

PALMETTO BREEZE SMALL URBAN AREA TRANSIT DEVELOPMENT PLAN

**Existing Conditions, Needs Analysis,
New Service Recommendations and Implementation Plan**

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Prepared for:

**Lowcountry Council of Governments (LCOG) and
Lowcountry Regional Transportation Authority
(LRTA dba Palmetto Breeze)**



Prepared by:

AECOM

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TABLE OF CONTENTS

Table of Contents.....	i
List of Figures	iii
List of Tables	iv
1.0 Introduction	1
1.1 Purpose of the Study	1
1.2 Related Planning Studies and Initiatives	1
2.0 Identify Study Area Conditions	3
2.1 Study Area Description	3
2.2 Regional and Study Area Demographics	6
2.3 Existing and Planned Land Uses	10
2.4 Potential Transit Market Demographics	18
2.5 Transportation Conditions	25
2.6 Commuting Patterns	30
2.7 Current Transit Services	36
2.8 Proposed Services.....	39
2.9 Public Involvement Summary.....	42
3.0 Identification of Potential Transit Needs	43
3.1 Existing Demographic Conditions and Trends Informing Transit Needs	43
3.2 Transit Dependent Populations - Needs Index	44
3.3 Transportation Conditions Informing Transit Needs	45
3.4 Other Identified Needs – Stakeholders and Previous Plan Input	45
4.0 Future Palmetto Breeze Service Options.....	47
4.1 New Service Evaluation Methodology	47
4.2 Peer Review	47
4.3 Peer Review Summary	53
4.4 Compilation of Information from Prior Planning Tasks.....	54
4.5 Proposed New Services.....	58
4.6 Transfer Locations	60
5.0 Implementation Plan.....	63
5.1 Recommended Service Options and Cost Estimates	63
5.2 Paratransit Recommendations	63
5.3 Capital Costs	65
5.4 Potential Funding Sources	65
5.5 Additional Implementation Considerations	73
6.0 Phase 2 Recommendations	75

Appendix A: Public Involvement..... A-1
Appendix B: Service Statistics..... B-1
Appendix C: Marketing Plan..... C-1

LIST OF FIGURES

Figure 2-1: Regional Context Map	4
Figure 2-2: Project Study Area.....	5
Figure 2-3: Town of Bluffton and Unincorporated Beaufort County Existing Land Use.....	10
Figure 2-4: The Town of Hilton Head Island Existing Land Use	11
Figure 2-5: Town of Bluffton and Unincorporated Beaufort County Future Land Use.....	12
Figure 2-6: The Town of Hilton Head Island Future Land Use	13
Figure 2-7: Population Density in the Study Area	14
Figure 2-8: Employment Density in the Study Area	15
Figure 2-9: Regional Major Employers	16
Figure 2-10: Study Area Major Employers.....	17
Figure 2-11: Community Resources and Activity Centers in the Study Area	18
Figure 2-12: Median Household Income in the Study Area	19
Figure 2-13: Low-Income Individuals in the Study Area	20
Figure 2-14: Zero-Car Households in the Study Area	21
Figure 2-15: Elderly Population in the Study Area	22
Figure 2-16: Youth Population in the Study Area	23
Figure 2-17: Population with Disabilities in the Study Area	24
Figure 2-18: Roadway Functional Classifications	26
Figure 2-19: Base Year Level of Service, 2010	27
Figure 2-20: No Build Level of Service, 2040	28
Figure 2-21: “Existing + Committed” Level of Service (2040).....	29
Figure 2-22: Where Residents in the Study Area are Employed	30
Figure 2-23: Where Employees in the Study Area Live.....	31
Figure 2-24: Where the Town of Hilton Head Residents Are Employed	32
Figure 2-25: Where the Town of Hilton Head Employees Live.....	33
Figure 2-26: Where Bluffton Residents are Employed	34

Figure 2-27: Where Bluffton Employees Live	34
Figure 2-28: The Town of Hilton Head Island Pathways	35
Figure 2-29: The Town of Bluffton Pathways.....	36
Figure 2-30: Palmetto Breeze Service Area	38
Figure 2-31: Proposed Town of Hilton Head Island Trolley Routes	40
Figure 2-32: Proposed Town of Hilton Head Island Trolley Routes + Existing Services.....	41
Figure 2-33: Existing/Proposed Service in Relation to Population and Employment Areas.....	42
Figure 3-1: Existing/Proposed Service in Relation to Transit Dependent Populations.....	44
Figure 4-1: Population Density in the Study Area	57
Figure 4-2: Employment Density in the Study Area	58
Figure 4-3: Proposed Trolley Service Phasing Map	60
Figure 4-4: Map of Bluffton Trolley Service.....	61
Figure 4-5: Map of Other Proposed Services	62

LIST OF TABLES

Table 1-1: Related Planning Studies	2
Table 2-1: Regional Study Area Population and Employment, 2016	6
Table 2-2: Regional Population Growth, 2000 - 2016.....	7
Table 2-3: Study Area Population Growth	7
Table 2-4: Employment and Occupations, 2014.....	8
Table 3-1: Study Area Trip Types and Appropriate Service Considerations	46
Table 4-1: Peer Review Summary Matrix	48
Table 4-2: Relationship between Residential Densities and Transit Services.....	55
Table 4-3: Relationship between Employment Densities and Transit Services	56
Table 5-1: Estimated Annual Operating Costs of Fixed Route Service.....	64
Table 5-2: Capital Facility Improvement Cost Estimates	65
Table 5-3: Federal Aid Grant Programs available in South Carolina.....	66

1.0 INTRODUCTION

1.1 Purpose of the Study

The area including the Town of Bluffton and the Town of Hilton Head Island was officially designated a Census Small Urban Area in March 2012 with a population of approximately 68,998 at that time. Due to this change, federal regulations require the designation of a Metropolitan Planning Organization (MPO) to provide transportation planning within the census-designated area. The Lowcountry Area Transportation Study (LATS) was established as the MPO in 2013 to provide transportation planning of the urbanized areas of Beaufort and Jasper Counties, including the municipalities of the Town of Beaufort, the Town of Bluffton, the City of Hardeeville, the Town of Hilton Head Island, and the Town of Port Royal. The MPO's area includes currently urban areas as of the 2010 Census, as well as the areas anticipated to be urbanized by the year 2030.

The Lowcountry Regional Transportation Authority (LRTA), also known as Palmetto Breeze, has been providing public transportation within the Lowcountry Region for four decades, with service in four counties. With the designation of Bluffton/The Town of Hilton Head Island as an urbanized area, new public transit funds – urban area formula funds are now available from the Federal Transit Administration (FTA). The LRTA is the region's designated recipient for those funds. Palmetto Breeze is undertaking this study in order to effectively utilize the funds by planning new and expanded transportation services and anticipating vehicle and operational needs for the future.

The emphasis of this study is to determine the most feasible new public transportation services in the Hilton Head Small Urbanized Area. These economically viable new services will link residents and visitors to the area's major employers, shopping areas, health care services, recreational and tourist attractions, and educational facilities.

1.2 Related Planning Studies and Initiatives

The following plan provides background for the initiation of this Transit Development Plan, as well as past recommendations. This includes local comprehensive plans, regional transportation planning, prior transit studies and specific area studies such as the Town of Hilton Head Circle to Circle Study. A summary of related planning studies is provided in Table 1-1.

Table 1-1: Related Planning Studies

Plan/Report	Author/Date	Purpose	Findings
Transportation Planning Services Report	Palmetto Breeze, 2010	This study provides existing conditions and public transportation alternatives for the U.S. 278 corridor and nearby corridors in the Bluffton and the Town of Hilton Head Island area.	The primary purpose of the Transit Planning Study was to determine the feasibility of implementing a fixed route transit system along the US 278 Corridor to serve and connect major developments and local points of interest.
Town of Bluffton Comprehensive Plan	Bluffton Planning & Growth Management, 2007, updated 2014	The Plan provides the overall guide for Bluffton area development and growth. Chapter 9 includes the transportation element.	Public transportation recommendations include expansion of transit options to transit-dependent populations, consideration of water taxi, and expansion of local routes serving Bluffton.
2040 Long Range Transportation Plan	Lowcountry Area Transportation Study (LATS), 2015	Provides the regional transportation vision; identifies current and future needs to the year 2040, and provides a regional vision for prioritizing and funding transportation projects.	Includes transit conditions and recommendations for the region, including the addition of a circulator or trolley for the Town of Hilton Head Island, paratransit services, and park-and-rides in Bluffton and the Town of Hilton Head Island.
Circle to Circle Study	Design Workshop, 2016	Strategic 20-year vision for the Pope Avenue between Sea Pines Circle and Coligny Circle, which are the most frequented and congested areas of the island.	Provides a basis for adding trolley or circulator service on the Town of Hilton Head Island, as well as a park-and-ride serving daily visitors.
The People Economy of the Lowcountry	Lowcountry Council of Governments (LCOG), 2017	Demographic overview of the Lowcountry region.	Provides a snapshot of regional and local demographic conditions and trends that identify the need for transit services.
Beaufort County Comprehensive Plan	Beaufort County, 2010, with updates through 2017	The County's guiding document for growth and development.	Transit recommendations include expansion of routes serving U.S. 278, and to the region's military bases. Further study on transit and Transportation Demand Management (TDM) strategies is also recommended.
Town of Hilton Head Island Comprehensive Plan	Town of Hilton Head Island, 2017	Provides the island's guiding document for growth and development through 2030.	Recommendations for public transportation include improved coordination, integration of bike racks on buses, and providing a local circulator system.

2.0 IDENTIFY STUDY AREA CONDITIONS

2.1 Study Area Description

The study area (shown in red in the Regional Context Map in Figure 2-1) is located in Beaufort County and the Lowcountry region of South Carolina, the southernmost region of South Carolina bordering Georgia and the Atlantic coastline. This region includes the counties of Beaufort, Colleton, Hampton and Jasper. Beaufort County is the most populous of the four counties in the region, and includes the majority of the region's coastline, as well as the City of Beaufort, the Town of Port Royal, the Town of Hilton Head Island, and the Town of Bluffton. The Lowcountry region also includes the Hilton Head Island-Bluffton-Beaufort Metropolitan Statistical Area (MSA) which is defined as the two southernmost counties in South Carolina – Beaufort and Jasper, also the two most populous and densely populated counties in the region.

Figure 2-1: Regional Context Map

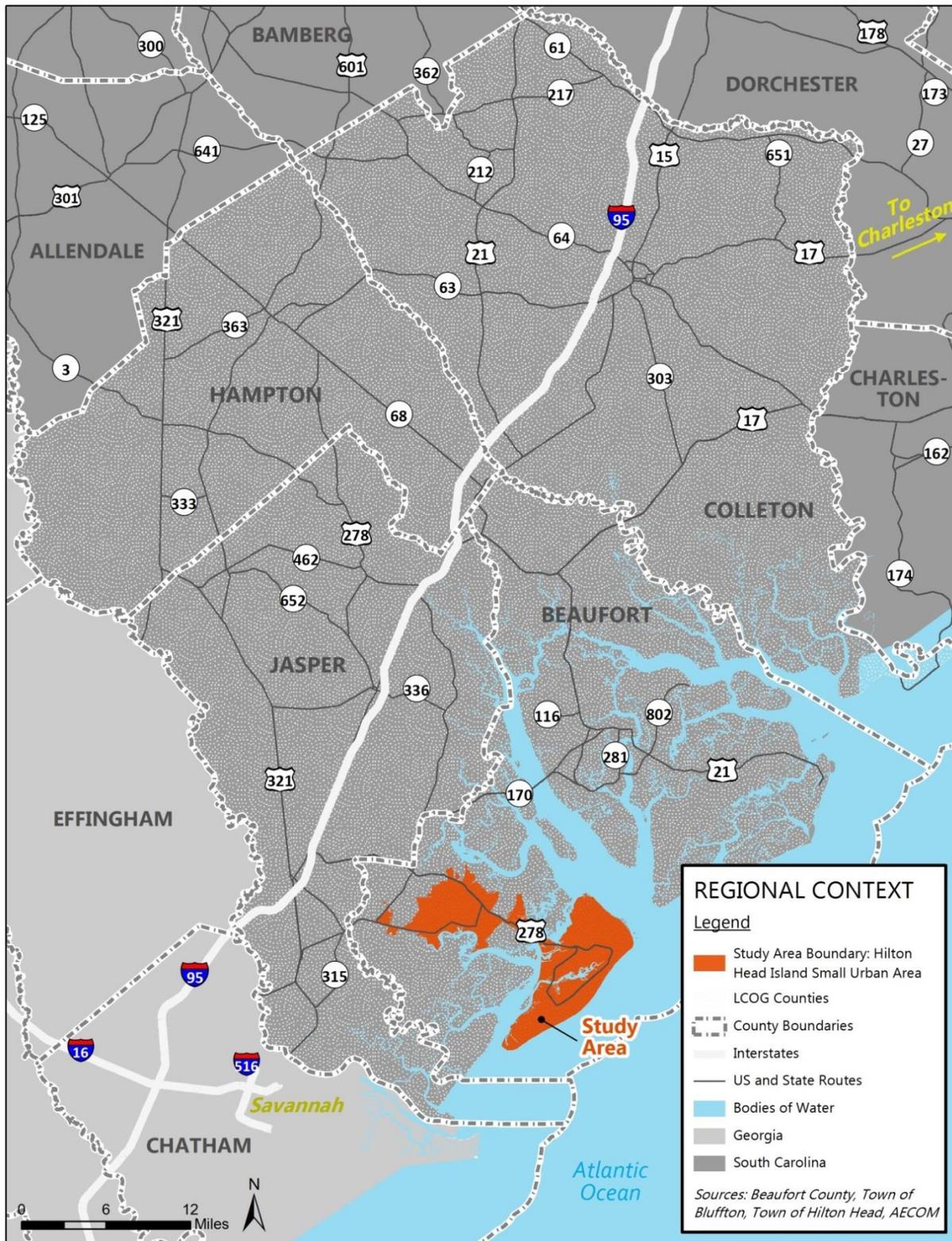
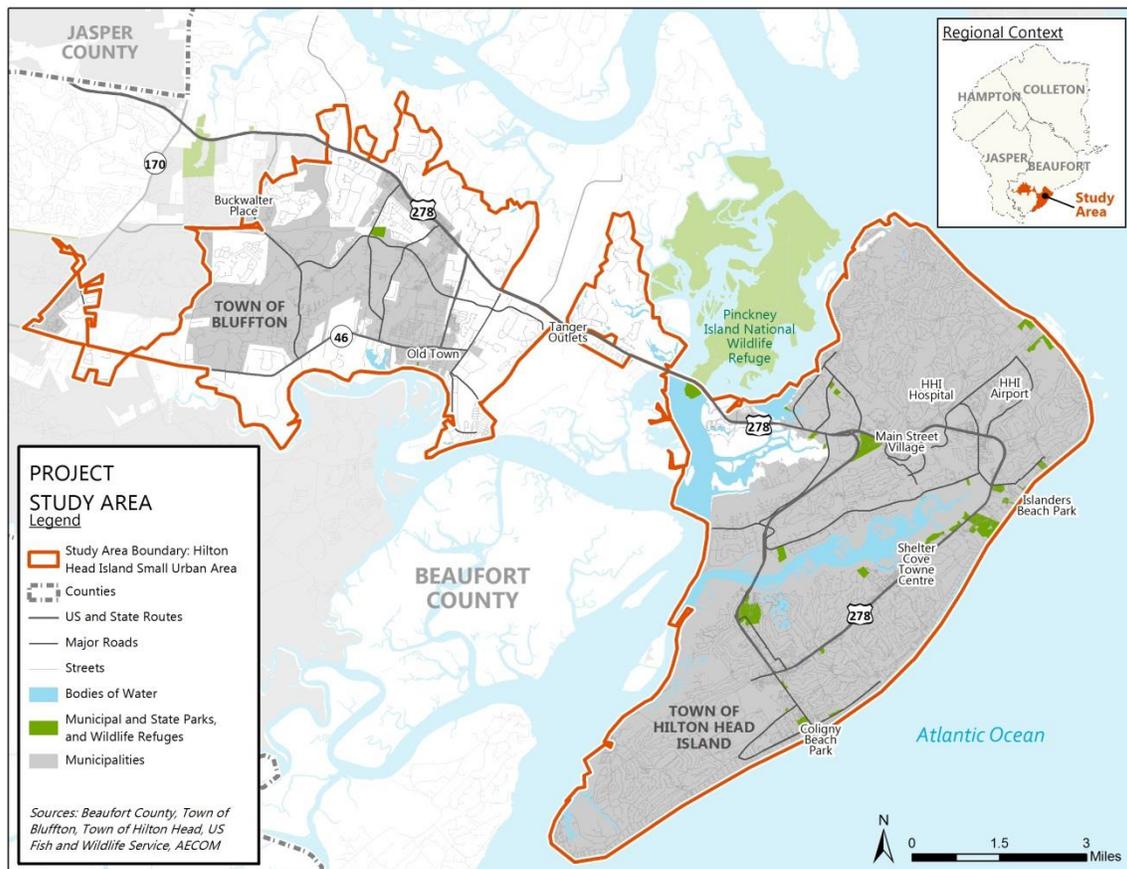


Figure 2-2 provides a closer view of the project study area, which comprises the census-designated Small Urban Area in southern Beaufort County that includes the Town of Bluffton, Town of Hilton Head Island and adjacent unincorporated areas of Beaufort County. This area was officially designated a Small Urban Area in March 2012, with a population of approximately 68,998 at that time.

The Lowcountry region is generally rural in nature across its entire span; however, the Study Area includes the most urbanized areas of the region, excluding the City of Beaufort. The Town of Hilton Head Island is the most populated and heavily developed area. The island is a popular beach and resort area, with numerous hotels and seasonal rentals, but is also home to a significant permanent residential population. Due to the nature of the island, employment is heavily oriented to the service industry, including restaurants, golf, retail hotels, and resorts. Much of the workforce for the island comes from outside of the area. Approximately 70 percent of the island's land area is within gated or private communities, which includes both resorts and residential communities.

Figure 2-2: Project Study Area



The Town of Bluffton is located west and inland of the Town of Hilton Head Island. Like on the Town of Hilton Head, there are several gated residential communities throughout the Town of Bluffton, with a mix of residential and commercial densities and a historic district. There is a small, historic downtown area – The Old Town Bluffton, but much of the development in the

town is new, especially on the west side of the town. The study area's larger scale retail is located in Bluffton or between the Town of Bluffton and the Town of Hilton Head Island along the U.S. 278 Corridor. This includes the Tanger Outlet Malls, big box retail stores such as WalMart, Sam's Club, Lowes and Home Depot, and auto services and dealerships.

2.2 Regional and Study Area Demographics

2.2.1 Current Population and Employment

Table 2-1 below reports the estimated current population and employment based on the latest Census American Community Survey data available (2016). The Town of Bluffton has an estimated population of 15,765, as compared to 39,651 in the Town of Hilton Head Island. Beaufort County has an estimated population of 175,316, which is 67 percent of the regional total of 260,682. Colleton, Hampton and Jasper Counties combined comprise the other 33 percent of the region's population.

Since the 2016 figures are not available for the exact study area boundary, the population and employment for the study area reflects the total of all block groups that are within or partially within the study area. The lower total reflects weighted area calculations based on the amount of land area of each block group that is partially within the study area.

Table 2-1: Regional Study Area Population and Employment, 2016

Area	Population	Employment
Town of Bluffton	15,765	7,508
Town of Hilton Head Island	39,651	17,383
Study Area (block group totals)	81,789	38,666
Beaufort County	175,316	72,457
Colleton County	37,884	15,182
Hampton County	20,296	7,740
Jasper County	27,186	12,125
Lowcountry Region	260,682	107,504

Source: U.S. Census, ACS 5-Year Estimates (2012-2016)

Population Growth

Tables 2-2 and 2-3 report regional and local population growth since 2000. The region overall grew 22.7 percent from 2000 to 2010 between decennial census years, and it is estimated that growth since 2010 (through 2016) has been 5 percent. Beaufort County grew even more rapidly from 2000 to 2010 at 34 percent. Hampton County had a slight decline in population (-1.4 percent), and Colleton County had a slight increase in population (+1.6 percent). Jasper County grew 20 percent during that time period, and it is estimated that growth since 2010 has been just under 18 percent (as of 2016). The general trend is that Beaufort County has had steady growth, Jasper County is beginning to add population rapidly this decade, Hampton County is declining in population, and Colleton County is not adding or subtracting to its population.

Table 2-2: Regional Population Growth, 2000 - 2016

Area	Year 2000	2010	2016	Change 2000-2010	Change 2010-2016
Beaufort County	120,937	162,233	171,569	+34.1%	+5.8%
Colleton County	38,264	38,892	38,549	+1.6%	-0.1%
Hampton County	21,386	21,090	20,167	-1.4%	-4.4%
Jasper County	20,678	24,777	29,137	+19.8%	+17.6%
Lowcountry Region	201,265	246,992	259,422	+22.7%	+5.0%
South Carolina	4,012,012	4,625,364	4,961,119	+15.3%	+7.3%

Source: U.S. Census, LCOG

Table 2-3 shows local growth within Beaufort County. As previously reported, Beaufort County growth was 34 percent in the 2000s, and has been slower but steady at over 5 percent since 2010 (estimated). Between 2000 and 2010, the Town of Bluffton's population went from 1,275 to 12,530, which represents a growth rate of 883 percent. This growth rate is a result of both annexation and development of large areas of previously vacant land. Growth from 2010 to 2015 is estimated to have been 16.6 percent. The Town of Hilton Head Island grew nearly 10 percent in the 2000s and has been following similar growth since 2010.

Table 2-3: Study Area Population Growth

Area	Year 2000	2010	2015	Change 2000-2010	Change 2010-2015
Beaufort County Total	120,937	162,233	171,420	+34.1%	+5.7%
Town of Bluffton	1,275	12,530	14,607	+882.7%	+16.6%
Town of Hilton Head Island	33,862	37,099	39,071	+9.6%	+5.3%

Source: U.S. Census, LCOG

Projected Population Growth

Growth projections from the 2014 update to the Beaufort County comprehensive plan anticipate continued strong growth in the county through 2030. The projection shows population would grow from 162,233 in 2010 to 212,466 in 2030, which is a total growth percentage of 30.9 percent and an annual rate of approximately 1.5 percent.

Employment and Occupations

Table 2-4 provides Beaufort County estimated employment by occupation in 2014, listed from highest to lowest. Many of the top occupational categories are service-related industries, including Food Preparation and Serving (13.7 percent), Sales and Related (12.9 percent) and Building and Grounds Cleaning and Maintenance (8.2 percent). These three categories combined account for over one-third of the county's employment. This is reflective of the tourism and resort industry that is prevalent on the Town of Hilton Head Island and other communities in the region.

Table 2-4: Employment and Occupations, 2014

Occupation	2014 Estimated # of Employees	% of Employment
Food Preparation and Serving Related	12,968	13.7%
Office and Administrative Support	12,423	13.1%
Sales and Related	12,256	12.9%
Building and Grounds Cleaning and Maintenance	7,758	8.2%
Education, Training, and Library	5,303	5.6%
Management	5,242	5.5%
Healthcare Practitioners and Technical	4,804	5.1%
Transportation and Material Moving	4,699	4.9%
Personal Care and Service	4,483	4.7%
Construction and Extraction	4,013	4.2%
Business and Financial Operations	2,933	3.1%
Installation, Maintenance, and Repair	3,972	4.2%
Protective Service	3,302	3.5%
Healthcare Support	2,669	2.8%
Production	2,378	2.5%
Farming, Fishing, and Forestry	1,371	1.4%
Community and Social Services	1,036	1.1%
Legal	878	0.9%
Arts, Design, Entertainment, Sports, and Media	850	0.9%
Computer and Mathematical	701	0.7%
Architecture and Engineering	472	0.5%
Life, Physical, and Social Science	423	0.4%
Total All	94,934	100.0%

Table 2-5 shows projected occupational growth through 2024. The three occupational categories discussed for the previous table are also three of the top four occupations that will add the greatest number of jobs to the region from 2014 to 2024. By percentage, the top growing occupations include Farming, Fishing, and Forestry (40.7 percent), Management (27.5 percent) and Healthcare Support (23.1 percent)

Table 2-5: Projected Employment Growth, 2014-2024

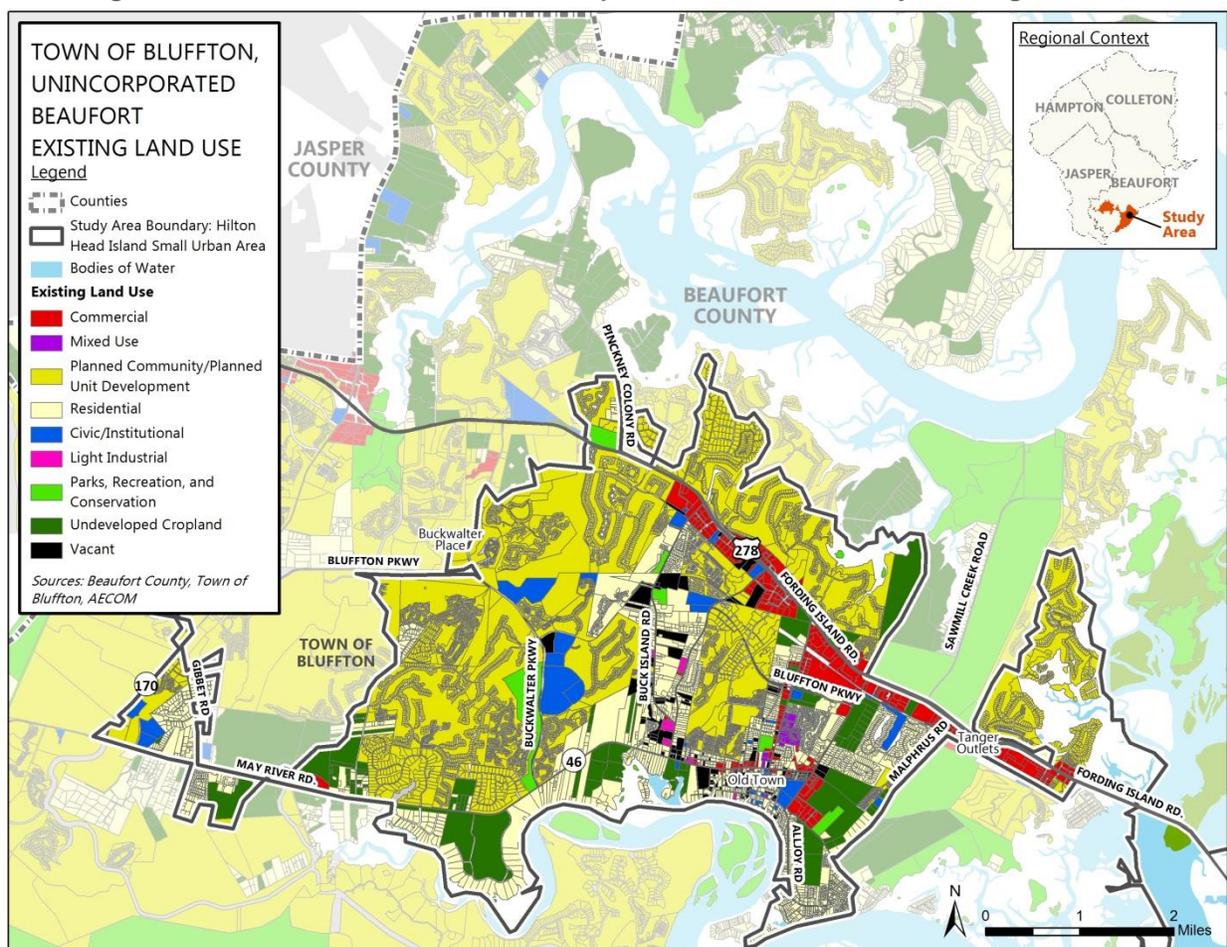
Occupation	2014 Estimated Employment	2024 Projected Employment	Growth	Growth %
Management	5,242	6,684	1,442	27.5%
Building and Grounds Cleaning and Maintenance	7,758	9,102	1,344	17.3%
Food Preparation and Serving Related	12,968	14,284	1,316	10.2%
Sales and Related	12,256	13,218	962	7.9%
Office and Administrative Support	12,423	13,323	900	7.2%
Education, Training, and Library	5,303	6,130	827	15.6%
Healthcare Practitioners and Technical	4,804	5,624	820	17.1%
Construction and Extraction	4,013	4,725	712	17.7%
Personal Care and Service	4,483	5,193	710	15.8%
Healthcare Support	2,669	3,285	616	23.1%
Farming, Fishing, and Forestry	1,371	1,929	558	40.7%
Transportation and Material Moving	4,699	5,175	476	10.1%
Business and Financial Operations	2,933	3,339	406	13.8%
Installation, Maintenance, and Repair	3,972	4,391	419	10.6%
Legal	878	1,050	172	19.6%
Protective Service	3,302	3,458	156	4.7%
Community and Social Services	1,036	1,189	153	14.8%
Computer and Mathematical	701	820	119	17.0%
Production	2,378	2,475	97	4.1%
Arts, Design, Entertainment, Sports, and Media	850	920	70	8.2%
Life, Physical, and Social Science	423	473	50	11.8%
Architecture and Engineering	472	513	41	8.7%
Total All	94,934	107,300	12,366	13.0%

2.3 Existing and Planned Land Uses

2.3.1 Existing Land Uses

Figure 2-3 shows the inland portion of the study area, including the Town of Bluffton and adjacent unincorporated areas. This area primarily consists of residential uses, including numerous planned communities. The vast majority of the residential development is single family, at various densities ranging from large lots to townhomes. Commercial uses are concentrated along the U.S. 278 corridor in Bluffton (Fording Island Road). Bluffton Parkway and May River Road, are also primarily commercial corridors. Additionally, Buckwalter Parkway, north of Bluffton Parkway, has a lot of new commercial development within Planned Unit Developments (PUDs).

