The city's trail system has done an excellent job identifying important destinations and creating a plan to safely link residents and visitors to those locations. Building on this effort, other facilities types can benefit from comprehensive route systems, including multi-use paths, bike lanes, shoulders, and wide outside curb lanes.

The City of Florence has created a brochure that explains the trail system and identifies the routes on a map. As the bicycle and pedestrian network in the city and surrounding area matures, such an effort will be critical to the fulfillment of the system. Efforts should not only include comprehensive route signing but also informative maps of bicycle routes and pedestrian trails and pathways.

Share the Road Signing Initiative

"Share the Road" signs heighten the awareness of motorists of the presence of bicyclists on high-use roads with potentially hazardous conditions. These signs serve as important and cost-effective safety and education tools.

Shared Lane Symbol

Commonly referred to as sharrows, Shared Lane Symbols indicate the recommended position for bicyclists in a shared travel lane that is 14 to 15 feet wide. Sharrows communicate to all roadway users how to share the road. Placed approximately three feet from the gutter or four feet from parked cars, the symbol indicates where bicyclists should ride to avoid being hit by suddenly opening car doors.

An added benefit is the reduction of sign clutter on the roadway and less debris in lanes. Sharrows are used in lanes shared by bicyclists and motorists with insufficient width for a bicycle lane.

The markings could be introduced on downtown streets where speeds are 35 mph or less and cyclists of different abilities frequently ride. By initially installing the pavement markings in coordination with "Share the Road" signage, sharrows could help identify bike routes to potential cyclists and motorists. Following a successful introductory period, the symbols could be used throughout the area along facilities with speed limits of 35 mph or less.







Sharrows show bicyclists the preferred area to ride in order to avoid roadway debris, doors from parked cars, and passing vehicles

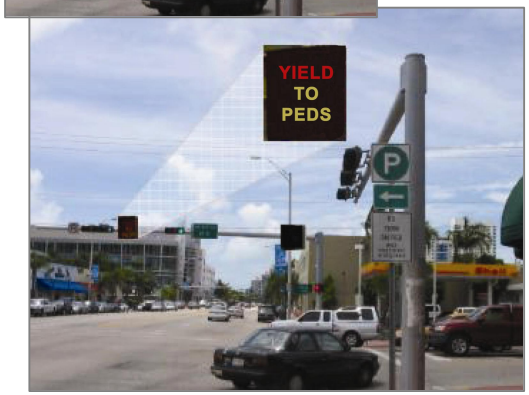
Examples of sharrows in Portland, Oregon (top) and at NC State University in Raleigh (left)

Intersection Signage

Any overuse of the signs limits their effectiveness by diluting the ability of the sign to command the attention of motorists. As a result, static and blank out signs only should be used where problems have been documented and relatively constant pedestrian/bicycle use exists. These signs reduce vehicular crashes with pedestrians with messages such as "No Turn on Red When Pedestrians Present" or "Left Turning Vehicles Yield to Pedestrians"

At locations where conflicts are not frequent enough to warrant a static sign, a blank out sign may be appropriate. These signs are activated when there is a potential conflict. Thus, if a pedestrian enters the crosswalk, the motorist will see a "Yield to Pedestrian" sign next to the permissive turn signal. The real-time aspect ensures the signs will be visible when needed and never relegated to visual clutter.







Bicycle Parking Facilities

Like motorists, bicyclists need a place to park their bicycles. Bicycle parking should be included near shopping areas, schools, and recreational areas as well as downtown and near businesses frequented by bicycle riders. It is not enough to simply place a bike rack at a random location. The bike rack should be highly visible, preferably near store fronts or in high pedestrian use zones to reduce the threat of theft. If bicycles are parked after dark, the area also should be well lit. The necessary protection varies according to the purpose of the bicycle trip. For short trips, a U-shaped bicycle rack may be acceptable. For commuter trips, bike lockers or covered parking may be more appropriate.

Bicycle racks also provide an opportunity to enhance the character of an area when they reflect the community culture or character. For additional information on bike rack designs, the Association of Pedestrian and Bicycle Professionals has produced guidance that covers rack design, rack placement, and specifics for appropriate layout of the rack area in dimensions and relation to the surrounding land uses. In addition to bicycle parking facilities, benches, water fountains, public restrooms, and changing areas would be helpful near popular locations and major destination points such as shopping areas and schools.



Source: PedBikeImages.com

Spot Improvement, Maintenance, and Safety

Maintenance of a roadway relative to bicycle safety can be assessed by answering several questions:

- Has debris collected in the bike lane?
- Are perpendicular cracks present?
- Are there perpendicular drainage grates?
- Are utility covers uneven with the roadway surface?

An answer of "yes" to any of these questions should result in roadway maintenance. All bicycle facilities, including trails and the right side of roadways, require additional effort to ensure acceptable maintenance. A more frequent maintenance cycle to address these defects should be provided for bicycle routes. Likewise, areas where excessive debris tends to build and bicyclists have limited refuge should be maintained even more frequently. More than 50% of respondents to the questionnaire identified maintenance improvements as an action that would increase their use of bicycling or walking in the Florence area.

Traffic Signal Considerations

Traffic signal location, timing, and loops along bicycle facilities require extra attention. The MUTCD requires signal faces to be adjusted or separated for optimal visibility by bicyclists and for signal timing to consider the needs of bicyclists. Additional guidance for signal timing and loops is provided by AASHTO.

Roadway Symbol Buildup

Bike lane symbols, lane directional symbols, and crosswalks use thermoplastic markings. To prevent handling problems for bicyclists, the number of layers of thermoplastic should be limited to one. In addition to build-up, the slipperiness of thermoplastic and paints can cause problems. The texture of the treatment can be altered by adding sharp silica sand to the glass spheres during application.

Safety Railings along Bicycle Facilities

Bridge railing heights have been the subject of recent revisions to the AASHTO Bicycle Guide and ongoing debates among bicycle facility design professionals. The current guide states that railing heights should be at least 42 inches to prevent bicyclists who hit the railing from tipping over the top. However, the current AASHTO Bridge Specifications require a 54-inch railing. In practice, designers have been using the 54-inch railing when a structure is being built to the AASHTO specifications and a 42-inch railing along non-structural locations, such as when protecting bicyclists from embankments.

Transit Interface

Over the past few years the Pee Dee Regional Transportation Authority has worked to add bike racks to its transit vehicles. This process expands the footprint of transit by allowing riders to ride a bike to reach their ultimate destination. In addition to racks on transit vehicles, shelters and route information should be provided for pedestrians. Linking transit services with bike and pedestrian facilities ensures a seamless transition between these modes of transportation. Facility improvements for transit should complement the recommended bike and pedestrian facilities.





Source: PedBikeImages.com

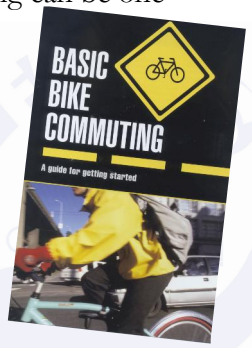
Groups, Programs, and Initiatives

The facility recommendations (including ancillary facilities) must be supplemented with coordinated education, enforcement, and encouragement programs. Some programs instruct and encourage bicyclists and pedestrians in the full and proper use of the non-motorized transportation network. Other programs ensure the safe use of the system by enforcing rules and regulations.

Local Bicycling Clubs

Weekly rides throughout the Florence area are organized by local bicycle clubs, including the Pedal Pack of the Pee Dee. These rides vary in length from 16 miles to up to 65 miles. Many more informal joggers, bicyclists, and walkers can be seen throughout Florence on a regular basis. With an active membership, local bicycling clubs can assist with various outreach efforts including education and encouragement initiatives. These programs include the following:

- **Bicycle Mentor Program** — This program matches experienced riders with those who want to learn more about commuting by bicycle. Ideally, a new rider will find help in discovering the best route to work, while receiving an education concerning how to ride in traffic, in the dark, or in poor weather.
- **Bicycle-to-Work Week** — For adults, Bicycle-to-Work Week can serve as a week-long reminder that bicycling can be one option for traveling to work. The success of Bicycle-to-Work Week often depends on the network of local bicycling enthusiasts to market the program and on local employers to support participation from their employees. A Bicycle-to-Work event could be coordinated with education material designed to explain the benefits of and tips for bicycling to work.



Safe Routes to School

Safe Routes to School is a federally funded program administered in South Carolina by SCDOT. With funding allocated through SAFETEA-LU, the program has encouraged many children to bike and walk to school by promoting bicycle and pedestrian education. Projected funding for South Carolina in 2009 is $2.4 million. Local government agencies should partner with schools and advocacy groups to leverage this funding. In collaboration with on-going efforts, pilot schools should be selected to implement the Safe Routes to School program. The current funding levels are not adequate to provide all needed sidewalk improvements, so priorities must be established. Coordination with SCDOT staff and the FLATS MPO can lead to spot improvements. More information on the program can be found at www.saferoutestoschool.org.



Source: PedBikeImages.com

Policy Recommendations

Policy Recommendations from 2004 Bikeway Master Plan

The 2004 Bikeway Master Plan also included policies supportive of education and increased awareness of bicycle usage and safety. Policies were developed for five major subject areas including planning, facilities, awareness, promotion, and funding.

Incorporate bicycle facilities in transportation planning activities.

- Appoint a bicycle representative to the MPO's Technical Coordinating Committee.
- Establish a Bicycle/Pedestrian Advisory Committee as a function of the Florence Area MPO.
- Require that bicycle issues be considered in all roadway plan reviews.
- Review and amend subdivision ordinances to incorporate bicycle-friendly policies and requirements.
- Incorporate prioritized bikeway improvements into annual Transportation Improvement Program (TIP).
- Periodically update the Bikeway Master Plan.
- Coordinate bikeway planning with local trails/greenway planning.
- Conduct annual bike counts/ surveys on bikeway facilities.

Design and build new and reconstructed roadways to be bicycle-friendly.

- Implement on-road bikeway facilities as part of roadway widening projects.
- Increase level of accommodation for bicyclists in conjunction with routine resurfacing and maintenance activities.
- Implement bicycle-friendly maintenance procedures and maintain bikeway facilities.
- Establish a Spot Improvement Program for implementation of low-cost improvements to enhance conditions for bicyclists.
- Work with local organizations to develop an "Adopt a Bikeway" program to keep bikeway facilities clear of debris and litter.

Promote safe bicycle travel.



- Encourage bicycle education programs in schools.
- Work with local law enforcement agencies and community organizations to promote bicycle safety through increased helmet usage.
- Support and encourage programs that promote motorist awareness of bicyclists' rights.
- Support and encourage programs that educate bicyclists of responsibilities and safe riding habits.

Encourage increased bicycle transportation ridership.

- Provide bicycle racks at major destinations.
- Prepare bicycle route maps.
- Initiate and hold annual bike events such as bike-to-work and bike-to-school days.

Pursue a variety of funding options to implement bikeway projects.

- Implement bikeway improvements as part of new roadway projects.
- Utilize TEA-21 Enhancements funding for bicycle project implementation.
- Seek funding support from private foundations and other grant sources.
- Provide an annual allocation in City/County budgets to leverage other funds for bikeway projects.

Findings & Recommendations

The findings and recommendations presented in **Table 6.2** are grounded in a planning process that included analysis, public outreach, and a review of previous and on-going planning efforts. The recommendations also have been weighed against the needs identified in the other elements of the *2035 LRTP*. The recommendations are grouped by general findings, and some recommendations address more than one finding.

Table 6.2 – Findings & Recommendations

Finding	Recommendation
Network Enhancements	
The general public has joined local officials and planning staff in their desire for an enhanced multimodal transportation with strategically planned on- and off-street connections. Where possible, the construction of these facilities should be incorporated into public and private infrastructure projects. Adopted city and county policies should require projects provide new bicycle and pedestrian facilities. The implementation of recommended facilities should occur in accordance with the phasing plan detailed in **Chapters 10** and **11**.	▪ **Implement the recommended on-street bicycle network that includes striped bicycle lanes, wide outside lanes/paved shoulders, and signed bike routes as shown in Figure 6.1.** ▪ **Construct the greenway (off-street) network as shown in Figure 6.1.** ▪ **Prioritize sidewalk construction to eliminate gaps in the current sidewalk network and connect existing downtown pedestrian facilities to key destinations in the area.** ▪ **Utilize the representative pedestrian nodes shown in Figures 6.3 to 6.7 as decisions are made regarding bicycle and pedestrian facilities at various activity nodes in the region.**
Ancillary Facilities	
A complete bicycle and pedestrian system requires ancillary facilities to complement the network of on- and off-street facilities. The questionnaire indicated more ancillary facilities would increase bicycling and walking in the Florence area.	▪ **Develop traffic calming plans for unsafe roadways.** As high speeds and changing travel habits threaten bicyclists and pedestrians, the MPO should team with local partners and neighborhood leaders to develop actionable traffic calming plans. The planning process should include residents and business owners potentially affected by the plans. ▪ **Allocate funds to install bicycle racks or more advanced bicycle parking facilities at high priority locations.** A list should be developed that prioritizes destinations based on current or potential bicycle use. More weight should be given to areas with greater intensity and diversity of destinations. ▪ **Assess railing heights of bridges along routes with bicycle facilities as identified in Figure 6.1 to determine if they meet AASHTO standards.** ▪ **Partner with PDRTA to coordinate improvements to the pedestrian and bicycle network with existing and future transit needs.**

Signage and Mapping

Signage and mapping enhancements can help maximize the use of the bicycle and pedestrian network. Respondents to the questionnaire identified new signage and a bicycle map as measures that would increase their bicycling and walking. Initial efforts should document existing facilities and be updated as the network matures.

- **Develop traffic calming plans for unsafe roadways.** As high speeds and changing travel habits threaten bicyclists and pedestrians, the MPO should team with local partners and neighborhood leaders to develop actionable traffic calming plans. The planning process should include residents and business owners potentially affected by the plans.
- **Create a route signage plan.** Building on the efforts initiated by the City of Florence to create a trail system, the MPO should work with the city and county to sign appropriate routes with an emphasis on the direction and distance to destinations.
- **Install "Share the Road" signs on identified routes.** These signs bring awareness to motorists that bicyclists may be sharing the road. The MPO should install signs along routes as identified in **Figure 6.1**.
- **Introduce shared lane symbols on appropriate downtown streets.** This effort should be coordinated with the installation of "Share the Road" signs and used as a trail for implementation on other roads throughout the MPO area.
- **Consider enhanced signage at intersections with identified conflicts between motorists and cyclists/pedestrians.** Appropriate measures should be determined based on analysis of specific intersections and may include static signs or blank out signs.

Groups, Programs, and Initiatives

The maximized use of bicycle and pedestrian facilities — including on-street, off-road, and ancillary facilities — requires education, enforcement, and encouragement programs. Facility improvements often require significant investment in resources (both time and money). Coordinated programs can ensure the investments are justified.

- **Partner with local bicycle clubs (such as Pedal Pack of the Pee Dee) to launch education and encouragement programs.** Two initial programs that should be launched are a bicycle mentor program that matches experienced riders with beginners and a bicycle-to-work week that markets the opportunity to commute to work by bicycle.
- **Secure additional Safe Routes to School funding to promote bicycling and walking and bridge gaps in the network near schools.** The MPO, in cooperation with local government agencies, should partner with schools and advocacy groups to identify priorities and leverage funding for pilot projects.

Policy Recommendations

The 2004 Bikeway Master Plan included various policies that support increased awareness of bicycle usage and safety. The Plan was developed through significant public involvement. These efforts should be recognized through the execution of policy changes outlined in the plan's recommendations.

- **Implement the various policies developed as part to the 2004 Bikeway Master Plan.**

Conclusion

The recommendations of the Bicycle & Pedestrian Element balance the need for improved facilities with programs designed to educate the public in the safe use of these facilities, encourage the active use of facilities, enforce the rules of the road, and evaluate the effectiveness of these facilities and programs. The recommendations serve cyclists and pedestrians throughout the entire MPO area. Limits on the improvements that can be constructed due to funding constraints require a proactive approach to implementation. For example, incidental improvements can be implemented as part of the roadway construction projects. Also, the development community should contribute by constructing bicycle and pedestrian facilities as they build the necessary infrastructure to support their projects. A combination of these practices process and local funding programs will allow the implementation of a variety of bicycle and pedestrian improvements.



Chapter 7

Transit Element

Introduction

As the oldest and largest transportation authority in South Carolina, the Pee Dee Transportation Authority (PDRTA) has a long history of serving residents, employees, and visitors in the Florence area. The various services — fixed route, demand-response, and commuter — offered by PDRTA provide some level of service to riders spread out across a 5,000 square mile area. The success by PDRTA in providing exceptional service to both urban and rural patrons has been recognized at the state and national levels.

- In 2009, PDRTA received a top 50 national ranking in the Transportation Fact Book published by the American Public Transportation Association.
- PDRTA was named the 2010 Urban Public Transit Provider of the Year by the South Carolina Department of Transportation.

The Transit Element of the *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) documents existing public transportation and paratransit service in the FLATS area, evaluates recent and on-going transit planning efforts, and recommends strategies to enhance access and mobility for residents throughout the area. The chapter begins with an overview of the framework required to support public transportation as well as the coordinated decision-making process necessary for public transportation to be effective and efficient.

Historical Trends

Since the end of World War II, the number of Americans using transit has steadily declined as the availability and dependence on private automobiles has risen. Still, local staff and elected officials continue to acknowledge the important role of public transportation in providing mobility to the people, particularly disadvantaged populations, of the greater Florence area. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires MPOs to consider all modes of transportation in the analysis of region-wide mobility and the formulation of recommended plans, programs, and policies. The collective result of the modal elements should be an integrated, balanced intermodal transportation system that safely and efficiently moves people and goods.

Transit serves two types of users: captive riders and choice riders.

- Captive riders do not have access to or the ability to use a personal vehicle. Transit options for them are essential. These riders include persons too young to drive, the elderly, persons with disabilities, and those without the financial means to own and operate a personal vehicle.
- Choice riders otherwise have access to a personal vehicle but instead choose to use transit. These riders include persons who decide not to own a personal automobile and those who decide to use transit for work, social, medical, or personal trips. Reasons choice riders use transit include saving money, convenience, comfort, or environmental principles.

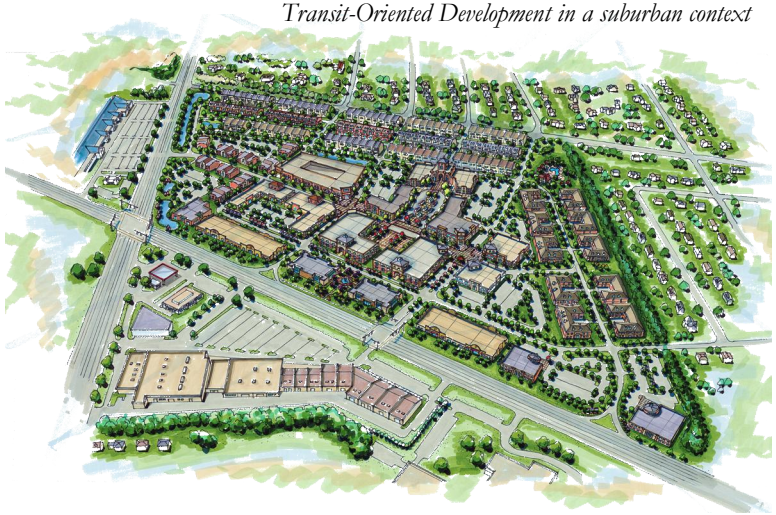
Over the past few decades, population growth in the Florence region has shifted away from the urban core, and convenient and reliable transit service has become more difficult. To encourage transit use and decrease dependence on the automobile, a safe, comfortable customer delivery system with attractive and convenient amenities must be developed around bus stops. This customer delivery system requires a network of sidewalks, safe street crossings, and lighting because most regular transit users walk or bike to and from the stop. The efficiency of transit also depends on an interconnected system of roads and highways suitable for bus traffic. For these reasons, transit cannot be considered in isolation, and the strategies presented in this chapter support improvements to the larger transportation system.

Transit and Urban Form

Across the nation, people agree they would be more likely to use transit if service was fast, frequent, dependable, and easy to use. While such criteria requires a complete system of roads, sidewalks, and bikeways, transit also must provide connections to the places people need to go at a time when they need to get there. As a result, transit must be introduced or expanded within a framework of transit-supportive urban form. PDRTA's on-going coordination with local planning departments illustrates their understanding of this need. Two development types that maximize potential transit ridership include transit-oriented development and transit-ready development.

Transit-Oriented Development

Transit-Oriented Development in a suburban context



Transit-oriented developments (TODs) provide a mixture of residential and commercial uses focused around a transit station or bus stop. The transit stop is surrounded by relatively high density development that spreads out as you move away from the center. The scale of a TOD generally is limited to ¼- to ½-mile in diameter to establish the walkability of the neighborhood. The design of such places maximizes access to transit and supports walking and biking between destinations. The Florence County Comprehensive Plan identifies TODs as an example of sustainable development. As the new transit hub in Florence takes shape, this area of downtown could emerge as the region's first TOD.

Transit-Ready Development

In locations that lack existing transit facilities or lack the demand to support a TOD, regulations and guidelines that support transit-ready development should be enforced. Transit-ready development describes the coordinated design of new neighborhoods and activity centers that supports future transit expansion. Like TODs, transit-ready developments include a mixture of land uses, pedestrian-friendly design, appropriate locations and/or routes for transit, an interconnected network of internal streets, and appropriate densities supportive of future transit use.

Single-Use Transit Destinations

While transit-oriented and transit-ready developments represent ideal urban form for transit destinations, many existing single-use locations in the FLATS area are viable long-term facilities. Francis-Marion University, Florence Regional Airport, Florence Civic Center, Magnolia Mall, McLeod Regional Medical Center, and Carolinas Hospital are a few examples of vital destinations for many residents of the Pee Dee region. While the current urban design near these destinations may not be ideal for transit, they represent locations where access to public transportation continues to be an important priority.



Planning Context

As a critical component of the complete transportation system, transit is closely tied to land use and economic development decisions. Public transit services should be a viable mobility option for those who need it most — senior citizens, the physically or economically disadvantaged, and commuters who choose to ride. At its best, transit provides an efficient and inexpensive transportation mode for persons making the traditional suburban-to-urban commute and those traveling between activity centers. But making transit practical in less dense areas and for suburban-to-suburban commutes is more difficult and typically incurs higher costs and lower ridership. The planning context for the Transit Element combines analysis, feedback from the general public and stakeholders, and previous planning efforts.

FLATS 2035 LRTP Vision

The vision for the *2035 LRTP* (described in **Chapter 2**) represents the collaborative efforts of the Transportation Plan Advisory Committee, numerous stakeholders, and the general public. While the vision is filled with several phrases that speak to roadway improvements, many of the key words from the vision directly relate to the region's public transportation system and how the system contributes to the overall transportation network. These key words are highlighted below:

> We envision a growing community serviced by a **safe and sustainable transportation system** that provides real choice among modes of travel. Our transportation system contributes to an **enhanced quality of life** by providing **attractive connections between destinations** for motorists, bicyclists, pedestrians, and transit users **without compromising cultural and environmental resources**, and it supports the **efficient movement** of people and goods at both the local and regional scale.

SAFETEA-LU Planning Factors

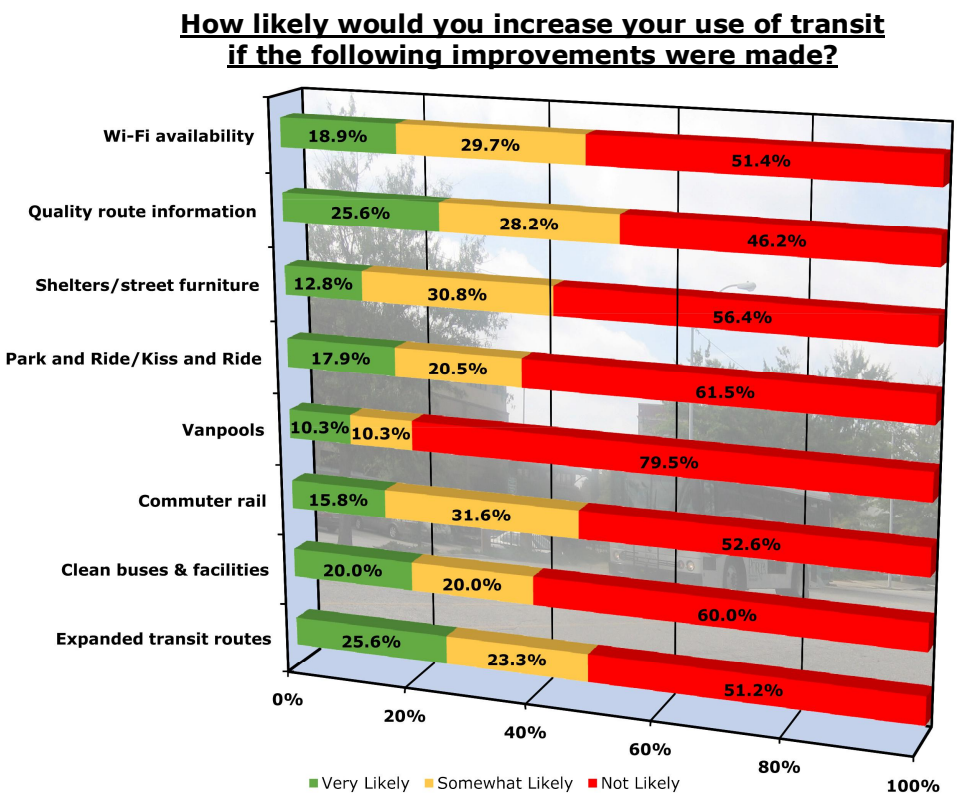
As mentioned in **Chapter 1**, the planning factors from SAFETEA-LU represent one way federal officials assess how the region's long range transportation plan addresses the unique needs of its transportation system. To reinforce the relationship between the federal legislation and the Transit Element of the *2035 LRTP*, the eight planning factors are restated below with added emphasis to ways transit will address the planning factor.

1. **Support the economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
2. **Increase the safety of the transportation system** for motorized and non-motorized users
3. **Increase the security of the transportation system** for motorized and non-motorized users
4. **Increase the accessibility and mobility of people** and freight
5. **Protect and enhance the environment, promote energy conservation, improve quality of life**, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. **Enhance the integration and connectivity of the transportation system, across and between modes, for people** and freight
7. Promote efficient system management and operation
8. **Emphasize the preservation of the existing transportation system**

Public Perception

Through the questionnaire and conversations at workshops, the public revealed their perception of the transportation network in the Pee Dee region. In many ways, opinions on the level of service provided by the transit system mirror that of the transportation system as a whole. When asked to rate the regional transportation system as a whole, more than 75% of respondents to the survey rated the system as Fair or Poor, and when asked to consider only transit service, nearly 80% rated it as Fair or Poor.

An insightful perspective that emerged through the public outreach efforts centered on how improvements that increase transit ridership will help the community as a whole, even those who are not taking transit. In addition, the questionnaire asked respondents to state how likely they would be to increase their use of transit if certain improvements were implemented. The results of this question (as shown to the right) identify ways PDRTA may be able to increase their ridership. The most popular responses include both low cost/low effort solutions (quality route information) and higher cost/greater effort initiatives (expanded transit routes).

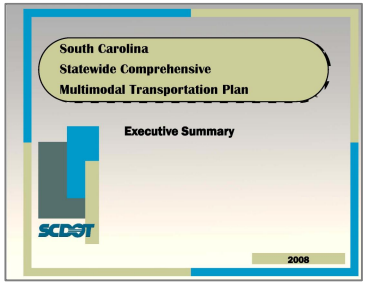


Previous Planning Efforts

Transit planning requires continual assessment of ridership trends, demographic shifts, technological advancements, and managerial processes. Aspects of these assessments are performed regularly by PDRTA as part of state and federal reporting guidelines. Previous planning efforts also have documented this type of information. Transit planning as part of a long range transportation plan at the MPO-level presents existing conditions, describes the vision for public transportation, and outlines general strategies to fulfill that vision. Where PDRTA has undertaken more detailed study, the *2035 Plan* should yield to those recommendations. Previous planning efforts considered during the development of the transit element included the 2030 FLATS Long Range Transportation Plan, the Pee Dee Regional Transit Plan, and the PDRTA Marketing Plan.

In addition, several recently completed plans provide relate to the development of a downtown Florence transportation hub. The most relevant plans include the Florence Conway Transit Assessment Report (April 2009), the South Carolina Statewide Comprehensive Multimodal Plan (May 2008), and the Downtown Florence Transportation Hub Feasibility Study (January 2010).

Statewide Comprehensive Multimodal Plan



The South Carolina Statewide Comprehensive Multimodal Transportation Plan, completed in 2008, evaluates the state's transportation system and provides recommendations for investment in transportation facilities through the year 2030. As a multimodal plan, it considers needs related to highways, passenger and freight rail, public transit, and bicycle and pedestrian accommodations.

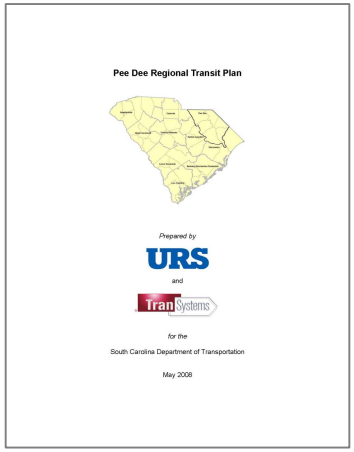
The plan identifies rail corridors in the state for potential transit use, including the CSX rail line adjacent to US 52. The plan notes that future transit service using rail will be dependent upon available right-of-way. And while the plan seeks to identify discontinued or at-risk rail corridors, it notes that abandonment of the line adjacent to US 52 is highly unlikely due to the volume of rail traffic on the corridor and the use of the line by Amtrak. However, the Multimodal Plan recognizes that a parallel consolidation of the line may be a possibility because of the second CSX line to the east of this corridor that connects Dillon to Charleston and travels briefly through the southeast portion of Florence County.

Regarding high speed rail service in Florence, the plan notes that recent preliminary planning studies have evaluated the feasibility of commuter rail and/or BRT, and though these projects remain in the early stages of planning, ongoing efforts are aimed at interim solutions that could set the stage for future commuter rail service. The corridor connecting Florence, Conway, and Myrtle Beach is identified as a "Potential Future High Speed Rail Corridor." However, other corridors in the state (segments of the Federally Designated Southeastern High-Speed Rail Corridor) are considered a high priority for upgrading to high speed standards.

Pee Dee Regional Transit Plan

The Pee Dee Regional Transit Plan was prepared as a component of the Statewide Transit Plan. The plan details the region's transit needs and recommends various actions to improve transit within the region as part of a coordinated statewide effort. The plan recognizes Florence's role in the medical and manufacturing industry and documents the need for additional commuter services as employment density increases. The plan determined the public lacks an understanding of the system and how to use it. Action items outlined in the plan include:

- Closing the funding gap, leveraging federal dollars, and increasing state funding
- Engaging non-traditional partners
- Increasing coordination among providers
- Expanding service by targeting gaps in rural areas, right-sizing urban systems, and increasing commuter-based services
- Coordinating transportation and land use decisions
- Upgrading passenger rail service



Florence Conway Transit Assessment Report

The Florence Conway Transit Assessment Report was prepared for the City of Florence in April 2009. The report recognizes the need to provide enhanced transportation between Francis Marion University and downtown Florence, improved transit service throughout the City of Florence and surrounding areas, and improved commuting alternatives between Florence/Marion and the Grand Strand. The centerpiece of these efforts is a proposed Multimodal Transportation Center north of downtown Florence on a 20-acre site east of US 52 bounded to the south by Darlington Street and to the east by Dargan Street. The South Carolina Central Railroad runs along the edge of the site.

In addition to its use as a transportation hub (PDRTA, Greyhound, taxis), potential site uses include a business incubator with ties to Francis Marion University, a multicultural center, an African American museum, and parking. Subsequent steps identified by the plan included:

- Short-term improvements in bus service between downtown Florence and Francis Marion University (FMU)
- Premium transit service between downtown Florence and FMU
- Extension of premium transit service to Marion
- Extension of premium transit service to Conway

The plan served as a precursor to the Feasibility Study, which was expected to refine the analysis and recommended specific transit modes and technologies based on the Multimodal Transportation Center at the 20-acre north of downtown.

Downtown Florence Transportation Hub – Feasibility Report

The Downtown Florence Transportation Hub – Feasibility Study (draft report – January 2010) was a collaborative effort of PDRTA, the Florence Downtown Development Authority, and the City of Florence. The report follows on the heels of the Florence Conway Transit Assessment Report but expands the scope by evaluating six potential sites for a transportation hub. The facility will serve as an access and transfer point for local and regional bus and taxi service, with a business incubator and parking deck.

Six sites for the transportation hub were evaluated based on four categories — ease of implementation, site assessment, connectivity assessment, and community fit. The recommended site is at the corner of Cheves Street and Dargan Street, with access provided via Dargan Street. Benefits of this site include:

- Proximity to the FMU Performing Arts Center
- Opportunity to coordinate transportation, housing, retail, and university functions
- Potential to revitalize economic interest in existing development along Dargan and Evans Streets
- Limited change to the existing PDRTA system
- Direct connection to a potential relocated Amtrak station
- Greatest opportunity for shared parking

Existing Public Transportation



Throughout the nation, many people only think of buses and trains as modes of public transportation. But public transportation includes everything from taxis and shuttles to commercial airlines and intercity buses. Each of these modes impact residents of the Pee Dee region on a daily basis. Public transportation also includes local buses, trolleys, vans, and shuttles that have a large impact on the day-to-day activities of persons who rely on these services for trips to work, medical appointments, the grocery store, or other locations that their neighbors can reach by private automobile.

Public transportation in the Florence area is provided by the Pee Dee Transportation Authority (PDRTA). PDRTA provides fixed-route bus service, fixed route commuter service, and paratransit (dial-a-ride) services. In addition, private transportation and taxicab companies provide local transportation services, and Greyhound provides intercity bus service.

Pee Dee Regional Transportation Authority

Fixed Route Service

Fixed route service provided by PDRTA includes both local bus service in the greater Florence area as well as commuter service. Fixed route bus service in Florence consists of a "hub and spoke" layout with five routes (or spokes) originating from a hub at the Central Transfer Point on West Evans Street at Dargan Street. A sixth route does not directly connect to the Central Transfer Point but instead connects to another route.

Figure 7.1 shows the six routes, which include:

- Route 1: West Evans – Magnolia Mall
- Route 2: North Florence
- Route 3: East & South Florence
- Route 4: 2nd Loop – DSS – Super Walmart
- Route 5: Palmetto Street – Florence Mall
- Route 6: South Florence/Savannah Grove

The hub and spoke layout emphasizes trips originating from or destined to the downtown area. Each route operates on 1-hour headways on weekdays between 6:00 a.m. and 6:00 p.m. (6:20 a.m. to 6:20 p.m. for Route 6). In the Spring 2010, PDRTA added Saturday service (8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m.) to these routes. Standard fare is $1.50 with discounted fares of $0.75 available for senior citizens (age 65 and older), persons with disabilities, and Medicare cardholders. Transfers for all riders are $0.50. Fixed route ridership increased from 41,203 trips in Fiscal Year 2008 (12-month period ending June 30, 2008) to 50,541 in FY 2009, a 22% surge. With plans to add Francis Marion University transportation in late 2010, ridership likely will continue to rise.



In addition to local fixed route bus service in Florence, PDRTA provides fixed route commuter service to Florence for residents of Dillon, Marion, Hartsville, and Darlington. This service provides residents of these areas an alternative way to get to work and school in Florence. The commuter routes also connect to the local fixed routes in Florence, which greatly increases the destinations accessible to residents in the outlying areas.



Figure 7.1

Fixed Route Bus Service

PDRTA Routes

- Route 1
- Route 2
- Route 3
- Route 4
- Route 5
- Route 6
- PDRTA Bus Stop
- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Park
- Municipal Boundary
- FLATS Boundary
- County Boundary

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Florence County | Florence-Darlington Technical College | City of Florence

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Demand-Response Service

Fixed route buses represent just one type of service offered by PDRTA. The system's demand-response service accounts for more of the day-to-day operation and carries more passengers.

Complementary Paratransit Service



Complementary Paratransit Service provides paratransit or van transportation for individuals who cannot otherwise access the fixed route bus service. The service is designed for individuals with disabilities as defined by ADA. In particular, Complementary Paratransit Service is limited to individuals with disabilities who:

- Cannot board, ride, or disembark from an accessible vehicle without the assistance of another person (except for the bus driver and lift)
- Could ride an accessible vehicle but the route is not accessible
- Have a specific impairment-related condition that prevents them from traveling to or from a boarding or disembarking location

Based on Federal guidelines, Complementary Paratransit Service provides curb-to-curb service 7:00 a.m. to 10:00 a.m. and 3:00 p.m. to 6:00 p.m. Monday through Friday to eligible persons living within ¾-mile of a PDRTA fixed bus route. Riders must make a reservation by calling the PDRTA Florence office during business hours, and reservations are accepted up to 14 days in advance with at least 24 hours notice before the trip. Fare for Complementary Paratransit Service is $2.50 per one way trip. A PCA (Personal Care Attendant) may accompany the eligible person at no charge, and service animals are allowed.

Human Services Transportation

PDRTA provides transportation for many human services agencies located throughout the region. Human services trips carry passengers of all ages and abilities to various destinations. Examples include trips to Adult Day Care facilities, dialysis clinics, nutrition centers, and various medical facilities. Medical appointments make up the largest portion of these services, though work, shopping, and training/education trips are represented. Without PDRTA, many of life's daily activities would be unavailable to residents in the Pee Dee region.

Vanpool Service

Carpooling and vanpooling is an economical and environmental-friendly commuting option. Compared to driving alone to work, carpooling or vanpooling provides personal benefits (reduced commuting expenses and more time to relax when not driving) and community benefits (fewer vehicles miles traveled resulting in cleaner air, less congestion, and reduced fuel consumption). One of the challenges for increasing participation in carpool and vanpool services is finding someone with a similar commute. For many communities, this obstacle is overcome through a carpool and vanpool matching service.

While PDRTA currently does not have a matching service, PDRTA's Transportation Manager is available to help vanpools get started once a citizen or business forms a group of workers with similar commuting patterns. Through its vanpool system, PDRTA provides a vehicle, insurance, gas, and maintenance, and the cost is shared by the riders. Tax incentives provide extra savings for both the employer and employees.



Other Public Transportation Providers

General discussions of public transportation traditionally center on services such as those provided by PDRTA — namely fixed-route and paratransit. These transit services are important components of the larger public transportation network that also includes taxis and intercity bus travel.

Taxis

Residents of the Pee Dee region have numerous options for using taxicabs as public transportation. Taxicab companies operating in the region provide service based on drop-off, per-mile, and waiting time rates. While the availability of taxicabs in the region has no direct correlation to the level of anticipated ridership for transit, the presence of these companies does indicate a need throughout the greater Florence area for a means of travel other than privately owned automobiles.

Amtrak

Amtrak service in Florence is provided from a station at 805 East Day Street north of McLeod Regional Medical Center. The station rests approximately half-way between New York City and Miami, the termini of the Silver Meteor line. Sample one-way fares for travel to New York City and Miami is $95.00 and $71.00, respectively. Station hours and ticketing hours are daily except between 5:00 a.m. and 9:30 a.m.

Greyhound Service

From its terminal at 611 South Irby Street in Florence, Greyhound (Southeastern Stages) connects riders of the Pee Dee region with locations throughout North America, including 18 cities in South Carolina and more than 30 cities in North Carolina. Fares vary based on the trip's distance and departure date. **Table 7.1** shows sample one-way fares for Friday travel to cities across the United States.

In addition to the reduced price of advanced purchases, Greyhound offers a variety of discounts for military personnel and companion travel. Schedules for Greyhound service vary by day and time. Station and ticketing hours are weekdays from 9:00 a.m. to 5:00 p.m. and 8:30 p.m. to 10:00 p.m. or weekends from 10:00 a.m. to 4:00 p.m. and 8:30 p.m. to 10:00 p.m. More information is available at www.greyhound.com.

Table 7.1 – Sample Greyhound Fares

City	Distance from Florence	Regular Refundable Fare	21-Day Advance Purchase Fare
Columbia	80 miles	$26.00	n/a
Charleston	135 miles	$39.50	n/a
Charlotte	160 miles	$57.00	$25.00
Atlanta	290 miles	$76.50	n/a
Washington DC	400 miles	$106.00	$47.00
Orlando	450 miles	$127.00	$56.00
New York City	650 miles	$130.00	$65.00
Chicago	875 miles	$172.00	$76.50
Dallas	1,075 miles	$197.00	$89.00
Los Angeles	2,500 miles	$251.00	$117.00
Seattle	2,950 miles	$270.00	$126.00

Note: Sample fares are one-way from Florence for Friday travel

Source: Greyhound.com

Regional Public Transportation

For longer distance travel, residents of the Pee Dee region can utilize the expanding options at Florence Regional Airport (see **Chapter 8** for more information). In addition to services provided by public transportation providers in the FLATS area, residents can travel to other cities in the region to take advantage of the public transportation options offered in these larger cities. In particular, citizens travel to Charleston, Myrtle Beach, or Columbia for air transportation.

Recommendations

Most daily activities, ranging from school to work to medical appointments to recreation, require some form of personal mobility. For our aging population and persons with disabilities, personal mobility also means independence. The level of mobility afforded to residents in the Florence area varies and gaps exist throughout the transportation network. Good — not just adequate — public transportation closes the gap between the mobility-constrained and those who move about freely. The desire is for public transportation to become a travel mode of choice for a greater proportion of the population. Continued investment in public transportation needs to be made to improve service and make this desire a reality. Following a general service gap analysis, the recommendations of the Transit Element are presented based on a series of four best practice guiding principles. All recommendations have been developed in consideration of PDRTA's organizational goals.



Source: Bing.com

PDRTA Facility on Stadium Road

PDRTA Organizational Goals

PDRTA has established the following organizational goals.

- Continue to provide safe and reliable public transportation for all residents of the counties served by PDRTA.
- Continue to provide safe and reliable specialized transportation for the disabled and elderly citizens of the counties served by PDRTA.
- Improve the cost efficiency and effectiveness of the transportation services by increasing revenues and decreasing expenses when possible.
- Continue to improve the public image of PDRTA.
- Work with local officials to insure the inclusion of transit planning in locally developed plans.
- Stimulate economic growth and development by providing existing and potential businesses with information on work transportation alternatives.
- Continue to actively promote choice ridership and van pools.
- Promote and develop public/private partnerships to enhance quality of life and sustainability.
- Partner with other transportation modes, including rail, to provide seamless transportation for work and leisure.
- Coordinate transportation with other agencies, educational institutions, and private providers to maximize transit use.
- Leverage the use and availability of transit and transit-related federal and state funding sources by increasing local financial support.
- Insure the sustainability of PDRTA through dedicated local funding.

Service Gap Analysis

Federal guidelines identify three groups of people that fall within the captive rider group that are considered as populations with special transportation needs: elderly people (individuals 60 years and over), people with disabilities, and low-income people (150% of the national poverty level). The following information for each of the three groups is based on data reported in the 2000 Census for the Florence Metropolitan Statistical Area (MSA).

- **Elderly Persons** — 20,022 persons (15.9%) are 60 years or older
- **Persons with Disabilities** — 27,430 persons (23.8%) age 5 years or older have at least one disability
- **Low Income Population** — 20,063 persons (16.4%) are below the poverty level

Maps showing the geographic distribution of these population groups can be found in **Chapter 3**. In addition to the three groups identified in federal guidelines, captive riders also include those too young to drive and those without access to a personal vehicle. **Figure 7.2** shows the percentage of persons without access to a personal vehicle based on 2000 Census block groups. While the image indicates households near downtown without access to automobiles are served by bus routes, pockets of households without vehicles outside must rely on paratransit or seek alternative options such as taxis.

Figure 7.3 shows the existing fixed routes in relation to the population density of Florence and Darlington Counties, also based on data from the 2000 Census. The figure indicates the densest areas of the region are served by PDRTA's fixed route bus service. The transit routes also were overlaid on the demographic maps presented in **Chapter 3** to determine location where transit service fails to meet the needs of transit-dependent populations.

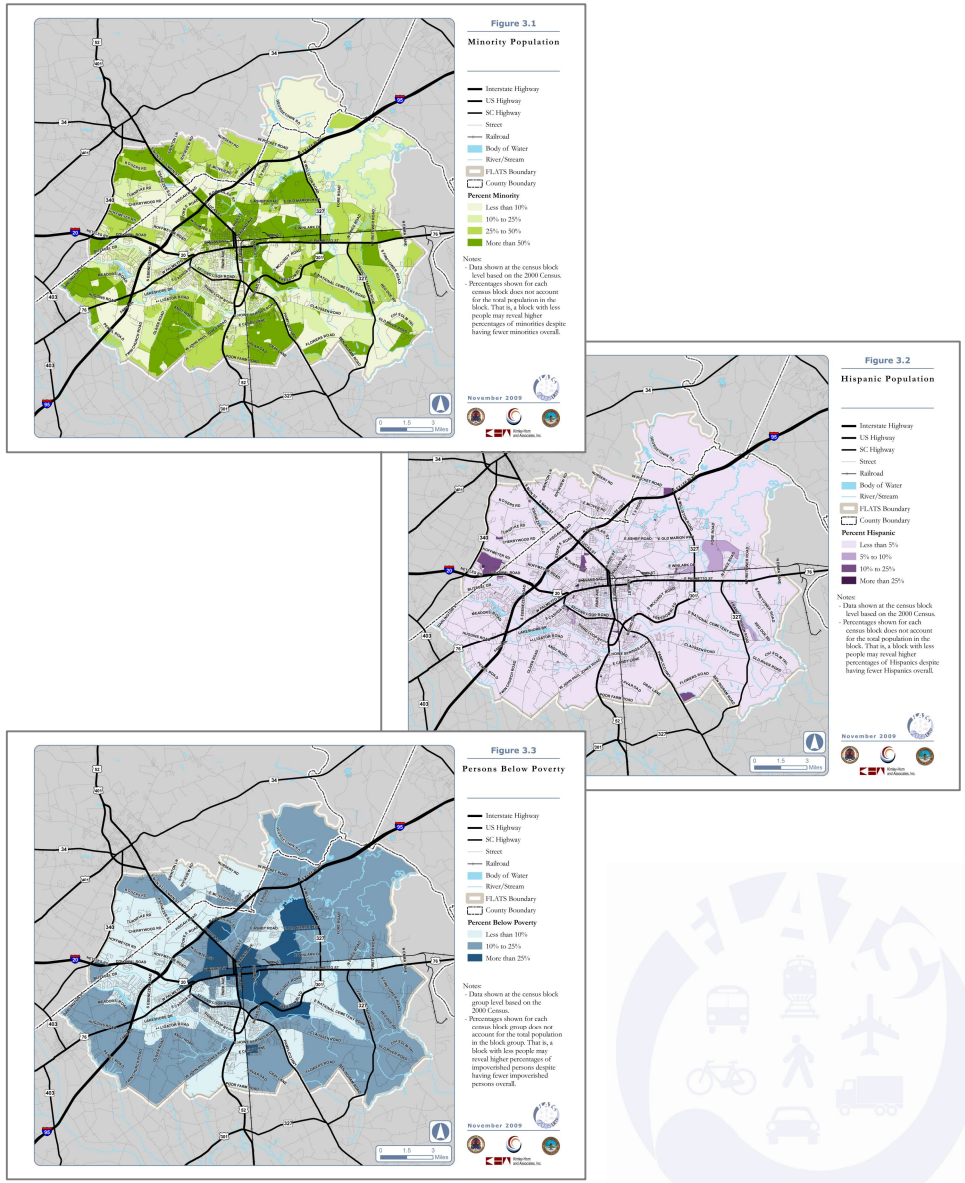
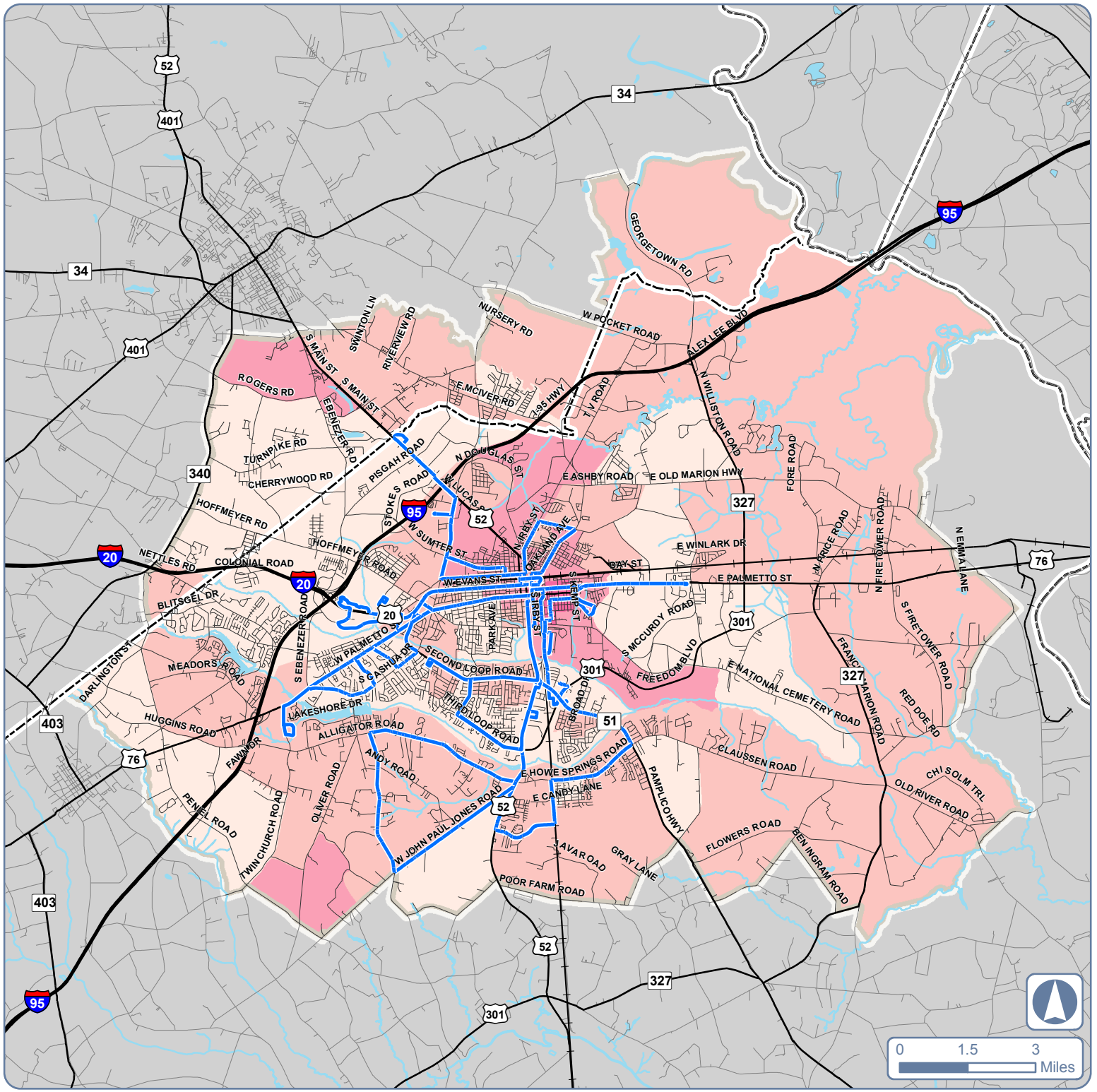


Figure 7.2

Vehicle Availability



Notes:

- Data shown at the census block level based on the 2000 Census.
- Percentages shown for each census block does not account for the total population in the block. That is, a block with less people may reveal higher percentages of households without access to a vehicle despite having fewer such households overall.

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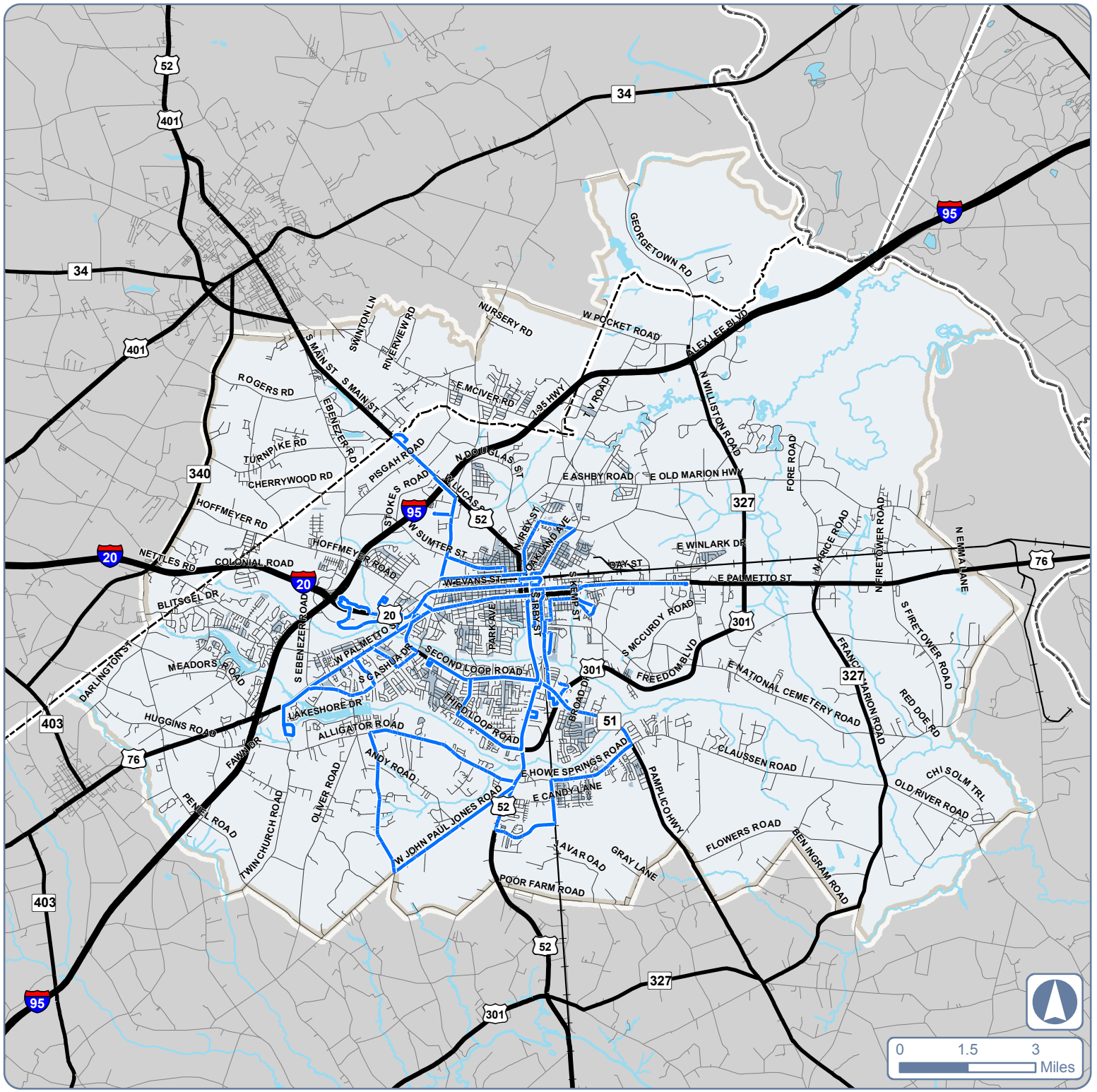


Figure 7.3

Population Density

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- FLATS Boundary
- County Boundary
- PDRTA Bus Route

Persons per Acre

- Less than 5
- 5 to 20
- 20 to 75
- More than 75

Note:
- Data shown at the census block level based on the 2000 Census.

FLATS 2035 LRTP

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Best Practice Guiding Principles

The vision for transit in the FLATS area is for it to become a preferred and viable mode of transportation. The guiding principles described below represent best practices for achieving this vision. The principles promote a system that supports regional land use, improves mobility, and benefits the environment. The findings and recommendations that follow are based on the need to balance the issues identified for other elements presented in the *2035 LRTP* and to support these guiding principles.

Land Use Integration

The transit system should support the local and regional land use vision.

Making transit an option for both captive and choice ridership will hinge on land uses that make traveling by transit a viable alternative to personal automobile use. Higher density and mixed-use development in the downtown service area as well as around high-use bus stops will promote economic growth. Well-designed and properly implemented transit can be central to developing or redeveloping activity centers and can target growth to specific corridors.

Mobility Solutions

Mobility should be provided for both choice and captive riders.

Mobility improvements should provide access to more locations, reduce travel times, add more frequent and reliable service, and incorporate different types of service (such as radial routes, circulator routes, demand-response, rail, etc.). Choice riders will need incentive to select transit (reduced travel time, increased access to key locations, or fares subsidized by employers). Captive riders will need access to more destinations (employment centers, schools, places of worship, recreation sites, and medical facilities). Mobility should be measured by improved transit service that enhances the quality of life for both populations.

Environmental Stewardship

Transit improvements should promote improvement in air quality while minimizing impacts to social, cultural, and natural resources.

Transit ridership can reduce the use of private automobiles, which in turn can lower congestion, improve air pollution, and reduce energy consumption. To maximize the functionality of transit and to reduce negative consequences, transit service provided in a particular area should be in line with the intensity and type of surrounding land use.

System Development

Changes to the transit system should be evaluated, planned, and implemented as part of a larger transportation system that includes sidewalks, bicycle facilities, roads, freight, and passenger rail corridors.

Transit service is an important link in a multimodal transportation system that includes pedestrians, bicyclists, motorists, and transit users. Transit can provide a vital connection that allows walking and cycling to become more than recreational and leisure activities. Passenger amenities, such as bus shelters, bus pull-offs, lighting, bicycle racks, and sidewalks should be planned in a way that supports multimodal corridors. By providing amenities and links to other transportation facilities, transit can become a more viable option for travel.

Findings & Recommendations

The findings and recommendations presented in **Table 7.2** are grounded in a planning process that included analysis, public outreach, and a review of previous and on-going planning efforts. The recommendations also have been weighed against the needs identified in the other elements of the *2035 LRTP*. The recommendations are grouped by general findings, and some recommendations address more than one finding.

Table 7.2 – Findings & Recommendations

Finding	Recommendation
Strategic Planning	
Previous planning efforts have provided a basic level of understanding but fall short of addressing the comprehensive needs of the Pee Dee region. PDRTA has initiated several plans of varying scope and objective. However, these plans do not provide a comprehensive review of the rural and urban dynamic of the system or forward defined strategies tied to a funding and phasing program.	▪ **Develop a Comprehensive Transit Master Plan that coordinates the dual functions of urban rural transportation as provided by PDRTA.** While the master plan should reflect the needs of the entire six-county PDRTA region, special consideration should be given to the needs of the FLATS area given the area's role as the economic hub of the region. In addition, development of the Comprehensive Transit Master Plan should be coordinated with the multimodal strategies of the *2035 Plan* where appropriate. • Objective-based needs assessment • Review of the current performance and organizational direction of PDRTA and recommended alternative operational and managerial strategies • Documentation of passenger amenities and future needs • Recommendations for fixed route location, frequency, and duration • Reiteration of targeted marketing initiatives • Phased Implementation Plan and Dynamic Financial Plan • Performance measures upon which to judge success
The Pee Dee region would benefit from the construction of the Multimodal Transportation Center to house the Florence Transit System, Greyhound (Southeastern Stages), and a business incubator. To be successful, a transit system must be integrated with other modes. PDRTA has partnered with the Florence Downtown Development Corporation to develop preliminary plans for a transit hub in downtown Florence.	▪ **Construct the multimodal transportation center in downtown Florence.** Preliminary planning has begun to fulfill the vision for a multimodal transportation center in Florence. PDRTA should continue to work with local, regional, and state leaders to secure adequate funding to see this project to completion.

Finding	Recommendation
Strategic Planning	
With Florence functioning as the center of the region's economic, entertainment, and medical activity, services for commuters must be a priority for the transportation system. Florence County is the only county in the Pee Dee region that increases in population during the day. PDRTA has been a leader among its peers across South Carolina in delivering commuter services for residents in outlying areas. As the population becomes more dispersed and more economic activity centers in Florence, services designed as alternatives to single-occupant private vehicles will provide critical mobility to the region's residents. The Pee Dee Regional Transit Plan also acknowledges the need for commuter services.	▪ **Expand opportunities for residents throughout the Pee Dee region to participate in carpools and vanpools.** The current vanpool services offered through PDRTA should be enhanced to include a rideshare matching program for both carpools and vanpools. A web-based program linked to www.pdrta.org should be introduced as part of the redesigned PDRTA website scheduled to be launched in 2010. When the rideshare program matures, a coordinator should be hired to work directly with major employers and local educational institutions to manage and market the program. ▪ **Enhance the commuter fixed route service currently offered by PDRTA.** In its marketing plan, PDRTA identified students and the business community as part of its target market. By identifying these groups, PDRTA established a goal of developing services and advertising to meet the unique needs of these groups. New routes focused on commuter services for these groups should be explored as part of the Comprehensive Transit Master Plan. ▪ **Identify strategic locations for park-and-ride facilities.** Having conveniently located park-and-ride lots throughout the Pee Dee region will be an important strategy for increasing the participation in carpool, vanpool, and commuter bus services. Where possible, partnerships with businesses and other private land owners should be formed to limit the financial burden of PDRTA in establishing park-and-ride locations. Demand for each location should dictate the level of amenities provided. ▪ **Construct a facility in Marion that consolidates the PDRTA office and transfer center.** Plans are underway to construct a facility in Marion that will expand opportunities to reach commuters from Marion. The new facility should add amenities to the transfer center that today is little more than a posted sign. Park-and-ride facilities should be included. ▪ **Remain actively involved in efforts to explore passenger rail service in Florence.** Previous plans at the state and local level have explored general ways to establish passenger rail service in the region. These plans are very much in the preliminary stage and future analysis and coordination will need to occur.
The Florence area's older population will continue to grow as the local population gets older and the region continues to attract retirees. The PDRTA Marketing Plan documents the importance and challenge of providing mobility to the aging population accustomed to the flexibility afforded by automobiles.	▪ **Implement the targeted marketing campaign outlined in the marketing plan.** The marketing plan provides a list of recommendations to market PDRTA's fixed route and demand response services to senior citizens. The recommendations include a range of targeted printed media (maps, brochures, rack cards, ride guides, posters) as well as improved advertising and public relations. ▪ **Develop strategies to transition paratransit riders to the fixed route system.** For able senior citizens (and other paratransit riders) living within walking distance to PDRTA bus routes, a focused effort must be given to transitioning ridership from paratransit to the fixed route bus system.

