

2035 BCDCOG RURAL LONG RANGE TRANSPORTATION

FOR TRANSPORTATION PLANNING IN THE
BERKELEY-CHARLESTON-DORCHESTER REGION



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CHAPTER 1: INTRODUCTION

Since the mid-1960's, the Charleston Area Transportation Study (CHATS) Policy Committee has produced a long range transportation plan for the urbanized area of the Berkeley Charleston Dorchester (BCD) region. Prior to 1998, transportation planning for the rural areas of the BCD region has been predominantly under the jurisdiction of the South Carolina Department of Transportation (SCDOT). A full explanation of how “urbanized” and “rural” areas of the BCD region are defined is discussed in Chapter 3.

In 1998, SCDOT contracted with the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) and the nine other COGs in the state to assist with coordination of transportation planning for non-urbanized areas statewide. The SCDOT involved the COGs to decentralize the transportation planning process and to allow for more local involvement in project identification and development. This partnership between the SCDOT and the COGs aids the State in fulfilling the requirements of the federal and state planning process to address the transportation needs of non-metropolitan areas.

In December 2006, the BCDCOG adopted the first comprehensive approach to a Rural Long Range Transportation Plan (RLRTP) as part of this new partnership. Just as some aspects of that original plan for the rural areas drew from work completed as part of the 2030 CHATS LRTP, this first update of the BCDCOG Rural LRTP will draw from work completed as part of the most recent update to the CHATS LRTP entitled “2035 CHATS Long Range Transportation Plan” that was approved by the CHATS Policy Committee on December 12, 2011.

1.1 Plan Development Process

The rural long range transportation planning process does not have the same federal mandates that guide the urbanized area transportation planning process. However, as was done with the 2006 RLRTP, the BCDCOG modeled the process after the one used by the CHATS Metropolitan Planning Organization (MPO) for the recent 2035 CHATS LRTP. Key players of this process included:

- *BCDCOG Rural Transportation Committee:* There are a total of twelve members on the 2013 BCDCOG Rural Transportation Committee. Each of the three counties is represented by four members who are also active members of the BCDCOG Board of Directors. They are elected or appointed officials that in some capacity serve rural areas of their respective county, such as a mayor, county supervisor, or member of the county delegation. The rural transportation committee met three times to oversee progress of the plan, provide guidance in its development, and make recommendations to the BCDCOG Full Board regarding a draft plan.
- *BCDCOG Full Board:* This policy body has the responsibility of adopting and overseeing implementation of the 2035 BCD RLRTP.
- *The General Public:* A critical component of the planning process was public involvement. A comprehensive public outreach effort was conducted as a part of the process, and full details of this public involvement is documented in Chapter 2.

- *SCDOT and other state departments:* BCDCOG staff worked closely with SCDOT and other state departments to ensure that plan process and contents met regulatory requirements. Since the rural plan addresses a number of planning areas traditionally managed at the state level, close coordination was needed to ensure that rural plan priorities and recommendations were compatible with SCDOT standards.
- *State, Regional and Local Transportation Professionals:* Planners, engineers and economic development staff at different levels of government relevant to the BCD Rural Planning Area (RPA) were engaged to provide appropriate input in the plan's development. In particular, input on proposed transportation projects to be considered for the plan was solicited from BCD county planners and engineer, who also had opportunity to review and comment on the complete list of proposed projects scored and ranked for the RL RTP.
- *Area Public Transportation Providers:* Since transportation providers often maintain their own internal planning processes, it was important to include their input in the plan. The primary public transportation provider for the rural areas of the region is the BCD Rural Transportation Management Association (BCD RTMA). Public transportation information is included in Chapter 4.

1.2 The Eight Planning Factors of MAP-21

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). The legislation is a funding and authorization bill to govern United States federal surface transportation spending, and it defines the roles and responsibilities of federal, state, and metropolitan transportation agencies. It supersedes the 2005 federal transportation legislation titled Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (commonly referred to as SAFETEA-LU), and in many ways the new legislation redefines the process of federal surface transportation spending. While much of what is stipulated in both pieces of legislation serve primarily as urbanized requirements, the requirements established by the Federal Highway Administration (FHWA) regarding the national transportation planning priorities included in MAP-21 and National Highway System legislation also apply in the non-urbanized area.

An important component from SAFETEA-LU that is left intact with the new MAP-21 legislation is a set of eight planning factors that transportation planning organizations should consider as part of the long range transportation planning process. As a result, these eight planning factors were instrumental in the development of the vision and goals for the 2035 Rural LRTP. The eight planning factors are:

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 options available to people and for freight;
5. Protect and enhance the environment, promote energy conservation and improve quality of life;

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.

1.3 Purpose and Scope

There are four primary reasons for updating the RL RTP:

1. As per SCDOT, the RL RTP is to be updated every five years;
2. The current RL RTP is based upon the outdated 2000 Census;
3. The Plan should match the scope and complement its urban counterpart, the 2035 CHATS LRTP; and
4. The rural and urban areas of the BCD region have changed.

In practical terms, the purpose of the plan is to bring together relevant stakeholders to identify the rural transportation needs in the Berkeley-Charleston-Dorchester region between now and the year 2035. The scope of the plan uses the most up to date census information collected for the 2010 Census. This time frame is consistent with the planning period identified in the recently adopted 2035 CHATS Long Range Transportation Plan.

The first of three rural transportation committee meetings was conducted on February 20, 2013. A primary objective of the meeting was to formulate and adopt a purpose statement and scope for the 2035 BCD RL RTP. The committee adopted the following:

Purpose Statement

The Purpose of the plan is to bring together relevant stakeholders to identify the rural transportation needs in the Berkeley-Charleston-Dorchester Tri-county region.

Scope of Plan

The Scope of the plan covers a planning period through the year 2035, using the most up to date census information collected for the 2010 Census. This time frame is consistent with the planning period identified in the most recently adopted 2035 CHATS Long Range Transportation Plan.

1.4 The Rural Planning Area

Demographic data for the BCD Region as a whole and the BCD RPA is presented in Chapter 3. Also included in that chapter is a description of what defines a “rural area” and what defines an “urban area”. For the purposes of this document, the “rural area” of the BCD Region, to be referred to as the BCD RPA, refers to all areas not included in the CHATS Planning Area. The size of each area is redefined with each decennial census, with the most recent definition being based upon the 2010 Census. The BCD Region totals approximately 3,163 square miles, and as of 2010 the BCD RPA made up 2,163 square miles, or 68.4% of the region. Figure 1.1 illustrates the current Rural Planning Area and CHATS Planning Area in the BCD Region.

1.5 Vision Statement and Goals

A vision statement and goals were also formulated and adopted during the first Rural Transportation Committee meeting. The Vision Statement articulates, in a single descriptive sentence, a generalized vision of what the 2035 BCD RL RTP is striving to achieve. The general “Goals” is a list of accomplishments that will collectively support meeting the identified vision. From this general list of goals, five primary goals were identified. In Chapter 5, Table 5.1 identifies the Primary Goals that are achieved by each individual General Goal. In the same chapter specific objectives and strategies are identified for each primary goal.

Vision Statement

The adopted vision is a focus on enhancing and maintaining the quality of life and economic vitality of the rural Berkeley-Charleston-Dorchester region, and accomplishing this by ensuring accessibility and mobility for people and goods through providing an adequate, safe, and balanced transportation system.





List of General Goals

1. Develop a compatible plan (This general goal is met through the planning process, meeting with transportation officials, and reviewing existing plans such as county transportation plans, county comprehensive plans, and the OurRegionOurPlan Regional Plan);
2. Improve roadway safety;
3. Recognize mobility needs;
4. Provide convenient and efficient connections (including bike lanes and trails);
5. Enhance efficiency of existing system;
6. Support mixed-use development;
7. Promote a pedestrian-friendly environment;
8. Provide and plan for future transit service expansion;
9. Protect and reserve rights-of-way;
10. Build consensus and locate funding sources; and
11. Enhance “quality of life”.

Five Primary Goals

1. Accessibility and Mobility
2. Economic Vitality
3. Protect the Environment
4. Maintain the Existing Transportation Network
5. Enhance Transportation Safety

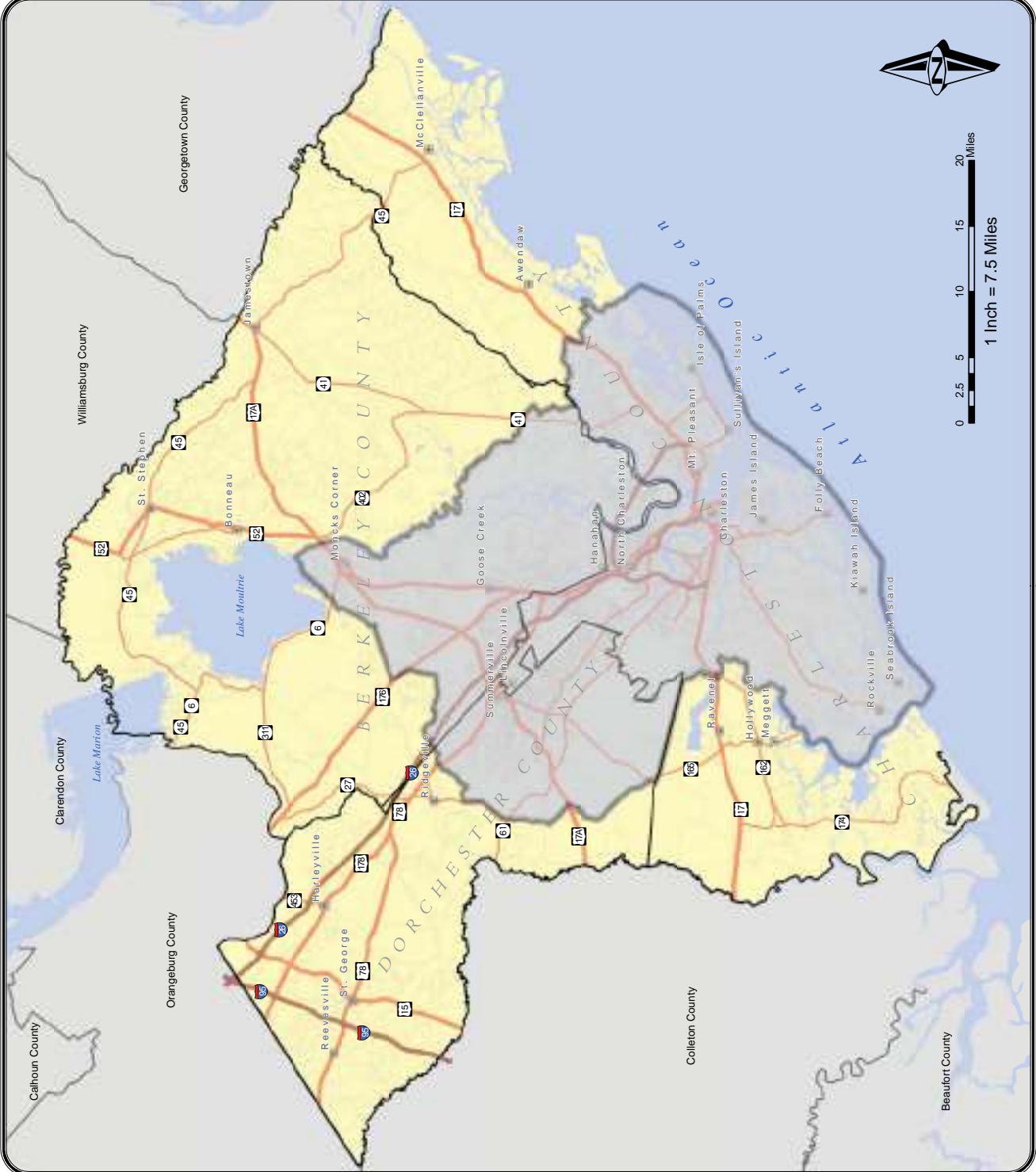
BCDCOG 2035
Rural Long Range Transportation Plan
Figure 1.1
Rural Planning Area Boundary Map

-  Rural Planning Area
-  CHATS Planning Area 2012
-  County Lines
-  Water

Data Source: BCDCOG, BCD GIS Departments, CHATS,
 Data Path: \\Planning Services\RURAL_Transportation\Rural
 LRTP2035 Rural LRTP Updates and Data\GIS\Boundary_Updated

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1.6 Transportation Components

An effective regional transportation system is a vital component to a healthy community. The “system” is not simply a crisscross of roads for people and vehicles, it is a deliberately planned and integrated set of transportation components that work together to safely and efficiently move people and goods from one location to another. In a much more generalized sense, people and freight are most often transported by road, rail, water and air. While there are many different modes of transportation, this 2035 BCDCOG RL RTP primarily focuses on the following four primary transportation components (a review of these transportation components in the BCD RPA is provided in Chapter 4):

- Roadway Network
- Public Transportation
- Freight Network
- Pedestrian and Bicycle Facilities

1.7 Amendment Process

From time to time circumstances dictate that updates be made to the Rural LRTP following its original adoption. Amendments can be made if the changes are consistent with federal requirements for plan development and approval. If any changes are needed, BCDCOG will adhere to the similar processes as identified for the urban long range transportation plan. These changes, or amendments, are not routine. BCDCOG will consider such amendments when the circumstances prompting the change are compelling, and the change will not adversely affect air quality conformity regulations.

There are two types of Rural LRTP amendments: *Minor Amendments* and *Major Amendments*. These two amendments differ based on the magnitude of the proposed change and the level of review required by various federal, state and local agencies. As a general rule, significant changes to the cost, scope and schedule of a project listing requires a Major Amendment, whereas minor changes in funding sources, description, lead agency, project limits, etc. may be processed through Minor Amendments. Major Amendments must be approved by the Board of Directors, the South Carolina Department of Transportation (SCDOT), Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Approval of Minor Amendments has been delegated to BCDCOG Executive Director and the SCDOT Office of Planning. Proposed changes will be reviewed by BCDCOG staff before any actions are considered. All changes must follow BCDCOG policies on the Public Participation Process.

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CHAPTER 2: PUBLIC PARTICIPATION AND JURISDICTION INPUT

Incorporating public involvement early in the transportation planning process is essential in order to fully assess all the social, environmental, and economic impacts of transportation decisions. The BCDCOG considers public participation a major component of the 2035 RL RTP.

BCDCOG's approach to public involvement in the transportation planning process is based in part on the CHATS MPO Public Participation Plan. This public participation plan was adopted by the CHATS Policy Committee in December 2012, and it outlines processes and procedures to be undertaken whenever significant planning efforts occur. As part of the plan development process, staff utilized several methods for engaging public participation, including public input meetings across the BCDCOG Rural Study Area, a public survey, stakeholder interviews, and visualization techniques, as well as general information about the 2035 RL RTP posted on the BCDCOG website.

The public meetings were designed and conducted in a manner to ensure adequate opportunities for the public to express its views on transportation issues and to become active participants in the decision-making process. Public outreach to the BCDCOG Rural Study Area was conducted early in the 2035 RL RTP process and included two primary methods of communication; public meetings and a public survey.

2.1 2035 RL RTP Update Public Meetings

In May, 2013, the BCDCOG conducted a total of five (5) public meetings at locations throughout the BCD Rural Study Area. The intent of these meetings was to obtain public input relating to the 2035 RL RTP. The meetings were presented in an "open-house" format, meaning attendees were welcome to drop in at any time during a three hour window provided and advertised. Attendees had an opportunity to view a looping slideshow presenting some general facts relating to the 2035 RL RTP, view current regional transportation maps, and ask questions from BCDCOG Staff. There was also an opportunity for attendees to fill out the RL RTP Public Survey, as well as view and comment on existing and proposed rural transportation projects. The primary focus of each of the meetings was to allow the public the opportunity to identify and discuss what they felt were the most pressing rural transportation needs and issues in the BCD Region.

Every effort was made to hold public meetings in central locations, with adequate access, within the rural areas of each county. Original scheduling of meetings included two in Charleston County, and one each in Berkeley and Dorchester Counties. After weak attendance at the initial Dorchester County public meeting, the Dorchester County Administrator requested a second meeting. The second Dorchester County meeting was held in conjunction with a previously scheduled Dorchester County FY2013-14 County Budget Public Hearing. Figure 2.1 shows the locations of the 2035 BCDCOG RL RTP public meetings.

Rural Berkeley County Public Meeting:

May 2, 2013
5:00 PM to 8:00 PM

Town of Bonneau
Municipal Court
420 Municipal Lane
Bonneau, SC 29431

Rural Charleston County (North and South) Public Meetings:

May 7, 2013
5:00 PM to 8:00 PM
Town of Hollywood
Council Chambers
6278 Highway 162, Unit C
Hollywood SC 29449

May 9, 2013
5:00 PM to 8:00 PM
Awendaw Town Hall
6971 Doar Road
Awendaw, SC 29429

Rural Dorchester County Public Meetings:

May 6, 2013
5:00 PM to 8:00 PM
Saint George Town Hall
Recreation Room
303 Ridge Street
St. George, SC 29477

May 28, 2013
*Following end of County Budget
Public Hearing*
County Council Chambers
Kenneth F. Waggoner Building
201 Johnston Street
St. George, SC 29477

Each of the originally scheduled public meetings was held during the “after work” hours of 5:00 – 8:00 pm. The meetings were held on a Monday, Tuesday or Thursday. The intent was to accommodate those members of the public working traditional work schedules, carrying on busy family schedules, or attending religious services on Wednesday evenings.

BCDCOG 2035 Rural Long Range Transportation Plan

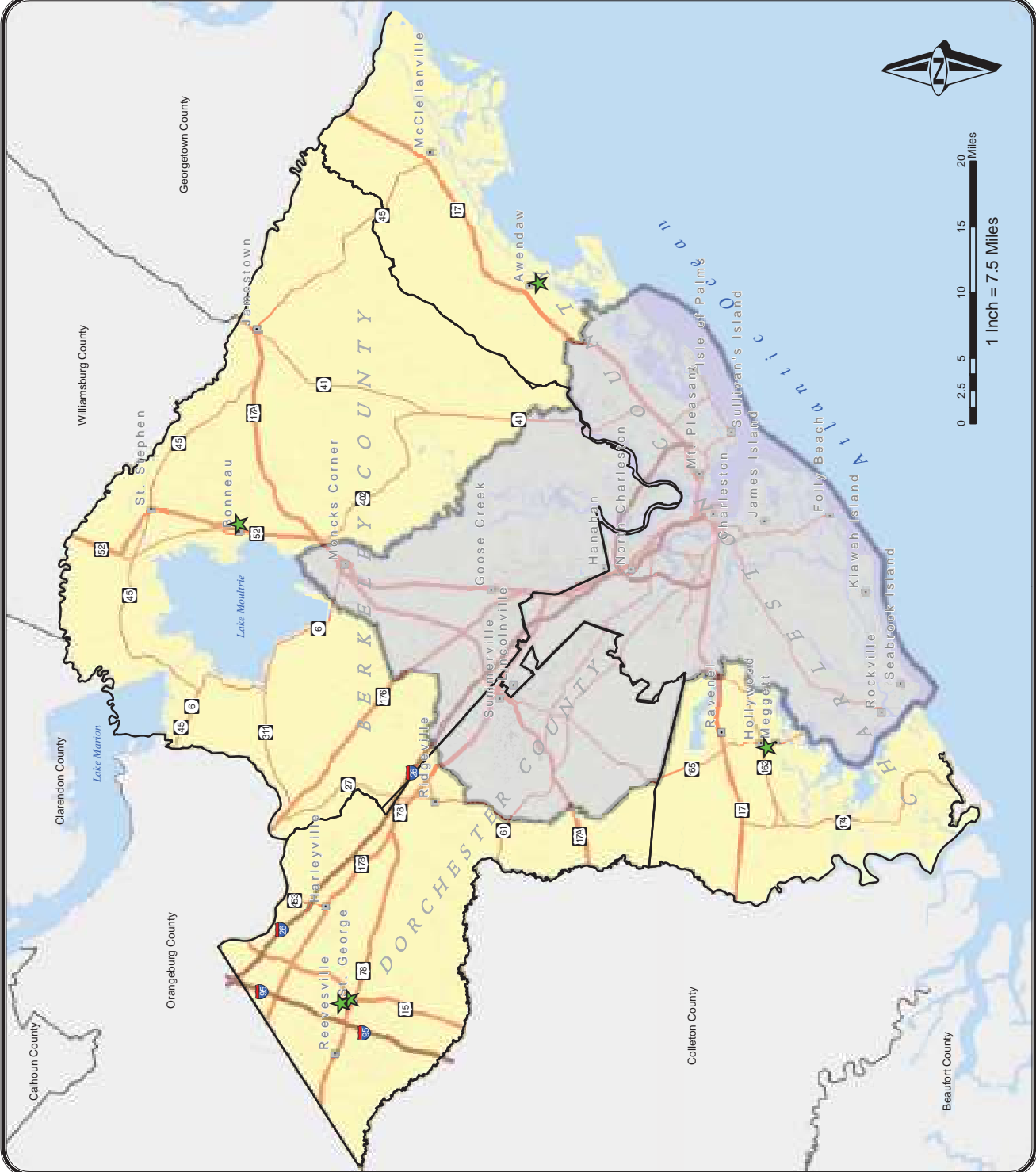
Figure 2.1
Public Meeting Locations Map

- ★ Public Meeting Locations
- Rural Planning Area
- ▭ CHATS Planning Area 2012
- ▭ County Lines
- Water

Data Source: BCDCOG, BCD GIS Departments, CHATS,
Data Path: \\Planning Services\RURAL_Transportation\Rural
LRTP2035 Rural LRTP Update\Map and Data\GIS\Meetings_Map.mxd



Disclaimer: This map is a graphic representation of data obtained from various sources. All efforts have been made to warrant the accuracy of this map. However, the BCD Council of Governments disclaims all responsibility and liability for the use of this map.



The public meetings were successful in terms of open and insightful dialogue, and input specific to transportation needs within the rural areas of each county. However, despite advertising via newspaper, website, email blast, and the distribution of public meeting flyers, the resultant meeting attendance was less than expected, as indicated in Table 2.1.

Table 2.1: BCDCOG 2035 RL RTP PUBLIC MEETINGS

Meeting	Date	Location	No. of Attendees
Berkeley County	May 2, 2013	Town of Bonneau	9
Dorchester County	May 6, 2013	Town of St. George	3
Charleston County	May 7, 2013	Town of Hollywood	13
Charleston County	May 9, 2013	Town of Awendaw	11
Dorchester County	May 28, 2013	Town of St. George	6

It should be noted that there are always inherent difficulties with attracting attendance at public meetings in general and more particularly when the public meeting focus is not necessarily a primary concern to the public at large. In reality, a large majority of the general public rarely attend public meetings except when a meeting involves a topic directly impacting their daily lives. While road conditions impact most citizens, many of these citizens may perceive attending long range transportation plan public meetings would not make a difference in the selection of future transportation projects. On the contrary, those who did attend the public meetings provided details on specific transportation needs of their community, and as a result, proposed transportation projects have been identified, scored and ranked within this 2035 RL RTP Update.

2.2 2035 RL RTP Update Public Survey

The second component of the public outreach effort was the 2035 BCDCOG RL RTP Public Survey. The survey was made accessible online through SurveyMonkey (a leading web-based survey provider) from April 15, 2013 through May 30, 2013. Hard copies of the survey were also made available at the public meetings, and at select locations throughout rural areas of the region, such as city and town halls, and local public libraries. The surveys were considered a very important part of the public outreach effort in that survey responses provide a critical link between the public's interaction with the rural transportation system of the region and those who make the critical decisions on where best to direct the limited rural funding dollars allocated.

A total of 14 questions were posed in the survey, with an expectation that the survey could be easily completed in less than 10 minutes. Demographic questions, such as where a respondent lives (zip code) and age range were coupled with transportation-related questions, such as what types of transportation a person uses and what types of trips they most frequently take. Questions about how the respondent would like to see transportation dollars spent, or what type of funding sources they would support to generate additional transportation dollars were also included. A final inquiry gave respondents an opportunity to specify locations and types of transportation improvements needed. Several of the proposed projects identified by the survey were included in the list of projects considered for the RL RTP. Appendix A1 is a sample copy of the public survey.

There were a total of 65 responses to the public survey. Approximately 63% of the responses came from rural Charleston County, while the remaining respondents were roughly split between rural Berkeley County and rural Dorchester County. Nearly half of the respondents were between 50 and 69 years of age. In what might be considered related questions, three out of four respondents usually “drive alone” and almost one in five respondents spend 21-30% of their household income on transportation-related expenses. Appendix A2 of this document details the final results of the public survey.

2.3 Jurisdiction Input

In addition to reaching out to the public to identify transportation needs, BCD Staff met with several jurisdictions over a two month period early in the planning process. Meetings were held with staff from each county. BCD Staff prepared base maps that were provided at the meetings to serve as discussion points on areas in need of transportation improvements. Like the public meetings and the public survey, several proposed projects identified through meetings with jurisdictional staff were included in the list of projects to be considered for inclusion into the RL RTP. Table 2.2 identifies dates, jurisdictions and the departments that were met with as part of the jurisdictional outreach effort.

Table 2.2: 2035 BCDCOG RL RTP JURISDICTION MEETINGS

Meeting Date	Jurisdiction	Department
February 26, 2013	Berkeley County	Planning & Engineering
February 28, 2013	Charleston County	Planning
March 5, 2013	Dorchester County	Planning
March 18, 2013	Charleston County	Public Works & Planning
March 21, 2013	Charleston County	Engineering
March 26, 2013	Berkeley County	Engineering
April 3, 2013	SCDOT	Planning
April 22, 2013	Berkeley County	Engineering

CHAPTER 3: *DEMOGRAPHIC ANALYSES*

3.1 Background

The beginning section of this chapter includes a background discussion on federal, state and local delineations that make up a region. This is followed by a description of the rural planning area (BCD RPA) that makes up the study boundary for this document, and a brief discussion of two current “vision” documents that include that BCD RPA within their scope of study. The remaining sections detail regional information, more specifically, historic and projected growth in the BCD RPA (Section 3.2), and an illustrative presentation of the regional demographics (Section 3.3.).

Federal Delineations

The U.S. Office of Management and Budget (OMB) designate the Charleston metropolitan area as the Charleston-North Charleston-Summerville, SC Metropolitan Statistical Area (MSA). The MSA is produced by the OMB, using information taken from the census and blended with information from other sources, primarily the U.S. Department of Labor. While the Charleston-North Charleston-Summerville MSA is centered on Charleston, the OMB defines the area as comprising all of Berkeley, Charleston and Dorchester counties.

Similarly, the U.S. Census Bureau defines an urbanized area (UZA) based on information collected during each decennial census, with the most recent data available being from the 2010 census. The primary purpose of both geographies (MSA and UZA) is to provide statistical information for use by government agencies. A secondary purpose is to serve as the basis for distribution of program funds that use a formula.

For all urbanized areas with a population of more than 50,000, as defined by the U.S. Census Bureau, a Metropolitan Planning Organization (MPO) must be established. The Charleston Areas Transportation Study (CHATS) MPO serves as the MPO for the Charleston-North Charleston-Summerville Region. An MPO Study Area Boundary represents the planning boundary for the MPO. It encompasses the existing census-defined urbanized area (UZA) and contiguous areas expected to become urban over the next 20-year period. While the UZA is census-defined, the 20-year urban growth boundary is locally defined and referred to as the CHATS planning area.

State and Local Delineations

The State of South Carolina is subdivided into 46 counties. South Carolina also has ten Council of Governments (COGs) across the state, with each of these COGs serving multiple counties. The representative COG for the Charleston area is the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG), and this body acts as a regional forum to allow local governments to come together to address common challenges. These challenges include issues pertaining to infrastructure, community and economic development, and other general regional governmental concerns. Both the Charleston-North Charleston-Summerville MSA and the BCDCOG are spatially defined as the three-county area that includes Berkeley, Charleston and Dorchester counties.

Each county in South Carolina can be further delineated into incorporated and unincorporated areas. Incorporated areas are governed locally by a municipal (city or town) government separate and distinct from the county, whereas unincorporated areas are locally governed at the county level.

Rural vs. Urban in the BCD Region

As stated earlier, the CHATS planning area includes portions of the BCD Region that are already, or anticipated to become, an urban area as defined by the U.S. Census Bureau. As federally mandated, the CHATS MPO has taken the newly defined urban area based upon the 2010 US Census, and increased the boundary to reflect what can be anticipated as 20 years of urban growth. As shown in Figure 3.1, this urban growth boundary thus defines what is considered the urban areas and what is considered the rural areas of the BCD Region. With respect to this RL RTP document, the urban planning area is referred to as the *CHATS Planning Area*, and the rural planning area is referred to as the *BCD RPA*.

South Carolina Statewide Multimodal Transportation Plan

Currently, the SCDOT is preparing the *South Carolina Statewide Multimodal Transportation Plan – Charting a Course to 2040*. Through this planning process a future vision for transportation mobility and efficiency throughout the state will be defined. This ongoing plan will emphasize the importance of linking transportation investment to economic development. Findings from this statewide multimodal transportation planning effort were incorporated into this 2035 BCD COG RL RTP document where applicable and available. Key elements of the state-wide planning effort include:

- Formulation of a Vision;
- Goals and Objectives;
- Formulating performance targets;
- Identifying multimodal transportation needs;
- Estimating future revenues;
- Environmental screening;
- Integrating bicycle and pedestrian planning;
- Safety;
- The following individual modal plans will also be developed as part of the effort;
 - ▶ Statewide Strategic Corridors for Transport and Commerce;
 - ▶ Interstate Highway Plan;
 - ▶ Statewide Transit and Coordination Plan;
 - ▶ Statewide Rail Plan;
 - ▶ Statewide Freight Plan.
 - ▶

Our Region Our Plan (OROP)

In December 2012, the BCDCOG completed a regional vision document: *OurRegion OurPlan*. Relevant findings from the OurRegion OurPlan document are incorporated into this 2035 BCDCOG RL RTP document where applicable. The plan provides a framework for future growth, development and infrastructure improvements in the Berkeley-Charleston-Dorchester Region. As defined in the plan’s introduction:

“OurRegion OurPlan is a Vision Plan for the future of the Berkeley- Charleston-Dorchester (BCD) region that is shaped by our residents, stakeholders, leaders, and various agencies. This plan will guide us over the next 30 years and set the stage for individual actions that will lead to long-term success. The Vision it paints is of a diverse Lowcountry with unique communities whose sense of place, history, iconic landscapes and rich environmental resources are preserved and whose quality of life is strengthened by a vital economy that is built on emerging, high-growth industries, a multimodal transportation system, and collaborative leadership.”

3.2 Regional Historic and Projected Growth

Land Area

The BCD Region encompasses approximately 3,163 square miles. As the size of the urban area has increased, the size of the rural area has decreased. Table 3.1 shows how the region’s urban/rural balance changed based upon the 2000 and the 2010 U.S. Census.

Planning Area	2000		2010		
	Land Area (Sq. Mi.)	% of BCD Region	Land Area (Sq. Mi.)	% of BCD Region	2000-2010 % Change
CHATS	916	29.0%	1,000	31.6%	9.2%
Rural (BCD RPA)	2,247	71.0%	2,163	68.4%	-3.7%
Total Area	3,163		3,163		

Source: U.S. Census Bureau, 2000 and 2010, BCDCOG

The 2,163 square miles of 2010 BCD Rural area serves as the study boundary for this 2035 BCDCOG Long Range Transportation Plan. Table 3.2 shows the by-county urban and rural land coverage change over this ten year period.

As shown in Figure 3.2, the largest increase in the CHATS Planning Area took place in Berkeley County. This change reflects incorporation of the Town of Moncks Corner, and projected growth adjacent to the Town, into the CHATS MPO Study Area. The result was a 32% increase in the CHATS Planning Area for Berkeley County between the year 2000 and the year 2010. Similarly, Dorchester County saw nearly a 7% increase in the CHATS Planning Area over the same time period, primarily a result of anticipated planned growth within the proposed East Edisto Development. For Charleston County, the increase in the CHATS Planning Area from the year 2000

to the year 2010 was minor, since much of the county's growth was anticipated and accounted for with CHATS Planning Area designation in 2000.

Table 3.2: BCD Regional Land Coverage Change, By County (Sq. Mi.)

CHATS Planning Area	County	2000	2010	% Change
	Berkeley	222	292	31.5
Charleston	531	533	0.4	
Dorchester	163	175	7.3	
Total Urban Area		916	1000	9.2
Rural Planning Area (BCD RPA)	Berkeley	1,007	937	-7.0
	Charleston	827	825	-0.2
	Dorchester	413	401	-2.9
	Total Rural Area	2,247	2,163	-3.7
Total BCD Region Area		3,163	3,163	0.0

Source: U.S. Census Bureau, 2000 and 2010

Population

The BCD Region has experienced substantial population growth over the last fifty years. As shown in Table 3.3, the decennial census population totals from 1960 through 2010 have recorded growth in every subsequent decade for each of the three counties.