Figure 2-3: Town of Bluffton and Unincorporated Beaufort County Existing Land Use



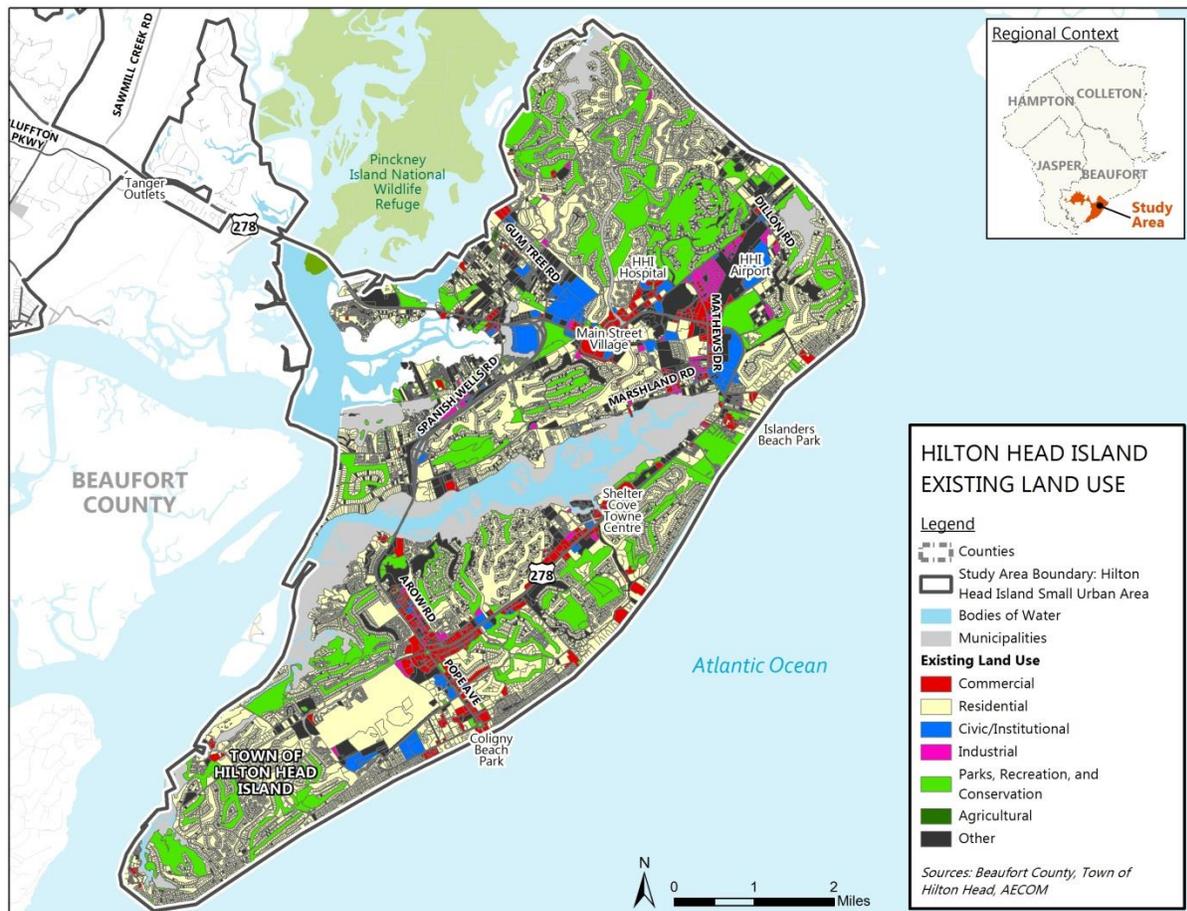
Public and institutional uses are generally scattered throughout the area; however, there are a couple of concentrated areas including the cluster at Buckwalter Parkway, along and adjacent to H.E. McCracken Circle, which includes Bluffton High School, H.E. McCracken Middle School, Bluffton Elementary School, Bluffton Early Learning Center, Bluffton Boys and Girls Club, Buckwalter Recreation Center, and the Lowcountry Community Church. Another concentration

of public uses is located along the south end of Burnt Church Road. This area includes Michael C. Riley Elementary, Michael C. Riley Early Childhood Center, Bluffton Town Hall, the Bluffton Pool, and the Bluffton Township Fire Station #30 and Maintenance Center. There are several large tracts of either undeveloped, agricultural, or park lands (including golf courses) – these are primarily situated on the periphery or just outside the study area boundaries.

The Town of Hilton Head Island is almost entirely developed, with the bulk of developable land occupied by golf courses, residential communities and resort communities. As mentioned before, most of the development is within private, gated communities. Commercial uses on the Town of Hilton Head Island, including the island's major shopping centers, are almost entirely located along the U.S. 278/278 Business loop. The exception is Pope Avenue, which is also primarily commercial and retail between Business 278 and the Coligny Beach Circle at Forest Beach Drive. The traffic circle at Coligny Beach includes a concentration of hotels, retail and tourist amenities and the most popular beach on the island.

Public and institutional uses are primarily located on the north end of the island, including the public school district, Hilton Head Island Airport, Hilton Head Island Branch Library, and the Main Street Village area. Existing land uses within Town of Hilton Head Island are shown in Figure 2-4.

Figure 2-4: The Town of Hilton Head Island Existing Land Use

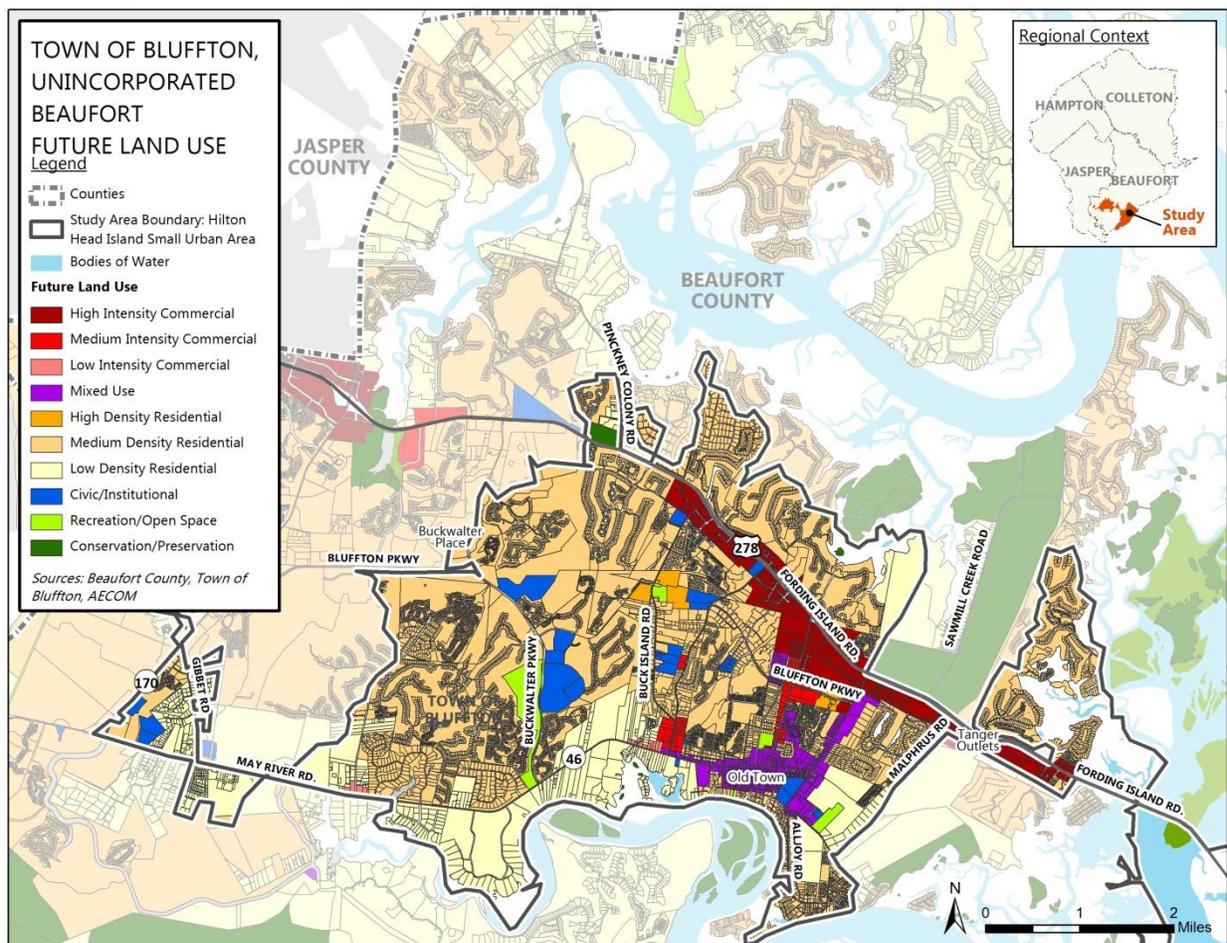


2.3.2 Planned Land Uses

Future land uses in the western and eastern portions of the study area are shown in Figure 2-5 and Figure 2-6, respectively. The future land use vision presented in the Beaufort County Comprehensive Plan, updated November 2016, primarily anticipates a continuation of existing land uses, although with further commercial development along SC 170 between U.S. 278 to SC 46, and further concentration of commercial development at the nodes of U.S. 278 at SC 170 and U.S. 278 at Burnt Church Road. Additionally, most areas that are currently commercial are envisioned as mixed-use centers in the future, which would allow some opportunities to intersperse more residential with retail to reduce vehicular trips and provide conveniences near residential areas.

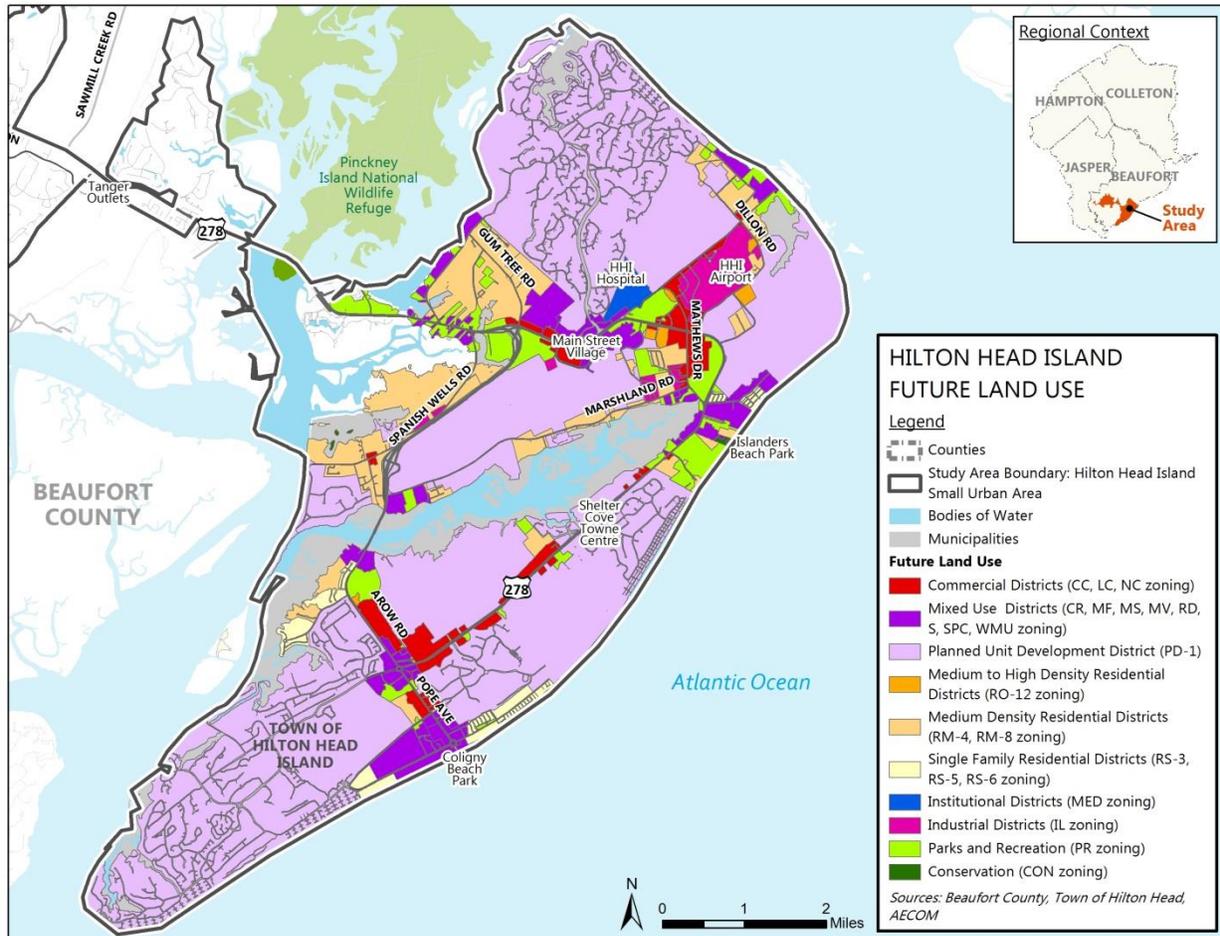
Many of the areas immediately west of the study area – towards Okatie and the Jasper County line are currently or partially developed at lower densities, but are planned for medium density residential development. This is a further reflection of the projected population in Jasper County and adjacent areas of Beaufort County, since this is where there is developable land that is still close to the City of Beaufort, Town of Bluffton, and the Town of Hilton Head Island, convenient to employment and desirable destinations for shopping, tourism and community services.

Figure 2-5: Town of Bluffton and Unincorporated Beaufort County Future Land Use



The Town of Hilton Head Island is likely to continue the same land use patterns, as the island is already close to being fully developed. The island's land use vision is set by the zoning categories. Any further land development is likely to continue as denser redevelopment and addition of a mix of uses in some areas that are currently lower density or either solely commercial or residential. Most development and redevelopment will continue to be concentrated mainly around the U.S. 278/Business 278 loop, Pope Avenue, and areas near the Hilton Head Island Airport, as these are the areas that would have better transportation access and have zoning categories that allow more intense development.

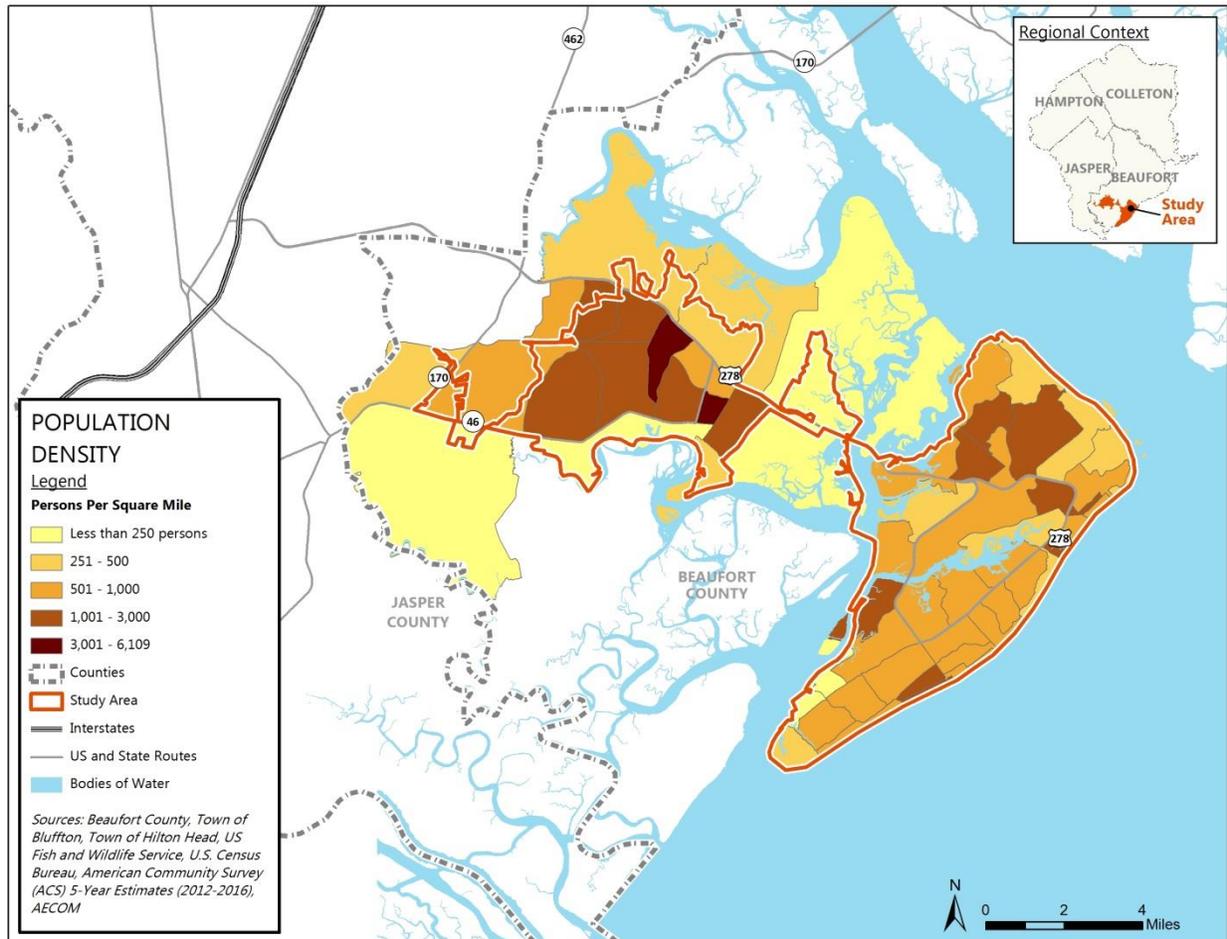
Figure 2-6: The Town of Hilton Head Island Future Land Use



2.3.3 Population and Employment Densities

The two most densely populated study area block group locations are in Bluffton, including the area bounded by Buck Island Road, U.S. 278 and Simmonsville Road, as well as the area bounded by Bluffton Road, May River Road, Burnt Church Road and Bluffton Parkway, as shown in Figure 2-7. These areas have over 3,000 people per square mile. Most of central Bluffton, between SC 170 and Malphrus Road, has between 1,000 and 3,000 people per square mile. Several areas on the Town of Hilton Head Island are also populated at this density. Most of the study area has at least 500 people per square mile, with the exception of census block groups that are on the periphery and center of the study area and not entirely located in the urbanized area.

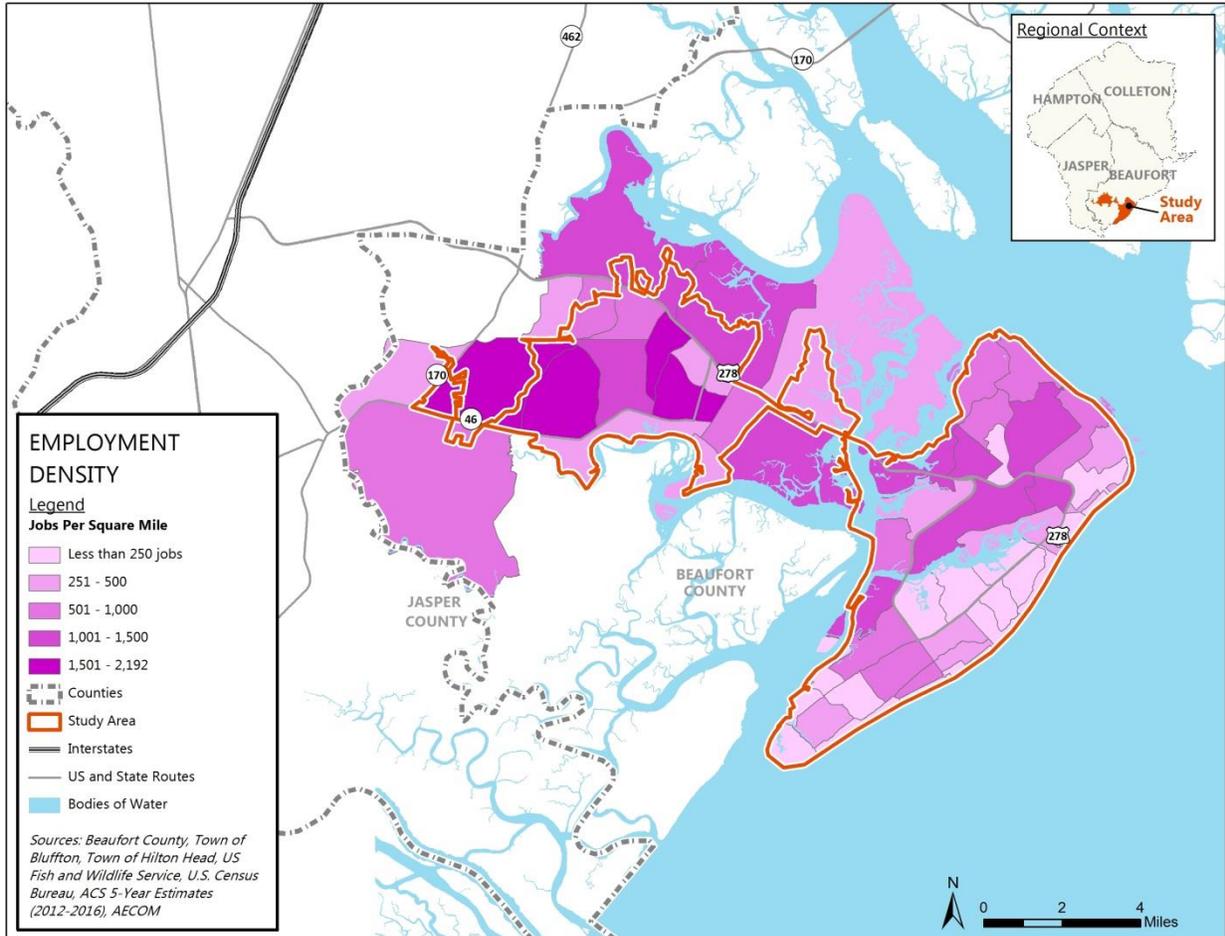
Figure 2-7: Population Density in the Study Area



Overall, there is not a high concentration of employment in the study area displayed in **Figure 8**. The most densely employed areas are at maximum 2,000 employees per square mile. Employment has somewhat similar density patterns. A lot of the employment in Bluffton is located in the southwest section of the study area in the quadrant between Buckwalter Parkway, Bluffton Parkway, SC 170 and May River Road (SC 46).

On the Town of Hilton Head Island, much of the employment is concentrated along the north section of the U.S. 278/Business 278 loop. This includes Hilton Head Hospital, Hilton Head schools, and several large shopping centers.

Figure 2-8: Employment Density in the Study Area



2.3.4 Major Employers

Figure 2-9 shows the major employer locations in the Lowcountry region. This graphic shows that Beaufort County is the employment center of the region, with most of the larger employers located in Beaufort County, and primarily in the City of Beaufort, Town of Bluffton, and the Town of Hilton Head Island. Outside of these areas, larger employers in the region are primarily located along I-95 and at the crossroads of some of the U.S. highways in the region.

Although several are in or near the City of Beaufort, including the region’s military institutions, a higher number of employers are located in the Bluffton-Hilton Head area.

Figure 2-9: Regional Major Employers

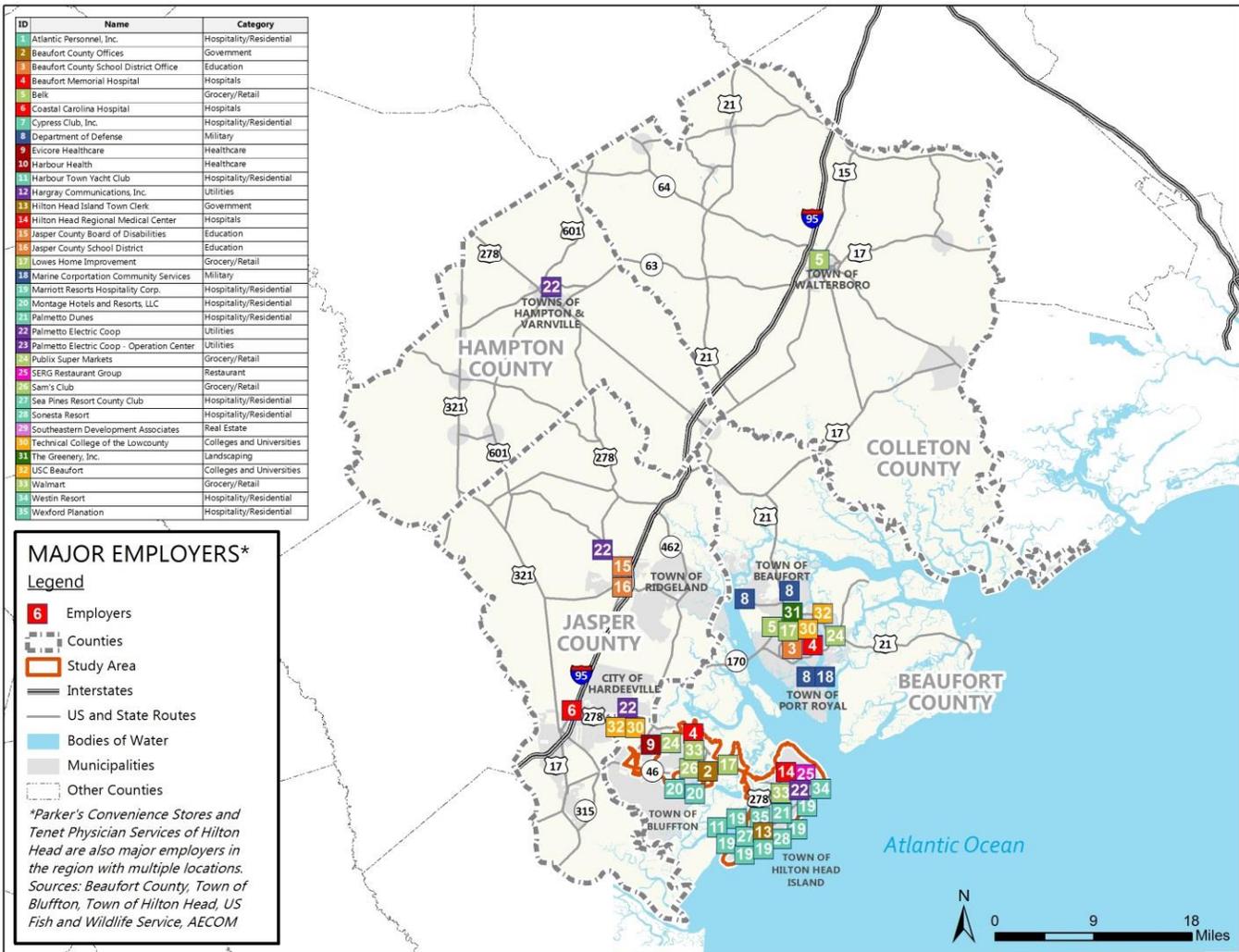
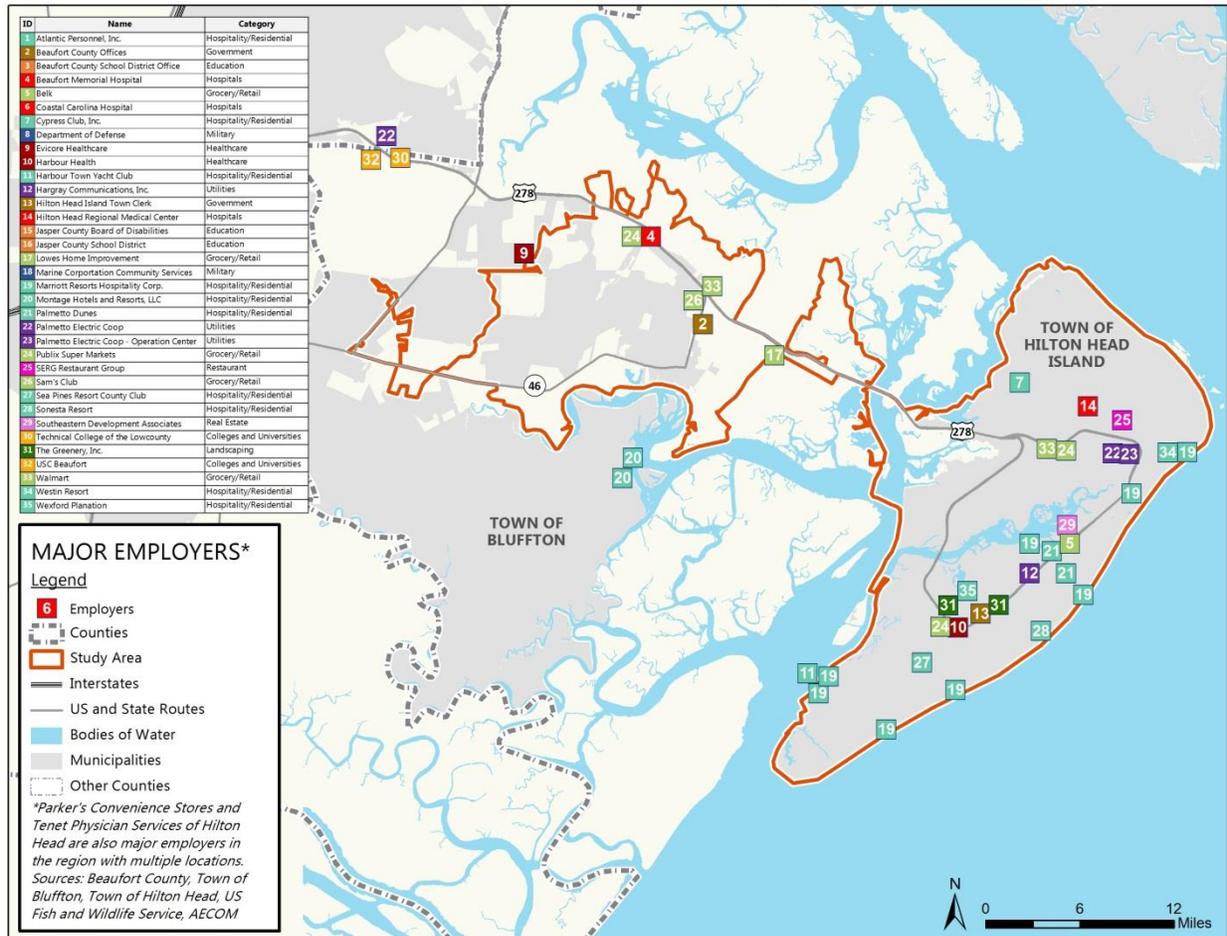


Figure 2-10 shows a closer look at locations of larger employers relative to the study area. The Town of Hilton Head Island has a high concentration of resort employment with several large resorts or hotels located on the island. As is shown in the demographics section of this document, the retail and service industries make up a large amount of the county and study area's employment. Bluffton has several government and institutional centers, as well as several larger retail locations, including the Tanger Outlet Malls on U.S. 278. In general, throughout the study area, employment is located primarily along or near U.S. 278 and Business 278, both in the Town of Bluffton and in the Town of Hilton Head Island.