Finding	Recommendation
Land Use Coordination	
Land use decision and transit initiatives have operated in a vacuum. Growth and shifting land development patterns will continue to impact the delivery of PDRTA services. As noted in the previous plans, an increase in the transportation-dependant population will increase the daily need for transportation throughout the Pee Dee region. A flexible system that grows with the region is a necessary goal.	▪ **Coordinate future fixed routes with land use development patterns.** PDRTA should continue to work with the city and county planning departments to ensure transit service is considered in future development projects. In locations with larger scale development and redevelopment impacts, the review process should ensure transit-ready development features such as a mixture of land uses at appropriate densities, interconnected streets, and pedestrian-friendly design. At a minimum, the coordination between PDRTA and local planning departments should ensure new neighborhoods geared toward the elderly and low income populations are transit friendly. ▪ **Utilize the Comprehensive Transit Master Plan to determine if modifications to the current hub and spokes layout are necessary.** The hub and spoke layout of the current fixed route system emphasizes trips to and from the downtown area. While the concentration of downtown destinations will support transit in the future, the continued decentralization of activity centers as the region grows will require consideration of changes in both system organization and headway times. The system must be flexible to growth within the region, particularly as the transit-dependent population expands. ▪ **Locate civic land uses within walking distance of public transit.** Civic land uses such as libraries, parks, administration buildings, and social services should be located within walking distance of public transportation. Existing bus routes and amenities should be evaluated to ensure equal accessibility to those choosing to ride transit. In addition, the ability to provide access via transit should be a priority when selecting locations for future public facilities.
Publicity and Outreach	
Current and potential riders need clear, up-to-date information about PDRTA services. In the past, PDRTA has experienced difficulty in effectively marketing their services. As a response, PDRTA hired a consultant to develop a marketing plan that evaluates current marketing needs and proposes a series of recommendations for targeted groups.	▪ **Develop a phased implementation plan with detailed action items based on the marketing strategies outlined in the PDRTA Marketing Plan.** The PDRTA Marketing Plan provides an excellent list of general marketing strategies as well as target marketing strategies. However, the plan lacks a defined implementation schedule based on the funding and resources available to PDRTA staff.

Finding	Recommendation
Customer Delivery System	
Riders and non-riders often form their perception of the transit system based on a customer delivery system that includes bus stop amenities as well as sidewalks and bikeways. The perception of these amenities can impact the overall success of the transit system, which depends on adequate sidewalks and bikeways as well as a comfortable environment to wait for the bus.	▪ **Coordinate bus stop upgrades with improvements to the pedestrian and bicycle network.** The *2035 Plan* recommends a series of bikeway and sidewalk improvements to connect activity centers and neighborhoods. Improvements to the pedestrian and bicycle network, especially those constructed as part of new road construction and/or widening, should be coordinated with existing and future transit needs. ▪ **Enhance bus stops.** Only one PDRTA bus route has bus stop signs. Focus group sessions conducted as part of the PDRTA Marketing Plan indicated that the lack of bus stop signs deters riders, especially new riders, from using the system. Initial steps to enhance the system's bus stops have begun, starting with the purchase of solar-powered signs. PDRTA has recognized the need to provide better amenities at bus stops, and future plans to add shelters will require additional funding and coordination with private land owners (especially at locations in which shelters/benches will be added outside the public right-of-way). Funding limitations can be overcome by creating a sponsorship program ($100 to sponsor a bench) and forming partnerships with adjacent land owners. Bus stops should be enhanced based on a priority score, with high volume and high visibility locations receiving top priority.
Safety and Security	
Safety and security of the public transportation system is a federal requirement and a local priority that requires both consideration and funding. Through SAFETEA-LU, the federal government established safety and security as independent planning factors for consideration in long range transportation plans. As the most public component of the transportation network, lapses in safety and security of the transit system can severely diminish its viability and cripple mobility in the region.	▪ **Improve the safety and security of the transit system.** The federal government requires PDRTA to spend a minimum of 1% of their federal dollars on safety and security. To date, PDRTA installed cameras and surveillance in their facility and installed automated fareboxes to eliminate cash transactions. The following additional tasks should be completed: • Install cameras on transit buses • Complete the installation of solar lighted bus stop signs with rotating beacons to alert the driver of activity at the bus stop • Install mobile data terminals on buses to relay GPS information in real time • Equip buses with the equivalent of a "black box" data recorder to provide information in the event of an incident These improvements are in various stages of implementation. Safety and security of the transit system also can be achieved by improving bus stops through better lighting and properly maintained landscaping.

Conclusion

Transit provides a vital service in daily life of passengers. The focus of many recommendations in this chapter is to promote transit as a safe, convenient, and dependable form of transportation. Longer-term solutions target improvements for captive and choice riders to ensure transit exists as a sustainable transportation alternative. Solutions for transit extend beyond what typically is considered transit planning. Strategies presented in other elements of the *2035 LRTP* will help establish transit as a viable alternative for residents, employees, and visitors throughout the Pee Dee region.

- Improving roadways and creating a more connected roadway network allows transit vehicles to service people more efficiently
- Constructing a consistent bicycle and pedestrian network helps residents safely move between bus stops and their final destination
- Coordinating land use and transportation decision-making processes ensures that new development — whether roads, homes, offices, or shops — will support existing and future transit service

If transit is going to flourish in the FLATS area, local leaders must be committed to progressive planning and continuous assessment even as they actively seek innovative funding sources for short- and long-term investments.



Chapter 8

Freight & Aviation Element

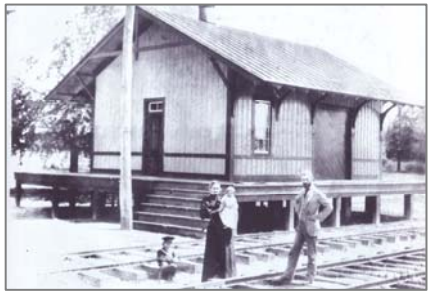
Introduction

When the federal government passed the SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) legislation, national policy leaders reaffirmed the importance of planning freight and aviation at a regional scale. Moving goods continues to be one of the most expensive parts of the production cycle, and a significant way to reduce costs for end users is to ensure the efficient movement of goods by highway, rail, and air. Effective planning also accounts for the transfer of goods from one mode to another. As a hub of industrial activity for the southeastern United States, changes to the transportation capacity in the FLATS area will impact areas beyond the MPO boundary. Maintaining and improving the infrastructure not only will promote economic growth across the country but also will provide long-term economic stability for Florence and the surrounding area.



A strategic approach to freight and aviation planning can limit the effects of such high concentrations of freight industries and infrastructure (including congestion, increased conflict points, and growth constraints). The recommendations of the Freight & Aviation Element of the *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) addresses the future needs of truck and rail freight as well as aviation service. While every recommendation cannot be included within the financially constrained plan, some can be implemented with highway or transit recommendations. It is assumed funding restricted to freight projects will be applied to the area of greatest priority. Additional funding and implementation strategies are discussed in **Chapters 10** and **11**.

Historical Trends

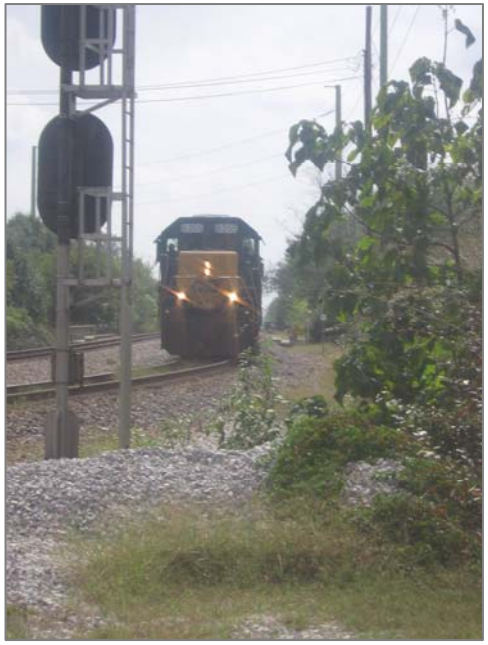




Perhaps more than any other element of the *2035 LRTP*, freight has played a pivotal role throughout the history of the Florence area beginning with the city's start as a railroad depot. Since the railroad arrived in the mid 1800s, the historical trends of both freight and aviation in the greater Pee Dee region have paralleled the trends of the nation as a whole. The economy of the Florence area has flourished as local businessmen and entrepreneurs stayed on the leading edge of technology and trends in moving freight as the network evolved from a regional to an international influence. Policy decisions also have mirrored national trends. As truck freight emerged, some emphasis was shifted to improving the network of highways.

The Bureau of Transportation Statistics estimated 4.6 billion ton-miles of freight were hauled domestically in the United States in 2006. (A ton-mile represents one ton of freight shipped one mile and is the primary physical measure of freight transportation output.) Rail accounted for 40% of the ton-miles while trucks accounted for slightly less than 28%. The growth of these two means of freight movement has steadily increased since the 1980s. While the total ton-miles of freight carried by trains has increased more than other modes, railroads have experienced a decreasing market share for decades as more freight is moved by truck. This reliance on trucks has facilitated "just in time" delivery; increased truck traffic; and contributed to worsening congestion on many highways.

The continued loss of the rail freight market share to the movement of freight by truck has impacted key corridors across the United States. The continued trend of limited funds for improving these roadway corridors likely will lead to worsening congestion. However, the cost of moving goods by truck in terms of time and money will increase, and the economic losses due to congestion will rise. With expanded port activity in Charleston and southeastern North Carolina a real possibility, relieving roadway congestion through urban centers demands more attention. In Florence, where significant highway and rail corridors intersect, enhanced coordination between modes will become even more important as the cost of transportation increases and roadway congestion further impacts travel times.





Economic Implications

At the National Association of Development Organizations (NADO) annual conference in October 2009, SCDOT representatives discussed statewide freight planning practices to an audience of regional planners, local government officials, and representatives from non-profit organizations and corporations. Freight implications for the state included:

- Expansion of the Port of Charleston and construction of a new port at Jasper
- Expansion of the Panama Canal by 2015 that will increase volumes for east coast ports
- Development of inland mega-sites
- Increased focus on the state as a logistics hub

To date, the state has relied on plans such as the *2035 LRTP* to identify freight needs and recommendations. In the absence of a statewide freight transportation plan, regional transportation plans will continue to provide direction to freight planning activities in South Carolina.





Planning Context

No other element of the *2035 LRTP* is more closely tied to economic development than freight and aviation. Historically, rail and highway corridors have provided a spine upon which industrial growth could occur in the Florence area. Industrial growth, in turn, has spawned population growth and commercial expansion. For this reason, obstacles facing the freight community can slow population growth and economic development.

Often these obstacles are related to other segments of the transportation network. Successful planning efforts for freight and aviation incorporate the specific interests of other modes, especially roadway recommendations that involve capacity improvements or access management strategies. The planning context for the Freight & Aviation Element builds upon the *2035 LRTP* vision and SAFETEA-LU planning factors with public and stakeholder feedback and review of ongoing planning efforts.

FLATS 2035 LRTP Vision

Several key words from the *2035 LRTP* vision relate directly to the safe and efficient movement of goods via highway, rail, and air as well as how these systems contribute to the overall transportation network. These key words are emphasized below:

> We envision a **growing community** serviced by a **safe and sustainable transportation system** that provides real choice among modes of travel. Our transportation system contributes to an enhanced quality of life by providing attractive connections between destinations for motorists, bicyclists, pedestrians, and transit users without compromising cultural and environmental resources, and it **supports the efficient movement of people and goods at both the local and regional scale**.

SAFETEA-LU Planning Factors

The SAFETEA-LU planning factors introduced in **Chapter 1** and reiterated throughout the *2035 LRTP* provide a means for federal officials to assess the long range transportation plan's response to the unique needs of the regional transportation system. To reinforce the relationship between the federal legislation and the Freight & Aviation Element, the eight planning factors are restated below with added emphasis to ways improvements to the freight and aviation network will address the planning factor.

1. **Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency**
2. **Increase the safety of the transportation system** for motorized and non-motorized users
3. **Increase the security of the transportation system** for motorized and non-motorized users
4. **Increase the accessibility and mobility of** people and **freight**
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and **promote consistency between transportation improvements and state and local planned growth and economic development patterns**
6. **Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight**
7. **Promote efficient system management and operation**
8. Emphasize the preservation of the existing transportation system

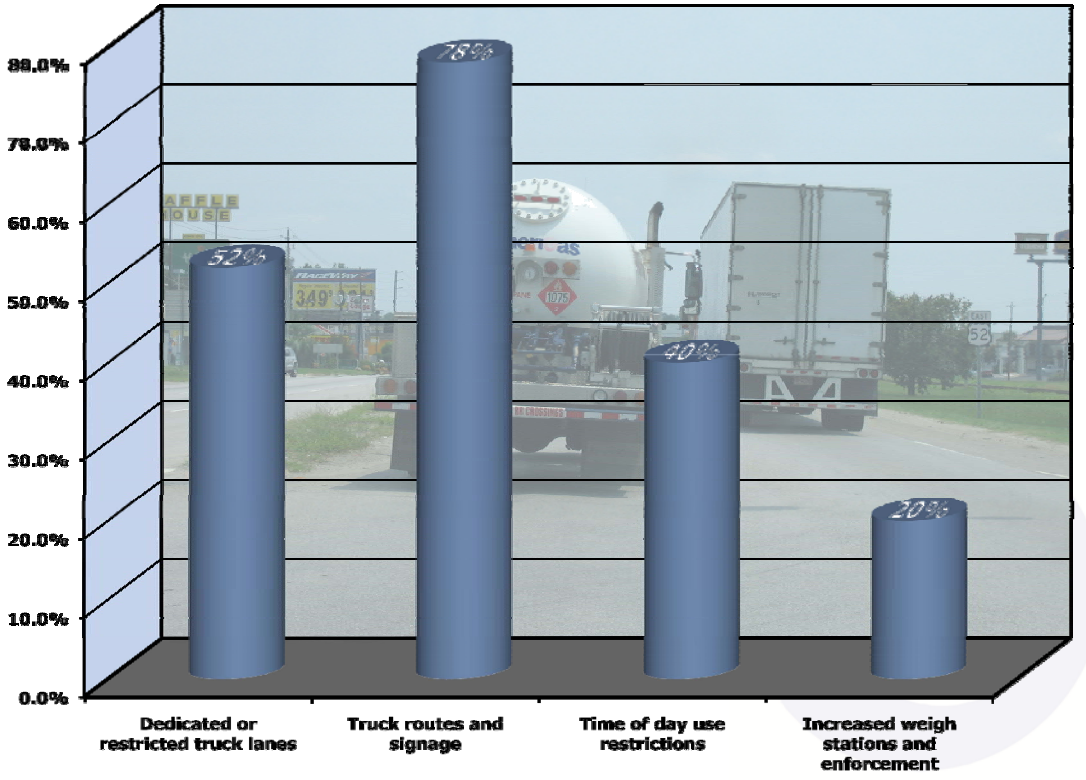
Public Perception

The planning process for the *2035 Plan* included multiple channels for public feedback. These channels included TPAC meetings, discussions with stakeholders and the general public, the public questionnaire distributed throughout the community, and a freight questionnaire targeted to different types of freight operators in the MPO. At the first TPAC meeting, several of the initial goals of the LRTP related to the movement of freight on the region's roadways and rail corridors. In particular, the TPAC stressed the importance of improving freight mobility and downtown access as well as easing the movement of goods to and from industrial areas. Following additional discussions with the TPAC and vetting through public outreach, these initial goals were refined and described in detail in **Chapter 2**. But the broader goals of safety, security, accessibility, and mobility directly relate to freight movement. Both the public questionnaire and freight questionnaire supported these goals.

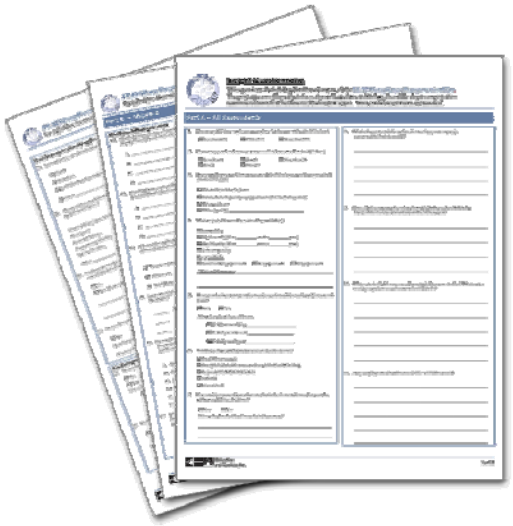
Public Questionnaire

In addition to questions tailored to the different modes of the LRTP, the public questionnaire distributed to the TPAC and general public asked specific questions regarding the movement of freight. When asked if improvements are needed to handle trucks on major roads, 68% of respondents answered yes. The graph to the right shows the preferred improvements according to the same respondents. More than three out four respondents wanted truck routes and signage, while more than half selected dedicated or restricted truck lanes.

What improvements should be made to handle truck traffic on major roads?



Freight Questionnaire



A brief questionnaire was distributed by MPO staff to members of the freight community to provide a perspective on the trends and issues operators face. Like the questionnaire distributed to the public at large, the freight edition was not intended to be scientifically valid but rather another venue through which to gather feedback. Issues raised in the responses included older roadways not adapted to the larger size of new traffic, lack of facilities to the Myrtle Beach area, and a shortage of intermodal accommodations. The questionnaire included quantitative and qualitative questions that revealed the following trends.

- Most businesses experience transportation peaks, though the peaks vary throughout the year by company.
- Drivers generally use the shortest route between the pick up and delivery location.
- Major truck routes included I-95, I-20, US 76, US 52, Palmetto Street, Irby Street. Interchanges identified on the questionnaires for high freight use include US 52/Lucas Street (Exit 164), TV Road (Exit 169), and SC 327/North Williston Road (Exit 170).
- Heavy vehicle restrictions are important to the operation of most respondents.

Existing Conditions



The planning process for freight and aviation — whether for truck freight, rail freight, or aviation services — encounters significantly different obstacles and political hurdles than planning other transportation modes. For highways, bicycle/pedestrian, and transit, government agencies are responsible for developing and maintaining facilities for the entire community's benefit. Freight, particularly in regards to rail freight, remains the only mode in which the main facilities are privately controlled. Public information typically available for other modes is considered proprietary and held confidential by private businesses. As a result, information and analysis conducted for freight often is less extensive than that of other modes.

Even under the umbrella of freight and aviation planning, different elements operate in unique organizational and governing environments. Local zoning boards dictate the location of trucking facilities while the operation of the trucks is controlled by SCDOT. Rail primarily is regulated at the federal level, but private corporations determine the use or abandonment of railroad right-of-way. Local or regional jurisdictions typically operate airports, but actual air freight service is provided by national corporations regulated by the Federal Aviation Administration (FAA). The review of existing conditions and formulation of recommendations proceeded with an understanding of these obstacles.

Freight Network

The movement of freight throughout the southeastern United States and across South Carolina has played an important role in the economic vitality of the region. Nowhere is that more true than in Florence, a city that was founded based on the potential of its rail access. Over the years, manufacturing has remained a core component of the FLATS regional economy even as the sector declined in neighboring regions. The confluence of two interstate highways and proximity of two major ports provides a robust base for economic activity. However, the freight community also requires a sound interconnected system for the movement of goods.

As shown in **Table 8.1**, when comparing all modes of shipment between 2002 and 2035, the FHWA Office of Freight Management and Operations estimates the share of truck freight to decline for trips within and from South Carolina and increase for trips to the state. According to the data, other intermodal and pipeline/unknown shipments are expected to gain market share.

Table 8.1 – Percentage[1] of Shipments by Mode (2002)

	Within SC		From SC		To SC	
	2002	2035	2002	2035	2002	2035
Truck	93%	89%	84%	79%	80%	86%
Rail	4%	4%	4%	2%	5%	3%
Water	<1%	<1%	<1%	<1%	<1%	<1%
Air (air & truck)	<1%	<1%	<1%	<1%	<1%	0%
Truck & Rail	<1%	<1%	<1%	<1%	<1%	<1%
Other intermodal[2]	<1%	<1%	4%	7%	6%	8%
Pipeline & unknown[3]	2%	7%	7%	12%	7%	3%

Notes:

[1] Numbers may not add to totals due to rounding.
[2] Other intermodal includes U.S. Postal Service and courier shipments and all intermodal combinations other than truck and rail and air and truck.
[3] Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

Source: Office of Freight Management and Operations

Highway Freight

The Florence region boasts one of the best highway freight networks in the state, anchored by I-95 and I-20. I-95 is one of the nation's busiest freight corridors, connecting the east coast's major population and economic centers. In South Carolina, up to 25 percent of vehicles traveling on I-95 are trucks, second only to I-85. The MPO's other interstate highway, I-20, is an important east-west connector for the southern United States. Beginning at its terminus in Florence, the interstate travels through Columbia, Atlanta, and Dallas. Within Florence County, these interstate highways are supplemented by numerous US highways, including the north-south route US 52 and east-west routes US 76 and US 378. Collectively, the interstate and US highways carry the most traffic — both in terms of personal vehicles and commercial trucks. But some SC highways, especially outside the Florence city limits, also carry significant freight traffic. These corridors include Pamplico Highway (SC 51), Williston Road (SC 327), and SC 403 near Timmonsville.

From a statewide perspective, the implication of freight activity on the highway network is significant. SCDOT maintains more than 840 miles of interstate highways. According to an October 2009 presentation by SCDOT at the National Association of Development Organizations Conference, 45 miles of South Carolina's interstate highways have capacity needs. Given freight activity increases due to industrial growth and expansion of port facilities, SCDOT predicts by 2030 more than 50 percent of the interstate highways will operate below acceptable levels of service and up to 50 interchanges will need to be reconstructed. On the state's primary and secondary roads, more than 1,100 miles (3% of total miles) will need to be improved at a cost of $7 billion in today's dollars.

Rail Freight

Without the railroad, Florence likely would not exist. Since the mid-1800s when the town of Florence was founded at the junction of two rail lines, the region has matured as a rail and transportation center. Economic growth in the first early years of the city was tied directly to the freight mobility provided by the rail corridors. And even as the highway network has improved and reduced the dependence on rail for moving goods, the region continues to rely on its rail network to connect industrial sites to ports and end users.

The Association of American Railroads (AAR) defines three railroad classifications.

- **Class I** railroads are the largest operating railroads in terms of revenue. The actual definition of a Class I railroad has changed over the years to account for inflation and other factors. As of 2005, the Association of American Railroads (AAR) defined Class I railroads as having annual operating revenues that exceed $319.3 million. The number of Class I railroads has shrunk from more than 130 in 1939 to only seven in the United States and Canada today. These seven railroads account for 93 percent of the industry's revenues.
- **Class II** railroads, commonly known as "Regionals", currently classified by the AAR as having operating revenues of $20.5 to $277.7 million. As with Class I railroads, the revenue benchmark used to classify these railroads is adjusted periodically. Class II railroads are not nearly as large as Class I railroads and typically operate only within a particular region. However, they offer well-equipped main lines for faster movement of freight as well as local switching operations. A total of 12 Class II railroads exist in the United States today, none of which operate in South Carolina.
- **Class III** railroads, commonly known as "Shortlines", are defined by the AAR as a railroad with less than $10 million in annual operating revenue. While shortlines are the industry's smallest in terms of miles of track and revenue, they are the most numerous in the nation with approximately 500 in operation.

CSX Transportation, the South Carolina Central Railroad, and Amtrak operate in the FLATS MPO area, using the region's Class I and Class III rail lines. No Class II railroads exist in South Carolina.

- Florence is home to a major CSX switching yard (located just north of downtown east of Lucas Street (US 52) and has direct rail service to two major seaports (Charleston, SC and Wilmington, NC). This rail line, shown in **Figure 8.1**, follows US 76 from the east to downtown then parallels US 52 to the south. This line is the company's major north-south route connecting Charleston with Washington, DC. CSX also owns a short rail corridor that parallels West Darlington Street. The CSX railroad in Florence County currently is an active Class I rail line.
- The South Carolina Central Railroad (SCRF), a RailAmerica property, is a Class III shortline railroad that connects Florence with Bishopville via Darlington and Hartsville. In total, SCRF maintains more than 120 miles of railroad (including a separate segment between Cheraw and Society Hill). The portion of the SCRF railroad in the MPO area is adjacent to Lucas Street/South Main Street.
- Amtrak passenger rail, with its station located at 805 East Day Street near McLeod Regional Medical Center, offers a connecting service between Florence and the cities of Greenville, Spartanburg, Myrtle Beach, and Columbia, with intermediary stops to Camden and Conway. The station rests approximately half-way between New York City and Miami, the termini of the Silver Meteor line. According to the Great American Stations website, the total Amtrak rail boardings in 2008 for the City of Florence were 47,163.

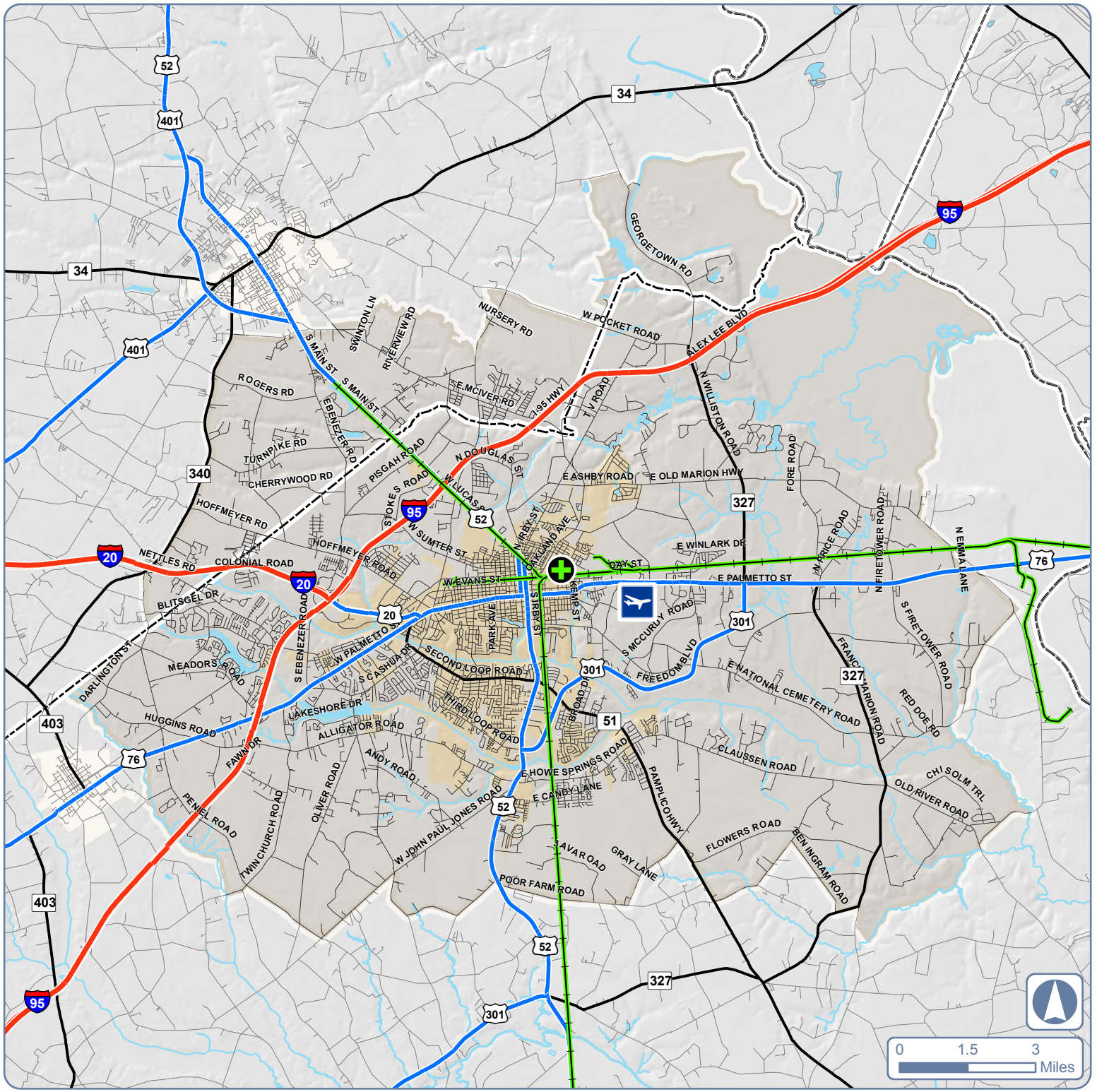


Figure 8.1

Freight & Aviation Network

- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Florence Regional Airport
- CSX Switching Yard

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

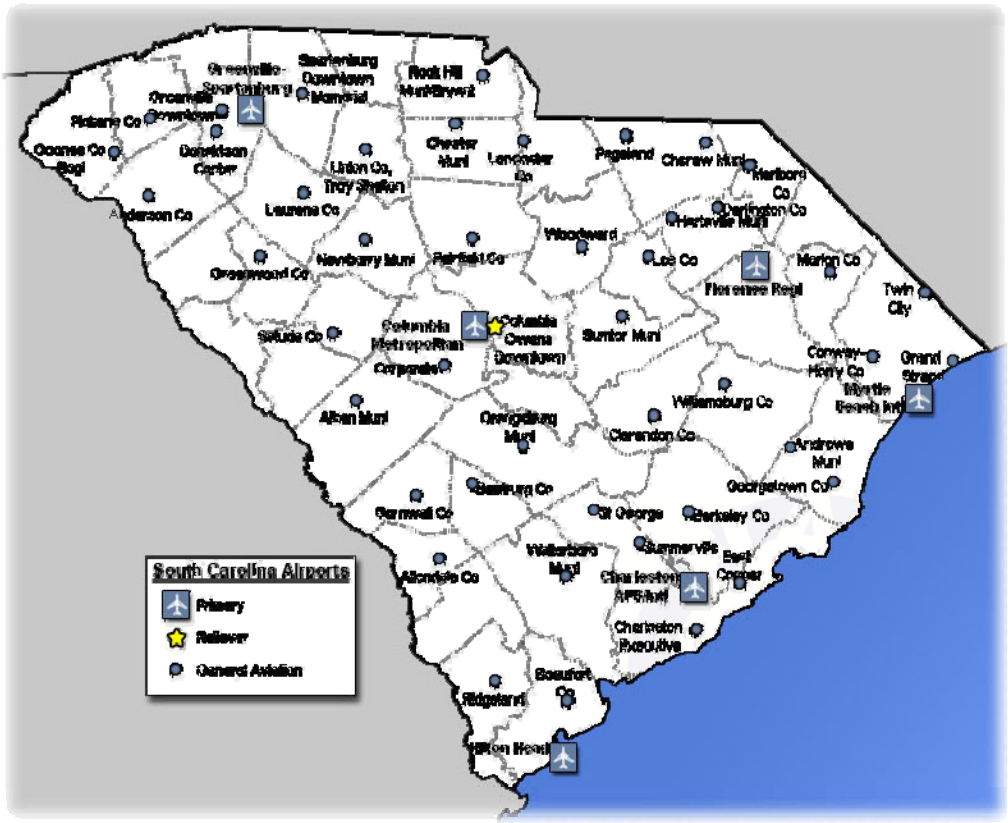
Aviation Services

South Carolina's airports are an important component of the statewide transportation system and a catalyst for the state's economy. Aviation needs — including passengers on commercial airlines, those piloting a private aircraft, and the movement of goods — are fulfilled through a combination of large airports and smaller facilities across the Palmetto State. These facilities fall into one of three major categories:

- **Commercial Service/Primary Airports** — These airports include facilities that serve regularly scheduled passenger service. The three largest facilities in the state are Charleston International, Greenville-Spartanburg International, and Myrtle Beach International. Other airports with scheduled passenger service in the state include Florence Regional Airport, Columbia Metropolitan Airport, and Hilton Head Island Airport.
- **General Aviation Airports** — These airports include smaller facilities that exist in the majority of counties throughout the state. They typically have paved runways 2,000 feet to 5,500 feet in length and can accommodate small (single engine) and medium-sized (multi-engine) aircraft. These airports often provide opportunities for businesses with suitable aircraft to avoid the use of larger facilities and minimize air travel associated with lag time. They also have proven useful in attracting business to communities throughout the state. No general aviation airports are located within the FLATS MPO area.
- **Reliever Airports** — These airports are large general aviation airports that provide additional capacity when the area's primary commercial airport reaches capacity. Columbia Owens Downtown is the state's only reliever airport.

The image to the right illustrates the location of these airport categories in South Carolina.





Existing Facilities

Florence Regional Airport (FLO)

Located a few miles east of downtown, Florence Regional Airport is a general aviation airport served by two commercial airlines (Delta Connection and US Airways). The commercial airlines provide regional service to Hartsfield-Jackson Atlanta International Airport (Delta) and Charlotte-Douglas International Airport (US Airways). **Figure 8.1** shows the location of Florence Regional Airport within the context of the FLATS MPO area. **Table 8.2** details the flight schedules.

Table 8.2 – Flight Schedules

Flight #	Time	Airline	Days
Departures			
4173	5:45 am	US AIR	Daily (except Sunday)
4901	6:40 am	Delta/ASA	Daily
4439	7:45 am	US AIR	Sunday Only
4169	9:22 am	US AIR	Daily (except Sat. or Sun.)
4107	11:10 am	US AIR	Sat. and Sun. only
4494	1:00 pm	US AIR	Daily (except Sat. or Sun.)
4191	2:42 pm	US AIR	Daily (except Saturday)
4743	3:22 pm	Delta/ASA	Daily
4256	5:53 pm	US AIR	Daily (except Sat. or Sun.)
Arrivals			
4169	8:55 am	US AIR	Daily (except Sat. or Sun.)
4107	10:44 am	US AIR	Sat. and Sun. Only
4494	12:32 pm	US AIR	Daily (except Sat. or Sun.)
4191	1:48 pm	US AIR	Daily
4843	2:57 pm	Delta/ASA	Daily
4256	5:27 pm	US AIR	Daily (except Sunday)
4852	7:43 pm	Delta/ASA	Daily
4443	8:05 pm	US AIR	Sunday Only
4262	9:10 pm	US AIR	Daily (except Sunday)
4392	9:44 pm	US AIR	Sunday only

Source: www.florenceairport.com, March 2010

History and Future Trends

The history of Florence Regional Airport began with the purchase of 300 acres east of downtown Florence in 1928. During World War II, the site served as a training base (Florence Army Airfield) and an additional 1,400 acres were added. Following the war, the property was deeded to the City of Florence, which eventually split the property with Florence County. In 1999, the airport's operation was assigned to the Pee Dee Regional Airport Authority (PDRAA). Over the past ten years, the PDRAA has focused on maintaining a safe and reliable facility. Today, the PDRAA has turned its attention to enhancing the passenger experience by improving the parking facility, reorganizing the passenger waiting areas, and installing a new baggage carousel with complimentary luggage carts. Future plans include the construction of a new passenger concourse and gate areas with improved vending facilities. Current plans will allow expansion to 12 gates with ramp and apron facilities.

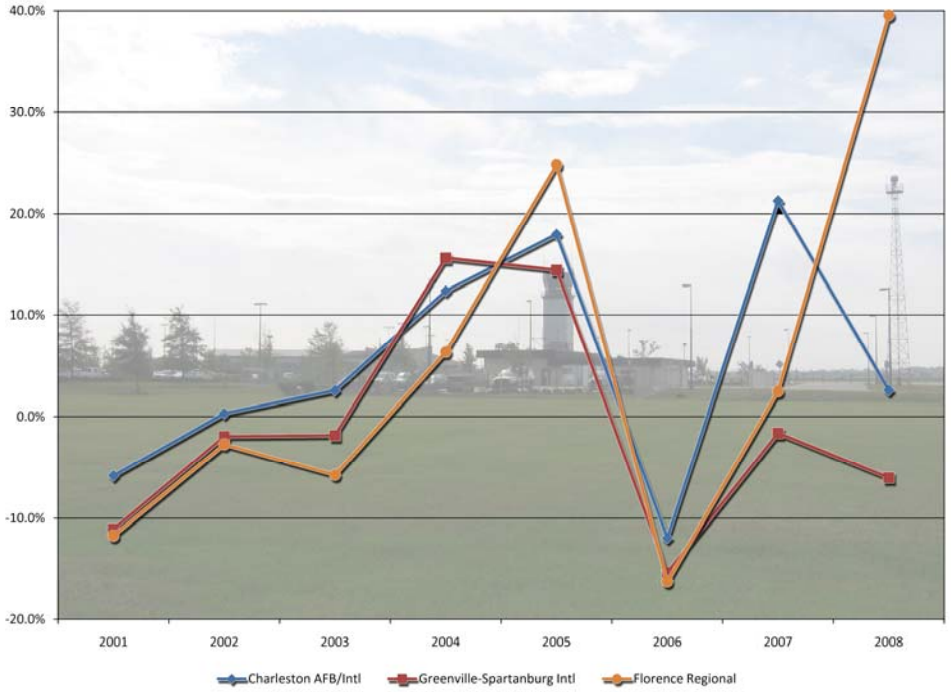
Aircraft and Enplanements

As of February 12, 2010, a total of 37 aircraft were based at the airport — 26 single-engine, 10 multi-engine, and 1 jet. The Federal Aviation Administration (FAA) compiles enplanement statistics for air facilities in the United States. A review of the trends for South Carolina's largest airports from 2001 to 2008 shows Florence Regional Airport continues to be the state's sixth largest airport by enplanements. **Table 8.3** shows statistics for 2000 and 2008, indicating Florence Regional Airport was one of only two airports in the grouping that grew from 2000 to 2008. The associated graph illustrates how Florence's airport has followed the same trend as the state's two largest airports in annual percent change of enplanements. This trend changed between 2007 and 2008, when the Florence airport continued to grow while the Charleston and Greenville airports did not.

Table 8.3 – Enplanements in South Carolina's Largest Airports			
	2000	2008	Percent Change
Charleston AFB/Intl	834,787	1,174,667	40.7%
Greenville-Spartanburg Intl	788,807	699,805	-11.3%
Myrtle Beach Intl	766,729	705,430	-8.0%
Columbia Metropolitan	607,228	565,938	-6.8%
Hilton Head	92,465	79,912	-13.6%
Florence Regional	50,384	64,835	28.7%

Source: www.faa.gov, March 2010

Percent Change in Enplanements from Previous Year



Airport Specifications

09/27 Runway

- **Designation**: 09/27
- **Width**: 148 feet
- **Length**: 6,502 feet
- **Surface**: asphalt in good condition

Lighting and Approach Aids:

- **Runway Edge Lights**: High Intensity
- **Runway Markings**: good condition
- **Visual Glide Slope Indicators**: 4-light PAPI on each approach
- **Approach Lights**: MALSR: 1400 feet medium intensity approach lighting system with runway alignment indicator lights

01/19 Runway

- **Designation**: 01/19
- **Width**: 147 feet
- **Length**: 6,000 feet
- **Surface**: asphalt in good condition

Lighting and Approach Aids:

- **Runway Edge Lights**: Medium Intensity
- **Runway Markings**: good condition
- **Visual Glide Slope Indicators**: 4-light PAPI on each approach

Recommendations

The ease of moving goods within and through a region — whether by highway or rail — is critical to remain competitive in a global marketplace. And the importance of reliable, convenient air travel is an important consideration for both quality of life and economic development. Officials at the state and local levels realize the advantage of having safe and efficient systems to move people and goods. The recommendations and strategies of the different modes in the *2035 LRTP* represent important steps to setting the stage for these systems to exist in the Florence region for the next 25 years. While the freight environment may be different in 2035, all trends point to the continued reliance on the region's network of highways and rail corridors to fuel economic development. The recommendations of the Freight & Aviation Element presented at the end of this chapter are based on a series of best practice guiding principles. The general recommendations build upon the strategies in the other elements of the *2035 LRTP*.



Best Practice Guiding Principles

The guiding principles that follow provide best practices for achieving a vision that ties freight and aviation in the Florence region to larger quality of life and economic development goals. The principles promote a system that recognizes the important role the movement of goods plays in the region. The findings and recommendations that conclude this element build upon the strategies and recommendations of other elements of the *2035 LRTP*, particularly the Future Roadway Element. The findings and recommendations also support the guiding principles.

Economic Development

The role the freight and aviation industries play in economic development should be a consideration as projects are weighed against competing priorities.

Given the global competitiveness of today's economy, the movement of freight and accessibility to reliable air travel is among the most important factors for business and industrial development. This fact recognizes that many industries define economic competition by the ease and timeliness in which they can move goods and services. Freight and aviation projects must assume their proper place within the regional transportation prioritization process.

Safety and Security

Safety and security of the freight network should be an overarching concern in the creation of plans, policies, and programs.

SAFETEA-LU emphasizes safety and security as independent planning factors for consideration in long range transportation plans. The growing volume of freight moving throughout the region underscores the need for a focus on safety and security in freight planning exercises — both as part of regional multimodal transportation plans and local freight-specific initiatives.

Education

An education campaign should be an on-going effort for local officials and industry stakeholders.

While the proper functioning of freight activity contributes heavily to the quality of life consumers' value, most consumers relate to freight only by the large trucks on area roadways and the long trains holding up the morning commute. Freight planning should address key issues and develop mitigation strategies that seamlessly integrate freight movement into the existing transportation system while educating the public on the importance of freight transportation to the region. The needs and issues of shippers, carriers, and other affected stakeholders should be emphasized.



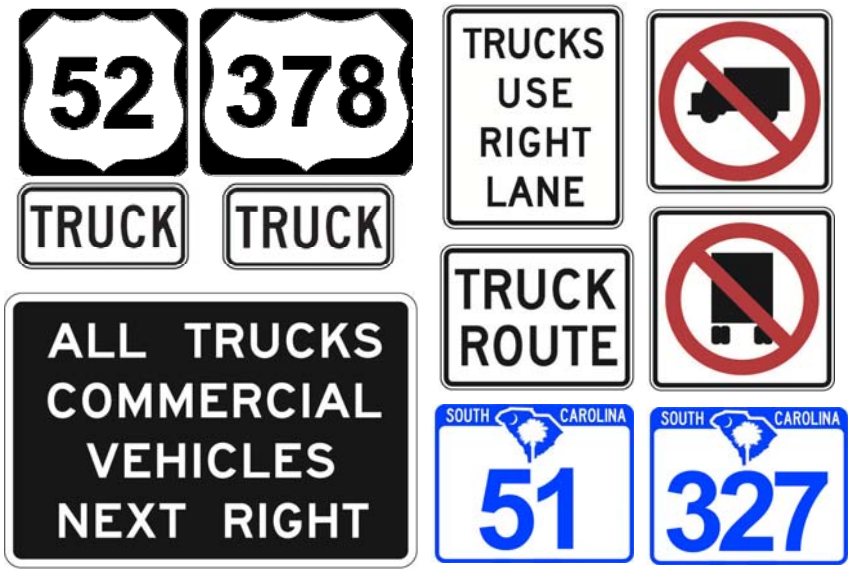
Truck Routing



Increasing truck traffic on the region's freeways and arterials makes it more important to guide these vehicles to routes designed to accommodate them. As mentioned previously, persons responding to the public questionnaire not only recognized that improvements to handle truck traffic are needed but also identified truck routes and signage as the preferred improvement. Routes designated for trucks should be signed and publicized so truck operators can utilize them and the general public will recognize these streets have been designed with truck traffic in mind. The design of the routes should allow the safe and efficient operation of trucks. **Figure 8.2** shows routes that are recommended to be retrofitted and signed for truck traffic. Trucks, with the exception of local deliveries, should be prohibited on routes not signed for truck traffic as described below. These routes were selected based on feedback from local staff, freight industry leaders, analysis, and field review. The following considerations should be applied:

- **Truck Classification** — Trucks should be defined as vehicles with a manufacturer's gross vehicle weight of 33,000 pounds or more. This definition excludes most straight trucks, panel trucks and delivery trucks but includes large trucks with more than two axles such as tractor-trailers and tandem axle dump trucks. Public service vehicles such as garbage collection trucks also would be excluded from this definition.

- **Route Designation** — Area roadways recommended to serve as truck routes are shown in **Figure 8.2**. Should the SCDOT adopt a statewide truck route map, these designations should be considered. As industrial development occurs, it will be important to provide efficient truck access and circulation to improve freight mobility while limiting cut-through truck traffic in adjacent neighborhoods. Within city limits consideration should be given to amending local ordinances to specifically prohibit through trip truck movements on local streets. Prohibiting trucks on state maintained roadways will require SCDOT approval.
- **Route Enhancement** — Once truck routes are designated, improvements should be prioritized to ensure the routes are fully utilized. The FLATS MPO should: (1) work with SCDOT to prioritize resurfacing of designated routes in an effort to reduce noise and vibration from trucks; (2) adjust signal timing where necessary to allow uninterrupted through movements based on posted speed limits; and (3) partner with local and state entities to improve critical intersections (turning radii, lane width, and the provision of dedicated turn lanes). These improvements will greatly improve the efficiency and safety of these corridors, in turn encouraging their use by truckers.
- **Route Education** — Signs should be posted at the city limits, freeway exits, and other appropriate locations directing truck drivers to roadways on which their movements are permitted. At a minimum, this should include limiting travel to the network identified in **Figure 8.2**, except for local deliveries. In addition to signage, Florence County and its municipalities should work together to publish educational materials and distribute it to businesses and industries concerning truck routes and restrictions.

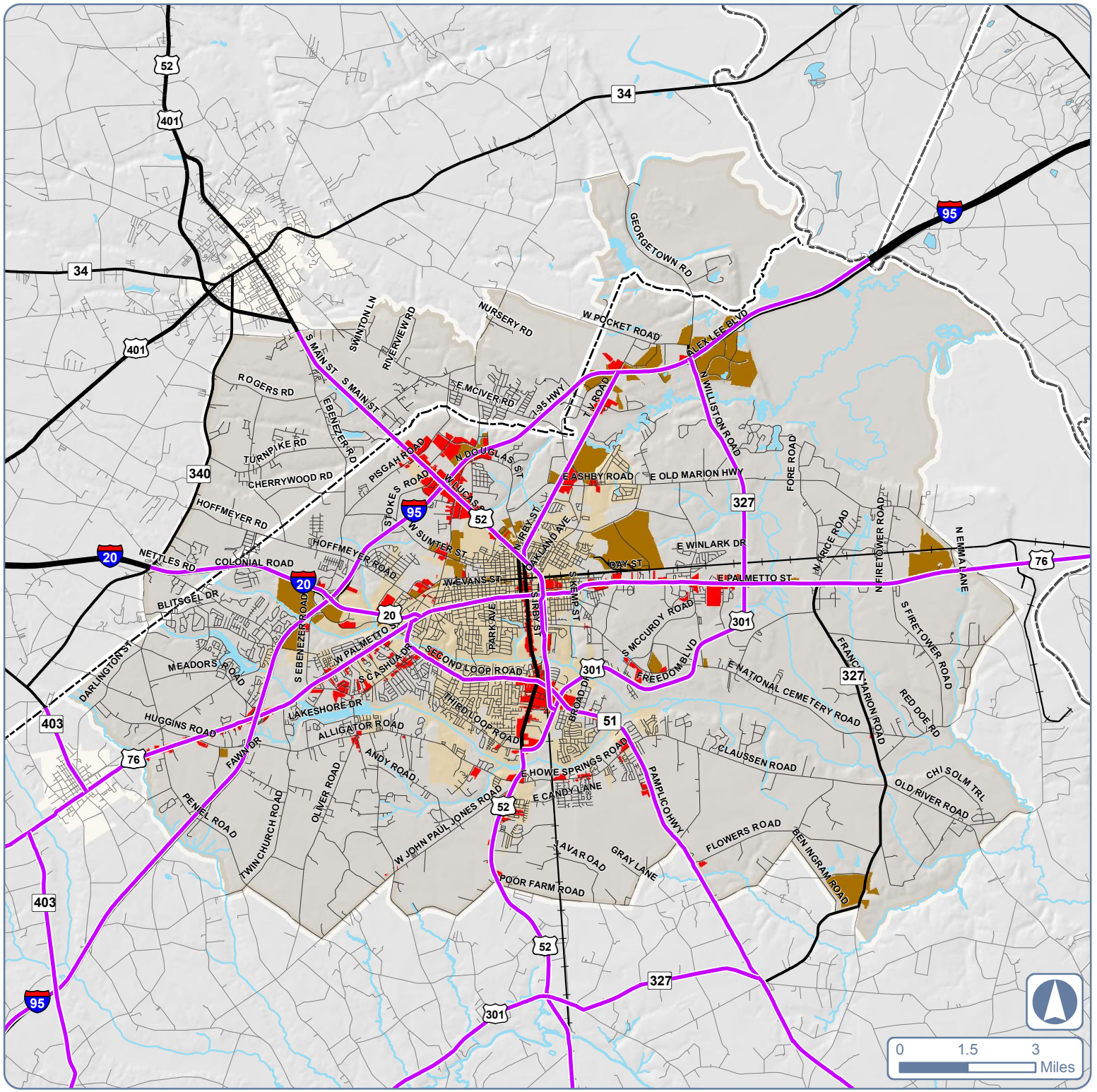


Findings & Recommendations

The findings and recommendations (**Table 8.4)** incorporate the outcome of previous planning efforts, public outreach, field review, and analysis. The relationship between these recommendations and the needs identified in the other elements of the *2035 LRTP* also has been considered. The recommendations are grouped by general findings, and some recommendations address more than one finding.

Figure 8.2

Freight Routes



- Interstate Highway
- US Highway
- SC Highway
- Street
- Railroad
- Body of Water
- River/Stream
- Municipal Boundary
- FLATS Boundary
- County Boundary
- Freight Routes

Future Land Use*

- Commercial G & P
- Industrial G & P

*Future Land Use categories (Commercial Growth & Preservation, Industrial Growth & Preservation) are derived from the Florence County Comprehensive Plan.

FLATS 2035 LRTP

Kimley-Horn and Associates, Inc.

Table 8.4 – Findings & Recommendations

Finding	Recommendation
Strategic Oversight	
Technical guidance is necessary to enhance regional economic competitiveness through freight initiatives. Perhaps more than any other element in *2035 LRTP*, freight improvements have the most potential to enhance the economic footing of the region and maintain a desirable quality of life. Strategic oversight is needed to ensure an efficient, reliable, and safe freight system becomes a reality.	▪ **Establish an Oversight Committee to provide feedback and strategic direction for freight and aviation at the regional level.** SAFETEA-LU requires MPOs to provide interested parties and freight stakeholders reasonable opportunities to provide input on transportation plans and programs. Recent efforts have been initiated to bring together a group of stakeholders to advance freight initiatives. The FLATS MPO should continue to take the lead on this process. The strategic direction may include: • Support for economic development through enhanced connectivity of the freight system. • Advancement of freight initiatives that support job creation. • Promotion of socially and environmentally responsible methods for movement of goods within and through the Pee Dee region. • Sound public investments that minimize costs and improve the efficiency of moving goods and services. • Sound public investments that provide long-term returns on public expenditures. • Greater priority to freight in the regional planning process.
Design Standards	
Officially recognized and publicized truck routes are a basic component of a larger effort to direct truck traffic to properly designed corridors. The strength of this effort rests on the ability of local and regional officials coming to an agreement on the proper design for truck routes.	▪ **Implement the recommended freight network as shown in Figure 8.2.** This process should serve as the foundation for continuing efforts to define a proper freight network within the region and to integrate future multimodal initiatives. ▪ **Develop design guidelines for freight infrastructure (roadways, intersections, and rail crossings).** Design guidelines consistently implemented at the municipal and county level for designated roadways should include proper lane widths, shoulder treatments, turning radii, and intersection treatments.

Finding	Recommendation
Project Development	
The development of freight projects traditionally has not occurred independent of regional roadway project development. While it is critical to integrate freight considerations in the public planning processes at all levels, the unique nature of freight needs and issues requires a balance between the development of projects as part of a regional multimodal planning process and the strategic direction offered only through a freight-specific regional plan.	▪ **Develop a regional freight plan that identifies corridors and conflict points for freight activity.** The plan should evolve from a dialogue between decision-makers, planners, and private sector stakeholders. The plan should establish freight needs and strategies and forward an action plan tied to an implementation schedule and appropriate funding sources. At a minimum, the regional freight plan should: • Identify improperly designed intersections that experience heavy truck traffic. • Address freight needs of area carriers and distributors at both the corridor and regional scales. • Establish a recurring schedule that evaluates pavement quality and general maintenance issues along freight corridors. • Identify, evaluate, and establish implementation parameters for low-cost congestion management improvements (e.g. traffic signal timing). ▪ **Remain actively involved in efforts to explore passenger rail service in Florence.** Previous plans at the state and local level have explored general ways to establish passenger rail service in the region. These plans are very much in the preliminary stage and future analysis and coordination will need to occur. Future enhancement to the freight and passenger rail system must be coordinated. ▪ **Implement ITS improvements that deliver on-time information to freight carriers and the general public.** Properly designed and executed ITS solutions will provide real-time information to highway users, allowing them time to react as traffic conditions change. ▪ **Prioritize projects in a way that gives extra weight to initiatives that promote intermodal freight and goods movement.** The evaluation matrix presented in **Chapter 5** considers freight in the process of prioritizing projects. Other plans (e.g. capital improvement plans) that program funds should follow suit.

Finding	Recommendation
Safety and Security	
Safety and security are critical components of any transportation plan, particularly plans that develop policies and programs for freight. The increasing volume of freight movement gives extra weight to the need to focus on safety and security as recommendations are developed. One way to ensure access and mobility for the freight industry is to enhance the safety and security of the existing network and set in place parameters to maintain standards.	▪ **Enhance safety for freight providers and the general public by identifying and prioritizing locations for improvements.** Efforts to prioritize projects based on safety and security should include a process that incorporates input from the freight sector. The following tasks should be completed: • Identify and prioritize locations with high truck/auto conflict to reduce injuries and loss of property. • Identify and prioritize rail grade crossings for improvement or closure. • Improve the flow of freight traffic by monitoring and disseminating roadway conditions using Intelligent Transportation Systems (ITS). ▪ **Provide for the secure movement of goods within and through the FLATS MPO area.** Communication with agencies and stakeholders is an essential element of a proactive approach to security issues. This process requires an effective working relationship between planning officials, law enforcement and emergency response personnel, and freight providers. The following tasks should be completed: • Discuss regional freight security issues as part of the Regional Freight Plan and meetings of the Oversight Committee. • Identify potential funding sources (such as through the Department of Homeland Security and other agencies) for freight security initiatives and support efforts to establish new revenue streams.

Conclusion

Few places in the United States have access to ports, railroads, and highways on the same level as the greater Florence area. The viability of the region's freight network is a critical element of economic competitiveness and mobility, and the safe and efficient movement of goods adds value to businesses and the general public. The Freight Element of the *2035 LRTP* considers the freight mobility needs of the region and recognizes that the city and county can work together to improve the movement of goods and services in a way that maintains the region's vision for economic development and quality of life. The outcome of improved freight planning should be a cornerstone of the ongoing efforts to sustain the competitiveness of the region in a global marketplace.

While considering freight in long range planning activities such as the *2035 LRTP* has reinforced the importance freight as part of regional and state planning initiatives, it remains difficult to see projects to completion that enhance freight movement. That is, even when freight is a core element of a plan, specific freight issues often are lost in translation before projects are programmed for funding. This battle makes it difficult for freight advocates to realize equal consideration as priorities and funding are programmed. And though numerous resources have been created to help MPOs incorporate basic freight issues into their planning activities, little guidance is available to help them translate general discussions into concrete programs and projects. Local officials — in cooperation with a dedicated committee of freight advocates — must make a concerted effort to overcome this obstacle.



Chapter 9

Land Use Element

Introduction

In recent years, planners and community leaders across the country have observed increased public interest in reversing the trend of urban sprawl and its consequences. Their efforts largely are motivated by the impacts of suburban development patterns: consumption of sensitive land for development, costly expansion of public infrastructure, and increasing traffic congestion. In cities like Florence and Quinby and surrounding Darlington and Florence Counties, the distance between complementary land uses (e.g., home and work, home and school, or home and shopping) and a lack of overall street connectivity leads to unintended consequences for the regional transportation system — increased vehicle miles traveled and energy consumption, longer commute times, increased air pollution, heightened infrastructure and public service costs, and decreased acreage critical to agrarian communities. These trends will continue if changes are not made to better integrate land use, urban design, and transportation decision-making.









Linking these three areas cannot be successful with a one-size-fits-all approach. The *2035 FLATS Long Range Transportation Plan* respects the variety of local smart growth planning initiatives underway in cities and counties inside the MPO planning area — such as reinvestment in downtown, suburban place-making, and rural preservation — and promotes transportation improvements sensitive to the overall goals of these initiatives within the context of the surrounding transportation system. The FLATS MPO planning area includes the urban areas of Florence and Quinby as well as more suburban and rural environments in the unincorporated Darlington and Florence counties. The City of Florence is the most densely populated location within the planning area and serves as the economic hub of the Pee Dee region.

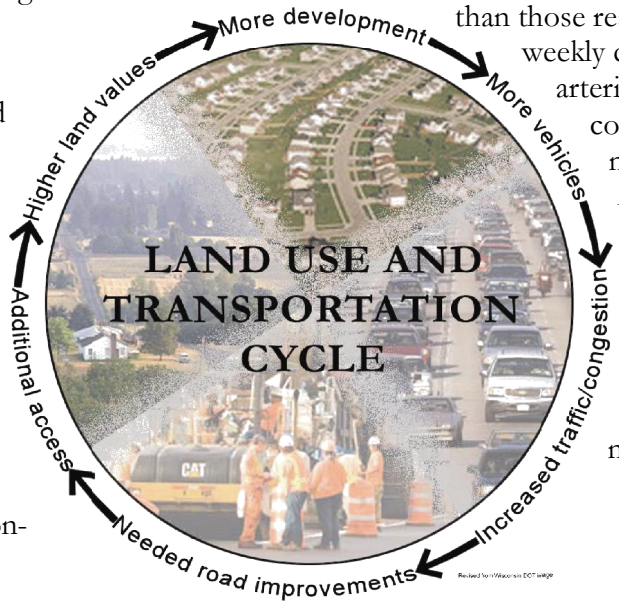




The Florence Area Transportation Study Metropolitan Planning Organization (FLATS MPO) is joining its peers in South Carolina to take a proactive approach to promoting more sustainable development patterns. Evaluating the relationship between land use, urban design, and regional travel behavior in a scenario planning analysis produces several benefits. When considered together, decisions and investments regarding all three elements can have a significant bearing on the MPO planning area:

- The impacts to sensitive land uses can be minimized when facilities identified for transportation investments are located *after* considering appropriate land use patterns and development intensities for the area.
- Prime locations for development can be stimulated if transportation investments consider available capacity or appropriate mobility options.
- Complementary activities can be placed next to existing or planned transportation infrastructure, making the most of development opportunities and dedicated transportation investments.
- The quantity and location of travel demand can be influenced by land use decisions, making the possibility of real choices for various modes of travel both accessible and attractive.

The underlying motive is to improve the efficiency of the regional transportation system while promoting livability within local communities. These relationships were analyzed in detail for the MPO planning area and represent opportunities to better integrate land use, urban design, and transportation decision-making processes.



How Do Regions Grow?

What Influences Regional Development?

Although presence of environmental features and historical growth patterns tend to be powerful indicators of the location and arrangement of future growth, cities and counties can help guide growth through other planning mechanisms. The most popular ways to influence regional development include the planned transportation system, public policies and ordinances, and public and private funding. These mechanisms are described below.

Transportation System

The transportation system greatly influences development patterns because it dictates the fastest, most convenient, and safest routes of travel. In addition, the various modes of travel influence the settlement patterns of residents. Those who desire community facilities and day-to-day services that are accessible by walking, cycling, or public transit, will choose to live in different locations than those residents who prefer to drive to their daily and weekly destinations. Interstates, highways, and large arterials prioritize vehicular travel, while boulevards, collector streets, and neighborhood streets provide more multi-modal transportation opportunities. As transportation corridors are improved and expanded, new development typically follows. This push-pull interaction between transportation infrastructure and development patterns typically results in concentrated growth along major thoroughfares with a wide variety of residential types designed to take advantage of the most convenient transportation facilities.