Table 3.3: Historic Population in BCD Region, By County

County	1960	1970	1980	1990	2000	2010
Berkeley	38,196	56,199	94,727	128,776	142,651	177,843
Charleston	216,382	247,650	276,974	295,039	309,969	350,209
Dorchester	24,383	32,276	58,761	83,060	96,413	136,555
BCD Region	278,961	336,125	430,462	506,875	549,033	664,607

Source: U.S. Census Bureau, 1960-2010

BCDCOG 2035 Rural Long Range Transportation Plan

Figure 3.1
*Urban and Rural Areas of the
BCD Region Map*

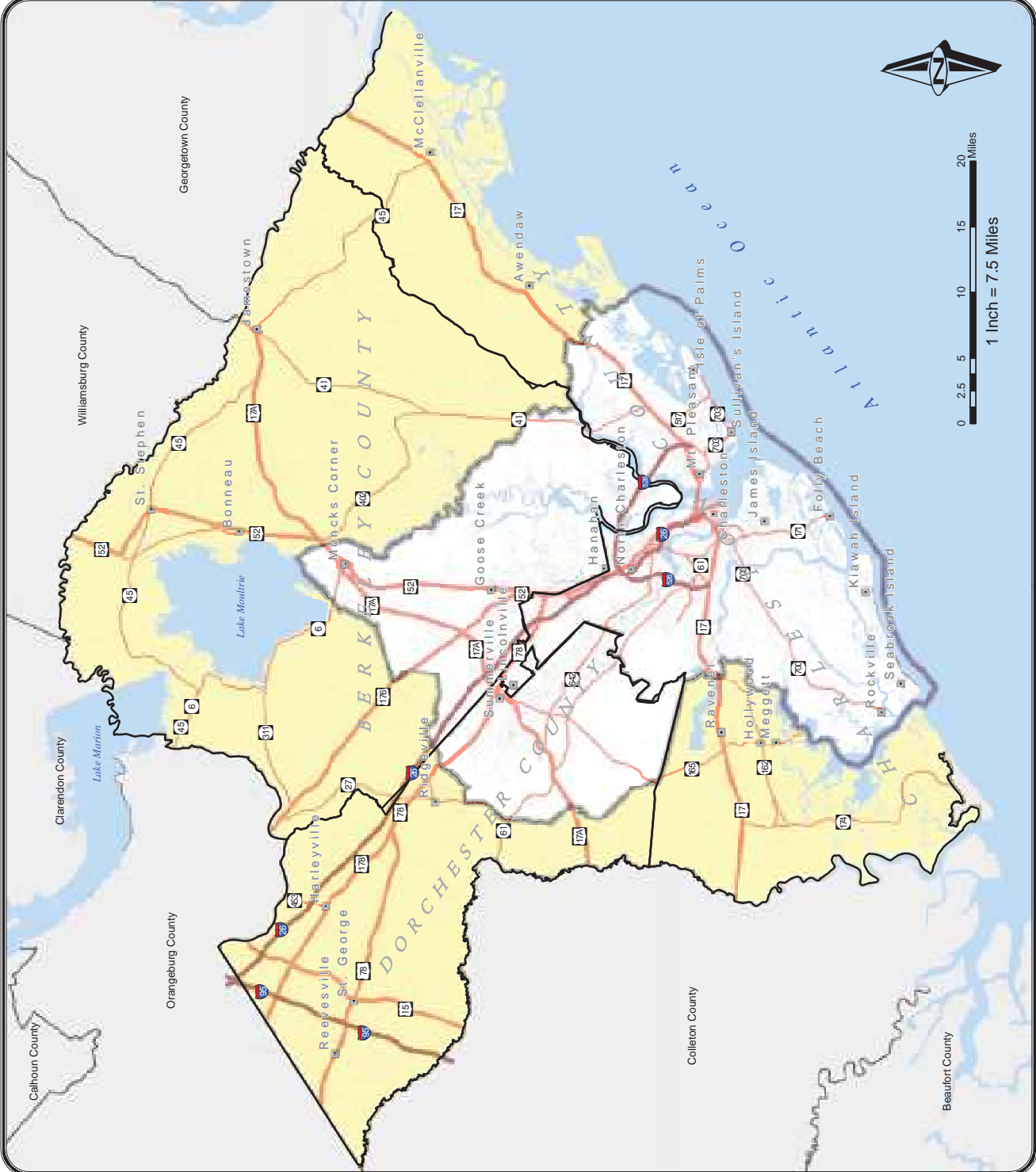


*Urban Area is the same as CHATS Planning Area 2012.

Data Source: BCDCOG, BCD GIS Departments, CHATS,
Data Path: \\Planning Services\RURAL_Transportation\Rural
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BCDCOG 2035 Rural Long Range Transportation Plan

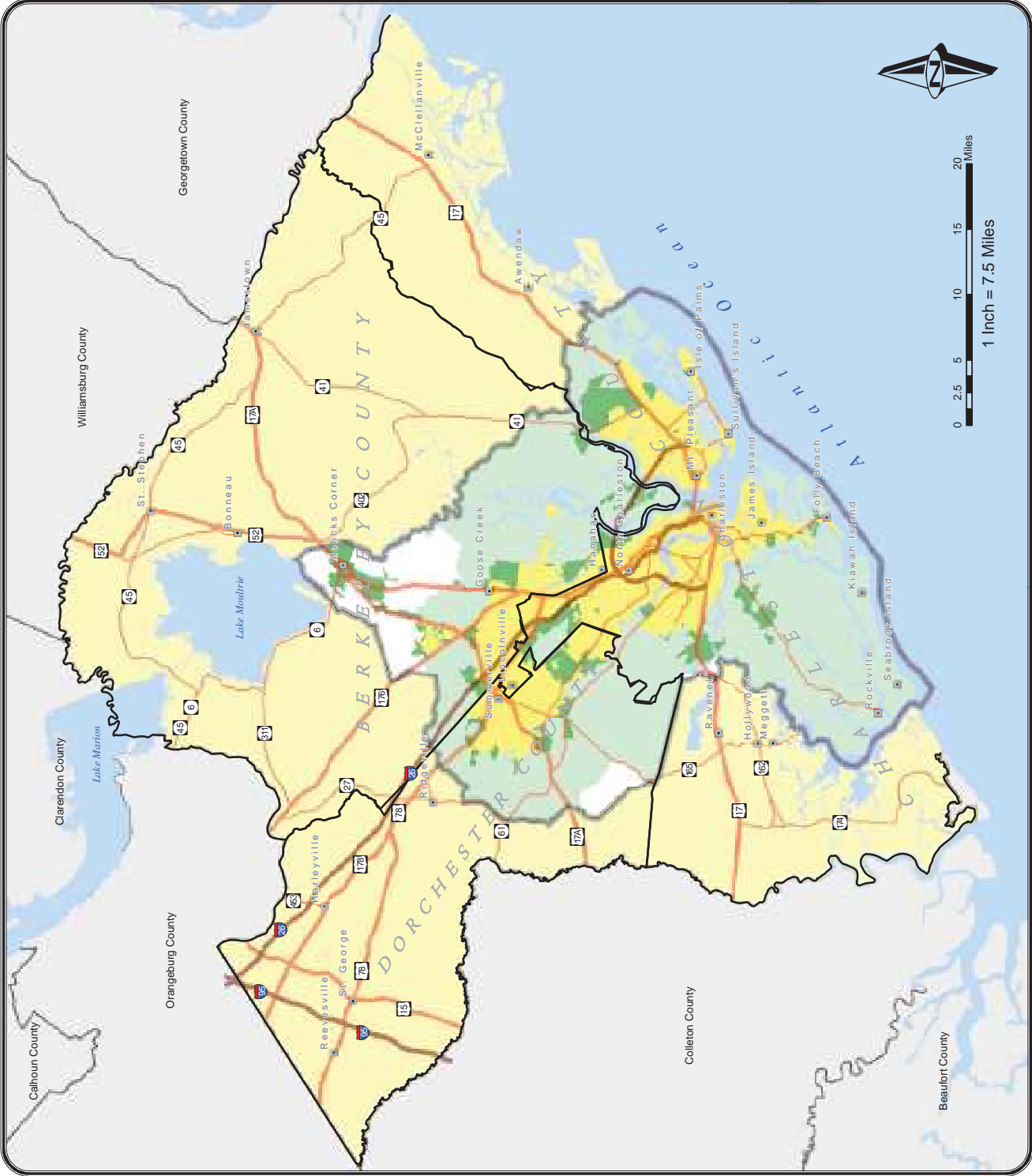
Figure 3.2
Urban Area Changes: 2000 - 2010 Map

-  2000 BCD Urban Area
-  2010 BCD Urban Area Additions
-  CHATS Planning Area 2002
-  CHATS Planning Area 2012
-  Rural Planning Area
-  County Lines
-  Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, US Census
Data Path: \\Planning Services\RURAL_Transportation\Rural_LRRP\2035 Rural_LRRP\Updates and Data\GIS\Urban_Area_Changes_Map.mxd



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Since the actual BCD RPA land area (in square miles) changed from the year 2000 to the year 2010, the best way to compare population change within the planning area over this period is to compare population density as opposed to using only population counts. Table 3.4 compares population densities for the rural areas of each county, as well as the BCD RPA as a whole.

With respect to the rural areas of the BCD Region, population changes and land coverage changes have not been dramatic over the 2000-2010 timeframe being compared. Of the three county RPAs, the most dramatic changes took place in Berkeley County, and even these changes in population and density are not unexpected considering the ten-year time span. Figure 3.3 shows population density in the BCD Region based on 2010 Census population totals.

Table 3.4: Change in Population Density in the RPA (2000 & 2010)

Location	2000			2010			% Change in Density
	Pop.	Land Area (sq. mi.)	Density (pop. /sq. mi.)	Pop.	Land Area (sq. mi.)	Density (pop. /sq. mi.)	
Berkeley RPA	50,455	1,007	50.1	36,855	937	39.3	-21.5%
Charleston RPA	19,354	827	23.4	19,947	825	24.1	2.9%
Dorchester RPA	19,621	413	47.5	20,437	401	51.0	7.4%
Total BCD RPA	89,430	2,247	39.8	77,239	2163	35.7	-10.3%

Source: U.S. Census Bureau, 2000 and 2010

Berkeley County's rural area has become over 20% less dense in large part due to the Town of Moncks Corner's absorption into the CHATS planning area in 2010, resulting in a large rural population decrease. In contrast, the populations of both Charleston County and Dorchester County became slightly denser over the same ten year period as a result of population increases coupled with a decrease in land area. Table 3.5 shows population densities for each county's RPA as a whole along with population densities for select places within each county RPA.



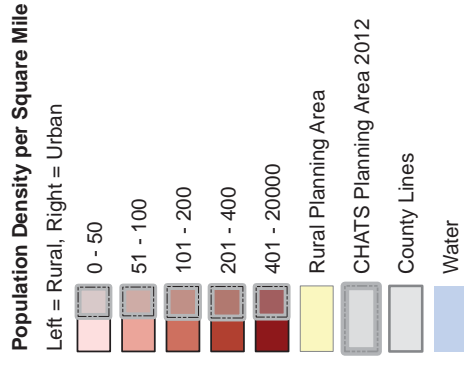
Table 3.5: Change in Population Density in Select Berkeley County RPA Places (2000 & 2010)

Area	2000			2010			% Change in Density
	Pop.	Land Area (sq. mi.)	Density (pop. /sq. mi.)	Pop.	Land Area (sq. mi.)	Density (pop. /sq. mi.)	
Berkeley RPA	50,455	1,007	50.1	36,855	937	39.3	-21.5%
Bonneau	354	2.81	126	487	2.9	168	33.3%
Jamestown	97	0.57	169	72	0.60	120	-29.0%
St. Stephen	1776	2.46	723	1697	2.50	679	-6.1%
Charleston RPA	19,354	827	23.4	19,947	825	24.1	2.9%
Awendaw	1195	8.30	144	1294	8.40	154	6.9%
Hollywood	3946	20.03	197	4714	21.20	222	12.7%
McClellanville	459	2.07	221	499	2.20	227	2.7%
Meggett	1230	14.64	84	1226	14.80	83	-1.1%
Ravenel	2214	12.30	180	2465	12.30	200	11.1%
Dorchester RPA	19,621	413	47.5	20,437	401	51.0	7.4%
Harleyville	594	0.98	601	677	1.00	677	12.6%
Reevesville	207	1.60	129	196	1.60	123	-4.6%
Ridgeville	1690	1.81	930	1979	1.80	1099	18.2%
St. George	2092	2.68	780	2084	2.70	772	-1.0%

Source: U.S. Census Bureau, 2000 and 2010

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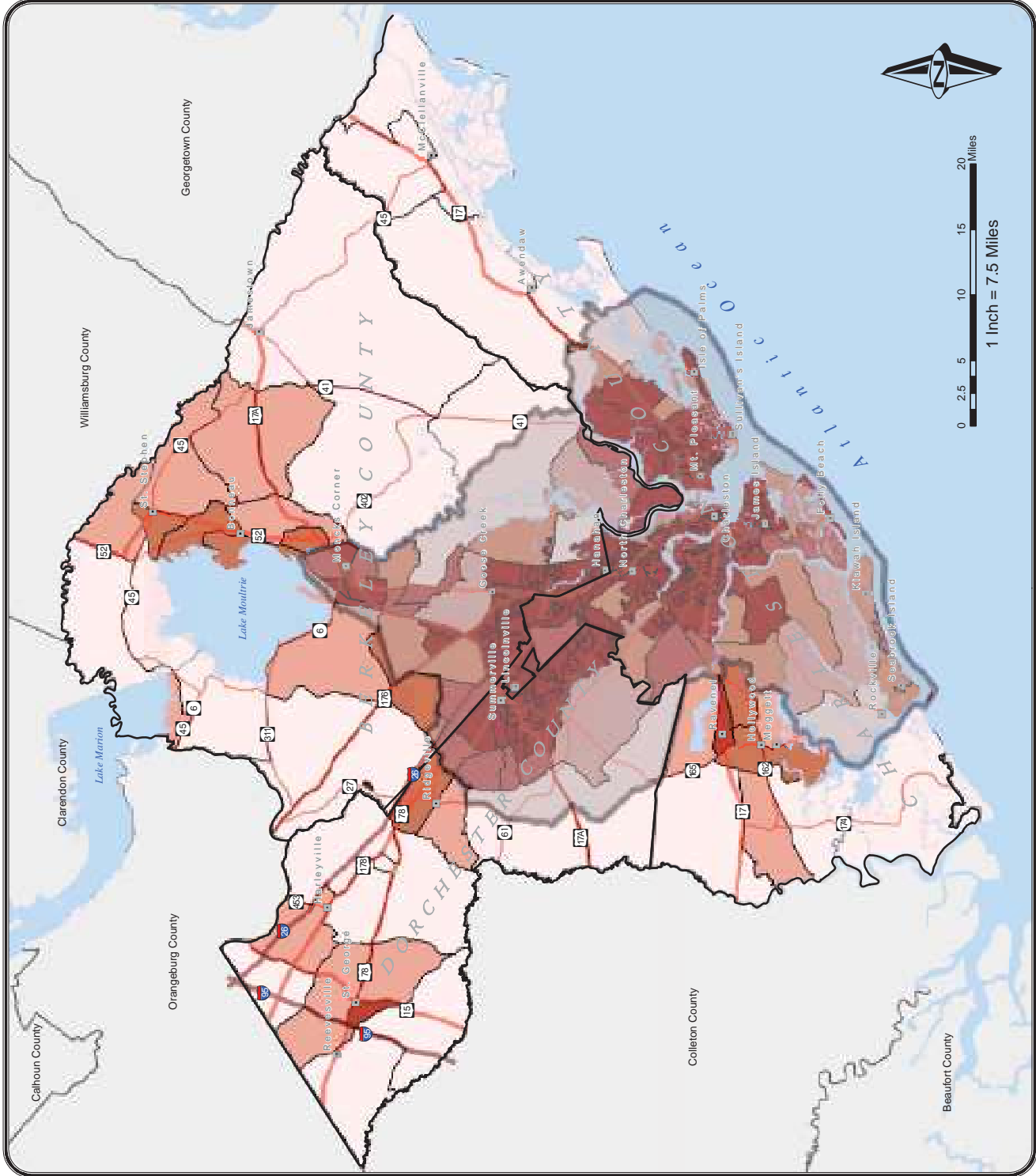
Figure 3.3
Population Density Map



Data Source: BCDCOG, BCD GIS Departments, CHATS, US Census 2010
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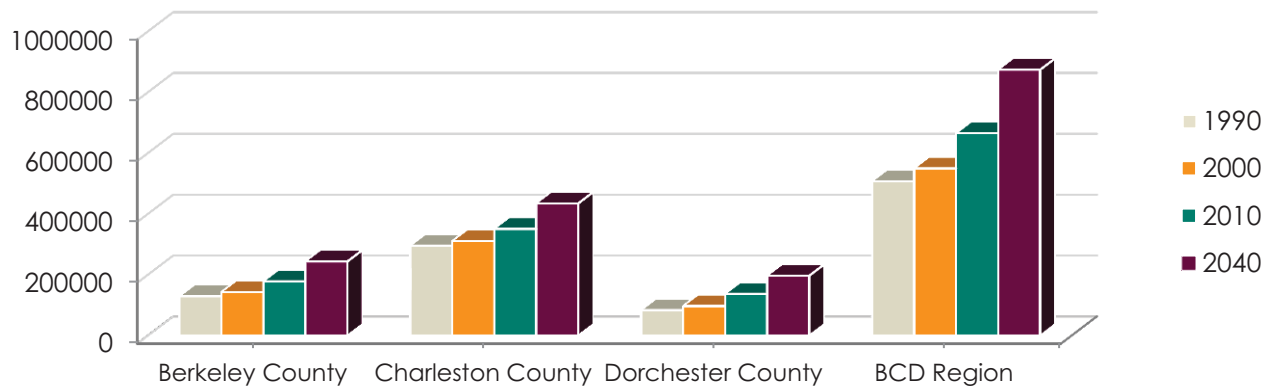
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Projected Population Growth

As presented in the OurRegion OurPlan Vision Plan, the population of the BCD Region is expected to continue to grow at a robust pace through the year 2040 (Figure 3.4). The forecasted growth rates presented in Table 3.6 show an anticipated growth of over 30% for the BCD Region over the next 30 years.

Figure 3.4: Regional Population Growth and Projection



Source: U.S. Census Bureau, 2010, BCDCOG, HNTB, 2011

Table 3.6: Projected BCD Regional Growth Rates (2010 – 2040)

	2010 Population (census)	2040 Population (forecasted)	% Increase in Population
Berkeley County	177,843	243,176	36.7%
Charleston County	350,209	434,070	23.9%
Dorchester County	136,555	196,233	43.7%
BCD Region	664,607	873,479	31.4%

Source: U.S. Census Bureau, 2010, BCDCOG, HNTB, 2011

As of 2010, 68.4% of the BCD Region landmass was considered rural, while only 11.6% of the population resided there. This is a trend that is likely to continue, meaning a majority of the forecasted population growth through 2040 likely will occur within the urban areas of the region. That is not to say that there will be limited or stagnant growth within the BCD RPA. Over the last decade there have been a number of large development projects proposed that have the potential to accelerate growth inside of rural areas of the region. As stated in the 2006 BCDCOG Rural Long Range Transportation Plan, there have been thousands of acres of residential and commercial development proposed in the rural areas of all three counties.

Projected Household Growth

Between 2010 and 2040, the Region is expected to increase its population by more than 31 percent, adding 208,872 residents to the region. With the continuing trend towards smaller household sizes, this population increase would create slightly more than 88,000 new households, averaging approximately 2,934 new households each year.

Approximately 35 percent of this region-wide household growth is likely to occur within the rural planning area. Dorchester County is expected to absorb a majority of the rural area growth with an additional 17,300 households. Figure 3.5 illustrates the forecasted housing growth in the rural planning area.

Projected Employment Growth

Closely tied to residential growth in the region, employment growth is also expected to continue throughout the BCD Region during the same time period. Overall, employment is expected to increase 41 percent by 2040 across the entire region. According to the BCDCOG Travel Demand Model, much of the employment growth anticipated in the BCD RPA is expected to occur in Dorchester County. This anticipated growth of an additional 5,000 jobs will be predominantly in the industrial sector and concentrated around the municipalities of Ridgeville, Harleyville, St. George, and along major corridors, as shown in Figure 3.6.

3.3 Regional Demographics

As illustrated in Table 3.7, minority residents constitute approximately 48.5 percent of the total population in the rural planning area, with more than half (approximately 53.2%) residing in rural Charleston County. Additionally, the Hispanic population represents 2.2 percent of the population in the BCD rural planning area, again with Charleston County having the largest portion at nearly 650 persons (3.2%). See Figures 3.7 and 3.8.

The US Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who lives in poverty. If a family's total income is less than the family size threshold, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically, but they are updated for inflation using Consumer Price Index (CPI-U). The US Census Bureau reports that more than 19 percent of households in the rural planning area are living below the poverty level. Dorchester County had the highest percentage (22.3%) of households below poverty level when compared to the rural areas of Berkeley and Charleston Counties. Conversely, approximately 12.8 percent of households in the urban area live below the poverty level, more than 50 percent less than those living in poverty in the rural areas. Figure 3.9 illustrates the percentage of impoverished families in the rural planning area.

Table 3.7: Socio-Economic Profile BCD Rural Planning Area

	Rural BCD Region	Rural Berkeley	Rural Charleston	Rural Dorchester
Population	77,239	36,855	19,947	20,437
Minority Population	37,490	16,670	10,617	10,203
% Minority Population	48.5%	45.3%	53.2%	50.0%
Hispanic Population	1,553	513	646	394
% Hispanic Population	2.2%	1.4%	3.2%	1.9%
Households	29,095	13,933	7,809	7,353
HH Below Poverty Level	5,603	2,690	1,273	1,640
% HH Below Poverty Level	19.3%	19.3%	16.3%	22.3%

Source: U.S. Census Bureau, 2010

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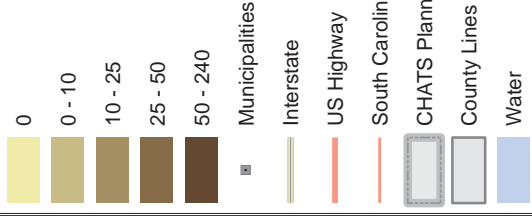
BCDCOG 2035

Rural Long Range Transportation Plan

Figure 3.5

Forecasted Housing Growth Map

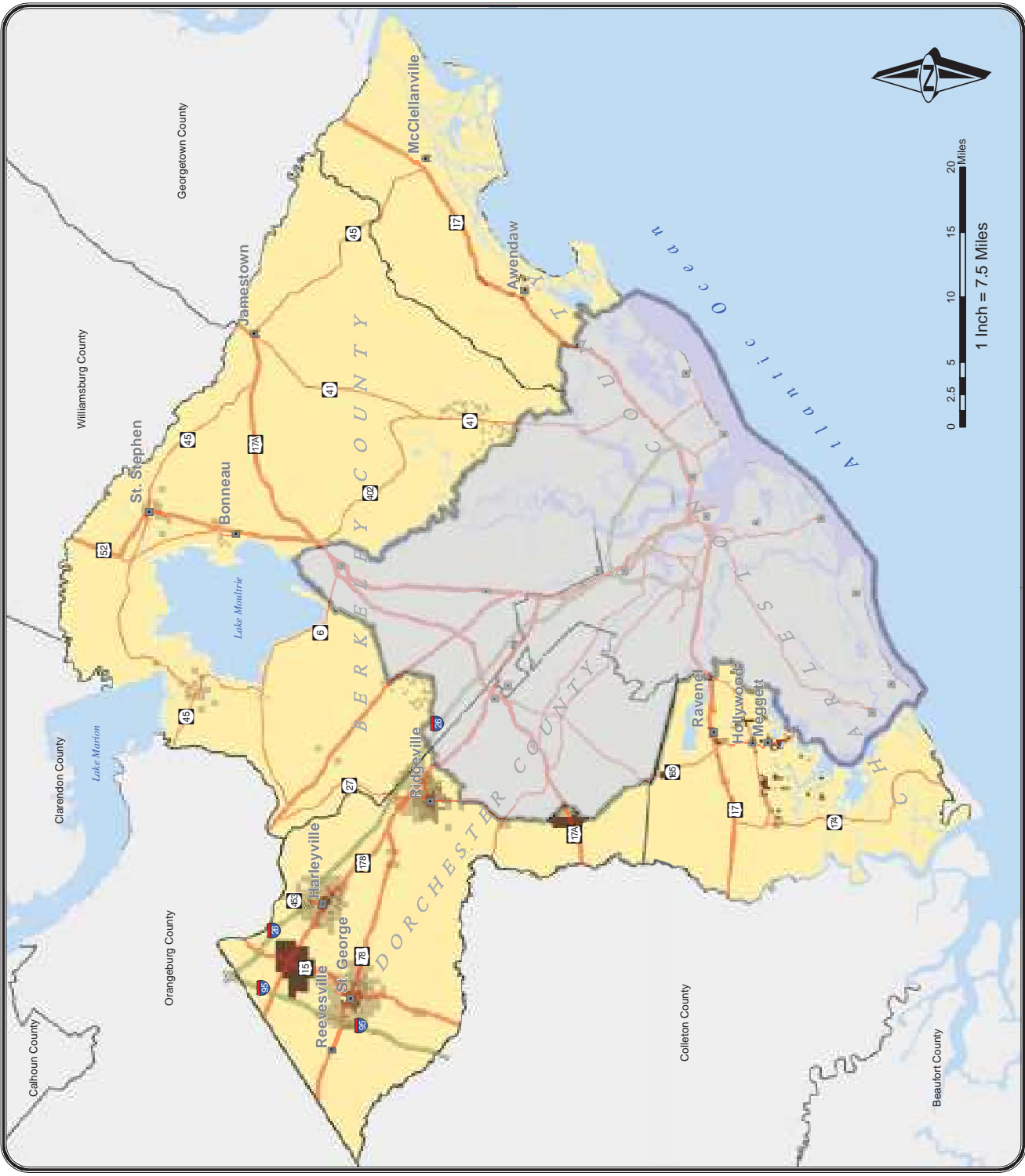
Forecasted Housing Growth(Units)



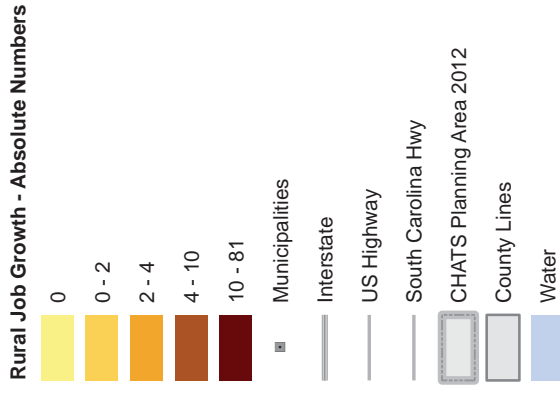
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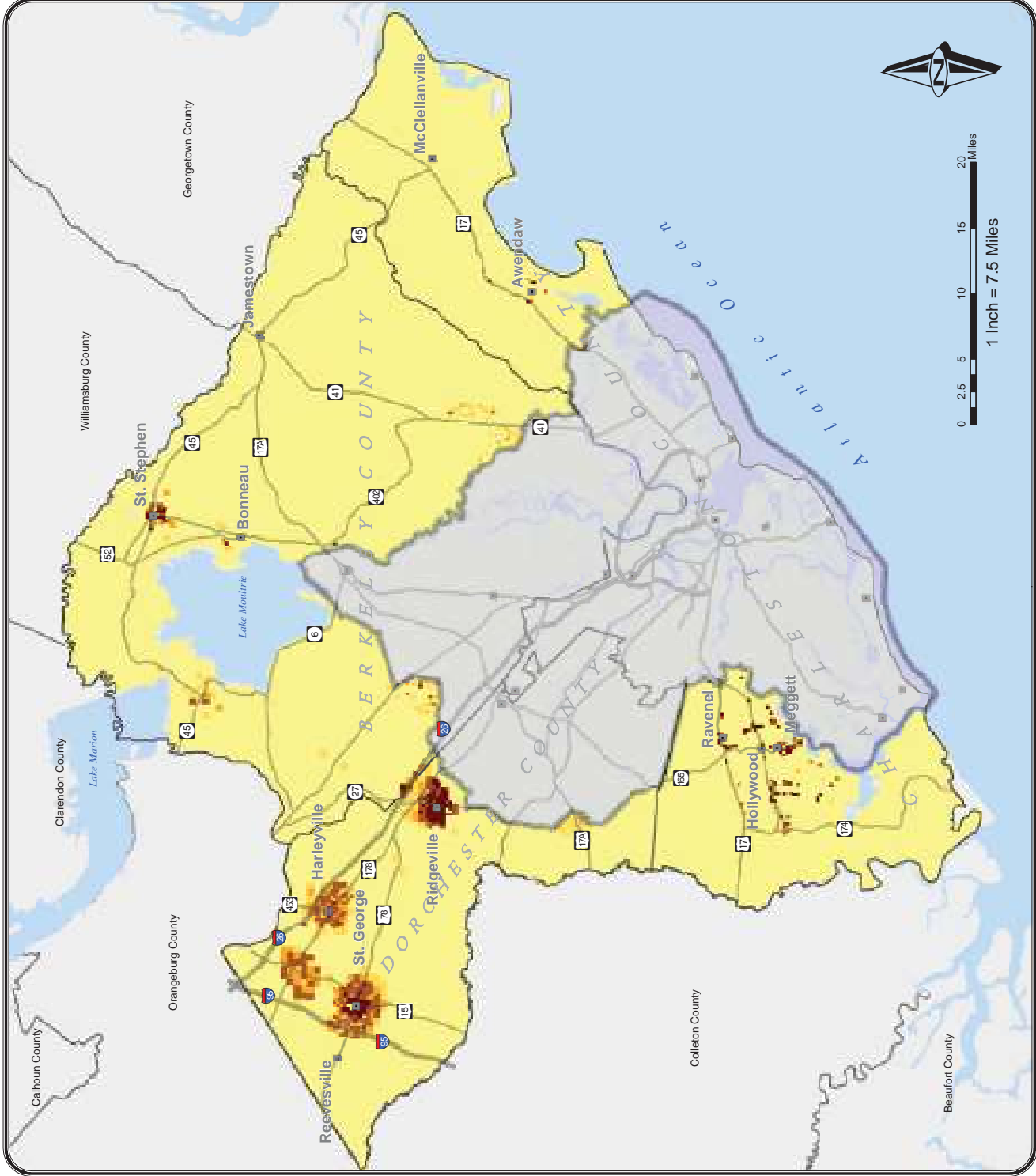
BCDCOG 2035
Rural Long Range Transportation Plan
 Figure 3.6
Forecasted Employment Growth Map



Data Source: BCDCOG, BCD GIS Departments, CHATS, ORGP
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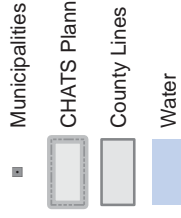
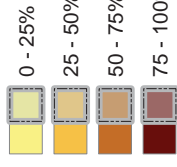
BCDCOG 2035 Rural Long Range Transportation Plan