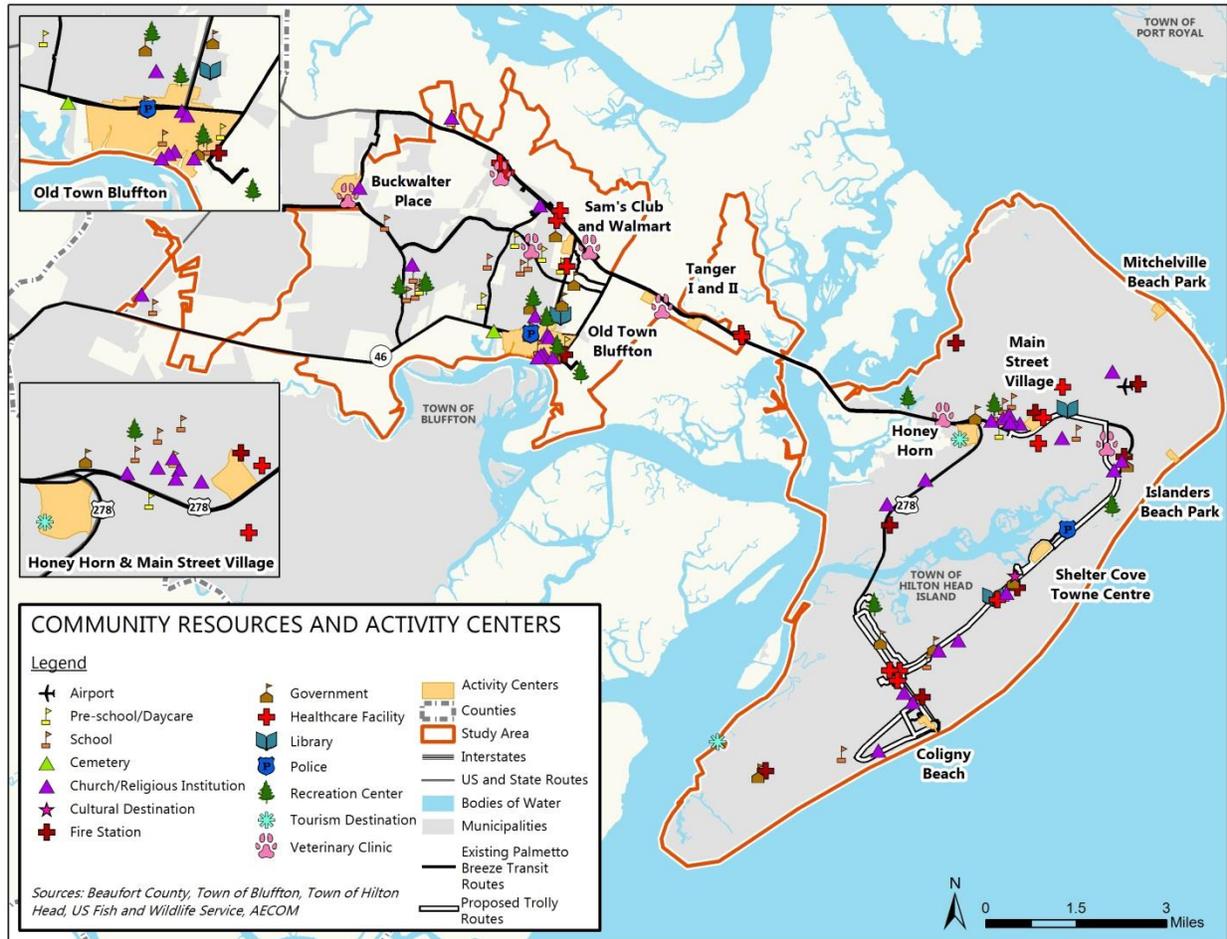
Figure 2-10: Study Area Major Employers



2.3.5 Community Resources and Destinations

Figure 2-11 shows a comprehensive look at the most common destinations and activity centers in the Study Area including specific locations such as community and government service locations, airports, schools, health care facilities, recreation facilities and tourist areas. Many of these locations are also the region’s and study areas largest places of employment. In addition to specific community facilities or service locations, the map identifies activity center districts, such as Old Town Bluffton and Buckwalter Place, or Coligny Beach and Shelter Cove Inn in the Town of Hilton Head Island. This map shows the current Palmetto Breeze services and the proposed Town of Hilton Head Island shuttle route. This figure indicates that the majority of common destinations in the study area are located on or near the major regular service routes (not including demand-response or seasonal routes).

Figure 2-11: Community Resources and Activity Centers in the Study Area



2.4 Potential Transit Market Demographics

2.4.1 Transit Dependent Populations

The following series of maps (**Figures 2-12 through 2-17**) indicates locations in the study areas that have concentrations of potential transit markets. These are areas with higher

concentrations of populations that may be reliant on public transportation services due to limited access to, ability to afford, or choice not to own a personal automobile (low-income, zero car households); younger populations (15-19 year olds); those of an age where they may chose not to drive (seniors); and those who cannot drive due to a physical or mental disability.

Figure 2-12 shows the general distribution of wealth by income in the study area, with darker colors indicating wealthier areas, by census block group. Most of the study area falls within the range of \$50,000 to \$100,000 for annual median household income; however, there are some areas on the Town of Hilton Head Island and on the edges of Bluffton that have a median household income over \$100,000. Additionally there are also several areas with median household incomes below \$50,000. In general, the distribution of income is fairly spread out through the study area, without any significant concentrations of lower or higher incomes in any one particular area.

Figure 2-12: Median Household Income in the Study Area

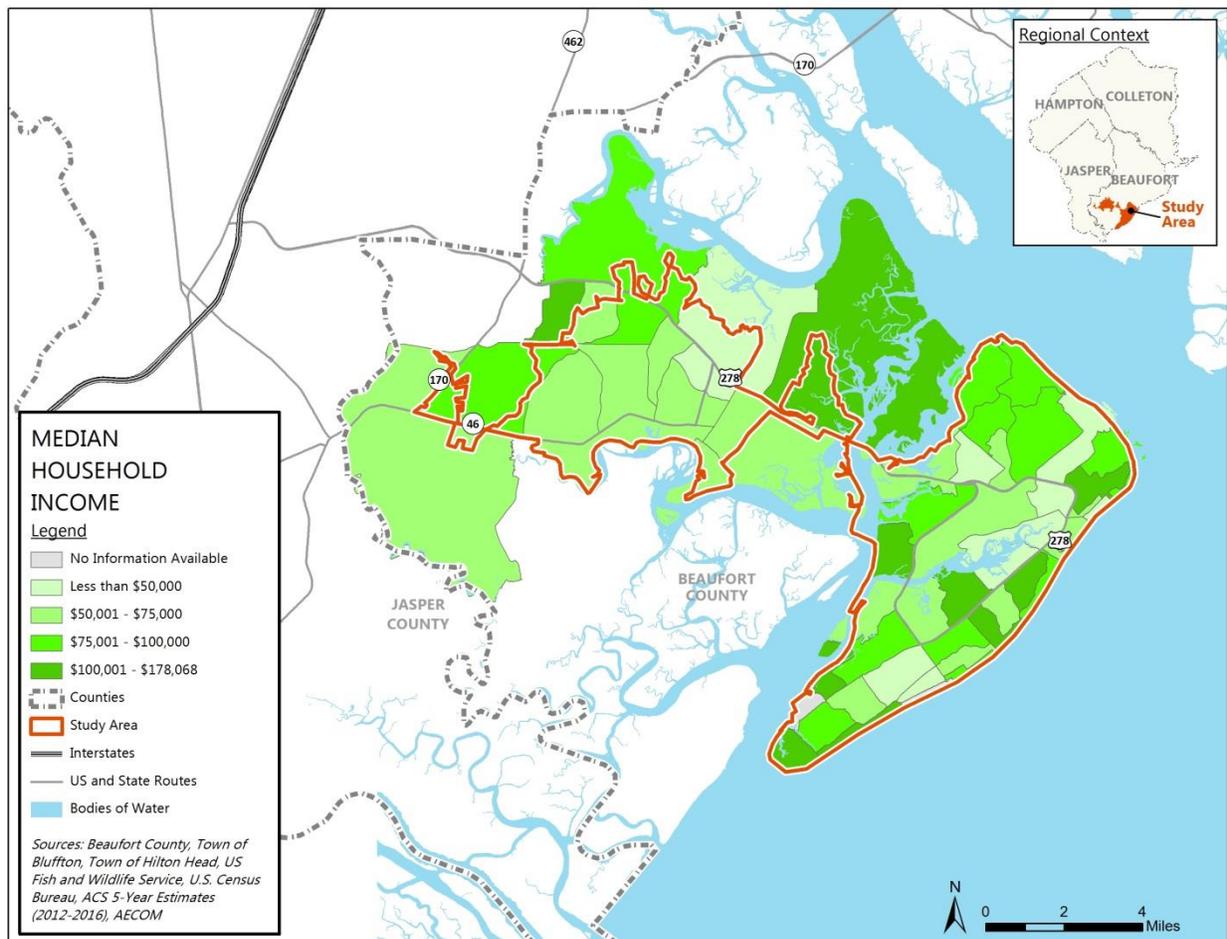


Figure 2-13 shows the percentage of low-income individuals in each study area block group. Although the study area is affluent relative to the region, there are some locations with higher concentrations of low-income populations. There are several block groups on the Town of Hilton Head Island where greater than 20 percent of the population is low-income. This includes

the area extending southwest of Sea Pines Circle, the areas surrounding the Hilton Head Airport to northeastern end of the island, and an area that includes the Windmill Harbour and Squire Pope developments at the northwest area of the island, near the bridge.

Figure 2-13: Low-Income Individuals in the Study Area

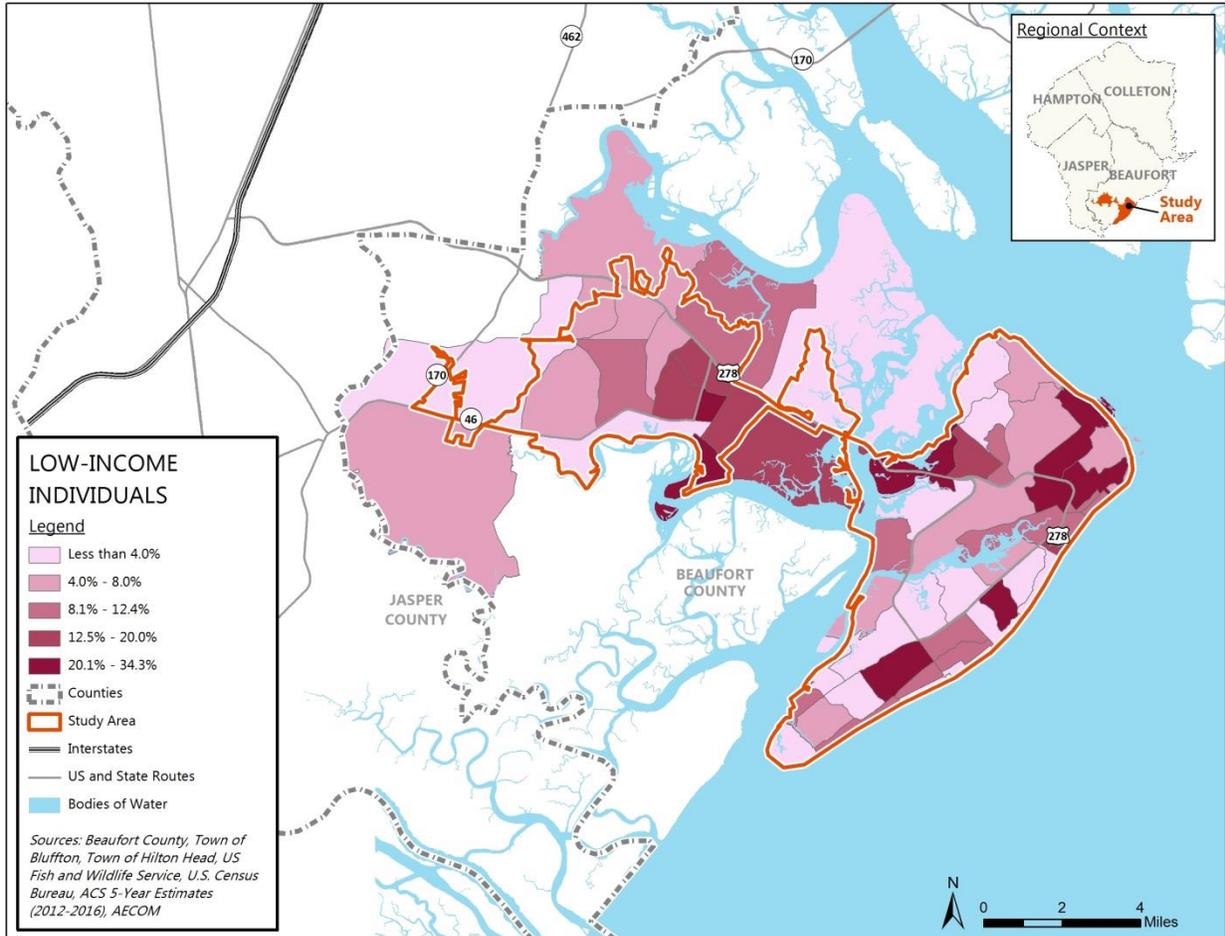


Figure 2-14 shows Census data reporting percentage of the block group households that do not have access to an automobile. There are five block groups, two in Bluffton, and three on the Town of Hilton Head Island, where greater than 10 percent of the households do not have access to an automobile. These are the darkest shaded areas indicated on the map. In Bluffton, this includes the south area along the May River and northeast quadrant extending north of U.S. 278. In the Town of Hilton Head, the higher concentrations of zero-car households are located near the Hilton Head Airport, and the areas extending southwest and southeast of Sea Pines Circle.

Figure 2-14: Zero-Car Households in the Study Area

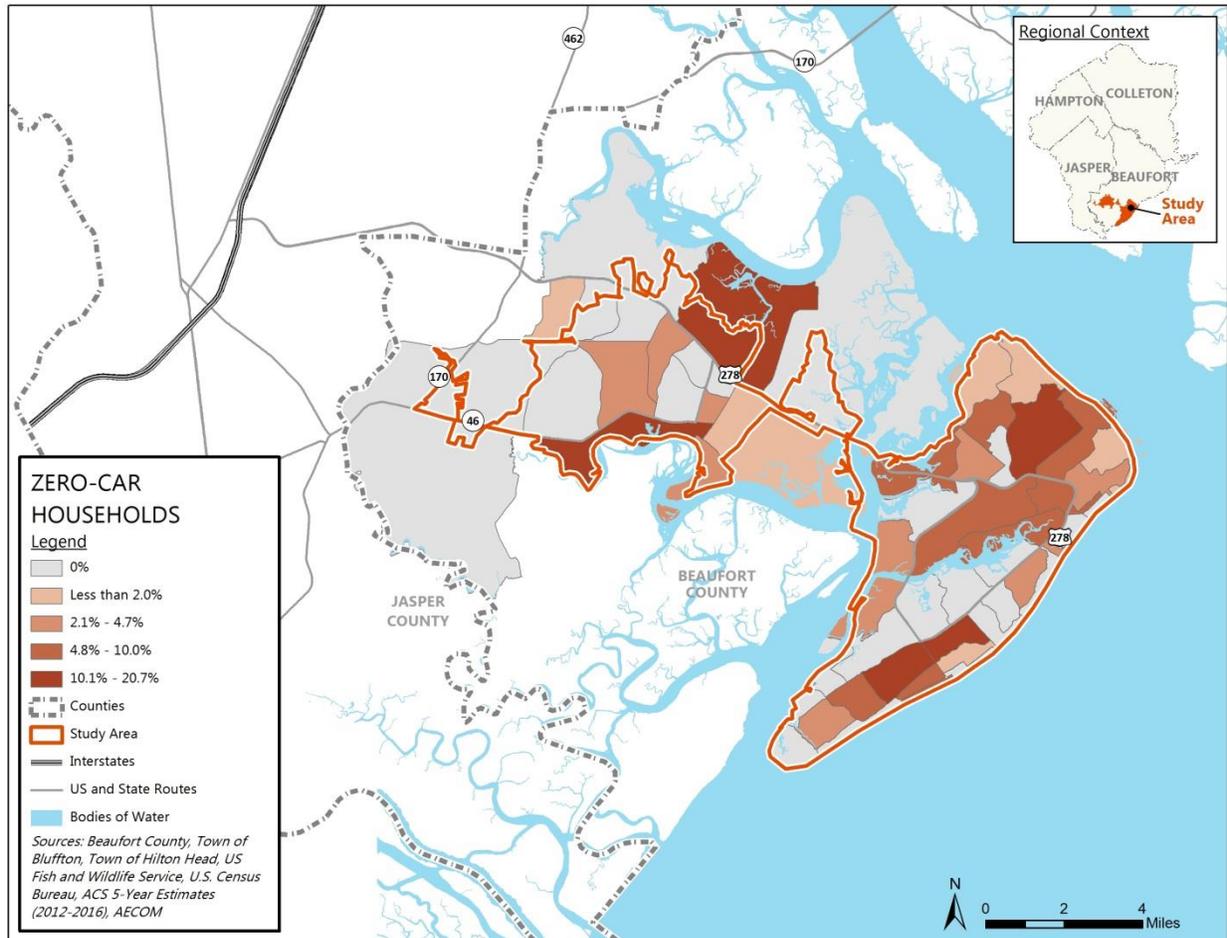
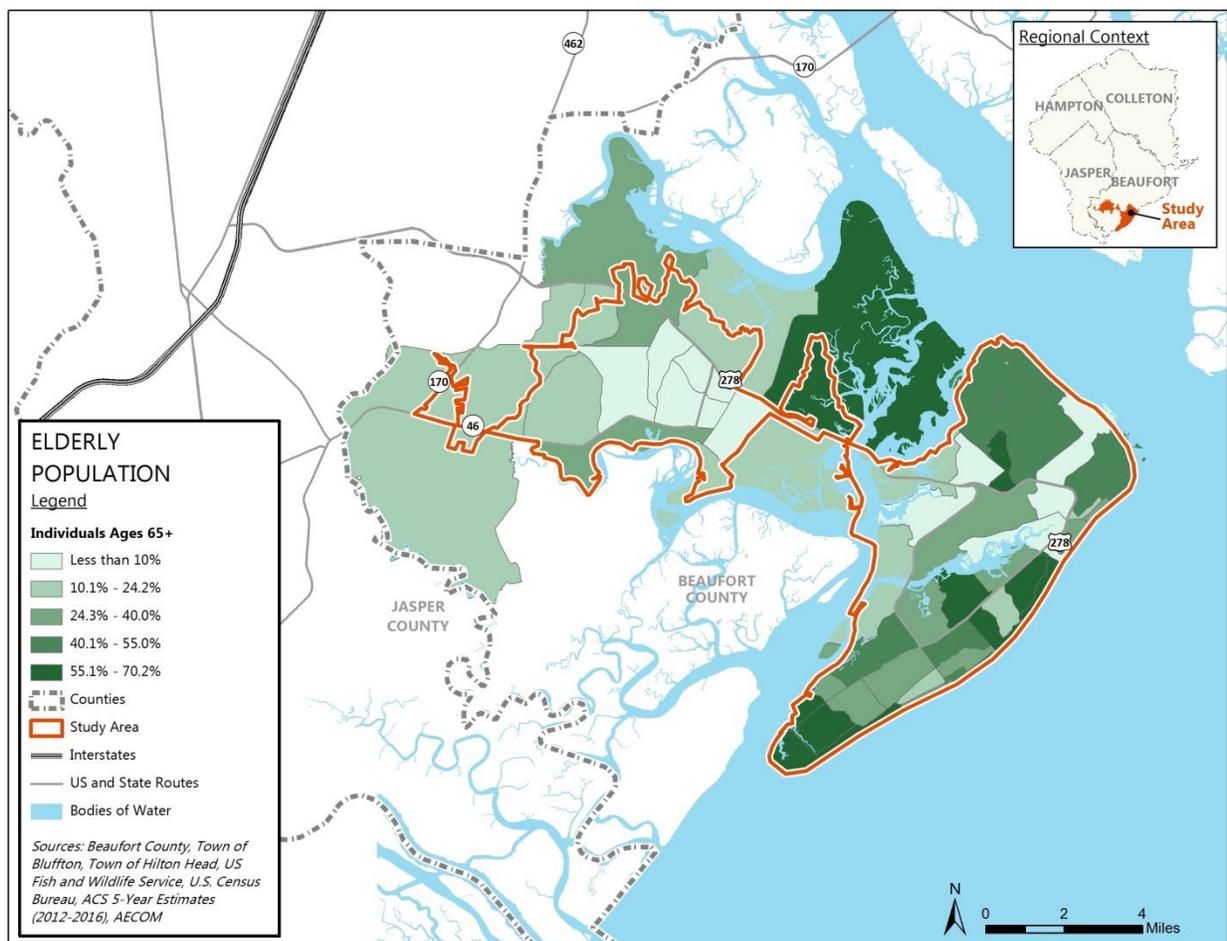


Figure 2-15 shows the elderly or senior population, those that are 65 years old or older. This segment of the population comprises a significant proportion of the population in the overall study area as it is a popular place for retirement and active living. There are only a handful of block groups where less than 10 percent of the population is 65 years of age or older, and there are several block groups where between 55 and 70 percent of the population is senior citizens. This includes the southern tip of the Town of Hilton Head Island (within the Sea Pines area), areas along Business 278 near the Palmetto Dunes area, and in the Bear Creek community extending north of the Cross Island Parkway/Business 278 interchange.

Inland, the only block group where more than 55 percent of the population are seniors is located to the northeast of Bluffton. This area primarily includes the Pinckney Island Wildlife Refuge and Victoria Bluff Heritage Preserve, but also includes the Colleton River Plantation and Moss Creek residential communities.

Figure 2-15: Elderly Population in the Study Area



Youth in the study area, ages 15-19, comprise a small portion of the study area population. Figure 2-16 below shows that there are only eight out of 59 block groups where eight percent or more of the population is of this age group. These block groups can be found spread throughout the study area in Bluffton, central Town of Hilton Head Island, and areas of unincorporated Beaufort County.

Figure 2-16: Youth Population in the Study Area

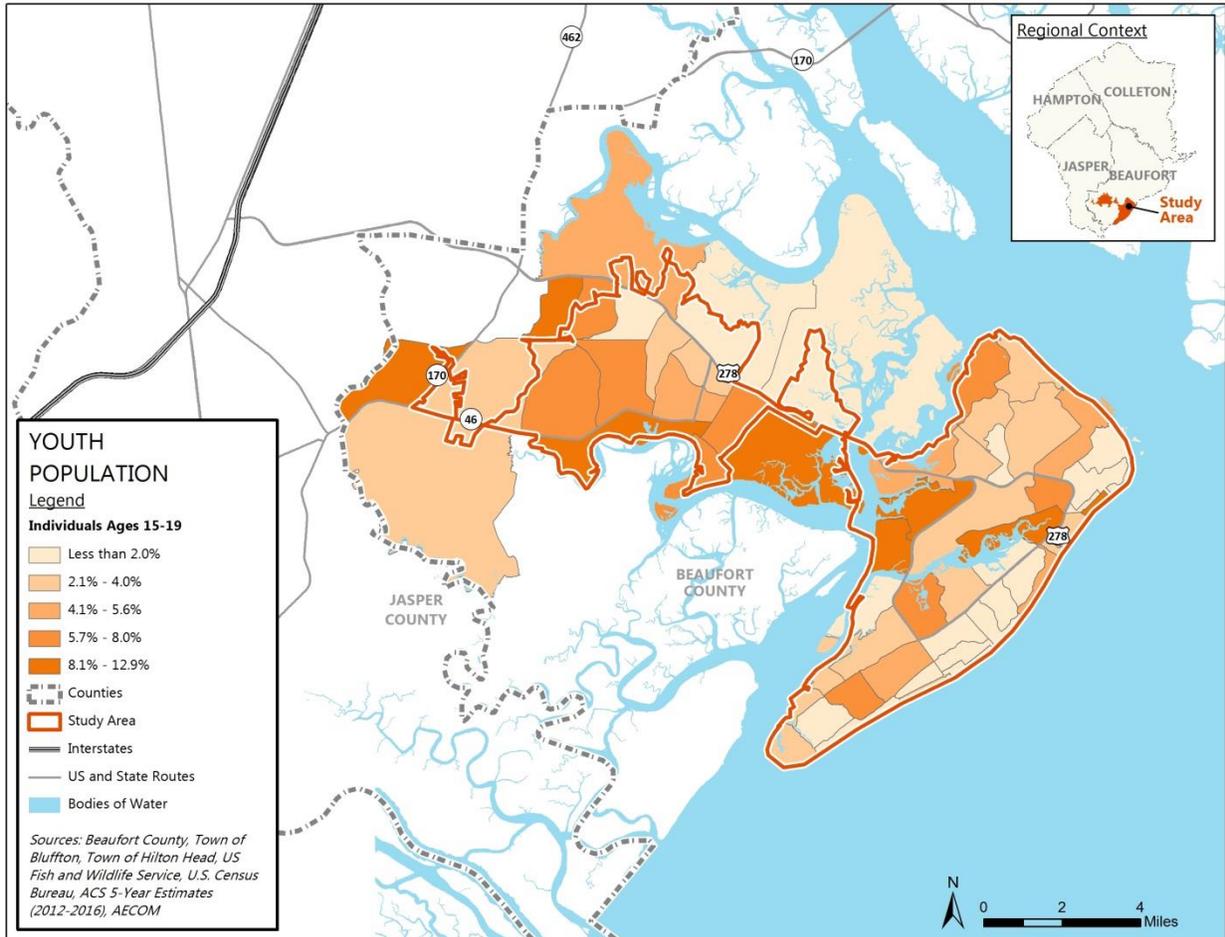
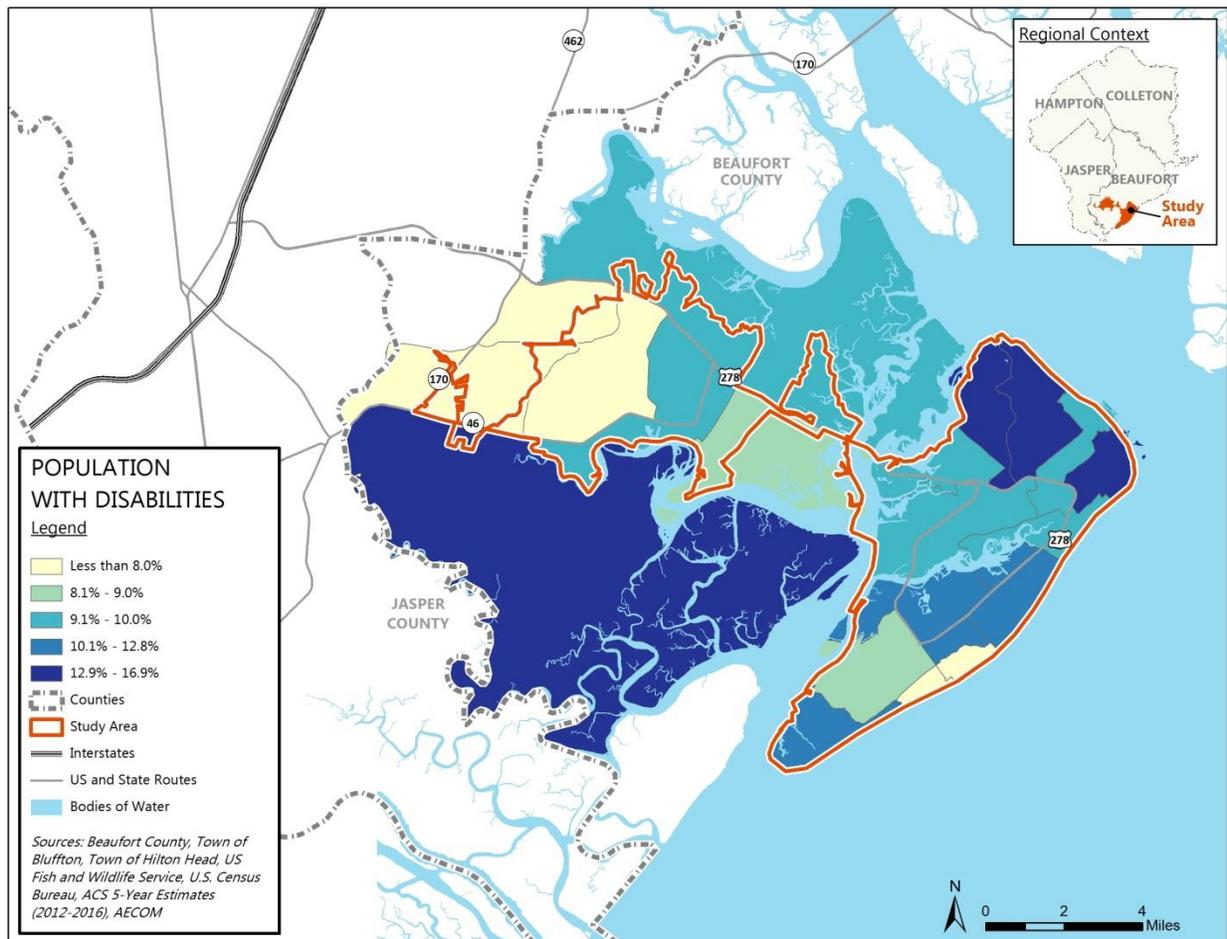


Figure 2-17 shows the percentage of population with disabilities. Unlike the previous demographic maps that reported block group populations, the data for persons with disabilities is limited to census tracts, which are larger in scale than census block groups. Therefore the geographical detail for concentrations of these populations is more limited, but some general geographic distributions are still present. Overall, persons with disabilities comprise a small percentage of the study area population, and only around one quarter of census tracts that coincide with the study area have a population with disabilities over 10 percent. One census tract is located in Bluffton south of May River Road, but very little of this census tract falls within the study area. Three other census tracts located on the Town of Hilton Head Island have a higher concentration of disabled persons. These are all located on the far north end of the island.