Public Policies and Ordinances

Although transportation infrastructure can directly guide growth, public policies and ordinances can also direct growth. These planning documents prescribe regulations that encourage growth where adequate public facilities exist or require private developers to pay for extension of such services. Redevelopment zones, such as the Downtown Redevelopment Area in the City of Florence, encourage development in existing urban areas. Subdivision ordinances can require transportation and public service infrastructure not currently present in affected areas.

Public and Private Funding

As private developers leverage funds to construct new residential and non-residential buildings in the area, public funds are also used to extend community services to these new developments. Public-private funding interactions guide growth indirectly by linking existing and future communities. Public institutions or privately funded institutions that serve the public good can also leverage a substantial amount of public and private dollars. Hospitals and universities dictate growth patterns and trends through placement of facilities that draw development — new performing arts centers, medical facilities, and maintenance of outdoor spaces all contribute to making certain locations more desirable for residents and smaller businesses looking to locate within an area.



A combination of policies, transportation infrastructure, and investment can work cohesively to guide growth to the most suitable areas, or, if considered separately, can unevenly distribute growth across large areas of land.

What makes a Place a Place?

Historical trends and the variables that influence development combine to create regions that exhibit different characteristics. These different characteristics can be summarized by a variety of different conceptual development scenarios. These scenarios are unique based on the presence of different growth sectors, including rural areas, suburban neighborhoods, suburban centers, urban centers, and special districts. To describe the look and feel of these sectors in a local context, place types were developed. Place Types describe the specific qualities that resonate with residents and business owners. Such qualities include street patterns, densities, neighborhood connections, and size, scale, and orientation of buildings. These qualities differ across a landscape—helping planners and residents define and distinguish a rural area from an urban area. The purpose of place types is to provide a measurable framework for interpreting the intuitive differences that people feel as they move through a community from urban to more rural areas.



FLATS LRTP Place Types

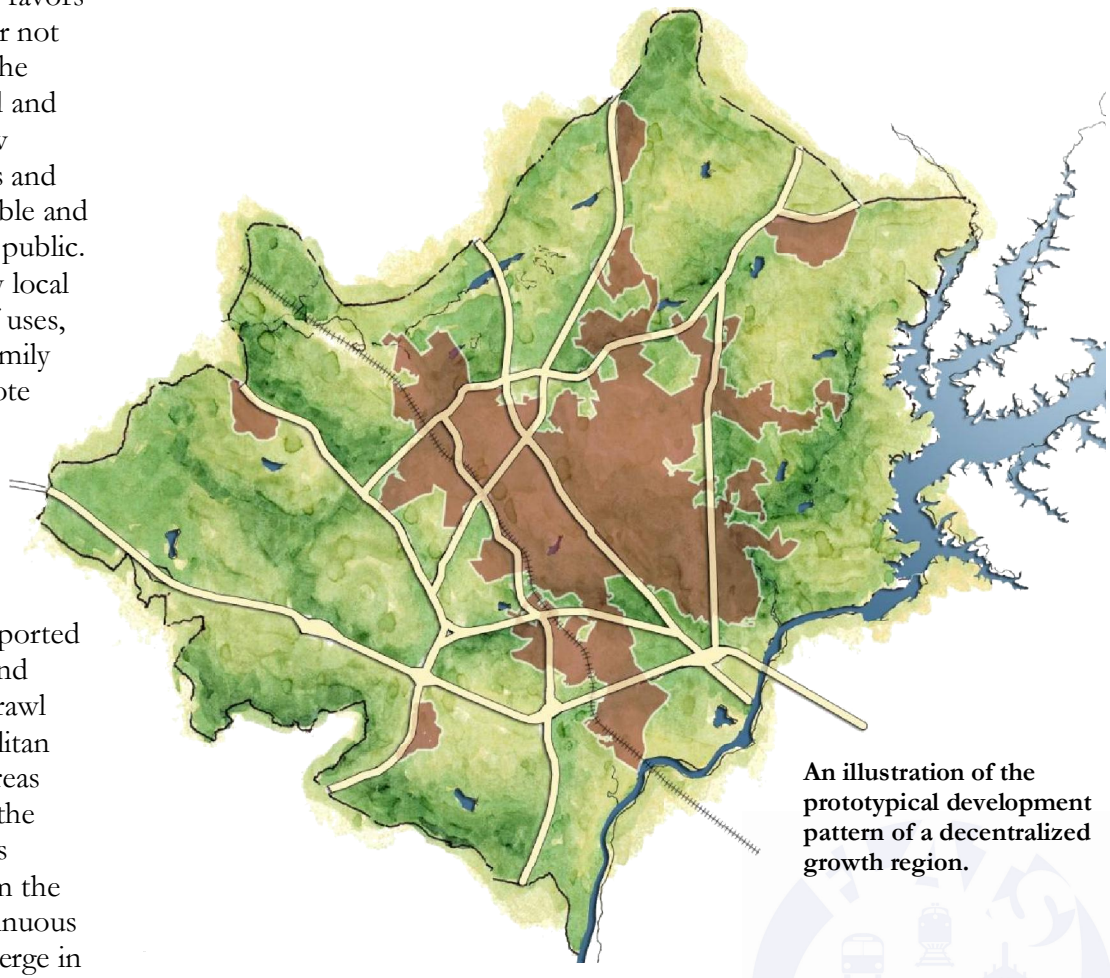
These different characteristics are summarized by a variety of different conceptual development scenarios. Those used as a reference in preparing this chapter are described in the following pages. They include decentralized growth, centers and corridors, and compact development.

Decentralized Growth

Decentralized growth (a.k.a. suburban development or sprawl) favors single use, low-density development that is generally isolated or not well-connected. The development pattern became popular in the United States following the end of World War II, when federal and local policies were enacted to promote the construction of new single-family, large-lot neighborhoods outside of urban centers and funding for the national transportation system favored affordable and convenient automobile travel over mass transit for the general public. Continued emphasis on decentralized growth is exemplified by local zoning ordinances that still require low densities, separation of uses, and large parking areas; by consumers' preference for single-family homes on large lots, and by low development costs that promote rapid consumption of land outside urban areas.

Decentralized Growth Patterns

Scholars describe decentralized growth using three general categories: low-density, continuous sprawl, ribbon sprawl, and leapfrog development sprawl. Low-density, continuous sprawl occurs at the margins of existing metropolitan areas and is supported primarily by the piecemeal extension of basic public facilities and services such as water, sewer, electricity, and roads. Ribbon sprawl follows major transportation corridors outward from metropolitan areas. Land in proximity to the corridors is developed, while areas without direct access remain rural. Over time, rural areas near the corridor are converted to suburban development as land values increase and public facilities and services are extended out from the transportation corridor. Leapfrog sprawl describes the discontinuous pattern of suburbanization, whereby large "developments" emerge in green fields because of the extension of supporting infrastructure (e.g., a new freeway interchange). Over time, rural areas in between metropolitan areas and leapfrog sprawl are converted to suburban development similar to the development pattern of ribbon sprawl.



An illustration of the prototypical development pattern of a decentralized growth region.

Five Components of Decentralized Growth

Decentralized growth patterns include five basic components: suburban residential neighborhoods, suburban commercial centers, suburban employment centers, civic institutions, and a road network. Each of these uses is strictly segregated from the others.

Suburban residential neighborhoods generally are formed as subdivisions or communities, with a relatively uniform housing type and low density throughout. Homes are oriented interior to the site and are typically buffered from surrounding development by transitional uses or landscape areas. Suburban commercial centers serve the daily needs of surrounding suburban residential neighborhoods. They typically locate near high-volume roads and key intersections, and design themselves to be accessible primarily by automobile. Buildings are set back from the road behind large surface parking lots, with little or no connectivity between adjacent businesses. Suburban employment centers (i.e., office parks or industrial parks) provide basic jobs and keep a small percentage of people in the area during normal work hours, while most still commute daily to the central business district for employment opportunities. Suburban employment centers typically include a series of buildings surrounded by large, surface parking lots. Suburban institutions include the town hall, churches, schools, and parks, all of which are scattered throughout the community.

The road network connects suburban residential neighborhoods, commercial centers, employment centers, and institutions. The physical distance between complementary land uses in a decentralized growth area tends to promote automobile travel, particularly since safe, convenient facilities are not available for transit riders, bicyclists, or pedestrians. Periods of congestion are common on a suburban road network given the long commutes and reliance on the automobile.

Illustrative examples of different development types prevalent in a decentralized growth region.



Suburban Neighborhood



Suburban Interchange Development



Suburban Business Park

Effects of Decentralized Growth

In recent years, planners and community leaders across the country have observed increased public interest in reducing or reversing the trend of decentralized growth and its consequences. Their efforts are largely motivated by the impacts associated with low-density, sprawling development patterns: consumption of sensitive land for development, costly expansion of public infrastructure, and increasing traffic congestion. In cities and regions, the physical distance between complementary land uses (e.g., between home and work, home and school, or home and shopping) and a lack of overall street connectivity leads to unintended consequences — increased vehicle miles traveled and energy consumption, longer commute times, increased air pollution, heightened infrastructure and public service costs, and decreased resource lands.

Centers, Corridors, & Open Space

Growth directed into discrete centers, linked by one or more regional transportation corridors, encourages compact development, economic vitality, and environmental stewardship. Land surrounding compact centers remains green and generally reserved for rural preservation, agriculture activities, and open space. The development pattern is popular in urbanizing cities and counties hoping to implement the principles and technologies of smart growth, new urbanism, or transit-oriented development. Managing the location and magnitude of development centers in a region helps target infrastructure needs and control implementation costs, as well as shift impacts away from environmentally-sensitive areas.

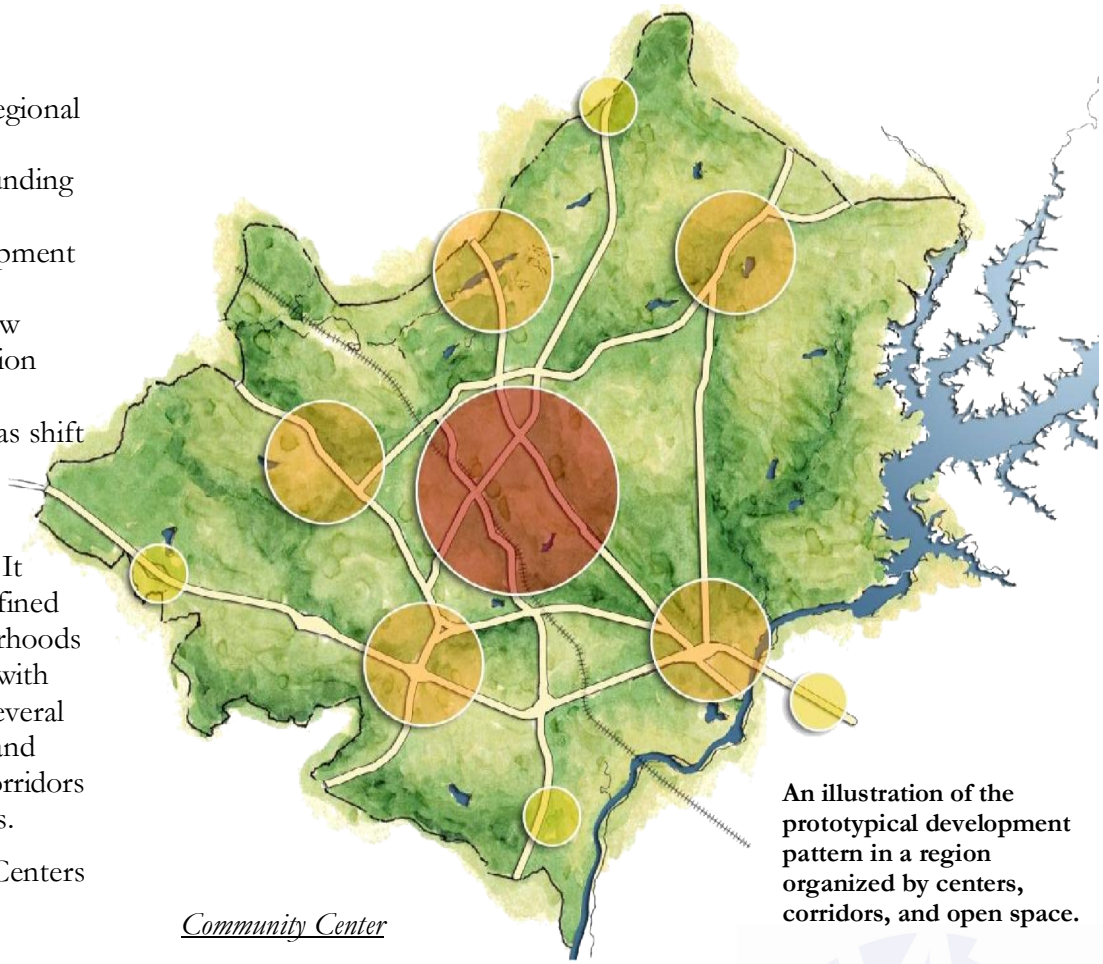
Compact Development Centers

Compact development helps create more livable communities. It typically concentrates dense, mixed-use development near a defined center with progressively lower densities spreading into neighborhoods surrounding it. Uses and buildings are located on small blocks with streets designed to encourage bicycle and pedestrian activity. Several housing types are provided in the center to meet future needs and preferences. Centers are connected by regional transportation corridors that encourage longer distance travel by automobile, rail, or bus.

Compact development centers will vary by type and intensity. Centers may include, but are not limited to, the following:

Rural Hamlet

A rural hamlet represents the small node of commercial activity near the intersection of two rural highways. Small-scale businesses, such as gas stations, convenience stores, or restaurants, serve some daily needs of the surrounding rural population. Employment and other commercial needs for rural residents are provided for in community, town, or metropolitan centers.



An illustration of the prototypical development pattern in a region organized by centers, corridors, and open space.

Community Center

A community center offers residents the ability to live, shop, work, and play in one community. They include a mixture of housing types and residential densities integrated with goods and services residents need on a daily basis. Larger community centers become known as town centers (see below). The design and scale of the development encourages active living, with a comprehensive and interconnected network of walkable streets.

Town Center

A town center is the locally-serving area of economic, entertainment, and community activity. Buildings in the core of the town center typically stand two or more stories with residential units above storefronts. They are typically surrounding by mixed-use neighborhoods that encourage active living, with a comprehensive and interconnected network of walkable streets.

Metropolitan Center

A metropolitan center is the focal point of the region. It is the hub of employment, shopping, entertainment, civic, and cultural activities, with a mix of housing types and common open space for active living. As a magnet to other surrounding centers, the metropolitan center becomes the iconic symbol of the region, starting with historic buildings and a traditional grid street network. The compact, walkable environment and mix of residential and non-residential uses in a metropolitan center support multiple modes of transportation.

Regional Transportation Corridors

Compact development centers are served by one or more regional transportation corridors. Corridors provide dedicated right-of-way and limited access to adjoining properties for safe and efficient travel. Corridors may support an interstate, heavy rail, light rail, or regional bus. Spacing between development centers would vary depending on the transportation technology.



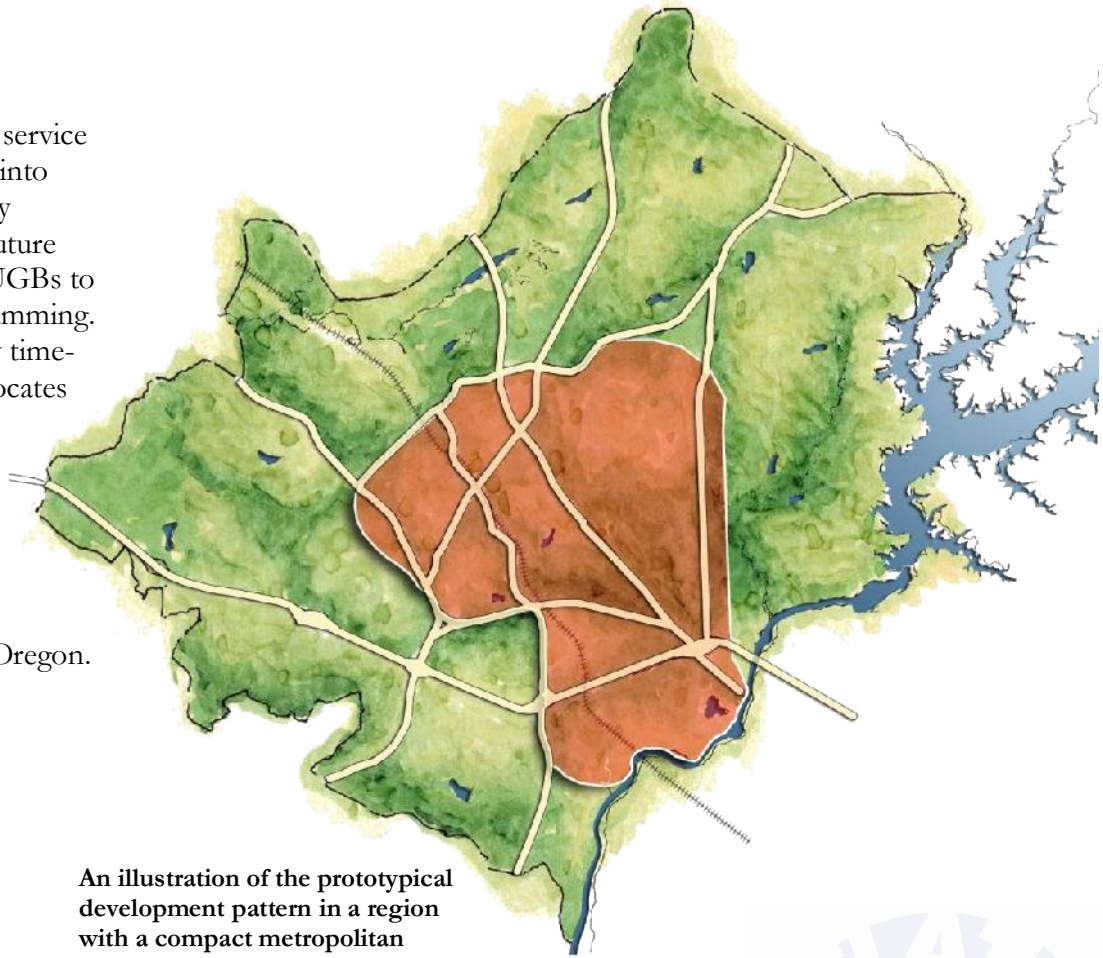
An illustration of the prototypical development pattern assumed for a compact town center within a centers & corridors development scenario, corridors, and open space.

Compact Center Development Pattern

Urban Growth Boundary

An urban growth boundary (a.k.a. urban service area or utility service district) is a policy initiative to limit outward urban expansion into surrounding farms and natural areas. The boundary completely surrounds the built environment plus an area designated for future growth within the planning horizon. Local governments use UGBs to guide local land use decisions and capital improvement programming. The boundaries for a UGB change over time, often refined by time-driven policy reviews, major events, or market concerns. Advocates credit UGBs with promoting reinvestment in downtown, providing housing for a variety of types and preferences, limiting unnecessary suburban sprawl, and fiscal responsibility. Affordable housing is a primary concern for many residents living in an urban growth boundary.

Urban growth boundaries, or their equivalent, are currently authorized in Washington, Maine, Maryland, Tennessee, and Oregon. Portland, Oregon is the most famous example of a compact metropolitan center.



An illustration of the prototypical development pattern in a region with a compact metropolitan center, corridors, and open space.

A compact metropolitan center represents uniform, outward growth from the city's historic core. Early expansion of the metropolitan center was slow and steady; tied to new transportation technologies such as the railroad, streetcar, and automobile. Historic edges to the center were formed by lakes, rivers, oceans, and mountains. Widespread suburbanization of the United States in the 1950s threatened the incremental growth behind compact metropolitan centers. Advocates for the development pattern responded with new policies and ordinances that control the timing and location of new development in a region. These tools are commonly referred to as urban growth boundaries, urban service areas, or utility service districts.

Components of a Compact Center

Compact metropolitan centers manage growth by promoting planned, compact, and orderly development patterns. These patterns are efficiently served by public facilities and services — water, sewer, roads, schools, fire, and police — while preserving agriculture activities and open space outside of a defined development boundary. Development patterns and intensities may vary in a single, large metropolitan center because of economic, social, or physical conditions unique to the area. However, the centers promote overall six basic principles: increased densities and intensities, healthy mix of complementary residential and non-residential uses, variety of housing types, preference for in-fill development and redevelopment over urban expansion, a comprehensive network of green infrastructure, and a multi-modal transportation system.



An illustration of the prototypical development pattern assumed for a metropolitan center, corridors, and open space.

Community Assessment

Development Trends in the FLATS MPO Area

Development in the FLATS area has been guided by the presence of environmental features and historical settlement patterns. A description of these features, existing, and future growth patterns is provided below.

Environmental Features

The FLATS area is characterized by an abundance of environmental features and natural resources. Fertile, agricultural soils, surface water streams, wetlands, and swamps are present throughout the study area. These resources serve biological and social functions, ensuring continued agricultural production, recreational opportunities, abundance of scenic view-sheds, and the provision of wildlife habitat.

A large proportion of the soils in the study area are designated as prime agricultural land by the US Department of Agriculture, and the Florence County Comprehensive Plan promotes conservation of farming and protection of these soils. Non-agricultural rural land also surrounds the urban areas of Quinby and Florence.



In addition to these rural and agricultural areas, the FLATS area contains a variety of environmentally significant features. Most numerous and important are the small streams that flow through the area. The stream floodways have been protected through greenways and riparian buffers. Approximately 22% of the total land in the study area is located within the 100 year flood plain. Some of these streams register high coliform counts and are considered "impaired." As such, future protection remains critical in reducing water pollution in the study area. The extensive greenway system runs throughout the study area and includes a variety of trails. Florence County also has adopted a storm water management plan that addresses EPA and SC Department of Health and Environmental Control (SCDHEC) requirements for protecting streams from water run-off.

The FLATS study area falls in the westernmost edge of the Carolina Bays phenomenon unique to South Carolina. Wetlands and swamps are located near the many waterways of Florence and are common throughout the study area. Protection of these resources is less prevalent then stream protection. These wetlands were last inventoried in 1993.

The location of areas that remain protected to preserve environmental integrity and public health also help guide the location and direction of growth. While wetlands, floodplains, and riparian corridors are protected from growth, access to these natural resources for recreation also draws growth nearer to these resources.

Existing Development Patterns

Historically, the FLATS MPO planning area was composed of agrarian and rural development. Employment opportunities in healthcare, manufacturing, and commercial operations have led to increased urban and suburban development. Development in the City of Florence is more urban in nature than surrounding areas. A dense grid network of streets forms the urban core, and is surrounded by single family and multi-family urban neighborhoods with houses on lots of less than ¼ acre. Suburban development has followed the major transportation thoroughfares, with strip commercial, suburban office, and low density residential lining SC76, SC52, I-20, and I-95. The remainder of the study area largely is composed of working agricultural operations and rural residences on lots of two acres or more. The unique combination of urban areas, suburban development along major transportation corridors, and abundant agriculture provides both exciting and challenging future development opportunities for the FLATS area.



Future Development

Florence occupies an ideal location in South Carolina and the region. The presence of active railroads, I-95, and I-20 has made it a critical shipping hub. Manufacturing centers have clustered around the city to take advantage of this efficiency, as have hospitals, medical research institutions, and universities. Continued development and investment in these operations have helped attract additional residents to the area. Florence County is expected to grow 3% every five years by 2030, while the MPO planning area is expected to add approximately 9,000 new households between now and 2035. Employment is expected to remain stable over the planning horizon. When completing the scenario planning exercise for the FLATS region, residential growth beyond 2035 was considered.

Chapter Overview

The Land Use Element of the *2035 LRTP* evaluates the relationship between land use, urban design, and transportation using the principles of urban form. This evaluation is completed at two scales. First, at a macro scale, the project team evaluated multiple community scenarios based on various development patterns and intensities using CommunityViz. The result is a series of measures of effectiveness that document the benefits of reorganizing urban form throughout the study area into more compact, nodal development patterns. Second, at a micro scale, two representative focus areas generalize land use categories and illustrate how this reorganization can occur at the site master planning level.

The incorporation of a land use discussion in the long range transportation plan is timely, not only due to the recent SAFETEA-LU guidance but also because of continued economic growth of the greater Florence area.

Scenario Planning Process

Scenario planning represents the next generation of analytical processes created to evaluate the influence of various development patterns and intensities on the efficiency of a proposed transportation system. Visualization of the interaction between land use, urban design, and transportation decision-making provides community leaders with the information they need to evaluate the consequences of potential actions. Building on this momentum, FHWA and other federal agencies actively promote the use of scenario planning models by state DOTs, MPOs, and local governments to better integrate land use, urban design, and transportation decisions.

Scenario planning considers multiple futures for a community based on various development patterns and intensities. Through consensus and evaluation, these futures come together into a vision and set of strategies used to direct policy. Typically, scenario planning represents a multi-step process: (1) Inventory existing conditions, (2) Develop trend analysis, (3) Explore alternative development scenarios, (4) Assess impacts and trade-offs, and (5) Prioritize options and make recommendations. Scenario planning in FLATS followed this general framework.

Place Type Palette

One way to describe a community's growth and development patterns is to apply place types. Place types give the community a common language when describing growth patterns and visions and opportunities for the future. Community character embodies the different land use types and development patterns envisioned for a community. The term "place types" represents the look or feel of a place, that which sets it apart from other areas. Place types have their own unique setting, development pattern, and visual qualities.

A place type palette was developed to identify and describe different development patterns, types, and intensities prevalent in the FLATS region. Generalized development characteristics used to describe the different place types include: generalized land use pattern (e.g., mixed or stand-alone), residential density, non-residential intensity, prevailing building height, open space elements, block size, or street pattern. Equal emphasis on land use and urban form in the place type descriptions guides decisions about growth and development, land preservation, resource protection, and the provision of community facilities and services during the scenario planning process.

The selected place types are not synonymous with land use categories or zoning districts used by cities and counties nor should they be thought to replace the rules and requirements set forth in currently adopted city or county ordinances. The following place types were identified for the study area:

- Open Space
- Working Farm
- Rural Living
- Estate Density Residential
- Mobile Home Community
- Small Lot, Suburban Neighborhood
- Multifamily Suburban Neighborhood
- Suburban Commercial Center
- Employment Center
- Education Center
- Mixed-Use Urban District
- Transit-Oriented Development
- Metropolitan Center
- University
- Regional Airport

The place type sheets found on pages 9-13 through 9-22 describe in detail the 20 character areas developed for the scenario planning study.

Open Space

Character and Intent

Open space is characterized by areas of significant natural or cultural value. These areas are generally undisturbed and have been protected from development by local, state, and federal agencies or by public, private, and nonprofit organizations. In the study area, these areas include water bodies, permanent conservation areas, riparian buffers along perennial and intermittent streams, large floodplain areas, parkland, golf courses, cemeteries, and dedicated open space inside residential subdivisions.

Land Use Considerations

Primary Land Uses

parks, greenways, natural areas, and wildlife corridors

Secondary Land Uses

golf courses, cemeteries, and water dependent recreation activities

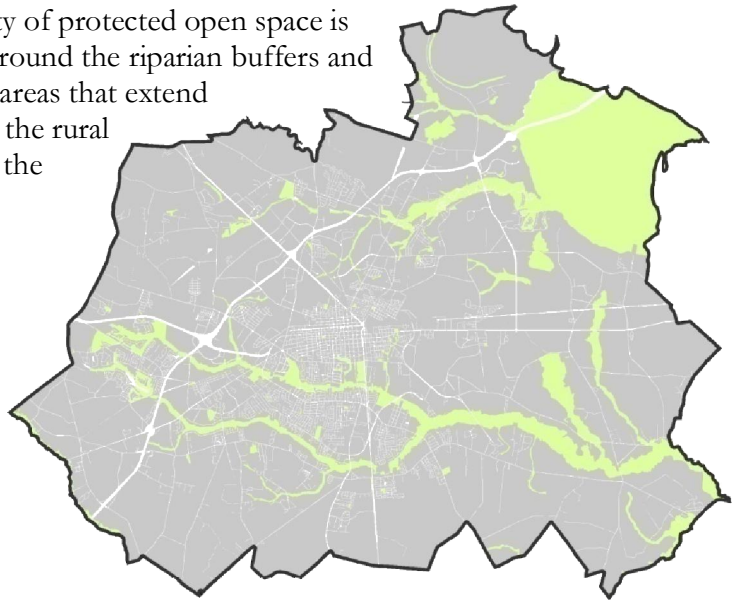
Precedent Photos





Context Map

The majority of protected open space is organized around the riparian buffers and flood plain areas that extend throughout the rural portions of the study area.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on a site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with preserved open space:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	N/A
Prevailing Building Height	N/A
Open Space Elements	Protected Natural Areas/ Greenways/Stream Corridors

Street Pattern	N/A
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Rural

Working Farm

Character and Intent

Working farms are actively being used for commercial agriculture or forestry activities, including cultivated farmland, timber harvest, livestock, or woodlands. These areas also support the primary residence of the property owner and any out-buildings associated with activities on the working farm.

Land Use Considerations

Primary Land Uses

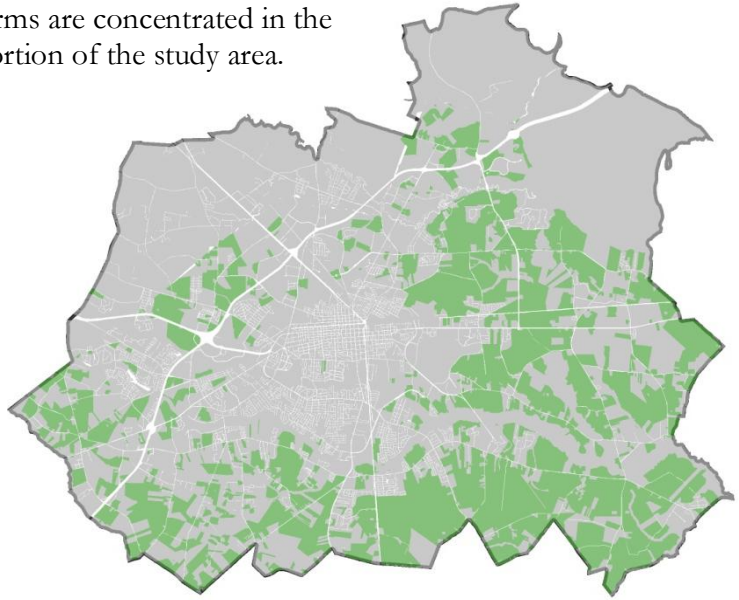
cultivated farmland, timber harvest, livestock, and woodlands

Secondary Land Uses

single-family detached home, warehouse/storage, and light industrial

Context Map

Working farms are concentrated in the southern portion of the study area.



Precedent Photos





Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on a site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with working farms:

General Development Pattern	Isolated Uses
Residential Density	0.10 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	1 to 3 stories
Open Space Elements	Protected Natural Areas/ Greenways/Stream Corridors

Street Pattern	N/A
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Rural

Rural Living

Character and Intent

Rural living areas are characterized by large lots, abundant open space, pastoral views, and a high degree of separation between buildings. Residential homes are located randomly throughout the countryside, integrated into the natural landscape. The lot size and separation between buildings decrease as you approach the edges of rural living areas. The buildings at the edges are oriented toward highways or major arterials, with direct access to the highway or major arterial via a small driveway. More dense development in the place type should only be allowed in conservation-based subdivisions (a.k.a. cluster development), which leaves large areas for permanent open space and uninterrupted views of the surrounding natural area.

Land Use Considerations

Primary Land Uses

single-family detached homes, single family attached homes (conservation-based subdivision only), mobile homes, and hobby farms

Secondary Land Uses

churches, parks, trails and open space

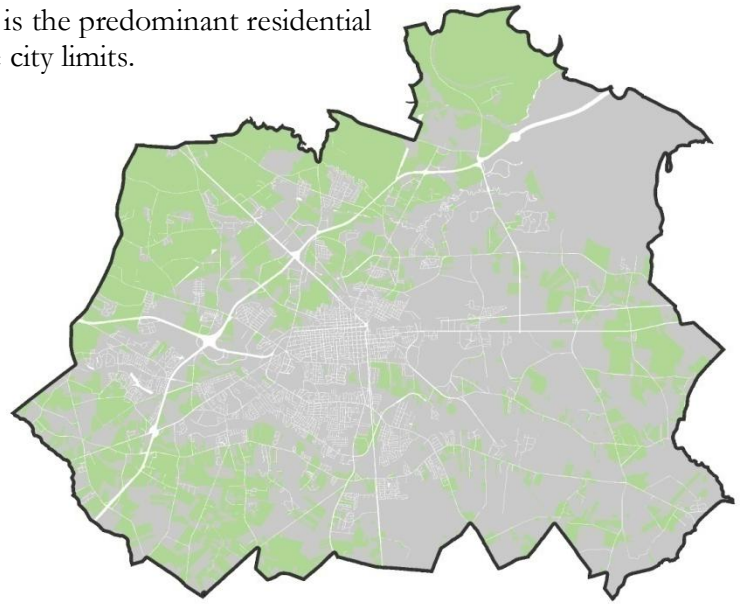
Precedent Photos





Context Map

Rural living is the predominant residential area outside city limits.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with rural living:

General Development Pattern	Isolated Uses
Residential Density	1 d.u./5 acres
Non-Residential Intensity	N/A
Prevailing Building Height	2 stories
Open Space Elements	Protected Natural Areas/ Greenways/Stream Corridors

Street Pattern	N/A
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Rural

Rural Cross Roads

Character and Intent

A rural cross roads represents the small node of commercial activity at the intersection of two rural highways. Small-scale businesses, such as gas stations, convenience stores, or restaurants, serve some daily needs of the surrounding rural population. Employment and other commercial needs for rural residents are provided for in Suburban Commercial and Employment Centers.

Land Use Considerations

Primary Land Uses

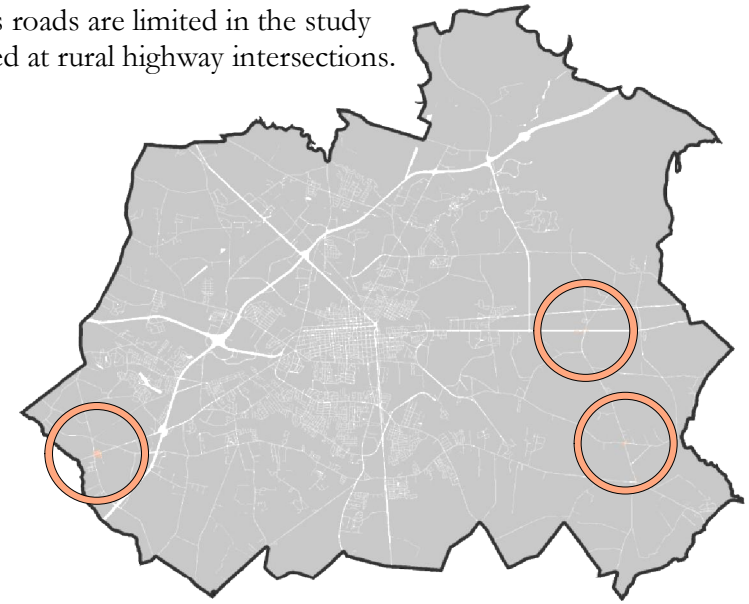
gas station, restaurant, convenience store, and hardware store

Secondary Land Uses

fire station, post office, and general government center

Context Map

Rural cross roads are limited in the study area, located at rural highway intersections.



Precedent Photos





Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a rural cross roads:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.15 to 0.25 FAR
Prevailing Building Height	1 to 2 stories
Open Space Elements	Protected Natural Areas/ Greenways/Stream Corridors

Street Pattern	N/A
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Rural

Estate Density Residential

Character and Intent

Estate density residential neighborhoods generally are formed as large lot, rural subdivisions on the fringes of rural living areas. Homes are oriented interior to the site and typically are buffered from surrounding development by transitional uses or landscaped areas. Many neighborhoods 'borrow' open space from adjacent rural or natural areas. Blocks typically are large and streets are typically rural in character. In some cases, an estate density residential neighborhood is served by only one long dead end street.

Land Use Considerations

Primary Land Uses

single-family detached homes

Secondary Land Uses

churches, parks, trails, and open space

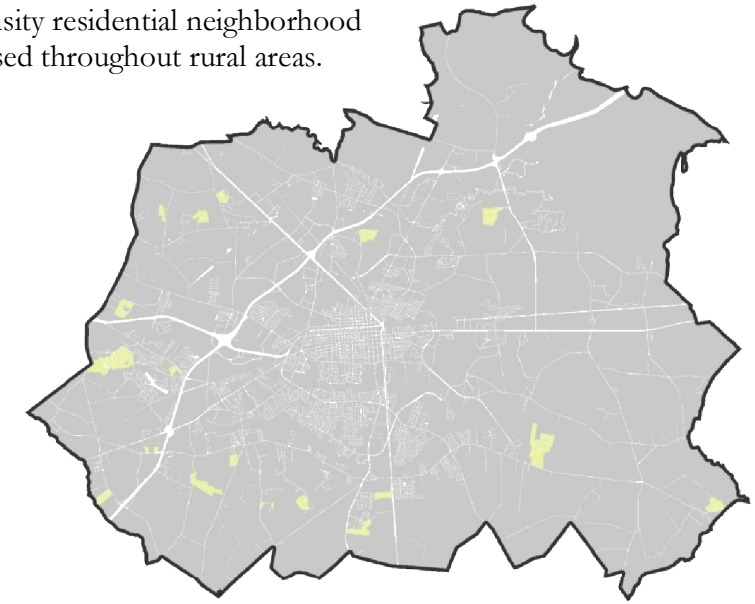
Precedent Photos





Context Map

Estate density residential neighborhood are dispersed throughout rural areas.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with estate residential areas:

General Development Pattern	Isolated Uses
Residential Density	0.2 to 1.0 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	2 stories
Open Space Elements	Protected Natural Areas/ Greenways/Stream Corridors

Street Pattern	Curvilinear
Typical Street Spacing	1,500 to 3,000 ft
Street Connectivity	Low
Typical Street Cross Section	Rural

Mobile Home Community

Character and Intent

Mobile home communities are characterized by single-wide and double-wide mobile homes on individual lots clustered in an area owned and managed by a single entity. These neighborhoods are found throughout the study area and provide one affordable housing option for residents.

Land Use Considerations

Primary Land Uses

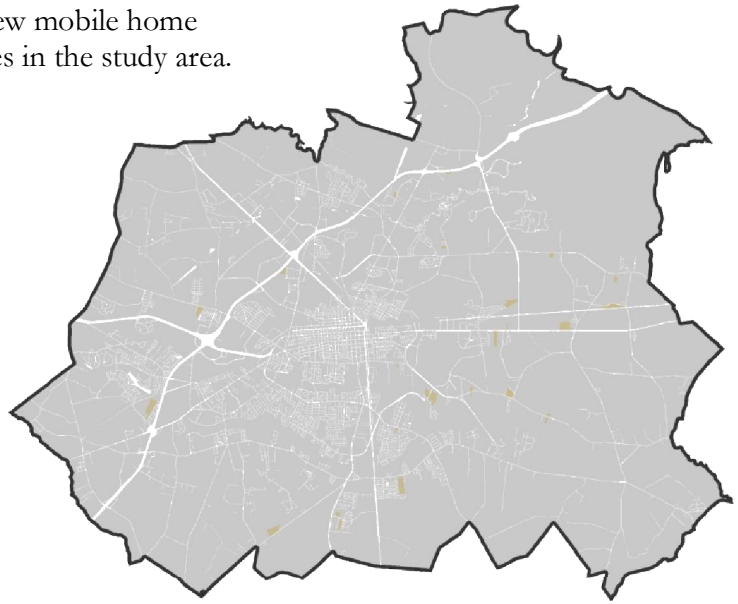
single wide mobile homes, double wide mobile homes

Secondary Land Uses

neighborhood center, pool, parks, trails and open space

Context Map

There are few mobile home communities in the study area.



Precedent Photos





Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a mobile home community:

General Development Pattern	Isolated Uses
Residential Density	8.0 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	1 story
Open Space Elements	Protected Natural Areas/ Greenways/Parks

Street Pattern	Curvilinear
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Rural

Small Lot Suburban Neighborhood

Character and Intent

Small lot, suburban neighborhoods are generally formed as subdivisions or communities, with a relatively uniform housing type and density throughout. They are found in proximity to Suburban Commercial and Employment Centers, and they provide rooftops necessary to support the commercial and office uses within the centers. Buildings are oriented interior to the site and are typically buffered from surrounding development by transitional uses or landscaped areas. Suburban neighborhoods are traditionally auto-dependent, characterized by low street connectivity and the presence of cul-de-sacs.

Land Use Considerations

Primary Land Uses

single-family detached homes, townhomes, and duplexes

Secondary Land Uses

churches, neighborhood serving amenities (pools/playgrounds), parks, trails, and open space

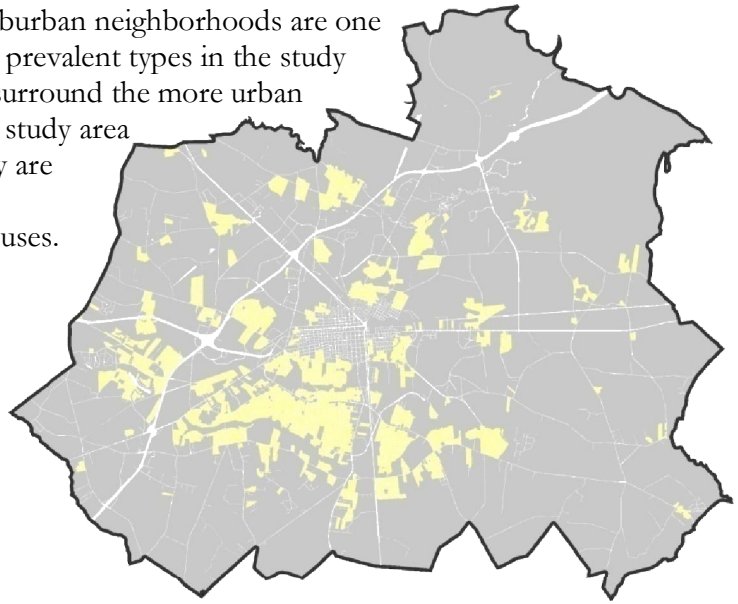
Precedent Photos





Context Map

Small lot suburban neighborhoods are one of the most prevalent types in the study area. They surround the more urban parts of the study area and typically are buffered by transitional uses.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following place-making qualities are associated with small lot suburban neighborhoods:

General Development Pattern	Isolated Uses
Residential Density	1.0 to 7.0 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	1 to 3 stoires
Open Space Elements	Neighborhood Parks/ Greenways/Stream Corridors

Street Pattern	Curvilinear
Typical Street Spacing	1,500 to 3,000 ft
Street Connectivity	Medium
Typical Street Cross Section	Urban

Multifamily Suburban Neighborhood

Character and Intent

Multifamily suburban neighborhoods are generally formed as complexes or communities, with a relatively uniform housing type and density throughout. They support the highest residential density in the suburban landscape, and may contain one of the following housing types: condominiums, townhomes, or apartments.

Multifamily suburban neighborhoods are found in close proximity to Suburban Commercial and Employment Centers, which provide rooftops necessary to support the commercial and office uses within the centers. Buildings are oriented interior to the site and are typically buffered from surrounding development by transitional uses or landscaped areas. Large parking lots and low street connectivity are common in multifamily suburban neighborhoods.

Land Use Considerations

Primary Land Uses

apartments, townhomes condominiums and senior housing

Secondary Land Uses

churches, neighborhood serving amenities (pools/playgrounds), parks, trails and open space

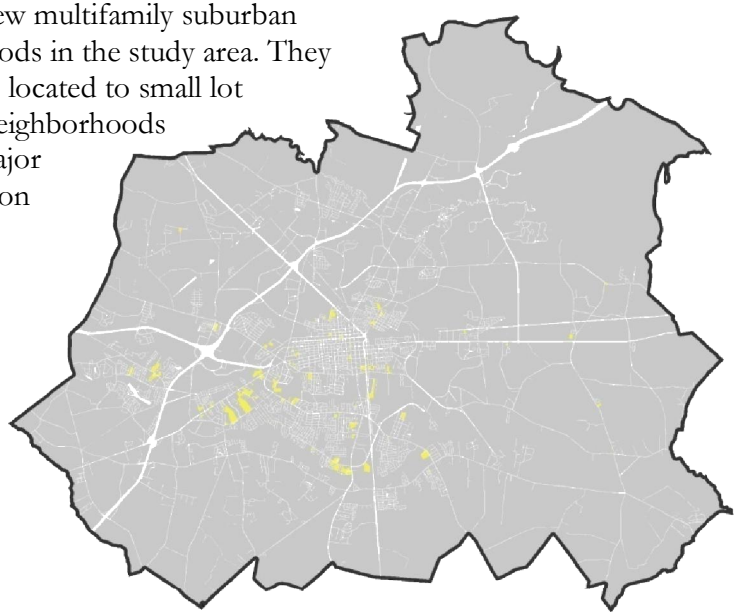
Precedent Photos





Context Map

There are few multifamily suburban neighborhoods in the study area. They typically are located to small lot suburban neighborhoods and near major transportation corridors.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following place-making qualities are associated with multifamily suburban neighborhoods:

General Development Pattern	Isolated Uses
Residential Density	8.0 to 10.0 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	2 to 4 stoires
Open Space Elements	Neighborhood Parks/ Greenways/Stream Corridors

Street Pattern	Modified Grid
Typical Street Spacing	1,500 to 3,000 ft
Street Connectivity	Medium
Typical Street Cross Section	Urban

Urban Neighborhood

Character and Intent

Urban neighborhoods support a mix of moderate- to high-density housing options. These neighborhoods are relatively compact, and may contain one or more of the following housing types: small lot, single family detached, townhomes, condominiums, or apartments. Buildings are generally oriented toward the street.

The design and scale of development in an urban neighborhood encourages active living, with a complete and comprehensive network of walkable streets. Cul-de-sacs are restricted to areas where topography, environment, or existing development makes other street connections prohibitive.

Land Use Considerations

Primary Land Uses

single-family detached homes, townhomes, duplexes, apartments, and condominiums

Secondary Land Uses

churches, parks, trails and open space

Precedent Photos





Context Map

Urban neighborhoods are limited to the immediate area surrounding the downtown core of Florence.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following place-making qualities are associated with urban neighborhoods:

General Development Pattern	Isolated Uses
Residential Density	3.0 to 5.0 d.u./acre 6.0 to 10.0 d.u./acre
Non-Residential Intensity	N/A
Prevailing Building Height	1 to 3 stories
Open Space Elements	Neighborhood Parks/ Greenways/Stream Corridors

Street Pattern	Grid
Typical Street Spacing	300 to 1,200 ft
Street Connectivity	High
Typical Street Cross Section	Urban

Mixed-Use Neighborhood

Character and Intent

A mixed-use neighborhood offers residents the ability to live, shop, work, and play in one community. They include a mixture of housing types and residential densities integrated with goods and services residents need on a daily basis (see Town Center description). The design and scale of the development encourages active living, with a comprehensive and interconnected network of walkable streets.

Land Use Considerations

Primary Land Uses

single-family detached homes, townhomes, apartments, senior housing, restaurant, neighborhood-serving commercial, and professional office

Secondary Land Uses

churches, general government services, parks, trails, open space, and public spaces

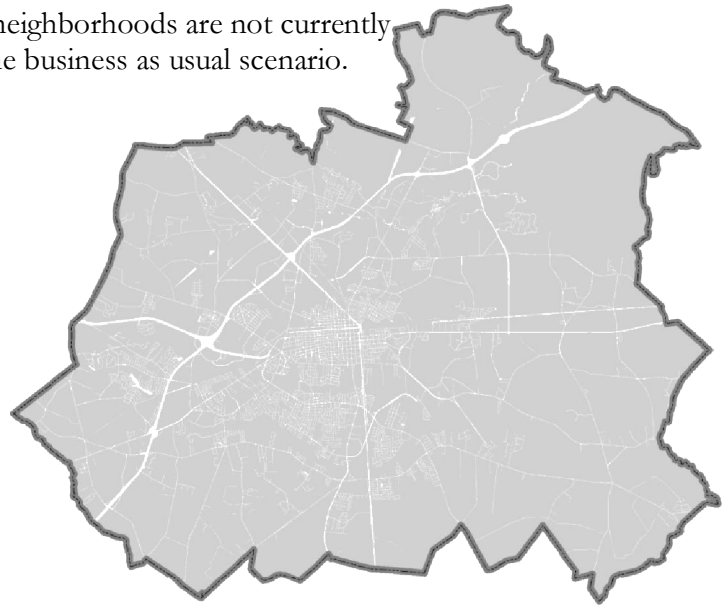
Precedent Photos





Context Map

Mixed-Use neighborhoods are not currently present in the business as usual scenario.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with mixed-use neighborhoods:

General Development Pattern	Mixed Uses
Residential Density	3.0 to 6.0 d.u./acre (SF) 8.0 to 15.0 d.u./acre (MF)
Non-Residential Intensity	0.35 to 2.00 FAR
Prevailing Building Height	2 to 4 stories
Open Space Elements	Community Parks/ Public Spaces/Stream Corridors

Street Pattern	Modified Grid
Typical Street Spacing	600 to 1,500 ft
Street Connectivity	High
Typical Street Cross Section	Urban

Suburban Commercial Center

Character and Intent

Suburban commercial centers serve the daily needs of surrounding suburban residential neighborhoods. They typically locate near high-volume roads and key intersections, and design themselves to be accessible primarily by automobile. Buildings are typically set back from the road behind large surface parking lots, with little or no connectivity between adjacent businesses. Common types of suburban centers in the study area include multi-tenant strip centers, big box stores, and large shopping malls.

Land Use Considerations

Primary Land Uses

general commercial services, restaurant, multi-tenant commercial, big box commercial, hotel, and professional office

Secondary Land Uses

churches, park, trails, and open space

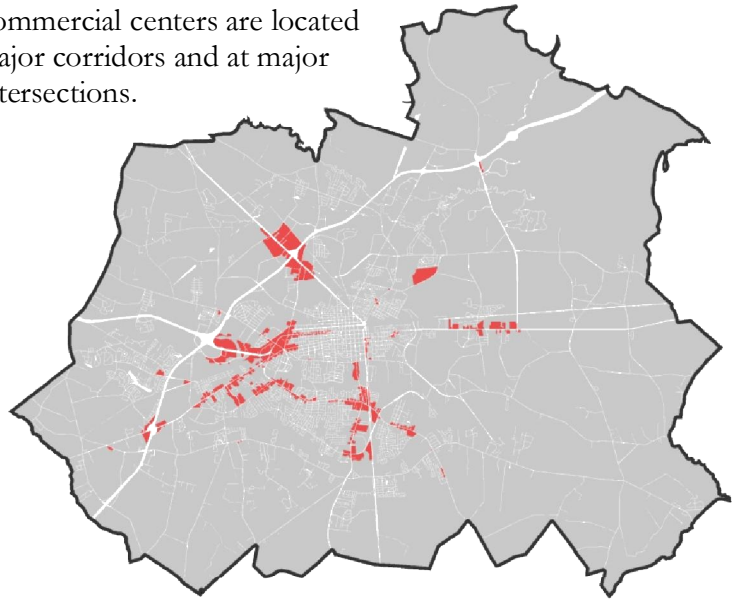
Precedent Photos





Context Map

Suburban commercial centers are located along the major corridors and at major suburban intersections.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with suburban commercial centers:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.20 to 0.50 FAR
Prevailing Building Height	1 to 2 stories
Open Space Elements	Stream Corridors

Street Pattern	N/A
Typical Street Spacing	1,200 to 1,500 ft
Street Connectivity	N/A
Typical Street Cross Section	Suburban

Employment Center

Character and Intent

Employment centers provide basic jobs and keep people in the study area during normal work hours. They include both large-scale isolated buildings with numerous employees and areas containing multiple businesses that support and serve one another. They are typically buffered from surrounding development by transitional uses or landscaped areas and are located in proximity to major highways or thoroughfares.

Land Use Considerations

Primary Land Uses

professional office, research and development, medical services, and flex space

Secondary Land Uses

commercial (primarily serving the employment center), churches, general government services, parks, trails, and open space

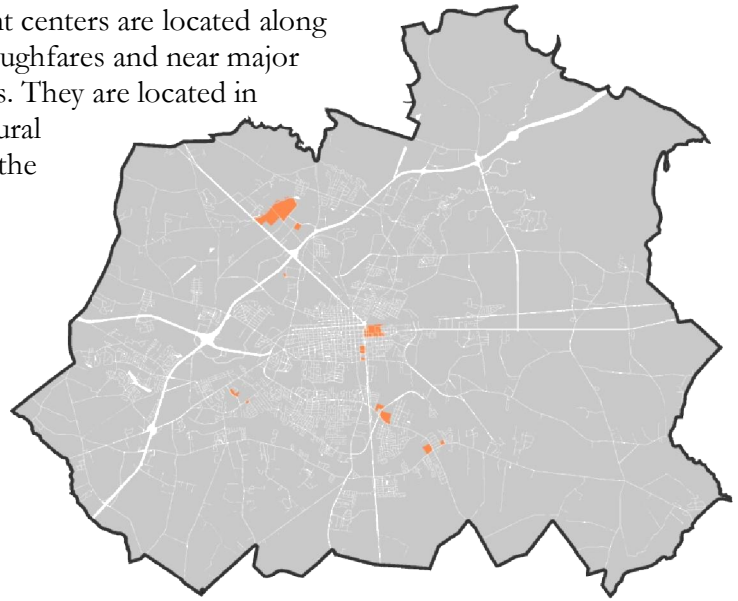
Precedent Photos





Context Map

Employment centers are located along major thoroughfares and near major intersections. They are located in urban and rural portions of the county.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with suburban employment centers:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.20 to 0.50 FAR
Prevailing Building Height	1 to 4 stories
Open Space Elements	Stream Corridors

Street Pattern	N/A
Typical Street Spacing	1,200 to 1,800 ft
Street Connectivity	Medium
Typical Street Cross Section	Suburban

Suburban Education Center

Character and Intent

A suburban education center includes academic buildings, administrative offices, athletic fields, and other supporting infrastructure typically associated with an elementary school, middle school, high school, vocational school, or community college. A center in the study area generally reflects a traditional suburban prototype: one- to two-story buildings oriented interior to the site, large parking lot(s), internal circulation pattern conducive to parent drop-off/pick-up, athletic fields reserved for school use only, and wide buffers from surrounding uses. Access to a campus typically is limited to driveways located near the front of the main building for security reasons.

Land Use Considerations

Primary Land Uses

elementary school, middle school, high school, vocational school, and community college

Secondary Land Uses

park and recreation facilities, cultural center, and community meeting rooms

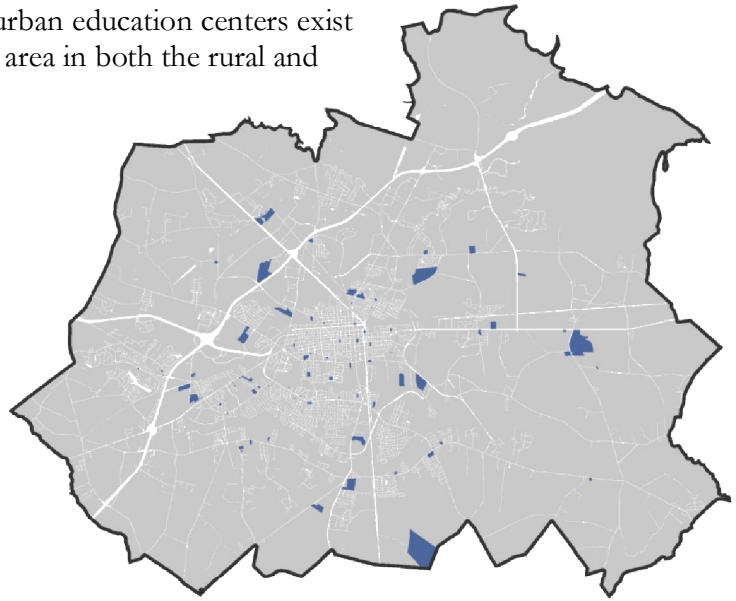
Precedent Photos





Context Map

Several suburban education centers exist in the study area in both the rural and urban areas.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with suburban education centers:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.20 to 0.35 FAR
Prevailing Building Height	1 to 2 stories
Open Space Elements	Stream Corridors/ Athletic Fields/Playground

Street Pattern	N/A
Typical Street Spacing	1,200 to 1,500 ft
Street Connectivity	N/A
Typical Street Cross Section	Suburban

Manufacturing Center

Character and Intent

Manufacturing centers provide basic jobs and keep people in the study area during normal work hours. They typically are located near major transportation corridors (i.e., highways or railways) and may include light or heavy industrial uses, transportation hubs, or technology centers. Clusters of uses that support or serve one another should be encouraged to be located in industrial parks.

Land Use Considerations

Primary Land Uses

manufacturing centers, transportation hubs, technology centers, light industrial uses, and heavy industrial uses

Secondary Land Uses

commercial (serving primarily the manufacturing center), parks, trails, open space, and fire stations

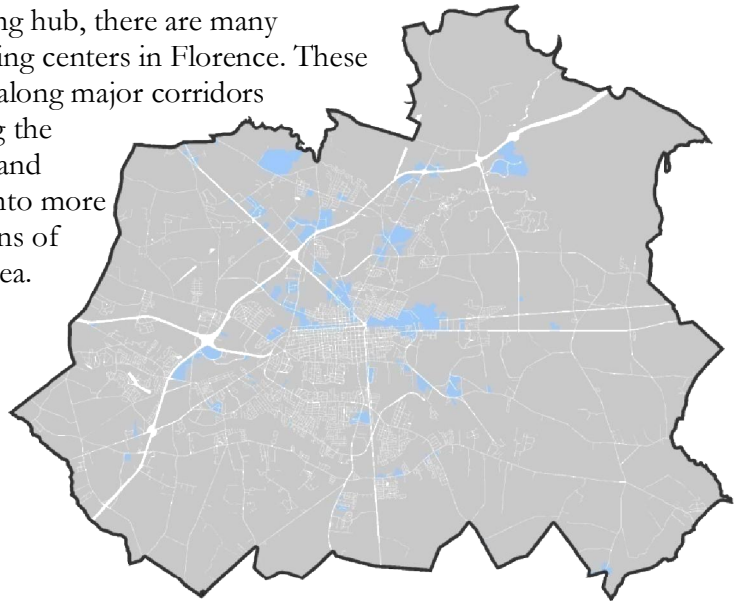
Precedent Photos





Context Map

As a shipping hub, there are many manufacturing centers in Florence. These are located along major corridors surrounding the downtown and extending into more rural portions of the study area.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the character area type. The following characteristics are associated with manufacturing centers:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.10 to 0.25 FAR
Prevailing Building Height	1 to 3 stories
Open Space Elements	Pocket Parks/ Stream Corridors

Street Pattern	Curvilinear
Typical Street Spacing	1,200 to 1,500 ft
Street Connectivity	Medium
Typical Street Cross Section	Suburban

Urban Mixed-Use District

Character and Intent

Urban mixed-use districts represent the first tier of expansion from the traditional Central Business District (CBD). They extend the short blocks, grid street pattern, and mix of uses originated in the downtown. Building height and intensity become progressively lower moving away from the CBD; however, buildings are still oriented toward the street. Compact, walkable streets support multiple modes of transportation.

Land Use Considerations

Primary Land Uses

condominiums, apartments, townhomes, restaurants, community-serving commercial, professional office, museums and libraries, and government buildings

Secondary Land Uses

churches, parks, and open space

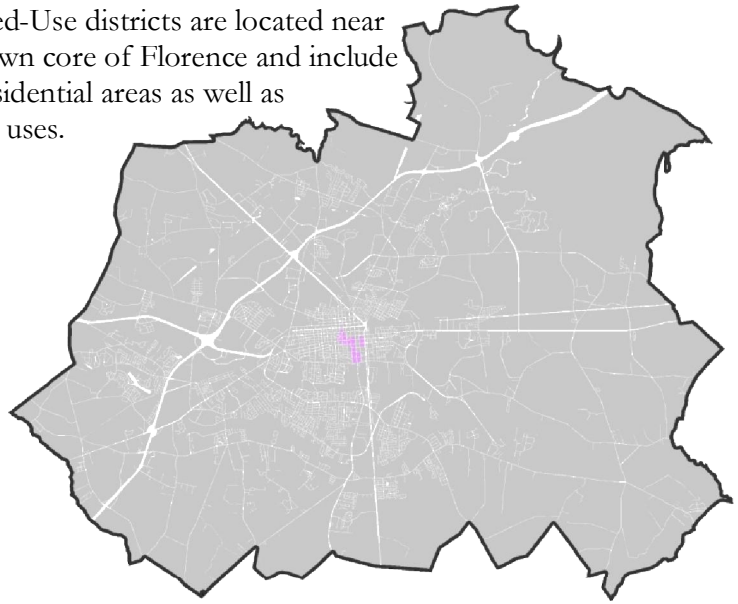
Precedent Photos





Context Map

Urban Mixed-Use districts are located near the downtown core of Florence and include small lot residential areas as well as commercial uses.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with an urban mixed-use district:

General Development Pattern	Mixed Uses
Residential Density	3.0 to 6.0 d.u./acre (SF) 8.0 to 12.0 d.u./acre (MF)
Non-Residential Intensity	0.35 to 1.00 FAR
Prevailing Building Height	1 to 4 stories
Open Space Elements	Community Parks/ Public Spaces/Stream Corridors

Street Pattern	Grid
Typical Street Spacing	600 to 1,500 ft
Street Connectivity	High
Typical Street Cross Section	Urban

Town Center

Character and Intent

Town centers are locally-serving areas of economic, entertainment, and community activity. Buildings in the core of the town center typically stand two or more stories with residential units above storefronts. They typically are surrounded by mixed-use neighborhoods that encourage active living, with a comprehensive and interconnected network of walkable streets.