Figure 3.7
Minority Saturation Map

2010 Census Block Groups

Minority Percentage

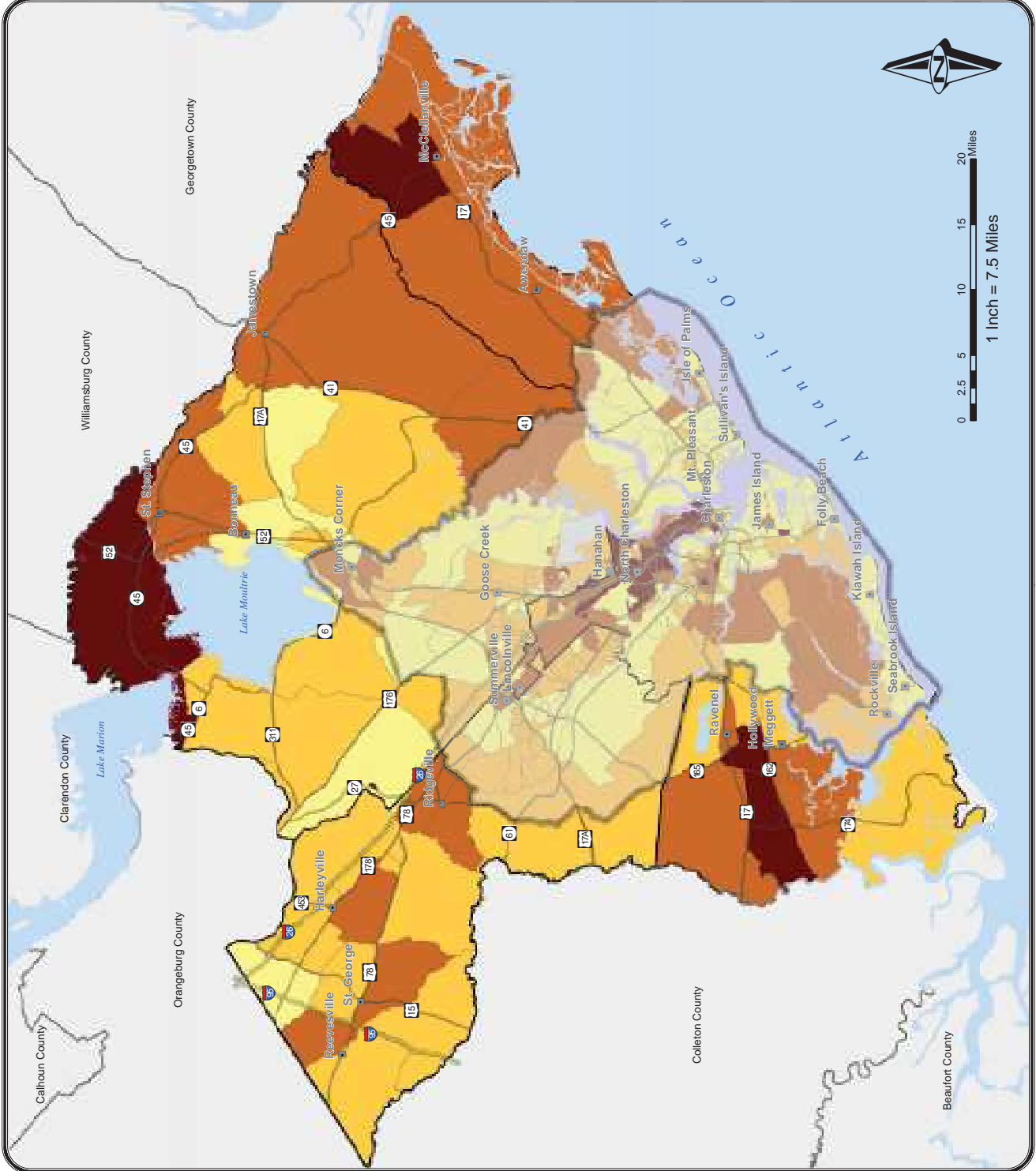
Left = Rural, Right = Urban



Data Source: BCDCOG, BCD GIS Departments, CHATS,
US Census 2010 ACS
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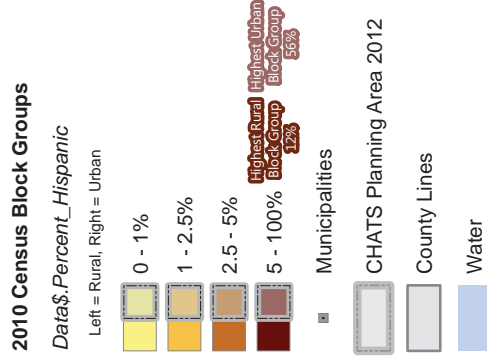


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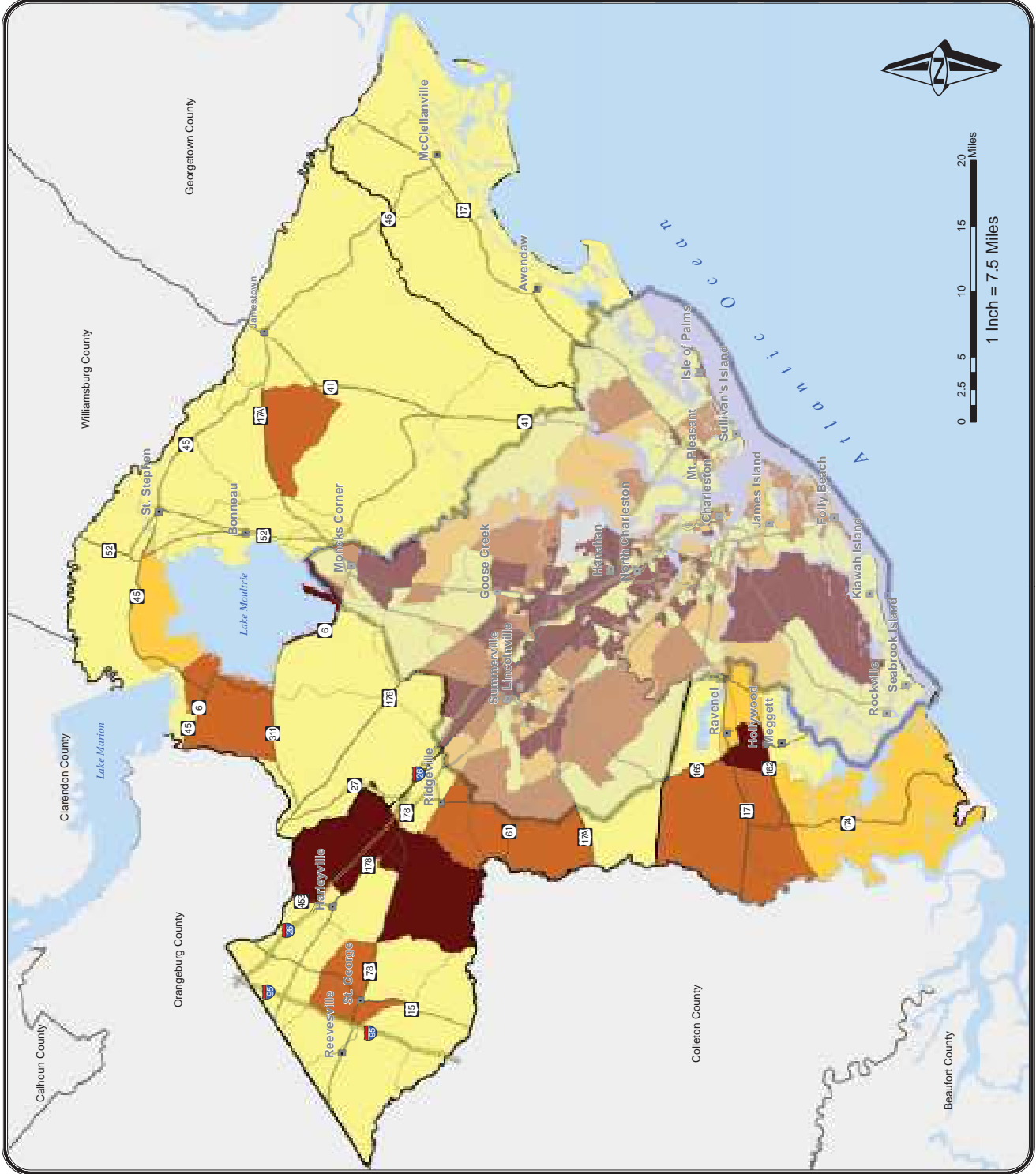
Figure 3.8
Hispanic Saturation Map



Data Source: BCDCOG, BCD GIS Departments, CHATS, US Census 2010 ACS
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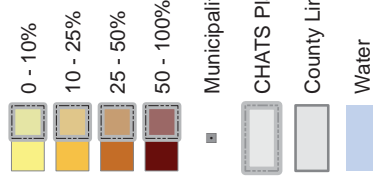
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BCDCOG 2035
Rural Long Range Transportation Plan
 Figure 3.9
Poverty Concentrations Locations Map

2010 Census Block Groups
Percentage of Impoverished Families

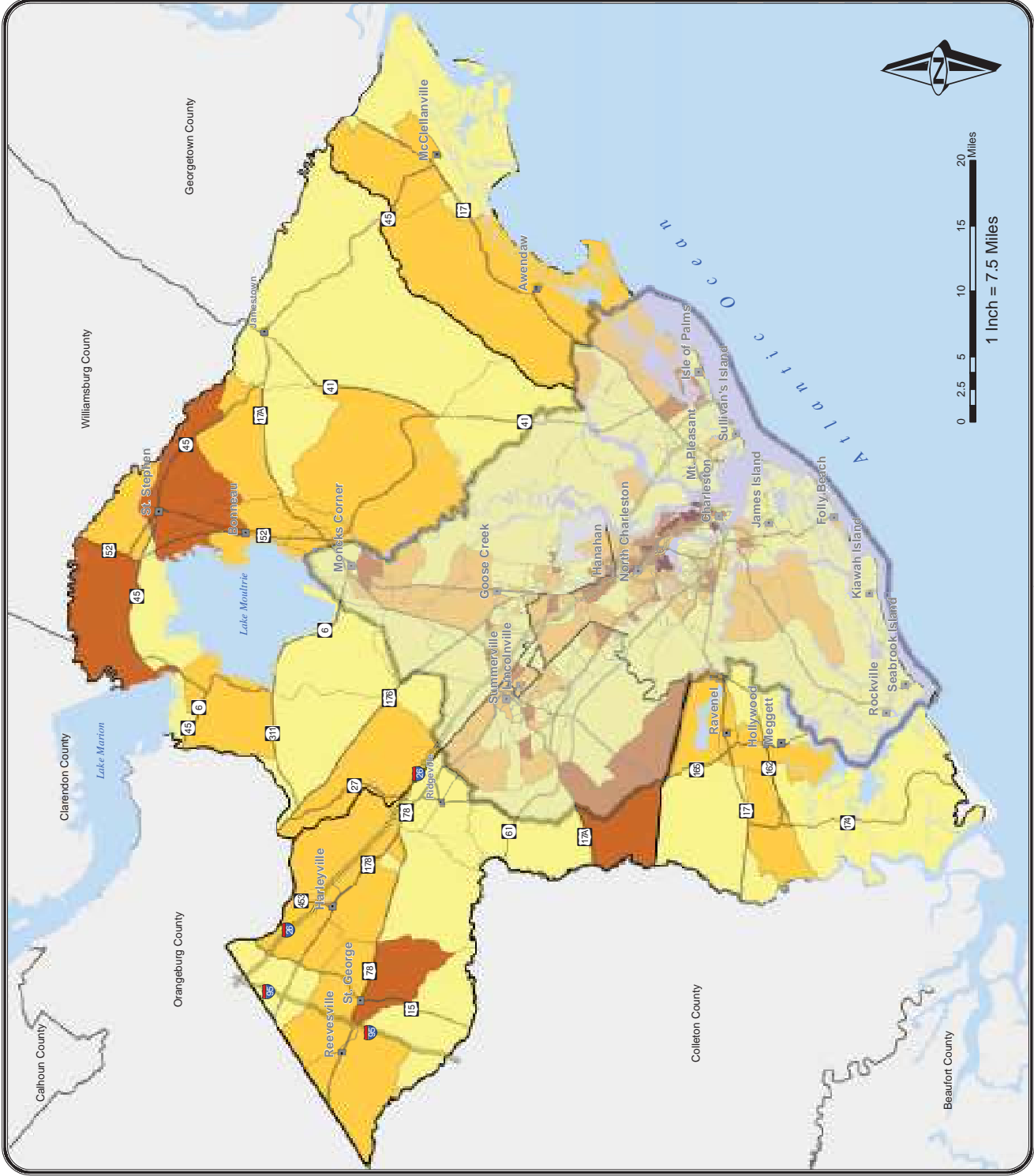
Left = Rural, Right = Urban



Data Source: BCDCOG, BCD GIS Departments, CHATS, US Census 2010 ACS
 Data Path: \\Planning Services\RURAL_Transportation\Rural_LRRP\2035 Rural LRRP-Update\maps and Data\GIS\Poverty Map.mxd



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CHAPTER 4: EXISTING TRANSPORTATION SYSTEM

4.1 Introduction

As noted in the BCDCOG Regional Plan entitled OurRegionOurPlan;

“Mobility and transportation infrastructure affects all aspects of life for those living in the BCD region. Transportation is integral to our lives, affording the mobility to experience life in the entire region. If developed in conjunction with our neighborhoods, places of employment, shopping, services and recreation areas, it serves us well without causing undue undesirable effects.”

The most obvious component of a regional transportation system is the network of major and minor roads that accommodate transportation of people and freight around and through a region. Different types of vehicles use these roads to perform different types of functions; personal vehicles carry individuals to and from work and play, city buses provide the general public with a low-cost option to get around the community, and the freight trucking industry uses the roads to transport goods to/from and across the region.

There are other transportation options for the movement of people and freight. Railways are integral to the movement of raw and finished goods from state to state, as well as providing means for people to enjoy an efficient commute in large, congested regions of the country. Waterways move freight by barge and tanker, and people by ferries and water taxis. They also support the fishing industry and the popular national pastime of recreational boating. Through our airways people are able to travel internationally, and goods can be “overnighted” to just about anywhere as well. Thus it can be said that “transportation” is defined in many different ways.

For the purposes of this rural long range transportation plan, an analysis of the existing transportation system in the BCD RPA focuses on four primary systems; the regional roadway network, public transportation, the regional freight network, and pedestrian and bicycle facilities.

4.2 Roadway Network

The BCD RPA is served by two interstates and an extensive system of US and State highways, many of which are four-lane facilities. Roads in the region are owned and/or maintained by one of the following: South Carolina Department of Transportation (SCDOT); Berkeley, Charleston or Dorchester County, incorporated jurisdictions, private developers and individuals. In addition, numerous roads are the responsibility of the federal government and the US Forest Service. In the past, roads constructed by a developer eventually were adopted into the state highway maintenance system under the Beltline Act. Recently the State Department of Transportation Commission capped the number of roads it would maintain and placed responsibility for all new roads to be accepted within the local systems (county or cities/towns) rather than the state system.

Road Classification

The Federal Highway Administration (FHWA) classifies roads and highways into groups according to the type of service they are intended to provide based on daily traffic volumes as well as purpose, characteristics, and location. As shown in the Highway Network Map (Figure 4.2), the classification system includes Interstates, Principal Arterials, and Minor Arterials, and Major Collectors.

Table 4.1: Miles of Roads by Functional Classification and County

SCDOT Functional Class	Berkeley County	Charleston County	Dorchester County
*Interstate	12.51	0.0	78.37
Principal Arterial	22.1	42.9	28.4
Minor Arterial	63.0	25.7	8.2
Major Collector	192.6	67.1	153.0

All estimates are for rural planning areas in BCD region

Source: SCDOT GIS database for road centerlines following FHWA classification schema

Interstate: This system serves high-speed and high-volume regional traffic. Access to an interstate is limited to grade-separated interchanges with mainline traffic signals (e.g. I-26 and I-95).

Principal arterial roads: This system consists of a connected network of continuous routes that (1) Serves corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel. (2) Serves all, or virtually all, urban areas of 50,000 and over population and a large majority of those with population of 25,000 and over, and (3) Provides an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise (e.g., international boundary connections and connections to coastal cities).

Minor arterial roads: This system should, in conjunction with the principal arterial system, form a network that (1) Links cities and larger towns (and other traffic generators, such as major resort areas, that are capable of attracting travel over similarly long distances) and form an integrated network providing interstate and inter-county service, (2) Is spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway, and (3) Provides (because of the two characteristics defined immediately above) service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems.

Major collector roads: This system should (1) Provide service to any county seat not on an arterial route, to the larger towns not directly served by the higher systems, and to other traffic generators of equivalent intra-county importance, such as consolidated schools, shipping points, county parks, important mining and agricultural areas, etc.; (2) Link these places with nearby larger towns or cities, or with routes of higher classification; and (3) Serve the more important intra-county travel corridors.

Traffic Volumes and Capacities

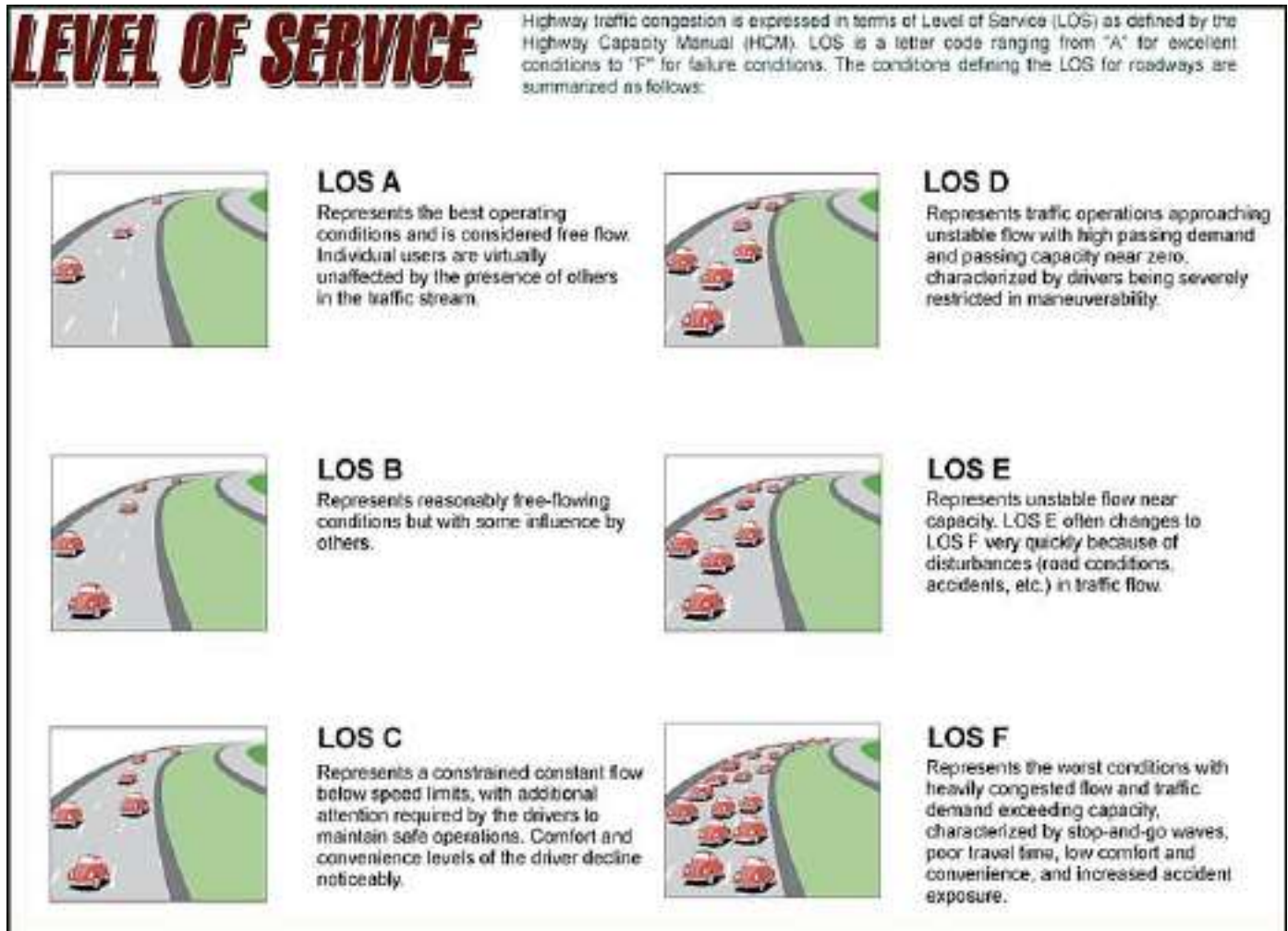
Figure 4.3 depicts SCDOT traffic count stations located within each county's RPA. A significant number of stations (highlighted in yellow) show a decrease in traffic volumes between 2001 and 2011. This can be attributed to effects of the economic downturn during the latter part of this time period and also due to the fact that overall VMT is trending downwards in the region and rest of the state. The decrease is spread evenly throughout the planning areas in the region, and there exists no specific locational trends.

However, a number of stations reported at least or well over 25% growth in volumes during this time. In Dorchester County, the majority of stations indicating increases are in the I-95 corridor, especially in the vicinity of St. George area. In Berkeley County, stations located between Moncks Corner and Bonneau indicated steady increases in the last decade. Even where station counts indicate upward trends in the volume of traffic, most of the road facilities are operating well within acceptable level of services (discussed in detail below), meaning existing capacities are adequate to absorb these increases. It should be noted that the increases in traffic counts, specifically freight truck activities in the rural areas, warrant safety improvements such as better pavement qualities, adding shoulders and turn lanes at intersections.

Levels of Service

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the road network to carry additional traffic nor the quality of service afforded by the road facilities. For this, the concept of Level of Service has been developed to subjectively describe traffic performance. A Level of Service (LOS) is a letter designation, similar to a report card rating, which describes a range of operating conditions on a particular type of facility (Figure 4.1). Mathematically, a LOS scheme is a scale to qualitatively describe the volume-to-capacity ratios. Volumes are observations of traffic flows at a given location (as discussed in the section above). Capacities are calculated from a road section's traffic related attributes, e.g. functional class, number of lanes, lane widths etc.; and determine theoretical total volumes that the road section can carry. Level of service analyses for the various highway facilities that were ranked as part of this 2035 RL RTP document shows LOS values of either A or B.

Figure 4.1: Descriptions of Levels of Service



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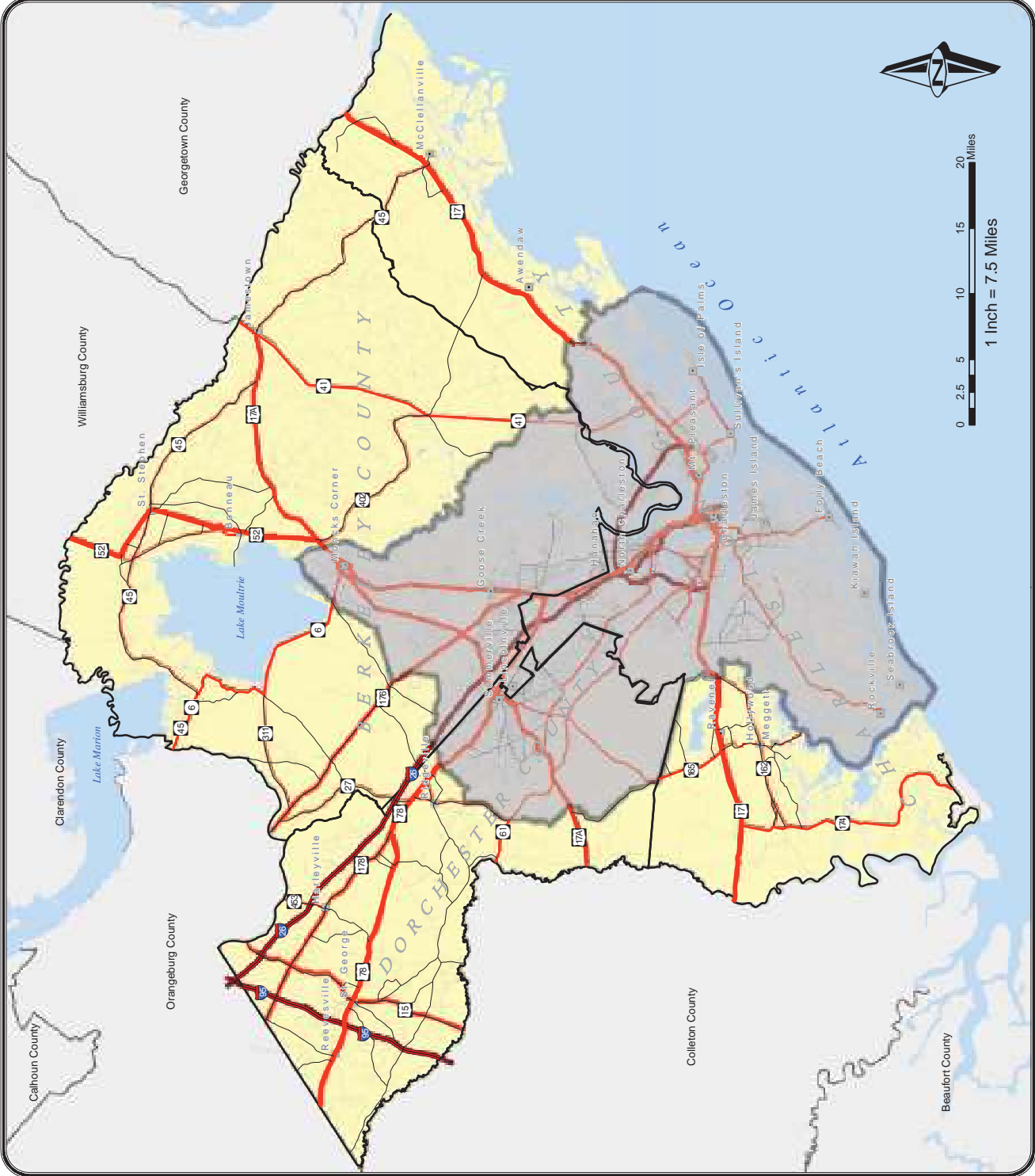
Figure 4.2
Highway Network Map

- Highway Functional Classes**
- Interstate
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Rural Planning Area
 - CHATS Planning Area 2012
 - County Lines
 - Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, SCDOT
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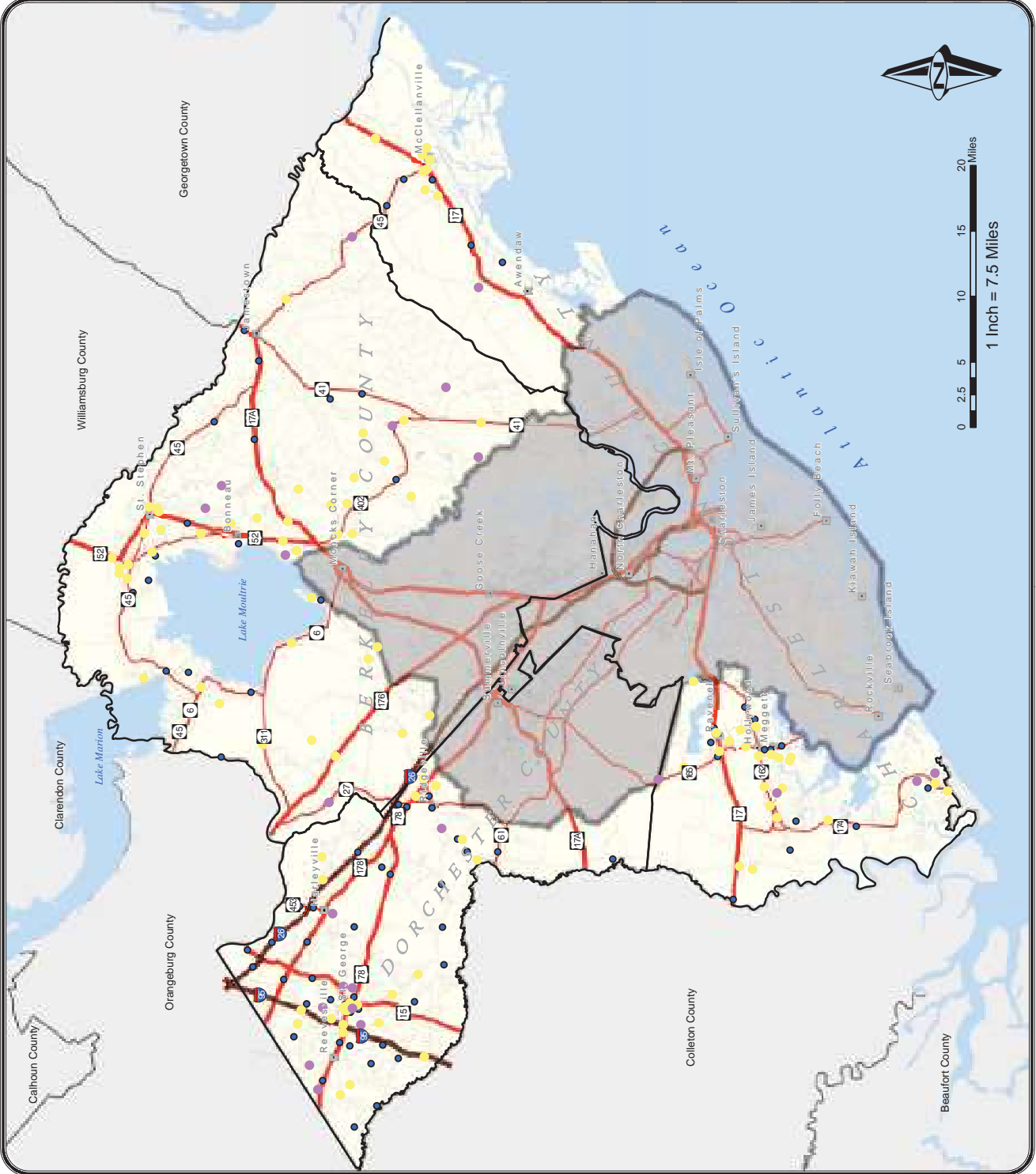
Figure 4.3
Traffic Count Stations

- Volume Increased
- Volume Decreased
- Traffic Count Stations
- Rural Planning Area
- CHATS Planning Area 2012
- County Lines
- Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, SCDOT
Data Path: V:\Planning Services\RURAL_Transportation\Rural LRTTP-2035 Rural LRTTP Update\Maps and Data\GIS\Road Network Map.mxd



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4.3 Public Transportation

Introduction

Moving Ahead for Progress in the 21st Century Act (MAP-21) is the new federal transportation bill which took effect in October 2012. MAP-21 provides a total of \$104.4 billion for rail, bus and highway projects over the next two fiscal years. Of that, more than \$21 billion is for transit projects, reinforcing the critical importance of transit in our transportation systems.

Transit is an integral component of the BCD regional transportation network. Rural transportation options that are accessible and reliable allow people to access employment, health care, and other essential services. In addition, nearly 40 percent of the country's transit-dependent population – primarily senior citizens, persons with disabilities and low-income individuals – live in rural areas.¹ These groups directly benefit from increasing the availability of viable transportation options. Increased mobility and independence for senior citizens, people with disabilities, those with limited access to a motor vehicle, and lower-income persons provides opportunity to live fully and independently.

Public transportation in rural areas, however, presents special challenges for rural transit providers. The low-density character, combined with longer trip lengths, often makes it difficult to achieve adequate ridership to support rural transit routes. This is no different for the rural areas of the BCD Region, which further limits the ability of rural population groups to find and maintain jobs or to access job training and other needed social services, causing them to remain isolated with few mobility options.

The purpose of this component of the RL RTP is to identify transit strategies that will enhance mobility options, ease congestion, and mitigate transportation costs for all residents of the BCD Region, including those who have no other transportation options as well as those who have other mobility choices.

Existing Conditions

The Berkeley Charleston Dorchester Rural Transportation Management Association (BCD RTMA) currently operates bus service throughout rural Berkeley, Charleston and Dorchester Counties. In 1996, the three counties agreed to invest in the startup of a rural transit program, created in response to an identified need of increased transportation options in rural areas of the Region, primarily as a result of ongoing residential growth in the rural areas. In 2007, the transit system's name was changed to TriCounty Link (TCL) to better represent the services provided and to increase visibility in the communities being served.

¹ Rural Transportation, Community Transportation Association of America, 2010, retrieved August 2013 from <http://web1.ctaa.org/webmodules/webarticles/anmviewer.asp?a=19&z=40>

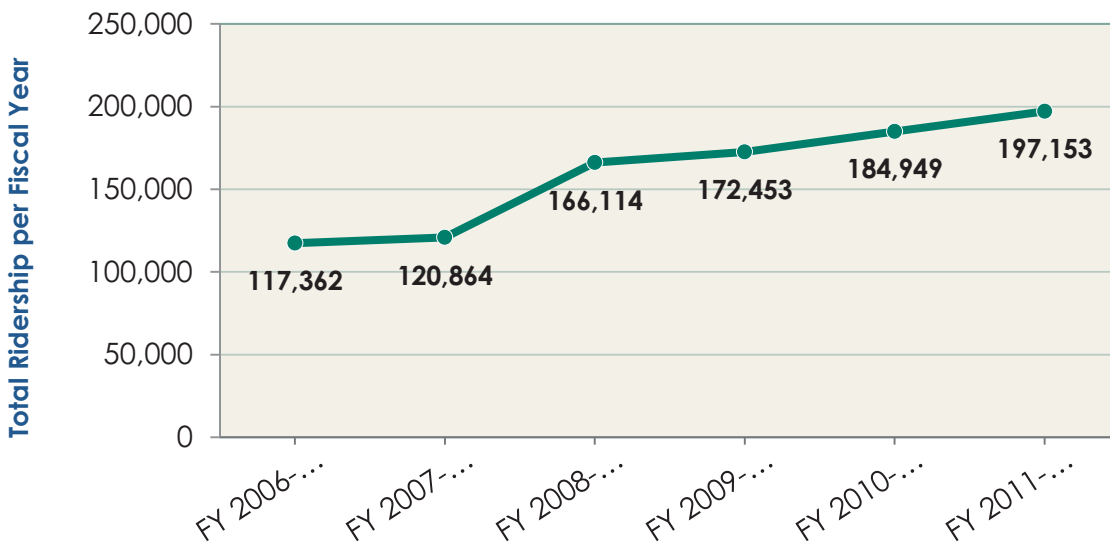
TriCounty Link operates nine deviated fixed routes² and six commuter routes, which include service to and from Bonneau, Goose Creek, Moncks Corner, Ridgeville, Summerville, Pineville, St. George and St. Stephen (see Figure 4.4). Additional TriCounty Link services include Dorchester Connector Shuttle (D-305), and the provision of free Link-to-Lunch services in Moncks Corner through a partnership with Santee Cooper.