Figure 2-17: Population with Disabilities in the Study Area



2.5 Transportation Conditions

This section describes the existing transportation conditions in the study area, including the existing roadway network, current and projected traffic conditions, commuting patterns, existing public transportation services, and the existing pedestrian and bicycle network.

2.5.1 Existing Roadway Network

Roadways in the study area are classified by the South Carolina Department of Transportation (SCDOT) with regard to the function served within a transportation system, and are shown in Figure 2-18. Functional classification varies based on the level of access and mobility provided by the roadway.

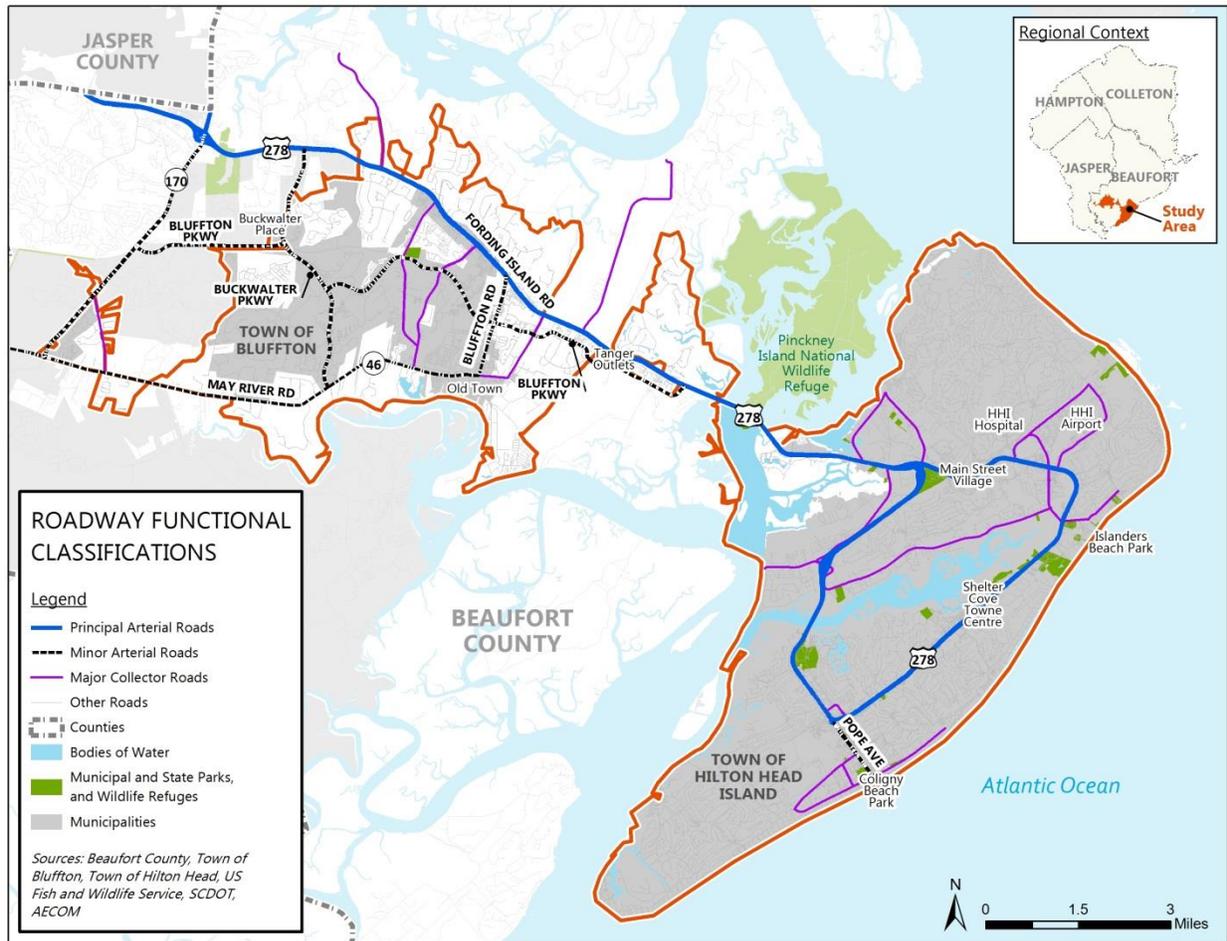
- Arterials are the primary roadways moving high volumes of traffic from one place to another. They have a lower degree of access combined with high vehicular mobility.
- Collectors link arterials and local roads and perform some of the duties of each.
- Local roads provide less vehicular mobility, but frequent access points to homes, businesses, and other properties.

The study area's primary arterial route is U.S. Highway 278, which extends from Interstate-95 (I-95) in Jasper County east through Bluffton and out to the Town of Hilton Head Island. In the Town of Hilton Head Island, U.S. 278 and Business 278 together form a loop encircling the center of the Island. U.S. 278 is the only roadway accommodating traffic onto or off of the Town of Hilton Head Island from mainland. Therefore all vehicular traffic bound for the island must also pass through the Town of Bluffton and unincorporated areas of Beaufort County. The majority of commercial/retail services in the study area are located off of U.S. 278, both in Bluffton and the Town of Hilton Head Island. For the most part, access off the roadway is minimized and consolidated to one or two access points serving a shopping center or cluster of uses, and there are few examples of individual business driveways.

Other primary routes within the study area include six minor arterials: SC 170, SC 46/May River Road, Bluffton Parkway, Buckwalter Parkway, and Bluffton Road, and Pope Ave. SC 170 is the primary route northeast from Bluffton to Beaufort, and southwest to U.S. 17 for travel to Savannah. SC 46/May River Road defines the southern edge of Beaufort County and also connects west to Hardeeville and I-95. Bluffton Parkway, Buckwalter Parkway, and Bluffton Road serve as arterials within Bluffton, providing connections between U.S. 278, SC 170, and SC 46. Bluffton Parkway runs primarily east to west, while Buckwalter Parkway and Bluffton Road run primarily north to south. Pope Avenue, which extends south beyond Business 278 on the Town of Hilton Head Island, provides a connection to the beachfront at Coligny Beach Park.

In addition to the arterial routes described above, collector and local roadways accommodate vehicle movement throughout the study area.

Figure 2-18: Roadway Functional Classifications



2.5.2 Study Area Traffic Congestion

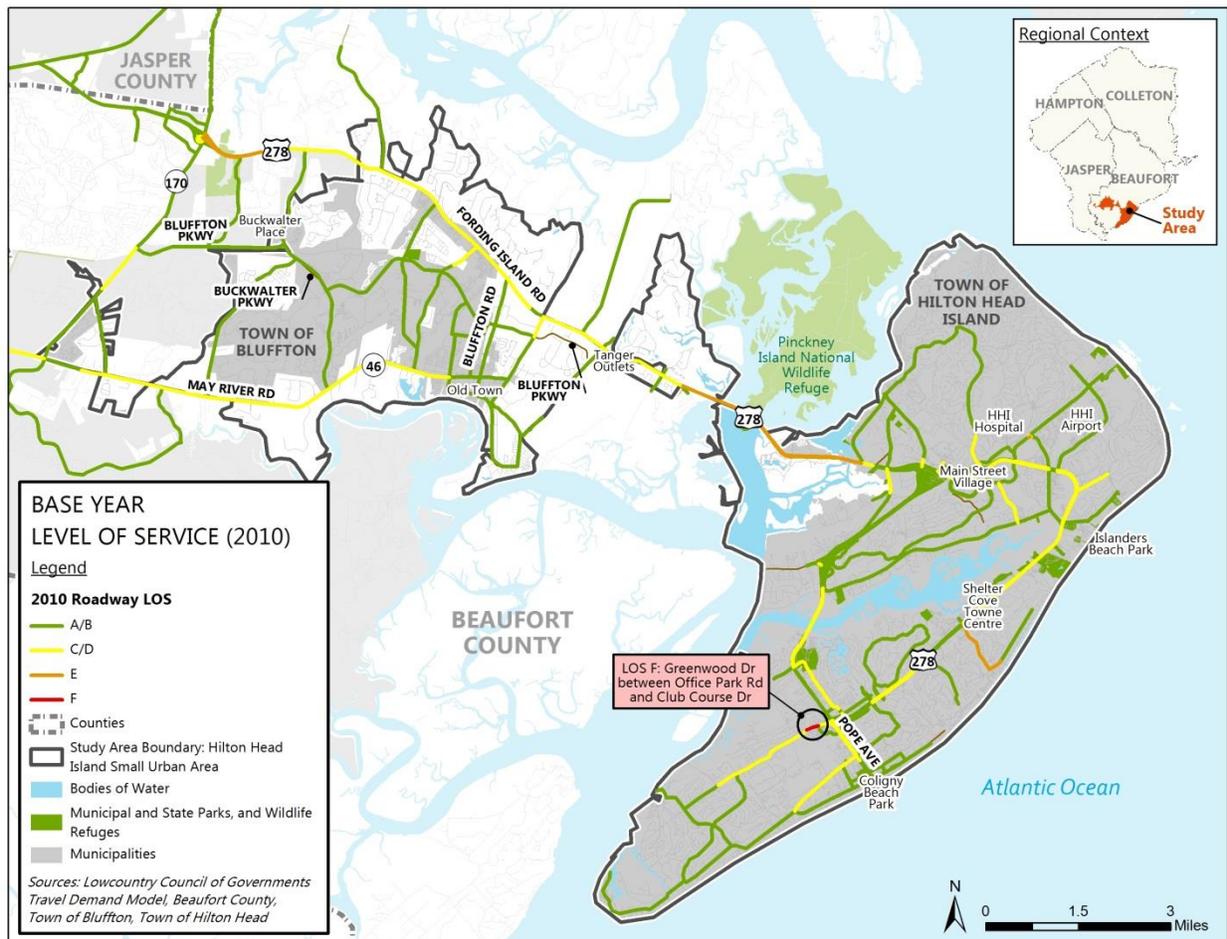
A Level of Service (LOS) analysis was performed in 2016 using the Lowcountry Regional Travel Demand Model to estimate where the existing and future transportation network in the Lowcountry region may exceed capacity.¹ The model-based traffic volumes were combined with roadway capacities to determine how well the system is functioning in the present, and how well it is expected to function in the future. The output of the model assigns a grade (A, B, C, D, E, and F) to each of the roadway segments analyzed, with the grades generally characterized as follows.

- LOS A/B: Good
- LOS C/D: Fair
- LOS E: Poor
- LOS F: Failing

¹ LCOG Regional Travel Demand Model Future Year “No Build” and “E+C” Model Report, CDM Smith, 2016

Figure 2-19 shows the base year (2010) LOS output from the model. In general, most roadways were operating at satisfactory conditions and able to handle the volume of existing traffic, with only a few exceptions on major roadways. Local and collector roads generally experienced good conditions (LOS A or B), while primary arterial roads including U.S. 278 and SC 46/May River Road were generally experiencing LOS C or D (fair). Certain areas, particularly along U.S. 278, experienced medium to high congestion levels with poor levels of service (LOS E). This includes a segment of U.S. 278 between Bluffton and the Town of Hilton Head Island, as well as just east of the SC 170 interchange both experiencing LOS E in both directions. Within the Town of Hilton Head Island, Queens Folly Road between Business 278 and the Palmetto Dunes Resort is experiencing LOS E, while the segment of Greenwood Drive westbound entering into the Sea Pines community is experiencing failing conditions (LOS F).

Figure 2-19: Base Year Level of Service, 2010



The travel demand model was also used to project the traffic conditions out to years 2020, 2030, and 2040 with assumptions for the “Existing + Committed” network. The “Existing + Committed” scenario assumes all existing roadways, plus all roadway improvements proposed and committed in the regional transportation that are reasonably expected to be operational in the forecast year (2020, 2030, or 2040). Additionally, a “No Build” scenario was prepared for

2040, which does not assume any additional improvements and shows roadway conditions should the regional projects not be implemented.

The 2040 levels of service are presented in **Figures 20 and 21** for the “No Build” and “Existing + Committed” scenarios, respectively. The planned regional projects would show improvements for many roadways within the study area; however, even with these improvements, several areas will see similar or worse congestion than they are currently experiencing, including key areas of U.S. 278. By 2020, the bridge section of U.S. 278 will already be experiencing LOS F, or failing conditions in the eastbound direction, and by 2030 will be LOS F in both directions. For year 2040, it would also be LOS F in both directions for either the Existing + Committed or No Build conditions. Furthermore, several chokepoints with LOS F are anticipated within the Town of Hilton under either scenario. These include segments of Greenwood Drive, Mooring Buoy Road, Pope Avenue, and Beach City Road. Those segments are identified on each map.

Figure 2-20: No Build Level of Service, 2040

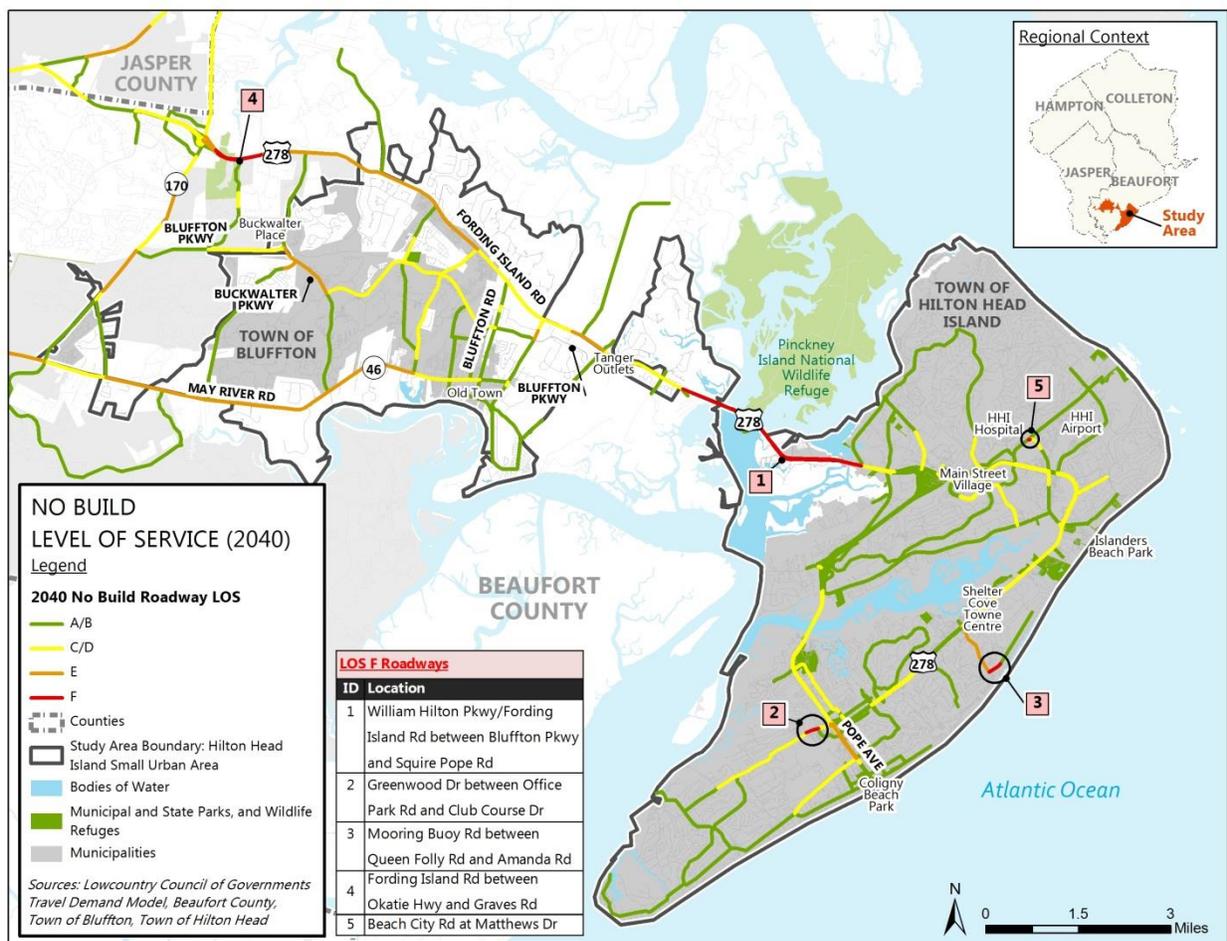
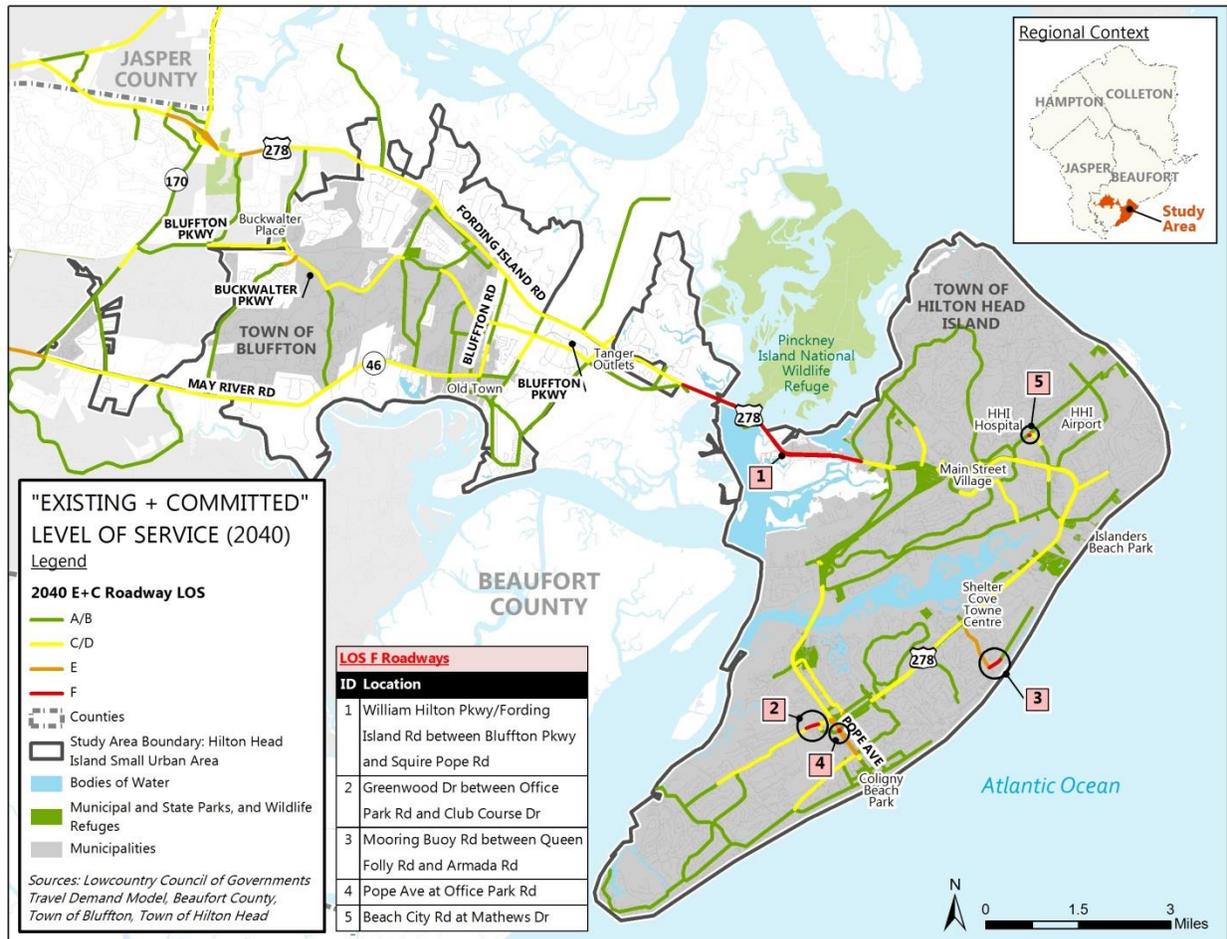


Figure 2-21: "Existing + Committed" Level of Service (2040)



In order to accommodate the projected volumes for the failing LOS segments along U.S. 278, widening of the bridges from 4 to 6 lanes along U.S. 278 between Bluffton and the Town of Hilton Head Island would be needed. This is estimated in the region's Long Range Transportation Plan (LRTP) to cost at least \$200 million (2015 dollars). This project is currently unfunded. Any planned improvements to public transportation must anticipate that these congested conditions between the Town of Hilton Head Island and Bluffton will continue into the foreseeable future without a new regional infrastructure mechanism that could provide the needed cost for U.S. 278 improvements.

2.6 Commuting Patterns

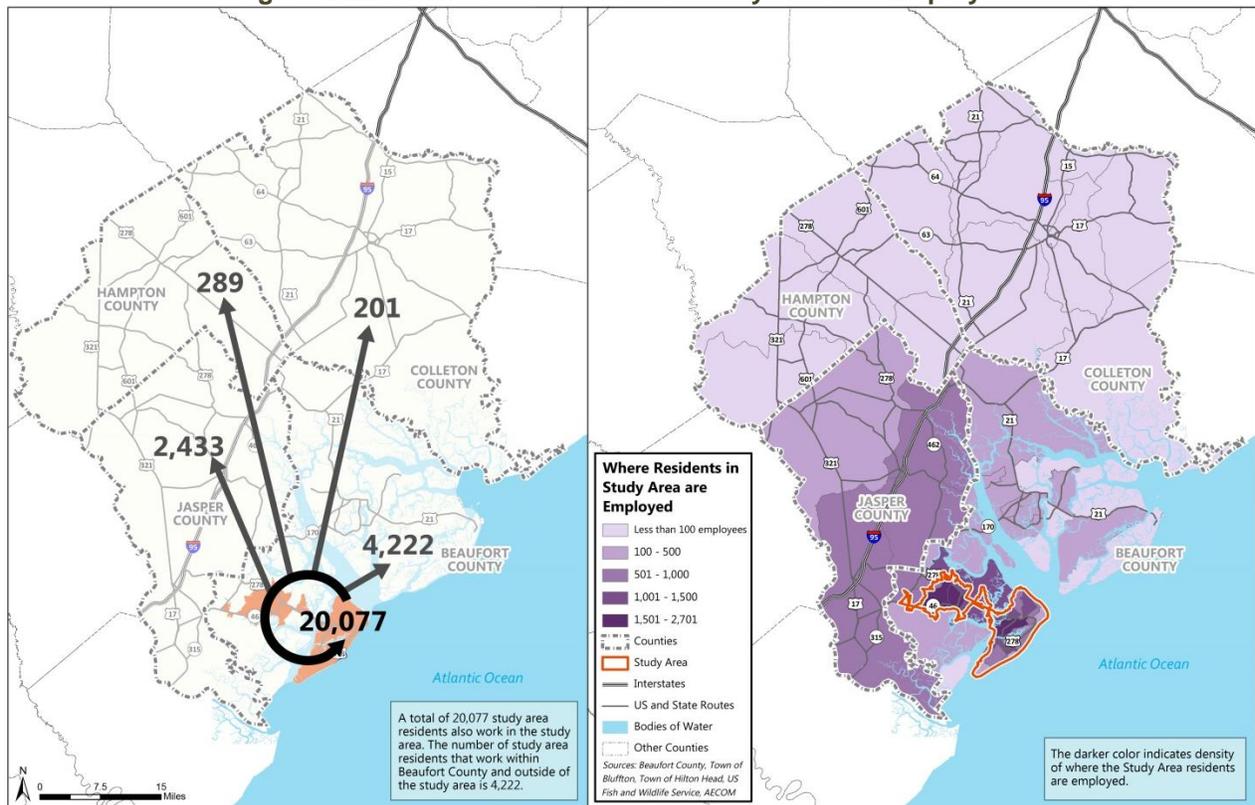
The following series of figures (**Figures 22 through 27**) show regional and local commuting patterns, based on the most recently available longitudinal employer-household dynamics (LEHD) data from the U.S. Census Bureau’s Center for Economic Studies (2015).

2.6.1 Regional Scale

Figure 2-22 provides a regional snapshot for where residents of the study areas work. The left side shows numbers of study area resident commuters and the right side shows density. The highest share of study area residents (20,077) work within the study area. Another 4,222 residents work outside the study area, but these work within Beaufort County. For study area residents commuting to other counties, the highest numbers are commuting to Jasper County (2,433 study area residents). Commuters to Hampton (289) and Colleton County (201) represent only a small number of study area residents.

The map on the right shows the density (by Census Tract) of where study area residents are employed in more detail. For instance, it shows that for those study area residents working in Jasper County, there is a higher concentration of employment along the I-95 corridor in Jasper County than the northwest portion of the county, and also compared to most areas of Beaufort County outside the study area.

Figure 2-22: Where Residents in the Study Area are Employed

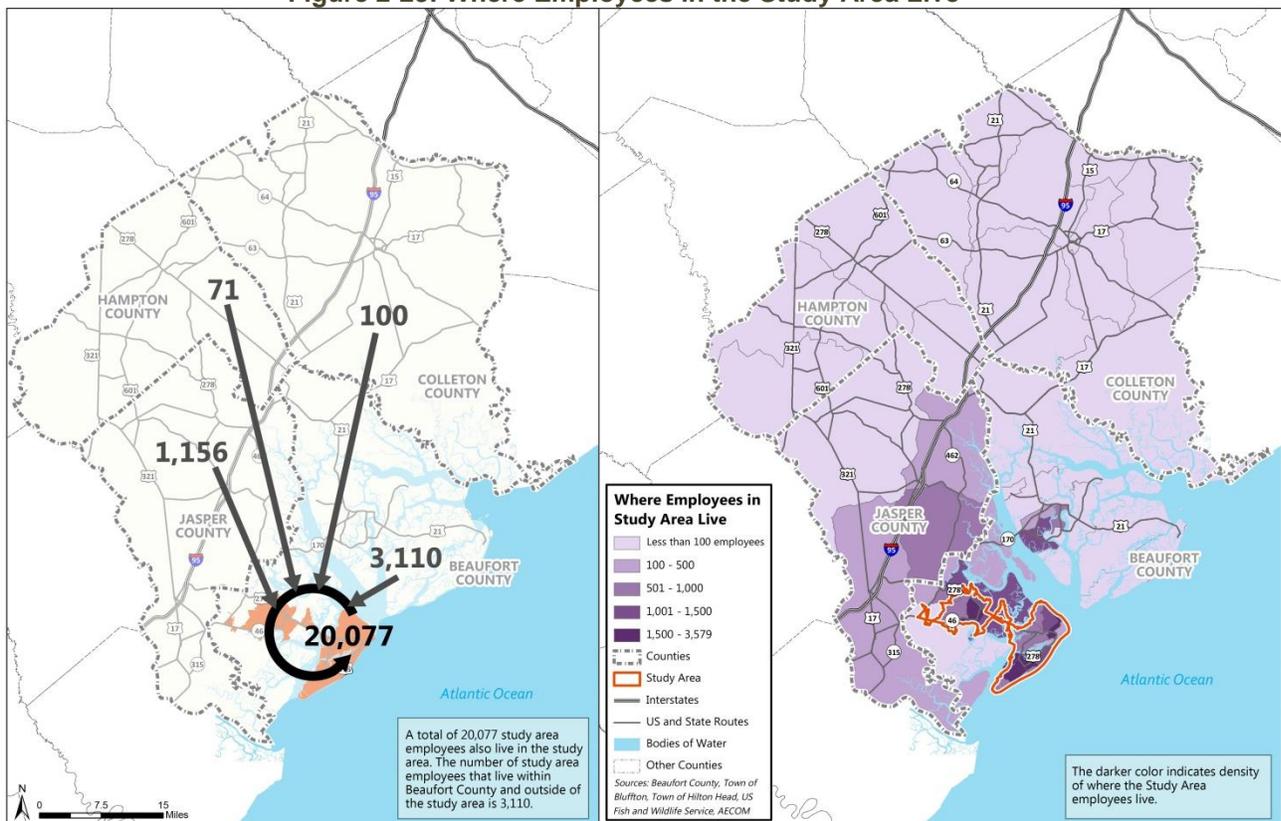


Where Study Area Employees Reside...

Figure 2-23 provides a regional snapshot for where employees that work in the study area reside. Consistent with the previous figure, Figure 2-22, 20,077 study area workers are also study area residents. Just over 3,000 study area employees live within Beaufort County but work outside the study area. Only 1,156 Jasper County residents commute into the study area, which is less than half the amount of study area residents commuting out to Jasper County to work (2,433), as was shown in Figure 2-22. Commuters into the study area that reside in Hampton and Colleton Counties represent only a small number of study area employees. Overall, the study area has more commuters commuting out of the study area to work than there are commuters coming into the study area from outside to work.

The map on the right shows the density (by Census Tract) of where study area employees reside. The highest concentrations of commuters coming from outside the study area to work reside in or near the City of Beaufort, or in the southeast portion of Jasper County.

Figure 2-23: Where Employees in the Study Area Live



2.6.1 Study Area Scale

Figure 2-24 shows commuting patterns within the study area. The map on the left shows where the Town of Hilton Head Island residents work. Approximately 9,000 Hilton Head residents stay on the island to work, whereas 4,867 the Town of Hilton Head Island residents commute to work elsewhere in the study area. The map on the right shows the concentration of where island residents work within the study area. Aside from those staying on the Town of Hilton Head Island to work, there is a large concentration that work within the central area of Bluffton, generally between U.S. 278, Buckwalter Parkway, SC 46 and Burnt Church Road.