Land Use Considerations

Primary Land Uses

townhomes, apartments, senior housing, restaurant, community-serving commercial, professional office, and live/work/shop units

Secondary Land Uses

public spaces and community buildings

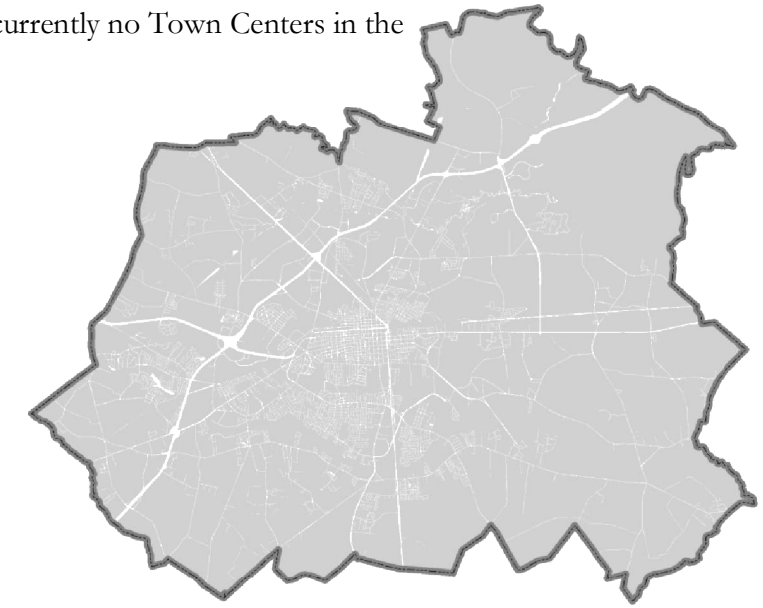
Precedent Photos





Context Map

There are currently no Town Centers in the study area.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a town center:

General Development Pattern	Mixed Uses
Residential Density	3.0 to 6.0 d.u./acre (SF) 8.0 to 15.0 d.u./acre (MF)
Non-Residential Intensity	0.35 to 2.00 FAR
Prevailing Building Height	2 to 4 stories
Open Space Elements	Community Parks/ Public Spaces/Stream Corridors

Street Pattern	Grid
Typical Street Spacing	300 to 1,200 ft
Street Connectivity	High
Typical Street Cross Section	Urban

Transit-Oriented Development

Character and Intent

Transit-oriented development (TOD) represents the concentration of mixed-use, dense development around a transit center. Uses and buildings are located on small blocks with streets designed to encourage bicycle and pedestrian activity. High density development is located primarily within ¼ mile of the transit station, with progressively lower densities spreading out into neighborhoods surrounding the center.

TOD is credited with relieving traffic congestion on the surrounding street network by shifting automobile trips to transit and by capturing some trips on-site between complementary land uses. National literature recommends a minimum residential density of 7.0 dwelling units per acre and a minimum non-residential intensity of 25.0 employees per acre to support TOD served by regional bus; and about twice these minimums for a location served by light or heavy rail.

Land Use Considerations

Primary Land Uses

condominiums, apartments, townhomes, restaurants, general commercial, professional office, live/work/shop units, and government buildings

Secondary Land Uses

churches, parks, and plazas

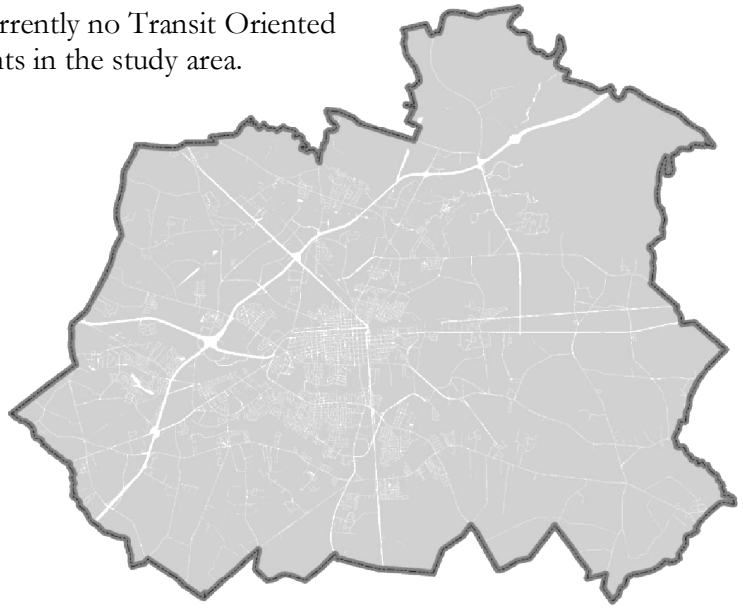
Precedent Photos





Context Map

There are currently no Transit Oriented Developments in the study area.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a transit-oriented development:

General Development Pattern	Mixed Uses
Residential Density	6.0 to 8.0 d.u./acre (SF) 8.0 to 25.0 d.u./acre (MF)
Non-Residential Intensity	0.35 to 3.00 FAR
Prevailing Building Height	2 to 6 stories
Open Space Elements	Community Parks/ Public Spaces/Stream Corridors

Street Pattern	Grid
Typical Street Spacing	300 to 1,200 ft
Street Connectivity	High
Typical Street Cross Section	Urban

Metropolitan Center

Character and Intent

A metropolitan center is the focal point of the region. It is the hub of employment, shopping, entertainment, civic, and cultural activities, with a mix of housing types and common open space for active living. As a magnet to surrounding towns and neighborhoods, the central business district becomes the iconic symbol of the region, starting with historic buildings and a traditional grid street network. The compact, walkable environment and mix of residential and non-residential uses in a metropolitan district support multiple modes of transportation.

Land Use Considerations

Primary Land Uses

condominiums, apartments, restaurants, community-serving commercial, professional office, live/work/shops units, museums and libraries, and government buildings

Secondary Land Uses

churches, parks, trails, and open space

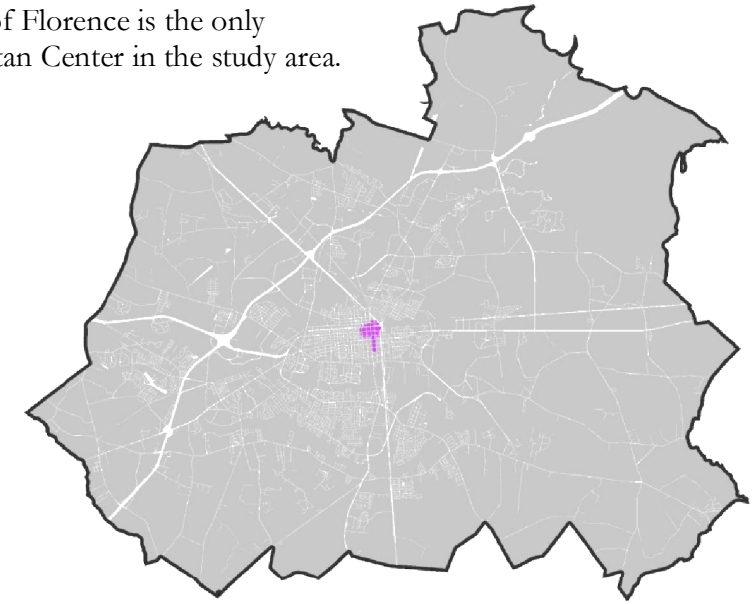
Precedent Photos





Context Map

The City of Florence is the only Metropolitan Center in the study area.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a metropolitan center:

General Development Pattern	Mixed Uses
Residential Density	6.0 to 6.0 d.u./acre (SF)
	8.0 to 25.0 d.u./acre (MF)
	1.0 FAR (MU)
Non-Residential Intensity	0.35 to 2.00 FAR
Prevailing Building Height	2 to 4 stories
Open Space Elements	Public Plazas/ Amphitheaters/Stream Corridors

Street Pattern	Traditional Grid
Typical Street Spacing	300 to 1,200 ft
Street Connectivity	High
Typical Street Cross Section	Urban

University

Character and Intent

Three major colleges and universities operate within the study area:

- Francis Marion University provides undergraduate and graduate studies for nearly 4,000 students. The 300-acre campus includes a core of academic buildings, surface parking around the perimeter of the campus, athletic fields, and a large area of preserved natural vegetation.
- Clemson University Cooperative Extension operates an office in the City of Florence. This office concentrates on agriculture issues, including row crops, livestock, and horticulture.
- Florence-Darlington Technical College provides 75 fields of study for full- and part-time students. The 100-acre main campus on Lucas Street includes eight buildings. A satellite campus, the Health Services Campus, is located in Downtown Florence.

Land Use Considerations

Primary Land Uses

academic buildings and related uses, residence halls, athletic fields

Secondary Land Uses

commercial and professional offices (serving university activities)

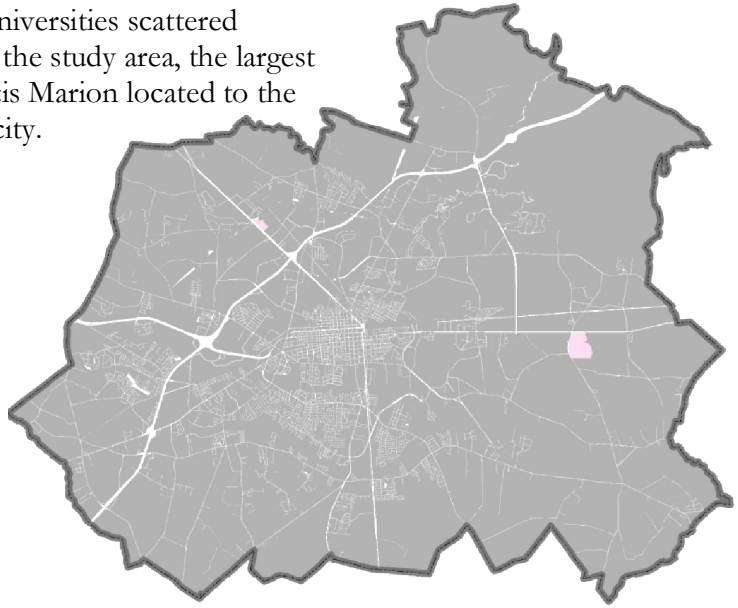
Precedent Photos





Context Map

There are universities scattered throughout the study area, the largest being Francis Marion located to the east of the city.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a university:

General Development Pattern	Mixed Uses
Residential Density	8.0 to 15.0 d.u./acre
Non-Residential Intensity	0.20 to 0.35 FAR
Prevailing Building Height	1 to 3 stories
Open Space Elements	Pocket Parks/Public Plazas/ Stream Corridors

Street Pattern	Modified Grid
Typical Street Spacing	600 to 1,500 ft
Street Connectivity	Medium
Typical Street Cross Section	Urban

Regional Airport

Character and Intent

The Florence Regional Airport is located in the study area. It includes a passenger terminal, two major runways (i.e., over 6,000 feet each), control tower, storage hangers, and car rental facility. Commercial passenger service is provided daily by Delta Airlines and US Airways. Fifty-two private airplanes are also based at the airport. In 2007, the FAA reported 86 airport operations at the airport each day.

Restrictions on use, placement, and height for some forms of development should be followed in designated runway protection zones extending from all runways at the airport.

Land Use Considerations

Primary Land Uses

airport activities, flight school, warehouse, and shipping

Secondary Land Uses

light and heavy industrial, professional office (highly dependent on air travel), and general commercial uses serving airport activities

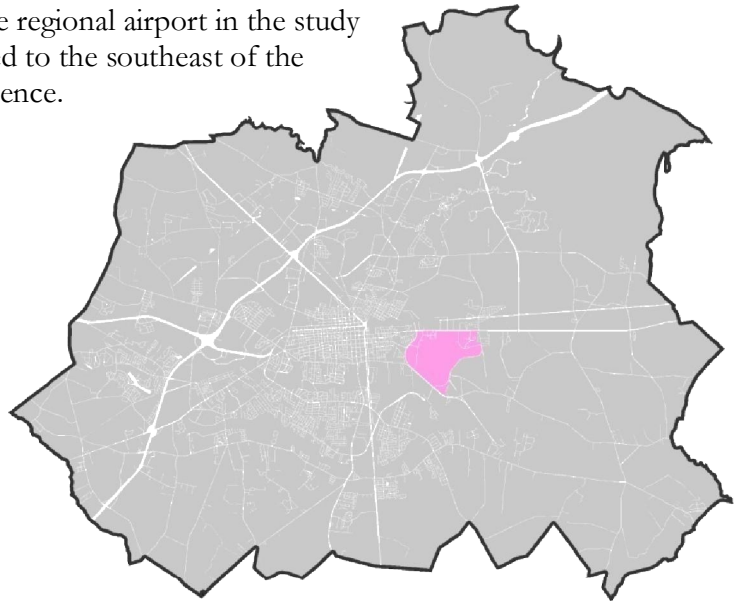
Precedent Photos





Context Map

There is one regional airport in the study area– located to the southeast of the City of Florence.



Form & Pattern

Form & pattern refers to the design and arrangement of buildings, streets, landscaping, and other elements on the site. Together, form and pattern reinforce the intent of the place type. The following characteristics are associated with a regional airport:

General Development Pattern	Isolated Uses
Residential Density	N/A
Non-Residential Intensity	0.10 to 0.20 FAR
Prevailing Building Height	1 to 3 stories
Open Space Elements	Buffer Areas/ Stream Corridors

Street Pattern	N/A
Typical Street Spacing	N/A
Street Connectivity	Low
Typical Street Cross Section	Suburban

FLATS Development Scenarios

Place types were assigned in the FLATS study area to represent future growth under four regional development scenarios (i.e., "compact development", "centers and corridors", "decentralized growth", and "business-as-usual") for the study area. By comparing the scenarios, the impact of the location and extent of the character areas on the efficiency of the transportation system can be measured. All four development scenarios represent the same study area, long-term planning horizon (2035), and control totals for population and employees maintained in the FLATS Regional Travel Demand Model.

A brief summary of the four development scenarios follows.

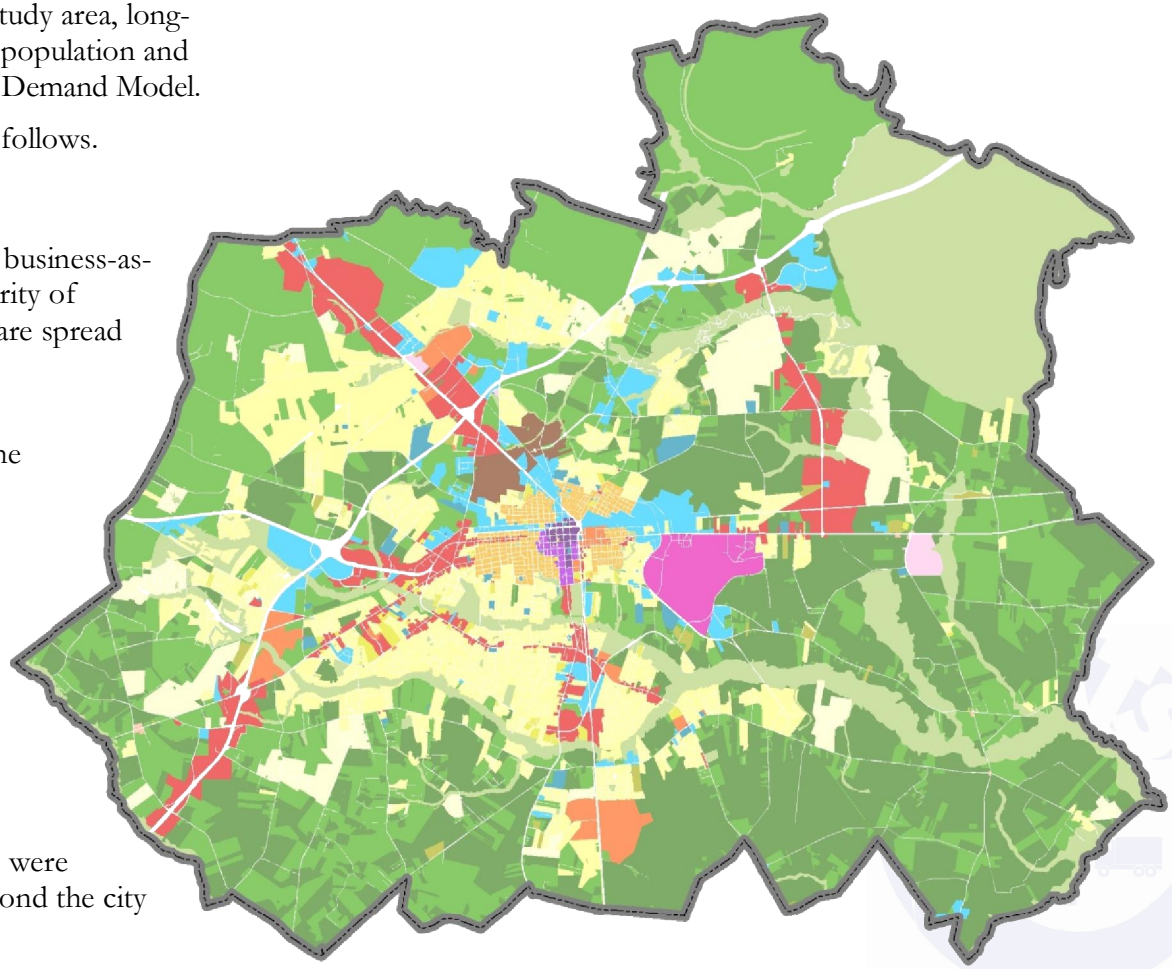
Decentralized Growth (Sprawl)

Decentralized growth is the most similar scenario to business-as-usual. Small lot suburban neighborhoods and a majority of suburban commercial centers at major intersections are spread throughout the study area. New development is not concentrated at nodes.

The following components were used to represent the decentralized growth scenario:

- Large-lot vacant parcels
- Cheap land
- Congested corridors
- Interstates interchanges
- Frontage on US highways
- Water and sewer infrastructure

Areas most suitable for development in this scenario were located along major roadways and extended well beyond the city limits of Florence and Quinby.



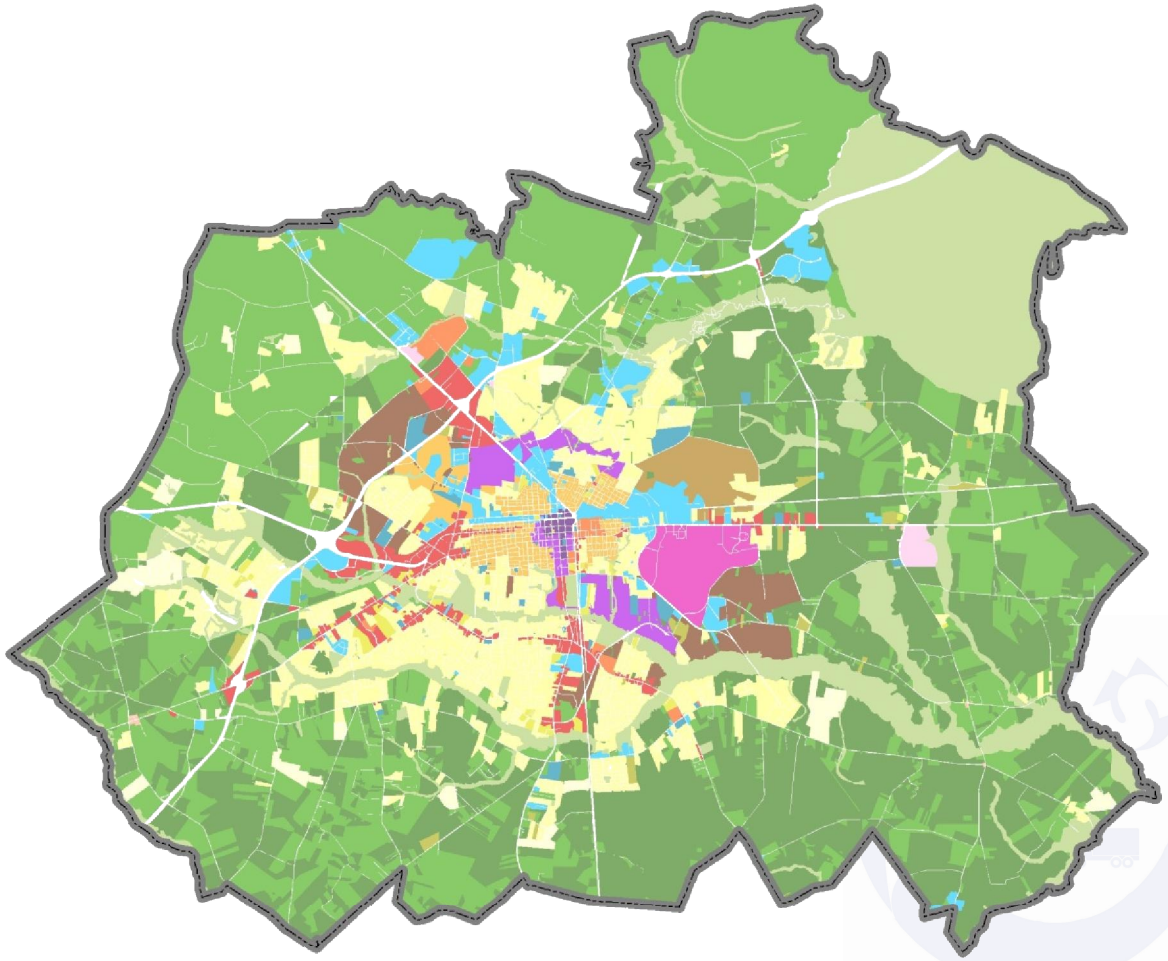
Compact Development (Concentric Circles)

Unlike the preceding scenario, the compact center scenario represents the biggest departure from business as usual. It focuses all new development within concentric circles surrounding the City of Florence. New development is mostly infill, high intensity, mixed use and attempts to maintain a hypothetical urban growth boundary in the study area.

The following components were used to determine the compact development scenario:

- Prime farmland
- Small vacant lots
- Redevelopment zone
- Water and sewer infrastructure
- Congestion levels
- Expensive land
- Access to transit stops
- Access to job clusters
- Access to retail clusters
- Location within city limits

The areas most suitable for development in this scenario were those tightly clustered around the downtown core of Florence.



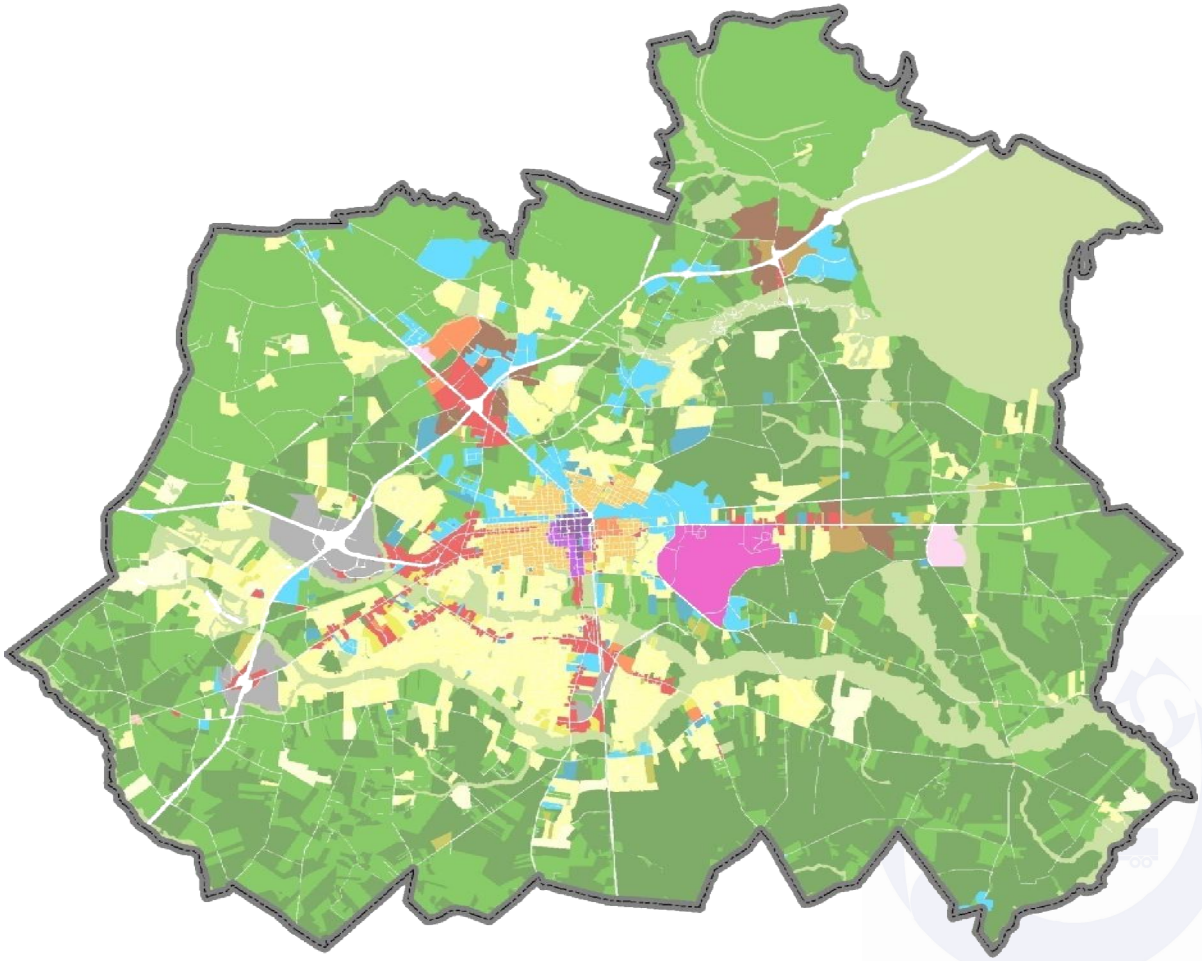
Centers and Corridors

Centers and corridors applies the conceptual development scenario to the study area by taking advantage of existing transit stops, major destination points, and major intersections. At these areas, mixed use, higher intensity development was clustered to draw new growth in from more rural and suburban locations. These nodes remain well connected to the urban core by existing transportation infrastructure.

The following components were used to determine the centers and corridors scenario:

- Prime farmland
- Small vacant lots
- Redevelopment potential
- Water and sewer infrastructure
- Congested corridors
- Expensive land
- Access to transit stops
- Access to job clusters
- Access to retail clusters
- Access to rail lines
- Access to pedestrian nodes

In this scenario, centers and corridors that linked suburban and rural development to the urban core were the most suitable for development.



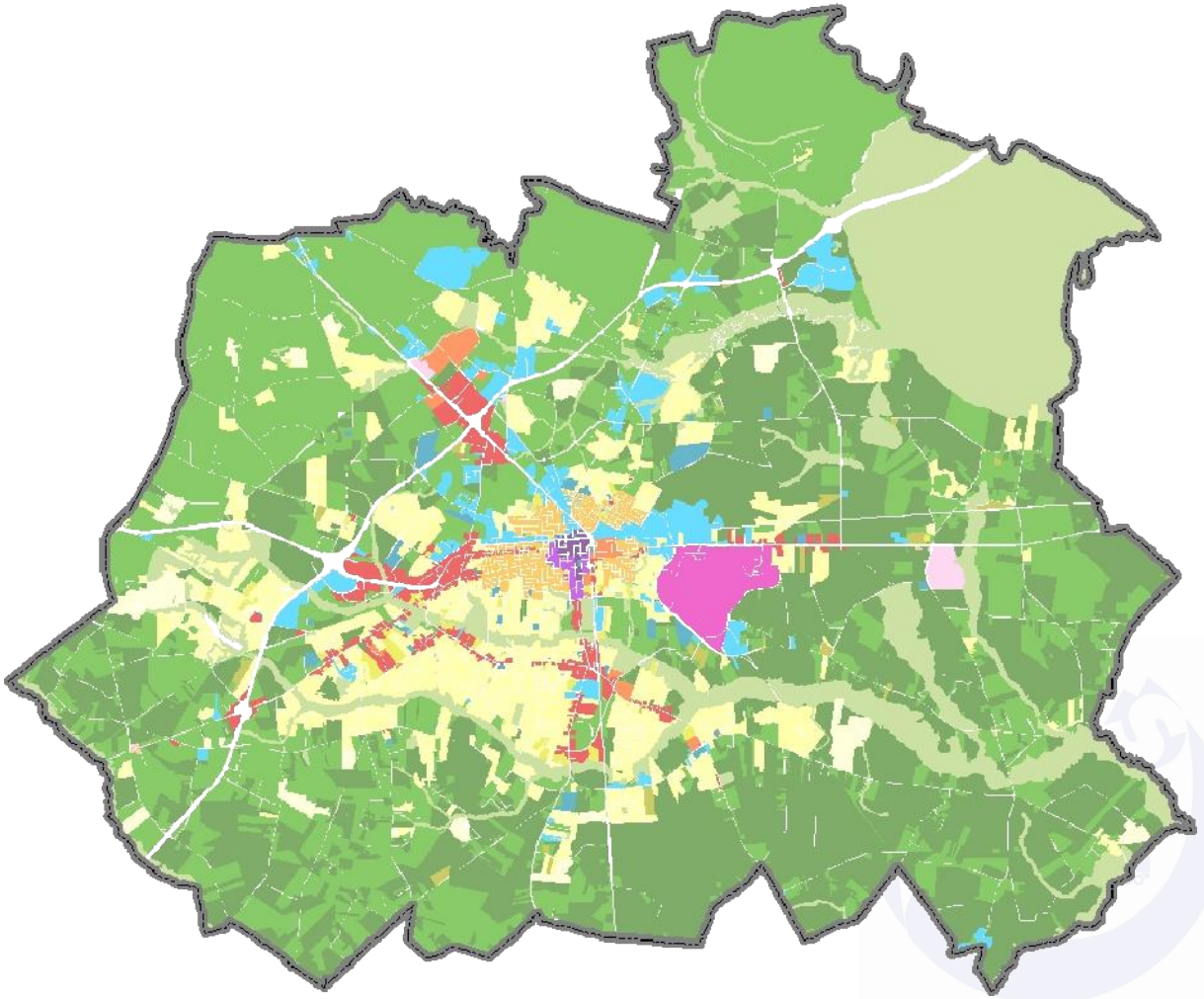
Business-as-Usual (Hybrid)

Business-as-usual represents existing development and planned programs and policies affecting land use. It is characterized by large amounts of small lot suburban neighborhoods with concentrated employment and commercial uses along major corridors. The downtown core of Florence remains intact.

The following components were used to determine the Business-as-Usual (hybrid) scenario:

- Prime farmland
- Large lot, vacant parcels
- Cheap land
- Congested corridors
- Access to interstates
- Frontage on US highways
- Water & sewer service
- Access to job clusters
- Access to retail clusters

Business-as-usual was set up to show current development trends. As such, the most suitable land is spread throughout the county and includes existing urban, rural, and suburban locations.



Development Scenario Trade-offs

Summary statistics for evaluating the impacts of four development scenarios were created using CommunityViz® software and the 2035 FLATS model. Measures of Effectiveness (MOEs) articulate the significance of reorganizing land use patterns and development densities/intensities to improve efficiency of the regional transportation system (i.e., business-as-usual scenario vs. compact development scenario). Viable travel alternatives and more compact, mixed-use development centers reduce travel distance between complementary land uses and reliance on the automobile for day-to-day activities. This leads to less vehicle miles traveled, less vehicle hours traveled, and higher average automobile travel speeds (system-wide) compared to the sprawling development pattern in the business-as-usual scenario. Further, vehicle miles traveled at times of highest demand on the transportation system were reduced in most scenarios (i.e., VMT at LOS E in **Table 9.1**), resulting in a more efficient transportation system. **Table 9.2** summarizes all the MOEs generated from the 2035 FLATS Model for the two development scenarios.

Table 9.1 – Land Use MOEs

MOE	Centers & Corridors	Compact Development	Decentralized Growth
Urban Footprint			

The size of the arrow corresponds with the relative magnitude of change between that scenario and the base (business-as-usual) scenario.

A compact development scenario also reduces the spatial footprint of the built environment on the surrounding landscape. Urban centers and surrounding walkable neighborhoods identified in the hypothetical compact development scenario would limit creeping low-density, sprawl development patterns and reduce accompanying public infrastructure costs.

Output data from CommunityViz® indicates that the urban footprint of growth could be reduced in the compact development scenario while accommodating the same magnitude of growth projections for 2035.

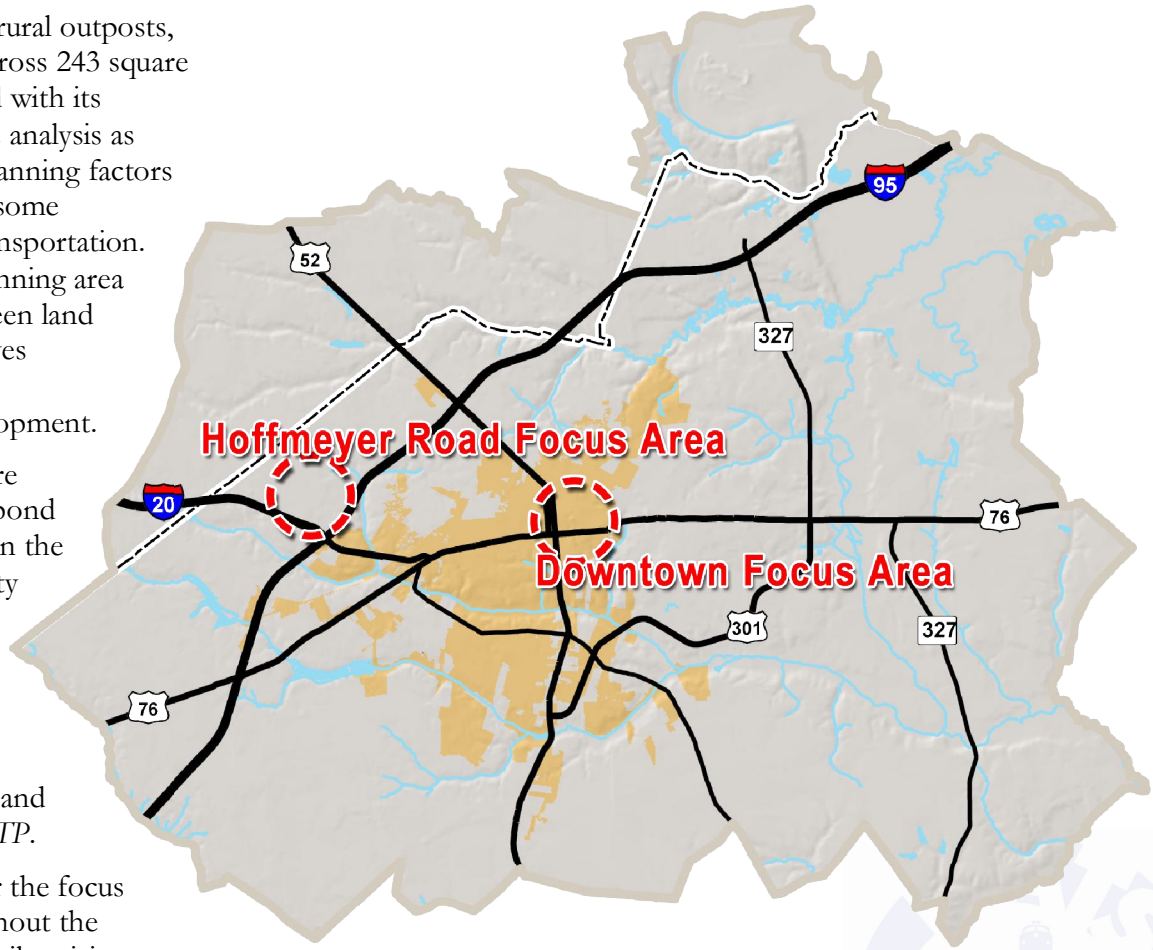
Table 9.2 – Transportation MOEs

MOE	Centers & Corridors	Compact Development	Decentralized Growth
Vehicle Miles Traveled (VMT)			
Vehicle Hours Traveled (VHT)			
VMT at Level of Service E			
VHT at Level of Service E			

The size of the arrow corresponds with the relative magnitude of change between that scenario and the base (business-as-usual) scenario.

Focus Area Studies

The FLATS MPO area is blessed with an urban core, rural outposts, active farmland, and unspoiled wetlands. Stretching across 243 square miles, the expanse of the FLATS MPO area combined with its diversity makes it difficult to conduct detailed land use analysis as part of the long range transportation plan. The new planning factors associated with the SAFETEA-LU legislation require some attention be paid to the interaction of land use and transportation. Selection of diverse, smaller focus areas within the planning area allows detailed analysis of the local relationships between land use, urban form, and travel behavior. Planning initiatives represented in two focus areas include Downtown Redevelopment and Traditional Neighborhood Development.



The City of Florence and Florence County currently are updating their comprehensive plans. The plans correspond with the findings of the planning initiatives described in the focus area studies. Planning staff from Florence County helped identify two focus areas to describe ways these emerging planning initiatives can be applied: Downtown Florence (Urban Redevelopment/ Residential Infill) and Hoffmeyer Road (Traditional Neighborhood Development). These locations were presented to the planning staff from Florence County and the City of Florence prior to inclusion in the *2035 LRTP*.

Recommendations and best development practices for the focus areas can — and should — be applied to areas throughout the region. New development and redevelopment with similar vision, development patterns, and supporting infrastructure can consider the results of this exercise when formulating plans that better integrate land use, urban form, and transportation decision-making.

Introduction of the Four D's

Local officials must consider the "Four Ds" commonly associated with the relationship between urban form and transportation — density, diversity, design, and (travel) distance — as they seek more balance in the land use and transportation equation. The evaluation of these issues as part of the land use planning exercises of the *2035 LRTP* have created proven strategies to shorten commuting distance between complementary land uses, increase travel choices, and create a more efficient transportation system. A brief summary of the four Ds associated with better integrating urban form and travel behavior follows. These concepts are further discussed as part of the focus area analysis.

Density

People often reject residential density and non-residential intensity because they envision traffic congestion or unattractive buildings. Those in favor of residential density and non-residential intensity recognize the diverse housing and travel options as beneficial to the community. Research shows perceived density usually does not relate to actual density, and the same density or intensity can look and feel quite different based on the building or neighborhood's scale and design. Good planning and design match an environment while naturally incorporating the benefits of a variety of transportation modes.

In general, residential density refers to the number of housing units per area of land. It is commonly reported in dwelling units per acre but also can be reported in persons per acre using household size characteristics. Dense urban projects sometimes measure residential density in floor-area-ratio (FAR), which is the ratio of gross building floor area to the total lot area. Non-residential intensity (e.g., commercial, office, or industrial uses) commonly is reported in floor-area-ratio for both suburban and urban conditions.

As in most communities, location often is the main factor in determining density and intensity in the Florence MPO area. Moving away from downtown Florence, land likely has developed at a lower density and intensity. Managing the location and magnitude of new density or intensity within the built environment helps planners determine infrastructure needs and implementation costs, and it shifts impacts away from environmentally-sensitive areas.

Visualizing Density

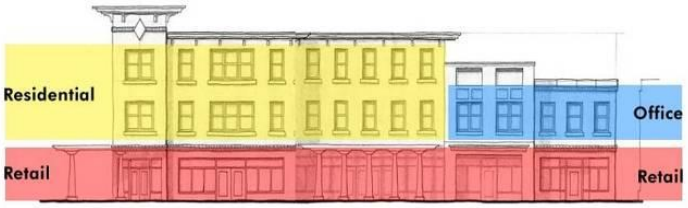


Diversity

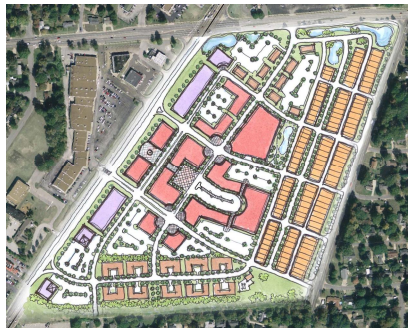
By creating places where people live, play, work, and shop in one general area, mixed-use developments combine various public amenities with compatible land uses in a centralized location. Successful mixed-use developments generally include residential uses and one or more of the following: commercial, office, light industrial, civic, hotel, public parks or plazas, and dedicated open space. Promoting a mix of land uses often is associated with smart growth, new urbanism, transit-oriented development, and Traditional Neighborhood Development.

While mixed-use developments come in a variety of forms, they typically are categorized as either vertical mixed-use buildings or horizontal mixed-use sites. As described in *Planning and Urban Design Standards* published for the American Planning Association (APA):

- **Vertical mixed-use** buildings combine different uses in the same building. The lower floors generally have more public uses, with private uses on the upper levels. Examples include residential space over commercial establishments, street-level retail with an office tower above, residential and hotel uses in the same building, and retail wrapped around a parking structure with multiple uses above. Vertical mixed-use development may have any number of revenue-producing and mutually supportive uses in the same building.
- **Horizontal mixed-use** development combines single-use buildings on distinct parcels in one planned development project with a range of uses. Examples include residential neighborhoods surrounding commercial or office development adjacent to a major highway or a medical campus with surrounding professional offices. This approach avoids the financing and code complexities of vertical mixed-use buildings while achieving the goals of place-making made possible by conveniently bringing together complementary uses in one place.



Vertical mixed-use buildings can occur at different scales in the built environment. The image above represents less intense vertical mixed-use buildings typical of an urban town center.



An illustrative example of horizontal mixed-use development.

Both types of developments create vibrant places while meeting the everyday needs of the community. They offer advantages over single-use developments by fostering a more efficient, livable transportation system characterized by shorter trip lengths, modal choice, convenient access, and internal trip capture.

In some communities, hurdles remain to building mixed-use development because of local government's continued adherence to Euclidean zoning, which generally isolates residential, commercial, office, and industrial uses to separate zoning districts. The City of Florence, through ongoing efforts to update its comprehensive plan, has begun to emphasize diversity in terms of land uses, character, and design. Likewise, the land use element of the Florence County Comprehensive Plan stresses more urban, mixed-use environments such as compact development and transit oriented design. Still, the city and county must work collaboratively to identify preferred locations for these types of development and then create flexible, performance-based standards for appropriate locations to support the development of these centers through policy measures.

Design

Urban design shapes the blocks, neighborhoods, and districts that give our cities identity and organize the built environment. Various elements of urban design provide a three-dimensional physical form to the requirements for density and diversity established in locally adopted comprehensive plans or zoning ordinances.



Urban design looks at various elements in the public realm that provide three-dimensional physical form for the built environment.

The emphasis for urban design is the public realm, which is created by public space (e.g., streets, plazas, open space) and the buildings that define them. Urban design looks at the various elements that influence these spaces and uses design elements to provide connections between people, places, and buildings. Specific elements of urban design — street pattern, streetscape design, block size, building scale and massing, parking, and landscaping — directly influence travel mode choice and travel behavior when supported by appropriate minimum densities and diversity of land uses. These design elements provide context to the transportation system and celebrate the street network as the centerpiece to the public realm.

Combining design elements (e.g., bicycle lanes, sidewalks, bus stops, street trees, and on-street parking) in the streetscape can transform transportation corridors from vehicle-dominated thoroughfares to community-oriented complete streets that safely and conveniently accommodate all modes of travel. The type, placement, and scale of design elements included in the streetscape for transportation corridors generally vary with the context of the surrounding environment. Programming improvements need to be tailored to rural, suburban, and urban environments.

The orientation, scale, and massing of buildings on a site relative to the adjacent transportation corridor can reinforce those design elements that support a complete street. Literature from around the country cites safe, predictable connections between adjacent properties, orientation of buildings, and elimination of excessive parking requirements as ways to promote a more balanced transportation system that favors walking between nearby destinations once arriving to the site by automobile or transit.

Distance

The travel distance between origin and destination is a primary factor (along with travel mode choice) for influencing travel behavior. The physical distance between complementary land uses in rural or suburban settings tends to promote automobile travel, particularly since safe, convenient facilities usually are not available for pedestrians and bicyclists. Denser mixed-use areas decrease the travel distance between complementary land uses and support transit, bicycle, and walking as viable alternatives to the automobile.



Focus Area Planning Process

The detailed study of the relationships between land use, urban form, and travel behavior in each of the focus areas followed the same four-step planning process:

1. Inventory existing conditions.
2. Evaluate existing development controls.
3. Formulate development scenarios.
4. Identify development scenario trade-offs.

Step One: Inventory Existing Conditions

An inventory of existing conditions was completed for both focus areas using geographic information system (GIS) data, aerial photography, photos, and field analysis. This information was used to characterize the study area based on existing land use patterns and development conditions. Particular attention was paid to physical features in the focus area in the context of the surrounding environment such as the distribution of open space, size and character of existing buildings, land use mix, size and character of streets, available travel modes, internal and external connections, location of parking, and interface of properties versus the public street.

Step Two: Evaluate Existing Development Controls

A review was conducted of locally adopted plans, programs, and policies administered by the City of Florence and Florence County. This information was used to inventory existing development controls to prepare a business-as-usual development scenario and identify potential barriers to implementing alternative development scenarios. This step included the review of local comprehensive plans, zoning ordinances, and subdivision ordinances.

Step Three: Development Scenarios

Two development scenarios were prepared for each focus area. The first development scenario represents a continuation of existing plans, programs, and policies administered by the local government under the current zoning designation (i.e., business-as-usual). The second development scenario represents a shift in planning philosophy toward one or more of the previously identified planning initiatives gaining popularity for better linking land use, urban form, and transportation planning — Downtown Redevelopment and Traditional Neighborhood Development.

Both scenarios for each focus area include a preferred development pattern, transportation infrastructure needs, and recommended multimodal circulation strategies. Development plans for the two scenarios are kept as consistent as possible for optimal comparison between the two. Also included were best development practices for parking, building placement and arrangement, site access, circulation, and connectivity based on the desired urban form category and prescribed regulatory framework.

Step Four: Development Scenario Trade-Offs

Trade-offs between the two development scenarios prepared for each focus area were identified using a set of elasticity factors developed for the U.S. Environmental Protection Agency. These factors relate physical features of the built environment — density, diversity, and design — to the percentage change in vehicle trips and vehicle miles traveled resulting from the two development scenarios. A technical memorandum describing in detail the methodology for estimating travel demand impacts from land use and urban design changes is included in the *Smart Growth Index Indicator Dictionary, Appendix A* prepared for the U.S. Environmental Protection Agency by Criterion, Inc. in October 2002.

Downtown Florence Focus Area







Downtown Florence, the civic and government center of Florence County, serves as a regional employment center, particularly for businesses supporting the medical facilities associated with McLeod Regional Medical Center. The existing infrastructure and streetscape along the Evans Street and Dargan Street corridors is in place to create a vibrant downtown. But the shift in recent years toward suburban living has eroded the vibrancy of this area of downtown. The focus area includes both the retail corridor of Irby Street and civic uses such as churches, Doctors Bruce and Lee Foundation Library, the Poyner Adult and Community School, and the new Francis Marion University Performing Arts Center.

The Downtown Florence focus area is centered on two main north/south connectors through downtown, Irby and Dargan Streets. It also includes the critical east/west corridors of Palmetto and Cheves Streets. The western boundary of the study area is Coit Street, while the rail line just west of Church and Barringer Streets forms the eastern boundary. Cedar Street forms the southern boundary of the focus area. The northern boundary follows Evans Street between Dargan Street and the rail corridor, then follows along the back of the buildings fronting Evans Street between Dargan and Coit Streets.

Planning Process

Step One: Inventory Existing Conditions

A physical assessment of the focus area highlighted strengths, weaknesses, and opportunities for better integrating land use, urban form, and transportation decision-making. A summary of existing conditions for the focus area is organized using the 4D planning framework.

Density

The focus area has a low density uncharacteristic of a typical urban area due to high vacancy and 1- to 2-story buildings surrounded by large open areas and surface parking lots. From single family residential to multi-story office buildings, this focus area is characterized by many large, single use buildings that in some cases occupy a majority of the city block.

Diversity

Existing land uses in the focus area include residential, retail, office, civic, and surface parking. The area could be characterized as horizontal mixed use with each use separated, usually by surface parking lots. The main core of the focus area predominantly is civic uses, and moving toward the focus area edge, small professional offices and single family dwellings are more prevalent.

Design

Downtown Florence streets form a grid pattern that provides highly-walkable blocks and safe convenient access between complementary uses. Building scale, massing, and materials vary widely throughout the focus area due to the presence of different land uses, buildings with historic significance, and redevelopment of certain parcels.

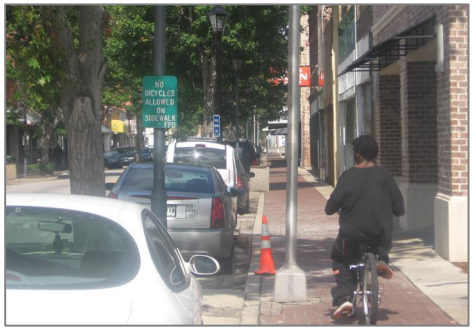
Distance

The proximity of complementary land uses served by an efficient transportation system provides travel mode choices in the urban core, reducing travel distance and supporting transit, bicycle, and walking as viable alternatives to the automobile. Two important features of the focus area relate to distance:

- The Central Transfer Point for the Pee Dee Regional Transit Authority (PDRTA) is located at the intersection of Evans Street and Dargan Street in the northeastern corner of the study area. Route 5 (Palmetto Street – Florence Mall) travels through the study area along Palmetto Street. The distance from the Central Transfer Point to the study area is on average just over a quarter mile.



- The 2004 Florence Area Bikeway Master Plan establishes detailed bicycle routes in the Florence Area. Portions of the Palmetto Connector, Downtown Connector, and Francis Marion Connectors travel through the focus area. Offering safe bicycle routes encourages alternative modes of travel and shortens distances between uses.



Step Two: Evaluate Existing Development Controls

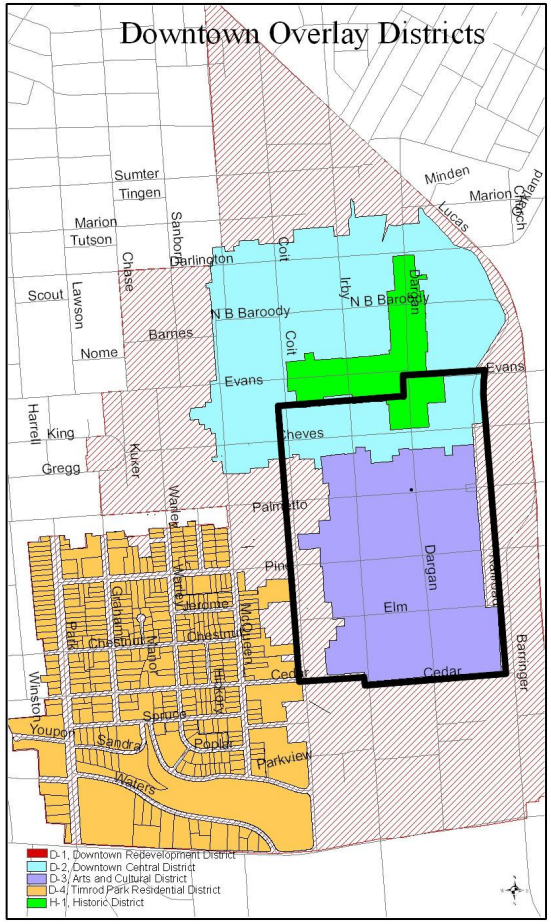
The following documents were reviewed for the focus area to identify supporting policies and/or potential barriers in preparing development scenarios for the Downtown focus area:

- *Zoning Ordinance of the City of Florence (Updated April 2009)*
- Florence County GIS Mapping and Zoning Application
- *Design Guidelines for Downtown Florence, South Carolina*
- *Florence Area Bikeway Master Plan*
- Coordination with Florence County Comprehensive Plan Update

The downtown focus area is located within Florence city limits and is governed by the existing development controls set forth in the *Zoning Ordinance of the City of Florence*. Existing zoning designations in the focus area are Multi-Family Residential (R-4), Limited Business (B-1), General Business (B-3), Central Business (B-4), and Industrial (B-6). Overall, the existing zoning provides a mix of uses, and B-1 — the predominant zoning in the focus area — allows office, institutional, and residential uses. The residential zoned areas only allow up to two family dwellings, which can be characterized as low density. The only other zoning area that allows residential uses is B-1 zoning. A majority of the focus area currently is developed, though vacant lots and businesses not characterized in the civic core of the study area are scattered throughout the focus area.

Despite the concentration of institutional uses and proximity to Florence's central business district, a surprisingly low number of people live in the focus area. The current zoning restricts the ability to infill with multi-family housing and mixed use developments without seeking a variance or rezoning. Existing zoning separates uses, rendering Irby Street a retail corridor, Dargan Street a civic corridor, and the eastern and western edges as low density residential.

The City of Florence established The Florence Downtown Development Corporation, which has inventoried the existing urban fabric of downtown, studied redevelopment opportunities, and outlined design guidelines to promote preservation, redevelopment, restoration, and revitalization in downtown Florence. As a part of this initiative, downtown overlay districts have been created to describe how and where redevelopment occurs downtown.



The Downtown Focus Area (outlined in black) falls within Downtown Overlay Districts.

The entire study area falls within this downtown redevelopment initiative. The Arts and Cultural District (D-3) covers the majority of the study area, while small areas fall within the Central District (D-2) and the Historic District (H). The Arts and Cultural District emphasizes this area as the civic heart of the community. Design guidelines for this area encourage orienting facades toward the street and creating pedestrian spaces within retail areas that add to the life of downtown Florence.

Step Three: Development Scenarios

Two development scenarios were created for the 165-acre Downtown focus area: business-as-usual and Downtown Redevelopment (vertical mixed use). These scenarios are summarized below and illustrated on the following pages.

Business-as-Usual Scenario

The business-as-usual scenario assumes the continued redevelopment of individual parcels or the consolidation of a few parcels. As this trend continues, additional strain will be placed on existing surface parking infrastructure and the practice of providing parking per development requirements will continue. The business-as-usual scenario assumes current zoning provisions would dominate the growth pattern. Some development in the scenario would require a zoning change, but it would closely follow the currently allowed uses. Likewise, this scenario assumes the physical separation of uses prevalent in the area today will continue. The business-as-usual scenario includes:

- 130,000 square feet of additional retail
- 50,000 square feet of medical office space
- 50,000 square feet of office
- 120-room hotel
- 60 townhome units
- 120 multi-family/low income housing units
- 2.5 acres of open space (equal to 1.5% of focus area)

Underutilized or vacant parcels identified during the field inventory were the primary location for redevelopment in the business-as-usual scenario. With the continuation of existing zoning and development practices, these redeveloped parcels develop inside a vacuum (that is, each parcel develops based on opportunity and/or market forces). While new development may follow the design guidelines, by not

implementing the concept of vertical mixed use or structured parking the amount of available space for development is greatly decreased. Also, with the piecemeal development of individual parcels, uses remain segregated and automobile trips are emphasized.

Downtown Redevelopment

Reinvestment in downtown and urban living is an initiative for the Florence Downtown Development Corporation. This development scenario targets vertical mixed use development for underutilized parcels currently occupied by vacant buildings and surface parking lots. Rather than develop separately, entire underutilized blocks were considered as part of this redevelopment plan. The Downtown Redevelopment Scenario includes:

- 74,000 square feet of mixed use space
  - This mixed use space could be used in many combinations, one being 56,000 square feet of medical office and 18,000 square feet of retail.
  - Live/work opportunities within vertical mixed use space could provide up to 75 additional live/work units.
- 50,000 square feet of office
- 120 room hotel
- 68 townhome units
- 120 multi-family/low income housing units
- 7.5 acres of open space, including areas near retail (equal to 4.5% of focus area)

The vertical mixed use in this scenario better utilizes urban land and preserves open space, which is critical to attracting residents to downtown areas. This plan incorporates structured parking wrapped by ground floor mixed use or retail. This approach reduces surface parking and addresses the streetfront as desired in an urban area. The live/work component infuses residential components into the heart of downtown. Rather than develop residential where it is already identified through zoning, pockets of residential developments are placed into entire blocks to create a neighborhood atmosphere.

Step Four: Development Scenario Trade-Offs

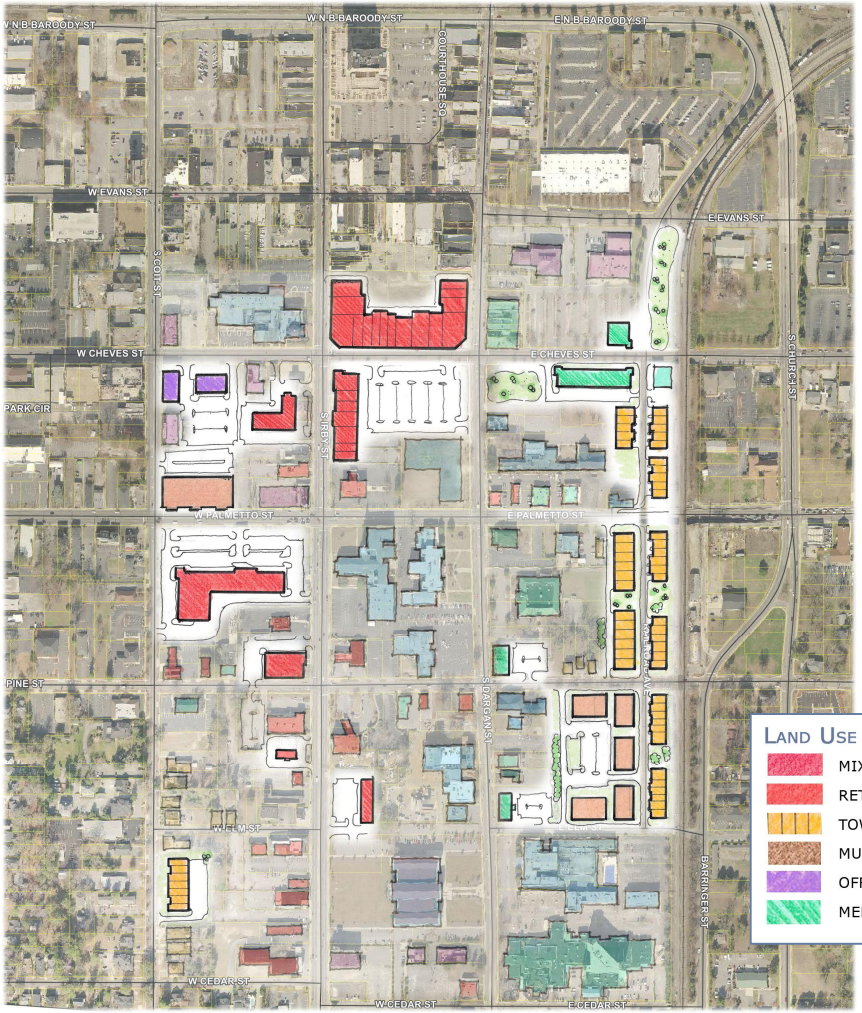
General development characteristics were used as input data to estimate the travel demand impacts likely to occur from land use and urban design changes. Comparative statistics calculated for the two development scenarios confirm that vertical mixed use developments would reduce automobile travel generated inside the focus area. The increased density and specific urban design elements prescribed in the downtown redevelopment scenario would reduce the number of vehicle trips (1.13% reduction) and vehicle miles traveled (0.81% reduction) compared to the business-as-usual scenario. **Table 9.3** provides further comparison of the scenarios.