RTMA also maintains eight park and ride locations that provide free parking for the system’s clients. TriCounty Link and CARTA (the Charleston Area Regional Transportation Authority), the mass transit provider that operates within the urbanized area of the region, have routes that meet at park and ride lots in North Charleston and Summerville.

Each TriCounty Link bus is equipped with bike racks to cater to the transportation needs of cyclists. In 2010, through their partnership with Santee Cooper, TriCounty Link was able to equip four commuter buses with wireless internet capabilities, making it the first public transit provider in the state to provide wireless internet service. The purpose of this installation was to boost ridership and revenues as well as change the image of public transit. TriCounty Link plans to equip additional buses with such capabilities in the future.

SCDOT designated TCL as the *best rural public transportation provider of 2010* and the *best transit provider of 2008*. According to the BCD RTMA 2012 Monthly Trip Report Summaries, TriCounty Link boarded more than 150,000 passengers, operated over 44,000 vehicle revenue hours, and drove nearly one million vehicle revenue miles. As illustrated in Figure 4.5, TriCounty Link increased ridership by approximately 68 percent from 2006 – 2012, a trend that is expected to continue in the future.

Figure 4.5: TriCounty Link Ridership Trends by Fiscal Year 2006 - 2012











Source: TriCounty Link

² Transit service that operates along a fixed alignment or path at generally fixed times, but may deviate from the route alignment to collect or drop off passengers who have requested the deviation.

BCDCOG 2035 Rural Long Range Transportation Plan

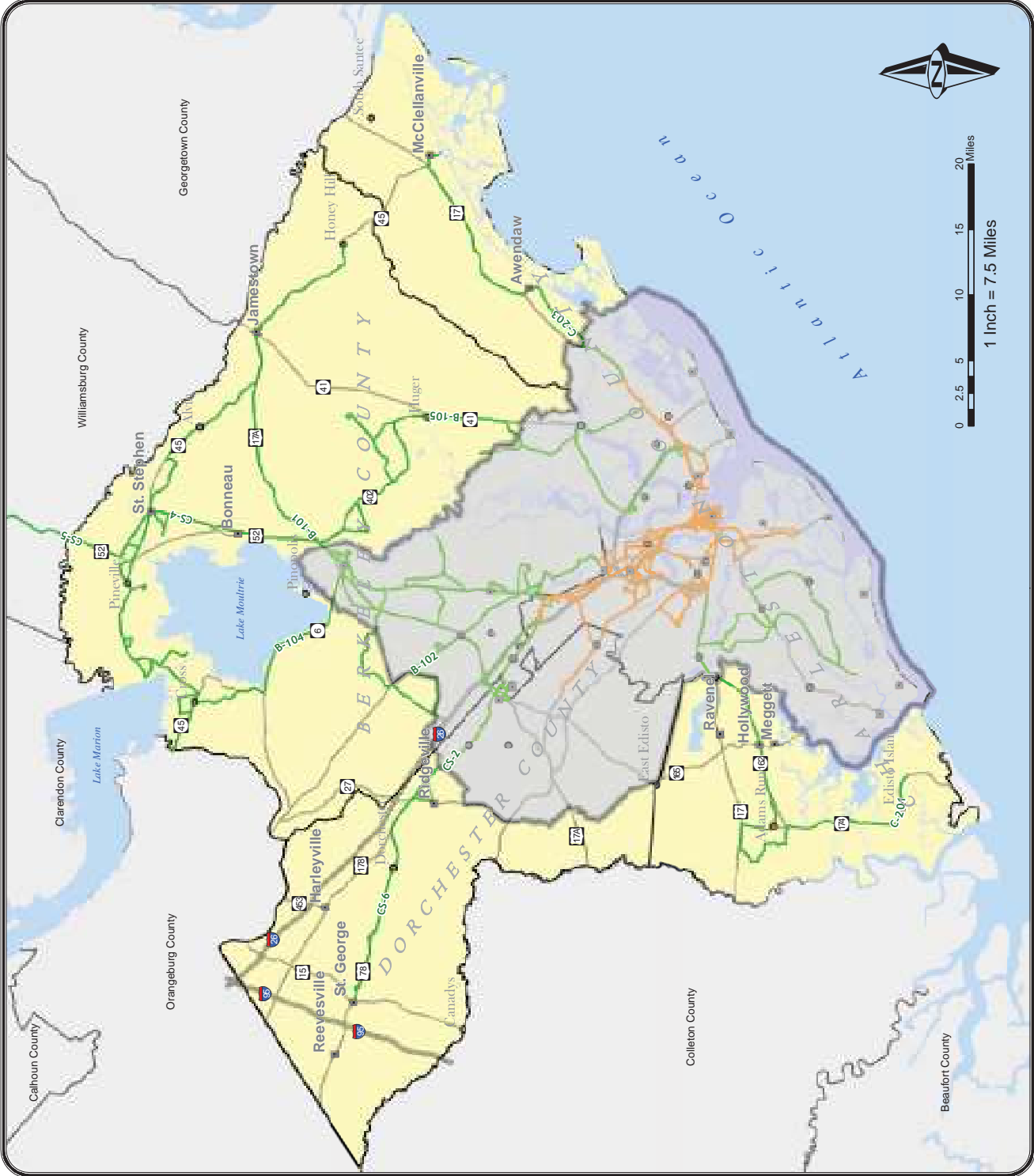
Figure 4.4
Public Transportation Route
Locations Map

-  RTMA TriCounty Link Routes
-  CARTA Routes
-  Unincorporated Places
-  Municipalities
-  Rural Planning Area
-  CHATS Planning Area 2012
-  County Lines
-  Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, RTMA, CARTA
Data Path: \\Planning Services\RURAL_Transportation\Rural LRT-2035 Rural LRT-Update\Maps and Data\GIS\Public Transit Map.mxd



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Funding

TriCounty Link obtains funding through the Federal Transit Administration (FTA) via such programs as *Section 5311 – Rural Transit Formula Grants*, *Section 5310 – Enhanced Mobility of Senior and Individuals with Disabilities*, and a proportional share of *Section 5307 - Urban Transit Operating Assistance* (funds for routes that serve the newly defined urbanized area). Based on the newly defined urbanized area, certain RTMA routes are providing service in what is now considered the urban area, making them eligible for urban funds.

Local revenues to match the grants from FTA are partly obtained through contractual agreements between TriCounty Link and businesses. One example is its ongoing partnership with Santee Cooper, which has enabled TriCounty Link to enhance and maintain services in Berkeley County. TriCounty Link plans to establish similar partnerships in Dorchester County to expand services. TriCounty Link also obtains revenues from fares and advertising income. Additionally, Charleston County allocates a portion of its half-cent sales tax revenue toward TriCounty Link operations. This appropriation has enabled the extension of services to residents of Mt. Pleasant, Awendaw, McClellanville, and Johns Island.

Current Initiatives

Based on continued residential growth, changes in employment centers, and the newly defined urbanized area, TriCounty Link is in the process of assessing its service and updating routes as needed. In an effort to determine how TriCounty Link routes were performing, BCDCOG Staff used daily trip sheets to analyze every stop on each route in 2012. Based on the results, Staff proposed changes that included the elimination of underutilized stops and the consolidation of other routes. BCDCOG Staff will be working with its on call engineer to review methodology and recommendations, as well as lead public outreach on proposed route changes.

Additionally, in the Fall of 2011, the BCDCOG initiated a study to evaluate the feasibility of consolidating TriCounty Link and CARTA into a unified system to more effectively serve the Region. The two agencies currently have an informal relationship based on common interests, but with no significant resource-sharing other than some information. TriCounty Link does have a transfer agreement with CARTA that allows customers to transfer in between transit providers at no additional charge.

The purpose of the feasibility analysis is to inform affected decision-makers of their options regarding consolidation so that the limited public transportation resources may be allocated in the most efficient and effective manner possible. The Study will provide scenarios for consolidation that, ultimately, will result in improved and coordinated transit services throughout the BCD Region.

Lastly, the BCDCOG recently completed its Regional Plan, *OurRegion OurPlan (OROP)*, a blueprint for growth based on the vision, goals and aspirations of the BCD Region. The Plan provides a framework for growth, with emphasis on protecting valuable natural resources, sustaining the economy, and a multimodal transportation system within the Region, of which expanded transit service is a big component.

Other Transit Providers

TriCounty Link contracts with a number of agencies in Berkeley and Dorchester Counties to provide transportation services for their clients; however, in Charleston County, many of the human service agencies work through the broker system established to deliver Title XIX (Medicaid) transportation for eligible clients to health care facilities. A number of other agencies also provide transportation specifically for their clients, using agency-operated vehicles. This type of service is generally funded by agency programs, and is not open to the general public.

In addition, a significant number of private transportation companies, including taxicab companies, operate in the BCD region. These companies provide specialized services for individuals and groups.

Issues Identified

As indicated, there are several issues that drive the need for public transportation in the rural areas:

A key indicator of transit need is the percentage of households without access to a vehicle. These households are often dependent on others to provide transportation, particularly in rural areas where destinations are often too far to reach by walking or bicycling. According to the U.S. Census Bureau (2005-2009 ACS), the rural area has nearly 2,440 households without access to a vehicle, which is approximately 10 percent of the total.

Secondly, the prevalence of senior citizens and people with disabilities can be an indicator of transit need. A number of rural communities in the BCD region have a rather high percentage of seniors, including the most northern portions of all three counties. Overall, nearly 15% of the population in the rural study area is over the age of 65.

Yet, as previously mentioned, population and employment density are determining factors when looking at the viability of fixed route transit service in rural areas. While TriCounty Link serves a few moderate density areas in central Berkeley County around Moncks Corner, Bonneau and St. Stephen, as well as around St. George in Dorchester County, the majority of the rural BCD Region is very low density.

As the region's population continues to grow, convenient and reliable transit service will become an even greater necessity. Transit is reliant upon a complete transportation system to operate effectively. Appropriate roads and highways must be suitable for bus traffic; sidewalks and other pedestrian features must provide adequate access to transit stops. Thus, transit cannot be considered in isolation. The strategies that will be developed as part of the long-range transit vision will be supportive of improvements to the total transportation system.

4.4 Freight Network

Introduction

MAP-21 includes a number of provisions to improve the condition and performance of the national *freight* network. As an incentive to support prioritization of projects to improve freight movement, USDOT may increase the federal share for interstate highway projects up to 95% and other

transportation projects up to 90% (from the standard 80% federal share). To be eligible, the project must enhance the efficient movement of freight; including making progress toward meeting performance targets for freight movement, as well as being identified in the state freight plan.

Strategic Corridor System

The South Carolina 2030 Statewide Multimodal Transportation Plan explains that a system of statewide corridors, intended to provide a connected, continuous network of highways, is needed to serve both the traveling public and facilitate the movement of freight. In order to maximize limited resources, maintain the State’s position in the global marketplace and efficiently move both people and goods, a strategic system of corridors forming the backbone of the state’s transportation system has been identified. This system reinforces the regional corridors identified herein. They were developed by emphasizing connectivity of activity centers, not just focusing on route numbers. The statewide corridors also focus on those routes that have certain minimum traffic volumes, routes that serve major truck traffic, those with safety issues, those serving economic corridors, those that are evacuation routes and tourism routes.

That guiding principle is similar to the criteria used to define regional freight corridors. The major freight corridors in the region include Interstate 95, Interstate 26, US Highways: US 52, US 17, US 78, US 176 and State Highways: SC 7, SC 61, SC 171, SC 41, SC 45, SC 6, SC 174, and SC 700. This strategic freight network is illustrated on Figure 4.6 Highway Freight Network Map.

Table 4.2: Freight Network Miles by Functional Classification and County

Facility Type	Berkeley County	Charleston County	Dorchester County
Interstate	12.51	0	78.37
US Highways	80.8	84.4	35.2
SC Highways	90.4	27.1	3.9

Source: Road Centerline GIS database with Strategic Corridor information from SCDOT

Rail Freight

CSX is South Carolina’s largest railroad, operating and maintaining nearly 1,800 miles of track, 212 of which are within the BCD rural planning area. CSX Rail handled nearly 946,000 carloads of freight in South Carolina during 2012. CSX carries a variety of commodities important to our economy and way of life, including consumer products, automobiles, food and agriculture products, coal and chemicals. Products shipped in South Carolina include textile chemicals, iron scrap, containerized consumer goods, plastics, and woodchips.

Norfolk Southern Railway (NS) is another Class I railroad operating 679 route miles throughout South Carolina, approximately 79 of which are within the BCD rural planning area. Major commodities transported by the NS Railway in South Carolina include coal, lumber and wood products, chemicals, pulp, paper and allied products, and transportation equipment.

South Carolina Public Railways (SCPR) operates three railroads, two of which serve terminals of the Port of Charleston and one that serves two major industries. The Port Utilities Commission of Charleston (PUCC) is a terminal switching railroad located in Charleston. Terminal switching service is provided to the South Carolina State Ports Authority's Columbus Street and Union Pier Terminals. The Port Terminal Railroad (PTR) is also a terminal switching railroad located in North Charleston where service is provided to the South Carolina State Ports Authority's North Charleston Terminal and the Charleston Naval Complex. As terminal switching railroads, PUCC and PTR have no mainline route miles of track. Traffic on the PUCC and PTR is interchanged with both CSX and NS.

The East Cooper and Berkeley Railroad (ECBR), built in the late 1970s, is a 17-mile line extending from State Junction (Cordesville) to Charity Church in Berkeley County. Operations began on November 15, 1978. Major commodities transported are chemicals and steel for BP Chemical and Nucor Steel. Traffic is interchanged with CSX at State Junction.

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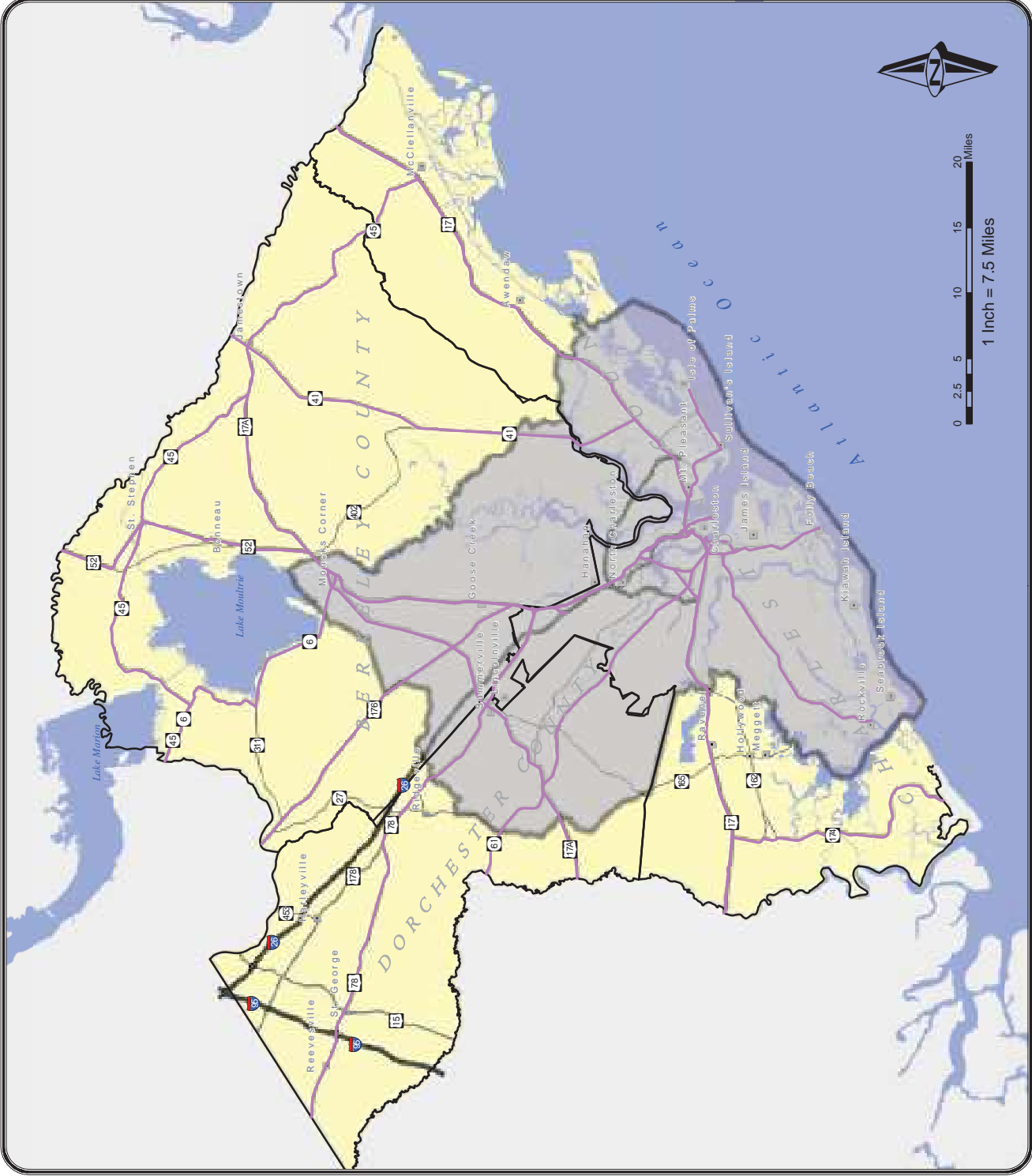
Figure 4.6
Highway Freight Network Map

- SCDOT Strategic Corridors US Hwys
- SCDOT Strategic Corridors SC Hwys
- ▭ CHATS Planning Area 2012
- ▭ Water
- ▭ Rural Planning Area

Data Source: BCDCOG, BCDGIS Departments, CHATS, SCDOT
 Data Path: \\Planning Services\RURAL_Transportation\Rural LRTIP-2035 Rural LRTIP Update\Maps and Data\GIS\Road Network Map.mxd



Disclaimer: This map is a graphic representation of data obtained from various sources. All efforts have been made to warrant the accuracy of this map. However, the BCD Council of Governments disclaims all responsibility and liability for the use of this map.



4.5 Pedestrian and Bicycle Facilities

Introduction

In both the urban and rural areas of the BCD Region, transportation planning no longer focuses only on roadway solutions. Like many other regions throughout the nation, the BCD Region recognizes that livable communities must accommodate pedestrians and cyclists. The many benefits associated with walking and bicycling include;

- *Personal Benefits* — Cardiovascular fitness, health, and transportation cost savings;
- *Societal Benefits* — Reduced vehicle miles of travel, improved public health through a cleaner environment and healthier citizens, and improved mobility for those that are disabled or without access to private automobiles; and
- *Environmental Benefits* — Reduced air and noise pollution and improved water quality from fewer parking lots/spaces/structures.

There are different types of pedestrian and bicycling facilities. Some of the facilities most commonly seen in rural areas include;

- *Shared Lane* — this type of facility is often referred to as a “wide outside lane,” a “shared lane,” or a “wide curb lane.” These facilities provide extra width in the outermost travel lane on either single- or multi-lane roadways to accommodate bicyclists. Typically, shared lane facilities have an outer lane width of 14 feet on multi-lane roadways and 15 feet on two-lane roadways. This facility is most appropriate on travel routes with moderate traffic volumes and is suitable for cyclists who are comfortable riding with the flow of regular traffic. These routes can be ridden by basic cyclists, but are most often preferred by advanced cyclists.
- *Striped Lanes* — this type of facility consists of an exclusive-use area adjacent to the outermost travel lane. The area delineated for cyclists is a minimum of 4-feet-wide and is marked by a solid white line on the left side and frequent signs and stenciled pavement markings indicating either “Bike Only” or another such message so as to deter vehicles other than bicycles from using the lane for travel. Striped bike lanes are one of the facilities of choice for basic and child cyclists because they offer a measure of security (separation from vehicles) not found in all other facilities.
- *Multi-Use Paths (one side of street)* — this type of facility is typically a minimum 10-foot-wide asphalt path that runs parallel to the street and is shared by pedestrians and cyclists. These paths are often set back from the curb by a planted verge area. This facility type is generally suitable for all levels of cyclists, but is most often preferred by basic and child cyclists.

- *Signed Routes* — this type of route is created in cases where no room or need exists to create additional space for cyclists. Often signed routes lead cyclists through the “quieter” streets of a community, using neighborhood streets where traffic speeds and volumes are low. This type of route is good for cyclists of any level, provided it is planned on streets that have low traffic volumes and speed. Signed routes are helpful in way-finding to link neighborhoods with networks of greenways and bike lanes.

Existing Conditions

The gap between the potential for bicycling and walking in the rural areas and the current or proposed transportation projects was raised during the public input process with a large percentage of residents expressing support for bicycling and walking facilities. Citizen’s surveys indicated a desire for opportunities to walk and bicycle safely within communities and throughout the region. Likewise county and municipal planners for the rural areas also recognized a need to improve safety and opportunities for bicycling and walking throughout the region.

In updating the Rural Long Range Transportation Plan, numerous plans and projects in the region were reviewed to identify bike and pedestrian initiatives including town, city and county comprehensive plans for the rural areas, the Francis Marion National Forest Master Plan, the East Coast Greenway Plan, the Charleston County Parks and Recreation Master Plan, the Dorchester County Transportation Plan and the Palmetto Conservation’s statewide Palmetto Trail Master Plan update.










In 2010, the BCDCOG completed the CHATS Long Range Transportation Plan. Although this plan was developed primarily for the urbanized area (CHATS Planning Area) of all three counties, the plan includes existing and proposed bicycle and walking facilities and recommends a list of regional pathways/bikeways that interconnect and link with areas beyond the CHATS Planning Area into the BCD RPA. To date, there are approximately 308 miles of proposed bicycle and pedestrian facilities in the rural areas with nearly 21 miles of completed facilities. As projects are developed, the BCDCOG will seek opportunities to connect towns and communities with biking and walking facilities.

The BCD RPA is traversed by several recognized statewide bicycle routes including the East Coast Greenway, which currently extends approximately 52.3 miles through Charleston County, and the Palmetto Trail, which travels nearly 85 miles through Berkeley and Charleston County. Alignments of these routes, as well as other existing and proposed trails and bike lanes in the BCD region, are identified on Figure 4.7 Existing and Proposed Bicycle and Pedestrian Facilities.

BCDCOG 2035 Rural Long Range Transportation Plan

Figure 4.7

*Existing and Proposed
Bicycle and Pedestrian Facilities*

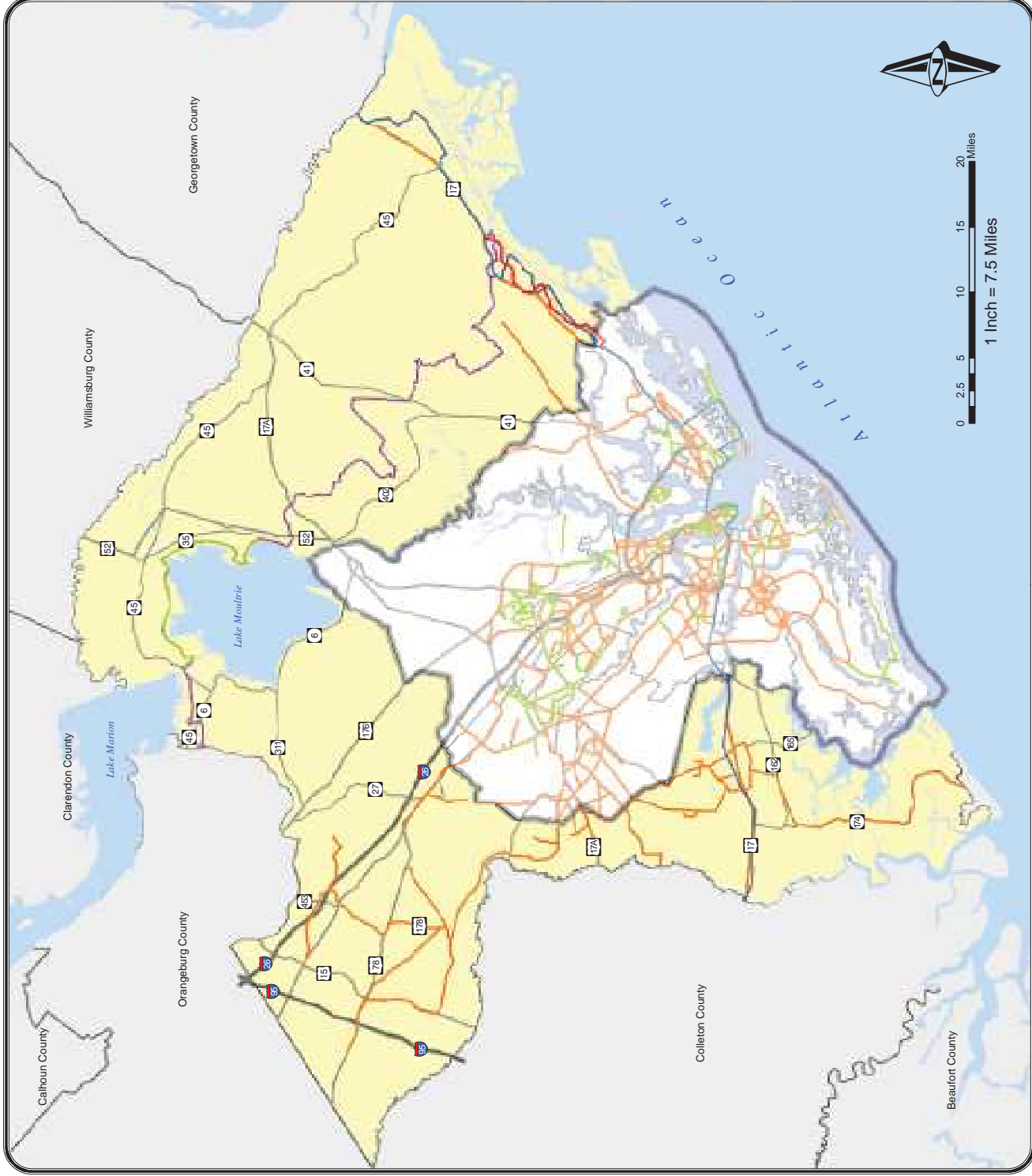
- | Facilities | | Rural Mileage |
|---|----------------------------------|---------------|
|  | East Coast Greenway (ECG) | 52.3 miles |
|  | Awendaw's Proposed ECG Alignment | 13.56 miles |
|  | Palmetto Trail | 85 miles |
|  | Proposed Trails & Bike Lanes | 308.28 miles* |
|  | Existing Trails & Bike Lanes | 20.98 miles |
|  | Rural Planning Area | |
|  | CHATS Planning Area 2012 | |
|  | County Lines | |
|  | Water | |

* Excludes ECG and Palmetto Trail

Data Source: BCDCOG, BCD GIS Departments, CHATS, East Coast Greenway Alliance, Town of Awendaw
Data Path: V:\Planning Services\RURAL_Transportation\Rural L RTP\2035 Rural L RTP Update\Maps and Data\GIS\Maps\Bike Ped Map.mxd



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The Bicycle and Pedestrian Environment

Much of the existing bicycling and walking in the BCD RPA falls into two distinct categories.

- 1) ***Utilitarian, non-discretionary travel:*** A significant portion of the population in the BCD RPA area does not have access to a car. Children, students, and many elderly are not able to drive. In addition, some households cannot afford an automobile. According to the 2010 Census, approximately 1,951 households in the rural area of the Berkeley-Charleston-Dorchester region do not have a vehicle available. This number is highest in Berkeley County, where 753 households have no vehicle available. For these households, bicycling and walking may be the only option they have for most of the trips they must make every day, regardless of the conditions they experience.

Table 4.3: Vehicle Availability in the BCD RPA

	BCD RPA	Berkeley County RPA	Charleston County RPA	Dorchester County RPA
No vehicle available	1,951	753	557	641
1 vehicle available	7,885	3,842	1,747	2,296
2 vehicles available	9,408	4,501	2,477	2,430
3 vehicles available	4,459	1,903	1,377	1,179
4 or more vehicles available	1,950	919	554	477
Total:	25,653	11,918	6,712	7,023

Source: 2007 Source: 2011 American Community Survey (Table: B08203; Universe: Households)

- 2) ***Recreational, discretionary travel:*** Local bicycle clubs such as the regional Coastal Cyclists and the Fat Tire group organize numerous rides throughout the year in the rural areas and have an active membership. Both organizations sponsor events that use the highway system such as Highway 17 near the Town of Awendaw, the East Coast Greenway route and the Palmetto Trail.

Previous Planning Efforts

The BCD region has envisioned incorporation of a bicycle network into its regional transportation system for a number of years, starting with the development of the 1976 Long Range Bikeway Plan. Limited implementation of this plan however can be traced to the nationwide trend where transportation planning and design has been focused on the needs of the motorist.

Bike and Pedestrian Action Plan: In 2005, the BCDCOG completed a regional *Bike and Pedestrian Action Plan* funded by the Robert Wood Johnson Foundation. With the assistance of healthcare providers, the school districts and other partners, the Berkeley-Charleston-Dorchester Regional Bicycle and Pedestrian Action Plan developed based on three principles:

- 1) Children should be able to safely walk and bike to school;
- 2) Roadways should equally accommodate pedestrians, bicyclists, and motorists;

3) Bicycling and walking should become a routine part of daily activity in the BCD region.

With these principles as a guide, an Action Plan was developed to improve walking and bicycling conditions in the region and to encourage residents to walk and bike on a daily basis. The Action Plan consists of three initiatives to achieve these objectives:

- ***Safe Routes to School (SRTS) Programs:*** The goal of a SRTS program is to create a safer environment for children who already walk and bike to school, and to encourage more children to become physically active by walking or bicycling to school.
- ***Complete Streets:*** A *Complete Street* is a street that is safe and convenient for all users, including pedestrians, bicyclists, and motorists. Complete Streets policies should be routinely implemented at state and local levels to insure that pedestrian and bicycle facilities are included in all transportation projects. Recommendations for the implementation of Complete Streets policies are included in numerous municipal Comprehensive Plans within the BCD region.
- ***Community Intervention:*** To foster environments where walking and bicycling are a routine part of daily activity, a variety of community interventions are needed in the BCD region. Physical interventions such as sidewalks, trails, and roadway improvements are needed to improve bicycle and pedestrian access.

Recommendations are detailed in the Implementation section of the BCD Bike and Pedestrian Action Plan and include allocating more funding to improve bike and pedestrian facilities, and encouraging local governments to adopt policies and programs that support bicycle and pedestrian safety.

East Coast Greenway Plan: In 2005, a separate study was conducted by Kimley-Horn and Associates for the BCDCOG to complete a bike and pedestrian route plan for the East Coast in the BCD region. The East Coast Greenway trail will ultimately extend from Calais, Maine to Key West, Florida. Nationwide, much of the East Coast Greenway will be comprised of existing local trails (greenways, bikeways, rail trails, canal towpaths, park pathways, waterfront esplanades, etc.) Users will include walkers, cyclists, skaters, wheelchairs, strollers, and in snowy areas of the country, even skiers in northern communities.

It is hoped that at completion of the East Coast Greenway, at least 80% of the system will be located along traffic separated trails with the remaining 20% on low traffic rural roads and city streets. Trail segments are planned to retain local character, function as community facilities, and boost local economies with new tourism dollars spent in the local communities. The East Coast Greenway route in the Berkeley Charleston Dorchester region is shown in Figure 4.6 Existing and Proposed Bicycle and Pedestrian Facilities, and extends approximately 52.3 miles through rural Charleston County.

The East Coast Greenway Plan will be updated by the BCDCOG in 2013-2014 to include new route changes in the Town of Awendaw area and improved connections to and through MeadWestavco's proposed 78,000-acre East Edisto Development located south of S.C. Highway 61 to the Edisto River in Dorchester and Charleston counties.