Figure 2-24: Where the Town of Hilton Head Residents Are Employed

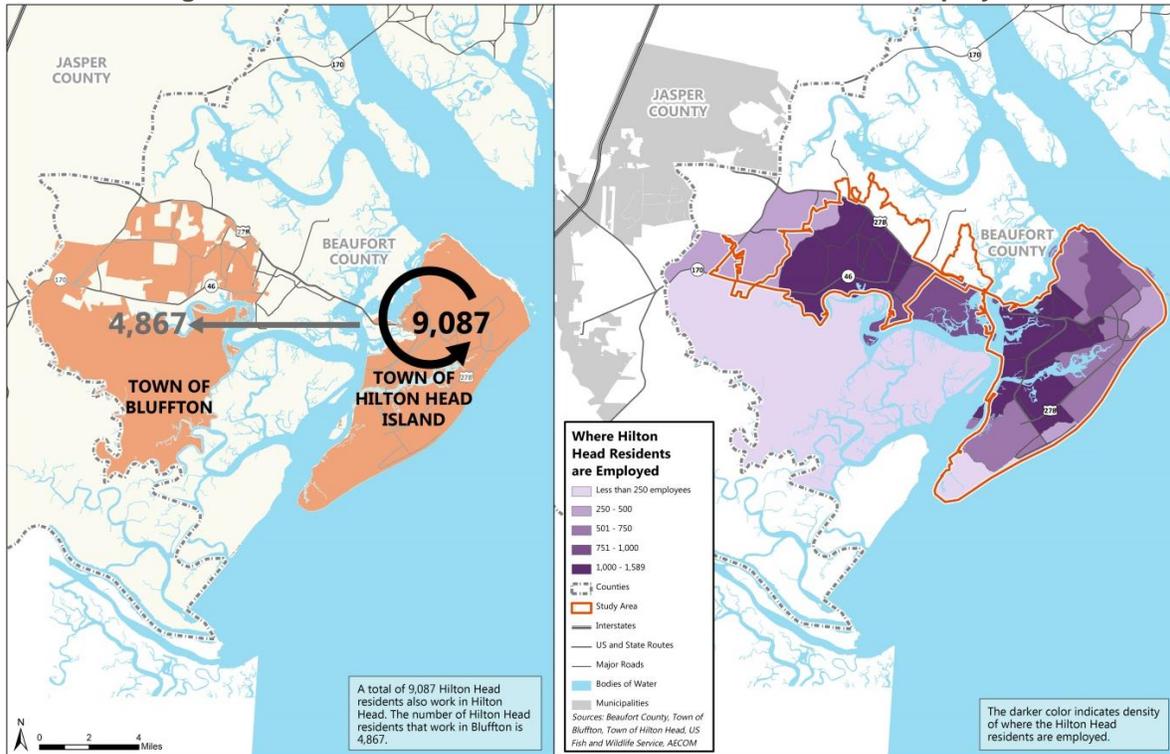


Figure 2-25 shows where the Town of Hilton Head Island workers live within the study area. There are less than 1,000 Hilton Head Island workers that live in Bluffton.

The map on the right shows the concentration of where island workers reside within the study area. Outside of the Town of Hilton Head Island, there are no significant concentrations of those who work on the island.

Figure 2-25: Where the Town of Hilton Head Employees Live

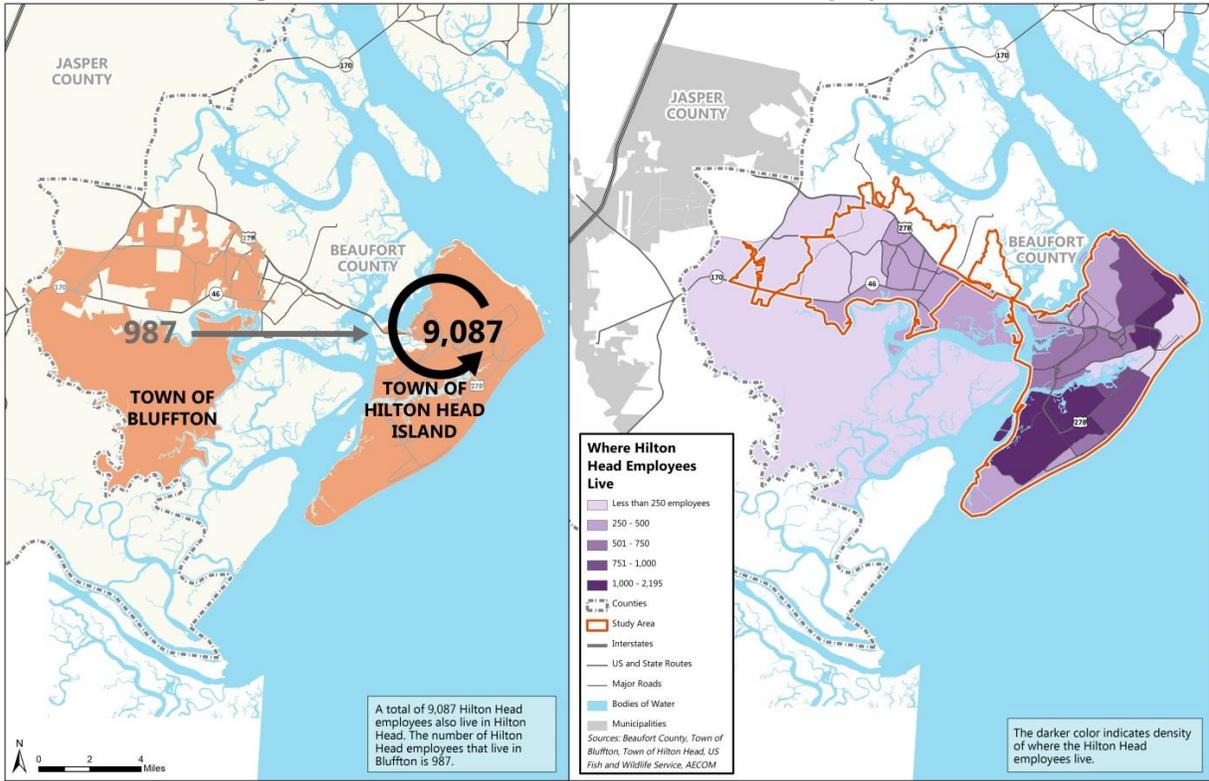


Figure 2-26 shows where Bluffton residents are employed within the study area. Less than 1,000 Bluffton residents commute to the Town of Hilton Head Island, compared to 3,352 Bluffton residents staying in Bluffton to work. The central Bluffton area, between U.S. 278, Burnt Church Road and Buckwalter Parkway, is where most Bluffton residents work.

Figure 2-27 shows where those employed in Bluffton live. As shown previously, 3,352 live within the Town of Bluffton; however, 4,867 are commuting in from the Town of Hilton Head Island. The highest concentrations of these commuters live either in central Bluffton or on the Town of Hilton Head Island near and just northeast of the intersection of U.S. 278 at Pope Avenue.

It should be noted that these maps only reflect data for full-time residences and the address of commuter employer's address. This may not be reflective of part-time residents, and also may not truly reflect the commuting patterns for construction workers, landscapers, etc. that may have an official business address in one location but primarily serves another location on a day to day basis.

Figure 2-26: Where Bluffton Residents are Employed

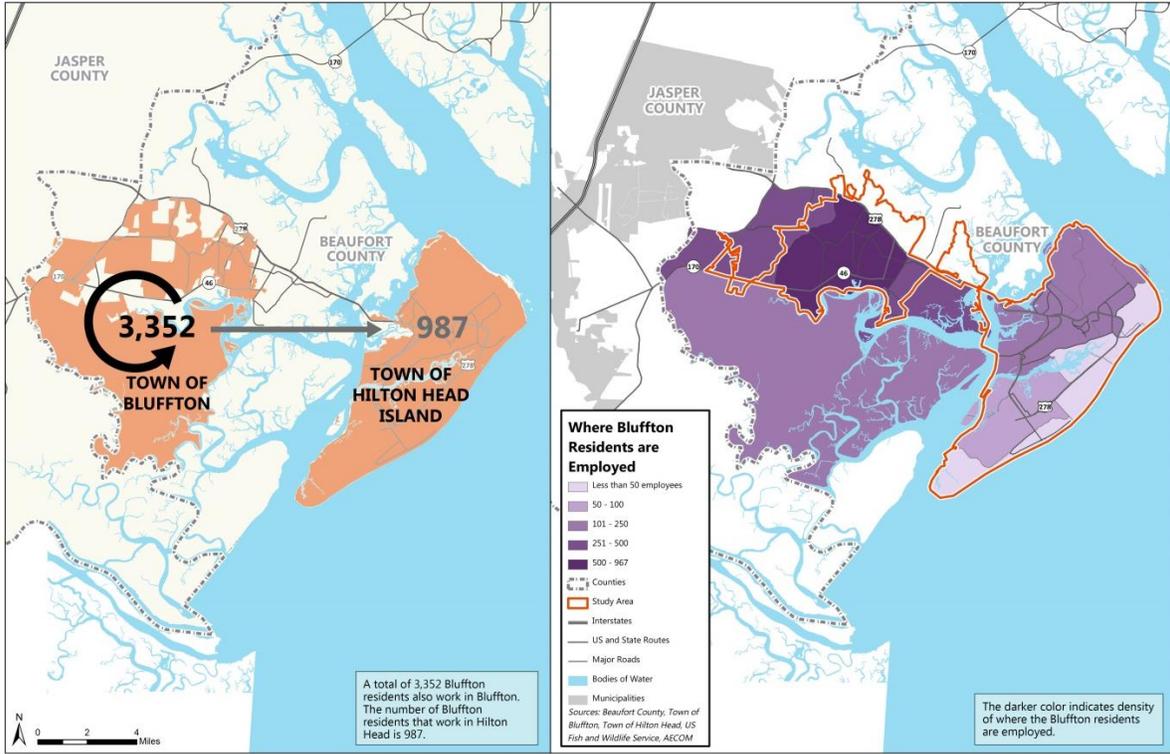
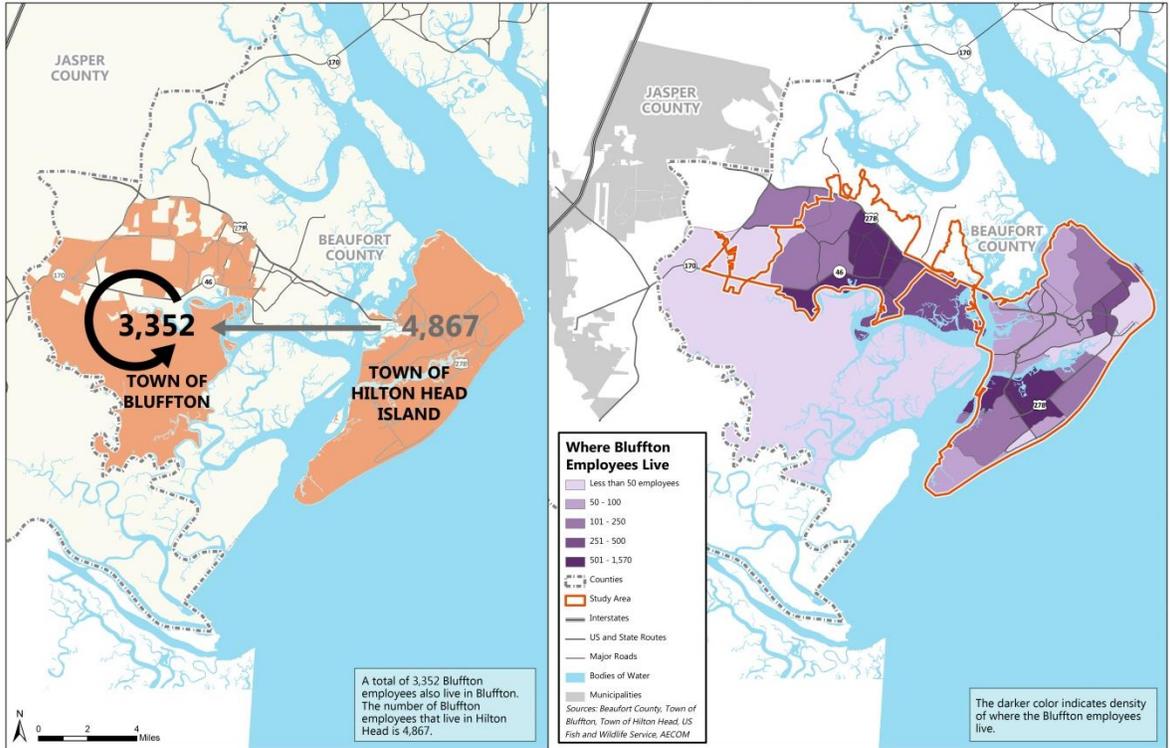


Figure 2-27: Where Bluffton Employees Live



2.6.2 Pedestrian and Bicycle Infrastructure

Sidewalks and multiuse pathways are present along many of the major roads throughout the study area. This includes pathways that are provided and maintained by public entities, such as Beaufort County and local municipalities, as well as private pathways located within Planned Unit Developments (PUDs).

Within the Town of Bluffton, most of the minor arterial roads have sidewalks on one or both sides of the road. This includes SC 170 (one side), Bluffton Parkway (both sides), Buckwalter Parkway (both sides), and Bruin Road before it becomes May River Road (both sides). Some of the smaller streets that feed into the primary roads also have sidewalks, although gaps exist in the pedestrian network. Many residential and commercial developments also include sidewalks and multi-use trails. In general, pedestrian and bicycle infrastructure is more prominent within the area west of Burnt Church Road in Bluffton. Within the Town of Hilton Head Island, multi-use pathways are present along all major roads. Private pathways are also common within PUDs, as demonstrated in **Error! Reference source not found.** and Figure 2-9.

Figure 2-28: The Town of Hilton Head Island Pathways

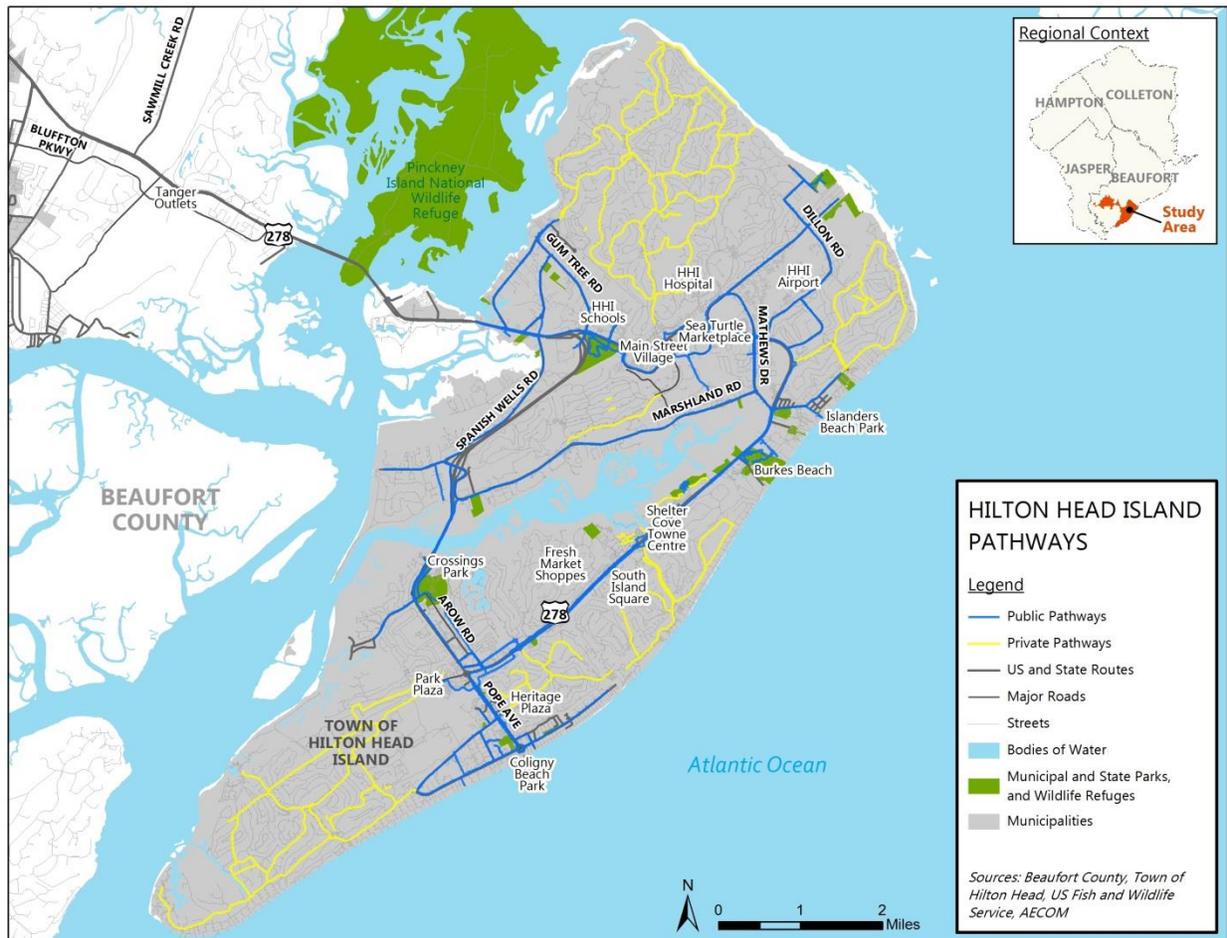
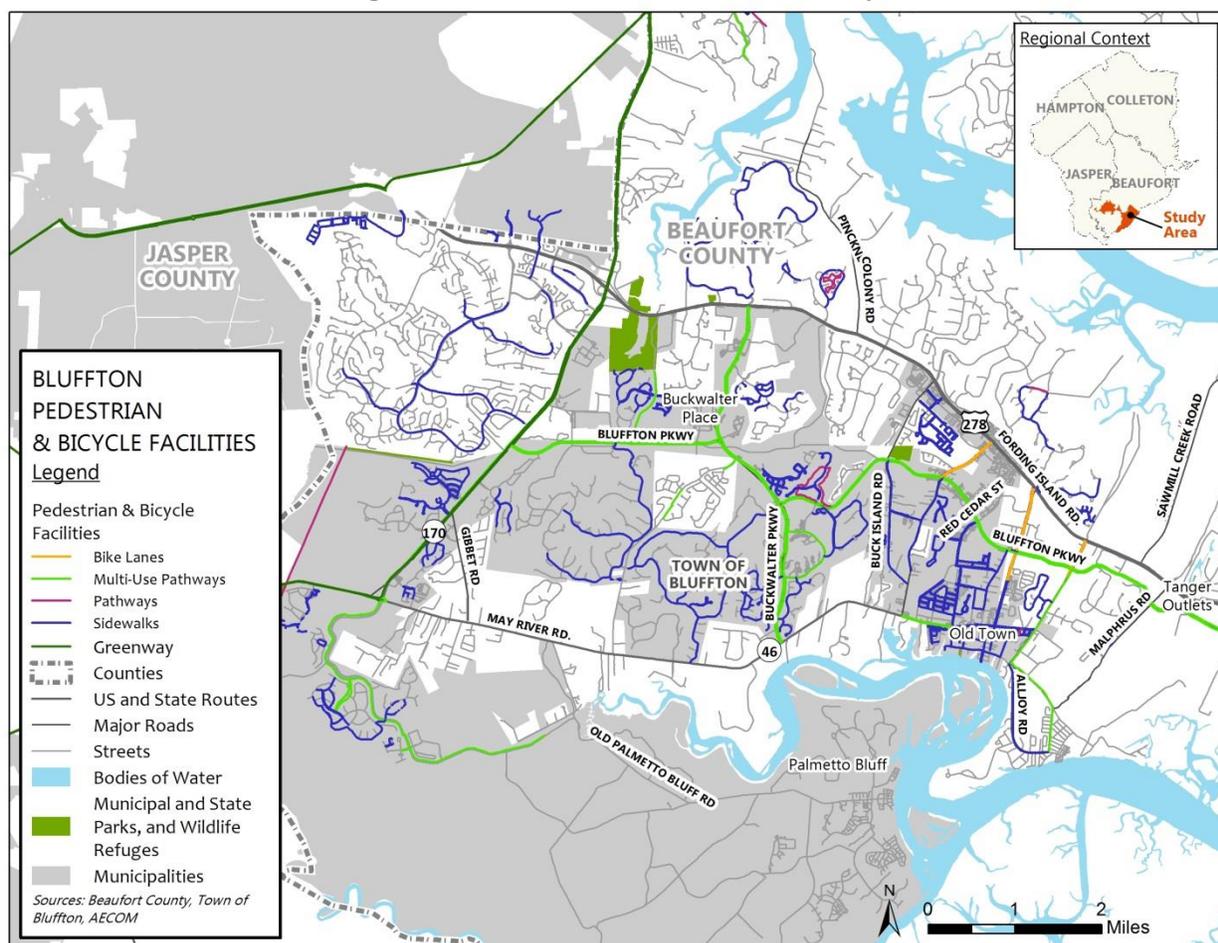


Figure 2-29: The Town of Bluffton Pathways



2.7 Current Transit Services

2.7.1 Existing Palmetto Breeze Transit Services

Palmetto Breeze currently provides transit service within the study area, and four other neighboring counties (see Error! Reference source not found.30). Palmetto Breeze provides a variety of transportation services within the Lowcountry area, including regional and local fixed-route bus service, seasonal routes, and routes to Beaufort County Disability and Special Needs (DSN) centers.

2.7.1.1 Regional Commuter Routes

The following Palmetto Breeze fixed bus routes provide regional commuter service from outer areas of the Lowcountry region into the Town of Hilton Head Island:

- **Route 302** provides service from St. Helena Island to the Town of Hilton Head Island via U.S. 21 and U.S. 170.
- **Route 307** provides service from Gilford (Allendale County) to Bluffton and the Town of Hilton Head Island via U.S. 321.

- **Route 308** provides service from Hampton County and Jasper County to Bluffton and the Town of Hilton Head Island via U.S. 336.
- **Route 309** provides service from Big Estate in northeast Beaufort County to Bluffton and the Town of Hilton Head Island via U.S. 21 and U.S. 170.
- **Route 310** provides service from Hampton and Jasper Counties to Bluffton and the Town of Hilton Head Island via U.S. 462.
- **Route 311** provides service from Allendale and Hampton Counties into Bluffton and the Town of Hilton Head Island via U.S. 278, U.S. 68, and I-95.
- **Route 320** provides service from Ruffin in Colleton County to Bluffton and the Town of Hilton Head Island via U.S. 21, U.S. 64, and U.S. 17.

2.7.1.2 Local Routes Serving Bluffton and Hilton Head

- **Route 401** provides service between the Town of Hilton Head Island and Bluffton for senior services.
- **Route 503** – operates to Okatie, Bluffton, and the Town of Hilton Head Island.
- **Route 504** provides local services to employment areas around Bluffton, with stops at RSI (Resort Services, Inc), Bluffton Parkway/Simmons ville Rd. intersection, Benton House of Bluffton (assisted living facility), Buckwalter Place shopping center and complex, Berkeley Place shopping area, Plantation Business Park, Belfair Town Village shopping center, and the Palmetto Breeze Annex. Operates on an approximately 19-mile loop around Bluffton in the AM and PM.
- **Route 863 (Palmetto Bluff)** provides service from Bluffton to the Palmetto Bluff Resort.

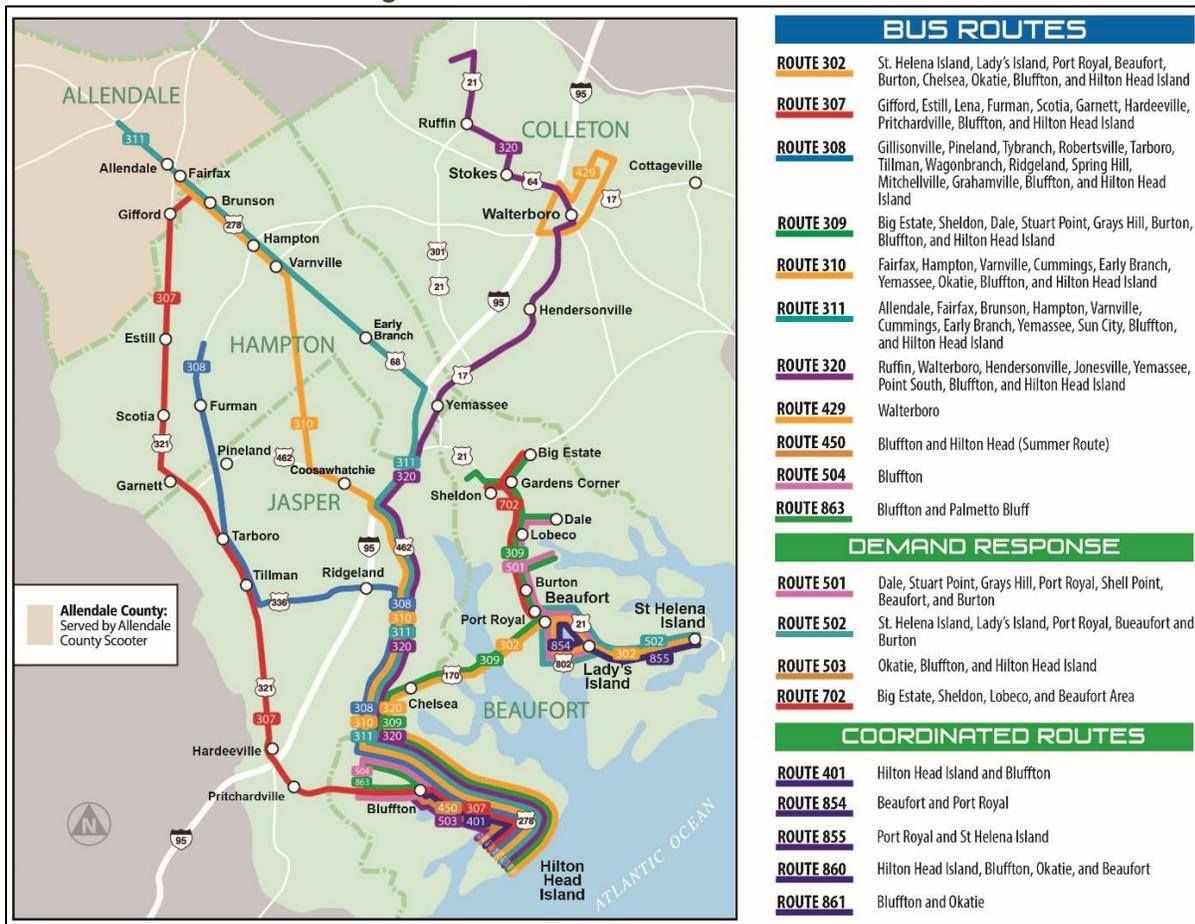
2.7.1.3 Other service routes

- **Route 501** provides service between the City of Beaufort and other nearby areas of Beaufort County, including Dale, Burton, Shell Point, and Port Royal.
- **Route 502** provides service between the City of Beaufort, Lady’s Island and St. Helena Island.
- **Route 429** provides a route servicing areas within the City of Walterboro area.
- **Route 702** is a demand-response route for north Beaufort County (Big Estate to Beaufort).

2.7.1.4 Demand-Response Routes to Beaufort County Disabilities and Special Needs (DSN)

- **Route 854** is a demand-response route servicing Beaufort, Port Royal, and the Beaufort DSN.
- **Route 855** is a demand-response route servicing St. Helena Island and the Beaufort DSN.
- **Route 860** is a demand-response route servicing the Town of Hilton Head Island, Bluffton, and the Beaufort DSN.
- **Route 861** is a demand-response route servicing Bluffton to the Beaufort DSN.

Figure 2-30: Palmetto Breeze Service Area



Source: Palmetto Breeze, AECOM, 2018²

2.7.1.5 Frequency, Hours and Fares

Palmetto Breeze transportation services operate Monday through Sunday from 4:30 am to 8:00 pm. Regular commuter routes have a single one-way morning route and a single one-way afternoon/evening route.

Fares are based on distance, with Beaufort County routes less expensive than regional locations further away. There are 10 percent discounts for purchasing weekly or monthly tickets rather than daily fares. Demand-response service also varies by distance from \$3.75 to \$14.00. Table 2-6 provides all Palmetto Breeze fares at the time of this report.

² Palmetto Breeze website service map, with the following updates: Route 850 removed; Routes 429, 450, 504, 854, 855, 863 added.

Table 2-6: Palmetto Breeze Fares, 2018

Stops	Full Fare	Weekly	Monthly
Beaufort County Bluffton, St. Helena, Lady's Island, Burton, Grays Hill, Beaufort, Seabrook, Port Royal, Pritchardville, Okatie	\$2.50	\$27.00	\$99.00
Beaufort County Dale, Big Estate, Sheldon, Point South	\$2.75	\$29.70	\$108.90
Jasper County Hardeeville, Robertsville	\$3.00	\$32.40	\$118.80
Jasper County Coosawhatchie, Gillisonville, Roseland, Ridgeland, Tarboro, Pineland	\$3.50	\$37.80	\$138.60
Hampton County	\$4.00	\$43.20	\$158.40
Colleton County	\$4.00	\$43.20	\$158.40
Allendale County	\$3.25	\$35.10	\$128.70
Demand-Response	\$3.75 - \$14.00 (one-way trip)		

Source: Palmetto Breeze; Weekly = 12 trips (10% discount); Monthly = 44 trips (10% discount)

2.7.2 Other Transportation Providers

In addition to transit service offered by Palmetto Breeze, other private operators provide shuttles and other limited services on the Town of Hilton Head Island. These include:

- Sea Pines Trolley System: Free for guests and residents of Sea Pines community
- Palmetto Dunes Shuttle: Free for guests/residents of Palmetto Dunes
- Forest Beach (Red) Shuttle: Free to public
- Airport Shuttles/Taxis: On-demand pay services

Transportation Network Companies (TNCs)

TNC refers to rideshare companies such as Uber and Lyft, which are increasingly common in urban areas. While not a public transportation service, they are very popular for short rides because of the convenience, interface with smartphones, and on demand service provided. In less populated areas that are underserved by taxicabs, TNC providers can often provide lower rates and quicker service.

It was found that there are a limited number of TNC drivers operating in the study area during the offseason, with approximately 5 to 10 drivers each operating in Bluffton and the Town of Hilton Head Island. In higher tourist season, a subset of the TNC drivers that normally operate in Savannah, GA will switch part or full time to the Town of Hilton Head Island area to take advantage of greater opportunity.

2.8 Proposed Services

Figure 2-31 shows a proposed trolley route serving the Town of Hilton Head Island. This route is shown in phases and is intended to serve popular tourist destinations to reduce the need for parking and short automobile trips. The proposed 2018 initial route, shown in pink, provides

service along Business 278 from Shelter Cove Towne Center, a popular shopping destination, with service to Coligny Beach, which is the most popular beach on the Town of Hilton Head Island. Interim stops provide service to other shopping services and communities in between.