Table 9.3 – Downtown Focus Area Development Comparison

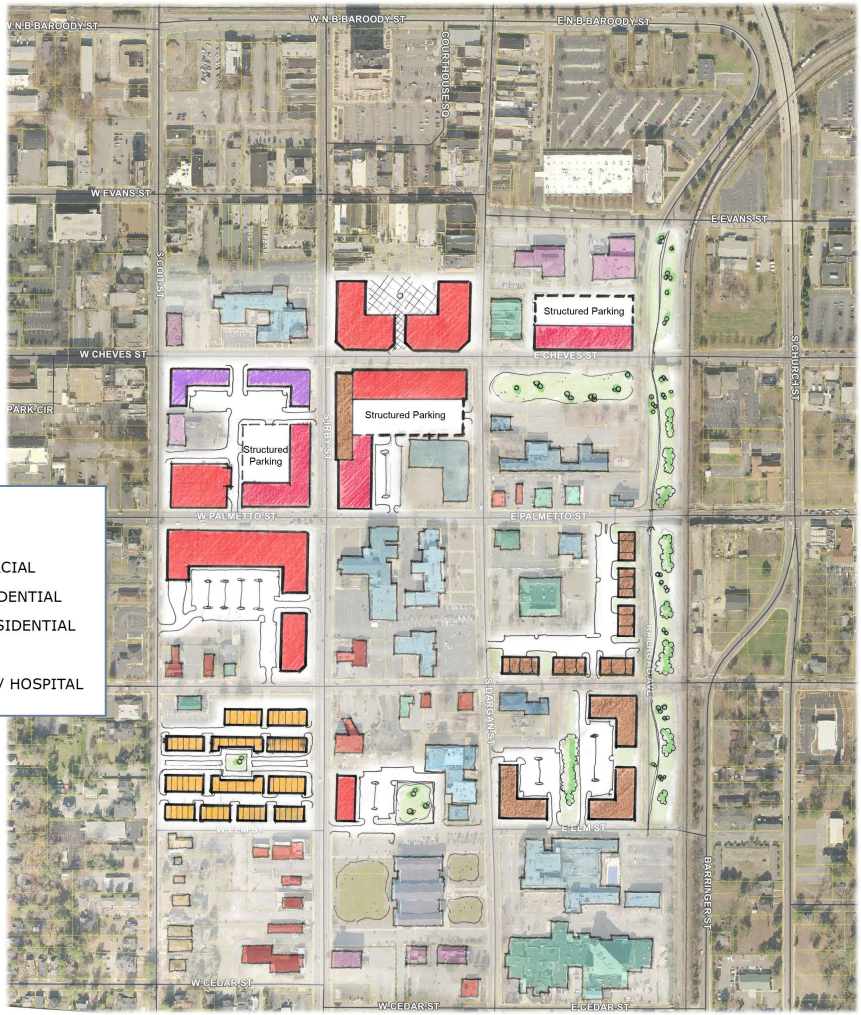
	Business-as-Usual	Downtown Redevelopment
Average Residential Density	16 dwelling units per acre	12 dwelling units per acre
Average Non-Residential Intensity (FAR)	0.13 to 0.35	0.24 to 0.50
Typical Street Pattern	Grid	Grid
Typical Block Length	600 linear feet	600 linear feet
General Land Use Pattern	Separation of Uses	Mixed Uses
Prevailing Building Height (stories)	2 stories	3 stories
Street Network Density	High	High
Street Network Connectivity	High	High
Pedestrian Infrastructure	High	High
Bicycle Infrastructure	High	High
Vehicle Infrastructure	High	High
Public Transit Infrastructure	High	High
Preserved/Public Open Space	1.5%	4.5%

Downtown Focus Area

Business-as-Usual



Downtown Redevelopment



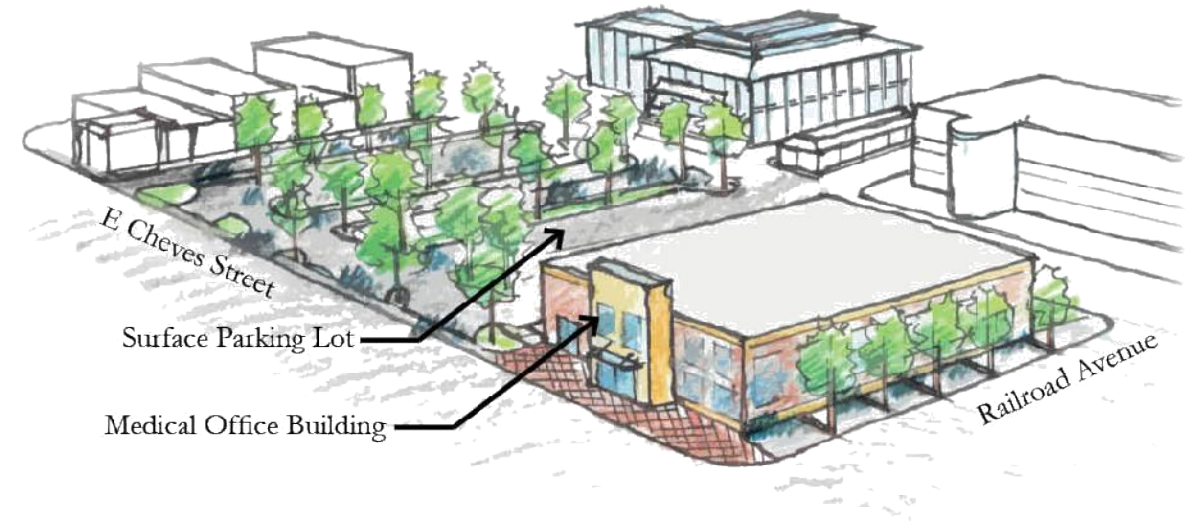
The business-as-usual scenario (above) assumes continuation of existing land use patterns and development intensities, observed in the focus area as lower density/intensity development separated by surface parking. For comparison, the downtown redevelopment scenario (right) infuses the area with livability by introducing vertical mixed use and preserving open space. This enhanced scenario includes structured parking wrapped with retail or mixed use fronting the street.

Visualizing Vertical Mixed Use

Downtown Focus Area

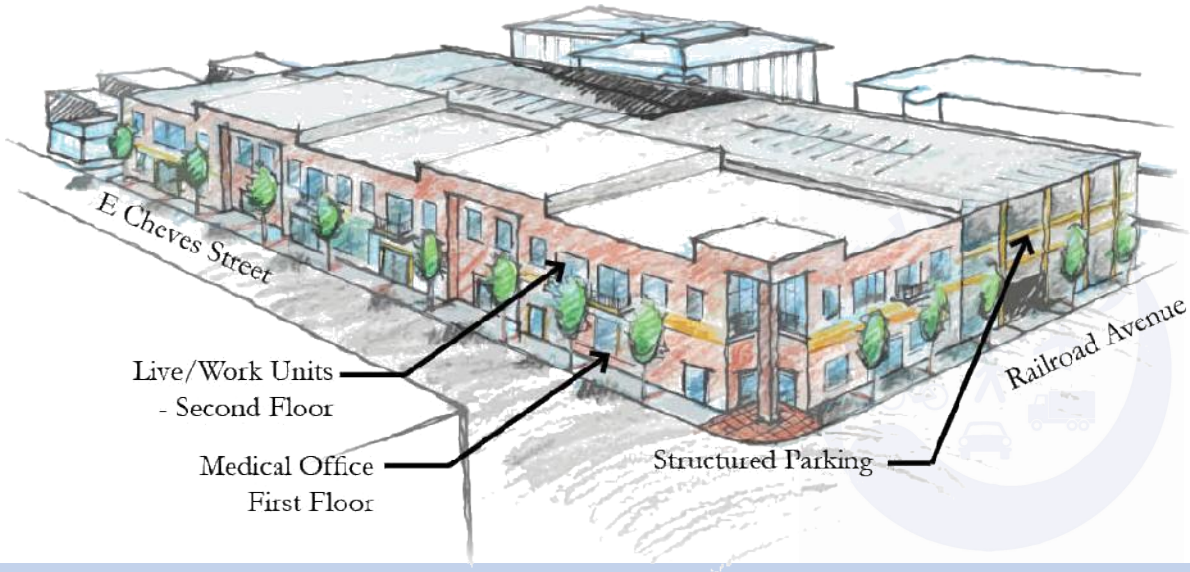
Business-as-Usual

Today, the corner of the Cheves Street/Railroad Avenue intersection is a surface parking lot for buildings within that block. The sketch to the right depicts how business-as-usual infill development could occur. While the proposed medical office building addresses the street, surface parking would need to be retained to serve existing and proposed buildings. On-street parking could provide additional spaces needed for the infill development as well as to replace parking lost for the development of the medical office building.



Downtown Redevelopment

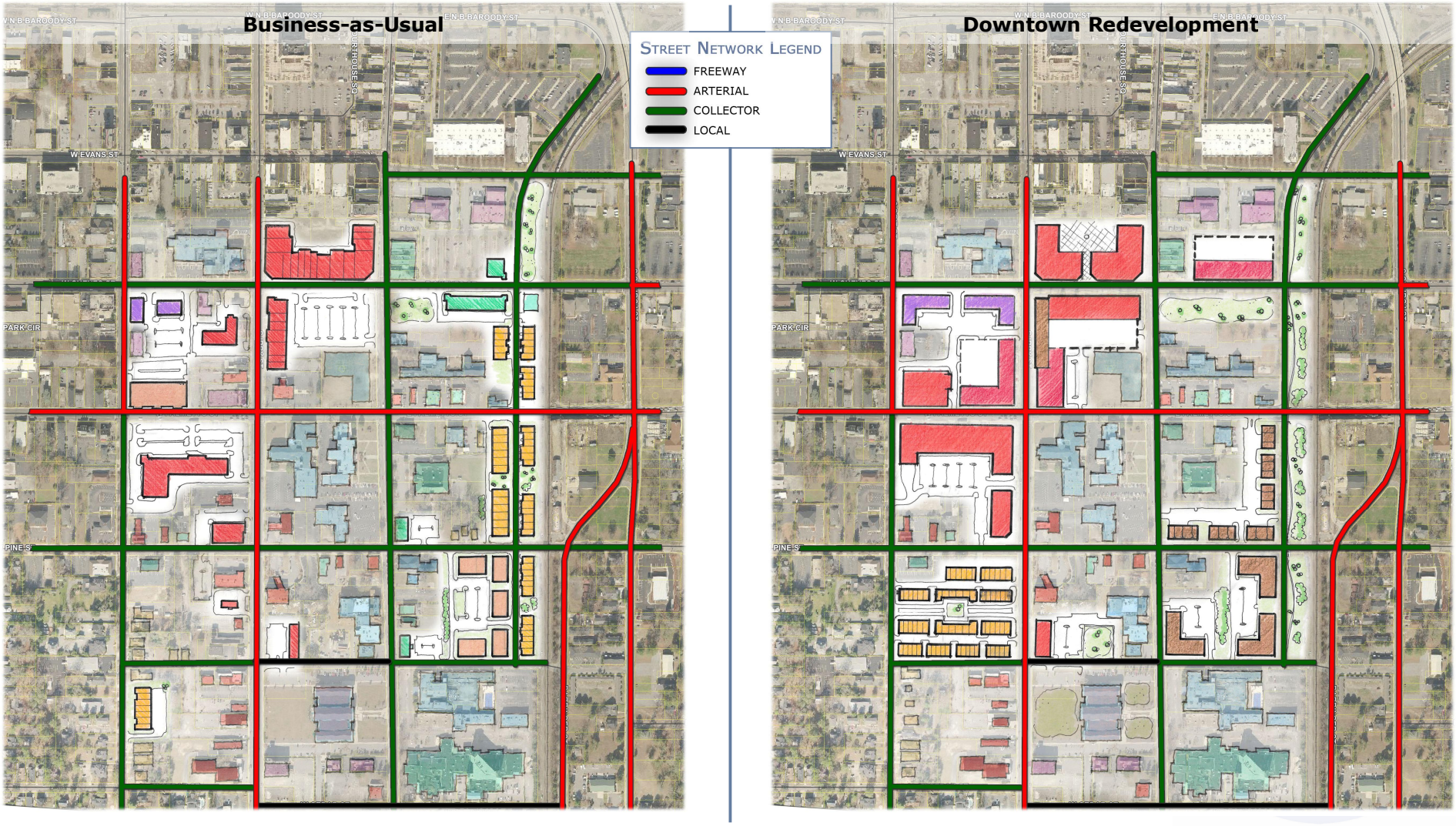
The Downtown Redevelopment scenario emphasizes vertical mixed use. The sketch to the right visualizes vertical mixed use for the same corner (Cheves Street at Railroad Avenue) of the focus area. By implementing structured parking and vertical mixed use on the existing surface parking lot, the same amount of medical office space could be developed with the addition of live/work residential units and structured parking that provides enough parking for all the surrounding buildings (both existing and proposed). Also, the entire streetfront along Cheves Street has an urban feel, a sense of character that is lost in the business-as-usual scenario.



Street Network

Downtown Focus Area

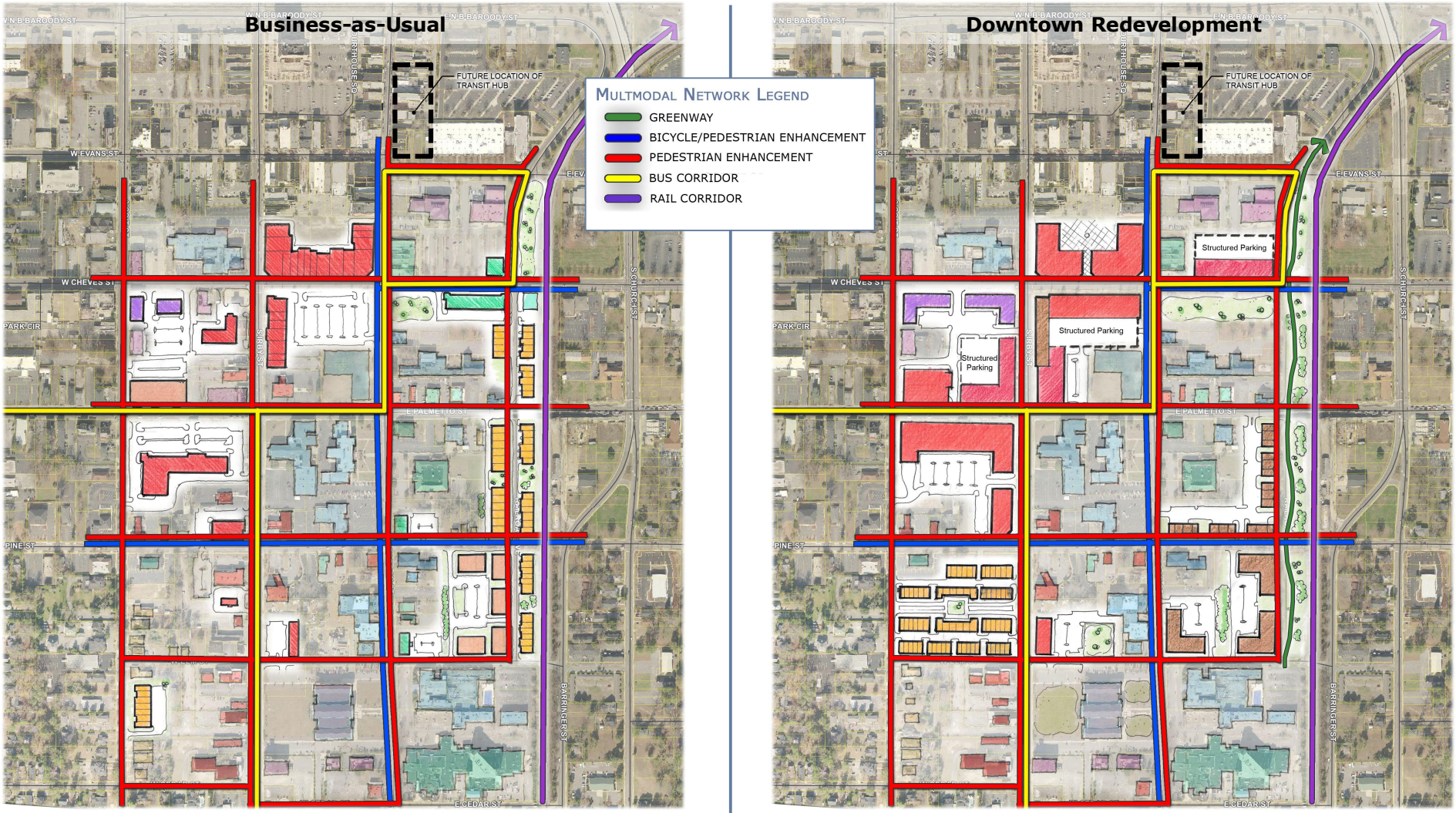
With its urban location, the Downtown Focus Area benefits from a grid network that distributes traffic more evenly throughout the focus area. Because both scenarios focus on preserving existing infrastructure, no change in the street network is expected. However, the enhanced livability of the Downtown Redevelopment scenario will be evident at the street level due to an improved streetscape and additional modes using the street network.



MULTIMODAL NETWORK

Downtown Focus Area

As with the Street Network, the grid pattern of downtown Florence provides a relatively unchanged network between the two scenarios. In both, a well-connected and diverse multimodal network is provided. The current PDRTA Central Transfer Point and anticipated location of the transit hub in the vicinity will ensure transit remains prominent in the future and will support increased civic, commercial, and residential uses. The Downtown Redevelopment scenario introduces a greenway adjacent to the rail corridor. Emphasizing a multimodal network benefits the focus area in a variety of ways.



Hoffmeyer Road Focus Area

As the interstate highway system grew on the outskirts of Florence, the shift to suburban living surrounded by sprawling retail centers strained the existing transportation system. Located near the interchange of I-95 and I-20, the Hoffmeyer Road Focus Area exemplifies suburban growth within the FLATS MPO area. The Hoffmeyer Road Focus Area is bounded by Hoffmeyer Road on the south, Ebenezer Road along the west, Sumter Street to the north and the I-95 corridor to the east. The selection of this area for detailed study is notable for several reasons:

- The recent widening of Hoffmeyer signifies additional growth is on the horizon.
- A new school is planned less than a mile south of the focus area.



- With existing residential neighborhoods nearby and infrastructure in place for the King's Gate, accessible neighborhood service retail will be warranted in the near future.



Planning Process

Step One: Inventory Existing Conditions

As with the Downtown Focus Area, a physical assessment of the focus area highlighted strengths, weaknesses, and opportunities for better integrating land use, urban form, and transportation decision-making. A summary of existing conditions for the focus area is organized using the 4D planning framework.

Density

The existing density of the focus area is low, characterized by large multi-acre single family parcels and large areas of open space currently used for agriculture. Subdivisions surrounding the focus area range from 1 to12 dwelling units per acre.

Diversity

Existing land uses in the focus area are limited to single family residential and agricultural uses.

Design

In general, the focus area is relatively flat, and prime for agriculture uses. Two streams cross the site from east to west and divide the focus area into developable areas. Floodplains and wetlands along the streams provide opportunities for trail networks. The roads surrounding the site provide adequate access to the focus area.

Distance

The distance between complementary uses such as employment and shopping necessitates travel by automobile. Without connectivity among subdivisions, trips typically are longer as most subdivisions have only one or two access points to main roads. Although the Hoffmeyer Road widening project provides wider outside lanes for bicycles and sidewalks on both sides, a lack of connectivity for other modes of transportation exists where the widening project ends and the two-lane rural cross-section begins. Currently fixed route transit is

not provided within the focus area, and the *Florence Area Bikeway Master Plan* does not propose any routes to or near the focus area.

Step Two: Evaluate Existing Development Controls

The following documents were reviewed for the focus area to identify supporting policies and/or potential barriers in preparing development scenarios for the Hoffmeyer Focus area:

- Florence County GIS Mapping and Zoning Application
- *Florence Area Bikeway Master Plan*
- Coordination with Florence County Comprehensive Plan Update

The focus area is located in unincorporated Florence County, and no existing development controls or zoning are applied to parcels in the focus area. The surrounding development pattern has followed the same pattern of a large parcel (or consolidation of smaller parcels) being developed into suburban neighborhoods. This development pattern usually can be sustained without land use plans guiding growth. Land use ideas expressed in this study will be coordinated with the Florence County Comprehensive Plan Update to help guide smart growth and cooperation to existing and proposed transportation infrastructure.

Step Three: Development Scenarios

Two development scenarios were created for the 350-acre Hoffmeyer Road Focus Area: business-as-usual and a Traditional Neighborhood Development scenario that incorporates mixed use and traditional neighborhood development. These scenarios are summarized below and illustrated on the following pages.

Business-as-Usual Scenario

The business-as-usual scenario assumes the continued development pattern of subdivisions with neighborhood-related retail focused toward Hoffmeyer Road. Focusing the retail on Hoffmeyer Road forces other site access to Ebenezer Road and places additional strain on the two-lane Ebenezer Road. Without zoning, the development pattern of subdivisions developing on easily purchased parcels would continue. The business-as-usual scenario includes:

- 200,000 square feet of retail
- 80,000 square feet of assisted living facility
- 228 multi-family units
- 48 townhome units
- 28 ½-acre single family units
- 34 ¼-acre single family units
- 112 ⅛-acre single family units
- 25-acre community park
- 110 acres of open space (equal to 31% of focus area)

Environmentally sensitive areas are preserved in this scenario. However, these areas also limit connectivity because stream crossings are restricted. By focusing traditional shopping center and neighborhood retail development along Hoffmeyer and Ebenezer Roads, residential uses pushed further away from retail sites limits the opportunity for alternative modes of transportation such as walking and bicycling. Land uses in the business-as-usual scenario are separated, rather than mixed, which lengthens trips and erodes the neighborhood's identity.

Traditional Neighborhood Development

Once completed, the Florence County Comprehensive Plan will promote sustainable development patterns that include compact development and the conservation of farmland. The Traditional Neighborhood Development scenario prescribes a development pattern that reduces vehicular trips, fosters a sense of community, and condenses commercial to preserve open space. The scenario uses a similar development program (i.e. number of residences and square footage of commercial area) as the business-as-usual scenario, but the application of cluster development and traditional neighborhood

design offers a wider range of single family lot sizes with most homes having direct access to shared open space. This alternative includes:

- 160,000 square feet of retail
- 80,000 square feet of assisted living facility
- 228 multi-family units
- 48 townhome units
- 32 ½-acre single family units
- 27 ¼-acre single family units
- 52 ⅛-acre single family units
- 56 $^{1}/_{10}$-acre single family units
- 20-acre park
- 118 acres of open space, including community green (equal to 34% of focus area)
- 41 acres of preserved agricultural land (equal to an additional 11% of preservation in the focus area)

By creating a mixed use center focused not on roads, but within the center of the focus area, a Community Center brings identity to an otherwise nondescript crossroads. Focusing development along roads and not parking fields also contributes to a more walkable environment. Using development patterns such as traditional neighborhood development and cluster development, which typically results in smaller single residential lots offers more shared open space and preserved green spaces. Offering a variety of lot sizes and living types within a development also creates a more marketable development that targets more buyers rather than only a few. The road network, set in a more grid-like pattern also lessens trips and provides better connectivity within and between neighborhoods.

Step Four: Development Scenario Trade-Offs

General development characteristics were used as input data to estimate the travel demand impacts likely to occur from land use and urban design changes. Comparative statistics calculated for the two development scenarios confirm that implementing the vision for mixed use and traditional neighborhood development types would have a positive impact on reducing the amount of vehicular travel generated inside the focus area. This is evident specifically through the street network pattern between the two scenarios. It is estimated that the increased density and specific design elements prescribed in the alternative development scenario would reduce both the number of vehicle trips (5.59 percent reduction) and vehicle miles traveled (7.04 percent reduction) compared to the business-as-usual scenario. **Table 9.4** provides further comparison of the scenarios.

Table 9.4 – Hoffmeyer Road Focus Area Development Comparison

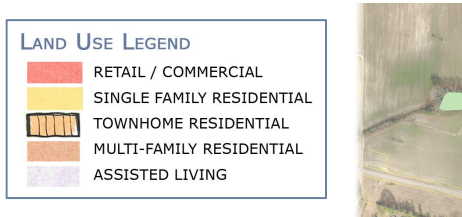
	Business-as-Usual	Traditional Neighborhood
Average Residential Density	3 dwelling units per acre	6 dwelling units per acre
Average Non-Residential Intensity (FAR)	0.09 to 0.18	0.12 to 0.23
Typical Street Pattern	Curvilinear	Grid
Typical Block Length	350 to 550 linear feet	400 to 650 linear feet
General Land Use Pattern	Separation of Uses	Mixed Uses
Prevailing Building Height (stories)	2 stories	2 stories
Street Network Density	Low	High
Street Network Connectivity	Low	High
Pedestrian Infrastructure	Low	High
Bicycle Infrastructure	Medium	Medium
Vehicle Infrastructure	Medium	High
Public Transit Infrastructure	None	Low
Preserved/Public Open Space	31%	49%

Hoffmeyer Road Focus Area

The business-as-usual scenario (left) assumes continuation of existing suburban land development that includes segregated uses, large lot development, and big box retail fronted by parking. The Traditional Neighborhood Development scenario (below) includes smaller lots to preserve farmland and open space and creates a mixed use lifestyle center with commercial, multi-family, and assisted living uses.

Business-as-Usual





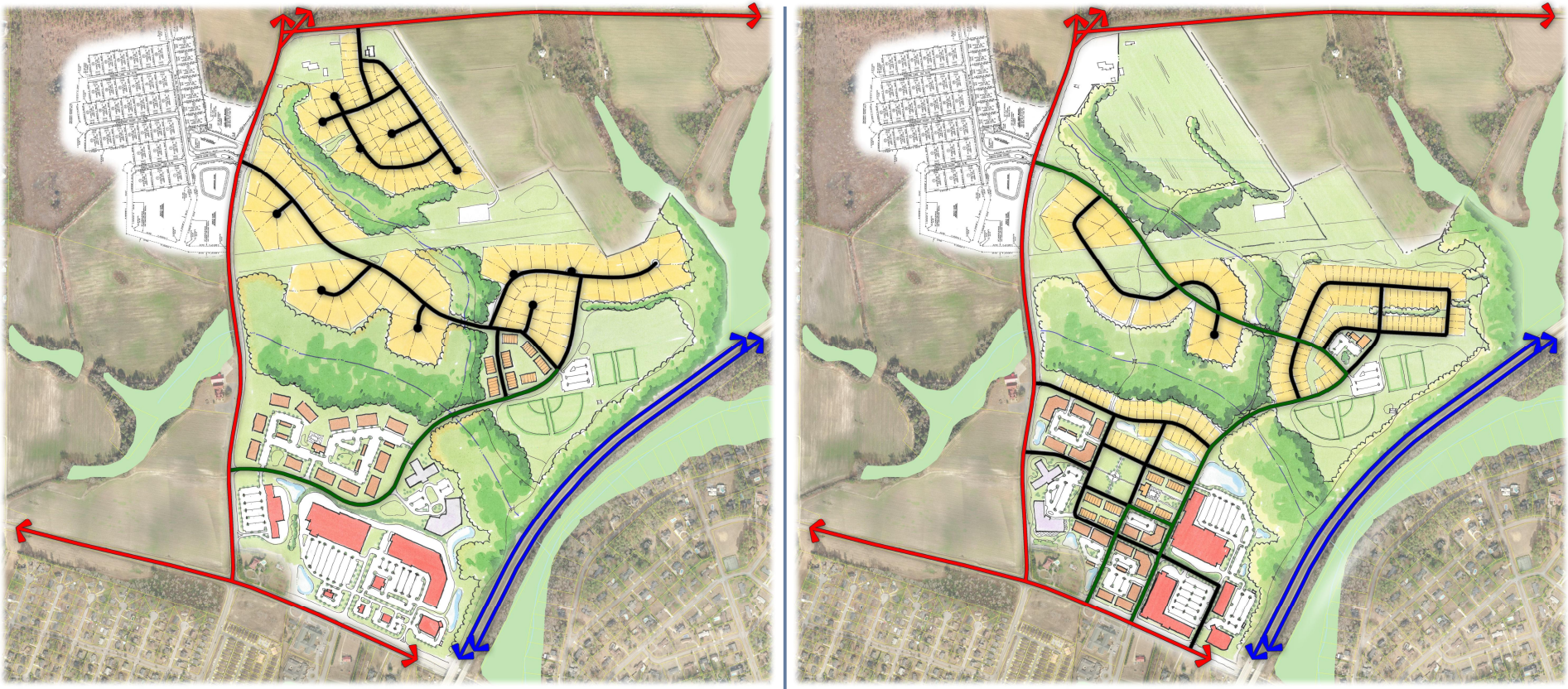
Traditional Neighborhood Development



Street Network

Hoffmeyer Road Focus Area

The street network maps for both scenarios clearly show how enhanced land development patterns can increase internal connectivity and reduce the burden on the external road network. The business-as-usual scenario burdens Hoffmeyer Road and Ebenezer Road and includes numerous cul-de-sacs. In contrast, the traditional neighborhood development has a more efficient, connected road network with different size streets and numerous opportunities to connect within the neighborhood. Cul-de-sacs are limited to areas with environmental features that prevent street connections.



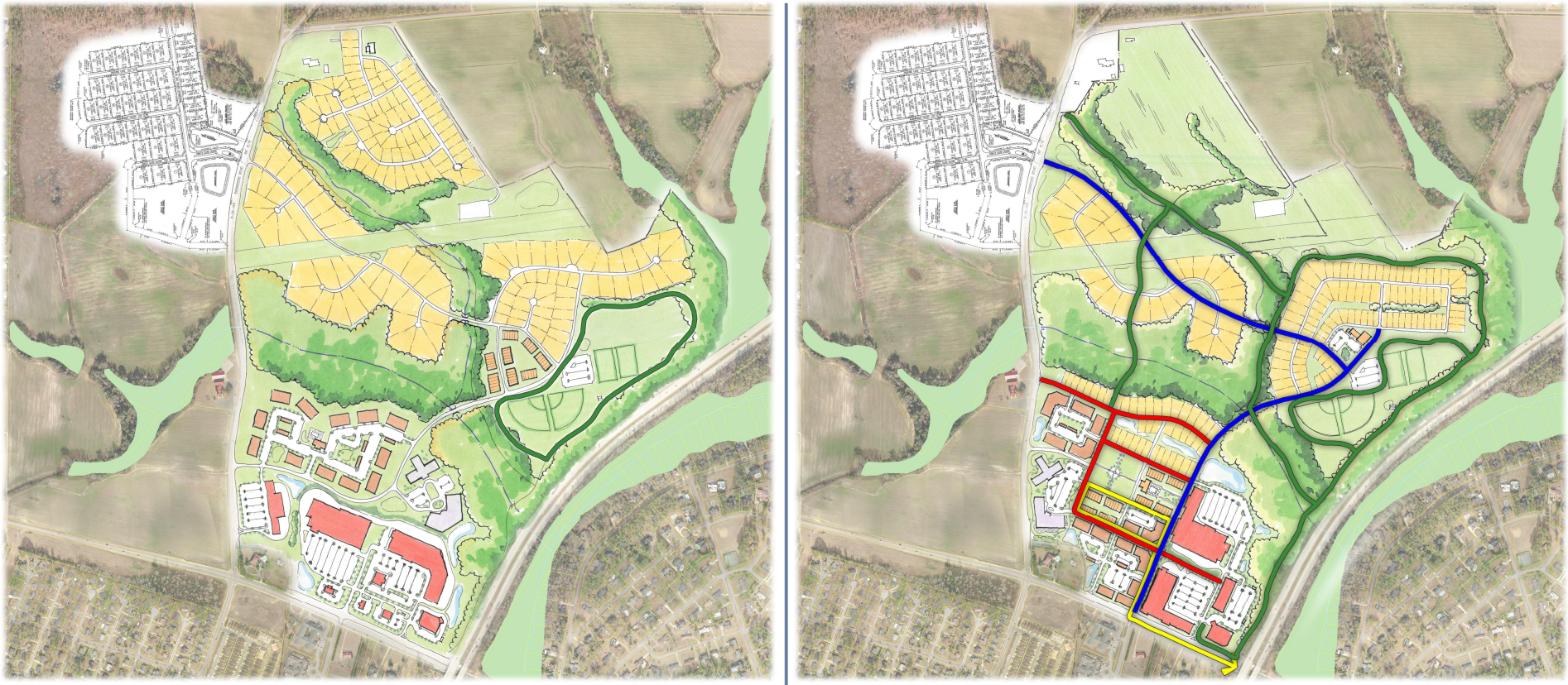
Business-as-Usual

Traditional Neighborhood Development

Multimodal Network

Hoffmeyer Road Focus Area

Like the street network, a comparison of the multimodal network shows significant improvement in the Traditional Neighborhood Development scenario. The business-as-usual scenario reveals a lack of bicycle and pedestrian amenities and poor connections within the site. In particular, connections to the lone greenway in the park are limited and safe accommodations are not provided between the commercial area near Hoffmeyer Road and the single family residences. Transit service in the business-as-usual scenario does not exist as the lack of intensity or diversity of land uses prohibits future service extensions. The bicycle and pedestrian networks and inclusion of transit service in the enhanced scenario relates to the connectivity of the street network and the coordination of land uses. An interconnected bicycle and pedestrian network provides connection between retail, assisted living, homes, and the park. The density and mix of land uses combined with and the interconnected street network allow the opportunity for PDRTA service to circulate through the lifestyle center near Hoffmeyer Road.



Business-as-Usual

Traditional Neighborhood Development

Conclusion

With the updates to the City and County comprehensive plans and the increased activity by the Florence Downtown Development Corporation, it is clear that momentum is shifting throughout the FLATS MPO area for planning initiatives that integrate the land use, urban form, and transportation elements of smart growth. Region-wide interest in a sustainable future was realized through conversations with TPAC members, local planning staff, elected officials, and the general public. The FLATS MPO supports smart growth initiatives underway — such as downtown reinvestment, traditional neighborhood development, and rural preservation — and promotes transportation improvements sensitive to the overall goals of these initiatives within the context of the regional transportation system.

If the built environment is to support a balanced and efficient transportation system, the four Ds of urban and form and travel behavior — density, diversity, design, and destinations — may need to be reevaluated. The focus area scenarios highlight the benefits of changing urban form (i.e., density, diversity, and design) to reduce vehicle trips and vehicle miles traveled. The smart growth initiatives incorporated into the focus areas also provide more choices among modes for residents, employees, and visitors to fulfill their daily needs. Moving forward, champions of smart growth will need to lead the efforts to reevaluate how these ideas are translated within the Florence area.

The scenario planning analysis confirms that reorganization of urban form throughout the study area into a more compact, nodal development pattern significantly improves the efficiency of the transportation system, while preserving unspoiled natural areas immediately surrounding town limits. Successful implementation of a compact, nodal development pattern will require fundamental changes to certain land use plans, programs, and policies administered by Florence County, the City of Florence, Quinby, and Darlington County. Purposeful coordination among private landowners, officials for the City and County, and the South Carolina Department of Transportation to combine land use and transportation planning processes traditionally completed in isolation will ensure a more efficient and fiscally responsible regional transportation system.

Findings & Recommendations

The findings and recommendations (**Table 9.5**) show general strategies the City and County can adopt to support land use considerations that balance the transportation network as outlined earlier in this chapter. The guidelines include ways to reinforce the connections between the four Ds commonly associated with improving the relationship between land use, urban design, and transportation. These tools focus on carrying out the vision of the *2035 LRTP* —a growing community, enhanced quality of life, and the efficient movement of people and goods both locally and regionally.

While the FLATS MPO has limited powers to directly influence land use decisions, the MPO — working with the city and the county — can encourage numerous local initiatives to support smart growth,. The local strategies that conclude the chapter will be the responsibility of some combination of the City, County, and MPO. More information on the responsible party for each strategy is provided in the Implementation Plan (**Chapter 11**).

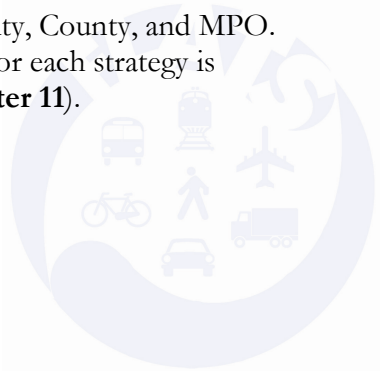


Table 9.5 – Findings & Recommendations	
Finding	**Recommendation**
Planning Philosophy	
The FLATS MPO has a definite interest in and responsibility to improve the efficiency of the regional transportation network without comprising the livability of local communities. The MPO should promote strategies and coordination efforts that forward smart growth initiatives; integrate land use, urban form, and transportation planning; and promote the livability of the greater Florence area.	▪ **Continue to support local initiatives that result in a more efficient, livable transportation system (street connectivity, complete streets, etc.).** ▪ **Promote development design to manage access and reduce congestion levels on major roadways.** ▪ **Partner with local, regional, state, and federal agencies that share a common vision for implementing smart growth development.** ▪ **Respect local government control and their desire to implement smart growth initiatives when programming improvements to the regional transportation system.** ▪ **Understand that "one size does not fit all" for implementing smart growth development.** New plans, programs, or policies adopted by elected officials should acknowledge the differences between rural, suburban, and urban settings. ▪ **Reinvest in existing infrastructure and promote infill development or redevelopment instead of continued sprawl out from the core of the community.**
Actionable Items	
Numerous smart growth initiatives can be spearheaded by the MPO and enforced by the City and County. Partnerships are a key component and can contribute to significant improvements in the quality growth throughout the Pee Dee region.	▪ **Develop livable street design guidelines for major arterial and collector streets (begin with endorsement of the cross-section design recommendations in this report and expand to include the Institute of Transportation Engineers/Congress for the New Urbanism recommendations).** Include recommendations for cross-section, lane width, planting specifications, sidewalk, street lighting, etc. ▪ **Establish standards to increase connectivity within and between developments.** ▪ **Develop design guidelines that establish development priorities and core design principles for implementing smart growth initiatives.** ▪ **Prepare best development practices and conduct design summits to educate and encourage developers to incorporate these principles into their land use planning and development process.** ▪ **Prioritize projects in the capital improvements plan that influence the positive timing and location of new development.** ▪ **Seek state and federal funding supportive of activities to improve the quality of development and protect human health and the environment.**



Chapter 10

Financial Plan

Introduction

Federal SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) legislation requires a financial plan be performed as a part of a Metropolitan Planning Organization's (MPO) Long Range Transportation Plan. The financial plan shows proposed investments that are realistic in the context of reasonably anticipated future revenues over the life of the plan and for future network years, set for the purpose of the *2035 FLATS Long Range Transportation Plan (2035 LRTP)* as 2020 and 2035. Meeting this test is referred to as "financial constraint." The mix of transportation recommendations proposed to meet metropolitan transportation needs over the next 26 years is consistent with revenue forecasts. The Financial Plan details both proposed investments toward these recommendations and revenue forecasts over the life of the plan.

The proposed recommendations were developed in collaboration with the FLATS MPO, City of Florence, Town of Quinby, Florence and Darlington Counties, SCDOT, FHWA, Pee Dee Regional Council of Governments, and the Pee Dee Regional Transportation Authority (PDRTA). These projects include roadway, bicycle, pedestrian, and transit facilities and services for the life of this plan. The financial plan also reflects existing and committed projects, the Transportation Improvement Program (TIP), and the future plans of FLATS, SCDOT, City of Florence, Florence County, Darlington County, Pee Dee COG, and PDRTA. These recommendations also reflect travel demand benefits and socioeconomic impacts studied using the evaluation matrix process detailed in **Chapter 5**. Finally, these projects result from an extensive public participation process that included public workshops (two public sessions), stakeholder interviews, and the participation of a Transportation Plan Advisory Committee. More information on the public outreach efforts can be found in **Chapter 2**.

Revenue forecasts were developed after a review of previous state and local expenditures, current funding trends, and likely future funding levels. The revenue forecasts involved consultation with FLATS, SCDOT, City of Florence, Florence and Darlington Counties, Pee Dee COG, and PDRTA. All dollar figures discussed in this section initially were analyzed in current year dollars (i.e. 2009) and then inflated to reflect projected year of funding or implementation. Based on current national standards and applicable local forecasts, an annual inflation rate of 3% was used to forecast costs and revenues.

This chapter provides an overview of revenue assumptions, probable cost estimates, and financial strategies along with the detailed research results used to derive these values. Since this is a planning level funding exercise, all funding programs, projects, and assumptions will have to be re-evaluated in subsequent plan updates.



Financial Planning Scenarios

The FLATS MPO obtains funding for its projects through a combination of local, state, and federal sources. State and federal dollars are primarily distributed through the guideshare funding program. This funding amount is determined largely by current and projected regional population and vehicle miles traveled compared to other regions of the state. As a result, funding levels are not expected to increase substantially over the life of this plan. These low funding levels will not be adequate to implement many of the projects identified as a part of this study, thereby leaving many deficiencies unaddressed across all modes of transportation.

Florence County approved a 1-cent sales tax for transportation projects in 2006 (discussed in more detail in **Chapter 2**). Over seven years of the sales tax, this funding source is anticipated to generate $148 million in county revenue. A $250 million grant from the State Infrastructure Bank is being combined with this local revenue, generating a total of $398 million that otherwise would not have been available. This additional funding is enabling the county to move forward with several significant roadway capacity projects that would not have received funding in the short-term otherwise.

The sales tax was approved by voters to last seven years. While this funding source provides an excellent mechanism to get high-priority projects implemented, its conclusion in 2014 will leave the FLATS area with a funding shortage. To mitigate this funding shortage, a range of alternative funding sources could be considered. These funding sources will be discussed in greater detail at the end of this chapter. However, once the improvements constructed using the current sales tax begin to be open to the public, voters may be amenable to renewing the sales tax initiative for another seven-year period.

The financial plan consists of two separate analyses. The first scenario represents the constrained plan using the current sales tax as well as current state and federal funding sources. The second scenario analyzes the effect of renewing the 1-cent sales tax, with the extension beginning in 2014 and expected to last through 2021. The current funding levels being provided are not projected to be available for future sales tax renewals. The assumption for this renewal is that 50 cents of SIB funding will be contributed for every 1 dollar generated locally. The current sales tax has approximately 41% of its total funding devoted to projects within the FLATS area. To maintain consistency, this percentage would be assumed to be carried forth into the renewal. When all of these items are considered, the sales tax and accompanying SIB funding would generate approximately $12.5 million annually for the FLATS area and approximately $31 million per year over the entire Florence County area, assumed to be applied entirely toward transportation. Within the sales tax, 40% of funding would be dedicated to highway capital projects, 25% would be dedicated to highway maintenance and paving, 15% would be dedicated to bicycle and greenway funding, 5% would be dedicated to pedestrian funding, and 15% would be dedicated to capital transit funds. These two scenarios are outlined in detail through this chapter.

It is important to note that the alternative scenario studied in this chapter represents a hypothetical sales tax renewal. The assumptions used to develop this hypothetical renewal are different than those being employed in the current Florence County Sales Tax. If a renewal of the one-cent sales tax is considered, the years of implementation and the funding allocation assumptions will need to be analyzed further by Florence County policymakers and staff.

Table 10.1 - 2035 LRTP Revenue Forecast Current Funding Methods Only						
Period	**Highway**	**Transit Capital**	**Transit Operations**	**Pedestrian/ Bicycle**	**Highway Maintenance**	**Totals**
2009-2020	177,510,000	47,260,000	14,510,000	450,000	26,510,000	266,250,000
2021-2035	47,040,000	21,700,000	30,990,000	890,000	49,430,000	150,040,000
Totals	224,550,000	68,960,000	45,500,000	1,340,000	75,940,000	416,290,000

Table 10.2 - 2035 LRTP Costs Current Funding Methods Only						
Period	**Highway**	**Transit Capital**	**Transit Operations**	**Pedestrian/ Bicycle**	**Highway Maintenance**	**Totals**
2009-2020	177,990,000	47,260,000	14,510,000	450,000	26,510,000	266,730,000
2021-2035	46,550,000	21,700,000	30,990,000	890,000	49,430,000	149,550,000
Totals	224,540,000	68,960,000	45,500,000	1,340,000	75,940,000	416,280,000

Table 10.3 - 2035 LRTP Revenue Forecast Sales Tax Renewal Included						
Period	**Highway**	**Transit Capital**	**Transit Operations**	**Pedestrian/ Bicycle**	**Highway Maintenance**	**Totals**
2009-2020	210,570,000	59,660,000	14,510,000	16,980,000	47,180,000	348,900,000
2021-2035	49,580,000	22,650,000	30,990,000	2,160,000	51,020,000	156,400,000
Totals	260,150,000	82,310,000	45,500,000	19,140,000	98,200,000	505,300,000

Table 10.4 - 2035 LRTP Costs Sales Tax Renewal Included						
Period	**Highway**	**Transit Capital**	**Transit Operations**	**Pedestrian/ Bicycle**	**Highway Maintenance**	**Totals**
2009-2020	209,800,000	59,660,000	14,510,000	16,980,000	47,180,000	348,130,000
2021-2035	50,340,000	22,650,000	30,990,000	2,160,000	51,020,000	157,160,000
Totals	260,140,000	82,310,000	45,500,000	19,140,000	98,200,000	505,290,000

System Costs and Revenues

Tables 10.1 and **10.2** show the forecasted revenues and costs for the *2035 LRTP*, assuming the continuation of current state and federal funding levels, and the termination of the sales tax revenue after 2014. Funding is divided to reflect a 2020 interim year and a 2035 final plan year. Highway capital projects, highway maintenance projects, bicycle and pedestrian, transit operations, and transit capital each are divided into individual costs and revenues. These tables indicate that using current funding level estimates, total projected overall revenue during the planning period would be approximately $416.29 million. After considering the estimated costs for all modes, the total cost over the planning period would be approximately $416.28 million.

Tables 10.3 and **10.4** show the forecasted revenues and costs for the LRTP, incorporating the proposed sales tax renewal discussed in the previous section. With this additional funding source, revenues rise over $89 million to approximately $505.30 million over the life of the plan. With the supplementary sales tax revenue, additional projects can be added to all of the modes, resulting in a total cost of approximately $505.29 million.

Highway Funding

Tables 10.5 and **10.6** reflect the proposed costs and revenues for highway projects with current funding sources and with the renewal of the 1-cent sales tax, respectively. The costs and revenues are broken up between highway capital projects and maintenance. With the sales tax renewal, an estimated additional $57.9 million will be available for highway capital and maintenance projects within the FLATS area in the funded plan.

Table 10.5 - Highway Costs and Revenues
Current Funding Methods Only

	Costs			Revenue			
Period	Highway	Maintenance	Total	Highway	Maintenance	Total	Difference
2009-2020	177,990,000	26,510,000	204,500,000	177,510,000	26,510,000	204,020,000	-480,000
2021-2035	46,550,000	49,430,000	95,980,000	47,040,000	49,430,000	96,470,000	490,000
Totals	224,540,000	75,940,000	300,480,000	224,550,000	75,940,000	300,490,000	10,000

Table 10.6 - Highway Costs and Revenues
Sales Tax Renewal Included

	Costs			Revenue			
Period	Highway	Maintenance	Total	Highway	Maintenance	Total	Difference
2009-2020	209,800,000	47,180,000	256,980,000	210,570,000	47,180,000	257,750,000	770,000
2021-2035	50,340,000	51,020,000	101,360,000	49,580,000	51,020,000	100,600,000	-760,000
Totals	260,140,000	98,200,000	358,340,000	260,150,000	98,200,000	358,350,000	10,000

Maintenance Funding

Maintenance funding in the FLATS region primarily is used for roadway maintenance and paving of dirt roads, though pedestrian and bicycle facilities also are maintained with these funds. Maintenance currently is funded using C-funds based on the county gas tax collections. These monies are distributed to resurfacing and maintenance projects throughout Florence and Darlington County. In Florence County, approximately $160,000 per month is being generated through this funding source. For the purposes of this plan, 40% of this total amount is assumed to be allocated to areas within the FLATS MPO. This funding source is not expected to increase. Instead, it is shown here as keeping pace with inflation.

The proposed sales tax renewal would have 25% of its funds dedicated to maintenance and paving projects. This funding source may be applied to projects such as the improvements to the freight routes identified in **Chapter 8**, adding shoulders and repaving critical areas. This funding source may also be applied for the paving of rural roads or maintenance of critical roadways and shoulder facilities within the region.

Projecting these funding sources through the 2035 horizon year of the LRTP, the total maintenance funding available for the region totals approximately $76 million. However, when the sales tax renewal is added, this amount increases substantially to $98 million. In each scenario, the maintenance costs generated annually are assumed to equal the revenue available. The sales tax renewal scenario would allow a more aggressive maintenance schedule to be pursued, resulting in better quality roads, freight routes, bicycle facilities, and sidewalks across the region.

Capital Highway Funding

As discussed in **Chapter 4**, funding for highway projects in the FLATS region consists of SCDOT guideshare funding as well as the 1-cent sales tax for Florence County enacted in 2006. At its outset, the existing sales tax was devoted entirely toward the construction of six projects, five of which are partially or fully contained within the FLATS area. With regard to the monetary value, approximately 41% of these projects are located within the FLATS area. Between 2009 and 2014, the existing sales tax and corresponding SIB grant is anticipated to generate approximately $160 million in the FLATS area, which will be entirely put toward the identified projects. It is anticipated that the US 301 Bypass Extension may not be fully funded through this sales tax. After considering the funding levels available, it is assumed that $50 million of this project can be funded using current sales tax and matching SIB grant funding. The remainder of this project (approximately $23 million in current-year dollars) will be designated as a priority and funded through other means.

The FLATS MPO area is receiving an annual guideshare revenue amount of $2.3 million according to the current TIP. This number was slightly diminished in 2009 to account for a negative balance the previous year. Based on trends observed on a national and state level, this amount is not expected to grow at a rate that outpaces inflation. The FLATS MPO also has an annual debt service amount between 2009 and 2025 to pay off the balance of the efforts undertaken through the "27 in 7" program. With this in mind, approximately $17 million in guideshare funding will be available in the FLATS between 2009 and 2020. Approximately $47 million is anticipated to be available between 2020 and 2035. For more information on the STIP, please visit http://www.scdot.org/inside/stip.shtml.

As a part of the revenue analysis, the proposed sales tax renewal was also considered. Forty percent of the total funding that would be made available through this sales tax renewal and assumed SIB grant funding would be allocated to capital highway projects. Between 2014 and 2021, this additional funding source is assumed to generate approximately $35.6 million for highway capital improvements within the FLATS area.

Once the funding levels have been established, the next step is to consider what needs to be filled within the two horizon year periods of the plan. To do this, the evaluation matrix and recommendations shown in **Chapter 5** have been consulted. Proposed project recommendations were analyzed to determine social and environmental conditions as well as public feedback and transportation network effects. While it would be ideal to implement all of these projects, only a portion can be accommodated in the funded plan. As a result, higher rated projects were considered for implementation prior to lower rated projects.

The following tables and figures divide the projects in the evaluation matrix into 2020 and 2035 funded horizon years and a vision plan. **Tables 10.7**, **10.8**, and **10.9** show projects for the current funding methods scenario during each of these three horizons. The map displayed as **Figure 10.1** shows the highway projects included as a part of this scenario, organized by funding horizon year. **Tables 10.10**, **10.11**, and **10.12** include highway projects funded using current methods as well as the renewed sales tax initiative before 2020, 2035, or unfunded in the vision, respectively. **Figure 10.2** shows the highway projects included as a part of this scenario.

The $35.6 million generated for capital highway projects from the sales tax renewal would allow the completion of the Bentree Lane/Holly Circle widening project and the Five Points Roundabout within the 2020 horizon year, and the widening of Radio Drive/Ebenezer Road by 2035. The cost of capital highway projects remaining in the vision plan is reduced from $273.6 million to $210.8 million.

Table 10.7 - Roadway Project Cost Estimates, 2020 Horizon Year, Current Funding Methods Only

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Horizon Cost (inflated)	2040 Horizon Cost (inflated)	Vision Cost (inflated)
Operational/Design Improvements														
A2	N Cashua Drive	W Palmetto Street (US 76) to Lucas Street (US 52): Use access management to improve mobility and safety	Varies	Varies	N/A	N/A	$ 3,125,000.00	$ 3,517,215.03	2013	4	1	$ 3,517,000		
A4	E Cheves Street	From S Church Street to E Palmetto Street (US 76): Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 500,000.00	$ 597,026.15	2015	6	1	$ 597,000		
A5	W Darlington Street	From N Cashua Drive to N Irby Street (US 52): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 875,000.00	$ 1,044,795.76	2015	6	1	$ 1,045,000		
A13	Ebenezer Road	From Hoffmeyer Road to Radio Drive: Use access management to improve mobility and safety	2	None	N/A	N/A	$ 875,000.00	$ 1,108,423.82	2017	8	1	$ 1,108,000		
A7	Five Points Intersection	Five Points Intersection: Use access management to improve mobility and safety	N/A	N/A	N/A	N/A	$ 500,000.00	$ 597,026.15	2015	6	1	$ 597,000		
A10	Howe Springs Road	From Pamplico Highway (SC 51) to S Irby Street (US 52): Use access management overlay to guide development	2	None	N/A	N/A	$ -	$ -	2012	3	1	$ -		
A8	Williston Road (SC 327)/ Freedom Boulevard	From I-95 to S Irby Street (US 52): Use access management overlay to guide development	2	None	N/A	N/A	$ -	$ -	2012	3	1	$ -		
Expand Existing/New Location														
E2	S Cashua Drive	From Second Loop Road to Knollwood Drive: Widen to 5-lanes with a two-way left-turn lane	2	None	5	TWLT	$ 11,500,000.00	$ 11,500,000.00	2015	6	1	$ 11,500,000		
E15*	Pine Needles Road	From Southborough Road to Ebenezer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 17,676,768.00	$ 17,676,768.00	2011	2	1	$ 17,676,768		
E16*	SC 51/ Pamplico Highway	From E Howe Springs Road to Kate's Garden Lane: Widen to 4-lanes with a median	2	None	4	Grass	$ 25,792,990.13	$ 25,792,990.13	2014	5	1	$ 25,792,990		
E19*	TV Road/Irby Street	From I-95 to Wilson Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 34,519,290.00	$ 34,519,290.00	2014	5	1	$ 34,519,290		
E20*	US 76/Palmetto Street	From E Main Street to I-95: Widen to 4-lanes with a median	2	None	4	Grass	$ 31,641,621.00	$ 31,641,621.00	2014	5	1	$ 31,641,621		
E21-a*	US 301 Bypass (Proposed)	From Palmetto Street (US 76) to S Irby Street (US 52): Construct a 4-lane roadway with a median - Phase 1	Varies	None	4	Grass	$ 73,464,146.00	$ 73,464,146.00	2014	5	1	$ 50,000,000		

* = Funded via current Florence County sales tax funds

Table 10.8 Roadway Project Cost Estimates, 2035 Horizon Year, Current Funding Methods Only

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Cost	2040 Cost	Vision Cost
Operational/Design Improvements														
A6	David H McLeod Boulevard	From I-95 northbound ramps to Woody Jones Boulevard: Use access management to improve mobility and safety	6	Grass	N/A	N/A	$ 625,000.00	$ 891,100.55	2021	12	2		$ 891,000	
A9	Hoffmeyer Road	From N Ebenezer Road to S Cashua Drive: Use access management to improve mobility and safety	5	TWLT	N/A	N/A	$ 1,250,000.00	$ 2,066,059.54	2026	17	2		$ 2,066,000	
A11	McIver Road (Darlington County)	From Charleston Road to I-95 (Darlington County): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 750,000.00	$ 1,395,220.93	2030	21	2		$ 1,395,000	
Expand Existing/New Location														
E9	Bentree Lane/Holly Circle	From David H McLeod Boulevard (I-20 Bus) to Second Loop Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 3,185,000.00	$ 4,541,048.42	2021	12	2		$ 4,541,000	
E21-b	US 301 Bypass (Proposed)	From Palmetto Street (US 76) to S Irby Street (US 52): Construct a 4-lane roadway with a median - Phase 2	Varies	None	4	Grass	$ 23,464,146.00	$ 37,653,066.17	2025	16	2		$ 37,653,000	

Table 10.9 Roadway Project Cost Estimates, Vision Plan, Current Funding Methods Only

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Cost	2040 Cost	Vision Cost
Operational/Design Improvements														
A1	Alligator Road	From Knollwood Road to S Irby Street (US 52): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 1,875,000.00	$ 4,164,916.89	2036	27	3			$ 4,165,000
A3	Charleston Road	From I-95 to Pocket Road (Darlington County): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 1,875,000.00	$ 4,164,916.89	2036	27	3			$ 4,165,000
A15	Irby Street (US 52)	From W Lucas Street (US 52) to Alligator Road: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 4,125,000.00	$ 9,162,817.15	2036	27	3			$ 9,163,000
A14	Main Street (Darlington County)/ W Lucas Street (US 52)	From N Ebenezer Road (Darlington County) to N Irby Street: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 2,000,000.00	$ 4,442,578.01	2036	27	3			$ 4,443,000
A16	Palmetto Street (US 76)	From Second Loop Road to Freedom Boulevard: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 3,500,000.00	$ 7,774,511.52	2036	27	3			$ 7,775,000
A12	Second Loop Road/ Pamplico Highway (SC 51)	From W Palmetto Street (US 76) to Howe Springs Road/ Claussen Road: Use access management to improve mobility and safety	5	TWLT	N/A	N/A	$ 3,375,000.00	$ 7,496,850.39	2036	27	3			$ 7,497,000
Expand Existing/New Location														
E1	Brofford Drive Extension*	From Alligator Road to Third Loop Road: Construct a 2-lane, undivided roadway	0	None	2	None	$ 4,979,000.00	$ 11,059,797.96	2036	27	3			$ 11,060,000
E3	W Darlington Street	From N Cashua Drive to Hoffmeyer Road: Widen to 5-lanes with a two-way left-turn lane	2	None	5	TWLT	$ 4,017,000.00	$ 8,922,917.94	2036	27	3			$ 8,923,000
E6	N Ebenezer Road	From Pisgah Road to Main Street (Darlington County - US 52): Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 12,272,000.00	$ 27,259,658.68	2036	27	3			$ 27,260,000
E10	Hoffmeyer Road	From Anderson Farm Road to Timmonsville Highway (Darlington County - SC 340): Widen to 4-lanes with a median	2	None	4	Grass	$ 12,428,000.00	$ 27,606,179.76	2036	27	3			$ 27,606,000
E11	Hoffmeyer Road	From Anderson Farm Road to N Ebenezer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 6,565,000.00	$ 14,582,762.32	2036	27	3			$ 14,583,000
E13	National Cemetery Road	From S Church Street to Stockade Drive: Widen to 4-lanes with a median	2	None	4	Grass	$ 3,211,000.00	$ 7,132,559.00	2036	27	3			$ 7,133,000
E14	Oakland Avenue	From E Lucas Street to Wilson Road: Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 4,030,000.00	$ 8,951,794.69	2036	27	3			$ 8,952,000
E7	Pisgah Road/ Ebenezer Road	From Presbyterian Road to Hoffmeyer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 15,366,000.00	$ 34,132,326.86	2036	27	3			$ 34,132,000
E8	Radio Drive/ Ebenezer Road	From David H McLeod Boulevard (I-20 Bus) to near Industry Boulevard: Widen to 4-lanes with a median	2	None	4	Grass	$ 8,229,000.00	$ 18,278,987.23	2036	27	3			$ 18,279,000
E17	Southborough Road	From N Sally Hill Road (Darlington County) to Pine Needles Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 18,005,000.00	$ 39,994,308.55	2036	27	3			$ 39,994,000
E18	Third Loop Road	From S Marsh Avenue to S Irby Street: Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 5,278,000.00	$ 11,723,963.37	2036	27	3			$ 11,724,000
Intersection or Interchange Improvements														
I1	Five Points Intersection	Five Points Intersection: Construct two-lane roundabout	N/A	N/A	N/A	N/A	$ 12,051,000.00	$ 26,768,753.81	2036	27	3			$ 26,769,000

* = Not currently an eligible project for federal funding. This local project is awaiting study for inclusion into federal eligibility. It is assumed for this plan that the project is deemed eligible for federal funding.