Palmetto Trail: One of the key bicycle and pedestrian links to the rural area is the 85 mile Palmetto Conservation Foundation’s Palmetto Trail that traverses Berkeley and Charleston Counties (alignment shown in Figure 4.7). This statewide trail system includes 425 miles of hiking and bicycling paths beside lakes, across mountain ridges, through forests, into towns big and small. Conceived in 1994, South Carolina’s Palmetto Trail is the state’s largest bicycle and pedestrian project. Eventually the trail will form a spine for a network of trails and bikeways in South Carolina.

Bike and Pedestrian Transportation Issues

There are many opportunities for incorporating walking and bicycling trails in the BCD RPA. While the Palmetto Trail and areas of Francis Marion National Forest provide wonderful rural settings for walking and biking, most rural towns in the BCD RPA contain quiet streets that invite citizens to take to two wheels for all types of trips. In addition, the climate and environs of the BCD RPA allow for year-round walking and biking on flat terrain. Despite these positive attributes, bicycling and walking are not considered viable options for most trips by many people in the rural area because of the long distance or difficulties with inter-community travel.

The most recent crash data involving a pedestrian or bicyclist were obtained from SCDOT. They represent crash data for the year 2009, and show six bike and pedestrian crashes in the rural area. These locations are shown in Figure 4.8 Bicycle and Pedestrian Accidents Location Map.

Within the rural study area, most existing roadways are not pedestrian or bicycle friendly; hence there is a considerable backlog of retrofit work. However, funding for retrofit projects is often scarce and very competitive. A good approach to addressing the backlog of retrofit work is to implement a policy that requires considering bicycle and pedestrian facilities when roads are scheduled for pavement maintenance. This may include restriping, which is a low-cost alternative that can modify an existing roadway cross-section for use by bicyclists without widening. Another alternative is the use of property contiguous to sewer, fiber optics, TV cable, phone line, or natural gas right-of-ways (ROW) for multi-use easements to help alleviate the cost associated with ROW acquisition and renegotiations.

The new federal transportation law, MAP-21, has consolidated many of the dedicated funding streams for active transportation projects under a single new program: the Transportation Alternatives Program (TAP). The TAP provides funding for programs and projects defined as transportation alternatives, including:








- On and off road pedestrian and bicycle facilities;
- Infrastructure projects for improving non-driver access to public transportation;
- Community improvement activities;
- Environmental mitigation;
- Recreational trail program projects;
- Safe routes to school projects;
- Projects for planning, designing, or constructing boulevards and other roadways.

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BCDCOG 2035 Rural Long Range Transportation Plan

Figure 4.8
*Bicycle and Pedestrian Accidents
Location Map*

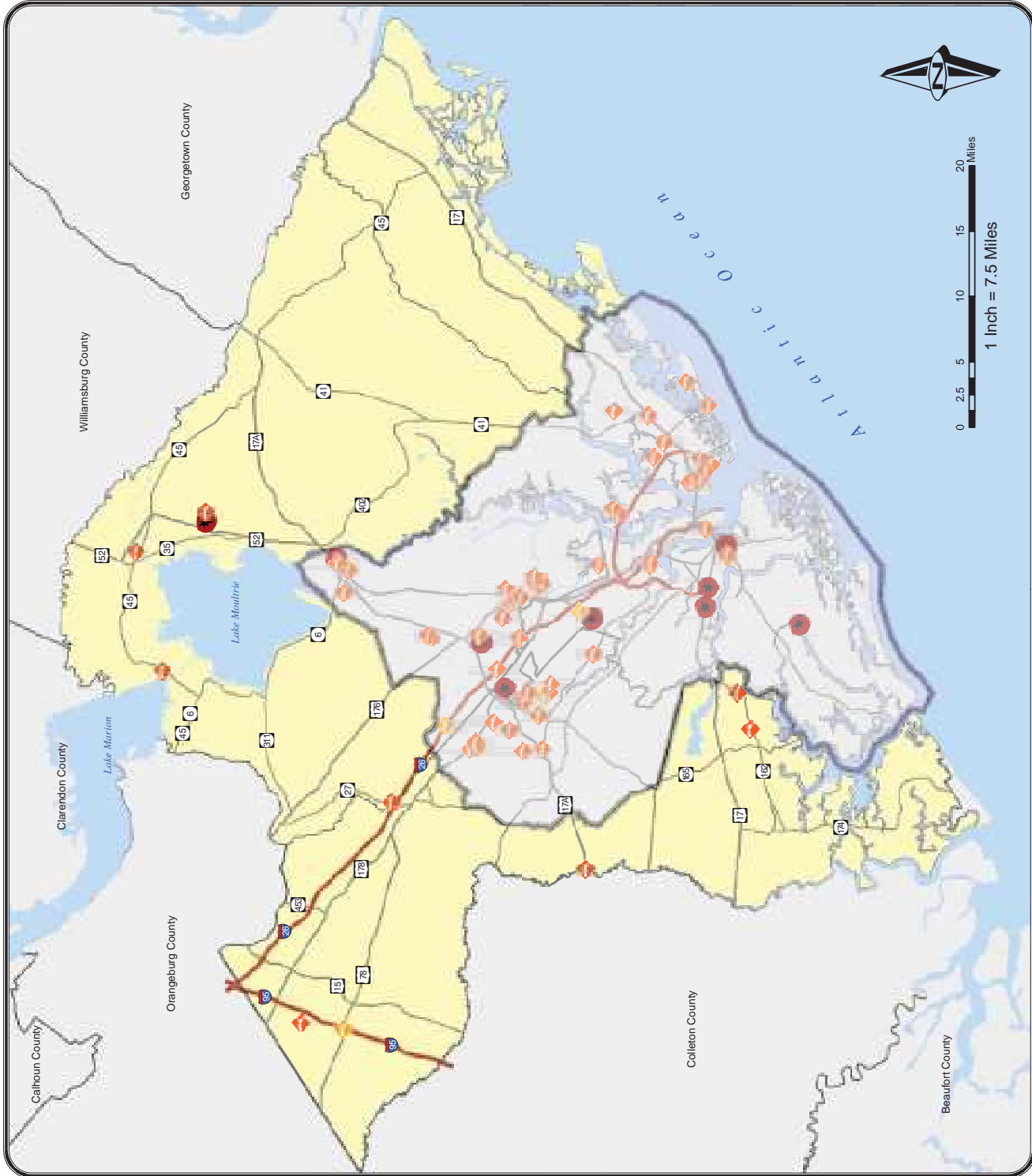
2009 BCD Region Bike/Ped Accidents

-  Accident Without Injuries
-  Accident With Injuries
-  Fatal Accident
-  Rural Planning Area
-  CHATS Planning Area 2012
-  County Lines
-  Water

Data Sources: BCDCOG, BCD GIS Departments, CHATS,
SC Dept of Public Safety, SCDOT
Data Path: V:\Planning Services\RURAL_Transportation\Rural
LRTP\2035 Rural LRTP Update\Maps and Data\GIS\Map\Bike Ped Map



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CHAPTER 5: GOALS, OBJECTIVES AND STRATEGIES

5.1 Overview

Introduction

In order to comprehensively address transportation needs in the BCD RPA, a structured approach to identifying needs and providing tools to address those needs is required. This effort began with the adoption of a Vision Statement for the plan, and through the specific process documented in this chapter, resulted in a quantified list of strategies that serve as the implementation tools recommended to fulfill that “vision”.

From Vision Statement to Strategies

Among the tasks asked of the rural transportation committee at the first 2035 RL RTP committee meeting was to formulate and adopt a “Vision Statement”. The Vision Statement identifies what the committee would like to achieve or accomplish as part of the 2035 BCDCOG RL RTP planning process. Committee members voted to approve the following *Vision Statement*:

“The vision is a focus on enhancing and maintaining the quality of life and economic vitality of the rural Berkeley-Charleston-Dorchester region, and accomplishing this by ensuring accessibility and mobility for people and goods through providing an adequate, safe, and balanced transportation system.”

A second task of the committee was to agree upon a list of general goals that identify desired outcomes in pursuit of the Vision Statement. The committee members agreed to adopt the following List of General Goals:

- 1) Develop a compatible plan: This general goal is met through the planning process, meeting with transportation officials and reviewing existing plans, and therefore there are no objectives and strategies developed for this General Goal.
- 2) Improve roadway safety;
- 3) Recognize mobility needs;
- 4) Provide convenient and efficient connections (including bike lanes and trails);
- 5) Enhance efficiency of existing system;
- 6) Support mixed-use development;
- 7) Promote a pedestrian-friendly environment;
- 8) Provide and plan for future transit service expansion;
- 9) Protect and reserve rights-of-way;
- 10) Build consensus and locate funding sources; and
- 11) Enhance “quality of life”

In order to address these general goals in a concise manner, as well as to take into consideration as many of the *eight planning factors* transportation agencies are asked to consider as part of their long range transportation planning process (see Chapter 1), the general goals were compared to the planning factors. As illustrated in Table 5.1, this exercise resulted in the identification of five *Primary Goals*:

Primary Goals of the 2035 BCDCOG RL RTP

- 1) Accessibility and Mobility
- 2) Economic Vitality
- 3) Protect the Environment
- 4) Maintain the Existing Transportation Network
- 5) Enhance Transportation Safety

Table 5.1 Primary Goals Achieved by Individual General Goals

General Goal	PRIMARY GOAL				
	Accessibility & Mobility	Econ. Vitality	Protect the Environ.	Maintain Existing Net.	Enhance Safety
Improve Roadway Safety	X				X
Recognize Mobility Needs	X	X			
Provide Convenient and Efficient Connections	X				X
Enhance Efficiency of Existing System	X			X	X
Support Mixed-Use Development	X	X	X		
Promote Pedestrian Friendly Environment	X				X
Provide and Plan for Future Transit Service Expansion	X	X			
Protect and Preserve "right-of-way"	X	X	X		
Build Consensus and Locate Funding Sources		X			
Enhance "Quality of Life"		X	X		X

With five *Primary Goals* identified, the next step was to prepare *Objectives* and *Strategies* designed specifically to achieve, at least in part, each of the *Primary Goals*.

As an example, one *Objective* to attaining the *Primary Goal* of “Protect the Environment” may be to “ensure that transportation projects avoid or minimize negative impacts upon the region’s resources”. While the *Objective* is quite descriptive, and would work towards meeting the intent of the *Primary Goal*, it does not articulate a specific task that could be implemented (an implementation tool). So the final step in the process would be to identify specific *Strategies* that support the identified *Objective*. For instance, “work closely with Francis Marion National Park to identify and conserve scenic vistas and roadways in close vicinity to the park” would be one implementation tool that would serve as a *Strategy* that meets the stated *Objective*.

5.2 BCD RPA Objectives and Strategies

What follows in this section is the identification of objectives for each of the *Primary Goals*, and the identification of the *Strategies* that would serve as implementation tools for each objective.

Primary Goal - Accessibility and Mobility

Objective A Improve and expand upon the existing transportation system to better accommodate non-motorized traffic and give residents alternatives to driving.

Strategies:

- Continue to partner with SCDOT, BCD RTMA, and/or large employers in promoting transit use, including employer incentives.
- Support coordination and cooperation between smaller providers in the region to improve the overall efficiency and to help fill the gaps in transit service.
- Support BCD RTMA in their efforts to improve and expand service, and explore ways to expand transit options in unserved or underserved areas.
- RTMA and CARTA should participate in the establishment of a comprehensive transit system, as recommended in OROP and the recently completed transit consolidation study.
- Seek funding to have a part-time bicycle-pedestrian coordinator in the region for three years.
- Allocate Federal Transportation Alternative funds to construct facilities identified in a Pedestrian and Bicycle Plan.
- Partner with county school districts to establish Safe Routes to School policies that encourage coordination with local and state entities to provide adequate pedestrian and bicycle facilities, linking residential areas and school campuses and encourage students to walk or bike to school.
- Ensure planning and project selection processes adequately consider rural accessibility and the unique mobility needs of specific groups.

Objective B Encourage land development and travel patterns that support automobiles, transit, and non-motorized travel.

Strategies:

- Encourage street connectivity, transit supportive development, and bike and pedestrian accessibility.
- Work with Counties to incorporate policies into their comprehensive plans to improve transportation efficiency, increase mobility, and support alternative modes of transportation.
- Encourage local governments to update land development regulations to support bicycle and pedestrian connectivity and the efficient use of the transportation network.
- Provide connectivity between important activity centers within each jurisdiction and within the region.
- Partner with SCDHEC, member governments, and health providers to promote pedestrian and bicycle transportation as a means of obtaining physical activity, improving personal health, and enhancing area quality of life.

Objective C Encourage municipalities to participate in annual SCDOT Transportation Alternatives Program (TAP) funding process.

Strategies:

- Continue circulating information on the benefits of the TA Program through rural transportation committee and member governments.
- Partner with SCDOT in sponsoring annual introductory workshops on the SCDOT Transportation Alternatives Program.

Primary Goal - Economic Vitality

Objective A Ensure minimal traffic congestion along key highway/roadway corridors to large employment centers.

Strategies:

- Create partnerships with large employment centers and BCD RTMA to create transit and/or ridesharing opportunities to large employers (similar to current partnership with Santee Cooper).
- Work with local governments and business to develop dedicated funding for public transit.
- Work with partners to create a project development and permitting process that will streamline implementation of SCDOT investments associated with state- identified economic development opportunities.

Objective B Provide a regional transportation system and alternatives and solutions supporting efficient movement of citizens and freight and economic development growth.

Strategies:

- Encourage and support greater alignment between local economic development stakeholders and regional transportation organizations.
- Continue support of organizations and initiatives seeking regional alternative transportation modes.
- Collaborate with counties on planning and funding sustainable roadway networks.
- Collaborate with local governments and businesses to develop dedicated funding for public transit.
- Encourage rail improvements that will enhance connectivity and reliability of freight movement to global markets.

Primary Goal - Protect the Environment

Objective A Maintain and improve air and water quality in the BCD Region.

Strategies:

- Continue to encourage stakeholders & officials to participate in the BCDCOG Air Quality Coalition.
- Continue to support local and regional air quality initiatives.
- Encourage local governments to adopt action strategies for conserving energy and reducing air pollution.

Objective B Preserve and Protect Open Space, Wildlife & Habitat in the BCD Region.

Strategies:

- Encourage regional consultation and coordination with environmental organizations, state agencies and local governments in order to mitigate the environmental impacts of transportation projects, identify potential areas for conservation, and ensure compliance with ongoing conservation initiatives and local land use plans.
- Continue to work with SCDOT to coordinate and consult with relevant environmental organizations on the compatibility of transportation plans with regional conservation goals.

Objective C Ensure that transportation projects avoid or minimize negative impacts upon the region’s resources.

Strategies:

- Minimize the number and size of transportation projects’ impact to historic features (structures and landmarks) and districts.
- Minimize the impact of transportation projects on cultural resources, such as churches, gathering areas, scenic corridors, etc.
- Work closely with Francis Marion National Park to identify and conserve scenic vistas and roadways in, and adjacent to, the park.

Primary Goal - Maintain the Existing Transportation Network

Objective A Collaborate with SCDOT to improve the condition of roadways in the rural areas.

Strategies:

- Identify opportunities for constructing intersection improvements, shoulder widening, signal timings, and resurfacing.
- Work with Berkeley, Charleston, and Dorchester Counties to develop maintenance strategies for county roads.
- Encourage SCDOT to maintain or exceed the National Bridge Inspection Standards in the BCD RPA.
- Encourage availability of both rail and truck modes of travel to major freight hubs (for example: ports, airports and intermodal facilities).
- Coordinate with the SC Public Railways to consider road improvements necessary to support the efficient movement of freight between the Inland Port and the Port of Charleston.
- Ensure broad- based public participation is incorporated into all planning and project development processes.

Primary Goal - Enhance Transportation Safety

Objective A Collaborate with SCDOT to improve roadway safety in the rural areas of Berkeley, Charleston, and Dorchester Counties.

Strategies:

- Encourage design, designation, and signing of bicycle and pedestrian facilities in the rural study area to conform to current standards and guidelines developed at the national level.
- Provide a minimum level of safe accommodation for bicyclists and pedestrians on all new and improved non-controlled access highways in the study area.

- Identify and install advance guide/warning signs and street name signs.
- Identify and install lighting in areas that lack appropriate lighting levels along major routes and corridors.
- Add five-foot paved shoulders along major roadways.
- Identify and install guardrails near hazardous locations.
- Install high intensity sheeting on all signs to increase sign visibility.

Objective B Identify hazardous corridors and intersections in the rural areas of Berkeley, Charleston, and Dorchester Counties.

Strategies:

- Coordinate with SCDOT and Law Enforcement Officials to stay informed and up to date concerning crash data.
- Work with SCDOT and law enforcement officials to stay informed of bike and pedestrian accident data.
- Create a plan to improve bicycle route signage and directional signage to show connections between the routes.
- Encourage the removal of physical barriers and the provision of facilities for persons with physical disabilities.
- Identify schools eligible for Safe Routes to School funding to promote safe mobility of parents and children to school.
- Encourage any improvements to area transit services to include safe and convenient access for bicyclists and pedestrians.

Objective C Increase awareness of bicycle and pedestrian safety in the rural areas of Berkeley, Charleston, and Dorchester Counties.

Strategies:

- Increase bicycle and pedestrian safety through public awareness and partnerships with the county school districts, local governments, Charleston County Parks & Recreation, SCDOT, and SC Department of Health & Environmental Control.
- Encourage local schools, civic groups, and family activity centers to become more involved and organize a local bicycle safety program.
- Provide programs that will better acquaint both motor vehicle and bicycle operators with their rights and responsibilities when operating on the highway system.
- Support employer programs that promote bicycling and walking as modes of commuting, including relevant safety information.

Federal requirements under MAP-21 and FAST Act require statewide and metropolitan planning processes to incorporate a more comprehensive performance-based approach to decision making. Performance-based planning and programming (PBPP) is a system-level, data-driven process to identify strategies and investments that are aimed at advancing or achieving the key goals and objectives identified through the planning process such as the goals and objectives identified in this section of the RL RTP.

The BCDCOG is currently working through developing its PBPP process and integrating it throughout the decision-making process and within the update of the area's Rural Long-Range Transportation Plan. Appendix C serves as a bridge as the BCDCOG transition from the traditional planning process to a more strategic PBPP. Appendix C provides a summary of the federally required performance measures and targets established by the State, at minimum, as necessary in planning for, monitoring and evaluating the region's transportation system.

CHAPTER 6: PROPOSED PROJECT SCORING AND RANKING

The process of estimating the project cost, and scoring and ranking the proposed projects, culminates with a prioritized list of projects. This chapter describes the process used to identify proposed projects, calculate preliminary cost estimates for the proposed projects, and ultimately score and rank the proposed projects. In Chapter 7, this prioritized list of projects is compared to projected revenue to create a Fiscally Constrained Transportation Program for the 2035 BCDCOG RL RTP.

6.1 Identifying Proposed Projects

A number of sources provided input on transportation needs that ultimately resulted into a preliminary list of proposed projects for the 2035 BCDCOG RL RTP. In addition to input received from the BCDCOG Rural Transportation Committee, BCD Staff purposefully sought out input from transportation professionals as well as the general public. And one could argue that the general public- those who utilize the transportation system day in and day out, are indeed transportation professionals themselves.

Jurisdictional Meetings

For the most part, meetings with transportation professionals took place at the county level. These were meetings set up specifically to bring to light county transportation needs and potential actions required to address those needs. Several proposed transportation projects that were ultimately scored and ranked were received as a result of input from all three county's engineering and planning departments. In addition to county-level meetings, BCD Staff consulted with SCDOT on several occasions and received direct guidance from the SCDOT Planning Department. There was also informal input from BCD RPA municipalities' planning staff that took place at the scheduled public meetings.

Public Meetings

The five public meetings held as part of the public participation component of the planning process proved quite productive. As mentioned in Chapter 2, attendance at these meetings could certainly have been better; however, those that were able to attend provided valuable input. For example, at the Berkeley County public meeting three different attendees showing up at the "open house" style meeting at different times all voiced their concern about the same well-utilized road being in definite need of attention.

While both Charleston County public meetings proved to have the highest attendance, all of the meetings gleaned valuable input that ultimately led to the identification of proposed projects that have been scored and ranked. Some examples of public comments from the meetings include concern about narrow roads requiring negotiation by school bus drivers, intersections that have become so congested they warrant left turn lanes, and long stretches of corridors in need of resurfacing.

Public Survey

As described in Chapter 2, the RL RTP Public Survey received 65 responses. Appendix A contains a sample of the survey, as well as a final report of results. The last question on the survey provided an opportunity for respondents to identify any areas in the BCD RPA they felt could be improved upon. Specifically, the question was posed as follows;

Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

The last four pages of Appendix A show the 37 responses to this question. Several of these responses correlate with concerns voiced at the public meetings and/or during jurisdictional meetings, while other responses identified concerns not yet considered for the proposed project list. Similar to the public meeting input, several of the identified transportation needs from the public survey resulted in proposed projects that were scored and ranked.

BCDCOG Rural Transportation Committee

At the second rural transportation committee meeting, a proposed project scoring criteria worksheet and a 2035 RLTP Proposed Project List were presented to the committee members. The committee members reviewed and approved the scoring criteria to serve as the methodology used to score and rank proposed projects. The committee also reviewed the proposed project list, provided comments, and asked for clarifications on several proposed projects. While not asked to approve the list as a committee, they did request the opportunity to add additional projects to the list. BCD Staff set aside an additional 3 weeks to allow the committee members the opportunity to modify the proposed project list. After the three week extension expired, the modified list was forwarded to individual counties and SCDOT for review and comment prior to preparing preliminary project cost estimates.

6.2 Preliminary Project Cost Estimates

Preliminary project cost estimates were calculated for all projects included on the preliminary proposed project list. There are many factors taken into consideration as part of the process used to calculate project costs. Keeping in mind that the calculated project costs only serve as a preliminary estimate of the true cost to construct the proposed projects, the following process was used to calculate preliminary project costs;

- The Raw Capital Cost for Road Construction*
- Maintenance Costs
- Construction Engineering Inspection (CEI) Costs (calculated as 15% of construction cost)
- Estimated right-of-way costs
- Estimated Bridge Construction Costs
- Capital costs and annual maintenance costs were calculated in 2012, 2020 and 2035 Dollars

*calculated for each project using the Florida Department of Transportation District 3 Preliminary Transportation Cost Estimates by Section Table since an equivalent South Carolina cost estimates by section table was not available. This table provides per mile costs for a wide selection of roadway, bicycle and sidewalk cross sections, as well as costs per location/intersection for a wide selection of roadway traffic signals.

The resulting preliminary project cost estimate was calculated as the Total Capital and 20 year Maintenance Cost. For comparison purposes, the non-intersection proposed projects were also calculated as the Total Capital and 20 Year Maintenance Cost Per Mile.

6.3 Proposed Project Scoring Process

With only minor variations, the 2035 BCDCOG RL RTP Project Ranking Methodology is based upon SCDOT Act 114 of 2007, which established changes to the South Carolina Code of Laws, adding Sections 57-1-370 and 57-1-460 requiring the SCDOT to promulgate new regulations describing its project selection process. SCDOT released Engineering Directive Number 60 on May 17, 2010, detailing the COG and MPO project ranking process. The directive included commission-approved criteria with weightings recommended to be used by MPOs and COGs for road widening, functional intersection, and new-location roadway improvement projects.

As per SCDOT Offices of Planning and Environmental Management recommendations, BCD Staff has adopted ACT 114 ranking methodology with only minor variations. These minor variations include adding an additional scoring criterion (Emergency Evacuation Route), and making some modifications to the weighting of some of the scoring criteria. The complete 2035 BCDCOG RL RTP Project Ranking Methodology is included in Appendix B.

SCDOT also recommended that proposed projects be divided into three distinct categories; widening projects, new location projects, and intersection projects. As explained by the SCDOT Offices of Planning and Environmental Management, this separation by project type allows for all projects to be scored and ranked against only projects of the same type; i.e. widening projects scored and ranked against other widening projects. For the purposes of this RL RTP, projects were separated by project type as recommended by SCDOT, and resurfacing projects in excess of five miles in length were also included in the widening category. The rationale for including the resurfacing projects is that they would represent major road projects, and in many cases even though additional lanes and capacity were not included in the improvements, the addition of 5 foot shoulders along each road margin was included.

Prior to scoring and ranking the proposed projects, several projects were removed from the list. The proposed projects that represented only the addition of bicycle lanes were removed, as well as the resurfacing project along SC 61 with termini at the CHATS Planning Area and the Colleton county line. This left a total of 24 projects that were scored and ranked by project type. A map locating the 24 projects is presented in Figure 6.1. Figures 6.2 and 6.3 represent Project Scoring Pages 1 and 2, and include the project descriptions, cost estimates, scores and rankings. Five additional maps aided in project scoring. Each of these maps provides a correlation between the map subject matter and the 24 proposed projects;

Figure 6.4 Vehicle Accident Location Map

Figure 6.5 Employment Centers and Industrial Sites Location Map













Figure 6.6 Environmental Justice Map

Figure 6.7 Environmental Features Location Map

Figure 6.8 Cultural Features Location Map

BCDCOG 2035 Rural Long Range Transportation Plan

Figure 6.1
Proposed Project Locations Map

-  Project IDs
-  New Alignment Projects
-  Widening and Resurfacing Projects
-  Intersection Projects
-  CHATS Planning Area 2012
-  Municipalities
-  Interstate
-  US Highway
-  South Carolina Hwy
-  Water
-  Rural Planning Area
-  County Lines

Data Source: BCDCOG, BCD GIS Departments, CHATS,
Data Path: \\Planning Services\RURAL_Transportation\Rural
URTP2035 Rural URTP Updates\Maps and Data\GIS\Projects Map.mxd



Disclaimer: This map is a graphic representation of data obtained from various sources. All efforts have been made to warrant the accuracy of this map. However, the BCD Council of Governments disclaims all responsibility and liability for the use of this map.

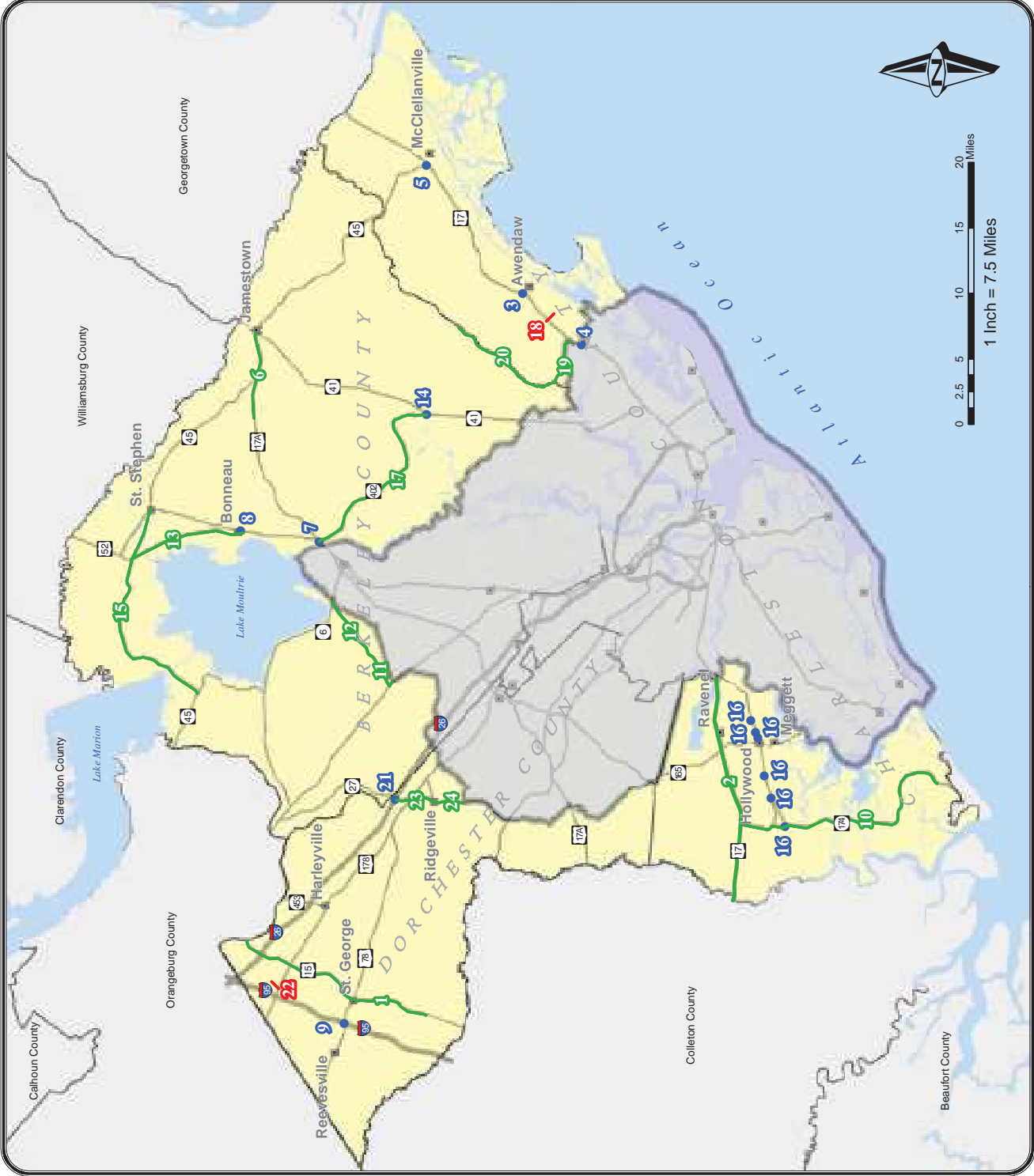


FIGURE 6.2 – PROJECT SCORING TABLE 1

BCDCOG 2035 RLRTP UPDATE - PROPOSED PROJECT SCORING TOTALS																		
FINAL SCORING FOR ROAD WIDENING / RESURFACING PROJECTS																		
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TRAFFIC VOLUME & CONGESTION (25 PTS MAX.)	PUBLIC SAFETY (15 PTS MAX.)	PAVEMENT QUALITY INDEX (10 PTS MAX.)	TRUCK TRAFFIC (10 PTS MAX.)	ECONOMIC DEVELOPMENT (10 PTS MAX.)	ENVIRONMENTAL IMPACT (10 PTS MAX.)	FINANCIAL VIABILITY (10 PTS MAX.)	EMERGENCY EVACUATION ROUTE (10 PTS MAX.)	TOTAL SCORE FOR ROAD WIDENING / RESURFACING	RANKING	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
23	23	SC 27	I-26 to S-18-19 (S. Main Street)	Dorchester	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	5	9.75	7	8	7.5	9	9	5	60.25	1	\$1,698,257	\$1,698,257
11	11	US 176	S-6-46/Black Tom Road/CHATS Boundary to S-6-36	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	5	9	1	6.7	10	7	9	10	57.7	2	\$212,282	\$1,131,162
24	24	SC 27	S-18-19 (S. Main Street) to CHATS Boundary	Dorchester	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	9	10	8.7	7.5	7.5	9	5	56.7	3	\$1,220,623	\$2,918,880
1	1	US 15	0.4 miles south of S-18-19/Wine Road to 1.5 miles northeast of I-26 (Orangeburg County Line)	Dorchester	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	9	6	10	5	8.5	9	5	52.5	4	\$8,491,287	\$11,622,449
13	13	SC 35	SC-45 to S-8-42 (Black Oak Rd)	Berkeley	Initial Paving / Resurfacing - paving (two-lane road) / resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	15	5	5.3	5	8	9	5	52.3	5	\$4,617,137	\$16,239,587
15	15	SC 46	SC 6 to US 52	Berkeley	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	9	7	10	5	6.5	9	5	51.5	6	\$9,658,839	\$25,898,426
6	6	US 17A	S-8-134 (Beaver Dam Rd) to SC 41	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (4-line roadway) 5' paved shoulders, 1 and rt turn lanes	0	6	10	8.7	2.5	7.5	6	10	50.7	7	\$7,803,863	\$33,702,289
12	12	S-8-36	US 176 to SC 6 (W. Main Street)	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (4-line roadway) 5' paved shoulders, undivided (includes milling and resurfacing of existing pavement) to increase standards, divided 40' median, lt. turn and light turn lanes	0	15	5	6.7	10	4	0	5	45.7	8	\$34,908,309	\$68,610,598
17	17	SC 402	US 17A to SC 41	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	6	5	6.7	2.5	6	9	10	45.2	9	\$8,279,005	\$76,889,603
10	10	SC 174	Along corridor	Charleston	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	6	6	4.7	2.5	5	9	10	43.2	10	\$14,410,167	\$88,299,770
2	2	US 17	0.25 miles west of SC 102 (CHATS boundary) to 0.4 miles east of S-16-30/Hope Plantation Lane (Calhoun County Line/Eldisto River)	Charleston	Resurfacing - resurfacing with shoulders	Milling and resurfacing (4-line roadway) 5' paved shoulders, divided 40' median, lt and rt turn lanes	0	3	0	10	5	7.5	7	10	42.5	11	\$21,046,783	\$109,346,554
20	20	S-10-98	S-20-98 (Halfway Creek Road) to S-210-103-2 (Steel Road)	Berkeley/Charleston	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	3	6	5.3	0	7.5	9	0	30.8	12	\$4,033,361	\$113,379,915
19	19	S-10-98	US 17 to S-10-98 (Halfway Creek Road)	Charleston	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-line roadway) 5' paved shoulders, undivided	0	3	5	5.3	0	7.5	9	0	29.8	13	\$2,918,880	\$116,298,795
* Total project cost (2012 dollars) includes capital cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.																		