The next phase would extend further north on Business 278 and Mathews Drive with service to Burke Beach, Hilton Head Island Beach and the newly developed Sea Turtle Marketplace, shown as a thick pink line. A third phase, shown in light blue, would provide service between Coligny Beach and Crossings Park, where a new park-and-ride would be built. This service would allow one-day visitors ('day-trippers') an opportunity to park and ride the shuttle service to the beach without having to mix with heavy island traffic or find limited parking at Coligny. An additional extension would provide service along Cordillo Parkway and South Forest Beach Drive, shown in yellow, providing service to many of the larger resorts and hotels on the south end of the island.

Note: Complementary ADA Paratransit service will be considered for this fixed route service. Additionally, cost estimates for the Phase II extensions to the initial trolley route will be developed, but the timing of Phases III and IV is tentative and cost estimates will not be developed for them in this report.

Figure 2-31: Proposed Town of Hilton Head Island Trolley Routes

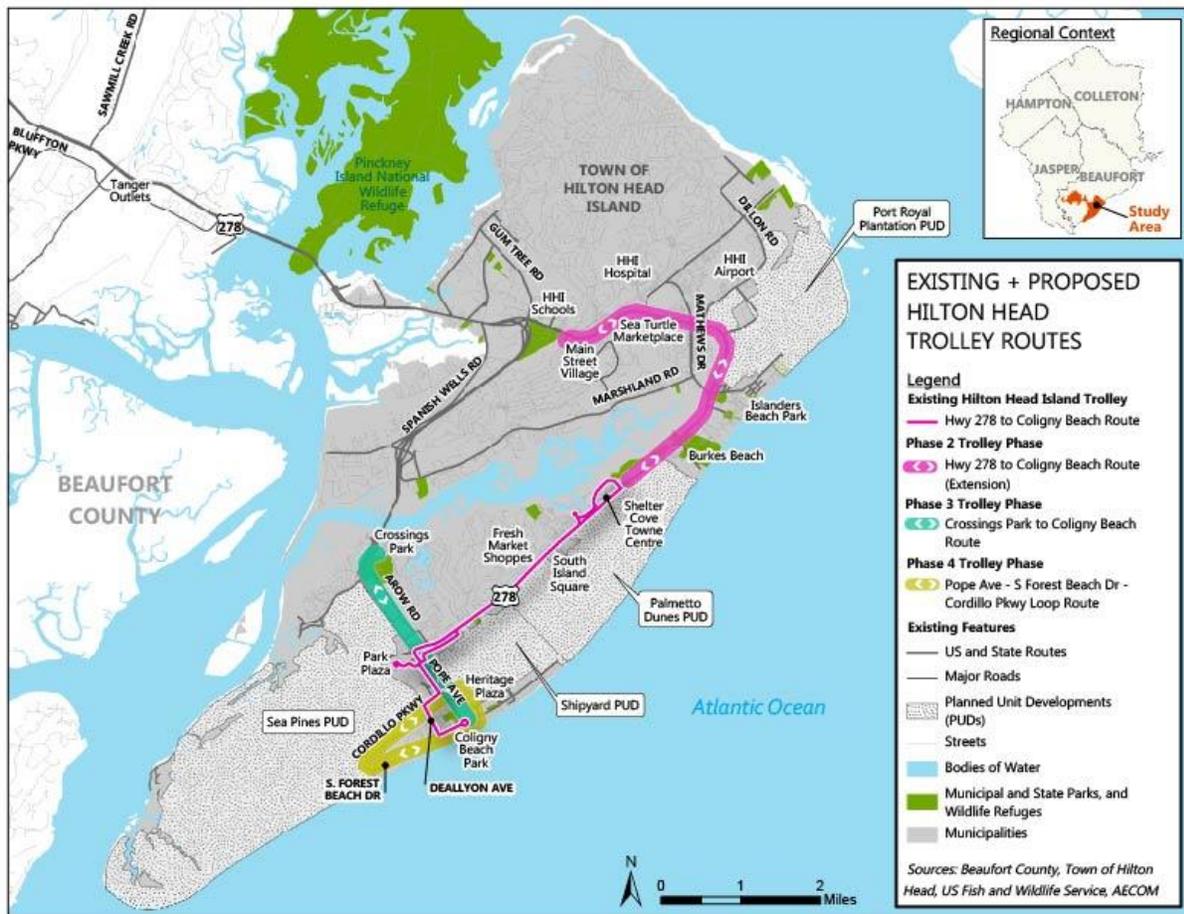
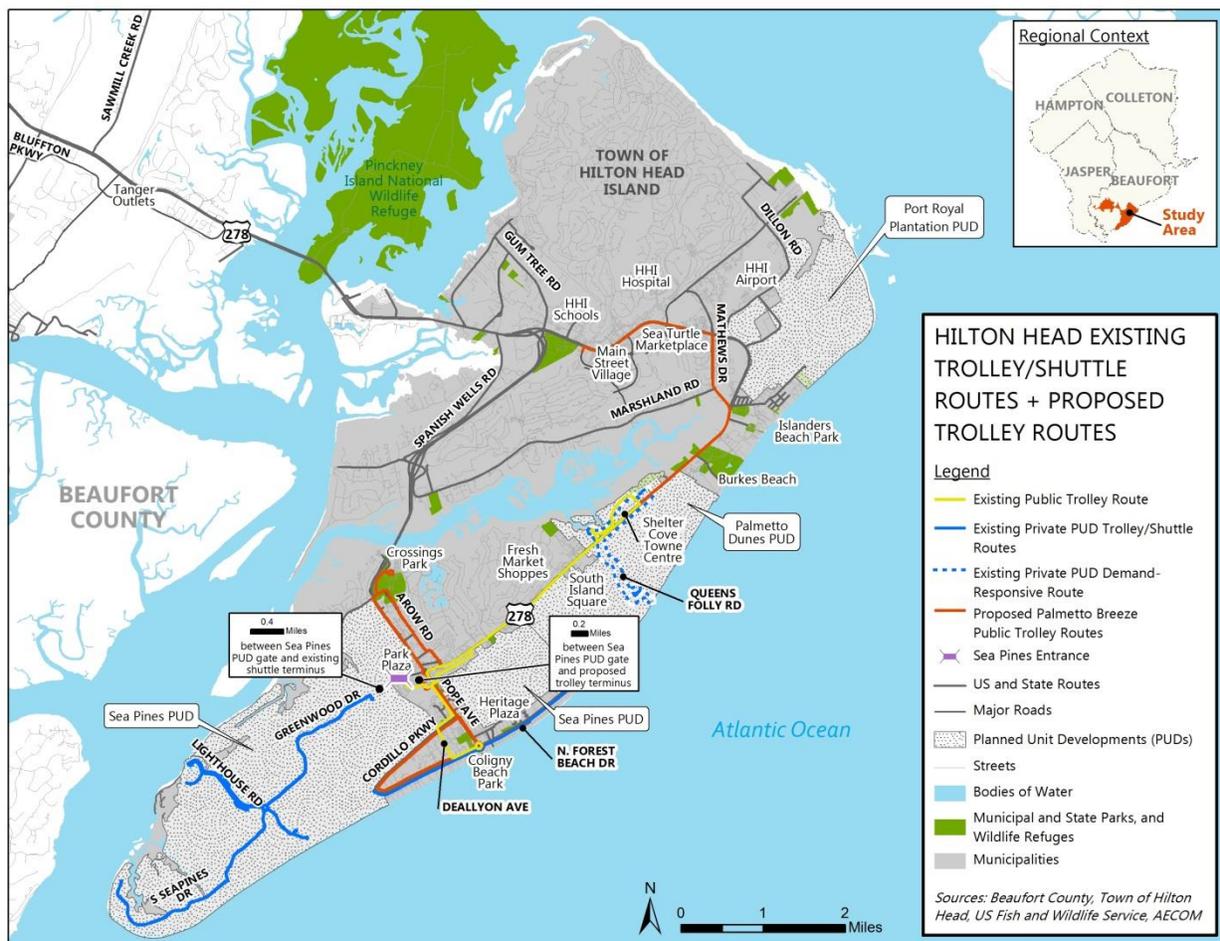


Figure 2-32 shows these proposed routes along with the routes and service areas of existing shuttle providers on the island. The Sea Pines trolley operates within the large gated community with three current routes, but does not extend outside of the gates. The Palmetto Dunes service provides residents and guests services to a limited number of stops outside the gate, as well as demand-response service to frequent destinations on the island outside the property, including Shelter Cove, which is owned by the same parent company as Palmetto Dunes.

The closest Sea Pines route would stop approximately 0.6 miles from the closest proposed Palmetto Breeze/the Town of Hilton Head Island trolley. There may be opportunities to close this gap; however, it would require agreement with Sea Pines to extend their route an additional 0.4 miles to the gate on Greenwood Drive – this would reduce the transfer distance to 0.2 miles.

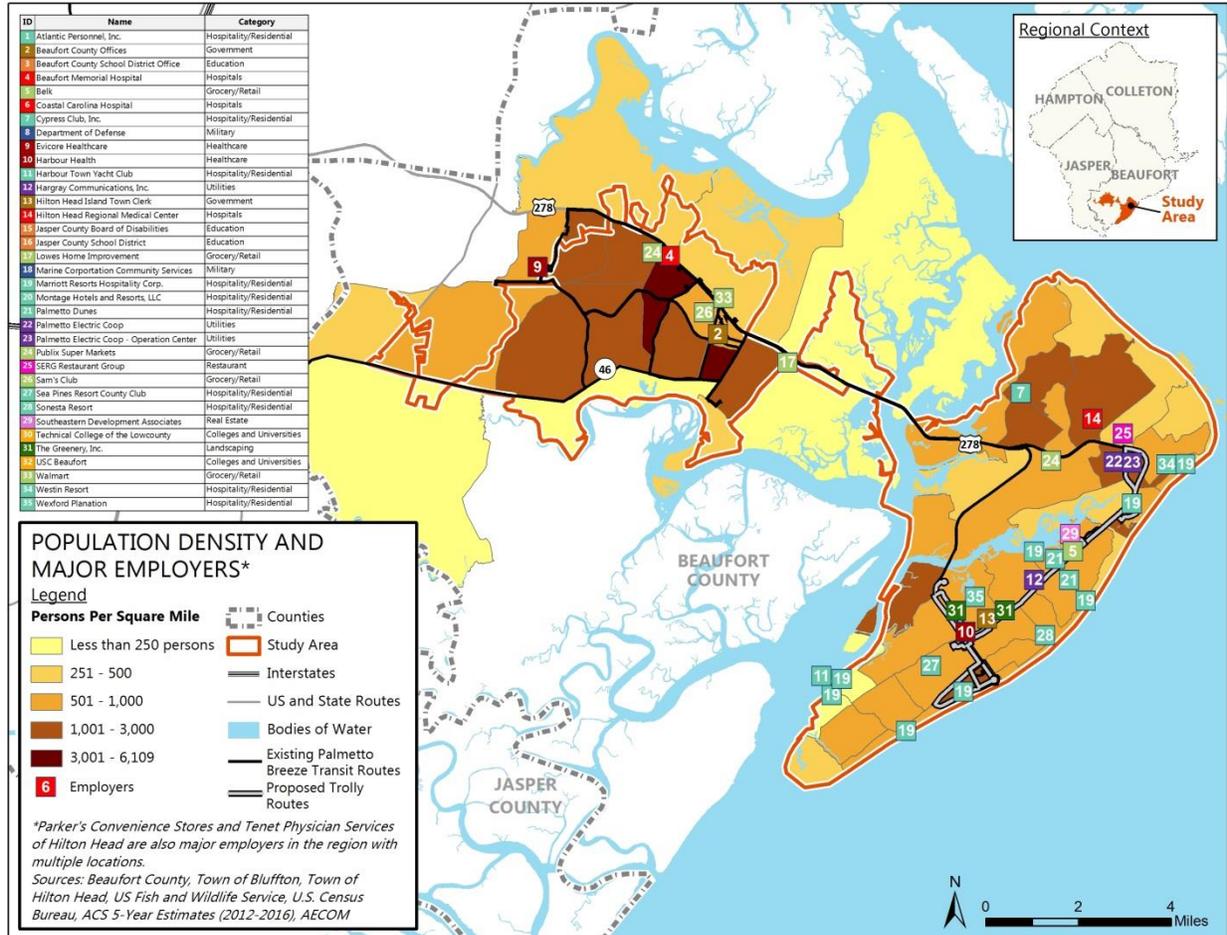
Figure 2-32: Proposed Town of Hilton Head Island Trolley Routes + Existing Services



2.8.1 Coverage of Existing and Planned Services

Figure 2-33 shows existing Palmetto Breeze routes and the proposed the Town of Hilton Head trolley routes juxtaposed with the study area population density and major employment locations. This shows that these services generally provide service to most employment and population centers in the study, with the primary exception of several private resort areas on the Town of Hilton Head Island which require gate entry. These areas are likely best served through private or public last mile service connections, either by employer based shuttles, privately operated shuttles (e.g. Sea Pines trolley), or through TNC-type providers.

Figure 2-33: Existing/Proposed Service in Relation to Population and Employment Areas



2.9 Public Involvement Summary

The public involvement process consisted of developing a project fact sheet; conducting two focus Group sessions – one in Bluffton and one on Hilton Head Island; presenting to the project Steering Committee and LCOG Policy Committee; and conducting a Resident Survey and an Employer Survey. The public involvement activities and results are summarized in Appendix A.

3.0 IDENTIFICATION OF POTENTIAL TRANSIT NEEDS

3.1 Existing Demographic Conditions and Trends Informing Transit Needs

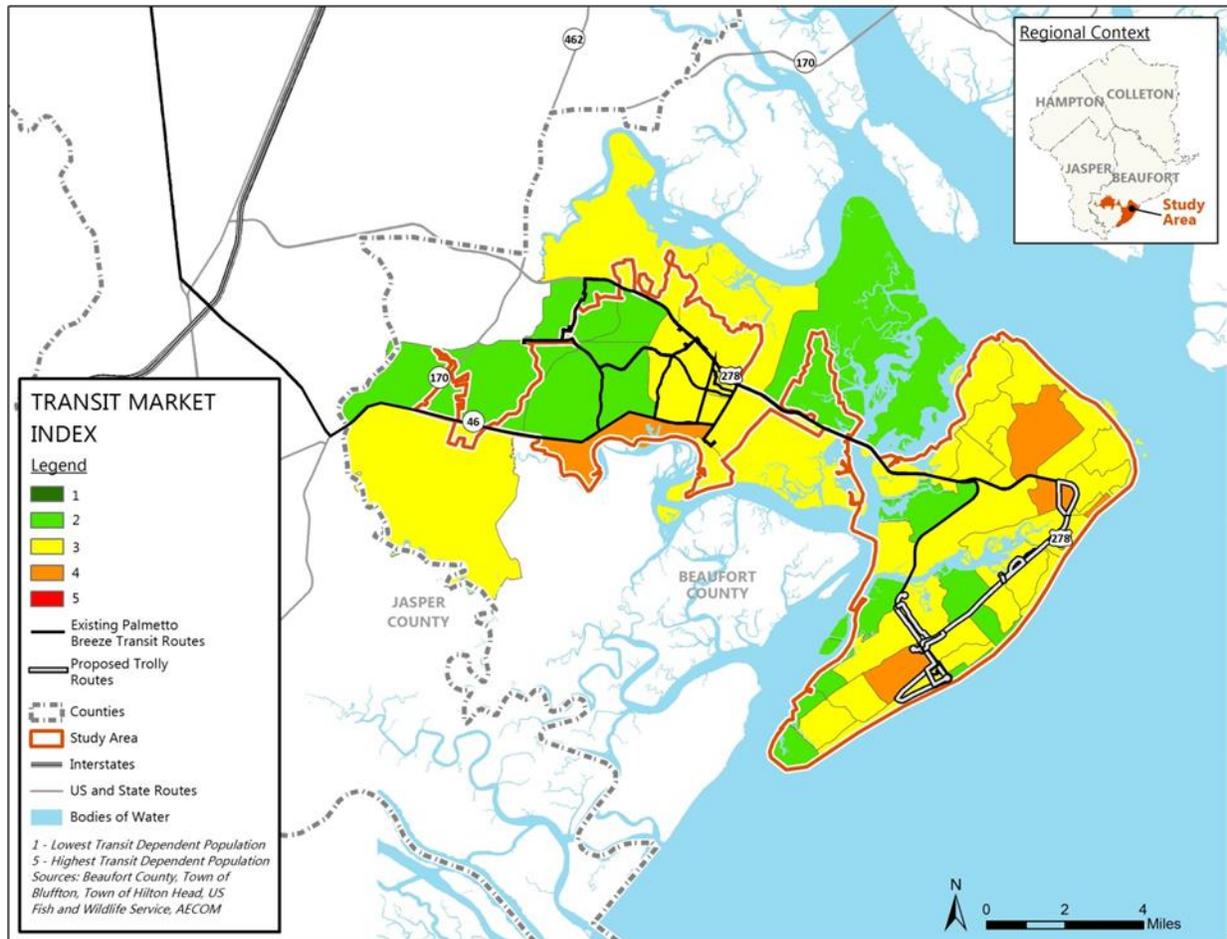
- Beaufort County is the population and employment center of the region. Transit services will need to meet continued overall growth and consider directional growth.
- Bluffton has a small population, but has had an extremely high growth rate due to annexation and development of previously vacant land. The Town of Hilton Head Island has had a steady and more stable growth pattern because new development is limited by land availability.
- A large share of Beaufort County employment is dedicated to service, construction and maintenance occupations. These occupational categories are projected to continue to grow. Services to areas employing these types of occupations, such as the Town of Hilton Head Island, will need to be considered.
- Beaufort County is the economic and population center of the Lowcountry region; however, adjacent Jasper County and the area of Beaufort County between Bluffton and the Jasper County line is rapidly developing and large scale housing developments will continue to develop in Jasper County into the foreseeable future.
- Most of the study area is developed between 500 to 3,000 persons per square mile; however, a couple areas of Bluffton have over 3,000 per square mile. There is not transit-supportive population density, and transit investments would need to target areas with both a higher population density and concentration of employment and/or community facilities.
- The study area is primarily residential, with most commercial uses concentrated on the U.S. 278 corridor, in Bluffton and on the Town of Hilton Head Island.
- The core of Bluffton is well established, but growth and development will continue along Buckwalter Parkway and points further west towards Jasper County.
- The Town of Hilton Head Island is mostly built out and will mostly see a continuation of similar land use patterns. The U.S. 278 loop and the corridor between Sea Pines and Coligny Circles will continue to be the center of commerce and tourist activity.
- The location of major employers and activity centers in the study area is concentrated primarily along U.S. 278 in Bluffton and the Town of Hilton Head Island. Old Town Bluffton, Buckwalter Place in Bluffton, and Coligny Circle on the Town of Hilton Head Island are other concentrated areas away from the U.S. 278 corridor.
- With a high share of Jasper County residents commuting to Beaufort County, and the significant amount of senior and active living housing developments being built in Jasper County, this will drive a need to service the area with public transportation within the region and also to Bluffton and the Town of Hilton Head Island as attractive shopping and day trip destinations in addition to work commutes.
- Service related jobs will continue to grow in Beaufort County indicating the need to continue providing workforce commuter services particularly to and from resorts and tourist destinations out to areas, where lower income households and/or households without access to vehicles are concentrated.

3.2 Transit Dependent Populations - Needs Index

Based on the transit market demographics reported in Section 2.3, a transit market index was created to comprehensively show populations that may rely on public transportation services. The index provides an overall score based on the population area's concentration of low-income, disabled, senior, youth, and no-vehicle households.

Figure 3-1 shows a composite score of 1-5, with 5 being the highest concentrations of each population type. The areas shown in orange had the highest concentration of potentially transit dependent populations, because no areas received a score of 5. These areas include: Old Town Bluffton between May River Road and the May River; the north end of the Town of Hilton Head Island extending along and northwest of and Beach City Road (including Hilton Head Hospital); and the area on the south end of the Town of Hilton Head Island extending southwest of Pope Circle.

Figure 3-1: Existing/Proposed Service in Relation to Transit Dependent Populations



3.3 Transportation Conditions Informing Transit Needs

- Palmetto Breeze provides several fixed commuter and local routes, as well as seasonal and demand-response services; however, fixed routes are limited to once per day in each direction, with no midday service.
- Although many commuters stay within the study area to both live and work, there are commutes between the Town of Hilton Head Island and Bluffton that need transportation services, as well as services circulating in each area locally.
- Both the Town of Hilton Head Island and Palmetto Breeze are planning for a circulator trolley service on the island to serve frequent tourist destinations. This could also serve local residents and workers for daily trips.
- Current traffic circulation is generally good, but there are areas along U.S. 278 and on the Town of Hilton Head Island with poor levels of service.
- Traffic congestion is projected to worsen through 2040, even with currently planned transportation improvements. U.S. 278 between Bluffton and the Town of Hilton Head Island, including the bridges, is the most glaring need as this segment is projected to begin functioning at LOS F by 2020.
- Popular tourist routes on the Town of Hilton Head Island are also projected to function at LOS F in the future.
- Sidewalks or trails exist along many of the primary routes; however, there may be unmet interior pedestrian access or circulation.

3.4 Other Identified Needs – Stakeholders and Previous Plan Input

- Regional workforce commuters from the western region into Bluffton and the Town of Hilton Head Island typically rely on public transportation and face extremely long commutes.
- There are limited resources to expand Palmetto Breeze transportation services, so they need to be strategic in deployment of service expansion.
- There is limited availability of TNC (Uber/Lyft) in Bluffton and the Town of Hilton Head Island to provide last mile service. These services can be cost-prohibitive.
- On the Town of Hilton Head Island, there is limited parking available and there can be congestion to/from major tourist areas, such as the more popular beaches (e.g. Coligny Beach).
- There is severe congestion between Bluffton and the Town of Hilton Head Island. There is only one way on and off the island, and the volumes exceed capacity in peak hours.
- Day trips to the Town of Hilton Head Island are sometimes discouraged due to stress of congestion and limited availability of parking at popular destination areas.
- Development and sidewalk conditions create an access challenge for bus route drop-off/pickups: service must choose to either enter developments at a cost of time, or riders have a more challenging walk between stops and final destination. This includes significant retail setbacks, gated residential communities, and in many cases lack of sidewalks.
- Development in areas west of Bluffton, such as Sun City, will drive service demands to these locations in the future, especially if the senior population increases significantly in these areas.
- Infrequent service extends the workday hours for commuters that rely on public transportation, as their work schedules may not align with bus schedules. They also have

limited means for local food and convenience travel during the day for lunch or while waiting for commuter buses.

3.4.1 Summary of Potential Service Type Needs

Table 3-1: Study Area Trip Types and Appropriate Service Considerations

Typical Movements Within Study Area	Short Name	Appropriate Service Types
Long-term Town of Hilton Head Island trips	Tourists	Circulator/trolley service
Local/regional day trips to Town of Hilton Head Island	Day-trippers	Personal auto, or personal auto to park-and-ride with service to circulator trolley
Daily commutes on/off Town of Hilton Head Island	Workforce Commute	Primary trip: Commuter express bus and/or fixed route service Last/First Mile: fixed route service or trolley/circulator
Town of Hilton Head Island residential trips for services/convenience	H.H.I. Local	Likely to remain personal auto; small percentage may use trolley/circulator service
Town of Hilton Head Island to Bluffton trips for off-island shopping	Big Box	Likely to remain personal auto
Daytime conveniences for employees on island between commutes – lunch, convenience shopping, etc.	Workforce Convenience	Best served via trolley/circulator and/or employer shuttles where possible
Visitor/resident trips to Hilton Head or Savannah Airports	Airport Passenger Trips	Public transportation options could be explored; however, passengers typically prefer on-call convenience and door-to-door service via taxi, Uber, or private shuttle
Medical trips and ambulatory services	Medical/Ambulatory	Demand-Response services

4.0 FUTURE PALMETTO BREEZE SERVICE OPTIONS

4.1 New Service Evaluation Methodology

The new services proposed in this document were developed based on input from a variety of sources which are summarized in the prior sections. The initial sources included a review of completed and/or ongoing plans, studies, and initiatives affecting land use and transportation decision making in the Bluffton and the Town of Hilton Head Island areas. A peer review was conducted to indicate how Palmetto Breeze is performing in relation to other similar transit systems. Data collected to analyze the existing system and to propose potential service modifications was also used for the purpose of identifying those areas most likely to support some form of transit. The data includes population and employment densities; socioeconomic and land use data; and a transit target market analysis. A series of public awareness forums and focus group interviews was also conducted during this time period to solicit passenger input and public opinion on all aspects of Palmetto Breeze service, but particularly on desired changes and new service requests. The summaries of these efforts are presented in **Appendix A**. Additionally, LCOG and LRTA staffs were closely involved in the TDP process and contributed their service recommendations.

4.2 Peer Review

A peer review was conducted for other similar-sized, coastal transit agencies throughout the Eastern United States in order to gauge the types of transit services and operating budgets appropriate for similar regions. The following transit agencies were selected for this peer review:

- Waccamaw Regional Transportation Authority (Coast) - Myrtle Beach and Conway, South Carolina
- Cape Fear Public Transportation Authority (Wave Transit) - Wilmington, North Carolina
- Chatham Area Transit Authority (CAT), Savannah-Chatham County, Georgia
- Cape Cod Regional Transit Authority – Cape Cod, Massachusetts
- Key West Transit – Key West, Florida
- Ocean City Transportation - Ocean City, Maryland
- Island Explorer - Bar Harbor and Acadia National Park, Maine
- LeeTran - Ft. Meyers-Lee County, FL

This analysis includes the operating and capital budgets, annual revenue hours, annual vehicle revenue miles, transit ridership, types of vehicles in the fleet for each type of service provided (e.g., demand response service, vanpool, fixed route). Information was obtained from the 2016 National Transit Database annual agency profiles.

Table 4-1: Peer Review Summary Matrix

System/ Location	Description of Services	Budget (Operating + Capital)	Annual Vehicle Revenue Hours	Ridership	Number of Vehicles	Cost per Rev. Hr.	Passengers per Revenue Hour
Wacamaw Regional Transportation Authority (Coast)	Demand Response Coast RTA provides curb-to-curb service for people who are unable to access its fixed routes independently and safely due to physical or mental disabilities. It serves the areas of Horry and Georgetown Counties within a 3/4 mile radius of any Coast RTA fixed route, and reservations must be made 24 hours in advance.	\$897,747	11,352	8,081	5	\$68.53	0.7
	Bus Coast RTA operates 11 daily fixed-route bus routes within Horry and Georgetown Counties.	\$4,361,881	38,651	476,995	13	\$106.71	12.3
	Total (Demand Response + Bus)	\$5,259,628	50,003	485,076	18	\$98.04	9.7
Cape Fear Public Transportation Authority (Wave Transit)	Demand Response Wave Connect offers accessible van service for people with disabilities who cannot travel by fixed bus route. Service is provided through Wave Transit's Dial-a-Ride Transportation Program (DART), and utilizes vans specifically equipped with a wheelchair lift and restraints for wheelchairs. DART provides curb-to-curb origin to destination service. Service is available seven days a week.	\$1,432,262	28,586	61,458	24	\$46.13	2.2
	Bus Wave Transit operates 14 fixed bus routes and 2 shuttle routes, including one free downtown trolley. Bus routes are served by full size coaches, while shuttle routes are served by smaller vehicles.	\$9,697,540	86,498	1,393,573	39	\$80.68	16.1

System/ Location	Description of Services	Budget (Operating + Capital)	Annual Vehicle Revenue Hours	Ridership	Number of Vehicles	Cost per Rev. Hr.	Passengers per Revenue Hour
	<p>Vanpool The WavePool is a collaborative effort between the local MPO and Wave Transit, which allows people who live and work near each other and have similar commuting schedules to share a ride to work. Groups of 5-12 commuters are eligible for Wave's Vanpool Program, and Wave Transit provides the vehicle, maintenance, fuel and insurance and employees pay a monthly fare for the service.</p>	\$44,842	937	4,889	6	\$47.86	5.2
	Total (Demand Response + Bus + Vanpool)	\$11,174,644	116,021	1,459,920	69	\$71.90	12.6
Chatham Area Transit Authority	<p>Demand Response CAT paratransit service provides transportation for eligible persons in Chatham County who are unable to use the fixed-route public transportation system due to a physical or mental disability. Trips must be reserved at least one day in advance.</p>	\$3,235,838	56,901	98,088	39	\$51.61	1.7
	<p>Ferryboat The Savannah Belles Ferry operates free service between three landing points at city hall, Trade Center convention center, and their Riverwalk. Service operates every day except Thanksgiving, Christmas, and New Year's Day.</p>	\$830,022	6,863	745,546	4	\$120.94	108.6
	<p>Bus CAT provides 16 daily fixed-route bus routes and one free shuttle in the downtown area. Additionally, they are piloting a free Senior circulator shuttle service designed to meet the transportation needs of those living in senior living facilities.</p>	\$17,865,530	183,032	3,532,628	72	\$90.67	19.3
	Total (Demand Response + Ferryboat + Bus)	\$21,931,390	246,796	4,376,262	115	\$82.50	17.7

System/ Location	Description of Services	Budget (Operating + Capital)	Annual Vehicle Revenue Hours	Ridership	Number of Vehicles	Cost per Rev. Hr.	Passengers per Revenue Hour
Cape Cod Regional Transit Authority	Commuter Bus Cape Cod RTA operates daily bus service on six fixed routes and one flex route with "on request stops". Routes operate between downtown Hyannis, Sagamore Park and Ride, and other destinations in the Cape Cod Region from Monday through Saturday.	\$433,701	3,027	52,976	2	\$143.28	0.4
	Demand Response Service Riders who meet ADA eligibility requirements can utilize paratransit service to travel anywhere within 3/4 miles of fixed-route bus services. Rides must be scheduled at least one day before the planned trip.	\$13,354,016	185,081	495,189	198	\$58.33	0.1
	Demand Response - Taxi	\$5,848,802	92,179	88,397	88	\$63.45	0.1
	Bus	\$7,991,317	97,756	655,890	47	\$63.45	0.5
	Total (Commuter Bus + Demand Response + Demand Response -Taxi + Bus)	\$27,627,836	378,043	1,292,452	335	\$61.59	0.2
Key West Transit	Bus Service The City of Key West Department of Transportation provides public transit services throughout Key West, Stock Island, and up to Marathon, FL. They have 6 routes, the earliest of which begin operation at 5:30 am and run as late as 12:00 midnight. Their fleet consists of 17 handicap accessible buses which accommodate 24 or 32 passengers.	\$6,595,584	37,595	316,162	18	\$80.29	8.4

System/ Location	Description of Services	Budget (Operating + Capital)	Annual Vehicle Revenue Hours	Ridership	Number of Vehicles	Cost per Rev. Hr.	Passengers per Revenue Hour
Ocean City Transportation	Demand Response Service Ocean City Transportation offers Origin-to-Destination service to disabled residents and visitors. This service is available during the same operating days and hours as our fixed-route Coastal Highway bus service. They can deliver riders to the front entrance of most special events. They can also connect the riders with neighboring transit systems: Delaware Area Transit (DART) at the North end of Town and Shore Transit.	\$268,453	5,286	10,103	65	\$50.79	1.9
	Bus Service Ocean City municipal buses travel along Coastal Highway 7 days a week, and people can ride for just \$3 per day. Safe and clean buses are reliable and convenient and offer multiple stops along Coastal Highway, so the favorite OC attractions are easily accessible and within walking distance. Ocean City buses also run to and from the West Ocean City Park & Ride facility seasonally. The comfortable boardwalk trams can take people the whole length of the boardwalk, which travels from the Inlet to the North Booth at 27th Street.	\$6,557,084	851,691	2,611,384		\$58.23	30.3
	Total (Bus + Demand Response)	\$6,825,537	91,617	2,621,487		\$57.80	28.6
Island Explorer	Commuter Bus Downeast Transportation provides popular year-round shopping trips to Ellsworth and Bangor, and in-town shuttle service for Bucksport, Ellsworth, and Bar Harbor, and commuter service between Ellsworth and Bar Harbor. Downeast Transportation also operates the Island Explorer serving Acadia National Park and neighboring towns from June 23 through Columbus Day.	\$331,354	144,016	43,148	30	\$62.81	0.3

System/ Location	Description of Services	Budget (Operating + Capital)	Annual Vehicle Revenue Hours	Ridership	Number of Vehicles	Cost per Rev. Hr.	Passengers per Revenue Hour
	Bus Service Downeast Transportation operates the Island Explorer which features nine bus routes linking hotels, inns, and campgrounds with destinations in Acadia National Park and neighboring village centers. Clean propane-powered vehicles offer Mount Desert Island visitors and residents free transportation to hiking trails, carriage roads, island beaches, and in-town shops and restaurants.	\$2,615,955	482,324	543,975		\$69.77	1.1
	Total (Commuter Bus + Bus)	\$2,947,309	626,340	587,123		\$68.84	0.9
LeeTran	Demand Response Service LeeTran is a department of Lee County government, responsible for operating the public transit system that serves the County. It operates a paratransit service for the disabled called Passport. LeeTran employs approximately 240 people and has a fleet of 50 full-size buses, 10 trolleys and 42 paratransit vans. Half of its full-size fleet is hybrid, greatly reducing carbon emissions and increasing fuel efficiency.	\$6,917,732	76,516	119,069	117	\$69.85	1.6
	Bus LeeTran operates 24 bus routes.	\$25,127,882	191,039	3,324,256		\$86.45	17.4
	Vanpool LeeTran also operates an employer vanpool program.	\$183,735	8,316	38,417		\$22.09	4.6
	Total (Demand Response + Bus + Vanpool)	\$32,229,349	275,871	3,481,742		\$79.91	12.6

4.3 Peer Review Summary

The peer agencies reviewed provide multiple types of services serving different needs, including local bus, commuter routes, vanpools, and demand-response services. The Chatham Area Transit Authority (CAT) provides a ferry boat service across the Savannah River between downtown Savannah and Hutchinson Island.