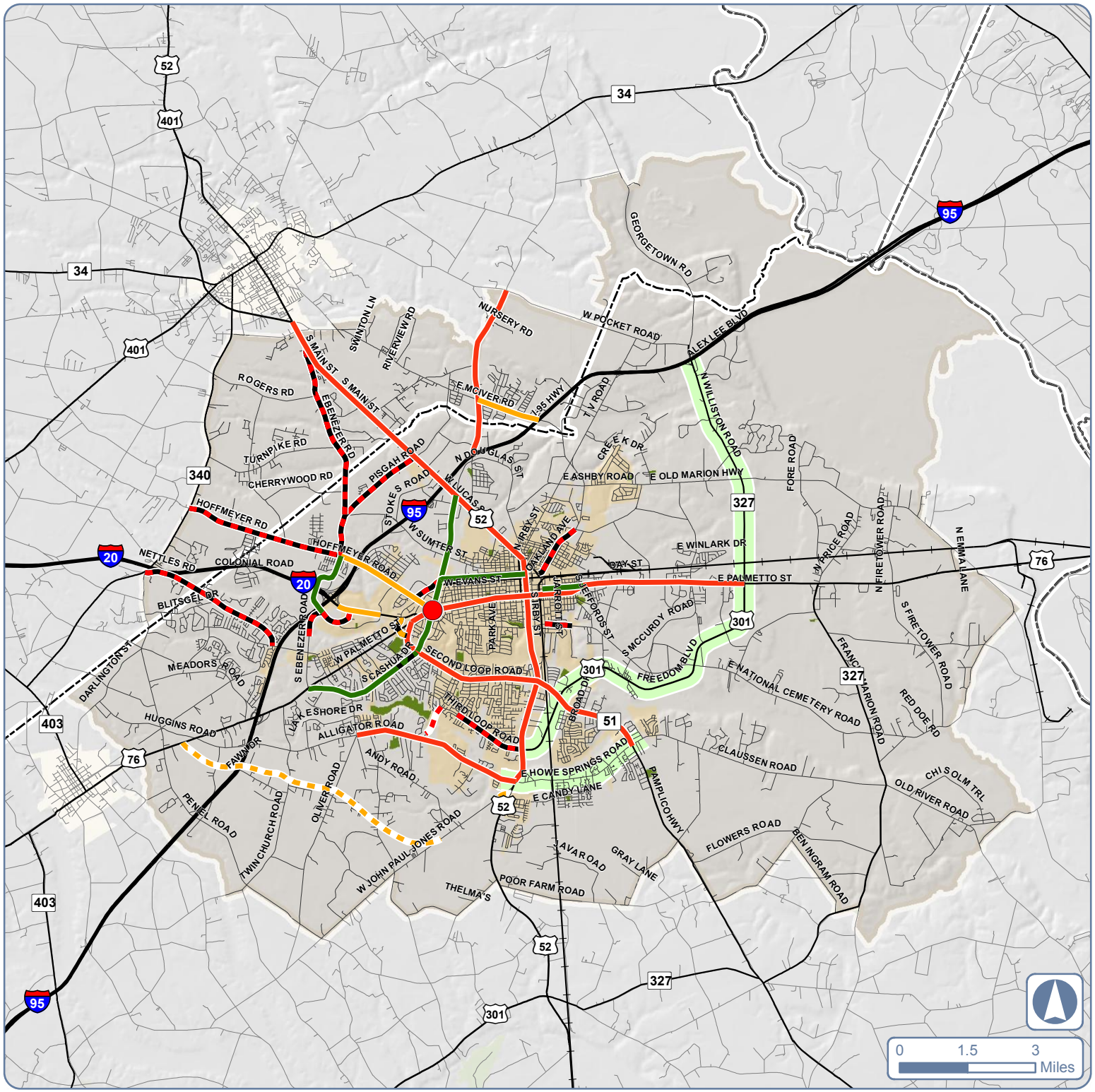


Figure 10.1

Financial Constraint

Current Funding Methods

- Roundabout (Vision)

2020 Project

- Access Management
- Widening
- New Location

2035 Project

- Access Management
- Widening
- New Location

Vision Project

- Access Management
- Widening
- New Location

Access Management Overlay

- 2020

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Table 10.10 - Roadway Project Cost Estimates, 2020 Horizon Year, Sales Tax Renewal Included

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Horizon Cost (inflated)	2040 Horizon Cost (inflated)	Vision Cost (inflated)
Operational/Design Improvements														
A1	Alligator Road	From Knollwood Road to S Irby Street (US 52): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 1,875,000.00	$ 2,306,013.50	2016	7	1	$ 2,306,000		
A2	N Cashua Drive	W Palmetto Street (US 76) to Lucas Street (US 52): Use access management to improve mobility and safety	Varies	Varies	N/A	N/A	$ 3,125,000.00	$ 3,517,215.03	2013	4	1	$ 3,517,000		
A4	E Cheves Street	From S Church Street to E Palmetto Street (US 76): Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 500,000.00	$ 597,026.15	2015	6	1	$ 597,000		
A5	W Darlington Street	From N Cashua Drive to N Irby Street (US 52): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 875,000.00	$ 1,044,795.76	2015	6	1	$ 1,045,000		
A6	David H McLeod Boulevard	From I-95 northbound ramps to Woody Jones Boulevard: Use access management to improve mobility and safety	6	Grass	N/A	N/A	$ 625,000.00	$ 865,146.17	2020	11	1	$ 865,000		
A13	Ebenezer Road	From Hoffmeyer Road to Radio Drive: Use access management to improve mobility and safety	2	None	N/A	N/A	$ 875,000.00	$ 1,108,423.82	2017	8	1	$ 1,108,000		
A7	Five Points Intersection	Five Points Intersection: Use access management to improve mobility and safety	N/A	N/A	N/A	N/A	$ 500,000.00	$ 597,026.15	2015	6	1	$ 597,000		
A10	Howe Springs Road	From Pamplico Highway (SC 51) to S Irby Street (US 52): Use access management overlay to guide development	2	None	N/A	N/A	$ -	$ -	2012	3	1	$ -		
A14	Main Street (Darlington County)/ W Lucas Street (US 52)	From N Ebenezer Road (Darlington County) to N Irby Street: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 2,000,000.00	$ 2,609,546.37	2018	9	1	$ 2,610,000		
A11	McIver Road (Darlington County)	From Charleston Road to I-95 (Darlington County): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 750,000.00	$ 1,007,937.28	2019	10	1	$ 1,008,000		
A16	Palmetto Street (US 76)	From Second Loop Road to Freedom Boulevard: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 3,500,000.00	$ 4,304,558.53	2016	7	1	$ 4,305,000		
A8	Williston Road (SC 327)/ Freedom Boulevard	From I-95 to S Irby Street (US 52): Use access management overlay to guide development	2	None	N/A	N/A	$ -	$ -	2012	3	1	$ -		
Expand Existing/New Location														
E9	Bentree Lane/Holly Circle	From David H McLeod Boulevard (I-20 Bus) to Second Loop Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 3,185,000.00	$ 4,034,662.71	2017	8	1	$ 4,035,000		
E2	S Cashua Drive	From Second Loop Road to Knollwood Drive: Widen to 5-lanes with a two-way left-turn lane	2	None	5	TWLT	$ 11,500,000.00	$ 11,500,000.00	2015	6	1	$ 11,500,000		
E15*	Pine Needles Road	From Southborough Road to Ebenezer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 17,676,768.00	$ 17,676,768.00	2011	2	1	$ 17,676,768		
E16	SC 51/ Pamplico Highway	From E Howe Springs Road to Kate's Garden Lane: Widen to 4-lanes with a median	2	None	4	Grass	$ 25,792,990.13	$ 25,792,990.13	2014	5	1	$ 25,792,990		
E19	TV Road/Irby Street	From I-95 to Wilson Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 34,519,290.00	$ 34,519,290.00	2014	5	1	$ 34,519,290		
E20	US 76/Palmetto Street	From E Main Street to I-95: Widen to 4-lanes with a median	2	None	4	Grass	$ 31,641,621.00	$ 31,641,621.00	2014	5	1	$ 31,641,621		
E21-a	US 301 Bypass (Proposed)	From Palmetto Street (US 76) to S Irby Street (US 52): Construct a 4-lane roadway with a median - Phase 1	Varies	None	4	Grass	$ 73,464,146.00	$ 73,464,146.00	2014	5	1	$ 50,000,000		
Intersection or Interchange Improvements														
I1	Five Points Intersection	Five Points Intersection: Construct two-lane roundabout	N/A	N/A	N/A	N/A	$ 12,051,000.00	$ 16,681,402.38	2020	11	1	$ 16,681,000		

* = Funded via current Florence County sales tax funds

Table 10.11 Roadway Project Cost Estimates, 2035 Horizon Year, Sales Tax Renewal Included

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Cost	2040 Cost	Vision Cost
Operational/Design Improvements														
A3	Charleston Road	From I-95 to Pocket Road (Darlington County): Use access management to improve mobility and safety	2	None	N/A	N/A	$ 1,875,000.00	$ 2,673,301.66	2021	12	2		$ 2,673,000	
Expand Existing/New Location														
E8	Radio Drive/ Ebenezer Road	From David H McLeod Boulevard (I-20 Bus) to near Industry Boulevard: Widen to 4-lanes with a median	2	None	4	Grass	$ 8,229,000.00	$ 13,205,129.29	2025	16	2		$ 13,205,000	
E21-b	US 301 Bypass (Proposed)	From Palmetto Street (US 76) to S Irby Street (US 52): Construct a 4-lane roadway with a median - Phase 2	Varies	None	4	Grass	$ 23,464,146.00	$ 34,457,889.46	2022	13	2		$ 34,458,000	

Table 10.12 Roadway Project Cost Estimates, Vision Plan, Sales Tax Renewal Included

ID	Facility	Description	Existing Laneage	Existing Median	Future Laneage	Future Median	2009 Estimated Total Project Cost with Contingency	Estimated Project Cost (inflated)	Funding Year	# Years Inflation	Horizon	2020 Cost	2040 Cost	Vision Cost
Operational/Design Improvements														
A9	Hoffmeyer Road	From N Ebenezer Road to S Cashua Drive: Use access management to improve mobility and safety	5	TWLT	N/A	N/A	$ 1,250,000.00	$ 2,776,611.26	2036	27	3			$ 2,777,000
A15	Irby Street (US 52)	From W Lucas Street (US 52) to Alligator Road: Use access management to improve mobility and safety	4/5	Varies	N/A	N/A	$ 4,125,000.00	$ 9,162,817.15	2036	27	3			$ 9,163,000
A12	Second Loop Road/ Pamplico Highway (SC 51)	From W Palmetto Street (US 76) to Howe Springs Road/ Claussen Road: Use access management to improve mobility and safety	5	TWLT	N/A	N/A	$ 3,375,000.00	$ 7,496,850.39	2036	27	3			$ 7,497,000
Expand Existing/New Location														
E1	Brofford Drive Extension*	From Alligator Road to Third Loop Road: Construct a 2-lane, undivided roadway	0	None	2	None	$ 4,979,000.00	$ 11,059,797.96	2036	27	3			$ 11,060,000
E3	W Darlington Street	From N Cashua Drive to Hoffmeyer Road: Widen to 5-lanes with a two-way left-turn lane	2	None	5	TWLT	$ 4,017,000.00	$ 8,922,917.94	2036	27	3			$ 8,923,000
E6	N Ebenezer Road	From Pisgah Road to Main Street (Darlington County - US 52): Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 12,272,000.00	$ 27,259,658.68	2036	27	3			$ 27,260,000
E10	Hoffmeyer Road	From Anderson Farm Road to Timmonsville Highway (Darlington County - SC 340): Widen to 4-lanes with a median	2	None	4	Grass	$ 12,428,000.00	$ 27,606,179.76	2036	27	3			$ 27,606,000
E11	Hoffmeyer Road	From Anderson Farm Road to N Ebenezer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 6,565,000.00	$ 14,582,762.32	2036	27	3			$ 14,583,000
E13	National Cemetery Road	From S Church Street to Stockade Drive: Widen to 4-lanes with a median	2	None	4	Grass	$ 3,211,000.00	$ 7,132,559.00	2036	27	3			$ 7,133,000
E14	Oakland Avenue	From E Lucas Street to Wilson Road: Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 4,030,000.00	$ 8,951,794.69	2036	27	3			$ 8,952,000
E7	Pisgah Road/ Ebenezer Road	From Presbyterian Road to Hoffmeyer Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 15,366,000.00	$ 34,132,326.86	2036	27	3			$ 34,132,000
E17	Southborough Road	From N Sally Hill Road (Darlington County) to Pine Needles Road: Widen to 4-lanes with a median	2	None	4	Grass	$ 18,005,000.00	$ 39,994,308.55	2036	27	3			$ 39,994,000
E18	Third Loop Road	From S Marsh Avenue to S Irby Street: Widen to 3-lanes with a two-way left-turn lane	2	None	3	TWLT	$ 5,278,000.00	$ 11,723,963.37	2036	27	3			$ 11,724,000

* = Not currently an eligible project for federal funding. This local project is awaiting study for inclusion into federal eligibility. It is assumed for this plan that the project is deemed eligible for federal funding.

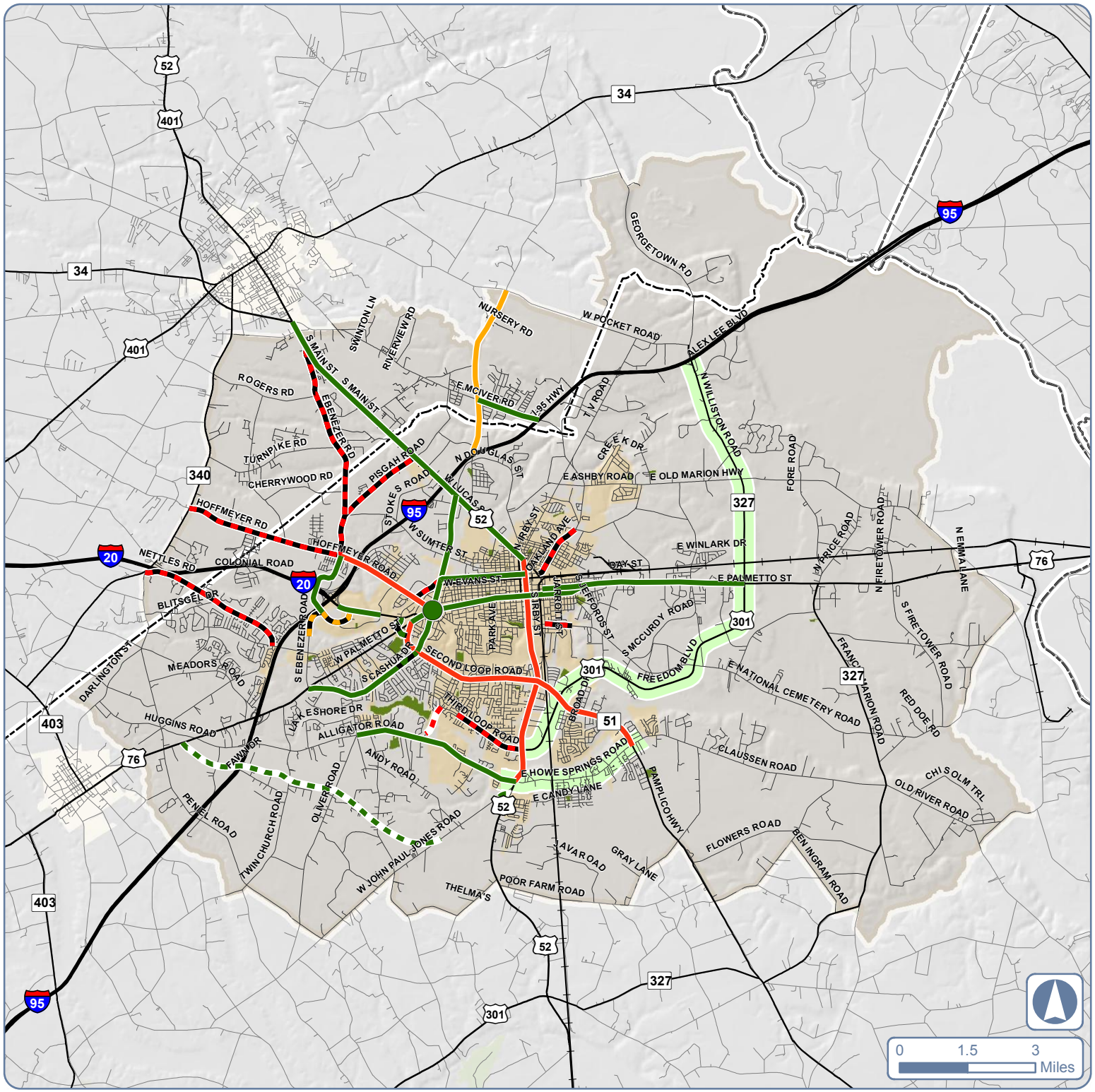


Figure 10.2

Financial Constraint

Sales Tax Renewal

- Roundabout (2020)

2020 Project

- Access Management
- Widening
- New Location

2035 Project

- Access Management
- Widening
- New Location

Vision Project

- Access Management
- Widening
- New Location

Access Management Overlay

- 2020

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Tables 10.13 and **10.14** reflect the proposed costs and revenues for bicycle and pedestrian projects with current funding sources and with the renewed 1-cent sales tax, respectively. Currently, new bicycle and pedestrian facilities in the FLATS region are primarily funded using Enhancement Funds. Enhancement funds are available from the state annually as a part of STP and guideshare funding sources. In order for enhancement funds to be used, these funds require a 20% local match. FLATS has $117,000 allocated for both 2009 and 2010 in the current TIP for bicycle and pedestrian projects using enhancement funds. To be conservative, these funds are assumed to rise with inflation but not to outpace it.

In keeping with the FLATS and Florence County commitment to pursue the complete streets concept in future planning and design, 20% of the funding received through the proposed sales tax renewal for Florence County would be dedicated to bicycle, greenway, and pedestrian projects. 15% of this amount is assumed to be set aside for bicycle facilities and greenways, while 5% would be dedicated to pedestrian facilities. It is assumed that with the projected sales tax revenues and SIB grant monies that over $19 million would be dedicated to bicycle and pedestrian projects within the FLATS area from the 2014-2021 sales tax renewal. This amount greatly outpaces the $1.3 million of federal and state funds projected for the 25-year horizon of this plan. The monies dedicated to bicycle and pedestrian projects through the sales tax renewal clearly would communicate the desire of the Florence area to move to a more bicycle and pedestrian-friendly locale.

Table 10.13 - Pedestrian & Bicycle Costs and Revenues* Current Funding Methods Only

Period	Costs	Revenues	Difference
2009-2020	450,000	450,000	0
2021-2035	890,000	890,000	0
Totals	1,340,000	1,340,000	0

** Maintenance expenses accounted for under roadways.*

Table 10.14 - Pedestrian & Bicycle Costs and Revenues* Sales Tax Renewal Included

Period	Costs	Revenues	Difference
2009-2020	16,980,000	16,980,000	0
2021-2035	2,160,000	2,160,000	0
Totals	19,140,000	19,140,000	0

** Maintenance expenses accounted for under roadways.*

As discussed in **Chapter 6**, a series of on- and off-road bicycle and greenway facilities were recommended for the FLATS area. These recommendations include 3.1 miles of striped bicycle lanes, 46.2 miles of signed routes, 40.6 miles of wide outside lanes or paved shoulders, and 4.9 miles of multi-use paths. To account for pedestrian needs, it is assumed that the member jurisdictions of the FLATS area would like to construct two miles of sidewalk per year. When considering the typical per-mile costs of these facilities, the analysis shows that current funding levels could only construct about 3% of these facilities. However, with the funding from the sales tax renewal, it is estimated that approximately 80% of these facilities could be constructed within the timeframe of this plan.

Transit Funding

Tables 10.15 and **10.16** reflect the proposed costs and revenues for transit capital and operations projects with current funding sources and with the renewed 1-cent sales tax, respectively. PDRTA is currently pursuing funding for several different initiatives from state and federal sources. To better understand the dynamics of transit funding, capital funding is considered separately from operations and maintenance funding.

Table 10.15 - Transit Costs and Revenues
Current Funding Methods Only

	Costs			Revenue			
	Capital	Operations	Total	Capital	Operations	Total	Difference
2009-2020	47,260,000	14,510,000	61,770,000	47,260,000	14,510,000	61,770,000	0
2021-2035	21,700,000	30,990,000	52,690,000	21,700,000	30,990,000	52,690,000	0
Totals	68,960,000	45,500,000	114,460,000	68,960,000	45,500,000	114,460,000	0

Table 10.16 - Transit Costs and Revenues
Sales Tax Renewal Included

	Costs			Revenue			
	Capital	Operations	Total	Capital	Operations	Total	Difference
2009-2020	59,660,000	14,510,000	74,170,000	59,660,000	14,510,000	74,170,000	0
2021-2035	22,650,000	30,990,000	53,640,000	22,650,000	30,990,000	53,640,000	0
Totals	82,310,000	45,500,000	127,810,000	82,310,000	45,500,000	127,810,000	0

Capital Transit Costs and Revenues

In the current TIP, capital funding is designated for PDRTA between 2009 and 2012. On average, capital funds during this time increase an average of 2% annually. To project future capital funding amounts, a 2% annual increase was applied to the TIP funding, beginning in 2016. In addition to these funds, PDRTA is pursuing funding for capital projects such as the Florence Multimodal Terminal, the Marion Park and Ride, a new bus maintenance facility, and new clean fuel low-floor buses. For these larger initiatives, funding is being sought through future federal transportation legislation and through state allocations. Capital transit funds come from several federal and state sources.

The proposed sales tax renewal is assumed to have 15% of its total funding allocated toward transit. For the purposes of this plan, the additional sales tax funding is assumed to be used for capital transit funding purposes. This additional revenue between 2014 and 2021 could allow PDRTA to accelerate some of its large capital projects, and to more quickly develop its desired future network. If the sales tax renewal initiative is pursued, further study should be undertaken to determine the best split between capital and operations funding needs. This funding will also help the FLATS and Florence County areas move toward their vision of complete streets.

The proposed sales tax renewal would add over $13 million to transit revenues between 2014 and 2021. With this funding available, approximately $82 million will be available for capital costs and revenues. Using only current funding methods, approximately $69 million is assumed to be available for capital expenditures.

Transit Operations Funding

On an annual basis, PDRTA has $507,000 in maintenance and operation costs for their fixed-route system for the FLATS area. There is $493,000 in maintenance and operation costs for the demand responsive system for the FLATS area. Beyond 2010, funding levels for maintenance and operation are assumed to increase at a rate of 1% to account for the needs of the growing transit system. These funds are also anticipated to increase with inflation. Over the planning period, a total of $45.5 million in maintenance and operations costs are assumed for the PDRTA system. For more information on PDRTA, see www.pdrta.org.

Transportation Funding Sources

FLATS MPO Funding

The Florence Area Transportation Study receives federal funds for transportation related projects for the FLATS MPO area. Transportation related projects funded by federal dollars for the FLATS MPO area must be considered and approved by the FLATS Policy Committee. The FLATS Policy Committee consists of representatives from the State Legislature, members of Florence County Council, Florence City Council, and the Mayors of Florence and Quinby. All transportation related projects, presented to the FLATS Policy Committee are first examined by the FLATS Study Team for recommendation. The FLATS Study Team consists of technical representatives from various agencies and departments in the area. Projects approved by the FLATS Policy Committee are then presented to SCDOT for final approval. The approved projects must be listed in the FLATS TIP, which is updated on a yearly basis. In addition, these projects are listed in the State TIP.

Federal law requires each state to establish a fiscally constrained STIP. Projects located on a federally-eligible highway must be placed in the STIP to protect their federal eligibility. Before any project in the STIP can move forward to construction, federal law requires that it must undergo extensive review. Besides engineering concerns, the plans for each project must consider environmental mitigation, national security, safety, bicycle and pedestrian needs, and consistence with planned growth and development plans.

Pee Dee COG Funding

The Pee Dee Council of Governments (PDCOG) receives federal money for highway improvement projects outside the FLATS area for Florence and Darlington Counties. Like the FLATS MPO, the PDCOG is required to have a Long Range Transportation Plan (LRTP), with all projects listed in their TIP and the STIP. The majority of funds available to the PDCOG currently are being applied toward debt service for highway projects completed as a result of the "27 in 7" bonding initiative as mentioned earlier in this chapter.

Transit Funding

PDRTA receives federal funds through the FTA programs. As authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users of 2005 (SAFETEA-LU), the FTA provides stewardship of combined formula and discretionary programs totaling more than $10B to support a variety of locally planned, constructed, and operated public transportation systems throughout the United States. Transportation systems typically include buses, subways, light rail, commuter rail, streetcars, monorail, passenger ferry boats, inclined railways, or people movers.

Federal funds awarded to PDRTA are listed in the FLATS TIP. Providing planning assistance to the major mass transit provider in the FLATS area helps the efficiency of the current transportation network by potentially removing traffic from area roadways. FLATS maintains this assistance by providing map books to PDRTA and continuously updating demographic information to them.

Rail Funding

The Department of Homeland Security (DHS) has provided roughly $18 billion in awards to state and local governments for programs and equipment that help to manage security. Through the Transit Security Grants Program (TSGP), DHS has provided $374.7 million to date to 60 of the country's rail mass transit, ferry, and intra-city bus systems in 25 states and the District of Columbia. In addition to this funding, states and localities can, under certain conditions, tap into other Homeland Security Grant Program and Urban Area Security Initiative funds for rail security projects and initiatives.

Airport Funding

The Federal Aviation Administration (FAA) is an agency of the United States Department of Transportation with authority to regulate and oversee all aspects of civil aviation in the U.S. Federal grant funds or federal property transfers for airport purposes are obtained through the FAA. The FAA enforces certain obligations to fund recipients through its Airport Compliance Program.

Alternative Funding Sources

State revenues alone will not sufficiently fund a systematic program to construct transportation projects in the FLATS MPO area. Therefore, jurisdictions within the FLATS region must consider alternative funding measures that could help implement this plan. One alternative funding measure, a 1-cent sales tax, already has been evaluated by Florence County and has been voted into place by its citizens. A potential renewal of these sales tax funds is discussed in detail in this chapter. Other alternative funding measures being considered and applied in areas around the state and the nation are included here.

Impact Fees

Developer impact fees and system development charges provide a funding option for communities looking to fund collector streets and associated infrastructure. They most commonly are used for water and wastewater system connections or police and fire protection services, but recently they have been used to fund school systems and pay for the impacts of increased traffic on existing roads. Impact fees place the costs of new development directly on developers and indirectly on those who buy property in the new developments. Impact fees free other taxpayers from the obligation to fund costly new public services that do not directly benefit them. A few communities in South Carolina have approved the use of impact fees (e.g., Berkeley County, Summerville). The use of impact fees requires special authorization by the South Carolina General Assembly.

Transportation Bonds

Transportation bonds have been instrumental in the strategic implementation of local roadways and non-motorized travel throughout South Carolina. Voters in communities both large and small regularly approve the use of bonds to improve their transportation system. Projects that historically have been funded through transportation bonds include sidewalks, road extensions, new road construction, and streetscape enhancements.

Developer Contributions

Through diligent planning and earlier project identification, regulations, policies, and procedures could be developed to protect future arterial corridors and require contributions from developers when the property is subdivided. These measures would reduce the cost of right-of-way and would in some cases require the developer to make improvements to the roadway that would result in a lower cost when the improvement is actually constructed. To accomplish

this goal, it will take a cooperative effort between local planning staff, SCDOT planning staff, and the development community.

One area where developers can be expected to assist in the implementation of transportation improvements is for new collector streets. Collector streets support the traffic impacts associated with local development. For this reason, developer contributions should be responsible sharing the cost of these improvements.

Oversize Agreement

An oversize agreement provides cost sharing between the city/county and a developer to compensate a developer for constructing a collector street instead of a local street. For example, instead of a developer constructing a 28-foot back-to-back local street, additional funding would be provided by the locality to upgrade the particular cross-section to a 34-foot back-to-back cross section to accommodate bike lanes.

Grant Anticipation Revenue Vehicles (GARVEE) Bonds

GARVEE Bonds can be utilized by a community to implement a desired project more quickly than if they waited to receive state or federal funds. These bonds are let with the anticipation that federal or state funding will be forthcoming. In this manner, the community pays for the project up front, and then receives debt service from the state. GARVEE bonds also are an excellent way to capitalize on lower present-day construction and design costs, thereby finishing a project more quickly and economically than if it was delayed to meet state timelines.

Safe Routes to School

Safe Routes to School receives funding through the federal SAFETEA-LU legislation and provides funding for individual schools to create route plans or develop facilities that create a safer walking and biking environment for their students. South Carolina has a yearly application program for which any school, school district, municipality or other governmental body, or non-profit association may apply.

Bicycle and Pedestrian Funding

Bicycle and pedestrian projects are often eligible for their own funding sources. For instance, the Robert Wood Johnson Foundation funds a grant program called Active Living by Design. The purpose of this program is to provide communities with a small grant to study bicycle, pedestrian, or other healthy living initiatives. There are other such grant programs in existence for bicycle and pedestrian projects, which would help to supplement the funding currently received by these modes. Other funding sources that can or have been used to enhance the existing bicycle and pedestrian network within the FLATS area include the South Carolina Parks, Recreation and Trails grants, Recreation Land Trust grants, City of Florence Hospitality Fund, City of Florence General Fund, and private donations.

Aesthetic Enhancement Funding

Small aesthetic improvements often have a large impact in creating a more pleasing transportation system. SCDOT has two formal programs to help provide an avenue for community involvement in the transportation system. The Adopt-A-Highway program allows individuals or groups to help maintain a part of the highway system. SCDOT's Adopt-An-Interchange program actually provides 80% funding toward landscaping and beautifying an interchange, with only a 20% local match. This initiative is a part of the state's enhancement funding program.

Enhancement Grants

State and federal grants can play an important role in implementing strategic elements of the transportation network. Several grants have multiple applications, including Transportation Enhancement Grants as well as state and federal transit grants. The Enhancement Grant program, established by Congress in 1991 through the Intermodal Surface Transportation Efficiency Act (ISTEA), ensures the implementation of projects not typically associated with the road-building mindset. While the construction of roads is not the intent of the grant, the construction of bicycle and pedestrian facilities is one of many enhancements that the grant targets.

Enhancement funding has already played an important role in enhancing the pedestrian safety and connectivity in the FLATS area. Approximately $700,000 of FLATS enhancement funding was utilized to begin the rail trail connection in the City of Florence. Potential enhancement projects follow the standard FLATS Study Team recommendation and Policy Committee approval to submit to SCDOT. Projects approved by SCDOT for these funds require a government entity as the applicant and a 20% match in funding. In the current 2010-2015 TIP for the FLATS MPO, the Irby Street Gateway project had funding allocated for 2009. Enhancement funds are also projected for use in 2010.

For additional information on alternative funding strategies, please visit the following websites:

GARVEE Bonds
www.fhwa.dot.gov/innovativeFinance/garguid1.htm

Safe Routes to School
www.saferoutesinfo.org/ www.scdot.org/community/saferoutes.shtml

Bicycle and Pedestrian Funding
www.activelivingbydesign.org/
www.walkinginfo.org/funding/sources.cfm

Adopt-A-Highway
www.scdot.org/community/adoptahiway.shtml

Adopt-An-Interchange
www.scdot.org/community/tep_inter.shtml

Enhancement Grants
www.scdot.org/community/tep_app.shtml



Chapter 11

Implementation Plan

Introduction

The success of the *2035 FLATS Long Range Transportation Plan* (*2035 LRTP*) will hinge on the collaboration of local, regional, and state officials with the private sector. The Implementation Plan sets the stage for the successful orchestration of the programs, policies, and facilities recommended throughout the *2035 LRTP*. The core of the Implementation Plan is a series of Action Plan tables that list specific projects, a phasing plan by horizon year, available funding sources, and agencies responsible for implementing the vision. This approach serves two purposes: (1) it provides a blueprint for decision-makers to enable them to track progress and schedule future improvements, and (2) clearly defined action items help the FLATS MPO identify public and private investment opportunities that are healthy, sustainable, and achievable through well-guided transportation and land use policies that encourage quality design and environmental stewardship.

Today's Paradigm Shift

Through the city and county's comprehensive plan updates, a focus on downtown, and renewed interest in transit, the Florence region has begun to shift its approach to land development and investment in transportation infrastructure. This paradigm shift, in part, is the result of the community taking a stand against worsening traffic congestion, rising safety concerns, and unsustainable land development. But reversing the trends in land use and transportation will require education and perseverance. Property owners historically have been reluctant to reinvest in their property, resulting in poorly designed areas that stand in stark contrast to the vibrant downtown Florence once enjoyed. Local officials and the community at large now recognize the quality of private investment in both design and orientation greatly impacts the attractiveness of the area. With transportation as a catalyst, successful and sustainable development can emerge through the cooperative effort of public and private ventures.

Action Plan

The implementation strategies in this chapter recognize the effect improvements have on travel safety and mobility, commerce, development patterns, and the visual appeal of the area. Some improvements will be implemented through the development review process, while major infrastructure improvements likely will require state and federal funding as well as self-financing mechanisms. Funding for these major projects is limited and statewide competition for it spirited. The purpose of the Action Plan is to recognize these challenges and suggest strategies and resources to address each challenge. With this in mind, the Action Plan identifies next step items for each category described in detail throughout this report. Ultimately, these recommendations can be administered concurrently or as priorities and regional initiatives present themselves.

The following series of tables (**Tables 11.1 to 11.4**) represent specific action items for each modal component (highways, bicycle & pedestrian, transit, freight, and aviation) as well as considerations for land use. These tables are based on the Findings and Recommendations presented in each element of the *2035 LRTP*. The timeframe for improvements coincides with the horizon years introduced in the Financial Plan (**Chapter 10**) — Short-Term (2010 to 2020) Long-Term (2021 to 2035), and Vision (beyond 2035). It should be emphasized that the Action Plan assumes the reauthorization of the Sales Tax Referendum. Also, projects listed in the Vision Plan are not fiscally or financially constrained. However, these projects are included in the recommendations to allow decision-makers the flexibility to adjust the regional transportation priorities on an annual basis.



Table 11.1 – Action Plan Matrix — General Action Items		
Action Item / Strategic Direction	**Timeframe**	**Responsible Party**
Adopt the *2035 FLATS Long Range Transportation Plan.* As a part of FWHA's SAFETEA-LU requirements, federal funds cannot be allocated to a local highway project without it being a part of a mutually adopted, financially-constrained plan.	2012	FLATS/SCDOT
Apply the recommendations of this plan during the development review process. Use this plan as a tool to review proposed development projects and plans as they are implemented within the Florence region.	Ongoing – Initiate immediately	City/County/SCDOT
Work collaboratively with the City of Florence, Florence County, Darlington County, the Town of Quinby, SCDOT, and local stakeholders to secure funding and implement the recommendations of the *2035 LRTP*.	Ongoing – Initiate immediately	City/County/ FLATS/SCDOT
Use the future collector street network as a tool to review proposed development projects and plans as future collector streets are located.	Ongoing – Initiate immediately	City/County/FLATS
Encourage access management policies that create a balance between the need for access to the transportation system and the desire to protect the mobility of major corridors.	Ongoing – Initiate immediately	FLATS
Work with the real estate community to increase public awareness of proposed highways (i.e., US 301 Bypass, etc.) and future street connections through enhanced signage – i.e., "Future Street Extension".	2012	City/County/FLATS
Require developments to reserve right-of-way for, and in some cases construct future collector streets.	2012	City/County/FLATS
Proactively support bicycle and pedestrian provisions in all SCDOT roadway improvements.	2012	FLATS/SCDOT
Adopt collector street spacing standards (**Table 5.1**) and median opening, driveway, and signal spacing standards as a part of the city and county development code.	2013	City/County
Adopt policies and dedicating funding to help construct traffic calming measures on existing streets.	2014	City/County/FLATS
Proactively pursue the reauthorization of the Florence County One-Cent Sales Tax Referendum in 2014.	2014	Florence County

Table 11.2 – Action Plan Matrix — Highway Action Items		
Action Item / Strategic Direction	**Timeframe**	**Responsible Party**
Committed Projects Action Items		
Pine Needles Road — Southborough Road to Ebenezer Road — Widen to 4-lanes with a median.	2011	County/SCDOT
Palmetto Street (US 76) — I-95 to Main St in Timmonsville — Widen to 4-lanes with a median.	2014	County/SCDOT
TV Road/Irby Street — Wilson Road to I-95 — Widen to 4-lanes with a median.	2014	County/SCDOT
Pamplico Highway (SC 51) — E Howe Springs Road to Kate's Garden Lane — Widen to 4-lanes with a median.	2014	County/SCDOT
US 301 Bypass — Southern Bypass connection from Palmetto Street (US 76) to Irby Street (US 52) – Widen Alligator Road or build a new location facility connecting with John Paul Jones, creating a 4-lane facility with a median.	2022	County/SCDOT
Short-Term (2010 to 2020) Action Items		
Williston Road (SC 327)/Freedom Boulevard — I-95 to S Irby Street (US 52) — Adopt access management overlay.	2012	FLATS/SCDOT
Howe Springs Road — Pamplico Highway (SC 51) to S Irby Street (US 52) — Adopt access management overlay.	2012	FLATS/SCDOT
N Cashua Drive — W Palmetto Street (US 76) to Lucas Street (US 52) — Apply access management strategies.	2013	FLATS/SCDOT
S Cashua Drive — Second Loop Road to Knollwood Drive — Widen to 5-lanes with a two-way left-turn lane.	2015	FLATS/SCDOT
E Cheves Street — S Church Street to E Palmetto Street (US 76) — Apply access management strategies.	2015	FLATS/SCDOT
W Darlington Street — N Cashua Drive to N Irby Street (US 52) — Apply access management strategies.	2015	FLATS/SCDOT
Five Points Intersection — Apply access management strategies.	2015	FLATS/SCDOT
Alligator Road — Knollwood Road to S Irby Street (US 52) — Apply access management strategies.	2016	FLATS/SCDOT
Palmetto Street (US 76) — Second Loop Road to Freedom Boulevard — Apply access management strategies.	2016	FLATS/SCDOT

Short-Term (2010 to 2020) Action Items (continued)		
Bentree Lane/Holly Circle — David H McLeod Boulevard (I-20 Bus) to Second Loop Road — Widen to 4-lanes with a median.	2017	FLATS/SCDOT
Ebenezer Road — Hoffmeyer Road to Radio Drive — Apply access management strategies.	2017	FLATS/SCDOT
Main Street (Darlington County)/ Lucas Street (US 52) — N Ebenezer Road (Darlington County) to N Irby Street — Apply access management strategies.	2018	FLATS/SCDOT
McIver Road (Darlington County) — Charleston Road to I-95 — Apply access management strategies.	2019	FLATS/SCDOT
David McLeod Boulevard — I-95 northbound ramps to Woody Jones Boulevard — Apply access management strategies.	2020	FLATS/SCDOT
Five Points Intersection — Construct two-lane roundabout.	2020	FLATS/SCDOT
Long-Term (2021 to 2035) Action Items		
Charleston Road — I-95 to Pocket Road (Darlington County) — Apply access management strategies.	2021	FLATS/SCDOT
Radio Drive/Ebenezer Road — David H McLeod Boulevard (I-20 Bus) to near Industry Boulevard — Widen to 4-lanes with a median.	2025	FLATS/SCDOT

Vision Plan (beyond 2035) Action Items		
Brofford Drive Extension — Alligator Road to Third Loop Road — Construct a 2-lane, undivided roadway.	2036	FLATS/SCDOT
W Darlington Street — N Cashua Drive to Hoffmeyer Road — Widen to 5-lanes with a two-way left-turn lane.	2036	FLATS/SCDOT
N Ebenezer Road — Pisgah Road to Main Street (Darlington County – US 52) — Widen to 3-lanes with a two-way left-turn lane.	2036	FLATS/SCDOT
Hoffmeyer Road — Anderson Farm Road to Timmonsville Highway (Darlington County – SC 340) — Widen to 4-lanes with a median.	2036	FLATS/SCDOT
Hoffmeyer Road — Anderson Farm Road to N Ebenezer Road — Widen to 4-lanes with a median.	2036	FLATS/SCDOT
Hoffmeyer Road — N Ebenezer Road to S Cashua Drive — Apply access management strategies.	2036	FLATS/SCDOT
Irby Street (US 52) — W Lucas Street (US 52) to Alligator Road — Apply access management strategies.	2036	FLATS/SCDOT
National Cemetery Road — S Church Street to Stockade Drive — Widen to 4-lanes with a median.	2036	FLATS/SCDOT
Oakland Avenue — E Lucas Street to Wilson Road — Widen to 3-lanes with a two-way left-turn lane.	2036	FLATS/SCDOT
Pisgah Road/Ebenezer Road— Presbyterian Road to Hoffmeyer Road — Widen to 4-lanes with a median.	2036	FLATS/SCDOT
Second Loop Road/Pamplico Highway (SC 51) — W Palmetto Street (US 76) to Howe Springs Road/ Claussen Road — Apply access management strategies.	2036	FLATS/SCDOT
Southborough Road — N Sally Hill Road (Darlington County) to Pine Needles Road — Widen to 4-lanes with a median.	2036	FLATS/SCDOT
Third Loop Road — S Marsh Avenue to S Irby Street — Widen to 3-lanes with a two-way left-turn lane.	2036	FLATS/SCDOT

Table 11.3 – Action Plan Matrix — Multimodal Action Items		
Action Item / Strategic Direction	**Timeframe**	**Responsible Party**
Bicycle & Pedestrian Action Items		
Implement the recommended on-street bicycle network that includes striped bicycle lanes, wide outside lanes/paved shoulders, and signed bike routes as shown in **Figure 6.1**.	Ongoing	City/County/ FLATS/SCDOT
Construct the greenway (off-street) network as shown in **Figure 6.1**.	Ongoing	City/County/ FLATS/SCDOT
Utilize the representative pedestrian nodes shown in **Figures 6.3 to 6.7** for guidance as decisions are made regarding bicycle and pedestrian facilities at various activity nodes in the region.	Ongoing	City/County/ FLATS/SCDOT
Prioritize sidewalk construction to eliminate gaps in the current sidewalk network and connect existing downtown pedestrian facilities to key destinations in the area.	2012	City/County/FLATS
Create a route signage plan.	2012	City/County/FLATS
Secure additional Safe Routes to School funding to promote bicycling and walking and bridge gaps in the network near schools.	2012	City/County/ FLATS/SCDOT
Implement the various policies developed as part to the ***2004 Bikeway Master Plan***.	2013	City/County/ FLATS/SCDOT
Develop traffic calming plans for unsafe roadways.	2013	City/County/ FLATS/SCDOT
Allocate funds to install bicycle racks or more advanced bicycle parking facilities at high priority locations.	2013	City/County/ FLATS/SCDOT
Install "Share the Road" signs on identified routes.	2013	City/County/ FLATS/SCDOT
Partner with local bicycle clubs (such as Pedal Pack of the Pee Dee) to launch education and encouragement programs.	2013	City/County/ FLATS/SCDOT

Bicycle & Pedestrian Action Items		**(continued)**
Assess railing heights of bridges along routes with bicycle facilities as identified in **Figure 6.1** to determine if they meet AASHTO standards.	2014	City/County
Introduce shared lane "sharrow" symbols on appropriate downtown streets.	2014	City/County/ FLATS/SCDOT
Partner with PDRTA to coordinate improvements to the pedestrian and bicycle network with existing and future transit needs.	2015	City/County/ FLATS/SCDOT
Consider enhanced signage at intersections with identified conflicts between motorists and cyclists/pedestrians.	2015	City/County/ FLATS/SCDOT
Transit Action Items		
Implement the targeted marketing campaign outlined in the marketing plan.	Ongoing	FLATS/ PDRTA
Coordinate future fixed routes with land use development patterns.	Ongoing – Initiate immediately	City/County/ FLATS/ PDRTA
Improve the safety and security of the transit system.	Ongoing – Initiate immediately	PDRTA
Locate civic land uses within walking distance of public transit.	Ongoing	City/County/PDRTA
Enhance bus stops.	2012	City/FLATS/PDRTA
Develop a phased implementation plan with detailed action items based on the marketing strategies outlined in the PDRTA Marketing Plan.	2012	FLATS/ PDRTA
Expand opportunities for residents throughout the Pee Dee region to participate in carpools and vanpools.	2013	PDRTA
Utilize the Comprehensive Transit Master Plan to determine if modifications to the current hub and spokes layout are necessary.	2013	PDRTA
Identify strategic locations for park-and-ride facilities.	2014	City/County/ FLATS/ PDRTA

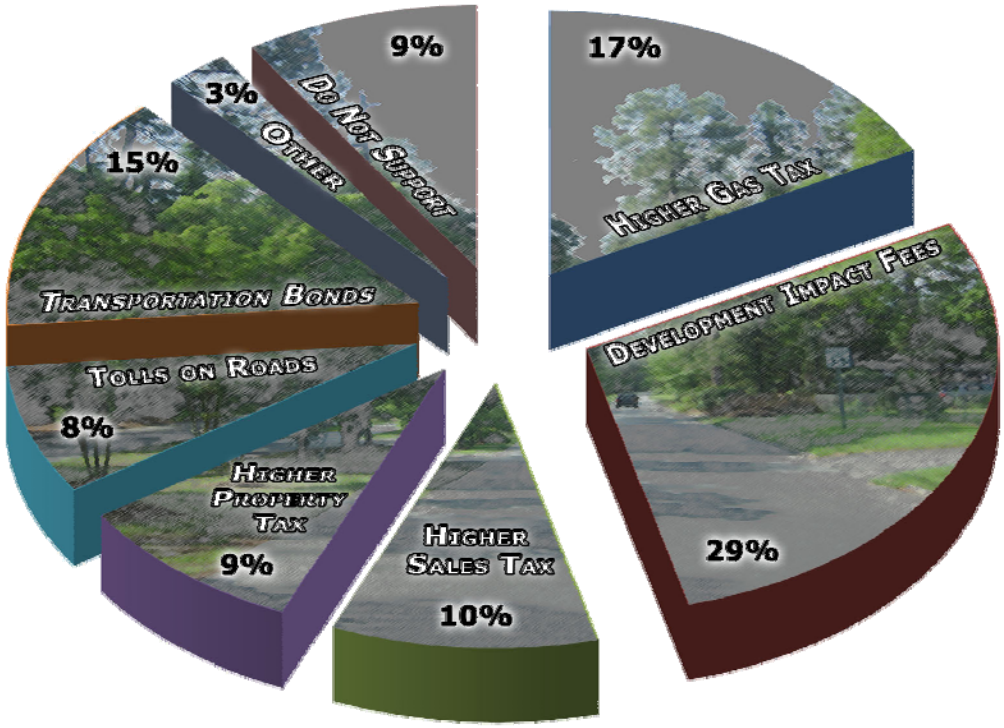
Transit Action Items		**(continued)**
Enhance the commuter fixed route service currently offered by PDRTA.	2015	PDRTA
Develop strategies to transition paratransit riders to the fixed route system.	2015	PDRTA
Coordinate bus stop upgrades with improvements to the pedestrian and bicycle network.	2016	City/County/PDRTA
Construct the multimodal transportation center in downtown Florence.	2017	City of Florence/PDRTA
Construct a facility in Marion that consolidates the PDRTA office and transfer center.	2018	PDRTA
Freight & Aviation Action Items		
Provide for the secure movement of goods within and through the FLATS MPO area.	Ongoing – Initiate immediately	FLATS/SCDOT
Prioritize projects in a way that gives extra weight to initiatives that promote intermodal freight and goods movement.	Ongoing – Initiate immediately	FLATS/SCDOT
Establish an Oversight Committee to provide feedback and strategic direction for freight and aviation at the regional level.	2012	FLATS
Implement the recommended freight network as shown in **Figure 8.2**.	2013	FLATS/SCDOT
Develop design guidelines for freight infrastructure (roadways, intersections, and rail crossings).	2014	FLATS/SCDOT
Develop a regional freight plan that identifies corridors and conflict points for freight activity.	2014	FLATS/SCDOT
Enhance safety for freight providers and the general public by identifying and prioritizing locations for improvements.	2015	FLATS/SCDOT
Implement ITS improvements that deliver on-time information to freight carriers and the general public.	2016	FLATS/SCDOT

Table 11.4 – Action Plan Matrix — Land Use Action Items		
Action Item / Strategic Direction	**Timeframe**	**Responsible Party**
Land Use Action Items		
Continue to support local initiatives that result in a more efficient, livable transportation system (street connectivity, complete streets, etc.).	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Promote development design to manage access and reduce congestion levels on major roadways.	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Partner with local, regional, state, and federal agencies that share a common vision for implementing smart growth development.	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Respect local government control and their desire to implement smart growth initiatives when programming improvements to the regional transportation system.	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Understand that "one size does not fit all" for implementing smart growth development.	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Reinvest in existing infrastructure and promote infill development or redevelopment instead of continued sprawl out from the core of the community.	Ongoing – Initiate immediately	City/County/FLATS /SCDOT
Seek state and federal funding supportive of activities to improve the quality of development and protect human health and the environment.	Ongoing	City/County/FLATS
Develop livable street design guidelines for major arterial and collector streets (begin with endorsement of the cross-section design recommendations in this report and expand to include the ITE/CNU recommendations).	2012	City/County/FLATS
Establish standards to increase connectivity within and between developments.	2012	City/County/FLATS
Develop design guidelines that establish development priorities and core design principles for implementing smart growth initiatives.	2013	City/County/FLATS
Prepare best development practices and conduct design summits to educate and encourage developers to incorporate these principles into their land use planning and development process.	2014	City/County/FLATS
Prioritize projects in the capital improvements plan that influence the positive timing and location of new development.	2014	City/County/FLATS

Funding Opportunities

The development of a comprehensive transportation network can occur through incremental adoption of local policies and programs supplemented by state programs and assistance from the private sector. Obviously, the success of the Sales Tax program cannot be understated. It is through the efforts of the local transportation decision-makers that these multimodal transportation projects have moved forward much faster than what could have occurred using traditional funding programs (i.e., gas tax, etc.).

As transportation priorities change, it will be important for the City of Florence, the Town of Quinby, Florence County, Darlington County, and the FLATS MPO to identify funding resources to implement the recommendations of this plan. The public questionnaire asked participants to identify funding strategies they would support to implement recommendations in the plan. The result of this question is shown in the pie chart to the right. Funding strategies included gas taxes, impact fees on developments, sales taxes, property taxes, tolls, and transportation bonds. State revenues alone will not sufficiently fund a systematic program of transportation projects within the study area. Therefore, the MPO and member jurisdictions must consider alternative funding measures that could allow for the implementation of this plan. The following provides a brief overview of the top performing alternative funding measures as expressed by the public.



Development Impact Fees (29%)

Developer impact fees and system development charges provide a funding option for communities looking for ways to pay for transportation infrastructure. Impact fees most commonly are used for water and wastewater system connections or police and fire protection services but recently several counties across South Carolina have used impact fees to pay for the impacts of increased traffic on existing roads. Impact fees place the costs of new development directly on developers and indirectly on those who buy property in the new developments. Impact fees relieve other taxpayers from the burden of funding costly new public services that do not directly benefit them. Cities and counties in South Carolina may enact development impact fees by securing special legislative authorization.

Gas Taxes (17%)

Today, 16 cents from every gallon of gasoline or diesel fuel purchased in the state of South Carolina is assessed as a state motor fuel tax. The average combined local, state, and federal gasoline tax in South Carolina is 35.2 cents per gallon. This makes South Carolina the state with the fourth lowest gasoline taxes in the nation. If an additional tax increase was implemented, this would provide a substantial increase in transportation funding. However, special legislative authorization must be secured to allow an increase in fuel tax. *Sources: American Petroleum Institute, www.api.org/statistics/fueltaxes; South Carolina Department of Revenue, www.sctax.org.*

Transportation Bonds (15%)

Transportation bonds have been instrumental in the strategic implementation of local roadways, transit, and non-motorized travel throughout South Carolina. Voters in communities both large and small regularly approve the use of bonds in order to improve their transportation system. Nearly every improvement identified in this plan could be financially supported using a transportation bond program. When the improvement occurs on a state-owned street, approvals and encroachment permits from SCDOT will be required.

Local Sales Tax (10%)

One of the most successful self-financing programs ever initiated in the State of South Carolina is the Florence County Sales Tax Program. Over seven years of the sales tax, this funding source is anticipated to generate $148 million in county revenue. A $250 million grant from the State Infrastructure Bank is being combined with this local revenue, generating a total of $398 million that otherwise would not have been available. With this in mind, the reauthorization of the Sales Tax referendum should be considered in 2014 when the current program ends. Public education and consensus building would be critical for a sales tax program to be reauthorized.

Conclusion

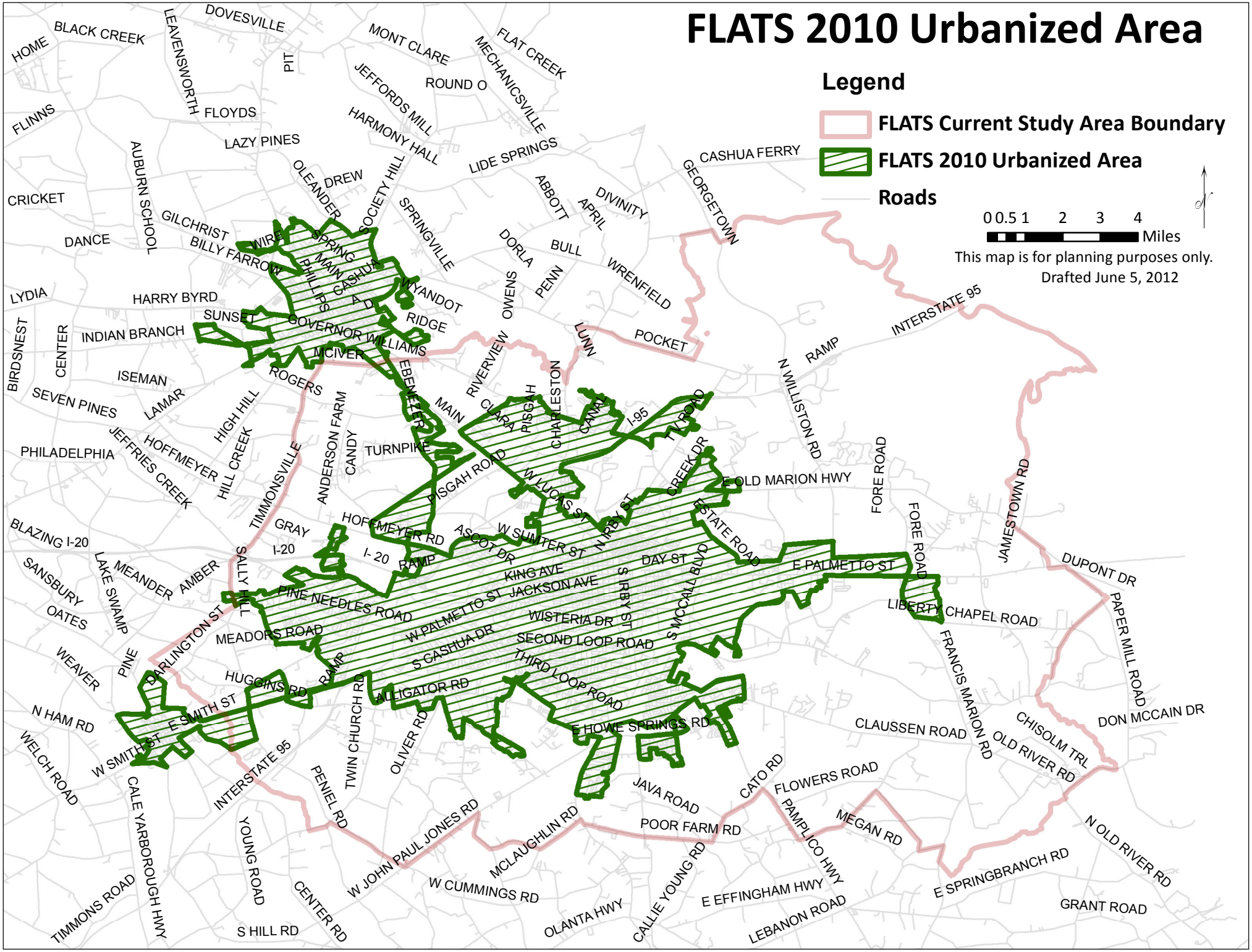
Through effective public outreach and the inclusion of a citizen-based advisory committee, the development of the *2035 LRTP* reinforces the vision and needs of the region. It is through this collaborative process that we have learned community leaders, business owners, and citizens of the Florence region have high expectations for the regional transportation system.

The Florence region has become an attractive transportation hub spurred by major transportation infrastructure facilities such as I-95, I-20 and US 52, healthy commercial growth, and the potential for expanded rail service. The realization that federal and state dollars are becoming more difficult to secure shows the Florence region has reached a tipping point. Do we rely on the status-quo for addressing our regional transportation needs, or do we continue to proactively move forward and address those needs through innovative measures and self-financing mechanisms that support the growth and continued prosperity of the region?

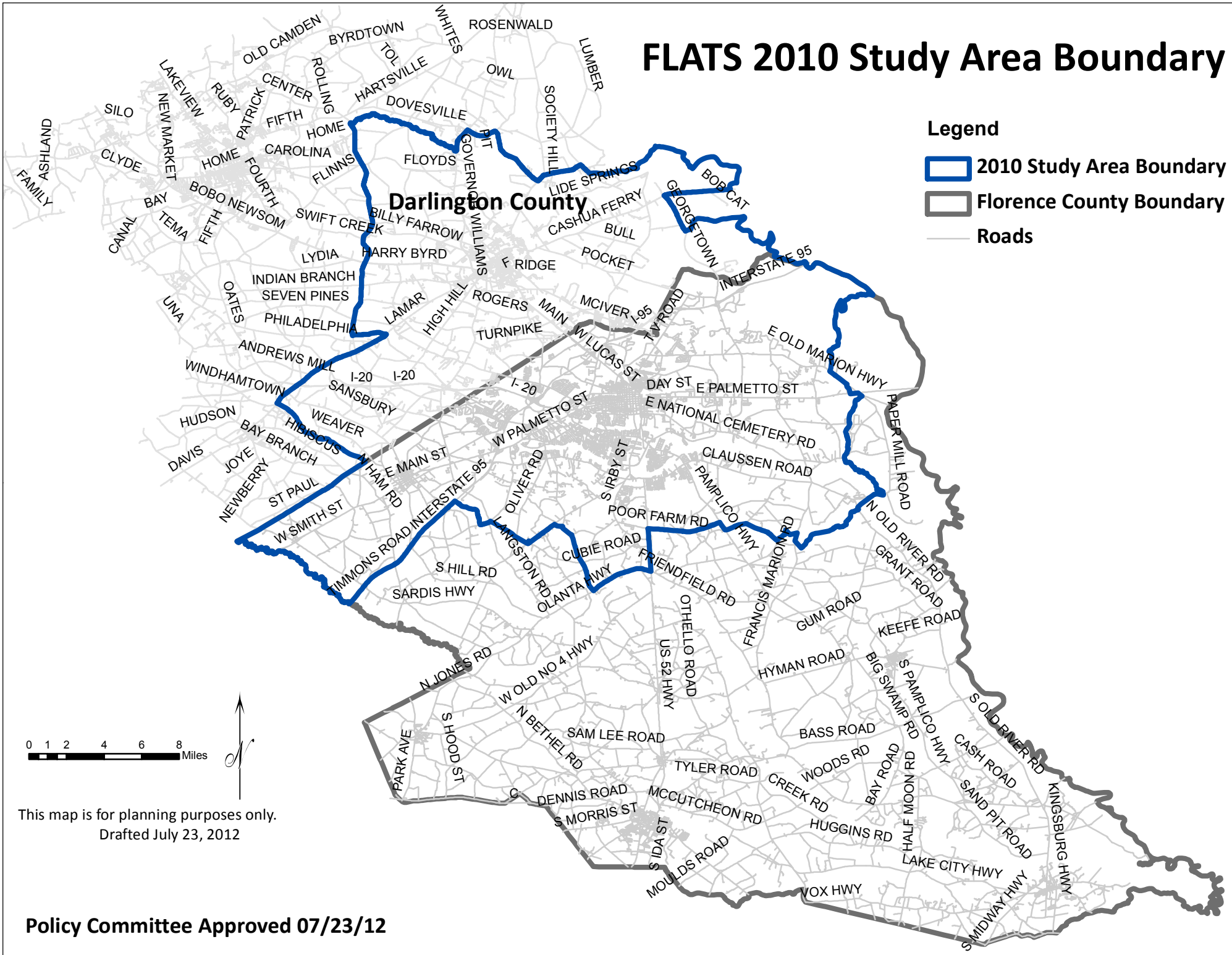
With this in mind, transportation decision-makers must continue to support funding strategies that address transportation infrastructure needs. Whether through reauthorization of a new sales tax referendum, additional vehicle tax, impact fees, or other innovative funding strategies, the region no longer can rely on federal gas tax dollars alone. One thing is certain. The most critical steps toward funding and implementing the plan will be carried by champions or leaders within the community. Ultimately, continued collaboration between state, local agencies, and the general public will provide more opportunities to foster a safe, aesthetically-pleasing, and well-balanced multimodal transportation system that makes the Florence region an attractive place to live.

Attachment 13

FLATS Study Area Boundary Map


FLATS 2010 Urbanized Area
Legend
FLATS Current Study Area Boundary
FLATS 2010 Urbanized Area
Roads
0 0.5 1 2 3 4
Miles
This map is for planning purposes only.
Drafted June 5, 2012
HOME
BLACK CREEK
LEAVENSWORTH
DOVESVILLE
PIT
MONT CLARE
FLAT CREEK
MECHANICSVILLE
ROUND O
JEFFORDS MILL
HARMONY HALL
FLINNS
FLOYDS
LAZY PINES
LIDE SPRINGS
CASHUA FERRY
GEORGETOWN
AUBURN SCHOOL
OLEANDER
DREW
SOCIETY HILL
SPRINGVILLE
ABBOTT
APRIL
DIVINITY
CRICKET
GILCHRIST
DANCE
BILLY FARROW
WIRE
SPRING
MAIN
PHILLIPS
GASHUA
A D
DORLA
BULL
PENN
OWENS
WRENFIELD
WYANDOT
RIDGE
LYDIA
HARRY BYRD
SUNSET
GOVERNOR WILLIAMS
INDIAN BRANCH
MCIVER
POCKET
LUNN
RIVERVIEW
INTERSTATE 95
RAMP
N WILLISTON RD
BIRDSNEST
CENTER
ISEMAN
ROGERS
EBENEZER
MAIN
CLARA PISGAH
CHARLESTON
CANAL
I-95
TYLORD
SEVEN PINES
LAMAR
HIGH HILL
HILL CREEK
JEFFRIES CREEK
HOFFMEYER
PHILADELPHIA
TIMMONSVILLE
ANDERSON FARM
CANDY
TURNPIKE
PISGAH ROAD
W LUCAS ST
CREEK DR
E OLD MARION HWY
FORE ROAD
JAMESTOWN RD
BLAZING I-20
GRAY
I-20
HOFFMEYER RD
ASCOT DR
W SUMTER ST
TIRBY ST
STATE ROAD
E PALMETTO ST
DUPONT DR
SANSBURY
LAKE SWAMP
MEANDER
AMBER
SALLY HILL
I- 20 RAMP
KING AVE
DAY ST
OATES
PINE NEEDLES ROAD
W PALMETTO ST
JACKSON AVE
S TIRBY ST
S MCCALL BLVD
LIBERTY CHAPEL ROAD
PAPER MILL ROAD
DARLINGTON ST
MEADORS ROAD
WISTERIA DR
S CASHUA DR
SECOND LOOP ROAD
FRANCIS MARION RD
WEAVER
PINE
RAMP
HUGGINS RD
THIRD LOOP ROAD
ALLIGATOR RD
E SMITH ST
N HAM RD
W SMITH ST
TWIN CHURCH RD
OLIVER RD
E HOWE SPRINGS RD
CLAUSSEN ROAD
OLD RIVER RD
CHISOLM TRL
DON MCCAIN DR
WELCH ROAD
INTERSTATE 95
PENIEL RD
JAVA ROAD
CATO RD
FLOWERS ROAD
CALE YARBOROUGH HWY
YOUNG ROAD
W JOHN PAUL JONES RD
MCLAUGHLIN RD
POOR FARM RD
PAMPLICO HWY
MEGAN RD
N OLD RIVER RD
TIMMONS ROAD
CENTER RD
W CUMMINGS RD
CALLIE YOUNG RD
E EFFINGHAM HWY
E SPRINGBRANCH RD
S HILL RD
OLANTA HWY
LEBANON ROAD
GRANT ROAD

FLATS 2010 Study Area Boundary



Attachment 14

Executed Resolutions for New Urbanized Areas

STATE OF SOUTH CAROLINA)
COUNTY OF FLORENCE)

RESOLUTION OF THE FLORENCE AREA TRANSPORTATION STUDY (FLATS) POLICY COMMITTEE ENDORSING THE ADJUSTMENT TO THE FLATS STUDY AREA BOUNDARY

WHEREAS, the Florence Area Transportation Study (FLATS) Metropolitan Planning Organization (MPO) must comply with Federal-Aid Highway Acts (23 USC 101 et seg) and the Urban Mass Transportation Act of 1964, as amended; and

WHEREAS, the Florence Area Transportation Study (FLATS) has been a cooperative transportation planning effort of the City of Florence, Town of Quinby, the County of Florence and the South Carolina Department of Highways and Public Transportation in cooperation with the United States Department of Transportation since November 26, 1969.