BCDCOG 2035 RLRTP UPDATE - PROPOSED PROJECT SCORING TOTALS

FINAL SCORING FOR NEW LOCATION PROJECTS															
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TRAFFIC VOLUME & CONGESTION (35 PTS MAX.)	ECONOMIC DEVELOPMENT (20 PTS MAX.)	FINANCIAL VIABILITY (20 PTS MAX.)	ENVIRONMENTAL IMPACT (15 PTS MAX.)	EMERGENCY EVACUATION ROUTE (10 PTS MAX.)	TOTAL SCORE FOR NEW LOCATIONS	RANKING	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
18	18	S-10-1170	Extension of S-10-1170 (Bulls Island Rd) from S-10-584 to US 17	Charleston	New Location - Extending S-10-1170 (Bulls Island Rd) from S-10-584 (Seewee Rd) to US 17	New construction - 2 line roadway, 5' paved shoulders, undivided	35	0	20	9	5	69	1	\$2,303,851	\$2,303,851
22	22	S-18-47	Extension/realignment of S-18-47 (Quail Run Road) from 0.6 miles south of S-18-11 (Duncan Chapel Road) to S-18-176 (Ipsarow Road) at intersection	Dorchester	New Location - Extending/realigning S-18-47	New Construction - 2 line roadway, 5' paved shoulders, undivided	13	0	20	14.25	0	47.25	2	\$2,303,851	\$4,607,703
* Total project cost includes Capital Cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.															

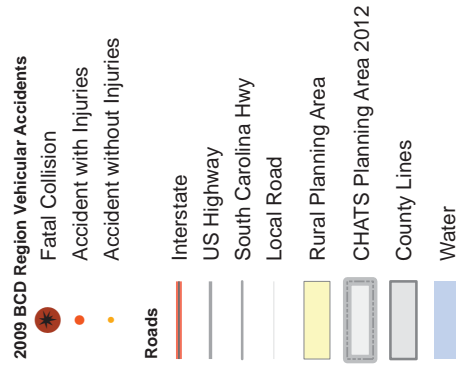
FIGURE 6.3 - PROJECT SCORING TABLE 2

BCDCOG 2035 RL RTP UPDATE - PROPOSED PROJECT SCORING TOTALS FINAL SCORING FOR INTERSECTION PROJECTS																
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TRAFFIC VOLUME (30 PTS MAX.)	PUBLIC SAFETY (25 PTS MAX.)	TRUCK TRAFFIC (20 PTS MAX.)	ECONOMIC DEVELOPMENT (10 PTS MAX.)	EMERGENCY EVACUATION ROUTE (10 PTS MAX.)	ENVIRONMENTAL IMPACT (5 PTS MAX.)	TOTAL ESTIMATED PROJECT CAPITAL COST*	RANKING	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
9	9	US 78	Intersection with I-95	Dorchester	Intersection improvement - needs traffic signal, truck traffic concerns	a) Signals Rural (Strain Poles) 4-lane divided (west of I-95) b) Signals Rural (Strain Poles) 4-lane divided (east of I-95)	30	10	13.3	7.5	5	5	\$281,992	1	\$281,992	\$281,992
5	5	US 17	Intersection with SC 45	Charleston	Intersection improvement - full traffic light needed	Signals Rural (Strain Poles) 4-lane divided	21	10	20	2.5	10	4.5	\$140,996	2	\$140,996	\$422,987
8	8	US 52	Intersection with S-8-126 (Black Oak Rd/Magnolia St)	Berkeley	Intersection improvement - left turn issues, needs traffic light	Signals Rural (Strain Poles) 4-lane divided	29	5	13.3	2.5	10	4	\$140,996	3	\$140,996	\$563,983
7	7	US 52	Intersection with SC 402	Berkeley	Intersection improvement - add right turn lane onto SC 402	ADD 300' exclusive right turn lane (rural typical, resurface existing lanes)	19	5	17.3	7.5	10	3.5	\$216,157	4	\$216,157	\$780,140
21	21	SC 27	Intersection with I-26	Berkeley	Intersection improvement - needs traffic signal, truck traffic concerns	a) Signals Rural (Strain Poles) 4-lane divided (north of I-26 Berkeley County) b) Signals Rural (Strain Poles) 4-lane divided (south of I-26)	15	15	12	7.5	5	5	\$281,992	5	\$281,992	\$1,062,132
4	4	US 17	Intersection with Seewee Rd/Fifteen Mile Landing Rd	Charleston	Intersection improvement - a) turn lane b) traffic light	a) Seewee Rd westbound lt. turn lane onto US 17 divided b) Flashing Beacon Rural (Strain Poles) 4-lane divided	21	10	13.3	2.5	5	4	\$302,200	6	\$302,200	\$1,364,332
3	3	US 17	Intersection with S-10-432/Doar Road (south)	Charleston	Intersection improvement - turn lanes	US 17 northbound rt turn lane onto S-10-432/Doar Road and S-10-432/Doar Road westbound lt turn lane onto	21	5	13.3	2.5	5	4.5	\$463,416	7	\$463,416	\$1,827,748
14	14	SC 41	Intersection with SC 402	Berkeley	Intersection improvement - needs speed limit reduction or traffic light	Flashing Beacon Rural (Strain Poles) 4-lane divided	6	5	20	2.5	10	4.75	\$54,965	8	\$54,965	\$1,882,713
16	16	SC 162 @ Multiple Locations	Intersection with S-10-174 Intersection with S-10-164 Intersection with S-10-1774 Intersection with S-10-1839 Intersection with S-10-79 Intersection with S-10-92	Charleston	Intersection improvement - turn lanes at key intersections / school bus stop issues	ADD 300' exclusive left turn lane (rural typical, resurface existing lanes)	4	12.5	12	2.5	5	4.5	\$1,483,410	9	\$1,483,410	\$3,366,124

*Total project cost includes Capital Cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.

BCDCOG 2035 Rural Long Range Transportation Plan

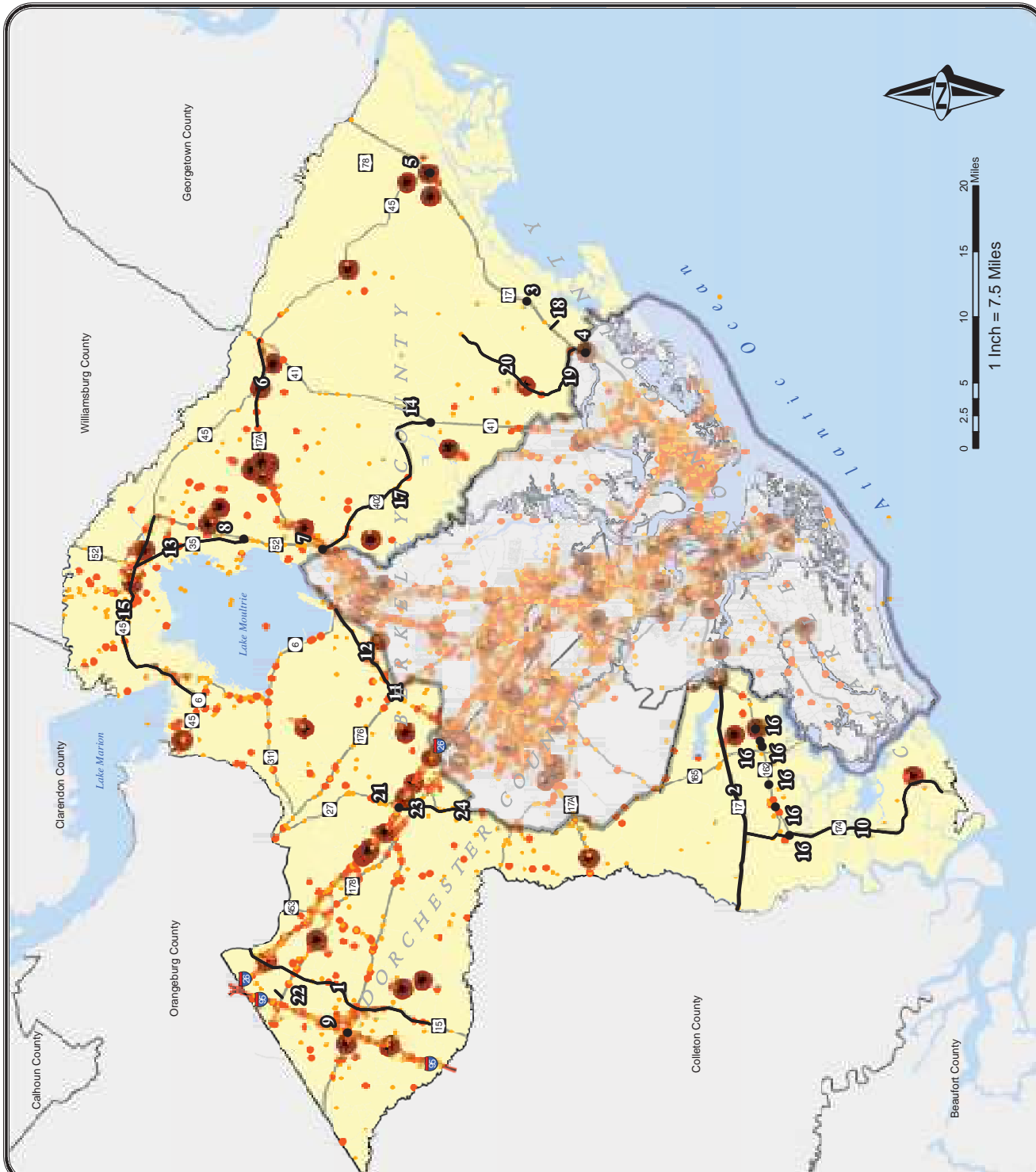
Figure 6.4
Vehicular Accident Location Map



Data Source: BCDCOG, BCD GIS Departments, CHATS, SCDOT, Department of Public Safety
 Data Path: \\Planning Services\RURAL_Transportation\Rural_LRT-2035 Rural LRT-Update\Maps and Data\GIS\MapLake Piep Map.mxd

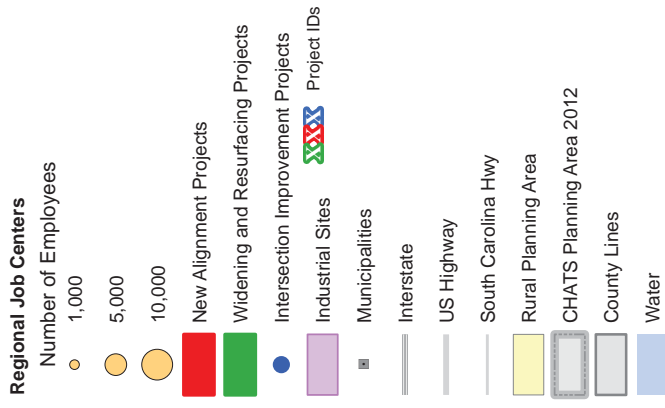


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BCDCOG 2035 Rural Long Range Transportation Plan

Figure 6.5
Employment Centers and Industrial Sites
Locations Map

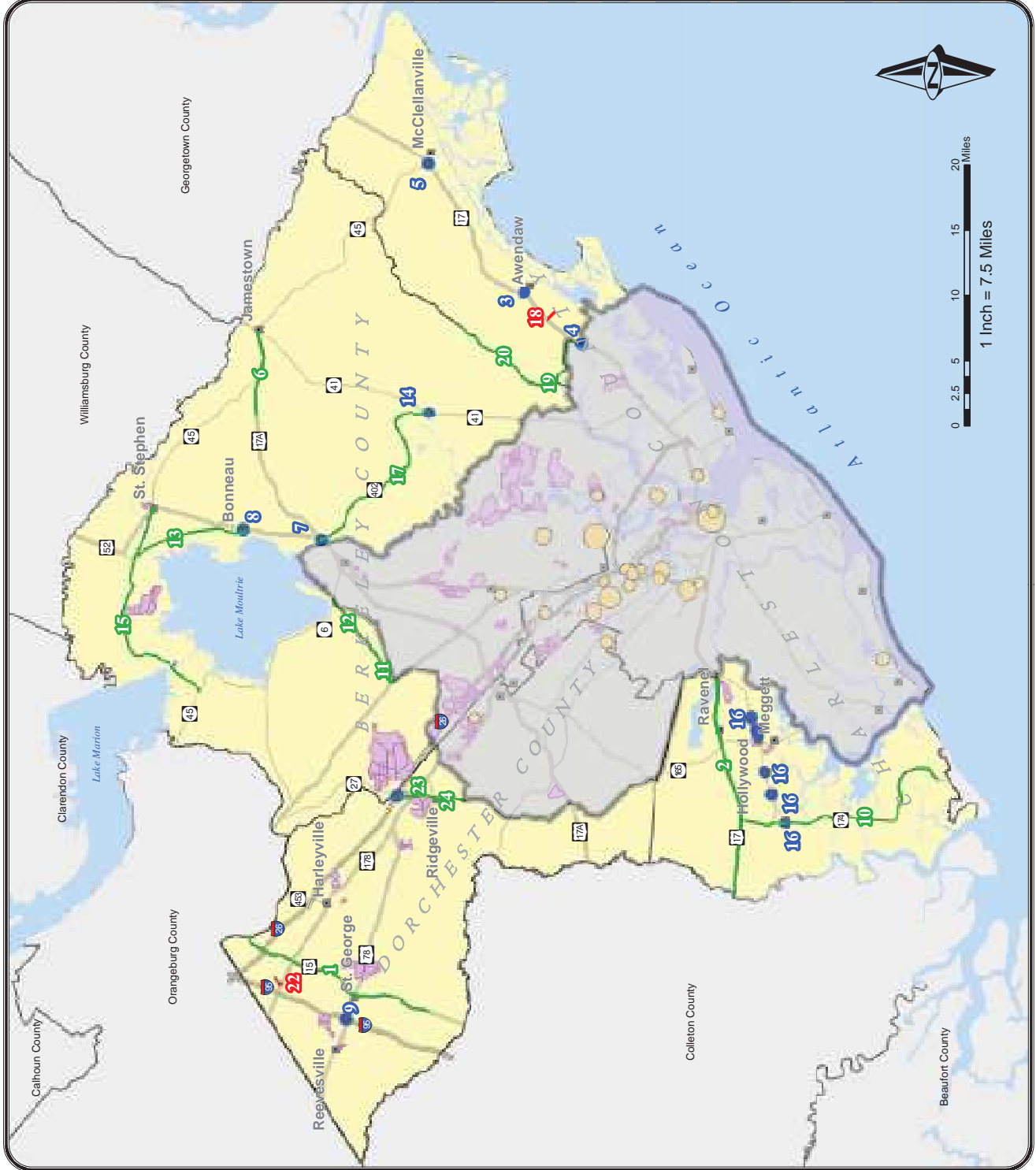


Data Source: BCDCOG, BCD GIS Departments, CHATS, BCD Economic Development Departments, INFO USA
Data Path: \\Planning Services\RURAL_Transportation\Rural URTP\2035 Rural LRRTP Update\Maps and Data\GIS\Employment and Industry.mxd



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BCDCOG 2035 Rural Long Range Transportation Plan

Figure 6.6
Environmental Justice Map

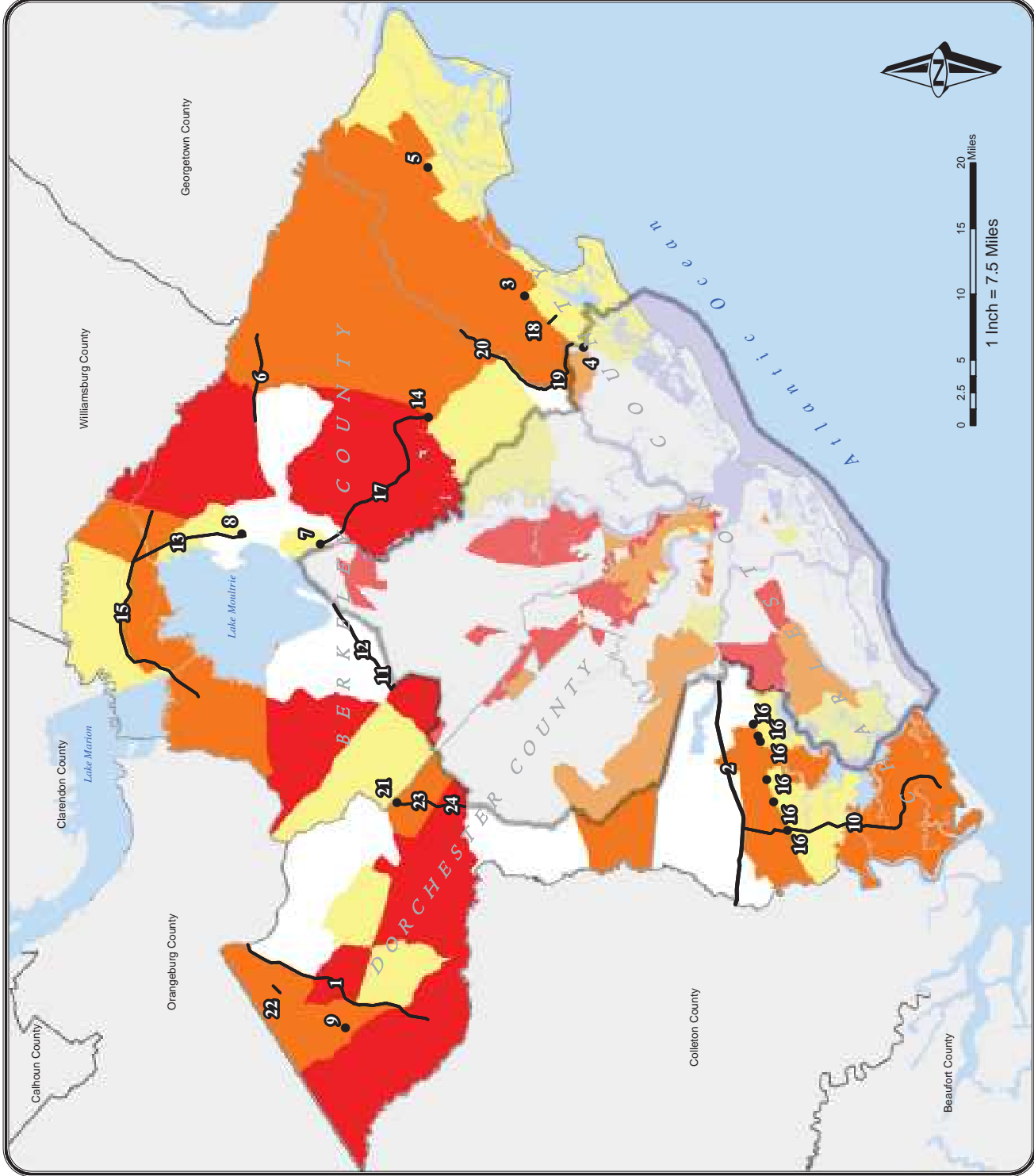
Component of the
Environmental Screening Process
for the Rural Long Range
Transportation Plan

- RLRTP Proposed Projects
- 50% + LMI
- 50% + Minority
- Both Minority and LMI 50% +
- Both Minority and LMI under 50%
- CHATS Planning Area 2012
- County Lines
- Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, 2000 US Census.
Data Path: \\Planning Services\RURAL_Transportation\Rural
LRTP-2035 Rural LRTP Update\Maps and Data\GIS\BCD_Envr_Compments_map.mxd



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BCDCOG 2035 Rural Long Range Transportation Plan

Figure 6.7
Environmental Features Location Map

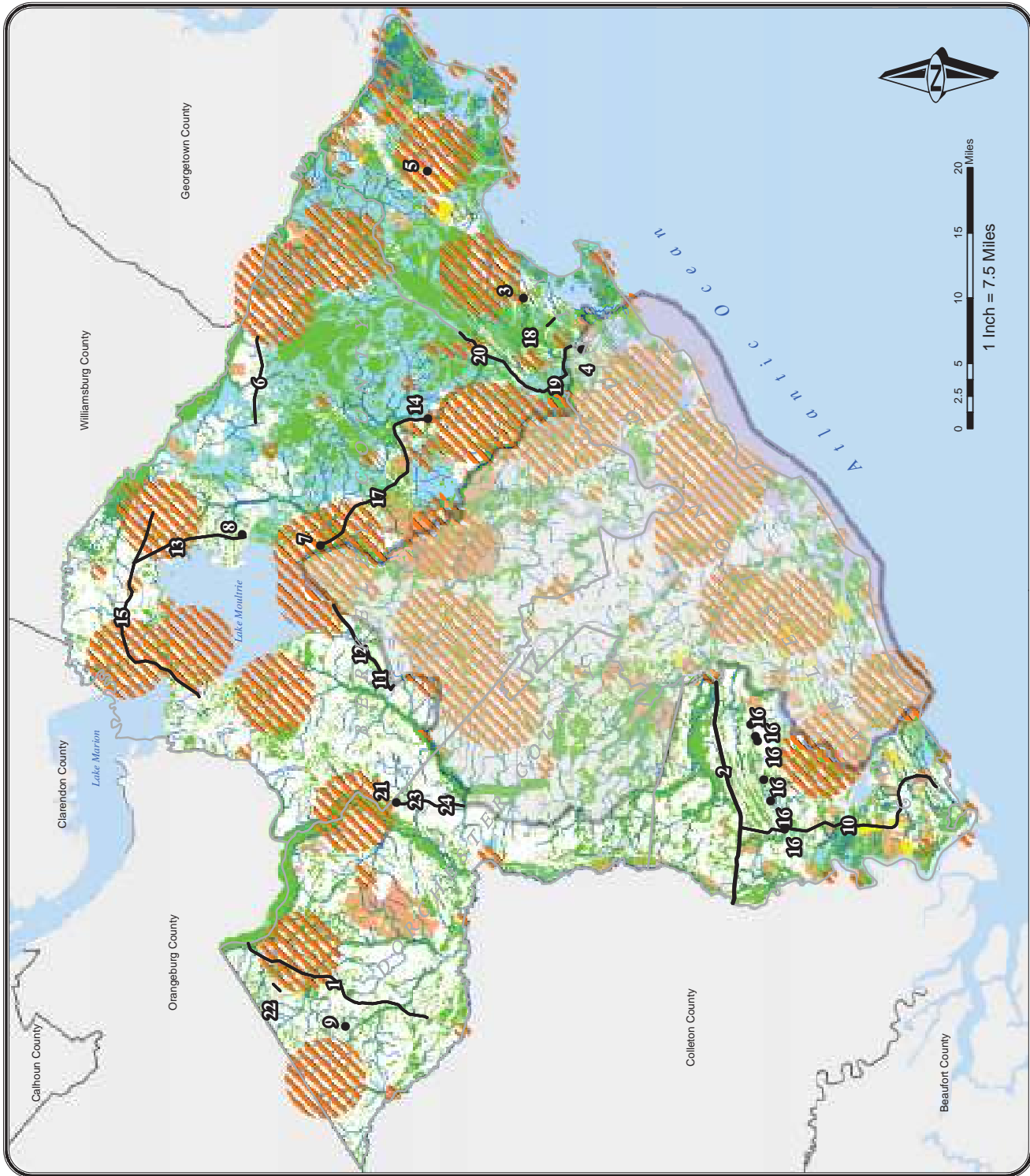
Component of the
Environmental Screening Process
for the Rural Long Range
Transportation Plan

- RL RTP Proposed Projects
- Endangered Species
- Publicly Protected Lands
- Privately Protected Lands
- Greenbelt Projects
- Wetlands
- Sensitive Streams
- BCD Counties
- County Lines
- CHATS Planning Area 2012
- Water

Data Source: BCDCOG, BCD GIS Departments, CHATS, SCIAA, DNR, USDA FS, NPS, SCPRP
Data Path: \\Planning Services\RURAL_TRANSPORTATION\BURL
LRTP\2035 Rural_LRTP_Updates\Maps and Data\GIS\BCD_Envl_Constraints_map.mxd



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BCDCOG 2035 Rural Long Range Transportation Plan

Figure 6.8

Cultural Features Location Map

Component of the
Environmental Screening Process
for the Rural Long Range
Transportation Plan

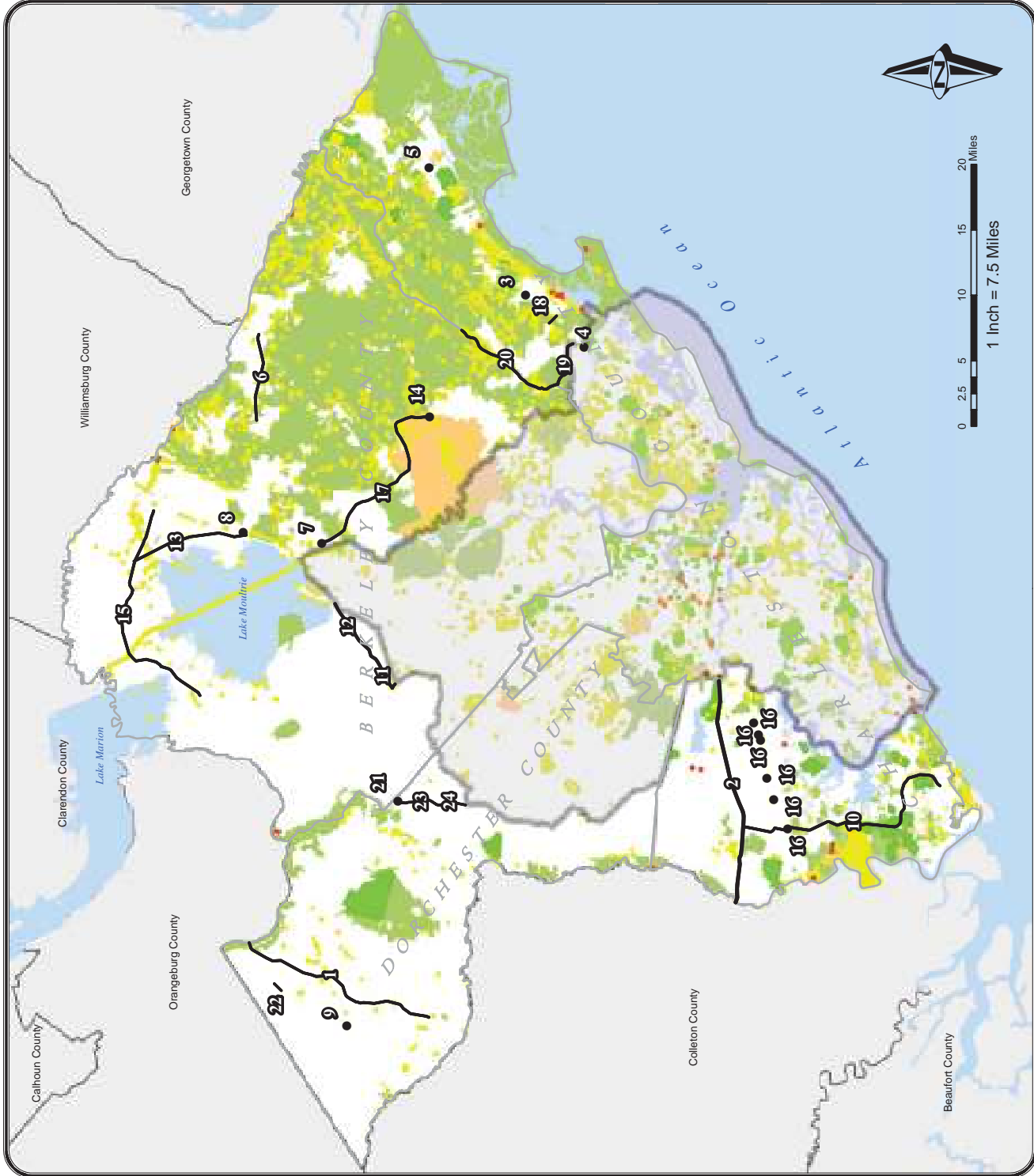
- RL RTP Proposed Projects
- Archaeological Sites
- Civil War Sites
- Public and Private Protected Lands
- Parks
- Restricted National Register Historic Places
- National Register Historic Places
- BCD Counties
- CHATS Planning Area 2012
- County Lines
- Water

Data Sources: BCDCOG, BCD GIS Datasets, CHATS, SCDAH, National Register of Historic Places, SCAPA, DNR, USDA FS, NPS, SCPRR
Data Path: V:\Planning Services\RURAL_Transportation\Rural LRTTP2035 Rural LRTTP Update\Map and Data\GIS\BCD_Envl_Constraints_map.mxd



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CHAPTER 7: THE FISCALLY CONSTRAINED TRANSPORTATION PROGRAM

This final chapter describes how the Guideshare revenue source is related to the BCDCOG RL RTP Fiscally Constrained Transportation Program. It provides a description of what Guideshare is and how anticipated Guideshare is calculated. A discussion on how projects “committed” in the Rural Transportation Improvement Program (RTIP) impact anticipated Guideshare leads into a description of what is meant by a fiscally constrained transportation program. Finally, the 2035 BCDCOG RL RTP Fiscally Constrained Transportation Program and the 2035 BCDCOG RL RTP Vision Projects are presented.

7.1 Guideshare

Guideshare is formula funding made available to each of the South Carolina Metropolitan Planning Organizations (MPOs) and Councils of Governments (COGs) for System Upgrade projects. The Guideshare dollar amount is calculated by taking the MPO’s and COG’s specific proportion of the state population and applying it to the total available funds for System Upgrade projects. Guideshare is the only revenue source that is taken into consideration in preparing the 2035 BCDCOG Fiscally Constrained Transportation Program. The most recent allocation of Guideshare funds for the BCDCOG RPA totals \$4,543,000 annually.

Relationship between the BCDCOG RL RTP and the BCDCOG RTIP

It is important to understand the different roles and relationship between the RL RTP and the RTIP. The RL RTP identifies critical transportation needs over 20 or more years and establishes a broad vision for meeting those needs. Conversely, the RTIP is a short range document that lists specific “programmed” projects that have actual committed funding (i.e. Guideshare) associated with them. Thus it is accurate to characterize the RL RTP as the “vision” document and the RTIP as the “implementation” document. Currently, the BCDCOG RTIP identifies and programs projects from Fiscal Year (FY) 2014 through FY2019.

Anticipated Guideshare Revenue

As stated, the current BCDCOG program projects through FY2019. Guideshare funding is currently “committed” to projects listed in the RTIP through part of FY2018, leaving a balance of \$521,000 for FY2018 and the entire annual allocation of \$4,543,000 for FY 2019 that has not yet been committed to any projects. Adding these uncommitted funds to Guideshare revenue anticipated for FY2020 through FY2035, results in the following total anticipated Guideshare funds through FY2035 available for planning purposes;

FY2018 Uncommitted Guideshare Funds (partial year)	\$ 521,000
FY2019 through FY 2035 Guideshare Funds (17 full years)	\$77,231,000
Total Uncommitted Guideshare Funds through FY2035	\$77,752,000

7.2 The Fiscally Constrained Transportation Plan

Fiscal constraint is a demonstration of budgeting sufficient funds (Federal, State, local, and/or private) to implement proposed transportation system improvements, as well as to operate and maintain the entire system, through the comparison of revenues and costs. With respect to the 2035 BCDCOG RL RTP Fiscally Constrained Transportation Program, this means restricting the list of proposed projects to be included in the transportation program to the amount of anticipated Guideshare revenue that is available through FY2035, or \$77,752,000.

In the previous chapter, 24 proposed projects were scored and ranked. If all 24 of those projects were to be built based upon the preliminary project cost estimates calculated for each project, the sum total would be in excess of \$124 million dollars. However, as calculated above, there is only an available anticipated Guideshare revenue total through FY2035 of \$77,752,000. In order to prepare a fiscally constrained program, the total costs for all of the projects in the program must remain within the “constraint” of \$77,752,000. To stay consistent with the scoring and ranking process, the projects included must also be the highest ranked projects in their respective project types. The following page contains the three tables that make up the 2035 BCDCOG RL RTP Fiscally Constrained Transportation Program. The transportation program tables are followed by the list of “vision projects” that represent transportation needs that cannot be addressed with anticipated Guideshare revenue before FY2035.