The agencies reviewed range from an annual budget of \$2.9 million (Island Explorer) to \$32.2 million (LeeTran); and from 18 vehicles (Coast and Key West) to 117 vehicles (LeeTran). Palmetto Breeze is closest in fleet size and operating budget to Island Explorer and Waccamaw Regional Transit (Coast).

Commuter Bus

Cape Cod and Island Explorer provide commuter bus services. Cape Cod's commuter service is very costly at \$143 dollars per revenue hour and only gets approximately 0.4 riders per hour. However, there are only two vehicles dedicated to this service. The Island Explorer commuter service is less costly at \$62.81 per hour, but also receives low ridership at 0.3 per hour. Island Explorer utilized 30 vehicles for this service. Palmetto Breeze's current commuter bus operations are closer to Cape Code, as Palmetto Breeze in 2016 was using seven vehicles with an operating expense of \$112 per hour and 7.5 riders per hour.

Demand-Response Services

This type of service has relatively high costs with low ridership. Among the peer organizations, all but Key West and Island Explorer provide demand-response services. The costs for this type of service ranged from to \$46.13 (Wave) to \$69.85 (LeeTran) per revenue hour. These services get very low ridership, with average passengers per revenue ranging from 0.1 passengers per hour to 2.2 passengers per hour. By comparison, Palmetto Breeze (in 2016) was operating a more cost-effective service at \$38.78 per hour and 3.5 passengers per hour, with 22 vehicles being used for demand-response.

Fixed Bus Service

Fixed bus service represents the bulk of each of the peer agency's budget and number of vehicles, as well as the most utilized services in terms of ridership for each. The bus services ranged from 316,000 annual riders for Key West's system to over 3.5 million for Savannah (CATS). There is also a wide range of cost per hour and riders per hour across the agencies. Island Explorer and Cape Cod had very low numbers of riders per hour (each under 1.0), whereas Ocean City's bus service had over 30 passengers per hour. Bus service costs per revenue hour ranged from \$63.45 (Island Explorer) to \$106.71 per hour (Coast).

Palmetto Breeze does not currently operate this type of service; however, given that the agency already has commuter bus service routes for longer trips, fixed bus service may fulfill a need for local trips at a lower or comparable cost to demand-response service.

Vanpool

Cape Fear and LeeTran provide Vanpool services. Cape Fear provides a very limited service with only 6 vehicles, but proves to be relatively cost effective compared to Commuter Bus and Demand-Response services. Cape Fear's costs for this service are \$47.86 per revenue hour and receive an average of 5.2 riders per revenue hour.

LeeTran also offers a vanpool, and reports that its costs for this service were \$22.09 per revenue hour, with an average of 4.6 passengers per revenue hour. The number of vans utilized was not provided; however, their operating budget is approximately four times that of Cap Fear's for their vanpool service, so it can be assumed their fleet of vans is much larger.

Palmetto Breeze does not currently provide this type of service. This type of service would be best executed through partnerships with larger employers that have workers with common origin-destinations that can be accommodated.

Other Services

Less common services are offered by Cape Cod, operating a demand-response taxi, and by CATS in Savannah, which operates a ferryboat service.

4.4 Compilation of Information from Prior Planning Tasks

In this section, the findings from the Existing Conditions and Stakeholder input were combined with an evaluation of the small urban area considering the propensity for transit service. The population and employment densities in the study area were compared to industry standard density thresholds for various transit bus service levels. Several studies in the past thirty years have attempted to identify relationships between transit ridership and land use development patterns. Transit Cooperative Research Program (TCRP) Report 16 provides scales for residential and employment densities that have been developed to identify the general type of transit service that can be supported by different local conditions. These are shown in Tables 4-2 and 4-3.

Table 4-2: Relationship between Residential Densities and Transit Services

Residential Density Transit Thresholds	
Type of Service	Residential Density Threshold
Ridesharing, van pools, employer shuttles, circulators and rural transit services (Demand Resonse)	Less than two dwelling units/residential acre
Flex Routes	Two to four dwelling units/residential acre
Local Bus (1 bus every hour)	Four to six dwelling units/residential acre
Intermediate Bus (1 bus every 30 minutes)	7 to 14 dwelling units/residential acre
Frequent Bus (1 bus every 10 minutes)	15+ dwelling units/residential acre

Table 4-3: Relationship between Employment Densities and Transit Services

Employment Density Transit Thresholds	
Type of Service	Employment Density Threshold
Ridesharing, van pools, employer shuttles, circulators and rural transit services (Demand Resonse)	Areas with two or less jobs/acre and 1,000 or less contiguous jobs
Flex Routes	Areas with two to nine jobs/acre and 2,000 or more contiguous jobs
Small to large bus fixed route service complemented by paratransit service with 30 to 60 minute frequency	Areas with 10 to 25 jobs/acre and 3,000 or more contiguous jobs
Large bus fixed route service complemented by paratransit service with 15 to 30 minute frequency	Areas with 26 to 49 jobs/acre and 5,000 or more contiguous jobs
Large bus fixed route service complemented by paratransit service with 5 to 15 minute frequency. Connections to circulators possible.	Areas with 50+ jobs/acre and 10,000 or more contiguous jobs

The thresholds listed in Tables 4-2 and 4-3 are generalizations that provide an overall estimate of the need and level of potential transit service. Corridor-specific factors, such as the mix of land uses, pedestrian accessibility, local travel patterns, roadway congestion, urban design elements, and transit service characteristics (existing or proposed) also have an effect on transit ridership. Nonetheless, this general information on residential and employment thresholds can be used at a planning level to identify areas or regions where scheduled transit service may be successful.

In determining the estimated housing units per acre, updated housing data from Bluffton and the Town of Hilton Head Island was obtained and utilized. The number of households per traffic analysis zone (TAZ) was divided by the number of acres in the TAZ and mapped in order to show concentrations of households by acre. The employment density was calculated the same way, but instead of the number of households, the number of jobs was divided by the acreage. However, the point of this evaluation was to compare the study area's current density per acre to the density thresholds. Figures 4-1 and 4-2 show the residential and employment densities in the small urban area in 2010.

The two most densely populated study area block group locations are in Bluffton, including the area between Buck Island Road, U.S. 278 and Simmonsville Road, as well as the area between Bluffton Road, May River Road, Burnt Church Road and Bluffton Parkway. These areas have over 3,000 people per square mile. Most of central Bluffton between SC 170 and Malphrus Road has between 1,000 and 3,000 people per square mile. Several areas on Hilton Head Island are also populated at this density. Most of the study area has at least 500 people per

square mile, with the exception of census block groups that are on the periphery of the study area and not entirely located in the urbanized area.

Overall, there is not a high concentration of employment in the study area – the mostly densely employed areas are at maximum 2,000 employees per square mile. Employment has somewhat similar density patterns. However, a lot of the employment in Bluffton is located in the southwest section of the study area in the quadrant between Buckwalter Parkway, Bluffton Parkway, SC 170 and May River Road (SC 46).

Figure 4-1: Population Density in the Study Area

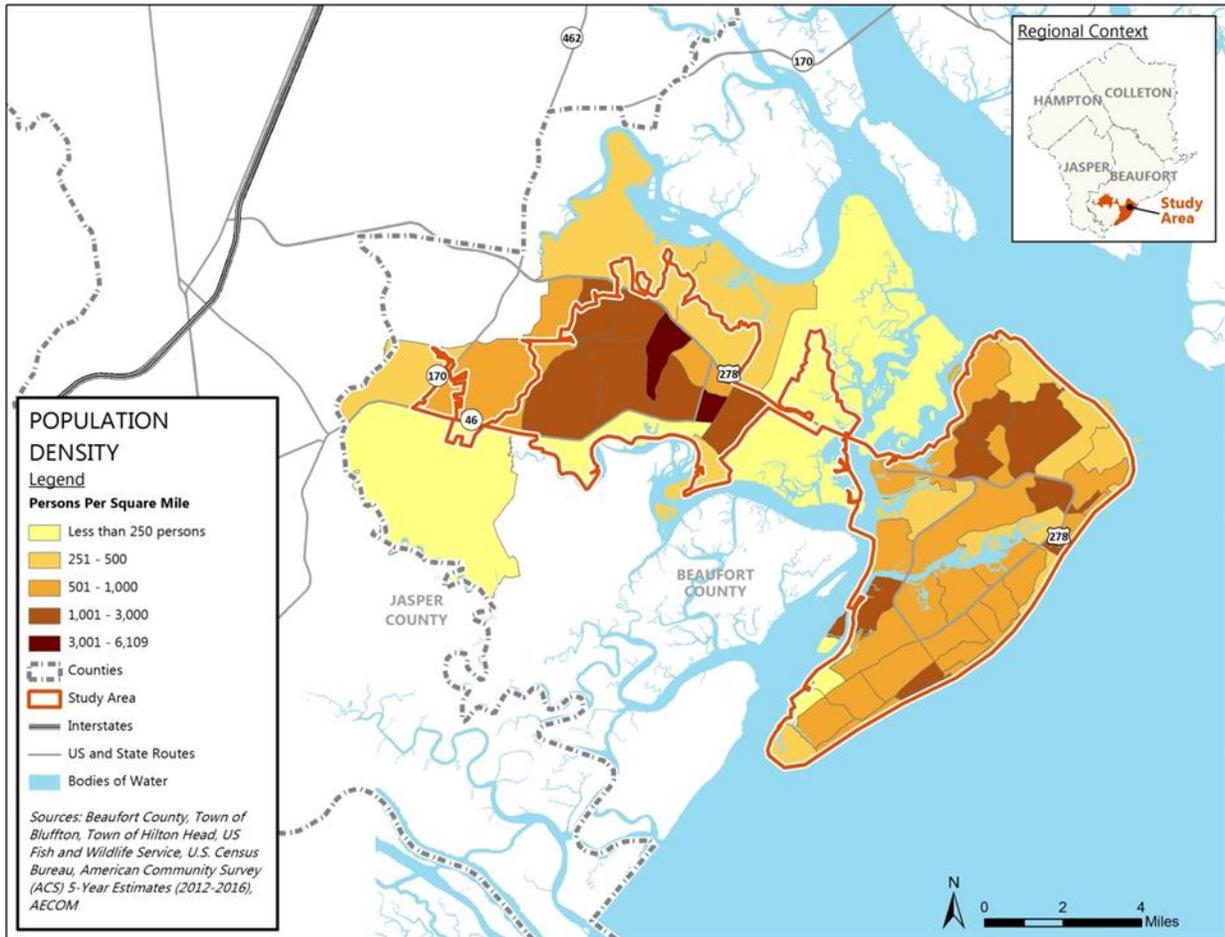
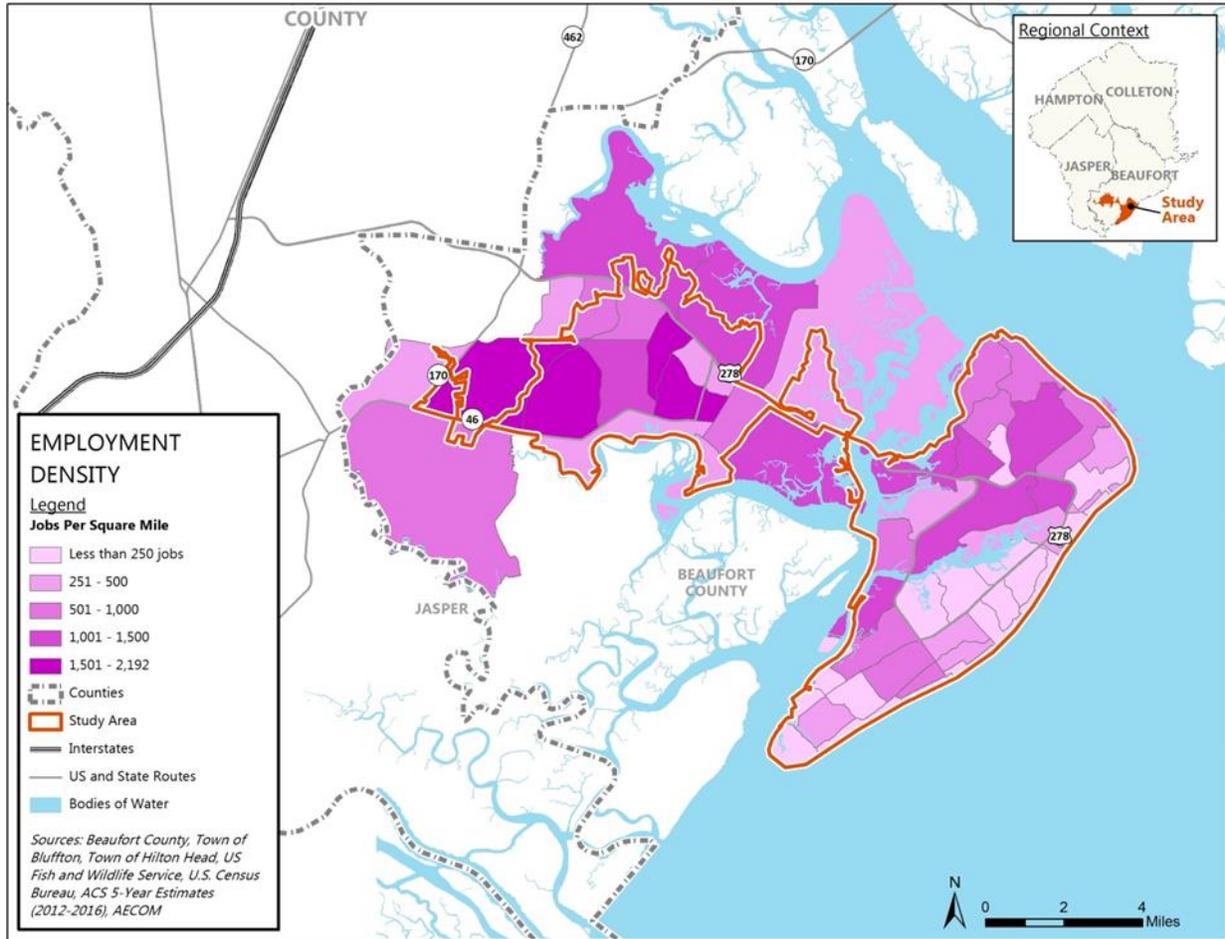


Figure 4-2: Employment Density in the Study Area



4.5 Proposed New Services

The proposed services presented below were developed using the data and analysis developed in the Existing Conditions and Needs Assessment Report, input from focus group participants, Steering Committee members, staff and elected officials from the Towns and Beaufort County, LCOG and LRTA staff and consulting team observations and findings. Service operation assumptions include:

4.5.1 Existing and Future Trolley Service on Hilton Head Island

- Existing Trolley Service:
 - There is an existing plan for trolley routes operating on Hilton Head Island. For the longer term, we recommend modifying this plan to deliver service to the northwestern portion of the island from Shelter Cove to due to demographic data and the presence of key activity centers.

- The initial seasonal (March to October) trolley route is scheduled for implementation in mid-July 2018. This phase will provide service between Shelter Cove and Coligny Beach Park along Hilton Parkway, New Orleans Road, Pope Avenue, Cordillo Parkway, Deallyon Avenue, and S. Forest Beach Drive.
- Potential Future Trolley Service:
 - Potential future phases of the Hilton Head trolley system would provide the following:
 - Phase II: Extension of the initial trolley route (Shelter Cove to Coligny) further northeast along William Hilton Parkway to Sea Turtle Marketplace, medical facilities around Hilton Head Hospital and other activity centers, including Festival Center.
 - Phase III: Trolley service between Coligny Beach Park and a new park-and-ride facility at Crossings Park, operating along Pope Avenue, Palmetto Bay Road, and Arrow Avenue.
 - Phase IV: Trolley loop route along Pope Avenue, South Forest Beach Drive, and Cordillo Parkway.
 - The potential Bluffton trolley would provide service from near Bluffton Parkway and 278 to Palmetto Bluff as shown in Figure 4-4.
 - *Note: Complementary ADA Paratransit service will be considered for this fixed route service. Additionally, cost estimates for the Phase II extensions to the initial trolley route will be developed, but the timing of Phases III and IV is tentative and cost estimates will not be developed for them in this report.*

4.5.2 Other Urban/Study Area Services:

- Connector Route:
 - Develop a fixed express route from Bluffton to HHI to connect the two towns
 - The connector route will operate on a 30-minute frequency during peak periods (6:00am-9:00am; 3:00pm-7:00pm) and on a 60-minute frequency during the midday (9:00am-3:00pm). It is assumed that this service would be operated with 24 seat cutaways.
 - Transfer locations will be at a to-be-determined park and ride lot in Bluffton and the Festival Center area on Hilton Head Island.
 - *Note: Since the Connector Route is an express service, complementary demand-response ADA paratransit service will not be required*
- Flex Routes:
 - Develop flex routes/circulator on Hilton Head Island and in Bluffton.
 - The routes would operate as demand response service requiring an advance reservation, utilizing technology that will enable users to reserve via electronic methods as well as telephone and internet.
 - A zone will be established in Bluffton and Hilton Head Island within which the flex route will operate
 - The service would operate, according to work schedules, from 5:30am to 7:30pm to provide connectivity to the Connector Route and also to activity centers within the operating zone.
- Inter-state Route:

- Develop a seasonal route from Palmetto Breeze Transfer Facility to Hutchison Island to connect to the Chatham Area Transit system. Note: South Carolina has no prohibitions against, nor Memorandums of Understanding (MOUs) required for, interstate transit service. FTA similarly does not have any. However, there are certain cross-state licensing and insurance considerations, among others, that would need to be satisfactorily addressed given the crossing of state lines. SC's Office of Regulatory Staff, along with their counterpart in GA, may be able to help with any questions. The Best Friend Express, the Aiken County, SC transit system, does offer transfers with the Augusta, GA Transit System. Also, the Charlotte Area Transit System 82X Route offers express bus service from downtown Rock Hill to uptown Charlotte, so there are interstate transit services operating in SC.
- Examine the possibility of a connection from the study area to Savannah/Hilton Head International Airport.

The operating statistics and ridership estimates for the services are presented in Appendix B. The proposed Palmetto Breeze local, fixed route system map is presented in Figure 4-3 and the proposed commuter route is presented in Figure 4-4.

4.6 Transfer Locations

Establish transfer centers at a to-be-determined location in Bluffton and the Festival Center area on Hilton Head Island.

Figure 4-3: Proposed Trolley Service Phasing Map

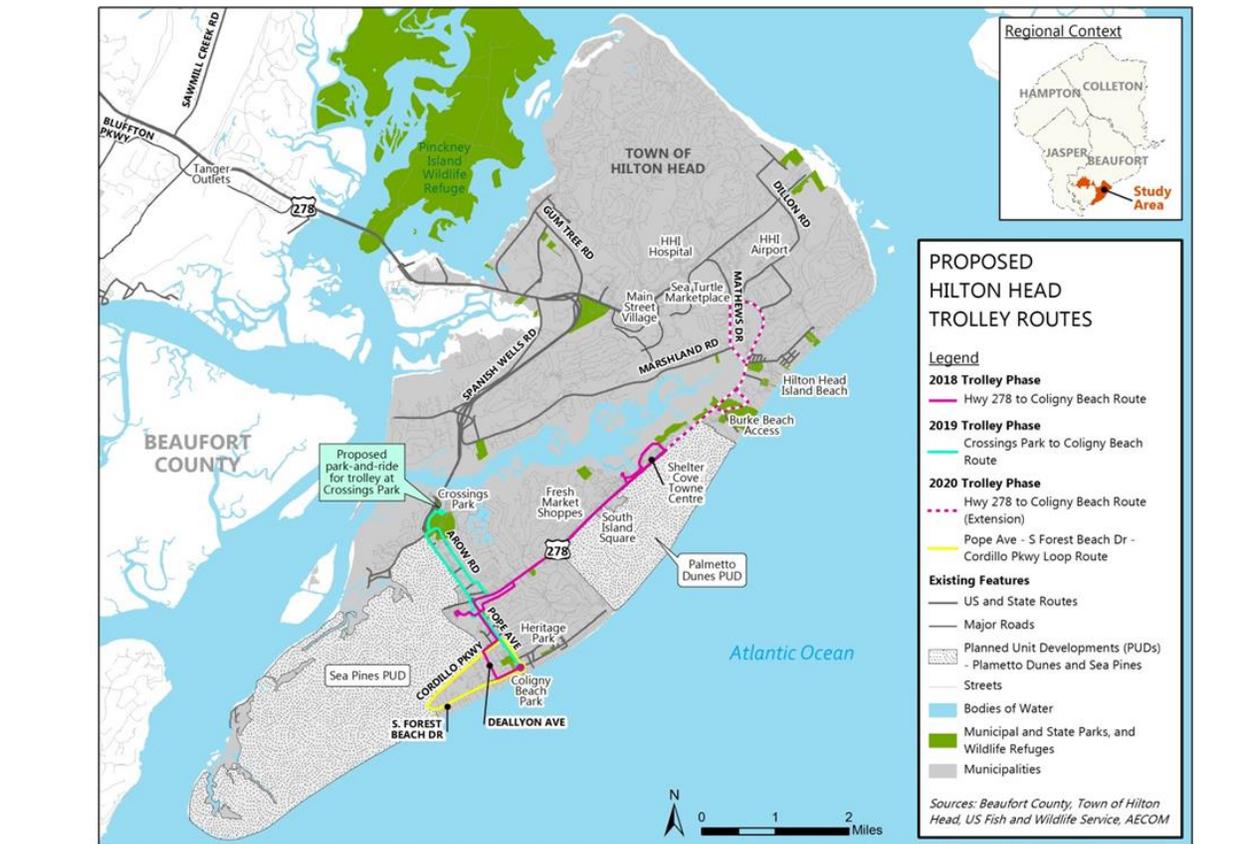


Figure 4-4: Map of Bluffton Trolley Service

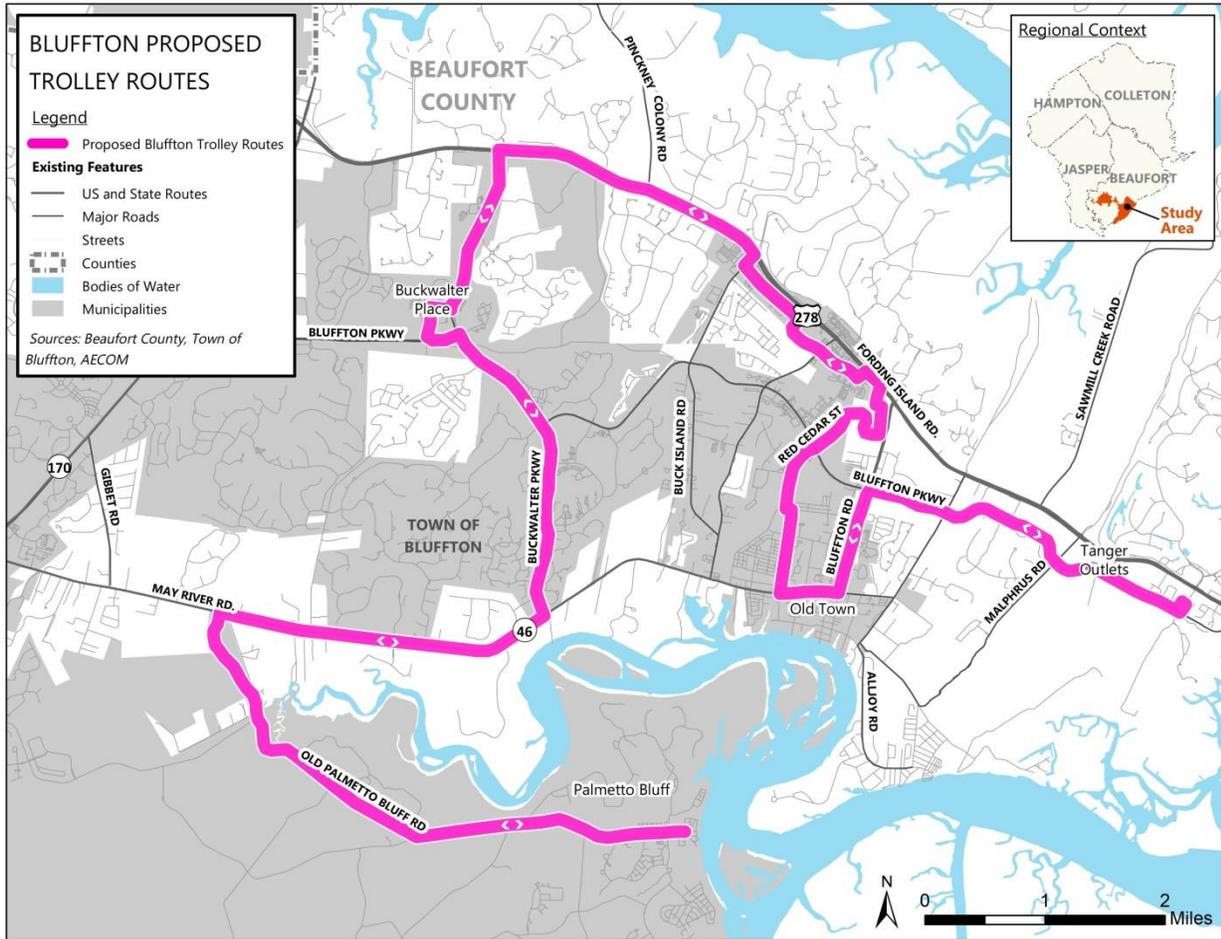
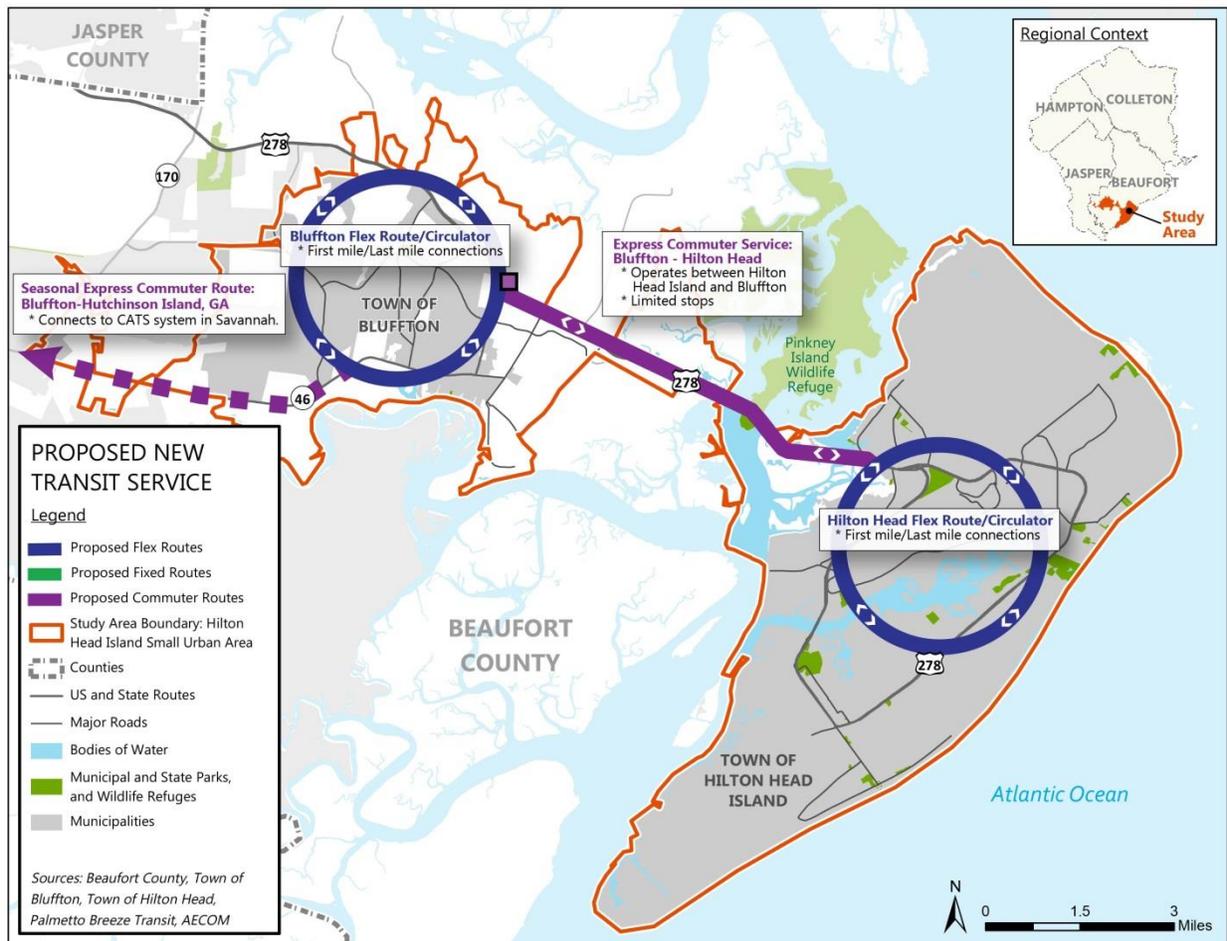


Figure 4-5: Map of Other Proposed Services



5.0 IMPLEMENTATION PLAN

Based on the further review of the future potential services and input received from the public meeting process, the following recommendations have been prepared. The recommendations regarding the proposed service options are grouped in four categories: Trolley service, Connector route service, Flex route service and Inter-state service. Operating and capital cost estimates for the proposed services were prepared using the Congestion Mitigation and Air Quality (CMAQ) program, Section 5307, and Section 5311 as funding sources.