WHEREAS, the U.S. Census Bureau published the list of 2010 Urbanized Areas (UZAs) on March 12, 2012 and urbanized areas must be included in an MPO. The Study Area Boundary (Planning area) of an MPO must include the urbanized area as well as the areas anticipated to become urban within 20 years; and

WHEREAS, the City of Darlington and the Town of Timmonsville have been designated as urbanized areas according to the 2010 Census and as required, are included in the Florence Area Transportation Study (FLATS) Study Area Boundary; and

WHEREAS, the Florence Area Transportation Study (FLATS) will continue to be a cooperative transportation planning effort of the City of Florence, Town of Quinby, the City of Darlington, the Town of Timmonsville, the County of Florence, the County of Darlington, and the South Carolina Department of Highways and Public Transportation in cooperation with the United States Department of Transportation.

NOW, THEREFORE, BE IT RESOLVED THAT THE FLORENCE AREA TRANSPORTATION STUDY (FLATS) POLICY COMMITTEE endorses the 2010 FLATS MPO Study Area Boundary which includes the City of Darlington and the Town of Timmonsville.

BE IT FURTHER RESOLVED that the FLATS Bylaws are amended to include a Councilmember from the City of Darlington and a Councilmember from the Town of Timmonsville on the FLATS Study Team.

ADOPTED THIS 25th DAY OF February, 2013.

ATTEST:

Jonathan B. Graham
Florence County Planning Director

SIGNED:

Senator Hugh Leatherman, Chairman
FLATS Policy Committee

COMMITTEE VOTE: 7-0
OPPOSED: 0
ABSENT: 2: J. Schofield
A. Gregg

STATE OF SOUTH CAROLINA)

COUNTY OF DARLINGTON) RESOLUTION

OF THE CITY COUNCIL FOR THE CITY OF DARLINGTON ENDORSING THE CONCEPT OF COOPERATIVE URBAN TRANSPORTATION PLANNING

WHEREAS, the City of Darlington became contiguous to and a part of the Florence urbanized area of over 50,000 persons according to the 2010 Census and as a result must comply with Federal-Aid Highway Acts (23 USC 101 et seg) and the Urban Mass Transportation Act of 1964, as amended; and

WHEREAS, the Florence Area Transportation Study (FLATS) has been a cooperative transportation planning effort of the City of Florence, Town of Quinby, the County of Florence, and the South Carolina Department of Highways and Public Transportation in cooperation with the United States Department of Transportation since November 26, 1969.

NOW, THEREFORE, BE IT RESOLVED BY THE DARLINGTON CITY COUNCIL that it endorses the cooperative urban transportation planning process as conducted by the Florence Area Transportation Study.

BE IT FURTHER RESOLVED that the City Council for the City of Darlington respectfully requests that the governor of the State of South Carolina affirm the Policy Committee of the Florence Area Transportation Study as the Metropolitan Planning organization responsible, together with the South Carolina Department of Highways and Public Transportation, for carrying out the transportation planning process, and is the forum for cooperative decision making by principal elected officials of general purpose local government.

BE IT FURTHER RESOLVED that the City Council for the City of Darlington recognizes that the Florence Area Transportation Study Policy Committee will be governed by its own bylaws.

BE IT FURTHER RESOLVED that Florence County shall be the recipient of all Federal-Aid Metropolitan Planning (PL) funds and said funds shall be deposited in an escrow account by the County Treasurer for the subsequent use of the Florence Area Transportation Study as determined by the Policy Committee. The Florence County Planning Department shall serve the Policy Committee as its local staff for the purpose of coordinating the activities of the Florence Area Transportation Study.

ADOPTED THIS 8th DAY OF JANUARY, ~~2012~~ 2013

Tony Walters

Wayne G. Chapman

James M. Copeland

Gloria C. Hynes

Dejan Cobras

John H. Segars

STATE OF SOUTH CAROLINA)

COUNTY OF FLORENCE) RESOLUTION

OF THE TOWN COUNCIL FOR THE TOWN OF TIMMONSVILLE ENDORSING THE CONCEPT OF COOPERATIVE URBAN TRANSPORTATION PLANNING

WHEREAS, the Town of Timmonsville became contiguous to and a part of the Florence urbanized area of over 50,000 persons according to the 2010 Census and as a result must comply with Federal-Aid Highway Acts (23 USC 101 et seg) and the Urban Mass Transportation Act of 1964, as amended; and

WHEREAS, the Florence Area Transportation Study (FLATS) has been a cooperative transportation planning effort of the City of Florence, Town of Quinby, the County of Florence, and the South Carolina Department of Highways and Public Transportation in cooperation with the United States Department of Transportation since November 26, 1969.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL FOR THE TOWN OF TIMMONSVILLE that it endorses the cooperative urban transportation planning process as conducted by the Florence Area Transportation Study.

BE IT FURTHER RESOLVED that the Town Council for the Town of Timmonsville respectfully requests that the governor of the State of South Carolina affirm the Policy Committee of the Florence Area Transportation Study as the Metropolitan Planning organization responsible, together with the South Carolina Department of Highways and Public Transportation, for carrying out the transportation planning process, and is the forum for cooperative decision making by principal elected officials of general purpose local government.

BE IT FURTHER RESOLVED that the Town Council for the Town of Timmonsville recognizes that the Florence Area Transportation Study Policy Committee will be governed by its own bylaws.

BE IT FURTHER RESOLVED that Florence County shall be the recipient of all Federal-Aid Metropolitan Planning (PL) funds and said funds shall be deposited in an escrow account by the County Treasurer for the subsequent use of the Florence Area Transportation Study as determined by the Policy Committee. The Florence County Planning Department shall serve the Policy Committee as its local staff for the purpose of coordinating the activities of the Florence Area Transportation Study.

ADOPTED THIS 18th DAY OF December, 2012.

Mayor

Gwen Harrison

Attachment 15

By-Laws

BYLAWS
FLORENCE AREA TRANSPORTATION STUDY (FLATS)
POLICY COMMITTEE

The following bylaws are adopted by the FLATS Policy Committee to provide for the transaction of business in the development of the Florence Area Transportation Study.

SECTION I PURPOSE

The following bylaws are adopted to designate the offices and functions of the FLATS Policy Committee and to provide for the transaction of business of the Committee in the development of the Florence Area Transportation Study in conformance with state and federal laws and regulations. The following bylaws also provides for one standing committee (Study Team) to assist the Policy Committee.

SECTION II MEMBERSHIP

Membership of the Policy Committee will consist of the following:

VOTING	NON-VOTING
City of Florence (2)	Florence City Manager
Mayor	County Administrator
Councilperson	Director, Florence County Planning and
Town of Quinby (1)	Building Inspection Department
Mayor	Deputy Secretary for Engineering, SCDOT
Florence County Council (2)	District Engineering Administrator, SCDOT
Chair	Chair, Florence County Planning Commission
Councilperson	Director, PDRTA
(representing Florence area)	Chair, Florence Airport Commission
Legislative Delegation (2)	Division Administrator, FHWA
State Legislators	Chair, City of Florence Planning Commission
(representing Florence area)	
District 7 Transportation Commissioner, SCDOT	

Chair, County Transportation Committee

Membership of the Study Team will consist of the following:

Environmental Engineer, FHWA
Area Planning Engineer, SCDOT
District Traffic Engineer, SCDOT
Program Manager, Pee Dee Regional Production Group, SCDOT
Assistance Program Managers (2), Pee Dee Regional Production Group, SCDOT
Statewide Programs Manager, SCDOT, Office of Public Transit
Regional Planning Manager, SCDOT, Office of Public Transit
Manager, SCDOT Enhancements Program
Coordinator, SCDOT Enhancements Program
Director, Planning, Research & Development, City of Florence
Chair, Florence County Planning Commission
Planner, Pee Dee Regional Council of Governments
Director, Pee Dee Regional Transportation Authority
Chair, City of Florence Planning Commission
Director, Darlington County Planning Department
Councilmember, City of Darlington
Councilmember, Town of Timmonsville
Director, Florence County Planning and Building Inspection Department
Planning Services Officer, Florence County Planning and Building Inspection Department

Membership terms:

The terms and membership of elected officials shall be coterminous with their terms of elected office. The terms of appointed representatives shall be coterminous with their appointment to the organization which they represent.

SECTION III OFFICERS OF THE POLICY COMMITTEE

A. **Offices**. There shall be two (2) officers from the voting members elected annually to the following offices: Chair and Vice-Chair. In any given year, the Chair and Vice-Chair shall not be representatives of the same organization or governmental unit. The Recording Secretary of the Policy Committee will be the Director of the Florence County Planning and Building Inspection Department.

B. **Election**. At the first meeting after January 1st each year, the Committee shall elect a Chair and Vice-Chair.
C. **Tenure**. The officers shall serve from the date of their election until a successor has been elected. Officers may be reelected to succeed themselves.
D. **Duties**. The Chair shall normally preside at all meetings of the Committee. In the absence of the Chair, the Vice-Chair shall preside. In the absence of both, a member agreeable to a majority of those present shall serve as acting chair.

The Chair shall appoint other committees, designate committee chair and perform such other duties as may be determined by the Policy Committee.

SECTION IV MEETINGS OF THE POLICY COMMITTEE

Regular Meetings. Regular meetings of the Committee shall be held when determined necessary by the Chair or by a quorum of the voting membership. In any event, meetings will be held at least annually.

Special Meetings. Special meetings may be held at the call of the Chair or of an acting chair, or by a quorum of the voting membership, provided that notice of such meeting shall be given to all members at least twenty-four (24) hours before the hour for which the meeting is called. Business transacted at all special meetings shall be confined to the objects and business to be transacted as stated in the notice.

Notice of Regular Meetings. Written notice of all regular meetings shall be electronically mailed, unless otherwise requested, to each member of the general membership at least seven (7) days prior to the meeting. Such notice shall state the time, place and purpose of such meetings.

Quorum. One-third of the number of voting members of the Policy Committee shall constitute a quorum.

- When a quorum is present at any meeting, the vote of the majority of the voting members present shall decide on any question brought before such a meeting.
- Whenever a quorum is not present at a regular or special meeting, those present may postpone the meeting to another day or hold the meeting for the purpose of considering such matters as are on the agenda or introduced by members.
- No action taken at such meeting (as described in the above paragraph) shall be official unless and until ratified and confirmed in a subsequent meeting of the Committee at which a quorum is present, by approval of the minutes of that meeting at which a quorum was not present.

Voting. Voting shall be by voice and shall not be recorded by yeas or nays unless such a record is requested.

Conflict of Interest. No member shall vote, or participate in discussion, on any issue in which he has personal, professional, or financial interest.

Proxy. When a member is unable to attend a meeting or must leave a meeting before a vote is taken, his proxy shall be accepted and used for voting as he directs, but only under the following circumstances:

- The proxy shall state the name of the committee member being represented.
- The proxy shall indicate in writing on a sign-in roster the organization being represented.
- Minutes shall include names of proxy and member represented.

Parliamentary Procedure. Procedure in all meetings of the Committee shall be governed by Robert's Rule of Order except when such rules of order are in conflict with these bylaws.

Public Access. All regular and special meetings of this Committee shall be open to the public and the Freedom of Information Act requirements will be followed.

SECTION V AMENDMENT

Suspension of Bylaws. The Committee may suspend any article of these bylaws by unanimous vote of the voting members present and constituting a quorum.

Amending of Bylaws. The bylaws may be amended only by a majority vote of the total voting membership of the Policy Committee.

OPERATING PROCEDURES

Procedures for Adopting or Modifying Adopted Transportation Plans and Programs

From time to time, changes are proposed in transportation plans and programs which have previously been adopted by the Policy Committee. These procedures will also be used in adopting initial plans or programs. The purpose of the procedure outlined herein is to insure that – when such a change is proposed:

a. All direct participants (SCDOT, Policy Committee, and affected local governments) in the comprehensive, continuing, cooperative planning process are notified of the proposed change before it is acted upon.
b. The probable effects (good and bad) of the proposed plan or program change on the overall transportation system and on the community will be evaluated by the Study Team – before action is taken on the proposal by implementing the agency.
c. The comprehensive, continuing, and cooperative approach used in developing the transportation plan and program will also be used in changing the plan.
d. Those responsible for adopting or rejecting the proposed change will be fully informed by the Study Team (before action is taken by the implementing agency) of the probable effects (on both the transportation system and the community) of the change.

1. Proposed Project or Modification

Changes of projects can be proposed by local governments, local planning groups, SCDOT and private or public groups or individuals. Proposals are usually fed into the process via either the Policy Committee or Study Team.

The type of change or project with which this procedure is concerned is one that would alter the concept of the plan or program. That is, it would materially affect either the anticipated traffic demand on elements of the transportation system or the level of service of the plan or it would make unlikely the evolvement of the community into the forecasted future arrangement and intensity of land uses which were used to predict design year travel.

Changes in concept can result from the addition, deletion, relocation, or alteration of any plan or program element. The element might be a block of city street, section of freeway, and interchange, etc. The change could be a reduction in number of lanes, the downgrading of a freeway to an at-grade arterial, the elimination of an interchange turning movement, etc.

In order to determine whether any proposal is (a) a change in concept or (b) merely a simple change in location or design, it will first be referred to the Study Team for review.

2. Evaluation and Recommendation

When a proposed change is referred to the Study Team, the first operation is to determine whether the proposal would result in a change in concept or only an inconsequential change in

location or design. If it would not change the concept of the plan or program, the Study Team's review ceases, the Policy Committee is so notified by the Study Team and the proposal is handled through normal location and design procedures.

However, if the change appears to be one in concept, the Study Team will advise the Policy Committee and the State Highway Engineer, and will evaluate the proposal, and prepare a written recommendation and present the evaluation and recommendation to the Policy Committee. The proposal will be reviewed with appropriate local groups and possibly other local citizens and SCDOT management before a recommendation for a major plan or program change is presented to the Policy Committee for concurrence, as in the development of the initial transportation plan and transportation improvement program.

The scope and level of detail of the Study Team's evaluation will determine the extent and probable impact of the proposed change. The evaluation can range from a simple analysis by the Study Team nucleus to a complex one requiring revised land use and socio-economic projections and additional traffic assignments and involving environmental, social and economic specialists and outside technical and citizen groups.

The Study Team recommendation may be a direct "approve", "reject", or a variation or an alternate recommendation developed by the Study Team in the course of its evaluation of the proposed change. The Study Team may also recommend that – because of the probable impact of the change – the Policy Committee air the proposal in a public meeting, prior to acting on the recommendation.

3. Policy Committee Action

When the Policy Committee receives the Study Team's written recommendation, it may directly accept the recommendation or it may reject the recommendation and request further evaluation by the Study Team. In this latter event, the procedure recycles until the Study Team and Policy Committee reach agreement as to the disposition of the proposal. When a change in concept is being considered, the Policy Committee has the responsibility for inviting formal participation by local governments and the public before acting.

4. Disposition of Proposed Change

The secretary will notify participants, the original proposer and other interested parties of the Policy Committee's actions. The secretary will keep appropriate files of the Policy Committee's decisions.

Once the necessary adoptions have been obtained, the plan or program is adopted or modified and the action shall be appropriately recorded in the minutes. Plan maps and documents shall also be revised within a reasonable time to accurately reflect any major changes.

Attachment 16

Transportation Improvement Plan (TIP)

FY2010-2015 and FY 2014-2019

* FLATS FINANCIAL STATEMENT *

(ALL VALUES IN THOUSANDS)

2010-2015 TIP
Policy Committee Approved 07/23/12

PIN #	COUNTY	GUIDESHARE PROJECTS	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TIP COST (2010-2015)	REMAINING COST (2016+)	FUNDING
		South Cashua Widening	500 P			4300 R		6700 C		11,700		
		From SC51 to S-103 (Knollwood Rd.)				700 P						
		GUIDESHARE PROJECT SUBTOTAL				$5,000		$6,700		$11,700		
		DEBT SERVICE TOTAL		$910	$978	$957	$903	$899	$894	$5,541	$5,528	
		GUIDESHARE SUBTOTALS		$910	$978	$5,957	$903	$7,599	$894	$17,241	$5,528	
		GUIDESHARE ALLOCATION		2,295	2,667	2,667	2,667	2,667	2,667	$15,630		
		CARRYOVER AVAILABLE		741	2,126	3,815	525	2,289	1	$741		
		BOND PROCEEDS										
		ADVANCEMENT AMOUNT						$2,644		$2,644		
		PAYBACK AMOUNT							(1773)	($1,773)	$676	
		GUIDESHARE SUBTOTAL		(910)	(978)	(5,957)	(903)	(7,599)	(894)	($17,241)	($5,528)	
		BALANCE		2,126	3,815	525	2,289	1	1	$1		
		ENHANCEMENT PROJECTS										
		FLATS ENHANCEMENT PROGRAM		118	118	118				$354		
		NO NAME CREEK										
		ENHANCEMENT SUBTOTALS		$118	$118	$118				$354		

			FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TIP COST (2010-2016)		
	CAPITAL PROJECT SALES TAX (Administrative Change for Information Only - No Action Necessary)										
	SC 577 (Pine Needles Road) Ebenezer to Southborough	P 1,398,449									
	(WIDENING & BRIDGE REPLACEMENT) (Length 0.8)	R 2,293,829									
	TOTAL Expenditures $17,676,490) as of 4/30/11	C 13,984,490									
	US 378 (E. Myrtle Beach Highway)		6,534	5,808 R	2,904 R				$122,421		
	(WIDENING) (Length 18.20)		R		50,177 C	38,757 C	18,241 C				
	US 76 (W. Palmetto Street)		5,566		23,705 C				$29,271		
	(WIDENING) (Length 4.00)		R								
	S-26 (TV Road) / S-343 (N. Irby Street)			6,776 R	24,743 C				$31,519		
	(WIDENING) (Length 3.80)										
	US 51 (Pamplico Highway)				9,716 R	29,588 C			$39,304		
	(WIDENING) (Length 24.20)										
	CAPITAL PROJECT SALES TAX SUBTOTALS		$12,100	$12,584	$111,245	$68,345	$18,241		$222,515		
	FEDERAL TRANSIT ADMINISTRATION										
	PEE DEE REGIONAL TRANS AUTHORITY		6,991	373 CA	668 CA				$8,032		5307
				250 OP	440 OP				$690		5307
				400 AD	0				$400		5307
				3,200	0				$3,200		5308 (Clean Fuel Grant)
					350 CA				$350		5309 (Veh. Acquisition)
			164		160 OP				$324		5316 (JARC)
			116		306 CA				$422		5317 (New Freedom)
	FLORENCE SENIOR CITIZENS ASSOCIATION			48 PS	60 PS				$108		5310
	FLORENCE COUNTY DSN BOARD		35	37 PS	37 PS				$109		5310
	FTA SUBTOTALS		$7,306	$4,308	$2,021				$13,635		
	GRAND TOTAL		$20,316	$17,870	$119,223	$69,248	$25,840	$894	$253,391	$5,528	

KEY: P - PRELIMINARY ENGINEERING; R - RIGHT OF WAY; C - CONSTRUCTION; CA - CAPITAL PURCHASE; OP - OPERATING; PS - PURCHASE OF SERVICE CONTRACT; IM - INTERSTATE MAINTENANCE; AD - ADMINISTRATION

Public Comment Period 5/7/12 through 5/17/12 (No Comments Received)

FLATS FINANCIAL STATEMENT

2010-2015 TIP

(ALL VALUES IN THOUSANDS)

Policy Committee Approved 02/25/13

PIN #	COUNTY	GUIDESHARE PROJECTS	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TIP COST (2010-2015)	REMAINING COST (2016+)	FUNDING
		South Cashua Widening From SC51 to S-103 (Knollwood Rd.)	523 P			677 P	2000 R	4300 R 4000 C	4400 C	6,977		
		GUIDESHARE PROJECT SUBTOTAL				$677	$2,000	$8,300	$4,400	$15,377		
		DEBT SERVICE TOTAL		$910	$978	$957	$903	$899	$894	$5,541		
		GUIDESHARE SUBTOTALS		$910	$978	$1,634	$2,903	$9,199	$5,294	$20,918		
		GUIDESHARE ALLOCATION		2,295	2,667	2,667	2,487	2,487	2,487	$15,090		
		CARRYOVER AVAILABLE		741	2,126	3,815	4,848	4,432	270	$741		
		ADVANCEMENT AMOUNT						$2,550	$2,537	$5,087		
		PROGRAM ADJUSTMENTS								$0		
		GUIDESHARE SUBTOTAL		(910)	(978)	(1,634)	(2,903)	(9,199)	(5,294)	($20,918)		
		BALANCE		2,126	3,815	4,848	4,432	270	0	$0		
		TRANSPORTATION ENHANCEMENT PROGRAM - SAFETEA-LU FUNDS										
				118	118	118				$354		
	Francis Marion University			118	118	18.4				254.4		
		CAPITAL PROJECT SALES TAX (Approximate Annual Allocations)										
	SC 577 (Pine Needles Road) Ebenezer to Southborough (WIDENING & BRIDGE REPLACEMENT) (Length 0.8) **TOTAL Expenditures $17,676,490) as of 4/30/11**		P 1,398,449 R 2,293,829 C 13,984,490									
	US 378 (E. Myrtle Beach Highway) (WIDENING) (Length 18.20)			3,988 R		8,712 R	112,278 C			$124,978		
	US 76 (W. Palmetto Street) (WIDENING) (Length 4.00)			1,804 R			25,370 C			$27,174		
	S-26 (TV Road) / S-343 (N. Irby Street) (WIDENING) (Length 3.80)				2,969 R		24,743 C			$27,712		
	US 51 (Pamplico Highway) (WIDENING) (Length 24.20)					18,101 R	28,350 R	111,985 C		$158,436		
	S-107 Alligator Road (US52 to US76) (WIDENING) - Length 7.5						5,300 P		10,000 R	$15,300		
	CAPITAL PROJECT SALES TAX SUBTOTALS			$5,792	$2,969	$26,813	$196,041	$111,985	$10,000	$353,600		

				FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	TIP COST (2010-2015)		
FEDERAL TRANSIT ADMINISTRATION												
	PEE DEE REGIONAL TRANS AUTHORITY			6,991	373 CA	404 CA	195 CA			$7,963		5307
					250 OP	600 OP	500 OP			$1,350		5307
					400 AD	104 PM	290 PM			$794		5307
					3,200					$3,200		5308 (Clean Fuel Grant)
							350 CA			$350		5309 (Veh. Acquisition)
				164			80 CA			$244		5316 (JARC)
				116			153 CA			$269		5317 (New Freedom)
	FLORENCE SENIOR CITIZENS ASSOCIATION				48 PS	60 PS				$108		5310
	FLORENCE COUNTY DSN BOARD			35	37 PS	37 PS				$109		5310
	FTA SUBTOTALS			$7,306	$4,308	$1,205	$1,568			$14,387		
	GRAND TOTAL			$14,008	$8,255	$29,652	$200,512	$121,184	$15,294	$388,905		
PROJECTS EXEMPT FROM GUIDESHARE (Administrative Change for Information Only - No Action Necessary)												**Federal Program**
	II-9	I-95 @SC 327 EXIT 170		12,662						$12,662		SPECIAL-APP. (2010)
		INTERCHANGE RECONSTRUCTION			1,150					$1,150		IM
					6,350					$6,350		ARRA (IM)
					591					$591		EARMARK-SAFETEA-LU
					6,750					$6,750		EARMARK-SAFETEA-LU
					613					$613		EARKMARK-APP. (2006)
					502					$502		EARMARK-APP. (2008)
					316					$316		EARMARK-APP. (2009)
	IM-60	INTERSTATE REHAB	1,951 C							$2,151		ARRA
		I-95 (MM 156.0 to MM 159.9, Northbound)	200 C									IM
	BR-242	US378-Great Pee Dee River Bridge	13,201 C									Federal-Aid (STP)
		Includes Activitied in Marion Cty.										
	BR-242	Paper Mill Road Bridge Replacement		700								
		at Jefferies Creek										
	TOTAL		$2,151	$12,662	$16,272					$31,085		

KEY: P - PRELIMINARY ENGINEERING; R - RIGHT OF WAY; C - CONSTRUCTION; CA - CAPITAL PURCHASE; OP - OPERATING; PS - PURCHASE OF SERVICE CONTRACT; IM - INTERSTATE MAINTENANCE; AD - ADMINISTRATION; PM - PREVENTIVE MAINTENANCE

PUBLIC COMMENT PERIOD: JANUARY 28, 2013 THROUGH FEBRUARY 7, 2013 (NO COMMENTS RECEIVED)

* FLATS FY2014-2019 TIP FINANCIAL STATEMENT *

(ALL VALUES IN THOUSANDS)

POLICY COMMITTEE APPROVED: June 10, 2013

PIN #	COUNTY	GUIDESHARE PROJECTS	Previous STIP(s)	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TIP COST (2014-2019)	REMAINING COST (2020+)	FUNDING
		South Cashua Widening	1200 P	4300 R						12,700		
		From SC51 to S-103 (Knollwood Rd.)	2000 R	4000 C	4400 C							
		GUIDESHARE PROJECT SUBTOTAL		$8,300	$4,400					$12,700		
		DEBT SERVICE SUBTOTAL		$899	$894	$889	$881	$876	$870	$5,309		
		ADVANCEMENT PAYBACK				$1,598	$1,605	$1,611	$1,616	$6,430		
		GUIDESHARE SUBTOTAL		$9,199	$5,294	$2,487	$2,486	$2,487	$2,486	$24,439		
		GUIDESHARE ALLOCATION		2,487	2,487	2,487	2,487	2,487	2,487	$14,922		
		CARRYOVER AVAILABLE		4,432	270					$4,432		
		ADVANCEMENT AMOUNT		2,550	2,537					$5,087		
		PROGRAM ADJUSTMENTS								$0		
		GUIDESHARE SUBTOTAL		(9,199)	(5,294)	(2,487)	(2,486)	(2,487)	(2,486)	($24,439)		
		BALANCE		270	0	0	0	0	0	$0		

PIN #	GUIDESHARE 20% ALLOCATION	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	REQUIRED	$317	$318	$319	$320	$321	$322	$323
	PLANNED							
	3 YR. REQUIRED AVG (ROLLING)			$319	$320	$321	$322	$323
	3 YR. PLANNING AVG (ROLLING)							
	BALANCE			($319)	($320)	($321)	($322)	($323)

** The rolling required/planned average = (current required/planned amount + two previous required/planned amounts) divided by 3

PIN #	TRANSPORTATION ALTERNATIVES PROGRAM PROJECTS - NO ACTION NECESSARY	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019

		FY2013 STIP	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TIP COST (2014-2019)		
CAPITAL SALES TAX PROJECTS (Approximate Annual Allocations)											
	SC 577 (Pine Needles Road) Ebenezer to Southborough (WIDENING & BRIDGE REPLACEMENT) (Length 0.8) **TOTAL Expenditures $17,676,490) as of 4/30/11** $1,398,449 (PE); $2,293,829 (ROW); $13,984,490 (Cons.)										
	US 378 (E. Myrtle Beach Highway - WIDENING (Length 18.20) EST. COST $ 136,364,420 $11.2M (PE); $12.9M (ROW); $112.3M (Cons.)										
	US 76 (W. Palmetto Street) - WIDENING (Length 4.00) EST. COST $ 28,425,621 $2.4M (PE); $2.4M (ROW); $23.7M (Cons.)										
	S-26 (TV Road) / S-343 (N. Irby Street) - WIDENING (Length 3.80) EST. COST $30,712,890 $3M (PE); $3M (ROW); $24.7M (Cons.)										
	US 51 (Pamplico Highway) - WIDENING (Length 24.20) EST. COST $140,449,217 $11.2M (PE); $17.3M (ROW); $112M (Cons.)		111,985 C						$111,985		
	S-107 Alligator Road (US52 to US76) - WIDENING (Length 7.50) EST. COST $73,464,146 $4.5M (PE); $23.4M (ROW); $45.5M (Cons.)			10,000 R	45,500 C				$55,500		
	CAPITAL PROJECT SALES TAX SUBTOTALS		$111,985	$10,000	$45,500				$167,485		

	FEDERAL TRANSIT ADMINISTRATION										
	PEE DEE REGIONAL TRANS AUTHORITY	485 CA							$485		5307 (Small Urban)
		500 OP							$500		5307
		290 PM							$290		5307
									$0		5308 (Clean Fuel Grant)
		350 CA							$350		5309 (Veh. Acquisition)
		80 CA							$80		5316 (JARC)
		153 CA							$153		5317 (New Freedom)
	FLORENCE SENIOR CITIZENS ASSOCIATION	10 OP							$10		5310
	FLORENCE COUNTY DSN BOARD	45 CA							$45		5310
	DARLINGTON COUNTY COUNCIL ON AGING	45 CA							$45		5310
		26 OP							$26		5317
	FTA SUBTOTALS	$1,984							$1,984		

			PREVIOUS STIPs		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	TIP COST (2014-2019)		
PROJECTS EXEMPT FROM GUIDESHARE (Administrative Change for Information Only - No Action Necessary)													**Federal Program**
	RANK	**DESCRIPTION**											
	II-9	I-95 @SC 327 EXIT 170	12,662										SPECIAL-APP. (2010)
		INTERCHANGE RECONSTRUCTION	1,150										IM
			6,350										ARRA (IM)
			591										EARMARK-SAFETEA-LU
			6,750										EARMARK-SAFETEA-LU
			613										EARKMARK-APP. (2006)
			502										EARMARK-APP. (2008)
			316										EARMARK-APP. (2009)
	IM-60	INTERSTATE REHAB	1,951	C									ARRA
		I-95 (MM 156.0 to MM 159.9, Northbound)	200	C									IM
	BR-242	US378-Great Pee Dee River Bridge	13,201	C									FEDERAL-AID (STP)
		Includes Activitied in Marion Cty.											
	BR-242	Paper Mill Road Bridge Replacement	700	P									
		at Jefferies Creek											
			324	C									ARRA
		I-95 Interstate Pavement Marking	36	C									SAFETY
FLATS/Pee Dee		**Florence County Resurfacing**	4,825	C									ARRA
		S-903 (SC 51 to S-29)	275	C									PAVE/RECONST
		S-13 (US 76 / S-29 to US 52)											
		US 52 (Near S-1714 to SC 51 CONN)											
		S-48 (S-32 to S-59)											
		S-546 (South of S-201 to S-31)											
		S-31 (S-29 to US 76)											
		S 327 (US 52 to SC 51)											
		S-12 (US 76 to US 52)											
		S-31 (S-329 to US 521)											
		US 76 (S-576 to S-829											
FLATS/Pee Dee		**Darlington County Resurfacing**	3,135	C									ARRA
		S-587 (SC 151 BUS to S-622 / S-505)	187	C									PAVE/RECONST
		S 390 (S-837 / S-392 to SC 34)											
		S-102 (SC 151 BUS to SC 151)											
		S-392 (US 52 BUS to S-390 / S-837)											
		S-179 (S-255 to US 52)											
		S-42 (S-375 to US 52 BUS)											
		S-16 (Lee Co Line to Lee Co Line N. of S-244)											
		S-49 (US 52 to Florence Co Line)											
		US 52 BUS (US 52 to South of W. Smith Ave)											
		S-712 (S-392 to SC 34)											
		S-98 (SC 34 to S-97)											
		S-98 (Near S-97 to S-59)											
		S-182 (S-155 to SC 151)											
		S-21 (US 15 to S-23)											
		S-341 (S-342 to S-59)											
		TOTAL	$53,768										

P - PRELIMINARY ENGINEERING; R - RIGHT OF WAY; C - CONSTRUCTION; CA - CAPITAL PURCHASE; OP - OPERATIONS; PS - PURCHASE OF SERVICE CONTRACT; IM - INTERSTATE MAINTENANCE; AD - ADMINISTRATION; PM - PREVENTIVE MAINTENANCE

PUBLIC COMMENT PERIOD: May 17, 2013 through May 27, 2013 NO COMMENTS RECEIVED

Attachment 17

Unified Planning Work Program (UPWP)

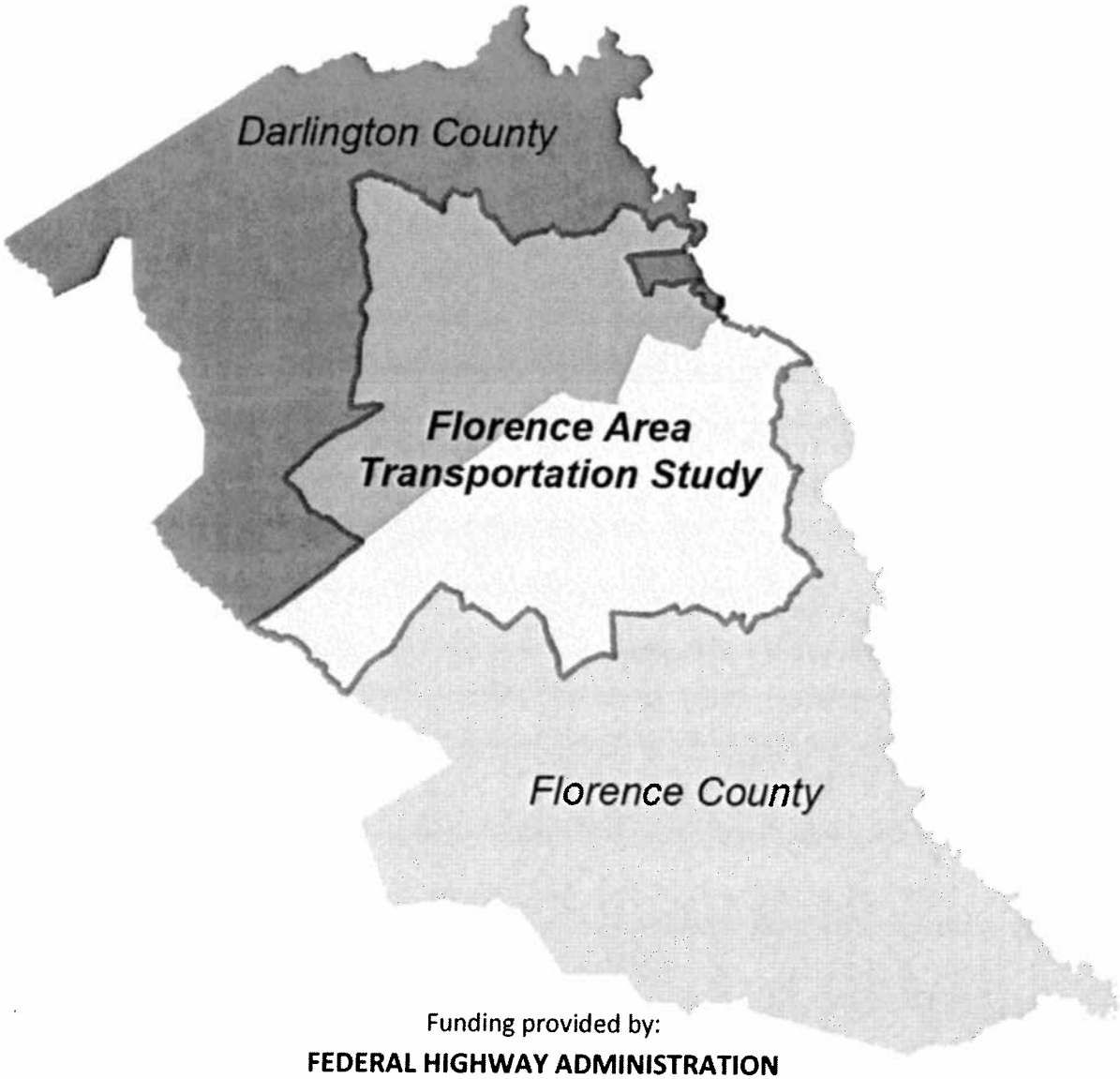
Fiscal Year 2014

FLORENCE AREA TRANSPORTATION STUDY

UNIFIED PLANNING WORK PROGRAM

Federal ID #57-6000351

Fiscal Year 2014



Funding provided by:

FEDERAL HIGHWAY ADMINISTRATION

and

FLORENCE COUNTY

www.florenceco.org/offices/planning/flats/

florenceco.blogspot.com

Public Comment Period 5/17/13 through 5/27/13 (No Comments Received)

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Introduction

This Unified Planning Work Program (UPWP) identifies the transportation planning activities being conducted by the Florence Area Transportation Study (FLATS) Metropolitan Planning Organization (MPO), which serves the Urbanized Florence Area in South Carolina. The FLATS MPO study area boundary includes the City of Florence, Town of Quinby, City of Darlington, Town of Timmonsville and the northwestern unincorporated area of Florence and Darlington counties. The FLATS MPO serves a population of approximately 124,316 (US Census 2010).

Florence County Planning, GIS and Engineering staff completes the activities outlined in the UPWP during each fiscal year between July 1st and June 30th. Planning staff prepared this document, in consultation with the South Carolina Department of Transportation (SCDOT), Federal Highway Administration (FHWA), and other agencies involved in transportation planning and implementation. This document is written in compliance with the Title VI requirements contained in the Federal Regulations for the development of plans and programs.

The FLATS MPO is allocated a total of $158,584 ($147,968 in Planning and Transit, PL/FTA, allocations and $10,616 in carryover funds). The planning funds are appropriated under the enactment of the Moving Ahead For Progress In The 21st Century Act (MAP-21; Public Law 112-141; Bill H.R. 4348). The MAP-21 law promotes investment in transportation infrastructure as a boost to the US economy. Planning funds are allocated into the three categories as shown in Table 1 with 80% being federally funded and a 20% local match from Florence County. For this term, the goals are: to minimize administrative costs, increase public participation and the utilization of traffic congestion modeling.

The Safe, Accountable, Flexible, and Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) (pub. 109-59, August 10, 2005) mandates changes in the metropolitan planning process. FLATS has adopted the eight Planning Emphasis Areas (PEAs) described under this law into our planning process. Increased participation from stakeholders, operational improvements, protection of existing corridors and improvements to bicycling, walking and transit facilities are all given great emphasis. The FLATS planning process emphasizes the importance of connectivity and managing access to our corridors. The PEAs are explained in the Planning Emphasis and Issues section of this document. The UPWP describes the specific tasks for FLATS for FY 2014 pursuant to these PEAs.

MAP-21 directs transportation planning actions (Titles 23 and 49, United States Code). MAP-21 states that the metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision-making to support the nation goals described in section 150(b) of Title 23 and in section 5301(c) of Title 49.

The FLATS MPO shall establish performance targets that address the performance measures described in section 150(c) of Title 23, where applicable, to use in tracking progress towards

attainment of critical outcomes for the FLATS region. Selection of performance targets shall be coordinated with the SCDOT to ensure consistency, to the maximum extent practicable.

The FLATS program is designed to solicit and include input from local officials, business owners and citizens into the decisions directing expenditures of transportation funds within the urban area of Florence, South Carolina. Federal Funds must be considered and approved by the FLATS Policy Committee for major road or transit projects that take place within the FLATS area.

FLATS continues its mission to coordinate with local transportation interests and long-term planning partners including the Pee Dee Council of Governments (PDCOG), Pee Dee Regional Transportation Authority (PDRTA), local governments within the FLATS area as well as members of the public.

The FLATS 2035 Long Range Transportation Plan (LRTP) was approved by the Policy Committee on July 12, 2012. The approved 2035 LRTP is incorporated on the FLATS website. FLATS MPO's selection and prioritization process in developing the Long Range Transportation Plan and Transportation Improvement Plan in addition to other required Federal documents are in accordance with South Carolina General Assembly Act 114 enacted on June 2007.

The FY2014 UPWP is supported by the 2035 LRTP. To further guide the FLATS planning process, the vision and goals of the 2035 LRTP are grouped according to the SAFETEA-LU eight planning factors. The essence of the 2035 LRTP elements represent the collective vision for a safe, multimodal and interconnected transportation system that supports continued economic development without compromising the natural historic and social resources vital to the FLATS area's sustainability.

Annual updates and amendments to the UPWP are performed as addressed in the Public Participation Process plan. Additional information about FLATS planning activities is available on the Florence County website at: http://www.florenceco.org/offices/planning/flats/ or by contacting FLATS staff at the Florence County Planning Department at (843) 676-8600.

This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.W. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

FLATS Committee Members

The FLATS Policy Committee is the decision-making body that transacts the business to develop FLATS in accordance with State and Federal laws and regulations. The FLATS Policy Committee consists of the following voting and non-voting members:

Policy Committee (Voting)
Mayor, City of Florence
Councilman, City of Florence
Mayor, Town of Quinby
Chairman, Florence County Council
Councilman, Florence County
Senator, South Carolina Senate (District 31)
Representative, South Carolina House of Representatives (District 63)
Commissioner, South Carolina Transportation Commission (District 7)
Chairman, County Transportation Committee

Policy Committee (Non-Voting)
City Manager, City of Florence
Administrator, Florence County
Director, Florence County Planning and Building Inspection Department (PBID)
Deputy Secretary of Transportation, SCDOT
District Engineering Administrator, SCDOT (District 5)
Chairman, Florence County Planning Commission
Executive Director, PDRTA
Chairman, Florence Airport Commission
Division Administrator, FHWA
Chairman, City of Florence Planning Commission

The FLATS Study Team is established by the Policy Committee to provide recommendations on technical methods, procedures and standards that are used in the development of transportation plans and programs. The FLATS Study Team consists of the following members:

Study Team
Statewide Programs Manager, SCDOT, Office of Public Transit
Regional Planning Manager, SCDOT, Office of Public Transit
Area Planning Engineer, SCDOT
District 5 Traffic Engineer, SCDOT
Program Manager, Pee Dee Regional Production Group, SCDOT
Assistant Program Managers (2), Pee Dee Regional Production Group, SCDOT
Manager, SCDOT Enhancement Program
Coordinators (2), SCDOT Enhancement Program
Environmental Engineer, FHWA

Director, Planning, Research and Development, City of Florence
Chairman, Florence County Planning Commission
Planner, Pee Dee Regional Council of Governments
Executive Director, Pee Dee Regional Transportation Authority
Chairman, City of Florence Planning Commission
Director, Darlington County Planning Department
Councilmember, City of Darlington
Councilmember, Town of Timmonsville
Director, Florence County PBID
Planning Services Officer, Florence County PBID

Planning Emphasis and Issues

Changes in the economy will always present challenges for the Florence Area Transportation Study. There are several key planning issues to continually address for improvements. Implementation of safety measures in the transportation planning process is at the top of the list. The FLATS planning process focuses on a multi-modal transportation network that can be financially justified, maintain its current attainment air quality status, increase public involvement in the planning process and strive for a livable, sustainable community.

A focus on operational improvements and the protection of existing corridors through access management offers relatively low cost projects that can significantly improve congestion and safety on community streets and roads.

The 2010 Census for the FLATS area was recently released. The population increased approximately 5% in the FLATS area. As a result, the FLATS study area boundary expanded. Increased planning to reduce/mitigate congestion will be mandatory and greater demographic data development of the entire MPO area will be needed as a result of this growth. Air quality issues will be more closely monitored and there will be an emphasis on GIS/GPS activities.

FLATS works closely with the City of Florence Parks and Beautification Department in enhancing its current Florence Trail System. Enhancing the FLATS area to a more pedestrian/bicycle friendly area will assist in improving traffic flow and potentially mitigate congestion.

The FLATS area's population, employment and housing continue to expand creating the need to plan for and implement transportation infrastructure and services. The ability for the FLATS Study Area to remain livable and sustainable, as well as economically competitive is highly dependent on the quality of our transportation systems and availability of services.

The FLATS MPO ensures that transportation plans address environmental impacts or mitigation activities involving conservation of natural resources, historic preservation and land use development activities as well as other provisions necessary to comply with the local, state and federal regulations, laws and policies.

FLATS will continue to incorporate the eight Planning Emphasis Areas (PEAs) listed below as directed by MAP-21 into the program (U.S. Code Title 23 Section 134 (h)(1)(A-H) and Title 49 Section 5303 (h)(1)(A-H)).

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase the accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation, and;
8. Emphasize the preservation of the existing transportation system.

Throughout the UPWP for FY2014, the above referenced PEAs are associated with the function and coordination of the multi-modal transportation planning process. The main concern of transportation planning coordination is the development of goals, objectives, and policies.

The following table indicates the PEAs that FLATS staff will continue to focus on as objectives are fulfilled for each section of the UPWP.

Table 1: Planning Emphasis Areas (PEA's)

UPWP Task	1	2	3	4	5	6	7	8
A. Program Administration								
A-1 Administration		X	X					
A-2 Public Participation				X		X		
A-3 Transportation Enhancement Program					X			X
B. Surveillance								
B-1 Mapping		X	X				X	
B-2 Air Quality Surveillance	X				X			X
B-3 Traffic Surveillance		X	X				X	
C. Documentation and Analysis								
C-1 Development and Maintenance		X		X	X	X		X
C-2 Socioeconomic and Land Use Data	X			X	X		X	X
C-3 Public Transportation Planning	X	X	X			X	X	

Funding

Funding for the transportation program of the Florence Area Transportation Study (FLATS) Metropolitan Planning Organization (MPO) is shown below by activity and source.

Table 2: Proposed Funding Sources – FY2013

WORK TASK	PERCENTAGE	FHWA	LOCAL SHARE	TOTAL
Administration	7%	8,881	2,220	11,101
Public Participation	8%	10,150	2,537	12,687
Transportation Enhancement Program	5%	6,343	1,586	7,929
Mapping	20%	25,374	6,343	31,717
Air Quality Surveillance	5%	6,343	1,586	7,929
Traffic Surveillance	10%	12,686	3,172	15,858
Development and Maintenance	10%	12,686	3,172	15,858
Socioeconomic and Land Use Date	20%	25,374	6,343	31,717
Public Transportation Planning	15%	19,030	4,758	23,788
TOTAL	**100%**	**126,867**	**31,717**	**158,584**

A. Program Administration

A-1 Administration

Objective:
Administer the transportation planning program in the FLATS area. Coordinate and conduct the transportation planning activities of the Metropolitan Planning Organization (MPO) in compliance with all federal, state, and local laws regulations and requirements.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 2 and 3

- Organized Policy Committee and Study Team Committee meetings and presented items for discussion accordingly. ***First quarter, third quarter and fourth quarter***
- Maintained minutes, resolutions, agreements and all other FLATS records. ***Continuous throughout the year***
- Distributed the UPWP to public officials to inform them of planning activities and costs associated with FY2013 and posted document on the FLATS webpage. ***Fourth quarter***
- Distributed the amendments to the FY2010-2015 TIP to public officials and posted document on the FLATS webpage. ***Fourth quarter***
- Attended SCAPA annual meetings and MPO conferences. ***First quarter and second quarter***
- Participated in several webinars hosted by the FHWA and FTA. ***Continuous throughout the year***
- Attended various conferences and workshops in order to enhance transportation planning techniques. ***Continuous throughout the year***
- Made presentations at public meetings and workshops. ***Continuous throughout the year***
- Organized and hosted quarterly meetings for the Florence Trails Committee. Prepared a study on one area in Florence where sidewalks are needed for pedestrian safety. ***First quarter, second quarter and third quarter***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 2 and 3

- Staff will provide the FLATS Policy Committee and Study Team with the administrative work and technical assistance necessary to effectively operate as an MPO. ***Continuous throughout the year***
- Provide the administrative support and supervision needed to administer the plans and programs identified in the UPWP. ***Continuous throughout the year***
- Staff will distribute the FY2014 approved UPWP to public officials and place document on the FLATS webpage. ***Fourth quarter***

- Staff will distribute the approved FY2014-2019 TIP to public officials and post document on the FLATS webpage. ***Fourth quarter***
- If any changes are necessary to the LRTP, staff will make amendments to the LRTP, host the public comment period and present the amended LRTP to the FLATS Study Team and Policy Committee. Upon approval, the FLATS webpage will be updated to include the revised document. ***Continuous throughout the year***
- Staff will continue to work on various safety and security issues throughout the FLATS area. To assist with the safety of our transportation system, staff will continue to notify and remain in contact with emergency personnel about meetings and other transportation related issues. **Continuous throughout the year**
- Provide and maintain correspondence presented to citizens, developers, consultants and government agencies on items such as traffic reviews, elements of design, development of grant applications and public transportation. As requested, staff will be available to speak at public meetings to provide opportunities for the public to discuss transportation related issues. ***Continuous throughout the year***
- Staff will continue to attend various training sessions and seminars on urban transportation planning in order to continue improving its technical capacity and stay abreast of changing regulations and transportation technologies. ***Continuous throughout the year as available***
- Advertise public notices for meetings and FLATS activities as guided by the Public Participation Process (PPP). ***Continuous throughout the year***
- Update the FLATS webpage as necessary (www.florenceco.org/offices/planning/flats/). ***Continuous throughout the year***
- Work with officials on various planning projects, including the one-cent sales tax projects currently funded by the State Infrastructure Bank (SIB). ***Continuous throughout the year***
- As SCDOT updates the Statewide Transportation Improvement Plan (STIP), FLATS will continue to work with them in its development and confirm that the FLATS TIP is in compliance. **Continuous throughout the year**
- Present SCDOT all Requests for Proposals (RFPs) for consulting services for their approval before publishing. All funds administered by SCDOT, regardless of source, will be subject to the provisions of the OMB Circular A-133, the Single Audit Act. ***Continuous throughout the year as applicable***
- As a vector to continue implementing the 2004 Florence Area Bikeway Plan, staff will continue to administer Florence Trails Committee meetings by providing the meeting place, organizing the agenda, liaising among members and other duties as appropriate. ***Each quarter throughout the year***
- Comply with Title VI/Environmental Justice regulations. **Continuous throughout the year**
- Educate the public and governing officials on the importance of creating a more livable, sustainable community. ***Continuous throughout the year.***

Products:
Minutes from all meetings, resolutions, agreements, reports, and other records of FLATS records will be produced and maintained as necessary. The UPWP will be published in addition to any other required documents. Copies of written correspondence concerning FLATS or other transportation related activities with citizens, local governments, developers, and other agencies will be maintained to provide a record of the yearly activities.

Staffing: County Planning Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 2,220
Federal	80%	$ 8,881
TOTAL COST		**$ 11,101**

A-2 Public Participation

Objective:
Educate the public regarding the importance of their input during the transportation planning and decision-making process and provide avenues of easy access for their input. Implement and improve the Public Participation Plan (PPP).

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 4 and 6

- Staff placed a public notice in a newspaper of local circulation and on the FLATS webpage stating that the FY2014-2019 TIP, FY2014 UPWP and PPP were available for public viewing and comment for the required number of days as outline in the PPP. ***Third quarter***
- After the appropriate number of days for the public comment was fulfilled for each of the above referenced documents, staff presented them to the Study Team on May 31, 2013, and they recommended approval to the Policy Committee. The Policy Committee approved the documents on June 10, 2013. ***Fourth quarter***
- Added groups and individuals interested in transportation planning to the FLATS mailing list for Policy Committee meetings and other transportation related issues. ***Continuous throughout the year***
- When FLATS documents were amended, staff updated the documents on the FLATS webpage and the copy on display for the public at the Florence County Library. ***Continuous throughout the year***
- As another outlet to reach the public, staff prepared and distributed the fifth edition of the FLATS Newsletter to public officials and placed at various locations throughout the County. ***Fourth quarter***
- Implemented public notification procedures as outlined in the PPP. ***Continuous throughout the year***
- Provided FLATS transportation information on the Florence County Planning Blog (www.florenceco.blogspot.com). ***Continuous throughout the year as time allowed***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 4 and 6

- Staff will continue to present the Public Participation Plan to the Policy Committee as part of a three-year self-review process. With this process, staff will provide the Policy Committee with a public involvement report from the recent year and demonstrate our response to citizen concerns as part of the update of the public participation plan. ***The new plan will be monitored continuously***
- One of the FLATS goals is to provide the public with information in many aspects. Staff will initiate contact with citizens, affected public agencies, representatives of public

transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties regarding transportation planning in the FLATS area. ***Continuous throughout fiscal year***

- Before the Policy Committee votes on any changes to the TIP, UPWP, and LRTP, and Public Participation Plan (PPP) a public notice will be placed in a newspaper of local circulation and on the FLATS webpage stating that the documents will be available for public viewing and comment for the required number of days as outline in the PPP. ***Continuous throughout fiscal year as necessary***
- Staff will continue to administer the Florence Area Trails Committee, which citizens are invited to attend. ***Continuous throughout fiscal year***
- Staff will work with SCDOT to update the public participation process to identify all required stakeholders according to MAP-21. ***Continuous throughout fiscal year***
- FLATS will also continue to update and add documents and transportation planning information to the FLATS webpage. This webpage provides the public with an additional means to access and comment on the transportation plans. ***Continuous throughout fiscal year***
- Conduct public meetings to increase awareness, involve the public and seek public comments. ***Continuous throughout fiscal year***
- The existing mailing list for the FLATS Policy Committee meetings will be reviewed regularly and expanded to insure that all segments of the population are given notice of the meetings at least one week prior to the meetings. Some of the groups to receive notice of the meetings will include but not be limited to affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs, and projects, minority and low-income groups, elderly and disabled and users of pedestrian and bicycle facilities. ***Continuous throughout fiscal year***
- All technical and policy information used in the development of plans will be available for public inspection upon written request to the FLATS staff. ***Continuous throughout fiscal year***
- Someone will be identified who can assist FLATS staff with communicating with non-English speaking persons. Significant population concentrations of non-English speaking persons will be identified using 2010 Census data. If there is a FLATS project that will have an impact on that area, staff will prepare to assist those persons. ***Continuous throughout fiscal year***
- Prepare the sixth edition of the FLATS Newsletter for distribution. ***Fourth quarter***
- Provide FLATS transportation information on the Florence County Planning Blog (www.florenceco.blogspot.com). ***Continuous throughout fiscal year as time allows***

Products:
The County Planning Department will make available any information on the planning process that may be of interest to any persons or groups. The mailing list will be updated accordingly. The Public Participation Process will also be updated at a minimum on a three-year basis.

Staffing: County Planning Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 2,537
Federal	80%	$ 10,150
TOTAL COST		**$ 12,687**

A-3 Transportation Enhancement Program

Objective:
Maintain the process for selecting enhancement projects to be included in the TIP and to be the liaison between the grant recipients and SCDOT.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 5 and 8

- Assisted SCDOT to insure that a Local Public Agency (LPA) is designated and approved by them to administer each enhancement project. The LPA is the administrator for each enhancement project. ***Continuous throughout the year***
- Coordinated with the LPA for each current project to obtain status updates to verify that each project is on track to meet its completion date. Presented the status updates to the Study Team and Policy Committee. ***Continuous throughout the year***
- FLATS staff received an enhancement application from Francis Marion University that was caught in the middle between SAFETEA-LU and the enactment of MAP-21. SCDOT advised staff to present the project to the Policy Committee and if approved, they will present to the Highway Commission to see if it can still be funded. If not, it will need to be presented under the new Transportation Alternatives Program (TAP). Staff presented this application to the Policy Committee during their February 25, 2013 meeting. The Policy Committee approved presenting the application to SCDOT. ***Third quarter***
- FLATS staff sent notices to applicable entities for the upcoming funding cycle for the Transportation Alternative Program, which replaced the Transportation Enhancement Program as a result of MAP-21. ***Third quarter***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 5 and 8

- Implement new MPO Transportation Alternatives Program Guidelines as required by the new Federal Surface Transportation Bill, MAP-21. ***Continuous throughout the year***
- Prepare documentation as TAP project applications are received to present to SCDOT. As requested by the FLATS Policy Committee, staff will provide the applications received to the Study Team and Policy Committee prior to submitting to the SCDOT for review. ***Continuous throughout the year***
- As grants have been awarded by the SCDOT for FLATS area applications, FLATS staff will amend the TIP to include the awarded application/s and work with SCDOT on the items listed in the TAP guidelines. ***Continuous throughout the year***
- Staff will continue to maintain quarterly status records of active enhancement projects from the Transportation Enhancement Program until the remaining two projects have been completed. ***Continuous throughout the year***

- As new funding cycles are open for the TAP, staff will send notification to applicable entities and assist as the liaison between the applicant and the SCDOT to prepare applications. ***Continuous throughout the year***

Product:
The TAP projects that are approved by the SCDOT will be listed in the TIP. The projects that are considered and information on these projects will be available from the FLATS staff at any time during the planning process.

Staffing: County Planning Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 1,586
Federal	80%	$ 6,343
TOTAL COST		**$ 7,929**

B. Surveillance

B-1 Mapping

Objective:
Provide a visual instrument that identifies areas of study and provides a detailed tool for planning and analysis within the FLATS area.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 2, 3 and 7

- In an effort to make sure building permits were issued with the appropriate setbacks required, staff requested the anticipated right of way digital data from the SCDOT for the widening of Guideshare projects and the Capital Sales Tax projects. This data has been added as a layer for staff's internal use. ***First quarter, second quarter and still in progress***
- The Florence Senior Citizens Association and the Darlington County Council on Aging were required to prepare digital data of their current client list. FLATS staff prepared this data and submitted to them for their use. ***Fourth Quarter***
- Made appropriate revisions to the land use map upon approval of amendment requests. ***Continuous throughout the year***
- FLATS provided digital data to PDRTA and PDCOG as requested. ***Continuous throughout the year***
- Completed a new web application for Emergency management Services (EMS) that plots dispatch calls on a mobile which enables mapping service in ArcGIS online. The new tool will empower both EMS decision makers and staff to select the best possible response route and team when managing an emergency. ***First quarter***
- Continued with the digital roads layer project to verify that address ranges within the file are highly accurate and also that the road surface types are identified correctly. ***Second quarter***
- Began a project to collect and estimate additional data on the GIS Roads layer within the FLATS area. This includes estimating speed limits and surface types that have not been added yet and the location of all stop signs, traffic signals and yield signs. ***Third quarter***
- Developed a downtown Florence website. Redevelopment of the downtown is underway. In conjunction with existing economic development efforts within the downtown, the new site will help the community and potential clients to visualize and navigate within downtown Florence, which is in the FLATS area. ***Second quarter***
- Staff reviewed plats of new subdivisions and digitized new parcels to better track growth in the FLATS area. ***Continuous throughout the year***
- Provided digital data, as requested, to law enforcement, E911 Dispatch, fire departments and emergency management personnel to assist in improving safety and security activities. ***Continuous throughout the year***

- Staff continues to make necessary upgrades to desktop and server levels to improve Geographic Information Systems (GIS) data editing workflows and improved functionality for web and mobile based application used for transportation planning. ***Continuous throughout the year***
- FLATS GIS staff created an ArcGIS JAVA Script application for emergency management staff to update a point file for hazardous material locations and sites that would or could be impacted by hazards within the County. This new data and information will assist with emergency evacuation notifications and routes to the citizens, businesses and visitors of Florence County. ***Fourth quarter***
- Staff started development of an oversized wall map to provide a visual resource for staff and citizens visiting the office. The map provides a street index and associated grid of all streets throughout Florence County. ***Fourth quarter***
- Staff continues to maintain and update county-wide addresses and road databases. ***Continuous throughout the year***
- Tracked County building permits and maintained accurate road maps. ***Continuous throughout the year***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***

Enhancement of Planning Factors 2, 3 and 7

- Continue to provide GIS information to PDRTA to assist them in determining locations where increased transit service may be needed for transit-dependent populations and updating their route maps as requested. ***Continuous throughout the year***
- Staff will continue to provide digital data to the Florence Senior Citizens Association and the Darlington County Council on Aging as requested. ***Fourth quarter***
- Staff will continue to work with the Assessor's Office, GIS Department and Engineering Division to maintain an accurate centerline and parcel map, which is critical in the efficient and effective tracking of trend data in the FLATS area. As new roads are proposed in the area, staff will verify the road for an accurate placement utilizing Global Positioning Systems (GPS) and include attribute data, such as road surface type and bridge location. This data will also be made available to emergency personnel, transit operators and other public entities to increase the effectiveness of the transportation system. ***Continuous throughout fiscal year***
- Work also continues on the development of our data so that GIS becomes an integrated system throughout other County departments. This work will improve the quality, speed, and uniformity of our data as well as our ability to use the data to plan for growth in the transportation network. ***Continuous throughout fiscal year***
- Staff will continue to provide a new road Atlas to PDRTA, emergency personnel and other public entities as updates are completed. ***Continuous throughout fiscal year***

- Staff will continue to update accurate address information. This information is used for updating, plotting and analyzing socioeconomic data for the FLATS transportation model. ***Continuous throughout fiscal year***
- Staff will continue to update the Comprehensive Plan Land Use Map as amendments are approved by Planning Commission and County Council. ***Continuous throughout fiscal year***
- Verify accurate placement of new roads proposed for the area. Notify emergency personnel, law enforcement, transit operators and other public entities of updates to increase the effectiveness of the transportation system. ***Continuous throughout fiscal year***
- Continue to explore ways in which GIS can provide data to FLATS staff to incorporate the eight Planning Emphasis Areas criteria in transportation planning. ***Continuous throughout fiscal year***
- Explore ways in which GIS can be applied to enhance stakeholder involvement in transportation projects. ***Continuous throughout fiscal year***

Product:
The County Planning Department and GIS Department will maintain digital data as described above. Staff will produce maps to be used by the planning staff for land use and trend analysis. County-wide address and roads databases will continuously be maintained. Transit bus routes will be continuously updated and altered for highest efficiency.