BDCOG 2035 RURAL LONG RANGE TRANSPORTATION PLAN FISCALLY CONSTRAINED TRANSPORTATION PROGRAM - RESURFACINGS/WIDENINGS										
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TOTAL SCORE FOR ROAD RESURFACINGS/WI DENINGS	RANKING R = Resurfacing W = Widening I = Intersections NL = New Locations	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
23	23	SC 27	I-26 to S-18-19 (S. Main Street)	Dorchester	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	60.25	1 (R)	\$1,698,257	\$1,698,257
11	11	US 176	S-8-467/Black Tom Road/CHAT'S Boundary to S-8-167/Cooper Store Road	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	57.70	2 (R)	\$212,282	\$1,910,540
24	24	SC 27	S-18-19 (S. Main Street) to CHATS Boundary	Dorchester	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	56.70	3 (R)	\$1,220,623	\$3,131,162
1	1	US 15	0.2 miles south of S-18-19/Wire Road to 1.5 miles northeast of I-26 (Orangeburg County Line)	Dorchester	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	52.50	4 (R)	\$8,491,287	\$11,622,449
13	13	SC 35	SC 45 to S-8-42 (Black Oak Rd)	Berkeley	Initial Paving / Resurfacing - paving (where gravel)/resurfacing/new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	52.30	5 (R)	\$4,617,137	\$16,239,587
15	15	SC 45	SC 6 to US 52	Berkeley	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	51.50	6 (R)	\$9,658,839	\$25,898,426
6	6	US 17A	S-8-134 (Beaver Dam Rd) to SC 41	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (4-lane roadway) 5' paved shoulders, lt and rt turn lanes	50.70	7 (R)	\$7,803,863	\$33,702,289
30	6/12/17 Amendment	US 176	SC 17 A to Centerline Road (Voivo Car Drive)	Berkeley	Road widening/new shoulders	Add 2-3 lanes to (2) with 5' paved shoulders	49.70	8 (W)	\$96,800,000	\$130,502,289
12	12	S-8-16	US 176 to SC 6 (W. Main Street)	Berkeley	Road widening/resurfacing - widening/resurfacing/new shoulders	Add 2 lanes (2 to 4) with 5' paved shoulders (includes milling and resurfacing of existing pavement) to intrastate standards, divided 40' median, lt turn and right turn lanes	45.70	9 (R)(W)	\$34,908,309	\$165,410,598
**Total project cost includes Capital Cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.										

BDCOG 2035 RURAL LONG RANGE TRANSPORTATION PLAN FISCALLY CONSTRAINED TRANSPORTATION PROGRAM - INTERSECTION IMPROVEMENTS										
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TOTAL SCORE FOR INTERSECTION IMPROVEMENTS	RANKING R = Resurfacing W = Widening I = Intersections NL = New Locations	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
9	9	US 78	Intersection with I-95	Dorchester	Intersection Improvement - needs traffic signal, truck traffic concerns	a) Signals Rural (Strain Poles) 4-lane divided (west of I-95) b) Signals Rural (Strain Poles) 4-lane divided (east of I-95)	70.80	1 (I)	\$281,992	\$281,992
5	5	US 17	Intersection with SC 45	Charleston	Intersection Improvement - full traffic light needed	Signals Rural (Strain Poles) 4-lane divided	68.00	2 (I)	\$140,996	\$422,987
8	8	US 52	Intersection with S-8-126 (Black Oak Rd/Magnolia St)	Berkeley	Intersection Improvement - left turn issues, needs traffic light	Signals Rural (Strain Poles) 4-lane divided	63.80	3 (I)	\$140,996	\$563,983
7	7	US 52	Intersection with SC 402	Berkeley	Intersection Improvement - add right turn lane onto SC 402	Add 300' exclusive right turn lane (rural typical, resurface existing lanes)	62.30	4 (I)	\$216,157	\$780,140
21	21	SC 27	Intersection with I-26	Berkeley	Intersection Improvement - needs traffic signal, truck traffic concerns	a) Signals Rural (Strain Poles) 4-lane divided (north of I-26 Berkeley County) b) Signals Rural (Strain Poles) 4-lane divided (south of I-26)	59.50	5 (I)	\$281,992	\$1,062,132
4	4	US 17	Intersection with Seewee Rd/Fifteen Mile Landing Rd	Charleston	Intersection Improvement - a) turn lane b) traffic light	a) Seewee Rd westbound lt turn lane onto US 17 b) Flashing Beacon Rural (Strain Poles) 4-lane divided	55.80	6 (I)	\$302,200	\$1,364,332
3	3	US 17	Intersection with S-10-432/Doar Road (south)	Charleston	Intersection Improvement - turn lanes	US 17 northbound rt turn lane onto S-10-432/Doar Road and S-10-432/Doar Road westbound lt turn lane onto US 17	51.30	7 (I)	\$463,416	\$1,827,748
14	14	SC 41	Intersection with SC 402	Berkeley	Intersection Improvement - needs speed limit reduction or traffic light	Flashing Beacon Rural (Strain Poles) 4-lane divided	48.25	8 (I)	\$54,965	\$1,882,713
16	16	SC 162 @ Multiple Locations	Intersection with S-10-174 Intersection with S-10-164 Intersection with S-10-1774 Intersection with S-10-1839 Intersection with S-10-79 Intersection with S-10-92	Charleston	Intersection Improvement - turn lanes at key intersections / school bus stop issues	Add 300' exclusive left turn lane (rural typical, resurface existing lanes)	40.50	9 (I)	\$1,483,410	\$3,366,124
**Total project cost includes Capital Cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.										

BCDCOG 2035 RURAL LONG RANGE TRANSPORTATION PLAN FISCALLY CONSTRAINED TRANSPORTATION PROGRAM - NEW LOCATION IMPROVEMENTS										
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TOTAL SCORE FOR NEW LOCATION PROJECTS	RANKING R = Resurfacing W = Widening I = Intersections NL = New Locations	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
18	18	S-10-1170	Extension of S-10-1170 (Bulls Island Rd) from S-10-584 to US 17	Charleston	New Location - Extending S-10-1170 (Bulls Island Rd) from S-10-584 (Sewee Rd) to US 17	New construction - 2 lane roadway, 5' paved shoulders, undivided	69.00	1 (NL)	\$2,301,851	\$2,301,851
22	22	S-18-47	Extension/realignment of S-18-47 (Quail Run Road) from 0.6 miles south of S-18-11 (Duncan Chapel Road) to S-18-176 (Sparrow Road) at intersection of US 178.	Dorchester	New Location - Extending/realigning S-18-47	New Construction - 2 lane roadway, 5' paved shoulders, undivided	47.25	2 (NL)	\$2,301,851	\$4,603,701
Total Resurfacing/Widening Projects \$165,410,598 Total Intersection Improvement Projects \$3,366,124 Total New Location Projects \$4,603,701 Total Proposed \$173,380,423										

FIGURE 7.2 - Vision Projects

BCDCOG 2035 RURAL LONG RANGE TRANSPORTATION PLAN VISION PROJECTS (NOT A PART OF THE FISCALLY CONSTRAINED TRANSPORTATION PROGRAM)										
PROJ ID	MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	DESCRIPTION (SPECIFIC)	TOTAL SCORE FOR VISION PROJECTS	RANKING	TOTAL ESTIMATED PROJECT CAPITAL COST*	RUNNING TOTAL OF ESTIMATED PROJECT CAPITAL COST
17	17	SC 402	US 17A to SC 41	Berkeley	Resurfacing - resurfacing with shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	45.2	9	\$8,279,005	\$8,279,005
10	10	SC 174	Along corridor	Charleston	Resurfacing - resurfacing/guardrails/shoulder and margin reinforcement	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	43.20	10	\$11,410,167	\$19,689,172
2	2	US 17	0.25 miles west of SC 162 (CHATS Boundary) to 0.4 miles east of S-18-30/Hope Plantation Lane (Colleton County Line/Edisto River)	Charleston	Resurfacing - resurfacing with shoulders	Milling and resurfacing (4-lane roadway) 5' paved shoulders, divided 40' median, lt and rt turn lanes	42.50	11	\$21,046,783	\$40,735,955
20	20	S-10-98	S-10-98 (Halfway Creek Road) to S-10-1032 (Steed Creek Road)	Berkeley/Charleston	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	30.80	12	\$4,033,361	\$44,769,317
19	19	S-10-98	US 17 to S-10-98 (Halfway Creek Road)	Charleston	Resurfacing - resurfacing / new shoulders	Milling and resurfacing (2-lane roadway) 5' paved shoulders, undivided	29.80	13	\$2,918,880	\$47,688,197
*Total project cost includes Capital Cost of Road Construction, CEI - Construction, Engineering & Inspection (15% of Construction Cost), and estimated ROW cost when applicable.										

BCDCOG 2035 RURAL LONG RANGE TRANSPORTATION PLAN AMENDED VISION PROJECTS (NOT A PART OF THE FISCALLY CONSTRAINED TRANSPORTATION PROGRAM)									
MAP ID	FACILITY	TERMINI	COUNTY	DESCRIPTION (GENERAL / AS REQUESTED)	TOTAL ESTIMATED PROJECT CAPITAL COST*				
Amended 6/12/2017	I-26	Sheep Island Interchange to SC 27 Interchange	Berkeley	Widening Project	\$300,939,000				

APPENDIX A

**PUBLIC
OUTREACH**

APPENDIX A1

A1 – Sample BCDCOG RL RTP Public Survey

BCDCOG Rural Long Range Transportation Plan (RLRTP)

Public Survey

Survey can also be completed online at:
<http://www.surveymonkey.com/s/NGJKQFZ>



1 Where do you live?

- | | |
|---|--|
| <input type="checkbox"/> Town of Awendaw | <input type="checkbox"/> Town of Ravenel |
| <input type="checkbox"/> Town of Bonneau | <input type="checkbox"/> Town of Reevesville |
| <input type="checkbox"/> Town of Harleyville | <input type="checkbox"/> Town of Ridgeville |
| <input type="checkbox"/> Town of Hollywood | <input type="checkbox"/> Town of St. George |
| <input type="checkbox"/> Town of Jamestown | <input type="checkbox"/> Town of St. Stephen |
| <input type="checkbox"/> Town of McClellanville | <input type="checkbox"/> Unincorporated Berkeley Co. |
| <input type="checkbox"/> Town of Meggett | <input type="checkbox"/> Unincorporated Charleston Co. |
| <input type="checkbox"/> Town of Moncks Corner* | <input type="checkbox"/> Unincorporated Dorchester Co. |

*As of the 2010 US Census, Moncks Corner is now considered an urban area.

2 What is your zip code?

3 What is your age range?

- | | |
|-----------------------------------|--------------------------------------|
| <input type="checkbox"/> Under 20 | <input type="checkbox"/> 50-59 |
| <input type="checkbox"/> 20-29 | <input type="checkbox"/> 60-69 |
| <input type="checkbox"/> 30-39 | <input type="checkbox"/> 70-79 |
| <input type="checkbox"/> 40-49 | <input type="checkbox"/> 80 and over |

4 How many people currently live in your household?

- | | |
|----------------------------|-----------------------------|
| <input type="checkbox"/> 1 | <input type="checkbox"/> 4 |
| <input type="checkbox"/> 2 | <input type="checkbox"/> 5 |
| <input type="checkbox"/> 3 | <input type="checkbox"/> 6+ |

5 What type of transportation do you use to get around in the rural areas of the Berkeley-Charleston-Dorchester region? (Select one)

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Drive Alone | <input type="checkbox"/> Motorcycle |
| <input type="checkbox"/> Vanpool | <input type="checkbox"/> Moped |
| <input type="checkbox"/> Carpool | <input type="checkbox"/> Bicycle |
| <input type="checkbox"/> Bus | <input type="checkbox"/> Walk |
| <input type="checkbox"/> Taxi | |

Other _____

6 Do you or members of your household have access to a car/ truck or other vehicle (motorcycle, moped...)?

- Yes
 No

BCDCOG Rural Long Range Transportation Plan (RLRTP)

Public Survey



7 What percentage of your household income is spent on transportation (gas, car payments, car insurance, registration, public transit, etc...)?

- 0-10%
- 11-20%
- 21-30%
- 31-40%
- More than 40%



8 Are there trips you or members of your household cannot make because of lack of transportation?

- Yes
- No

9 If yes, what kind of trips? (Select all that apply)

- Work
- Religious
- Kids' activities
- School
- Shopping (retail)
- Shopping (grocery)
- Visiting friends/family
- Medical appointments
- Social/entertainment trips
- Social service agency appointments
- Other (please specify) _____



10 How important do you think each of the following transportation priorities should be in the rural areas of the Berkeley-Charleston-Dorchester Region over the next 20 years?

A Improving General Public Transportation

- Very Important
- Important
- Somewhat Important
- Not Important

B Building new roads/highways

- Very Important
- Important
- Somewhat Important
- Not Important



BCDCOG Rural Long Range Transportation Plan (RLRTP)

Public Survey



- C** Adding capacity to existing roads/highways
- Very Important
 - Important
 - Somewhat Important
 - Not Important



- D** Maintaining existing roads/highways
- Very Important
 - Important
 - Somewhat Important
 - Not Important



- E** Expanding bicycle trails and pedestrian walkways
- Very Important
 - Important
 - Somewhat Important
 - Not Important

11 What do you think are the most effective ways to improve transportation in the rural areas of the Berkeley-Charleston-Dorchester region? (Select all that apply)

- Expanding the highway system
- Adding turn lanes at intersections
- Reducing the time to clear crashes
- Providing more biking and walking facilities
- Increasing dedicated transportation funding
- Improving the operation of existing transit/bus service
- Improving education on carpooling and ridesharing
- Expanding the Mass Transit System (i.e. bus, light rail, ferry, etc.)
- Providing additional passenger rail service between metro areas
- Improving the connection between land use and transportation planning
- Improving traveler information (i.e. electronic message signs, highway advisories...)
- Improving the operation of existing road/highway facilities (i.e. coordinating traffic signals)

Other (please specify) _____



BCDCOG Rural Long Range Transportation Plan (RLRTP)

Public Survey



12 Which of the following would you prefer your transportation dollars to be spent on in rural Berkeley-Charleston-Dorchester counties? (Select all that apply)

- Bicycle lanes and trails
 - Sidewalks/crosswalks
 - Highway construction
 - Turn lanes at intersections
 - Buses (more efficient busses, shelter, etc.)
 - Highway operations (i.e. coordinating traffic signals)
 - Traveler information (i.e. electronic message signs, 511, highway advisory, radio)
 - Alternative modes of transportation (light rail, ferries,...)
- Other (please specify) _____



13 If additional funding is needed to improve transportation in the region, which of the following potential funding sources would you support? (Select all that apply)

- Tolls
 - Increase in gas tax
 - Increase in sales tax
 - Increase in vehicle registration fees
 - Government backed low interest loans and bonds
 - Public-Private Partnerships (a government service or private business venture funded and operated through a partnership of government and one or more private sector companies)
- Other (please specify) _____



14 Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

APPENDIX A2

A2 – Final Public Survey Results

PAGE:

1. Where do you live? *As of the 2010 US Census, the Town of Moncks Corner is now considered an urban area.

	Response Percent	Response Count
Town of Hollywood	10.5%	6
Town of Awendaw	14.0%	8
Town of Bonneau	3.5%	2
Town of Harleyville	1.8%	1
Town of Jamestown	0.0%	0
Town of McClellanville	8.8%	5
Town of Meggett	7.0%	4
Town of Moncks Corner*	0.0%	0
Town of Ravenel	1.8%	1
Town of Reevesville	0.0%	0
Town of Ridgeville	0.0%	0
Town of St. George	7.0%	4
Town of St. Stephen	1.8%	1
Unincorporated Berkeley County	12.3%	7
Unincorporated Charleston County	21.1%	12
Unincorporated Dorchester County	10.5%	6
	answered question	57
	skipped question	8

2. What is your zip code?

Response

Count

[Hide replies](#)

63

1. 29449	Wed, Jun 5, 2013 2:12 PM
2. 29449	Wed, Jun 5, 2013 2:09 PM
3. 29449	Wed, Jun 5, 2013 2:08 PM
4. 29485	Fri, May 31, 2013 1:59 PM
5. 29483	Fri, May 31, 2013 1:58 PM
6. 29448	Fri, May 31, 2013 1:56 PM
7. 29477	Fri, May 31, 2013 1:55 PM
8. 29477	Fri, May 31, 2013 1:54 PM
9. 29483	Fri, May 31, 2013 1:52 PM
10. 29429	Fri, May 31, 2013 1:49 PM
11. 29464	Fri, May 31, 2013 1:48 PM
12. 29429	Fri, May 31, 2013 1:46 PM
13. 29483	Fri, May 31, 2013 1:44 PM
14. 29431	Fri, May 31, 2013 1:42 PM
15. 29449	Fri, May 31, 2013 1:41 PM
16. 29410	Fri, May 31, 2013 1:39 PM
17. 29477	Fri, May 31, 2013 1:37 PM
18. 29477	Wed, May 29, 2013 2:18 PM
19. 29483	Fri, May 24, 2013 4:56 PM
20. 29438	Wed, May 22, 2013 8:38 PM

100 responses per page

answered question

63

skipped question

2

2. What is your zip code?

21.	29483	Tue, May 14, 2013 1:27 PM
22.	29403	Tue, May 14, 2013 1:22 PM
23.	29429	Fri, May 10, 2013 11:53 AM
24.	29429	Wed, May 8, 2013 1:58 PM
25.	29405	Wed, May 8, 2013 1:46 PM
26.	29450	Wed, May 8, 2013 1:31 PM
27.	29412	Wed, May 8, 2013 11:31 AM
28.	29456	Wed, May 8, 2013 11:20 AM
29.	29464	Wed, May 8, 2013 11:20 AM
30.	29449	Wed, May 8, 2013 11:06 AM
31.	29449	Wed, May 8, 2013 9:14 AM
32.	29429	Tue, May 7, 2013 4:00 PM
33.	29458	Tue, May 7, 2013 12:43 PM
34.	29438	Tue, May 7, 2013 10:00 AM
35.	29458	Mon, May 6, 2013 10:59 AM
36.	29455	Fri, May 3, 2013 7:19 PM
37.	29487	Fri, May 3, 2013 6:40 PM
38.	29431	Fri, May 3, 2013 4:47 PM
39.	29470	Fri, May 3, 2013 2:40 PM
40.	29485	Fri, May 3, 2013 2:15 PM
41.	29455	Fri, May 3, 2013 2:08 PM
42.	29483	Fri, May 3, 2013 1:47 PM
43.	29449	Thu, May 2, 2013 3:27 PM
44.	29426	Wed, May 1, 2013 3:53 PM
45.	29449	Wed, May 1, 2013 2:10 PM
46.	29449	Wed, May 1, 2013 10:43 AM

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answered question 63

skipped question 2

2. What is your zip code?

47.	29449	Wed, May 1, 2013 10:19 AM
48.	29449	Tue, Apr 30, 2013 8:02 PM
49.	29429	Sun, Apr 28, 2013 4:56 PM
50.	29429	Fri, Apr 26, 2013 12:23 PM
51.	29429	Thu, Apr 25, 2013 7:23 PM
52.	29458	Tue, Apr 23, 2013 10:33 AM
53.	29458	Mon, Apr 22, 2013 4:00 PM
54.	29410	Sun, Apr 21, 2013 12:04 PM
55.	29466	Fri, Apr 19, 2013 7:56 PM
56.	29407	Thu, Apr 18, 2013 5:11 PM
57.	29414	Thu, Apr 18, 2013 4:29 PM
58.	29464	Thu, Apr 18, 2013 4:13 PM
59.	29414	Thu, Apr 18, 2013 4:07 PM
60.	29458	Thu, Apr 18, 2013 2:22 PM
61.	29403	Thu, Apr 18, 2013 1:31 PM
62.	29492	Thu, Apr 18, 2013 1:24 PM
63.	29466	Thu, Apr 18, 2013 1:03 PM

100 responses per page

answered question 63

skipped question 2

3. What is your age range?

Response Response

answered question 64

skipped question 1

3. What is your age range?

	Percent	Count
Under 20	0.0%	0
20-29	6.3%	4
30-39	14.1%	9
40-49	18.8%	12
50-59	25.0%	16
60-69	23.4%	15
70-79	10.9%	7
80 and over	1.6%	1
	answered question	64
	skipped question	1

4. How many people currently live in your household?

	Response Percent	Response Count
1	15.6%	10
2	56.3%	36
3	10.9%	7
4	7.8%	5
	answered question	64
	skipped question	1

4. How many people currently live in your household?

5	6.3%	4
6+	3.1%	2
answered question		64
skipped question		1

5. What type of transportation do you use to get around in the rural areas of the Berkeley-Charleston-Dorchester region? (Select one)

	Response Percent	Response Count
Drive Alone	76.2%	48
Vanpool	0.0%	0
Carpool	1.6%	1
Bus	4.8%	3
Taxi	0.0%	0
Motorcycle	1.6%	1
Moped	0.0%	0
Bicycle	15.9%	10
Walk	0.0%	0
Other (please specify) Hide replies		1
answered question		63
skipped question		2

5. What type of transportation do you use to get around in the rural areas of the Berkeley-Charleston-Dorchester region? (Select one)

1. Rely on others for transportation

Tue, May 7, 2013 10:00 AM

answered question 63

skipped question 2

6. Do you or members of your household have access to a car/truck or other vehicle (motorcycle, moped...)?

Response	Response
Percent	Count

Yes	96.9%	63
------------	--------------	-----------

No	3.1%	2
-----------	-------------	----------

answered question 65

skipped question 0

7. What percentage of your household income is spent on transportation (gas, car payments, car insurance, registration, public transit, etc...)?

Response	Response
Percent	Count

0-10%	32.3%	20
--------------	--------------	-----------

answered question 62

skipped question 3

7. What percentage of your household income is spent on transportation (gas, car payments, car insurance, registration, public transit, etc...)?

11-20%	41.9%	26
21-30%	17.7%	11
31-40%	3.2%	2
More than 40%	4.8%	3
	answered question	62
	skipped question	3

8. Are there trips you or members of your household cannot make because of lack of transportation?

	Response Percent	Response Count
Yes	14.5%	9
No	85.5%	53
	answered question	62
	skipped question	3

9. If yes, what kind of trips? (Select all that apply)

	Response	Response
	answered question	17
	skipped question	48

9. If yes, what kind of trips? (Select all that apply)

	Percent	Count
Work	52.9%	9
Religious	52.9%	9
Kids' activities	29.4%	5
School	17.6%	3
Shopping (retail)	58.8%	10
Shopping (grocery)	70.6%	12
Visiting friends/family	82.4%	14
Medical appointments	52.9%	9
Social/entertainment trips	76.5%	13
Social service agency appointments	17.6%	3
	Other (please specify)	3
	Hide replies	

- 1. Volunteering Wed, Jun 5, 2013 2:09 PM
- 2. Vacation Fri, May 31, 2013 1:56 PM
- 3. does not own a car has handicap son Fri, Apr 26, 2013 12:23 PM

answered question **17**

skipped question **48**

10. How important do you think each of the following transportation priorities should be in the rural areas of the Berkeley-Charleston-Dorchester Region over the next 20 years?

Very Important Somewhat Not Rating

10. How important do you think each of the following transportation priorities should be in the rural areas of the Berkeley-Charleston-Dorchester Region over the next 20 years?

	Important	Important	Important	Count	
Improving General Public Transportation	45.3% (29)	40.6% (26)	10.9% (7)	3.1% (2)	64
Building new roads/highways	33.3% (21)	19.0% (12)	23.8% (15)	23.8% (15)	63
Adding capacity to existing roads/highways	41.5% (27)	23.1% (15)	21.5% (14)	13.8% (9)	65
Maintaining existing roads/highways	70.8% (46)	24.6% (16)	4.6% (3)	0.0% (0)	65
Expanding bicycle trails and pedestrian walkways	56.3% (36)	29.7% (19)	9.4% (6)	4.7% (3)	64
			answered question	65	
			skipped question	0	

11. What do you think are the most effective ways to improve transportation in the rural areas of the Berkeley-Charleston-Dorchester region? (Select all that apply)

	Response Percent	Response Count
Expanding the highway system	25.4%	16
Adding turn lanes at intersections	46.0%	29
Reducing the time to clear crashes	22.2%	14
	answered question	63
	skipped question	2

11. What do you think are the most effective ways to improve transportation in the rural areas of the Berkeley-Charleston-Dorchester region? (Select all that apply)

Providing more biking and walking facilities	57.1%	36
Increasing dedicated transportation funding	42.9%	27
Improving the operation of existing transit/bus service	61.9%	39
Improving education on carpooling and ridesharing	27.0%	17
Expanding the Mass Transit System (i.e. bus, light rail, ferry, etc.)	52.4%	33
Providing additional passenger rail service between metro areas	28.6%	18
Improving the connection between land use and transportation planning	34.9%	22
Improving traveler information (i.e. electronic message signs, highway advisories...)	15.9%	10
Improving the operation of existing road/highway facilities (i.e. coordinating traffic signals)	58.7%	37
	Other (please specify) Hide replies	5

- | | |
|---|---------------------------|
| 1. Maintaining existing roads | Fri, May 31, 2013 1:37 PM |
| 2. Berms/Bike Lanes MUST be added to existing roads and ditches MUST be covered with storm drains underground. It's time for SC to get into the 21st Century. | Fri, May 24, 2013 4:56 PM |
| 3. Less stop light, more express intersections or roundabouts | Wed, May 8, 2013 9:14 AM |

answered question 63

skipped question 2

11. What do you think are the most effective ways to improve transportation in the rural areas of the Berkeley-Charleston-Dorchester region? (Select all that apply)

- | | |
|---|----------------------------|
| 4. Fix the current road that are falling apart like Wilson rod in meggett | Tue, Apr 30, 2013 8:02 PM |
| 5. at lot of the citizens do not drive need public transportation | Fri, Apr 26, 2013 12:23 PM |

answered question 63

skipped question 2

12. Which of the following would you prefer your transportation dollars to be spent on in rural Berkeley-Charleston-Dorchester counties? (Select all that apply)

	Response Percent	Response Count
Bicycle lanes and trails	61.3%	38
Sidewalks/crosswalks	40.3%	25
Highway construction	30.6%	19
Turn lanes at intersections	41.9%	26
Buses (more efficient buses, shelter, etc.)	35.5%	22
Highway operations (i.e. coordinating traffic signals)	35.5%	22
Traveler information (i.e. electronic message signs, 511, highway advisory, radio)	9.7%	6

answered question 62

skipped question 3

12. Which of the following would you prefer your transportation dollars to be spent on in rural Berkeley-Charleston-Dorchester counties? (Select all that apply)

Alternative modes of transportation (light rail, ferries,...)	27.4%	17
--	-------	----

Other (please specify)		7
Hide replies		

1. We need to provide real public transportation in rural areas. It is presently not being used effectively by the community and they are viewing it as an ineffective option. Fri, May 31, 2013 1:52 PM

2. Improve roads - Dennisridge Road Fri, May 31, 2013 1:42 PM

3. Maintenance Fri, May 31, 2013 1:37 PM

4. express intersections take down lights Wed, May 8, 2013 9:14 AM

5. repair/better maintenace of existing roads Mon, May 6, 2013 10:59 AM

6. How can you mis-spell buses in the same sentence? Wed, May 1, 2013 10:19 AM

7. fix the current roads Tue, Apr 30, 2013 8:02 PM

answered question 62

skipped question 3

13. If additional funding is needed to improve transportation in the region, which of the following potential funding sources would you support? (Select all that apply)

	Response Percent	Response Count
Tolls	21.4%	12
Increase in gas tax	53.6%	30

answered question 56

skipped question 9

13. If additional funding is needed to improve transportation in the region, which of the following potential funding sources would you support? (Select all that apply)

Increase in sales tax	28.6%	16
Increase in vehicle registration fees	25.0%	14
Government backed low interest loans and bonds	35.7%	20
Public-Private Partnerships (a government service or private business venture funded and operated through a partnership of government and one or more private sector companies)	50.0%	28
	Other (please specify) Hide replies	6

- | | |
|--|----------------------------|
| 1. Gas tax should be % per gallon and not flat rate | Wed, Jun 5, 2013 2:09 PM |
| 2. Additional explanation(s) of choice desired to make informed decisions. | Fri, May 31, 2013 1:55 PM |
| 3. Get matching funds and go after federal dollars! | Fri, May 24, 2013 4:56 PM |
| 4. tags for trailers, higher car tag fees | Wed, May 8, 2013 9:14 AM |
| 5. Get rid of DOT and use private businesses. They waste more money than anybody I know. | Wed, May 1, 2013 10:19 AM |
| 6. sales tax & gas tax will affect current drivers | Fri, Apr 26, 2013 12:23 PM |

answered question 56

skipped question 9

14. Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

Response
Count

14. Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

[Hide replies](#)

37

- | | |
|---|---------------------------|
| 1. From Hwy 17 South to get on 162 need flyover or something | Wed, Jun 5, 2013 2:12 PM |
| 2. Intersection Hwy 17 & Hwy 162
Intersection Hwy 17 & Main Road | Wed, Jun 5, 2013 2:09 PM |
| 3. Rte 7 & 162 Death Trap!! | Wed, Jun 5, 2013 2:08 PM |
| 4. Hwy 61 to Beech Hill | Fri, May 31, 2013 1:59 PM |
| 5. Hwy 61 | Fri, May 31, 2013 1:58 PM |
| 6. Traffic light & turn lanes at Hwy 78 at Orangeburg Road. | Fri, May 31, 2013 1:54 PM |
| 7. Replace 4 way lights on Orangburg Road with decisive red, yellow, and green lights. | Fri, May 31, 2013 1:52 PM |
| 8. Orangeburg Road between Dorchester Road and US Highway 17a is well traveled, but need to be widened and lane miles should be added. US Hwy 78 between Jedburg and Ridgeville needs to be resurfaced and widened. | Fri, May 31, 2013 1:44 PM |
| 9. We would like to get Dennisridge Road get paved. Its been over 10 years and nothing has been done. We need help. | Fri, May 31, 2013 1:42 PM |
| 10. 162 & 17 Intersection - traffic control
Toogoodoo Road - sidewalks
New Road - sidewalks
Hwys 162 & 165 - sidewalks | Fri, May 31, 2013 1:41 PM |
| 11. 78 between St. George and Summerville
15 within the Town of St. George
Mechanical light at 95 & 78 very very important | Fri, May 31, 2013 1:37 PM |
| 12. All of them!! The only one that is marginally decent is HWY 78. Berms, bike lanes and covered storm drains are an absolute MUST!!! Please don't bring dirty buses to Berkeley / Dorchester County. How about creating greenways and bikeways? We have so much natural | Fri, May 24, 2013 4:56 PM |

50 responses per page

answered question

37

skipped question

28

14. Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

beauty, let's please be smart about our transportation planning. Thank you!!!

13.	Main Road & US 17	Wed, May 22, 2013 8:38 PM
14.	Hwy 17 at Seewee Rd/Fifteen Mile Landing Rd-turn lanes and traffic light Hwy 17 at Doar Rd (South) turn lanes East Coast Greenway off road location in Awendaw new intersection of Hwy 17 and new road as extension of Bull's Island Rd	Fri, May 10, 2013 11:53 AM
15.	None in Awendaw	Wed, May 8, 2013 1:58 PM
16.	intersection of hwy. 41 and steed creek rd. needs speed limit reduces or stop traffic light	Wed, May 8, 2013 1:31 PM
17.	Entire Ladson Area is gridlocked everymorning and evening to include Hwy 78 from Fairgrounds to Hwy 52, Ladson Rd from 78 to Milles Rd, College Park Rd from Ladson Rd to Crowfield to include the interchanges at 26 at College park and Hwy 78. Too many cars not enought roads.	Wed, May 8, 2013 11:20 AM
18.	The junction at 17 south and Hwy 162 needs improvement. It is dangerous and needs a better onramp.	Wed, May 8, 2013 11:06 AM
19.	Main/17, Main/17, Mail/17! Nothing can be done in rural Hollywood until Main/17 is fixed!	Wed, May 8, 2013 9:14 AM
20.	Doar Rd and Hwy17, 15 Mile Landing Rd and Hwy 17 with flashing lights or traffic lights	Tue, May 7, 2013 4:00 PM
21.	Please add a traffic light at Pinckney St and US-17	Tue, May 7, 2013 12:43 PM
22.	Main Road & Savannah with fly over, The current super street is no the answer give that citizen wil not be able too turn left off of Main road during Hurriance season , Secondly response time will be impacted .	Fri, May 3, 2013 7:19 PM
23.	Intersection of Highway 17 and Main Road.	Fri, May 3, 2013 6:40 PM
24.	US Hwy 52 & Hwy 402 needs a right turn lane onto Hwy 402 at the Traffic light.	Fri, May 3, 2013 4:47 PM

50 responses per page

answered question 37

skipped question 28

14. Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

- | | |
|---|----------------------------|
| 25. Turn lanes @ key intersections on Hwy. 162; Dedicated left turn arrows w/red arrows also at US 17 & Main Rd | Fri, May 3, 2013 2:40 PM |
| 26. Hubs- why don't we use the hub concept? | Fri, May 3, 2013 2:15 PM |
| 27. Savannah Highway (Hwy 17) and Main Rd. The traffic must be grade separated - the so called "super street" is a nonstarter. | Fri, May 3, 2013 2:08 PM |
| 28. Southbound HWY 17 / Southbound HWY 162 intersection. The flashing yellow light on HWY 17 is confusing to tourists who sometimes come to a stop waiting for HWY 162 turning traffic. Tourists turning onto HWY 162 do NOT know that teh Northbound HWY 17 traffic does not have to stop. they sometimes assume they too have a flashing red light. Some basic signage would clear it all up. | Thu, May 2, 2013 3:27 PM |
| 29. Hwy. 17 and Main road | Wed, May 1, 2013 10:19 AM |
| 30. Hwy 17/162
Add turning lanes along Hwy 162 to Hollywood, SCDOT has already promised this would be done 10 years ago. Plus fix Wilson Road which is falling into the creek. | Tue, Apr 30, 2013 8:02 PM |
| 31. NA | Fri, Apr 26, 2013 12:23 PM |
| 32. add traffic signal at Pinckney St. and Hwy 17 N | Tue, Apr 23, 2013 10:33 AM |
| 33. The intersection of US 17 N., SC Hwy. 45 and S. Pinckney St. in McClellanville needs a stoplight. | Mon, Apr 22, 2013 4:00 PM |
| 34. Hwy 17 - build a shoulder past the rumblestrips for bicycles and added safety. | Sun, Apr 21, 2013 12:04 PM |
| 35. Bike lane along highway 17 and a crossing from doar road onto 17 and at Steed Creek.
Bicycle lanes on route 41, especially on the new bridge | Thu, Apr 18, 2013 5:11 PM |
| 36. Crossover from Doar to Steed Creek is very unsafe for bicyclists | Thu, Apr 18, 2013 4:29 PM |
| 37. bike lanes along hwy 17 from mount pleasant to awendaw (sewee outpost) so that people could ride their bikes to the francis marion national forest and to the awendaw | Thu, Apr 18, 2013 1:03 PM |

50 responses per page

answered question 37

skipped question 28

14. Is there any specific road/intersection locations that you feel could be improved upon? Please identify the locations and the type of improvements you feel could resolve the issue (traffic lights, turn lanes, additional lanes, sidewalks, bike lanes...)

passage of the Palmetto Trail!

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answered question **37**

skipped question **28**

APPENDIX B

2035 BCDCOG RL RTP PROJECT RANKING METHODOLOGY

2035 BCDCOG RL RTP Project Ranking Methodology

WIDENINGS/RESURFACINGS

Scoring:	Traffic Volume and Congestion	25%
	Public Safety	15%
	Pavement Quality Index	10%
	Truck Traffic	10%
	Economic Development	10%
	Environmental Impact	10%
	Financial Viability	10%
	Emergency Evacuation Route	<u>10%</u>
		100%

Criteria: Traffic Volume and Congestion
Weight: 25% of overall score (25 Points maximum)
Basis: Quantifiable based on current traffic volumes and the associated level-of-service (LOS) condition.
Methodology: Road segments to be scored based upon calculated LOS:

0 points	LOS A
5 points	LOS B
10 points	LOS C
15 points	LOS D
20points	LOS E
25 points	LOS F

The SCDOT LOS are determined using the daily volume-capacity ratio (V/C) and are based on LOS C capacities. The SCDOT V/C -LOS criteria are:

- LOS A $V/C < 0.50$
- LOS B $0.50 \leq V/C < 0.75$
- LOS C $0.75 \leq V/C < 1.00$
- LOS D $1.00 \leq V/C < 1.15$
- LOS E $1.15 \leq V/C < 1.35$
- LOS F $V/C \geq 1.35$

Where volume (V) is presented in average annual daily traffic (AADT) derived from SCDOT Traffic Flow Maps and the associated 2012 Station counts for the road section, and capacity (C) is calculated for individual

road segments utilizing equations developed using the *Highway Capacity Manual* and analysis performed by the Indiana Department of Transportation in 1997 for the *Indiana State Highway Congestion Analysis Plan* (FHWA/IN/JHRP-96/8 Opsuth and Whitford).

The general form of the equation* is:

$$SF = c * N * fw * fHV * Fp * FE * fd * FCLT * FPark * (v/c)^i$$

Where the variables are:

- SF = Maximum service flow for desired level-of-service
- C = Capacity under ideal conditions (vehicles per hour per lane)
- N = Number of lanes
- Fw = Factor due to lane and shoulder width
- fHV = Factor due to percent heavy vehicles
- Fp = Factor due to driver population
- FE = Factor due to driving environment
- Fd = Factor due to directional distribution
- FCLT = Factor for continuous left-turn lane (for undivided sections)
- FPark = Factor for on-street parking
- (v/c)ⁱ = Rate of service flow for levels-of-service A through E

*Non-quantifiable variables were discounted by quantifying with the number 1.

Criteria:	Public Safety
Weight:	15% of overall score (15 points maximum)
Basis:	Quantifiable based on collision data.
Methodology:	Road segments to be scored based upon a Safety Score provided by SCDOT Traffic Engineering:

The safety score is derived based on an adjusted accident rate calculated by the number of crashes within given location divided by the volume and multiplied by the number of years. The adjusted accident rate incorporates an ADT factor to give greater consideration to higher volume roads.

Safety scores range from 0 to 5 points. The higher the safety score, the higher the concern for safety. Therefore, safety scores will be multiplied by three; so that projects receiving the highest safety score (highest safety concern) will score the maximum 15 points.

Criteria: **Pavement Quality Index (PQI)**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on SCDOT Road Data Services most current pavement evaluation assessment.
Methodology: Road segments to be scored based on PQI provided by SCDOT Road Data Services:

A total of 10 points will be awarded for the road segment with lowest PQI Score. Remaining segments receive points proportional to their PQI Score.

Grade for pavement condition is called a Pavement Quality Index (PQI). PQI is made up of two components – one that measures rutting and roughness and one that measures pavement distress (cracking, raveling). PQI range is from 0.0 to 5.0 where 0.0 – 2.6 is “poor” condition, 2.7 – 3.3 is “fair” condition, and 3.4 – 5.0 is “good” condition.

Reconstruction range is 0.0 to 2.4 and usually involves the complete replacement of the pavement structure.

Rehabilitation range is 2.4 to 3.2 and requires structural enhancements to improve a pavement’s load carrying capability – i.e.; adding additional layers of asphalt.

Preservation range is 3.2 to 5.0 and involves low cost treatments such as chip seals, crack sealing, or ultra-thin asphalt overlays placed at the right time to slow pavement deterioration.

Criteria: **Truck Traffic**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on current volume and average daily truck traffic estimates.
Methodology: Road segments to be scored based upon data provided by SCDOT Road Data Service. In some instances, the SCDOT Truck Traffic percentages are based on functional classification averages. This is because SCDOT can only do actual vehicle classification counts on a small percentage of the roads it maintains around the state. This then yields an average percent of trucks which SCDOT may use for a specific road classification. Truck percentage is converted to a truck ADT to give greater consideration to higher volume roads.

A total of 10 points shall be awarded for the road segment with highest Truck Traffic Percentage. Remaining segments shall receive points proportional to their Truck Traffic Percentage.

Criteria: **Economic Development**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on specific impact to local economic development.
Methodology: Road segments to be scored based upon the following 4 economic development criteria:

- 2.5 points Accessibility to large employers/employment areas
- 2.5 points Reduces congestion or directly benefits regional freight mobility
- 2.5 points In vicinity or directly serving existing/proposed regional industrial areas
- 2.5 points Project facilitates regional transportation of the workforce

Criteria: **Environmental Impact**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on an assessment of potential impacts to social, natural, and cultural resources.
Methodology: Road segments to be scored based upon their positive or negative impact in the following criteria categories:

Impact on Socially Sensitive Areas:

- 2.0 points Proximity to areas with over 50% LMI population*
 - 2.0 points Proximity to areas with over 50% minority population
- *Low-Moderate Income

Impact on Natural Resources:

- 0.5 points Proximity to Endangered species
- 0.5 points Proximity to Publicly protected lands
- 0.5 points Proximity to Privately protected lands
- 0.5 points Proximity to Greenbelt projects
- 0.5 points Proximity to Wetlands
- 0.5 points Proximity to Floodplains / riparian buffers

Impact on Cultural Resources:

- 0.5 points Proximity to Archeological sites
- 0.5 points Proximity to Civil War sites
- 0.5 points Proximity to All protected lands
- 0.5 points Proximity to Parkland
- 0.5 points Proximity to Restricted National Register Historic sites
- 0.5 points Proximity to Non-restricted National Register Historic sites

Criteria: **Financial Viability**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on project cost estimates and 20-year maintenance cost.
Methodology: Calculate total capital plus 20-year maintenance cost per mile:
Road segment with lowest Total 20-year cost per mile 10 pts
Road segment with highest Total 20-year cost per mile 0 pts
Remaining segments receive points proportional to their Total 20-year cost per mile

Criteria: **Emergency Evacuation Route**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on SCDOT-recognized hurricane evacuation routes.
Methodology: Compare road segments to SCDOT South Carolina Central Hurricane Evacuation Routes Map
Road segment is an identified evacuation route 10 pts
Road segment supports an evacuation route 5 pts
Road segment does not support an evacuation route 0 pts

NEW LOCATIONS

Scoring:	Traffic Volume and Congestion	35%
	Economic Development	20%
	Financial Viability	20%
	Environmental Impact	15%
	Emergency Evacuation Route	<u>10%</u>
		100%

Criteria: **Traffic Volume**
Weight: 35% of overall score (35 points maximum)
Basis: Quantifiable based on current traffic volumes of adjacent corridors
Methodology: Intersections to be scored based upon current traffic volumes of adjacent corridors:
A total of 35 points shall be awarded to intersections with the highest traffic volumes of adjacent corridors. Remaining new locations receive points proportional to their adjacent corridors current traffic volumes

Criteria: **Economic Development**
Weight: 20% of overall score (20 points maximum)
Basis: Quantifiable based on specific impact to local economic development.
Methodology: New locations to be scored based upon the following 4 local economic development criteria:

5 points	Accessibility to large employers/employment areas
5 points	Reduces congestion or directly benefits regional freight mobility
5 points	In vicinity or directly serving existing/proposed regional industrial areas
5 points	Project facilitates regional transportation of the workforce

Criteria: **Financial Viability**
Weight: 20% of overall score (20 points maximum)
Basis: Quantifiable based on project cost estimates and 20-year maintenance cost.

Methodology: Calculate total capital plus 20-year maintenance cost per mile:
New location with lowest Total 20-year cost per mile - 20 pts
New location with highest Total 20-year cost per mile - 0 pts
Remaining new locations receive points proportional to their Total 20-year cost per mile.*

*Both projects were very similar in cost/mi (\$3,042,563/mi vs. \$2,965,284/mi, therefore 20 points awarded to both)

Criteria: **Environmental Impact**
Weight: 15% of overall score (15 points maximum)
Basis: Quantifiable based on an assessment of potential impacts to natural, social, and cultural resources.
Methodology: Road segments to be scored based upon their positive or negative impact in the following criteria categories:

Impact on Socially Sensitive Areas:

- 3.0 points Proximity to areas with over 50% LMI population*
 - 3.0 points Proximity to areas with over 50% minority population
- *Low-Moderate Income

Impact on Natural Resources:

- 0.75 points Proximity to Endangered species
- 0.75 points Proximity to Publicly protected lands
- 0.75 points Proximity to Privately protected lands
- 0.75 points Proximity to Greenbelt projects
- 0.75 points Proximity to Wetlands
- 0.75 points Proximity to Floodplains / riparian buffers

Impact on Cultural Resources:

- 0.75 points Proximity to Archeological sites
- 0.75 points Proximity to Civil War sites
- 0.75 points Proximity to All protected lands
- 0.75 points Proximity to Parkland
- 0.75 points Proximity to Restricted National Register Historic sites
- 0.75 points Proximity to Non-restricted National Register Historic sites

Criteria: **Emergency Evacuation Route**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on SCDOT-recognized hurricane evacuation routes.
Methodology: Compare new locations to SCDOT South Carolina Central Hurricane Evacuation Routes Map

New location is an extension of an existing evacuation route	10 pts
New location supports an evacuation route	5 pts
New location does not support an evacuation route	0 pts

INTERSECTIONS

Scoring:	Traffic Volume	30%
	Public Safety	25%
	Truck Traffic	20%
	Economic Development	10%
	Emergency Evacuation Route	10%
	Environmental Impact	<u>5%</u>
		100%

Criteria: **Traffic Volume**
Weight: 30% of overall score (30 points maximum)
Basis: Quantifiable based on current traffic volumes
Methodology: Intersections to be scored based upon current traffic volumes:
A total of 30 points shall be awarded to intersections with the highest traffic volumes. Remaining intersections receive points proportional to their current traffic volumes

Criteria: **Public Safety**
Weight: 25% of overall score (25 points maximum)
Basis: Quantifiable based on collision data.
Methodology: Intersections to be scored based upon a Safety Score provided by SCDOT Traffic Engineering:
The safety score is derived based on an adjusted accident rate calculated by the number of crashes within given location divided by the volume and multiplied by the number of years. The adjusted accident rate incorporates an ADT factor to give greater consideration to higher volume roads.

Safety scores range from 0 to 5 points. The higher the safety score, the higher the concern for safety. Therefore, safety scores will be multiplied by five; so that projects receiving the highest safety score (highest safety concern) will score the maximum 25 points.

Criteria: **Truck Traffic**
Weight: 20% of overall score (20 points maximum)
Basis: Quantifiable based on current volume and average daily truck traffic estimates.
Methodology: Intersections to be scored based upon data provided by SCDOT Road Data Service. The SCDOT Truck Traffic percentages are based on functional classification averages. For example, SCDOT can only do actual vehicle classification counts on a small percentage of the major collectors

around the state. This then yields an average percent of trucks which SCDOT uses for all major collectors. Truck percentage is converted to a truck ADT to give greater consideration to higher volume roads.

A total of 20 points shall be awarded for the road segment with highest Truck Traffic Percentage. Remaining segments shall receive points proportional to their Truck Traffic Percentage.

Criteria: **Economic Development**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on specific impact to local economic development.
Methodology: Intersections to be scored based upon the following 4 economic development criteria:

- 2.5 points Accessibility to large employers/employment areas
- 2.5 points Reduces congestion or directly benefits regional freight mobility
- 2.5 points In vicinity or directly serving existing/proposed regional industrial areas
- 2.5 points Project facilitates regional transportation of the workforce

Criteria: **Emergency Evacuation Route**
Weight: 10% of overall score (10 points maximum)
Basis: Quantifiable based on SCDOT-recognized hurricane evacuation routes.
Methodology: Compare intersections to SCDOT South Carolina Central Hurricane Evacuation Routes Map

Intersection is on an existing evacuation route	10 pts
Intersection supports an evacuation route	5 pts
Intersection does not support an evacuation route	0 pts

Criteria: **Environmental Impact**
Weight: 5% of overall score (5 points maximum)
Basis: Quantifiable based on an assessment of potential impacts to natural, social, and cultural resources.
Methodology: Road segments to be scored based upon their positive or negative impact in the following criteria categories:

- Impact on Socially Sensitive Areas:*
- 1.0 points Proximity to areas with over 50% LMI population*
 - 1.0 points Proximity to areas with over 50% minority populations
- *Low-Moderate Income

- Impact on Natural Resources:*
- 0.25 points Proximity to Endangered species

- 0.25 points Proximity to Publicly protected lands
- 0.25 points Proximity to Privately protected lands
- 0.25 points Proximity to Greenbelt projects
- 0.25 points Proximity to Wetlands
- 0.25 points Proximity to Floodplains / riparian buffers

Impact on Cultural Resources:

- 0.25 points Proximity to Archeological sites
- 0.25 points Proximity to Civil War sites
- 0.25 points Proximity to All protected lands
- 0.25 points Proximity to Parkland
- 0.25 points Proximity to Restricted National Register Historic sites
- 0.25 points Proximity to Non-restricted National Register Historic sites

APPENDIX C

2035 BCDCOG RL RTP PERFORMANCE MEASURES AND TARGETS

PERFORMANCE MEASURES AND TARGETS

1.1 Performance Based Planning and Performance

Performance-based planning and programming (PBPP) applies system data to inform investment and policy decisions to achieve desired outcomes set for the region’s multimodal transportation system. It is a federal requirement that PBPP be applied as a standard state of the practice in the planning and programming process and should be integrated throughout the decision-making process and within the development of an area’s Long-Range Transportation Plan (LRTP); other plans and processes including those federally mandated such as Strategic Highway Safety Plans, Asset Management Plans, Congestion Management Process, Transit Agency Asset Management Plans and Transit Agency’s Safety Plans; as well as in programming documents such as the statewide and metropolitan transportation investment plans (STIPs and TIPs).

The goal of PBPP is to ensure efficient investment of federal transportation funds by increasing accountability and transparency to the public, and provide for better investment decisions that focus on advancing the key outcomes related to established national goals.

The BCDCOG is currently developing its PBPP process to meet federal requirements (including tracking specific measures and setting targets) and to also meet the unique local planning needs of the area. This section is meant to serve as a bridge as BCDCOG transitions from the traditional transportation planning process to a more strategic PBPP. This document describes:

- National Goal Areas and Measures;
- Federal Requirements;
- Safety Goal Area and Targets;
- Asset Condition and System Reliability Performance Targets; and
- Next steps for the MPO/COG to build its PBPP practices, process, and policies.

1.2 National Goal Areas and Federal Requirements

Highway Performance

Through the federal rule-making process, the Federal Highway Administration (FHWA) is requiring state DOTs and MPOs/COGs to monitor the transportation system using specific performance measures. These measures are associated with the national goal areas prescribed in MAP-21 and the FAST Act. Table 1.1 describes these national goal areas, performance areas and prescribed performance measures. It should be noted that BCDCOG can choose to adopt additional measures beyond what is described in the following, however, what is outlined must be addressed at a minimum.

Table 1.1: National Goal Areas and Performance Measures

National Goal Area	Performance Area	Performance Measure
Safety: To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.	Injuries and Fatalities	<ul style="list-style-type: none"> ➤ Number of Fatalities ➤ Fatality rate (per 100 million VMT) ➤ Number of serious injuries ➤ Number of non-motorized fatalities and non-motorized serious injuries
Infrastructure Condition: To maintain the highway infrastructure asset system in a state of good repair.	Pavement Condition	<ul style="list-style-type: none"> ➤ Percent of pavements on the Interstate System in Good Condition ➤ Percent of pavements on the Interstate System in Poor Condition ➤ Percent of pavements on the non-Interstate System in Good Condition ➤ Percent of pavements on the non-Interstate System in Poor Condition
	Bridge Condition	<ul style="list-style-type: none"> ➤ Percent of NHS bridges classified as in Good Condition □ ➤ Percent of NHS bridges classified as in Poor Condition
System Reliability: To improve the efficiency of the surface transportation system.	Performance of the National Highway System	<ul style="list-style-type: none"> ➤ Percent of person miles traveled on the Interstate System that are reliable ➤ Percent of person miles traveled on the non-Interstate NHS that are reliable
Freight Movement and Economic Vitality: To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.	Freight Movement on the Interstate System	<ul style="list-style-type: none"> ➤ Truck Travel Time Reliability
Congestion Reduction: To achieve a significant reduction in congestion on the Nation Highway System.	Traffic Congestion	<ul style="list-style-type: none"> ➤ Annual hours of peak-hour excessive delay per capita ➤ Percent of non-single-occupant vehicle traffic
Environmental Sustainability: To enhance the performance of the transportation system while protecting and enhancing the natural environment.	On-Road Mobile Source Emissions*	<ul style="list-style-type: none"> ➤ Total emissions reduction*

*Note: This measure only applies to non-attainment or maintenance areas over a prescribed population threshold. This measure does not apply to the BC COG planning area since the area is an attainment area.

Transit Performance Measures

Recipients of public transit funds—which can include states, local authorities, and public transportation operators—are required to establish performance targets for safety and state of good repair; to develop transit asset management and transit safety plans; and to report on their progress toward achieving targets. Public transportation operators are directed to share information with MPOs/COGs and states so that all plans and performance reports are coordinated. Table 1.2 identifies performance measures outlined in the National Public Safety Transportation Plan, released by the Federal Transit Administration (FTA), and in the final rule for transit asset management. The BCDCOG will coordinate with public transit providers to set targets for these measures.

Table 1.2: National Goal Areas and Performance Measures for Transit

National Goal Area	Transit Performance Area or Asset Category	Performance Measure
Safety	Fatalities	➤ Total number of reportable fatalities and rate per total vehicle revenue miles by mode
	Injuries	➤ Total number of reportable injuries and rate per total vehicle revenue miles by mode
	Safety Events	➤ Total number of reportable events and rate per total vehicle revenue miles by mode
	System Reliability	➤ Mean distance between major mechanical failures by mode
Infrastructure Condition (State of Good Repair: Transit Asset Management)	Equipment	➤ Percent of vehicles that have met or exceeded their Useful Life Benchmark (ULB)
	Rolling Stock	➤ Percent of revenue vehicles within a particular asset class that have met or exceeded their ULB
	Facilities	➤ Percent of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirement Model scale

Additional Federal PBPP Requirements

Additional federal requirements as it pertain to target setting, reporting and performance assessments are as follows:

Targets

- The MPO/COG is required to establish performance targets no later than 180 days after SCDOT or a public transportation operator sets performance targets.
- For each performance measure, the Policy Committee will decide whether to support a statewide target, or to establish a quantifiable target specific to the BCDCOG planning area.
- SCDOT, MPOs/COGs and public transit operators must coordinate targets for performance measures to ensure consistency to the maximum extent practicable.

Reporting

- The LRTP must describe the performance measures and targets, evaluate the performance of the transportation system, and report on progress made.
- The TIP must link investment priorities to the targets in the LRTPs and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets.
- The MPO/COG must also report baseline roadway transportation system condition and performance data and progress toward the achievement of targets to SCDOT.

Assessments

- FHWA and FTA will not directly evaluate BCDCOG progress toward meeting targets for required performance measures.
- FHWA will determine if SCDOT has met or made significant progress towards attaining the selected targets for the highway system.

The BCDCOG has elected to accept and support the targets set by the State for the safety, infrastructure condition and system reliability performance measures. Performance reports will be added to the LRTP as data becomes available.

1.2 Highway Performance Measures and Targets

The following summarizes Highway performance measures and targets set by SCDOT.

Safety

The State of South Carolina has the highest fatality rate in the nation; it is 67% higher than the national rate and 40% higher than the states in the southeast. Reducing the number of transportation-related collisions, injuries, and fatalities is the SCDOT's highest priority and makes safety everyone's business. In 2011, the Director of the SC Department of Public Safety (SCDPS), who also serves as the Governor's Representative for Highway Safety in South Carolina, announced the Agency's goal of zero traffic related deaths for the State. This goal, also strongly supported by the

South Carolina Department of Transportation (SCDOT) and the South Carolina Department of Motor Vehicles, became the starting point for the State’s update of the Strategic Highway Safety Plan (SHSP), entitled Target Zero. Target zero is an aspirational target for South Carolina based on the philosophy that no fatalities are acceptable for any household. The state will set targets advancing towards this goal over the next 20-years.

SCDOT evaluated and reported on safety targets for the five required measures in August, 2019. This action started the 180 day clock for the MPO/COG to take action to evaluate and set regionally specific targets or to accept and support the state’s targets. The following table provides the baseline information for the BCDCOG, and the State of South Carolina, as well as the targets set for the State.

Table 1.3: Safety Measures Baseline and Targets

Measure	Traffic Fatalities	Fatality Rate*	Severe Injuries	Severe Injuries Rate*	NMU Fatalities & Severe Injuries
State Baseline (2013-2017 Average)	915	1.75	3,088	5.94	381
State Targets (2019 Approved)	988	1.79	2,986	5.42	380
BCDCOG Baseline (2013-2017 Average)	35	2.18	93	5.73	9

*Note: *Rate per 100 million vehicle miles traveled.*

For the 2019 performance period, the BCDCOG has elected to accept and support the State of South Carolina’s safety performance measures. This means BCDCOG will:

- Address areas of concern for fatalities or serious injuries within the planning area through coordination with SCDOT and incorporation of safety considerations on all projects;
- Integrate safety goals, objectives, performance measures, and targets into the planning process; and
- Include the anticipated effect toward achieving the targets noted above within the TIP, effectively linking investment priorities to safety target achievement.

Safety Strategies

The BCDCOG is committed to improve the safety of the area’s transportation system across all modes. Clear strategies are provided in the RL RTP that are aimed at enhancing area-wide safety for motorized and non-motorized users beyond engineering solutions but also emphasize the importance of increased coordination and corporation with law enforcement, school systems, local jurisdictions and the community. Strategies also include education and encouragement opportunities to address safety. The BCDCOG will continue to identify, evaluate and advance projects through the RL RTP and TIP programming that have the potential to improve the safety of the transportation system for all users.

The BCDCOG collaborates with an established Safety Improvements Committee, comprised of county and municipal government staff, public safety personnel, public transportation service representatives, school district staff, active transportation advocacy group representatives, and SCDOT staff, in an effort to collectively identify locations with high safety concerns for both motorized and non-motorized users and to propose appropriate safety countermeasures to mitigate them. The BCDCOG, through the Safety Improvements Committee, will also actively seek out opportunities to work with regional partners to improve safety through education, enforcement and encouragement programs. These projects and programs should help support or advance the safety targets set by the State.

Infrastructure Condition

Existing System and Baseline Conditions

SCDOT owns and maintains over 41,000 centerline miles, encompassing over 90,000 lane-miles, of roadway and approximately 8,400 bridges on its network. For federal purposes, FHWA only requires targets for the interstate and non-interstate NHS pavement systems and the NHS bridge system. Table 1.4 details the baseline data SCDOT used to develop its infrastructure targets and the corresponding baseline for the BCDCOG planning area. The pavement baseline numbers are based on the federal metric, which uses rideability, cracking percentage, rutting, and faulting condition data. For bridges, data is based on the National Bridge Inventory (NBI) measure and is calculated as a percentage of total system deck area.

Table 1.4: Infrastructure Baseline Conditions

	SCDOT Baseline		BCDCOG Baseline	
	% Good	% Poor	% Good	% Poor
Pavements				
Interstate	61.4%	1.7%	45.6%	2.3%
Non-Interstate	10.3%	2.6%	2.7%	13.3%
Bridges				
NHS	41.6%	4.2%	11.9%	4.0%

Pavements

SCDOT implements a combination of pavement investment strategies based on system conditions, funding, and risk. The current policy of SCDOT is to allocate funding to the different pavement strategies based on the ratio of pavements eligible for that type of strategy. The three strategies SCDOT follows include pavement preservation, pavement rehabilitation, and pavement reconstruction/ replacement. Due to SCDOT owning and maintaining all but 4.2 centerline miles of the NHS in South Carolina, and collecting condition data for the entire NHS, almost all infrastructure improvement projects are developed and managed by SCDOT. However, because SCDOT does not

currently have an off-interstate NHS widening program, it depends on coordination and efficient collaboration with MPOs and COGs within the State of South Carolina.

The following table outlines 2- and 4-year statewide targets SCDOT established for its interstate and non-interstate NHS pavement systems. These targets are projected conditions of the respective systems during 2020 and 2022. SCDOT developed its targets by modeling the deterioration of its pavement assets and projecting pavement condition improvements based on planned and programmed preservation, rehabilitation, and reconstruction/replacement projects that will be completed and have updated condition data collected within the 2- and 4-year timeframes.

Table 1.5: SCDOT Infrastructure Target Conditions for Pavements

Measure	2-Year Target	4-year Target
% of Interstate Pavements in Good Condition	N/A	71.0%
% of Interstate Pavements in Poor Condition	N/A	3.0%
% of non-Interstate Pavements in Good Condition	14.9%	21.1%
% of non-Interstate Pavements in Poor Condition	4.3%	4.6%

BCDCOG agree to adopt and support SCDOT’s statewide targets supporting planned and programmed projects that SCDOT has identified for inclusion in the Rural LRTP and Transportation Improvement Plan.

Bridges

Similar to pavements, SCDOT owns and maintains most of the federal-aid eligible bridges on the South Carolina Highway System. SCDOT adopts cost-effective bridge investment strategies, such as bridge preservation, which includes preventative condition-driven maintenance and bridge replacement as integral components of its bridge asset management program.

Table 1.6 outlines 2- and 4-year statewide targets SCDOT established for its NHS bridge systems. These targets are projected conditions of the respective systems during 2020 and 2022. SCDOT developed its targets by modeling the deterioration of its bridge assets and projecting bridge condition improvements based on planned and programmed bridge replacement projects that will be completed and have updated condition data collected within the 2- and 4-year timeframes. BCDCOG has agreed to adopt SCDOT’s statewide targets by supporting planned and programmed projects that SCDOT has identified for inclusion in the Rural LRTP and Transportation Improvement Plan.

Table 1.6: SCDOT Infrastructure Target Conditions for Bridges

Measure	2-Year Target	4-year Target
% of NHS Bridges in Good Condition	42.2%	42.7%
% of NHS Bridges in Poor Condition	4.0%	6.0%

System Reliability

The Federal Highway Administration developed three measures to track travel reliability on the road networks: percent of reliable person-miles traveled on the interstate; percent of reliable person-miles traveled on the non-interstate NHS; and an index of truck travel time reliability. These measures collectively report reliability of the NHS network as required by MAP-21. SCDOT staff explored the relationship between reliability and other data measures such as vehicle miles traveled to develop a model that predicts system reliability in 2- and 4-year periods. The methodology also examined the effect of construction projects on the NHS and completion of any widening projects within the timeframe. Table 1.7 outlines statewide and BCDCOG reliability baselines and targets for South Carolina based on this analysis.

Table 1.7: System Reliability Baseline Data

Measure	% of Person-Miles Traveled on the Interstate that are Reliable	% of Person-Miles Traveled on the non-Interstate NHS that are Reliable	Truck Travel Time Reliability Index
State 2017 Baseline	94.8%	89.8%	1.34
State 2-Year Target	91.0%	N/A	1.36
State 4-Year Target	90.0%	81.0%	1.45
BCD COG 2017 Baseline	100%	91.7%	1.14

BCDCOG has agreed to adopt and support SCDOT’s statewide targets by supporting planned and programmed projects that SCDOT has identified for inclusion in the Rural LRTP and Transportation Improvement Plan.

System Reliability Strategies

The Berkeley-Charleston-Dorchester Council of Governments, in partnership with the SCDOT and FHWA, and major employers and stakeholders in the region is currently facilitating the “Lowcountry Go” rideshare program. The program supports carpools, vanpools, public transportation, walking, biking and other programs that encourage a shift in commuter behavior toward alternative

transportation commute options. “Lowcountry Go” also works with regional employers to promote sustainable commute options such as flextime, staggered shifts and incentives. With the completion of the *BCD WalkBike Master Plan (2017)*, *BCD Regional Transit Framework Plan (2018)*, *BCD Regional Park-and-Ride Study (2018)*, advancement of the Lowcountry Rapid Transit BRT project, and continued improvement to the existing local transit system the BCDCOG is committed to providing a more balanced mix of transportation alternatives to residents. These projects and programs should help support or advance the system reliability targets set by the State.

Next Steps

The BCDCOG has agreed to adopt and support SCDOT’s statewide targets set for the federally required performance measures identified to-date, and will update or add additional federally mandated measures and/or targets as they are established and within the prescribed timelines.

As the COG transition from the traditional transportation planning process to a more strategic, performance based planning and programming (PBPP) process it will continue to work on identifying and refining additional (non-federally or state required) measures that are deemed useful in planning for, monitoring and evaluating the region’s transportation system. This includes developing relevant baseline conditions and establishing associated performance targets which will be added to this document on an on-going basis until the next RL RTP update.