Staffing: County Planning and GIS Departments

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 6,343
Federal	80%	$ 25,374
TOTAL COST		**$ 31,717**

B-2 Air Quality Surveillance

Objective:

Track current Federal and State legislation regarding air quality in an effort to remain compliant with the Environmental Protection Agency's National Ambient Air Quality Standards (NAAQS) for ground-level ozone. Proactively research and administer projects that would have a positive impact on air quality for the FLATS area.

Previous Responsibilities and Projects: (includes schedule of milestones after each work task)

Enhancement of Planning Factors 1, 5 and 8

- FLATS staff has continued to participate in air quality training and monitor relevant air quality data and regulations to keep local stakeholders informed about air quality issues. ***Continuous throughout fiscal year***
- Staff is coordinating with the County Grants Coordinator to assist staff in researching grants and other assistance available in order to propose potential new programs to County Council to be proactive in keeping the FLATS area in attainment. ***Continuous throughout fiscal year***
-

Anticipated Responsibilities and Projects: (includes schedule of milestones after each work task)

Enhancement of Planning Factors 1, 5 and 8

- Staff will continue to monitor relevant air quality data, help implement local and regional air quality initiatives, monitor developments related to federal air quality regulations and requirements, attend air quality training workshops, work with other stakeholders to maintain an air quality action plan and provide information to stakeholders in the FLATS study area. ***Continuous throughout fiscal year***
- Staff will continue to research grants and other assistance available in order to propose potential new programs to County Council to be proactive in keeping the FLATS area in attainment. ***Continuous throughout fiscal year***
- Incorporate procedures as required by EPA, DHEC, SCDOT, FHWA and other state and federal agencies to determine the conformity of transportation plans, projects and programs within the Transportation Improvement Plan (TIP) and Long Range Transportation Plan (LRTP). ***Continuous throughout fiscal year***
- FLATS Staff will contact the local DHEC, PDRTA, the PDCOG and other relevant transportation related entities and other applicable stakeholders to establish an air quality coalition for the FLATS area. ***Continuous throughout fiscal year***
- Staff will continue transportation conformity training as offered to provide basic information about conformity requirements and the relationship of the transportation and air quality planning processes in order to prepare staff on interagency collaboration and working effectively in resolving conformity issues should FLATS be declared a non-attainment area. ***Continuous throughout fiscal year***

Product:
Abide by all Federal and State programs and requirements relating to air quality and conformity for the FLATS area. These efforts are designed to enhance local ambient air quality as part of the overall strategy to meet Federal and State clean air regulations, promote public and assist local government. Complete air quality analysis for projects as needed.

Staffing: County Planning and Engineering Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 1,586
Federal	80%	$ 6,343
TOTAL COST		**$ 7,929**

B-3 Traffic Surveillance

Objective:
Monitor current traffic characteristics and travel patterns to improve efficiency, reliability, safety, security, and volume affecting the movement of traffic in the FLATS area.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 1 and 5

- The annual count program is on a continual basis with count information available by FLATS staff to citizens, county agencies and officials as needed. ***Continuous throughout fiscal year***
- Staff has participated in various traffic-related meetings, including a public hearing for US51 Pamplico Highway, which is a Capital Sales Tax widening project. ***Third Quarter***
- Staff participated in the SCDOT public hearing for the FLATS Guideshare project, S. Cashua Drive. The S. Cashua Drive project was selected and prioritized in accordance with South Carolina General Assembly Act 114 enacted on June 2007 and listed in the TIP. ***Second Quarter***
- Attended a meeting with SCDOT representatives as requested by several S. Cashua Drive business owners who will have to relocate as a result of this widening project. ***Third Quarter***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 1 and 5

- As traffic counts are continuously collected for our area by SCDOT, staff will continue to incorporate these counts into maps and traffic reviews for projects. These traffic reviews incorporate SCDOT traffic counts and provide information to assess levels of service and function of roadways. ***Continuous throughout fiscal year***
- As growth occurs throughout our area and as traffic patterns change, staff will continue to produce traffic reviews on development projects. This information will also be used to update and provide information for the long range plan as updates are needed. In addition, these counts will be made available as requested by the public. ***Continuous throughout fiscal year***
- Staff will increase collection and study data on congested areas in support of anticipated congestion modeling capabilities. Staff will continue coordinating with the local SCDOT office to review the timing of signalization on streets with congestion issues. ***Continuous throughout fiscal year***
- Staff will begin collecting study data on intersections that have concern regarding safety, security, freight and traffic congestion. The developed list will be ranked by the SCDOT in accordance with Act 114 and projects will be presented to the Policy Committee for approval to include in the LRTP to utilize as FLATS guideshare funds are available. ***Continuous throughout fiscal year***

- Staff will continue to collect information from local freight and freight service companies through origin/destination surveys and interviews to: identify and access existing and future freight movement and regional infrastructure for all modes; identify regional freight needs and challenges; facilitate a task force of stakeholders; determine freight capacity of major routes; collect data from freight stakeholders through origin/destination surveys and interviews; compile a comprehensive freight transportation profile including origin/destination, modal shares, and interregional and intraregional freight flows. ***Continuous throughout fiscal year***

Product:
As growth occurs throughout the FLATS area and as traffic patterns change, staff will continue to produce traffic reviews on development projects. This information will also be used to update and provide information for the long range plan as updates are needed. In addition, these counts will be made available as requested by the public.

Staffing: County Planning and GIS Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 3,172
Federal	80%	$ 12,686
TOTAL COST		**$ 15,858**

C. Documentation and Analysis

C-1 Development and Maintenance

Objective:
Maintain the FLATS program by developing the Unified Planning Work Program (UPWP), the Transportation Improvement Plan (TIP), and the Long Range Transportation Plan in compliance with federal regulations as they relate to metropolitan transportation planning. In addition and as needed, staff will update each element of the Florence County's Comprehensive Plan.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 2, 4, 5, 6 and 8

- Staff, along with a consultant completed the final draft of the 2035 LRTP. Staff satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The FLATS Policy Committee approved the document during their July 23, 2012 meeting. ***First Quarter***
- As a result of the 2010 Census, the FLATS Study Area Boundary increased adding two new jurisdictions within the urbanized area. Staff prepared the new study area boundary map, the required Resolutions of support and amendments to the Bylaws as was necessary. These documents were due to the SCDOT by March, 2013. Staff presented the required documents to the Study Team and Policy Committee. The Policy Committee approved the documents at their February 25, 2013 meeting and staff forwarded to the SCDOT accordingly. The documents included the 2010 Study Area Boundary Map, the three executed Resolutions and the amended Bylaws. ***Third Quarter***
- Staff completed the FY2010-2015 TIP amendments, satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their February 25, 2013 meeting. **Third *Quarter***
- Staff completed the FY2014-2019 TIP amendments, satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting. **Fourth *Quarter***
- Staff completed the 2014 UPWP, satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting. **Fourth *Quarter***
- Staff updated the Public Participation Process to include the new study area boundary information and MAP-21. Staff satisfied the public comment period requirement and presented it to the FLATS Study Team and Policy Committee. The Policy Committee approved during their June 10, 2013 meeting. **Fourth *Quarter***
- Staffed prepared and maintained the PL quarterly fund reports and provided to the SCDOT as required. ***Quarterly throughout fiscal year***

Anticipated Responsibilities and Projects: (includes schedule of milestones after each work task)

Enhancement of Planning Factors 2, 4, 5, 6 and 8

- Staff will continue to prepare updates to the TIP and UPWP as required. The appropriate public comment period will be held for each prior to presenting to the FLATS Study Team and Policy Committee. ***Updated as needed***
- As needed, staff may also work with consultants on network improvement studies. These studies would involve investigating key problem areas, including intersections, and finding cost effective ways to improve traffic conditions. ***Continuous throughout the year***
- Staff will also continue to work with SCDOT on the Statewide Multi-modal plan as it is being developed. As this plan develops, staff can use the plan when considering future projects. ***Continuous throughout fiscal year***
- FLATS will continue to comply with the Title VI requirements contained in the federal regulations in the development of the plans and programs. In the event that a Title VI complaint is received, FLATS will acknowledge and log the complaint, forward the complaint to SCDOT and address the concern appropriately. ***Continuous throughout fiscal year***
- Staff will continue to prepare and maintain the FLATS quarterly PL funding reports and submit to SCDOT in the time required. ***Quarterly throughout fiscal year***
- Comply with the Disadvantaged Business Enterprise (DBE) program to the extent authorized by federal law as stated in the Civil Rights Section 12 of the FTA Master Agreement. ***Continuous throughout fiscal year***
- As needed, staff may also work with consultants on network improvement studies. These studies would involve investigating key problem areas, including intersections, and finding cost effective ways to improve traffic conduction. Continuous throughout fiscal year. ***Continuous throughout fiscal year***

Product:

Staff will produce the UPWP, TIP, and produce all other Federal and state documents including the long range plan and the County's Comprehensive Plan as required.

Staffing: County Planning Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 3,172
Federal	80%	$ 12,686
TOTAL COST		**$ 15,858**

C-2 Socioeconomic and Land Use Data

Objective:
Monitor growth trends based on building permit and employment data. Maintain and update databases for use in transportation planning. Coordinate land use and transportation planning in an effort to facilitate a healthy, sustainable community.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 1, 4, 5, 7 and 8

- Socioeconomic and land use data has been collected and maintained. Several databases, including zoning and land use, have been maintained and updated. Information such as the applicant's name, address, zoning district, and type of work is included in the zoning database. This, as well as other information, has been used to direct traffic modeling. ***Continuous throughout the year***
- New Site plans and subdivision plats were reviewed to evaluate the timing and location of land use changes taking place in the FLATS study area. Changes in land use could initiate adjustments in socioeconomic data and have other impacts on the transportation system. ***Continuous throughout the year***
- Staff worked with SCDOT to update the TAZ for the FLATS area. ***Second Quarter***
- Staff reviewed and updated the functional classification data for the FLATS area and submitted to the SCDOT. ***First and Second Quarters***
- Staff continued tracking foreclosures in our area to establish comparable socioeconomic trends for future reference. A map of the various areas and charts for monthly and yearly comparison has been created and is available as requested. ***Continuous throughout the year on a monthly basis***

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***
Enhancement of Planning Factors 1, 4, 5, 7 and 8

- FLATS staff will continue to update and coordinate land use and socioeconomic data as necessary to maintain data inventories. ***Continuous throughout the year***
- Land use changes will continue to be tracked through review of zoning cases, site plans, and subdivision plans. ***Continuous throughout the year***
- Develop data for comprehensive plan updates, and corridor and principal point studies as necessary to improve the transportation network. ***Continuous throughout the year***
- Staff members will also be monitoring the transportation system throughout its development including working on projects, such as the one-cent sales tax projects, that connect the FLATS network to other areas in the county. ***Continuous throughout the year***

- Staff will continue to track foreclosure trends, analyze clusters and may compare to statistics such as distance driven to work, distance from center of town, distance from public transit and socioeconomic trends. ***Continuous throughout fiscal year***
- Building permit and development data will also be tracked. This task will allow the comparison of past with future growth by analyzing Traffic Analysis Zones. This data will show residential growth from new subdivisions and commercial growth from new and altered developments. ***Continuous throughout fiscal year***

Product:

Data from traffic analysis zones and from building permit databases will continue to be created to track growth. An updated land use report will be maintained. Foreclosure statistical reports and maps will continuously be provided to stakeholders.

Staffing:

County Planning, Engineering and GIS Department

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 6,343
Federal	80%	$ 25,374
TOTAL COST		**$ 31,717**

C-3 Public Transportation Planning

Objective:

Support and assist Pee Dee Regional Transportation Authority (PDRTA) and evaluate transit options to enhance planning for new multi-modal initiatives and projects. Also support and assist the three additional agencies within the FLATS Study Area Boundary who receive Small Urban Transit Funding. These agencies are The Florence Senior Citizens Association, The Florence County DSN Board and The Darlington County Council on Aging.

Previous Responsibilities and Projects: ***(includes schedule of milestones after each work task)***

Enhancement of Planning Factors 1, 2, 3, 6 and 7

- FLATS Staff periodically updates the centerline coverage for the County as new roads are developed. This information is supplied to PDRTA administration for their use. As additional information is needed to comply with their Pee Dee Regional Transit Plan, and the PDRTA Marketing Plan, staff provided accordingly. ***Continuous throughout fiscal year***
- Staff continues to maintain an internet mapping website, which can be used to locate addresses, find major buildings, identify subdivisions/industries, and pinpoint other landmarks. This website also has road information, including surface type. Staff has continuously provided mapping updates to PDRTA in order to develop new routes and identify ridership. ***Continuous throughout fiscal year***
- FLATS Staff initiated quarterly meetings with PDRTA and the PDCOG to keep them up to date on transportation planning activities and to stay abreast of any assistance needed by the FLATS staff. ***Quarterly throughout the fiscal year***
- Included PDRTA's Small Urban Transit Funding for FFY2013 in the FLATS FY2010-2015 TIP and presented to the FLATS Policy Committee during their February 25, 2013 meeting for approval. ***Third Quarter*** The following FTA funding information was provided:
    - Program 5307 - $195,000 Capital; $500,000 Operations; $290,000 Preventative Maintenance. On March 21, 2013, per the SCDOT STIP Revision #41, the Capital funds for Program 5307 were amended to $485,000. The correction was presented to the Policy Committee in the FY2014-2019 TIP in the ***Fourth Quarter***.
    - Program 5309 - $350,000 Capital
    - Program 5316 - $80,000 Capital
    - Program 5317 - $153,000 Capital
- Included The Florence Senior Citizens Association's Office of Public Transit Allocation for Small Urban Transit Funding for the FFY2013 apportionment in the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. ***Fourth Quarter*** The following FTA funding information was provided:
    - Program 5310 - $10,000 Operations

- Included The Florence County DSN Board's Office of Public Transit Allocation for the Small Urban Transit Funding for the FFY2013 apportionment in the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. **Fourth Quarter** The following funding information was provided:
  - Program 5310 - $45,000 Capital
- Included The Darlington County Council on Aging's Office of Public Transit Allocation for Small Urban Transit Funding for the FFY2013 apportionment in the FLATS FY2014-2019 TIP. The FY2014-2019 TIP was presented to the Policy Committee for approval on June 10, 2013. **Fourth Quarter** The following funding information was provided:
  - Program 5310 - $45,000 Capital
  - Program 5317 - $26,000 Operations

Anticipated Responsibilities and Projects: ***(includes schedule of milestones after each work task)***

Enhancement of Planning Factors 1, 2, 3, 6 and 7

- Staff will continue to assist and support the PDRTA, The Florence Senior Citizens Associates, the Darlington County Council on Aging and the Florence DSN Board programs with any information or documentation needed to fulfill their duties to residents. ***Continuous throughout the year***
- Staff has direct contact with the PDRTA on a continual basis and will keep them apprised of project activities as well as aide in PDRTA projects such as signage, facility planning and mapping updates to develop new routes and identify ridership as necessary. ***Continuous throughout fiscal year***
- FLATS Staff will continue to coordinate quarterly meetings with PDRTA and the PDCOG to keep them up to date on transportation planning activities and to stay abreast of any assistance needed by the FLATS staff. ***Quarterly throughout the fiscal year***
- The PDRTA has had a substantial downsize in their staff and changes in their routes and stops over the last fiscal year. Staff will be updating this information when PDRTA advises that all changes are complete. ***Continuous throughout fiscal year***

Product:

Provide an updated County Road Atlas to the PDRTA annually. Reports and plans developed in conjunction with PDRTA, The Florence Senior Citizens Association, The Florence DSN Board and the Darlington County Council on Aging using GIS may also be produced.

Staffing: County Planning and GIS Departments

Estimated Date of Activity Completion: June 30, 2014

Financial Responsibility:

Source of Funds	*Ratio*	*Cost*
Local	20%	$ 4,758
Federal	80%	$ 19,030
TOTAL COST		**$ 23,788**

Appendix A. List of Acronyms

AADT	Average Annual Daily Traffic
DBE	Disadvantaged Business Enterprise
DHEC	Department of Health and Environmental Control
DSN	Disabilities and Special Needs
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FLATS	Florence Area Transportation Study
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GIS	Geographic Information Systems
GPS	Global Positioning Systems
LPA	Local Public Agency
LRTP	Long Range Transportation Plan
LUCA	Local Update of Census Addresses
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Protection Act
PBID	Planning and Building Inspection Department
PDCOG	Pee Dee Council of Governments
PDRTA	Pee Dee Regional Transportation Authority
PEA	Planning Emphasis Area
PL	Planning
PPP	Public Participation Process
RFP	Request for Proposal
RPWP	Rural Planning Work Program
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SCAPA	South Carolina American Planning Association
SCDOT	South Carolina Department of Transportation
SIB	State Infrastructure Bank
STIP	State Transportation Improvement Program
TAP	Transportation Alternatives Program
TAZ	Traffic Analysis Zone
TIP	Transportation Improvement Program
UPWP	Unified Planning Work Program

Appendix B. General References

MAP-21, Public Law 112–141 (H.R. 4348) — July 6, 2012, 112th U.S. Congress
U.S. Code Title 23, Section 134
U.S. Code Title 49, Section 5303
H.R. 2847, Hiring Incentives to Restore Employment Act; Surface Transportation Extension Act of 2010

SCDOT Certification

South Carolina
Department of Transportation

CERTIFICATION OF THE FLORENCE AREA TRANSPORTATION STUDY PLANNING PROCESS

Be it known to all that the below signees do hereby endorse and certify the planning process for the Florence Area Transportation Study and further certify that this Planning Process addresses the major issues facing the area and is being conducted in accordance with the requirements of: 23 C.F.R. 450.334(a), 23 U.S.C. 134, and the applicable regulations; Section 174 and 176 (c) and (d) of the Clean Air Act (42 U.S.C. 7504, 7506 (c) and (d); Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794; Section 1101 (b) of the Moving Ahead for Progress in the 21st Century Act (MAP-21) (Pub. L. 1212-141) regarding the involvement of disadvantaged business enterprise in FHWA and FTA funded planning projects and provisions of the Americans with Disabilities Act and US DOT regulations "Transportation for Individuals with Disabilities" (49 CFR Parts 27, 37, and 38).

CHAIRMAN, POLICY COMMITTEE
FLORENCE AREA
TRANSPORTATION STUDY

DATE: 6/10/13

DEPUTY SECRETARY FOR ENGINEERING
SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION

DATE: _____

Post Office Box 191
Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

AN EQUAL OPPORTUNITY/
AFFIRMATIVE ACTION EMPLOYER

SCDOT LPA Agreement

LOCAL PROJECT AGREEMENT (LPA)
COORDINATION REQUIREMENTS FOR PROCUREMENT OF CONSULTING SERVICES

The following process is intended to comply with LPA requirements by ensuring eligibility of planning activities utilizing Federal-Aid funds. Planning activities by definition do not include findings required by National Environmental Policy Act (NEPA), preliminary engineering, the acquisition of real property, or the management/oversight of construction projects. Federal funds may include PL, SPR, STP, NHPP, CMAQ or any other Federal-Aid Program funds. In the event that the MPO, COG or sub-recipient intends to procure consulting services utilizing federal funds to complete tasks outlined in the approved Unified Planning Work Program (UPWP) or Rural Planning Work Program (RPWP), the following steps must be adhered to in sequence in order to ensure federal participation in the project:

STEP 1

- Ensure that the project is included in the UPWP or RPWP
- Submit a draft scope of work in sufficient detail to determine that all work elements are eligible under Title 23 USC
- Submit a draft advertisement that will be used in South Carolina Business Opportunities (SCBO)
- Submit an internal estimate of the project cost
- Receive a notice to proceed from SCDOT to advertise the request for proposal

STEP 2

- Include the SCDOT and FHWA as non-voting members of the selection committee
- Submit a recommendation to SCDOT for approval of the selected firm(s) with documentation of the evaluation process
- Submit a copy of the negotiation process
- Receive notice to proceed from SCDOT

STEP 3

- Submit a copy of the draft agreement
- Receive final notice from SCDOT to execute agreement and initiate project

I hereby acknowledge that all procurement activities will follow the above described steps. Any deviation for this process will jeopardize federal reimbursement for the project.

6/10/13
DATE

MPO/COG PLANNING AGENCY DIRECTOR

If applicable:

_____
DATE

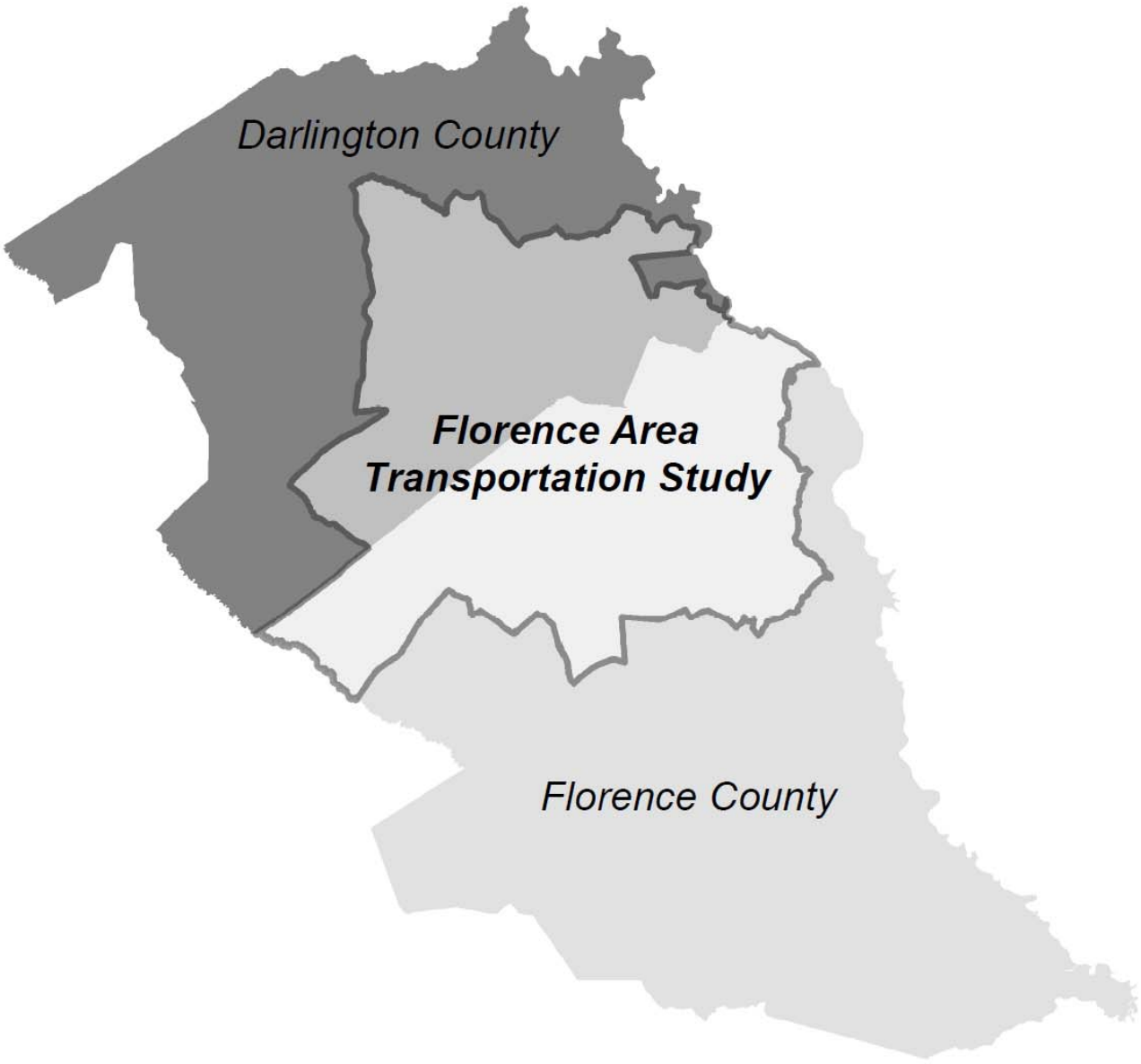
_____
SUB-RECIPIENT

Attachment 18

Public Participation Process (PPP)

Florence Area Transportation Study

Public Participation Process



For information, please contact
Debi Matthews, Planning Services Department
dmatthews@florenceco.org
518 South Irby Street, Florence, South Carolina 29501
(843) 676-8600

On the web: http://www.florenceco.org/planning/flats.htm

Florence Area Transportation Study

Public Participation Process

June 2013

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Introduction

The Florence Area Transportation Study (FLATS) is one of eleven metropolitan planning organizations (MPO) in the State of South Carolina. The FLATS MPO is responsible for directing federal transportation funds to local transportation programs. Furthermore, transportation oriented grants are administered through the FLATS program.

The Federal-Aid Highway Act of 1962 established the requirement for transportation planning in urban areas throughout the country. The laws extending the federal requirement for transportation planning are the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21), adopted in 1998, the Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU), enacted on August 10, 2005, and (MAP-21), Moving Ahead for Progress in the 21st Century Act, which was signed into Law (P.L. 112-141), on July 6, 2012 and was enacted on October 1, 2012.

The FLATS area encompasses a population of 124,316 people. The FLATS MPO study area boundary includes the City of Florence, Town of Quinby, City of Darlington, Town of Timmonsville and surrounding unincorporated areas of Florence and Darlington counties.

Federal land represented within the FLATS jurisdiction includes two locations: the Florence National Cemetery and the McMillan Federal Building. The 24.9 acre cemetery site is located at 803 East National Cemetery Road, about a quarter-mile east of South Irby Street in the City of Florence. The McMillan Building is found at 401 West Evans Street at the northwest corner with McQueen Street. The cemetery is managed by the Department of Veterans Affairs while the courthouse is managed by the Department of Justice.

Purpose

Mobility improvements in the study area will impact citizens along major corridors as well as in connecting corridors. A singular focus on transportation projects will limit local potential in attracting additional state and federal transportation funding. Conversely, a mixed strategy of large and small projects including pedestrian walkways and bikeways, bus enhancements, and roadway projects of all types and sizes will optimize the success of local officials attracting new monies. The purpose of FLATS public involvement is to canvass the communities within the study area in search of ideas that will have public support and improve mobility and travel safety. Additionally, the purpose is to promote and provide a variety of meaningful forums for FLATS stakeholders to communicate with the Study Team. A list of known stakeholders and issues of interest will be outlined. The overall goal of public involvement will be that members of the general public will have access to information and opportunities to provide feedback regarding acceptable and effective ways to improve mobility and safety in the FLATS area.

The Public Participation Process is in response to changes to the metropolitan planning process. This Plan fulfills requirements outlined in the Final Rule for Statewide and

Metropolitan Transportation Planning as published in the Federal Register on February 14, 2007 by the Federal Highway Administration and Federal Transit Administration. The rules were effective on March 16, 2007. The regulations are a result of the passage of the Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users (SAFETEA-LU) (Public Law 109-59, August 10, 2005) and more recently, the passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21) (Public Law 112-141, July 6, 2012. MAP-21 was enacted on October 1, 2012.

Objectives

- Disseminate information about the FLATS LRTP, TIP or a FLATS special study project to the general public and directly affected communities.
- Improve the comment response rate of citizens who live, work, and travel in the outer areas of the planning area, in particular those within the rural communities of Florence County.
- Identify and actively solicit input from stakeholder groups most affected by and interested in possible "short-term" and "long-term" improvements.
- Provide a variety of opportunities for public participation and involvement throughout the planning process.
- Produce recommendations based on public comment consideration. Respond to issues raised by the area's residents, either by incorporation into the recommendations or as a separate summary of public issues that are not incorporated.

Principles Guiding the FLATS Public Interaction

FLATS recognizes and embraces the important role of public involvement in the transportation study process. Team members will be guided by the following principles when addressing people interested in and/or impacted by transportation plans or projects:

- Those groups likely to be most impacted will receive early identification and continuous communication regarding the project. A more personal, individual approach may be required for these groups to rectify misinformation (e.g., small group meetings lead by the local planning staff).
- Two-way communications (i.e., the free exchange of information, ideas, and values between staff and citizens/stakeholders) will be sought. A variety of communication methods (e.g. e-mail, phone, and mail) will be employed in order to reach the greatest number of people.
- Draft and final study findings will be communicated to all known stakeholders via public workshops, stakeholder interviews, and information (e.g., public flyers and agendas) provided to local newspapers, radio, and television stations.

- All reasonable input from the citizens and communities will be given consideration by the FLATS team. Evidence of such will be apparent in the form of technical documents as well as the public workshops.
- Citizen/public questions will be responded to within 2 business days. This quick action builds trust and confidence.
- A series of public outreach actions, both formal and informal, are necessary. Formal actions include the public workshops as well as small group meetings or stakeholder interviews. Informal actions encompass responses to citizen phone calls and e-mails. Team members will be mindful of technical jargon, cultural differences, language barriers, and the need for simple illustrations when possible.
- Opportunities for multiple forms of input will be illustrated from the beginning. Citizens will be provided points of contact for FLATS staff on all correspondence and information.

FLATS ORGANIZATION

The purpose of the Florence Area Transportation Study (FLATS) as the Metropolitan Planning Organization (MPO) for the Florence area is to establish and maintain a continuing, comprehensive, and cooperative transportation planning process. While meeting the appropriate federal and state requirements, this process promotes the development of a safe, effective, efficient and environmentally sensitive multi-modal transportation system for moving people and goods in the FLATS area.

The FLATS MPO is currently monitored by two committees. The Policy Committee contains the voting membership and has final local approval and authority on all major transportation decision, policies, and programs of FLATS. The FLATS Study Team provides recommendations to the Policy Committee on technical methods, procedures and standards that are used in the development of transportation plans and programs.

General Guidelines

This Public Participation Process is intended to provide direction for public involvement activities to be conducted by the MPO and contains the policies, goals, objectives, and techniques used by the MPO for public involvement. In its public participation process, the MPO will:

1. Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agencies, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs and projects (including but not limited to local jurisdiction concerns).

2. Provide reasonable public access to technical and policy information used in the development of the Long Range Transportation Plans, the Transportation Improvement Program, and other appropriate transportation plans and projects,

and conduct open public meetings where matters related to transportation programs are being considered.

3. Give adequate public notice of public participation activities and allow time for public review and comment at key decision points, including, but not limited to, approval of the Long Range Transportation Plan, the Transportation Improvement Program, the Unified Planning Work Program and other appropriate transportation plans and projects. If the final draft of any transportation plan differs significantly from the one available for public comment by the MPO and raises new material issues, which interested parties could not reasonably have foreseen, an additional opportunity for public comment on the revised plan shall be made available.

4. To support Section 5307 grantees, this public participation process is being used to satisfy the Federal Transit Authority's (FTA) Program of Projects public participation requirements.

5. Respond in writing, when applicable, to public input. When significant written and oral comments are received on the transportation plan drafts (including the financial plan for the TIP and Long-Range Transportation Plan developed in cooperation with the MPO Boards and Committees), as a result of the public participation process or the interagency consultation process required under MAP-21, report on the disposition of comments shall be made part of the final plan.

6. Solicit the needs of those under-served by existing transportation systems, including but not limited to the transportation disadvantaged, minorities, elderly, persons with disabilities, and low-income households. MAP-21 requires that the MPO shall provide reasonable opportunities for affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation planning process.

7. Provide a public comment period of 45 calendar days prior to the adoption of the Public Participation Plan and/or any amendments. Notice of the comment period will be advertised in a newspaper of general circulation and various other publications prior to the commencement of the 45-day comment period. Notice will also be mailed to the entire MPO mailing list prior to the start of the 45-day comment period.

8. Provide a public comment period of not less than 30 calendar days prior to adoption of the Long Range Transportation Plan.

9. Provide a public comment period of not less than 10 calendar days prior to the adoption of the Transportation Improvement Program, the Unified Planning Work Program, Transit Development Plans, any formal amendments or updates, and other appropriate transportation plans and projects.

10. Coordinate the Public Participation Process with statewide Public Participation Processes wherever possible to enhance public consideration of the issues, plans and programs, and reduce redundancies and costs.

11. The Consultation Process will allow many organizations and agencies to review and have the opportunity to comment on the LRTP process and product and the TIP. The MPO will solicit the proper official and method of notification desired of all the groups in addition to other local government agencies and non-profits that receive federal funding from those U.S. departments other than DOT for transportation related functions (other than emergency assistance). This list will be kept updated. Agencies not wishing to be on the list will be required to send an official letter to the MPO requesting to be removed from the list and these letters will be kept for documentation. The ability for the agencies and groups to effectively provide input and comment requires a reasonable time frame to respond. While a period of 10 working days seems reasonable, agencies and organizations needing greater lead time will be accommodated within reason.

Goals, Objectives, and Policies

Goal: To effectively interest, inform and involve the public in the regional transportation planning process, encouraging and accommodating their meaningful participation and input.

Objective 1

The MPO shall encourage the involvement of all area citizens in the transportation planning process.

Policy 1.1: The MPO will work to identify traditionally under-involved populations within the region, including minority, low income, and senior citizen populations.
Policy 1.2: Target audiences shall be identified for each planning study conducted by the MPO, including residents, business and property owners and those traditionally underserved and underrepresented populations, including but not limited to, low income and minority households within the study area.
Policy 1.3: The MPO shall, whenever feasible, hold public meetings at a site convenient to potentially affected citizens.

Objective 2

The MPO shall actively engage the public in the transportation planning process according to the policies contained in this Public Participation Process and State and Federal Law.

Policy 2.1: The MPO shall maintain an up-to-date database of contacts including at a minimum the following persons to provide that all interested parties have reasonable opportunities to comment on the transportation planning process and products:

a. Elected Officials
b. Local Government Staff
c. Transportation Agencies (Port, Airports, Transit, etc.)
d. Local Media (Print)
e. Civic Groups
f. Special Interest Groups (Other Interested Parties)
g. Libraries (For Public Display)
h. Consultation with Federal, State and local agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation, and other environmental issues (see Appendix B)
i. Consultation with parties that would have an interest in the planning and development of the transportation network including affected public agencies in the metropolitan planning area (see Appendix C)
j. Native American Tribal Councils
k. Private Freight Shippers
l. Representatives of Public Transportation Employees
m. Providers of Freight Transportation Services
n. Private Providers of Transportation
o. Representatives of Users of Public Transportation
p. Representatives of Users of Pedestrian Walkways
q. Representatives of Users of Bicycle Transportation Facilities
r. Representatives of the Disabled

Policy 2.2: The MPO shall, when feasible, electronically mail meeting announcements to the MPO contact list or to targeted groups for upcoming activities.

Policy 2.3: The MPO shall employ visualization techniques to depict transportation plans. Examples of visualization techniques include: charts, graphs, photo interpretation, maps, GIS, artist renderings, physical models, and/or computer simulation.

Objective 3

The MPO shall keep the public informed of on-going transportation related activities on a continuous basis.

Policy 3.1: The MPO shall make all publications and work products available electronically to the public via the Florence County web page, www.florenceco.org and the MPO office and employ visualization techniques to describe transportation actions as part of the Long-Range Plan.

Policy 3.2: MPO staff shall be available to provide general and project-specific information at a central location during normal business hours and after hours at the request of community interest groups with reasonable notice.

Policy 3.3: The MPO shall maintain an internet web site that will be compliant with Section 508 of the Americans with Disabilities Act for disabled users.
Policy 3.3.1: The web site shall be updated and maintained to provide the most current and accurate transportation planning information available.
Policy 3.3.2: The web site shall, at a minimum, contain the following information:

a. Contact information (mailing address, phone, fax, and e-mail)
b. Current MPO committee membership
c. Meeting calendars and agendas
d. Work products and publications (Transportation Improvement Program, Long Range Transportation Plans, Unified Planning Work Program,
e. Current By-Laws and Operating Procedures (including the Public Participation Plan and updates)

Policy 3.4: MPO staff will produce an annual newsletter.

Objective 4
The MPO shall strive to continuously improve public participation.

Policy 4.1: The MPO shall continuously evaluate public involvement techniques.
Policy 4.2: This Public Participation Plan shall be reviewed and adopted, with revisions if necessary, at least every three (3) years in order to improve the effectiveness of public involvement.

Objective 5
The MPO shall participate in public participation activities for individual transportation improvement projects from the planning phase through construction.

Policy 5.1: The MPO shall actively assist the South Carolina Department of Transportation, local governments and transportation agencies in the development and implementation of public involvement techniques for planning and other studies, including Major Corridor/Feasibility Studies, and Project Development and Environmental Studies or other documents to support planning.

Objective 6
The MPO shall maintain a Title VI Program including a complaint procedure to report unfair treatment of groups based on race, color, and national origin.

Policy 6.1: The MPO will maintain a log of Title VI complaints and forward to appropriate State and Federal agencies for review and guidance.

Public Participation Techniques

Public participation is an ongoing activity of the MPO. Public participation is also an integral part of one-time activities such as corridor studies and regularly repeated activities such as the annual Transportation Improvement Program process and Long Range Transportation Plan updates.

This section contains descriptions of public participation tools currently being used by the MPO:

MPO Web Site

Description: The web site is established to provide basic information about the MPO process, members, meeting times and contact information. Work products, such as the drafted, and adopted Public Participation Plan, Unified Planning Work Program, Transportation Improvement Program and Long Range Transportation Plan are available on the site.

The website address is www.florenceco.org. The web site will be maintained by the Florence County MPO staff and regularly updated.

Activities: The web site is used to list current and topical information on regular and special meetings, planning studies, publications, related public events and work products.

MPO Master Database

Description: MPO staff maintains a master database of business, federal, state and local agencies and interested public. The database includes committee membership, mailing information, phone numbers, fax numbers, e-mail addresses and web sites. The database is used for maintaining up-to-date committee membership lists, special interest groups and homeowner association contacts, and is the foundation in providing the public of any transportation related documents. The database will be used to establish and maintain a list of e-mail contacts for electronic meeting notification and announcements.

Activities: The database is used to enhance public involvement activities.

Legal Advertised Notices

Description: All notices of meetings and hearings of the MPO Transportation Policy Committee shall be posted pursuant to the *South Carolina Open Public Meetings Act.* Notices shall be published a minimum of seven (7) days prior to the meeting. The mailing and/or e-mailing of notices and press releases should be timed to be received locally within five (5) days of the meeting.

When official public hearings and public comment periods for regional plans and programs are provided, said meeting notices shall be published a minimum of ten (10) days prior to adoption in *The Morning News*. All notices of sub-regional plans and programs funded by the MPO shall be made in the newspaper of greatest circulation in the study area (see Table 1).

The FLATS Policy Committee, or another MPO committee, shall consider hosting special meetings when needed to consider a special non-routine item that necessitates action

but falls between regularly scheduled meetings. If a special meeting is called, the notice shall be published a minimum of three (3) days prior the meeting.

Activities: Regular and other meetings seeking public input are posted ten (10) days prior to the meeting.

Display Ads

Description: The MPO may publish ads that are used to promote meetings that are not regularly scheduled, such as corridor study workshops. They are published in selected newspapers in order to reach a larger audience than those that typically read legal notices.

Activities: Pubic awareness of project specific meetings, workshops, or open houses.

Other Media

Description: Opportunities are sought for articles in other newsletters produced by municipalities, homeowners' associations, church groups, civic groups, or others that may have an interest in the MPO. Opportunities are also sought to present to civic and social agencies, participate on radio talk shows, and provide television news highlights and to utilize public service notices to create community awareness of planning activities.

Activities: Increased opportunities to make public aware of corridor studies, small-area studies, other planning studies or major activities.

Direct Mailings

Description: Used to announce upcoming meetings or activities or to provide information to a targeted area or group of people. Direct mailings are usually letters, but can be postcards or flyers. An area may be targeted for a direct mailing because of potential impacts from a project. Groups are targeted that may have an interest in a specific issue, for example avid cyclists and pedestrians may be targeted for pathways and trail projects.

Activities: Project-specific meetings, workshops, open houses, corridor studies, small area studies, other planning studies or major activities.

Press Releases

Description: Formal press releases are sent to *The Morning News* to announce upcoming meetings and activities and to provide information on specific issues being considered by the MPO or their committees. When specific communities are affected by transportation plans, then local newsletters and media will be sought to communicate the project status.

Activities: Corridor or other planning studies, workshops, open houses, public hearings, and other MPO activities.

Table 1. Target Audiences of FLATS Area Media Outlets

Media Outlet	Largest Audience			
	Age	Gender	Education	Race
Radio				
WYNN	25-34	female	some college	*unknown*
WBZF	35-44	female	high school	*unknown*
WCMG	45-54	female	high school	*unknown*
WHLZ	25-34	female	high school	*unknown*
WMXT	45-54	male	some college	*unknown*
WWFN	25-34	male	some college	*unknown*
WSIM	*unknown* – soft mix music			
WICI	*unknown* – classic rock music			
WWKT	*unknown* – urban music			
WDAR	25-54	female	*unknown*	*unknown*
WEGX	25-54	*unknown*	*unknown*	*unknown*
WJMX	18-34	female	*unknown*	*unknown*
WJMX-AM	25-54	male	*unknown*	*unknown*
WZTF	25-49	*unknown*	*unknown*	*unknown*
WGSS	*unknown* – gospel music			
WHMC	*unknown* – public news			
Television				
Ch-11, Gov. Access	*unknown* – public channel			
Print Media				
The Morning News	unknown – serves the Pee Dee area			
Community Times	*unknown*	female	*unknown*	African-American and Hispanic
The News Journal	*unknown* – delivered within the FLATS area			
She Magazine	*unknown*	female	*unknown*	*unknown*
The Greater Pee Dee Business Journal	*unknown* – serves the Pee Dee area			

Project Workshops

Description: These are targeted public meetings that are generally open and informal, with project team members interacting with the public on a one-on-one basis. Short presentations may be given at these meetings. The purpose of project-specific meetings is to provide project information to the public and to solicit public comment and a sense of public priorities.

Activities: Long-range planning studies, corridor studies, and other major MPO activities.

E-mail Announcements/Internet Websites

Description: Meeting announcements and MPO information are e-mailed to interested persons that have submitted their e-mail addresses to MPO staff.
Activities: Long-range planning studies, corridor studies, small-area studies, other planning studies, regular meetings, public hearings, workshops, open houses, and other major MPO activities.

MPO Logo

Description: A logo representing the MPO will be used to identify products and publications of the MPO. A logo helps the public become familiar with the different activities of the MPO by providing a means of recognizing MPO products.

Activities: A logo may be used on all MPO publications; including those developed by consultants working on MPO sponsored projects to create a community awareness of the MPO deliverables.

Public Hearings

Description: These are public meetings used to solicit public comment on a project or issue being considered for adoption by the MPO. Hearings provide a formal setting for citizens to provide comments to the MPO or another decision-making body. Meeting minutes are taken and maintained. In addition, staff members may be made available who communicate in additional languages as required.

Activities: Long Range Transportation Plans, Transportation Improvement Program, corridor studies, Project Development & Environmental studies, and other planning studies as needed for other MPO activities.

Comment Forms/ Complaint Procedure

Description: Comment forms are often used to solicit public comment on specific issues being presented at a workshop, other public meetings or accompany documents made available for public review. Comment forms can be very general in nature, or can ask for very specific feedback. For example, a comment form may ask for comments on specific alignment alternatives being considered during a corridor study, or may ask for a person's general feelings about any aspect of transportation. Comment forms can also be included in publications and on web sites to solicit input regarding the subject of the publication and/or the format of the publication or web site.

In alignment with Title VI of the 1964 Civil Rights Act, these comment opportunities allow for complaints associated with minority groups as described in Title VI of the U.S. Code (42 U.S.C. § 2000d et seq.). Such complaints will be logged in at the MPO office, reviewed according to the Department of Justice's investigation procedures manual then forwarded to SCDOT and FHWA for further review and direction. Title VI complaints may be e-mailed, mailed by post or communicated directly by calling or visiting the MPO office. This information is shown on the cover of this document.

Activities: Public workshops, open houses, hearings and other meetings, accompany MPO documents on public display, general MPO activities.

Surveys

Description: Surveys are used when very specific input from the public is desired. A survey can be used in place of comment cards to ask very specific questions such as whether a person supports a specific alignment in a corridor study. Surveys are also used to gather technical data during corridor and planning studies. For example, participants may be asked about their daily travel patterns.

Activities: Conduct on-line surveys on issues and needs to provide input into the plans.

Posters and Flyers

Description: Posters and flyers are used to announce meetings and events and are distributed to public places such as City/Town Halls, libraries and community centers for display. The announcement may contain a brief description of the purpose of a meeting, the time(s) and location(s), and contact information. Posters and flyers may be used to reach a large audience that cannot be reached using direct mailings and/or newsletters.

Activities: Corridor studies, small-area studies, other planning studies, regular and special MPO activities.

Library Distribution Sites

Description: All MPO documents released for public review and comment are disseminated to the Florence County Libraries to afford the public the opportunity to review the documents. The documents are currently available in English, but providing Spanish language documentation will be explored.

Activities: Documents for review made available to the public.

Partner Agencies

Description: The MPO is dependent upon Federal and State guidelines for planning transportation projects. Continued interaction and communication enables the MPO to remain up-to-date on policies and project status. The following table lists those agencies which it consults for transportation plans:

- South Carolina Department of Transportation
- South Carolina Department of Health and Environmental Control
- U.S. Department of Transportation
    - Federal Highway Administration
    - Federal Transit Administration
- Pee Dee Regional Transportation Authority
- Florence County

- Florence County municipalities
- Pee Dee Council of Governments
- U.S. Department of the Interior
    - U.S. Fish and Wildlife Service

Activities: Consultation with partner agencies about day-to-day operations as necessary.

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Table 2. Summary Public Participation Policy Table

Program Adoption	Public Meetings	Comment Period	Public Participation Techniques		Remarks
			Required	Proactive	
Long-Range Transportation Plan (LRTP)	Initial Meeting, Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	30 Days	Legal Notice in Print Media	Web Site Comment Forms	Updated every five (5) years. Comments received included in LRTP
Transportation Improvement Plan (TIP)	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	10 Days	Legal Notice in Print Media	Web Site Comment Forms	Updated every six (6) years. Comments received provided to FLATS Study Team and FLATS Policy Committee
Unified Planning Work Program (UPWP)	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	10 Days	Legal Notice in Print Media	Web Site Comment Forms	Updated every year
Public Participation Process	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	45 Days	Legal Notice in Print Media	Web Site Comment Forms	Updated every 3 years. Comments received provided to FLATS Study Team and FLATS Policy Committee
Program Amendments					
Long-Range Transportation Plan (LRTP)	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	10 Days	Legal Notice in Print Media	Web Site Comment Forms	As Needed
Transportation Improvement Plan (TIP)	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	10 Days	Legal Notice in Print Media	Web Site Comment Forms	As Needed
Unified Planning Work Program (UPWP)	NA	10 Days	Legal Notice in Print Media	Web Site Comment Forms	As Needed
Public Participation Plan (PPP)	Public Meeting on Draft by FLATS Study Team, and FLATS Policy Committee	45 Days	Legal Notice in Print Media	Web Site Comment Forms	As Needed

Table 3. Summary of Other Public Participation Tools

Program Adoption	Public Meetings	Comment Period	Required Legal & Proactive Public Participation Techniques		Remarks
Open Committee & Board Meetings	Scheduled as Needed	Dependent upon agenda items	Legal Notice in Print Media	Website	Includes a public comment period
Annual Calendar	NA	NA	Last Meeting of Year		Maintained and updated regularly
Newsletter	NA	NA	Sent to Master Database		Produced annually
Website	NA	NA	NA		Updated Regularly
Staff Presentations	NA	NA	NA		Upon Request

Evaluation Methods and Performance Goals

In order to determine the effectiveness of the public involvement tools, they must be evaluated and compared to established performance goals. The typical methods for evaluating the effectiveness of public involvement tools are surveys and quantitative statistical analysis. This section briefly describes evaluation methods used by the MPO. For each public involvement tool, performance goals and methods for meeting those goals have been identified.

Surveys

Surveys typically consist of short, specific questions regarding public involvement tools that are ongoing or that were used on a specific project. Surveys can be conducted in person, by phone, mail or e-mail. Face-to-face and telephone surveys provide quick responses and can be used when a respondent's answer may lead to a follow-up question. For example, respondents may be asked if advertisements are an effective notification tool. If the response is no, the surveyor can ask the respondent why advertisements are not effective and also what other tools they would prefer. In person and telephone surveys can target specific areas or groups or can be random sampling. Mail surveys may be used to provide written record of respondent's answers. Mail-back surveys can be distributed at meetings, inside other publications, or by mailing directly to potential respondents. Respondents can be a targeted group, such as members of special interest groups or residents of specific areas, or they can be randomly generated. Return postage for mail surveys typically can be pre-paid by the MPO, or can be the responsibility of the respondent. E-mail surveys, like mail surveys, provide a written record of responses. Unlike mail-back surveys, there is little to no reproduction or distribution cost to the MPO to send out the surveys, and little to no cost to respondents to return a response. To use e-mail surveys, it is necessary to have e-mail addresses for the targeted respondents, and random distribution rarely an option.

Statistical Analysis

Statistics can be used to determine the "return on the investment" of producing public involvement tools. For example, the number of persons attending an activity can be compared to the number of persons that were notified of the activity. This type of evaluation can be an indicator of whether or not the tools used for public involvement are actually reaching the intended audience, or which tools had a greater response rate. Statistical analysis is used to evaluate survey responses and the results of the analysis are compared to the evaluation measures to determine the rate of success of public involvement tools.

Improvement Strategies

The MPO continually strives for improved public involvement. Improvements should be made to increase public awareness and to improve the quantity and quality of information provided to the public. The decisions made by the MPO affect the entire population, both residents and visitors, of Florence County. Therefore, seeking public input on those decisions is vital to the success of the MPO as the agency responsible for transportation planning. Each time a public involvement evaluation is performed, a list of improvement strategies needed should be identified for implementation. If improvement is needed for an ongoing public involvement task, such as the MPO web site, a reasonable completion date should be established. If improvement is needed for one-time activities, such as corridor studies, the improvement should be implemented where appropriate on future activities.

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Table 4. Public Participation Tools Evaluation Table

Public Participation Tool	Evaluation Criteria	Performance Goal(s)	Methods to Meet Goal(s)
Public Participation Process	No Measure/PPP should reflect the practices of the MPO	N/A	Update at least every 3 years to incorporate the improvement strategies from public involvement evaluations.
MPO Web Site	Number of Hits	Minutes of Hits	Use other public involvement tools to increase advertisement of the web site
MPO Master Database	Number of returned items	Max. of 2% return rate per mailing	Make immediate corrections when items are returned
Public Notices	No Measure/This tool is required by Statue	NA	NA
Annual News Letter	Calls, letters, etc. Number of returns	N/A. Return rate is addressed under MPO Master Database	Continue items that receive favorable comments and address items that receive negative comments
Other Media (newspaper, electronic media)	Calls, letters, etc.; number of persons contacted	Reference in project area community newsletters, presence on electronic news shows quarterly and public service announcement for public meetings associated with LRTP	Provide information to the publishers of these newsletters in a timely fashion. Investigate all possible newsletters that may reach an affected area.
Direct Mailing	Calls, Letters, etc.; Number of persons contacted	Min. of 15% of meeting attendees/survey respondents indicated that they received the mailing. – OR – Reaches a min of 85% of persons affected by a project	Increase/Decrease mailing list to more accurately target affected areas. Use the most up-to-date information for Florence County Assessor's Office.
Press Releases	Calls, Letters, etc	No Standard. Format may be modified based on specific comments received	Encourage publication of press releases and general articles by keeping the media informed
Project Specific Website	Calls, letters, etc.; Number of hits	Min of 30 hits/ month. Increase of at least 10% over the life of the project. Expectations may be higher depending on the size of the study area	Use other public involvement tools to increase advertisement of the web site
Project Specific Meetings/ Workshops	Calls, letters, etc.; Attendance	3%-5% of affected population (based on study area) in attendance	Schedule at convenient times and locations; hold multiple workshops; use multiple tools to increase awareness.
Email Announcements	Calls, letters, etc.; Number of persons contacted	Min. of 5% of meeting attendees/survey respondents indicated that they saw the announcement	Increase email list by advertising the availability of email announcements using other public involvement tools.

Table 4 continued…

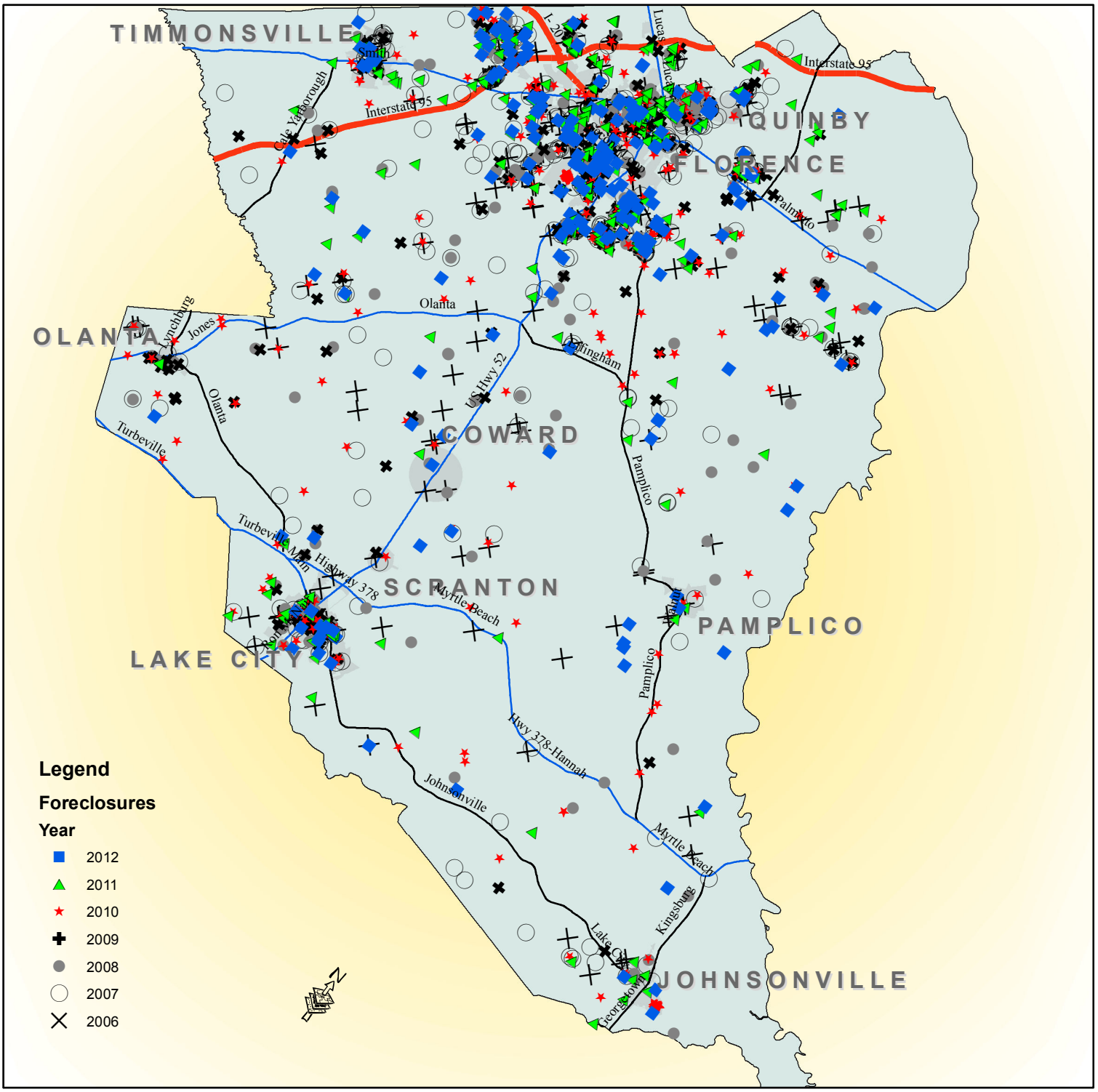
Public Participation Tool	Evaluation Criteria	Performance Goal(s)	Methods to Meet Goal(s)
MPO Logo	Calls, letters, etc.; Number of persons contracted	Recognition of the logo	The MPO logo should be used on all MPO products and publications, and on materials for all MPO sponsored activities
Surveys	Calls, letters, etc.; Number of respondents	60% of contacted persons participate in the survey –OR- 20% mail recipients return the survey	Encourage response by explaining the importance of receiving feedback to improve the planning process

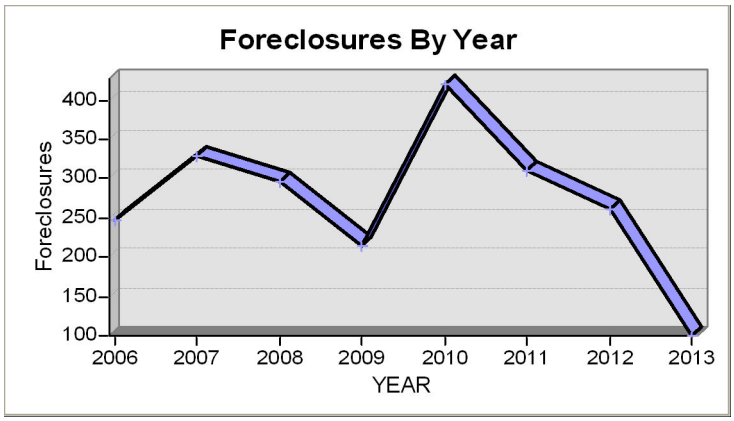
This report was funded in part through grant[s] from the Federal Highway Administration [and Federal Transit Administration], U.W. Department of Transportation. The views and opinions of the authors [or agency] expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

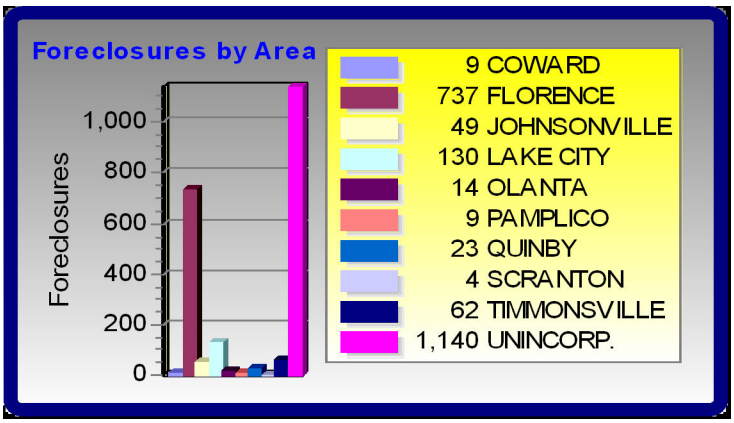
Attachment 19

Florence County Foreclosure Reports and Map

FORECLOSURES BY YEAR AND AREA FROM 2006 TO MAY 2013







Foreclosures

YEAR	Municipality	Number	
2006			**248**
	COWARD	**4**	
	FLORENCE	**67**	
	LAKE CITY	**20**	
	PAMPLICO	**2**	
	QUINBY	**2**	
	SCRANTON	**1**	
	TIMMONSVILLE	**9**	
	UNINCORP.	**143**	
2007			**328**
	FLORENCE	**83**	
	JOHNSONVILLE	**3**	
	LAKE CITY	**20**	
	OLANTA	**3**	
	PAMPLICO	**1**	
	QUINBY	**7**	
	SCRANTON	**1**	
	TIMMONSVILLE	**13**	
	UNINCORP.	**197**	
2008			**296**
	COWARD	**2**	
	FLORENCE	**96**	
	JOHNSONVILLE	**4**	
	LAKE CITY	**21**	
	OLANTA	**5**	
	QUINBY	**1**	
	TIMMONSVILLE	**5**	
	UNINCORP.	**162**	
2009			**214**
	FLORENCE	**81**	
	LAKE CITY	**14**	
	OLANTA	**4**	
	QUINBY	**3**	
	SCRANTON	**1**	
	TIMMONSVILLE	**9**	
	UNINCORP.	**102**	

YEAR	Municipality	Number	
2010			**420**
	COWARD	**1**	
	FLORENCE	**143**	
	JOHNSONVILLE	**36**	
	LAKE CITY	**23**	
	OLANTA	**1**	
	PAMPLICO	**2**	
	QUINBY	**5**	
	SCRANTON	**1**	
	TIMMONSVILLE	**6**	
	UNINCORP.	**202**	
2011			**311**
	COWARD	**1**	
	FLORENCE	**128**	
	JOHNSONVILLE	**5**	
	LAKE CITY	**13**	
	OLANTA	**1**	
	PAMPLICO	**2**	
	QUINBY	**1**	
	TIMMONSVILLE	**7**	
	UNINCORP.	**153**	
2012			**261**
	COWARD	**1**	
	FLORENCE	**102**	
	JOHNSONVILLE	**1**	
	LAKE CITY	**15**	
	PAMPLICO	**2**	
	QUINBY	**3**	
	TIMMONSVILLE	**8**	
	UNINCORP.	**129**	
2013			**99**
	FLORENCE	**37**	
	LAKE CITY	**4**	
	QUINBY	**1**	
	TIMMONSVILLE	**5**	
	UNINCORP.	**52**	

TOTAL **2177**