5.1 Recommended Service Options and Cost Estimates

The services recommended for implementation and the estimated annual operating cost of implementing the recommendations for the first seven years are presented in **Table 5-1**. The operating statistics and ridership estimates for the services in Table 5-1 are presented in **Appendix B**.

In Table 5-1, the following assumptions were made:

- An Administrative position will be added to help oversee the new services at an initial annual salary of \$40,000.
- The new services described in Sections 5.5.1 and 5.5.2 will start after the initial implementation year to allow adequate time to hire the administrative staff member, train and hire operators, procure vehicles, place bus stops and shelters, etc.
- A fare of \$1.00 for fixed route service and \$2.00 for commuter and paratransit service will be charged.
- Federal 5307 funding will be applied for and utilized.

Ridership estimates were based on peer ridership figures presented in the *Data Collection, Review and Analysis* Report. The average peer ridership was approximately twelve passengers per revenue hour. As new transit service can take from one to three years to develop full ridership potential, a conservative estimate of nine passengers per revenue hour was assumed for the initial year of fixed route service. A growth rate of five percent per year was also assumed.

5.2 Paratransit Recommendations

Federal regulations allow for vehicles purchased with 5311 funds to operate complementary paratransit service for urban routes. However, the operating funds for the complementary service must be paid with 5307 funds. An analysis of the FTA National Transit Database ridership figures for fixed route service (MB - motor bus) versus paratransit service (DR - demand response), for years 2002 through January 2017 indicates paratransit ridership is approximately two percent of fixed route ridership³. Palmetto Breeze operates within the fixed route service area and for the purposes of this study it is assumed that one vehicle in the Town of Hilton Head and one vehicle in the Town of Bluffton will be available to accommodate eligible paratransit riders. The estimated paratransit service costs are presented in Table 5-1.

³ Source: <https://www.transit.dot.gov/ntd/data-product/monthly-module-adjusted-data-release>

Table 5-1: Estimated Annual Operating Costs of Fixed Route Service

Year	Program Elements	Est. Annual Riderhip ¹	Operating Cost ²	Average Fare (Est.)	Fare Revenue	Total Subsidy	Federal Source (5307) ³	Federal Source (5311) ⁴	State Share	Total Local Share	Other Contribution (10%) ⁵	Section 5307 Funding Accrual ⁶
2019	Administration Position	-	\$40,000	-	-	\$40,000		\$20,000	\$10,000	\$10,000		
	Trolley Service	116,100	\$967,500	\$1.00	\$116,100	\$851,400	\$425,700		\$85,140	\$340,560		
	Paratransit Service	2,322	\$258,000	\$2.00	\$4,644	\$253,356	\$126,678		\$6,480	\$120,198		
	Total	118,422	\$1,265,500	-	\$120,744	\$1,144,756	\$552,378	\$20,000	\$101,620	\$470,758	\$0	\$270,798
2020	Administration Position	-	\$41,200	-	-	\$41,200		\$20,600	\$10,300	\$10,300		
	Trolley Service	121,905	\$996,525	\$1.00	\$121,905	\$874,620	\$397,952		\$42,108	\$434,560		
	Paratransit Service	2,438	\$265,740	\$2.00	\$4,876	\$260,864	\$118,693		\$12,647	\$129,523		
	Flex Service	64,260	\$428,400	\$1.00	\$64,260	\$364,140	\$165,684		\$17,605	\$180,852		
	Connector Service	45,900	\$382,500	\$2.00	\$91,800	\$290,700	\$132,269		\$14,079	\$144,353		
	Interstate Service	50,310	\$419,250	\$2.00	\$100,620	\$318,630	\$63,726	\$254,904	\$31,863	\$191,178	\$31,863	
	Total	284,813	\$2,533,615	-	\$383,461	\$2,150,154	\$878,323	\$275,504	\$128,602	\$1,090,766	\$31,863	\$172,330
2021	Administration Position	-	\$42,436	-	-	\$42,436		\$21,218	\$10,609	\$31,827		
	Trolley Service	128,000	\$1,026,421	\$1.00	\$128,000	\$898,421	\$399,797		\$42,499	\$456,125		
	Paratransit Service	2,560	\$273,712	\$2.00	\$5,120	\$268,592	\$119,524		\$12,897	\$136,172		
	Flex Service	67,473	\$441,252	\$1.00	\$67,473	\$373,779	\$166,332		\$17,841	\$189,607		
	Connector Service	48,195	\$393,975	\$2.00	\$96,390	\$297,585	\$132,425		\$14,258	\$150,901		
	Interstate Service	52,826	\$431,828	\$2.00	\$105,651	\$326,177	\$65,235	\$260,941	\$32,618	\$195,706	\$32,618	
	Total	299,054	\$2,609,623	-	\$402,634	\$2,206,989	\$883,313	\$282,159	\$130,721	\$1,160,337	\$32,618	\$89,603
2022	Administration Position	-	\$43,709	-	-	\$43,709		\$21,855	\$10,927	\$32,782		
	Trolley Service	134,400	\$1,057,213	\$1.00	\$134,400	\$922,813	\$416,804		\$43,372	\$462,636		
	Paratransit Service	2,688	\$281,924	\$2.00	\$5,376	\$276,548	\$126,308		\$12,998	\$137,242		
	Flex Service	70,847	\$454,490	\$1.00	\$70,847	\$383,643	\$174,447		\$18,031	\$191,164		
	Connector Service	50,605	\$405,794	\$2.00	\$101,210	\$304,585	\$138,911		\$14,162	\$151,512		
	Interstate Service	55,467	\$444,782	\$2.00	\$110,934	\$333,849	\$66,770	\$267,079	\$33,385	\$200,309	\$33,385	
	Total	314,006	\$2,687,912	-	\$422,766	\$2,265,146	\$923,241	\$288,934	\$132,875	\$1,175,645	\$33,385	\$43,357
2023	Administration Position	-	\$45,020	-	-	\$45,020		\$22,510	\$11,255	\$33,765		
	Trolley Service	141,120	\$1,088,930	\$1.00	\$141,120	\$947,809	\$467,988		\$43,260	\$436,561		
	Paratransit Service	2,822	\$290,381	\$2.00	\$5,645	\$284,736	\$141,672		\$13,422	\$129,643		
	Flex Service	74,389	\$468,124	\$1.00	\$74,389	\$393,735	\$195,354		\$18,327	\$180,055		
	Connector Service	53,135	\$417,968	\$2.00	\$106,270	\$311,698	\$154,950		\$14,635	\$142,112		
	Interstate Service	58,240	\$458,126	\$2.00	\$116,480	\$341,646	\$68,329	\$273,316	\$34,165	\$204,987	\$34,165	
	Total	329,707	\$2,768,549	-	\$443,904	\$2,324,645	\$1,028,293	\$295,826	\$135,065	\$1,127,123	\$34,165	\$0

Notes:

1. Ridership estimate for Fixed Route assumes 9 passengers per hour and annual increase of 5% annually
2. Operating Cost assumes \$75.00 per revenue hour for fixed route; \$60.00 per revenue hour for on-call service and includes estimated 3% CPI annual increase
3. Federal contribution under 5307 Program is 50% of operating costs with 50% state/local match
4. Federal contribution under 5311 Program is 50% of operating costs with a 50% state/local match
5. The Interstate Service proposed includes a 10% contribution by a separate entity. This model assumes a contribution from Chatham Area Transit
6. This model allows some funding to be accrued from the Section 5307 funding formula. The funding accrued in the first year is then used to offset the state/local share in later years.

5.3 Capital Costs

Table 5-2 displays the Transit Program Capital Projection utilizing 5307 funding parameters for the seven-year period, including estimated vehicle, passenger amenities, and office/computer equipment and subsidy funding requirements.

Table 5-2: Capital Facility Improvement Cost Estimates

Capital Facility Improvement Cost Estimates							
Year	Type	Units	Estimated Unit Cost	Total	Federal Share (80%-85%)	State Share (7% - 10%)	Local Share (7% - 10%)
2019	Trolley Vehicles	5	\$400,000	\$2,000,000	\$1,700,000	\$150,000	\$150,000
	Paratransit Vehicles	2	\$60,000	\$120,000	\$102,000	\$9,000	\$9,000
	Support Vehicle	1	\$30,000	\$30,000	\$24,000	\$3,000	\$3,000
	Transfer Centers	2	\$100,000	\$200,000	\$160,000	\$20,000	\$20,000
	Software/Hardware	-	\$20,000	\$20,000	\$16,000	\$2,000	\$2,000
	Office Equipment	-	\$15,000	\$15,000	\$12,000	\$1,500	\$1,500
	Shelters	10	\$25,000	\$250,000	\$200,000	\$25,000	\$25,000
	Bus Stops (installed)	20	\$500	\$10,000	\$8,000	\$1,000	\$1,000
2019 Totals			\$650,500	\$2,645,000	\$2,222,000	\$211,500	\$211,500
2020	Flex Vehicles	3	\$60,000	\$150,000	\$120,000	\$15,000	\$15,000
	Connector Vehicles	3	\$110,000	\$330,000	\$264,000	\$33,000	\$33,000
	Interstate Vehicles	3	\$600,000	\$1,800,000	\$1,440,000	\$180,000	\$180,000
	Shelters	10	\$25,000	\$250,000	\$200,000	\$25,000	\$25,000
	Bus Stops (installed)	20	\$500	\$10,000	\$8,000	\$1,000	\$1,000
	2020 Totals			\$1,471,500	\$5,445,000	\$4,462,000	\$491,500

Note: Any cost and/or quantity opinions, estimates or forecasts provided by AECOM was on a basis of experience and judgment, but since AECOM has no control over market conditions or bidding procedures, AECOM cannot and does not warrant that bids, ultimate construction cost, or project economics will not vary from such opinions, estimates or forecasts.

5.4 Potential Funding Sources

This section evaluates the financial plan for the proposed transit system expansion in the service area. Tax revenues, transit expenditures, capital and operating costs and funding sources are calculated in this chapter. This chapter includes a discussion of several key implementation issues and the financial capacity and possible phasing of the transit system expansion.

In order to fund this proposed expansion, local revenues will be required in order to provide the necessary local match needed to acquire federal and state funding. The South Carolina

Department of Transportation (SCDOT) administers various Federal and State Aid Grant Programs to assist localities with funding for public transportation systems. SCDOT distributes various types of Federal Transit Administration (FTA) funding to small urbanized localities based on an application process.

Prior to the 2010 Census designation, the Hilton Head UZA operated as a rural Area system and applied for FTA Section 5311 grant program funding. Following the 2010 Census, the Hilton Head UZA became a small urbanized area and became eligible for the use of FTA Section 5307 Urbanized Area funding. Funding from the FTA is typically used to fund up to 50% of operating expenses and 80% of capital investments in the transit system for either Rural Section 5311 funds or Section 5307 Urbanized Area funding.

5.4.1 Federal Sources of Transit Funding

Table 5-3 is a summary of the Federal grants, some of which are administered by SCDOT, which Palmetto Breeze is eligible for the financing of an expanded public transportation system.

Table 5-3: Federal Aid Grant Programs available in South Carolina

Federal Aid Grant Programs available in South Carolina			
Federal Aid Grant Program	Program Description	Eligible Recipients	Matching Ratios
FTA Section 5303, 5304 and 5305 – Metropolitan and Statewide Planning formula funding	Support transit planning expenses.	<ul style="list-style-type: none"> Metropolitan Planning Organizations (MPOs) State DOTs 	Up to 80% of eligible expenses
FTA Section 5307 – Urbanized Area formula funding	Supports operating and capital costs of transit operators. Used by the State DOT to fund small urban transit systems.	Funding is made available to designated recipients, which must be public bodies. Typically the State DOT is the designated recipient for urbanized areas between 50,000 and 200,000.	<p>UP to 50% of eligible operating expenses.</p> <p>Up to 80% of eligible capital expenses.</p>
FTA Section 5310 – Enhanced Mobility of Seniors and Individuals with Disabilities formula funding	Apportioned to the State DOT by the FTA to fund small urban transit systems.	<ul style="list-style-type: none"> States for rural and small urban areas (small UZAs) and designated recipients chosen by the Governor of the State for large urban areas (large UZAs); or 	<p>Up to 50% of eligible operating expenses.</p> <p>Up to 80% of eligible capital expenses.</p>

		<ul style="list-style-type: none"> • State or local governmental entities that operates a public transportation service. 	
FTA Section 5311 – Rural Area formula funding	Supports operating and capital costs of transit operators in non-urbanized areas.	<ul style="list-style-type: none"> • State DOTs • Federally recognized Indian Tribes • Sub-recipients include state or local government authorities, nonprofit organizations, and operators of public transportation or intercity bus service. 	Up to 50% of eligible operating expenses. Up to 80% of eligible capital expenses.
FTA Section 5339(a) – Bus and Bus Facilities formula grant	Provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.	<ul style="list-style-type: none"> • Designated Recipients of urbanized areas. • State DOTs that operate or allocate funding to fixed-route bus operators. • Sub-recipients include public agencies or private non-profits engaged in public transit. 	Up to 80% of eligible capital expenses.
FTA Section 5339(b) – Bus and Bus Facilities discretionary grant	Provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities.	<ul style="list-style-type: none"> • Designated Recipients of urbanized areas. • State DOTs that operate or allocate funding to fixed-route bus operators. • Sub-recipients 	Up to 80% of eligible capital expenses.

		include public agencies or private non-profits engaged in public transit.	
Flexible Funding Program – Surface Transportation Program (STP) Funds	Provides funding for a wide variety of projects that support operating and capital costs of transit operators. Used by the State DOT to fund small urban transit systems.	Funding is made available to designated recipients, which must be public bodies. Typically the State DOT is the designated recipient for urbanized areas between 50,000 and 200,000.	Up to 88.5% of eligible capital expenses.

Most all transit systems in the United States receive substantial federal funding. This section provides a summary of the transit funding options available for Hilton Head UZA. All funding programs include limiting factors related to the eligible recipients and eligible costs, either planning, capital and/or operating costs.

Federal funding is established through legislative program structures and programs maintained in the Fixing America’s Surface Transportation (FAST) Act. The FAST Act preserved much of the Moving Ahead for Progress in the 21st Century (MAP-21) legislative programs and funding shares. Because the horizon of the FAST Act is much longer than MAP-21, the FAST Act provides longer term funding provisions for transportation agencies. Federal funding categories that can be leveraged for transit improvement projects are detailed below.

A. Metropolitan and Statewide Planning and Non-Metropolitan Transportation Planning – Sections 5303, 5304 and 5305 Programs

These funds are available for planning activities that:

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

This funding is allocated to SCDOT and then distributed to the MPOs in the state of South Carolina through a grant process with FTA. Each specific MPO receives an allocation through a SCDOT-administered formula.

B. Urbanized Area Formula Grant – Section 5307 Program

The Section 5307 formula grant provides transit capital, operating and planning assistance to urbanized areas with populations of more than 50,000. This program has the most encompassing eligibility of any federal program providing funding to transit systems. Grant funds are utilized to support the development, maintenance and improvement of public transportation in urbanized areas. Eligible projects fall into three primary categories: Planning Projects, Capital Projects and Operating Projects.

Planning eligible activities include, but are not limited to: studies relating to management, operations, capital requirements, and economic feasibility; work elements and related activities preliminary to and in preparation for constructing, acquiring, or improving the operation of facilities and equipment; plans and specifications; evaluation of previously funded projects; job access and reverse commute projects; and other similar or related activities before and in preparation for the construction, acquisition, or improved operation of public transportation systems, facilities, and equipment.

Capital projects eligible under the Urbanized Area Formula Program include all projects included under 49 U.S.C. 5302(3). In general, capital project expenses involve purchasing, leasing, constructing, maintaining, or repairing facilities, rolling stock, and equipment for use in a public transportation system. Capital project costs may include all direct costs and indirect costs associated with the project (provided that the grantee has an approved cost allocation plan or indirect cost proposal). It is noted that a listing of eligible projects is not shown here because of the breadth of projects. All eligibility of projects is generally determined by the FTA regional offices. Example eligible projects include engineering design and evaluation of transit projects, capital investments in bus and bus-related activities such as replacement and overhaul of buses, rebuilding of buses, crime prevention and security equipment, construction of maintenance and passenger facilities and capital investments in new and existing fixed guideway systems. All preventive maintenance and some Americans with Disabilities Act (ADA) complementary paratransit service costs are considered eligible.

FTA provides funding to eligible recipients for costs incurred in the *operation of public transportation service*. In general, operating expenses are those costs necessary to operate, maintain, and manage a public transportation system. Operating expenses usually include such costs as driver salaries, fuel, and items having a useful life of less than one year. Recipients in small UZAs, such as the Hilton Head area, may use Section 5307 funds for operating assistance. There is no limitation on the amount of their apportionment that recipients in these UZAs may use for operating assistance.

Established under MAP-21 and upheld by FAST Act legislation, the Section 5307 grant program also includes eligible activities from the Job Access and Reverse Commute (JARC) Program (formerly known as Section 5316), which focuses on providing services to low-income individuals to access jobs. These activities include operating assistance with a 50 percent local match for JARC activities. In addition, the urbanized area formula for distributing funds now includes the number of low-income individuals as a factor. There is no minimum or maximum amount of funding that can be spent on JARC activities.

The local match required for the Section 5307 funding can vary from 10% - 50% depending on the type of project. The federal share for *planning and capital* projects that receive funding under the Section 5307 Program may not exceed 80 percent of the project cost. There are several notable exceptions in which the federal share may exceed 80 percent for certain projects related to ADA, Clean Air Act, and certain bicycle projects as follows:

1. Vehicles. The federal share is 85 percent for the acquisition of vehicles for purposes of complying with or maintaining compliance with the Americans with Disabilities Act of 1990 (ADA; 42 U.S.C. 12101 et seq.) or the Clean Air Act (CAA; 42 U.S.C. 7401 et seq.).
2. Vehicle-Related Equipment and Facilities. The federal share for project costs for acquiring vehicle-related equipment or facilities (including clean fuel or alternative fuel vehicle-related equipment or facilities) for purposes of complying or maintaining compliance with the CAA, or required by the ADA, is 90 percent.

The federal share for *operating expenses* may not exceed 50% of the net operating cost.

C. Rural Formula Program – Section 5311 Program

The Formula Grants for Rural Areas program provides capital, planning, and operating assistance to state DOTs to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations.

The Section 5311 program supports both the maintenance of existing public transportation services and the expansion of those services through these program goals of:

- Enhancing access in rural areas to health care, shopping, education, employment, public services, and recreation;
- Assisting in the maintenance, development, improvement, and use of public transportation systems in rural areas;
- Encouraging and facilitating the most efficient use of all transportation funds used to provide passenger transportation in rural areas through the coordination of programs and services;

- Providing financial assistance to help carry out national goals related to mobility for all, including seniors, individuals with disabilities, and low-income individuals;
- Increasing availability of transportation options through investments in intercity bus services;
- Assisting in the development and support of intercity bus transportation;
- Encouraging mobility management, employment-related transportation alternatives, joint development practices, and transit-oriented development; and,
- Providing for the participation of private transportation providers in rural public transportation.

The program also provides funding for state and national training and technical assistance through the Rural Transportation Assistance Program. Funds may be used for capital, operating, and administrative assistance to state agencies, local public bodies, Indian tribes, and nonprofit organizations, and operators of public transportation services. The maximum FTA share for operating assistance is 50 percent of the operating costs. Similar to the Section 5307 formula grant, JARC activities in rural areas are also eligible Section 5311 costs.

Similar to Section 5307, funds in the Section 5311 program have a very wide compass of eligibility. Eligible capital expenses include the acquisition, construction, and improvement of public transit facilities and equipment needed for a safe, efficient, and coordinated public transportation system as well as certain other expenses classified as capital in Section 5302(3). Operating expenses are those costs directly related to system operations. At a minimum, states must consider the following items as operating expenses: fuel, oil, drivers' salaries and fringe benefits, dispatcher salaries and fringe benefits, and licenses.

The governor designates a state agency that will have principal authority and responsibility for administering the Section 5311 program. For South Carolina, the agency given charge over the Section 5311 program is SCDOT. Specifically, the role of the state agency is to:

- 1) Document the state's procedures in a state management plan (SMP);
- 2) Notify eligible local entities of the availability of the program;
- 3) Plan for future transportation needs, and ensure integration and coordination among diverse transportation modes and providers;
- 4) solicit applications from transit providers;
- 5) Develop project selection criteria;
- 6) Review and select projects for approval;
- 7) Forward an annual program of projects and grant application to FTA;
- 8) Certify eligibility of applicants and project activities;
- 9) Ensure compliance with federal requirements by all sub-recipients;
- 10) Monitor local project activity;
- 11) Oversee project audit and closeout; and
- 12) File an NTD report each year for itself and each sub-recipient.

A portion of the study area not included in the small urbanized area boundary will continue to receive Section 5311 funds from SCDOT. These funds will continue to be allocated in much the same fashion as prior to the designation as a small urbanized area. Naturally, the amount of Section 5311 funds will decrease because the portion of the study area considered “rural” has decreased and will continue to decrease as the study area urbanized area population grows.

D. Bus and Bus Facilities Grant – Section 5339 Program

The Bus and Bus Facilities is a formula grant program created by MAP-21 legislation which replaced the previous Section 5309 discretionary Bus and Bus Facilities program. This capital-only program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. Distribution of this grant is formula based and requires a 20% local match. A portion of the total Section 5339 program has been also set aside as a discretionary pot of funding through the FAST Act. These competitive grants also provide additional federal resources to state DOTs and designated and direct recipients to replace, rehabilitate and purchase buses and related equipment and to construct facilities including technological changes or innovations to modify low or no emission vehicles or facilities. Note that despite the Section 5339 supporting capital only expenditures, preventive maintenance is not an eligible activity. A sub-program, the Low- or No-Emission Vehicle Program, provides competitive grants for projects that support the purchase or rehab of those specified vehicles.

E. Flexible Funding Program – Surface Transportation Program (STP) Funds

The STP program provides a national annual appropriation to the Federal Highway Administration (FHWA). This funding has a broad project eligibility and funding may be used for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge project on any public road, facilities for non-motorized transportation, transit capital projects and public bus terminals and facilities. This program funding can also be “flexed” to FTA for use by transit agencies. Once flexed to FTA, the funds generally follow the regulations and eligibility of Section 5307 funding.

5.4.2 State Sources of Transit Funding

The State of South Carolina, through SCDOT, has administrative responsibility for several FTA funding programs including the Rural Transportation funding in the Section 5311 program. The Office of Public Transit at SCDOT has established administrative guidelines that are updated regularly that govern the use of a variety of FTA funding programs. The Office of Public Transit has integrated the administration of several FTA programs as much as possible to streamline its oversight functions, while remaining committed to the separate goals established for each program by Congress. South Carolina provides funding assistance for transit capital and operations through a formula program. The State has a matching fund of roughly \$6 million dollars on an annual basis that is used for matching the FTA funding programs. These matching funds are predominately used in the large and small urban areas along with the matching funds for the rural (Section 5311) program.

5.4.3 Local Sources of Transit Funding

The local share for funding transit capital and operating expenses can come from a variety of sources, provided that they did not originate from a federal source. Local share is normally made in the form of cash; however, in some cases the local share can be made in the form of in-kind services or contributions. In-kind services are those services which may be used by the transit operation but paid for from another local source and not directly by the transit operation. For example, shared use of a garage facility may be counted as in-kind contribution because the value of the service provided by the use of the garage could be paid from another source such as the Public Works Department. Typically, local share comes from three main sources, general fund, ad valorem taxes (property taxes), or sales taxes dedicated specifically to transit. For capital, general revenue or capital improvement bonds may be considered as a local share source.

Local funding can also come from public-private partnerships, local taxes, and advertising revenues. These funding sources are briefly described below.

- Public-Private Partnerships: Large local employers could have a financial interest in the creation of various transit programs in the area. Consideration should be given to identifying these potential partners in formulating strategies to create a successful transit system.
- Local Taxes: A property tax designated specifically for transit operations and capital improvements could be assessed. A dedicated millage levy could offset local funding costs and deficits in farebox revenues. Other potential sources could include car rental or lodging taxes or special fees.
- Advertising Revenues: While transit related advertising revenues are not usually a large revenue generator, they can still be used to help with operating and maintenance cost. Advertising revenues can typically be generated from display signage applied to bus exteriors or interiors and through shelter display programs.

5.5 Additional Implementation Considerations

5.5.1 Marketing

The marketing plan serves as the communication and engagement guideline for launching new Palmetto Breeze services. The plan outlines and identifies key audiences, outreach strategies, sample messages, methods for communication, and potential ridership incentives. With the support of a regional Transportation Demand Management (TDM) program, Palmetto Breeze will increase awareness and build ridership through targeted outreach and marketing efforts. The marketing plan is presented in Appendix C.

5.5.2 Intelligent Transportation System (ITS) Applications

Intelligent Transportation Systems (ITS) is a term commonly used to refer to a collection of technological applications and transportation management concepts designed to move people and goods in an efficient and safe manner. A preliminary screening of the services and technologies was conducted to identify their applicability to Palmetto Breeze.

Those services/technologies identified as having potential include:

1. Traveler Information/Display Systems
2. Transit Vehicle Monitoring and Maintenance
3. Transit Signal Priority

Traveler Information Systems

Both static and real-time information should be considered for the transit system at stops and onboard. Real-time bus arrival information should be considered for display at key bus stops. Displays use automatic vehicle location systems (AVL), computer-based vehicle tracking systems capable of providing real-time transit arrival and departure information to transit passengers. The actual real-time position of each transit vehicle is determined and relayed to a control center. Actual position determination and relay techniques vary, depending on the needs of the transit system and the technologies employed.

Complete packages of ITS services, providing AVL capabilities are available to small transit and shuttle operators to:

- Continuously track the position of vehicles throughout the day
- Inform passengers when vehicles will arrive, taking into account delays
- Provide passengers with travel time to a destination
- Monitor drivers and contractors, verifying compliance with work rules
- Replay past events in case of accidents, alleged service failures, or accusations of misconduct.
- Produce a variety of management reports, to help in service monitoring, planning system improvements, and meeting reporting requirements.

Transit Vehicle Monitoring or Maintenance

ITS technologies can also be used to collect operational and maintenance data from transit vehicles, manage vehicle service histories, and monitor operators and vehicles. Vehicle mileage data can be used to automatically generate preventative maintenance schedules for each vehicle by utilizing vehicle tracking data from a prerequisite vehicle tracking equipment package. Additionally, on-board condition sensors can be employed to monitor system status, transmit critical status information to a transit management subsystem/center, and schedule maintenance and repairs.

Transit Signal Priority

Transit Signal Priority is an ITS operational strategy that facilitates the movement of transit vehicles, either buses or streetcars, through traffic-signal controlled intersections. Objectives of Transit Signal Priority include improved schedule adherence and improved transit travel time efficiency while minimizing impacts to normal traffic operations.

An emitter is installed on transit vehicles and a detector on traffic signals, making it possible for a transit vehicle to “request” a longer green time or a shorter red time when approaching a signalized intersection.

If Palmetto Breeze transit vehicles encounter significant delays at traffic signals, this strategy might be considered. If Transit Signal Priority is needed, the U.S. Department of Transportation provides guidance through a manual explaining the process of planning and implementing signal priority, based on a systems engineering approach.⁴

5.5.3 Service Monitoring

Transit systems have recurrent needs and requirements to collect and report a wide range of information about operations and ridership. The continual compilation of data is essential for the effective planning and management of transit services. Without detailed operations information, the ability to effectively monitor and report system performance and subsequently revise services would be severely impacted. Resource limitations frequently limit comprehensive service monitoring programs. However, the information resulting from service monitoring is very important because fundamental transit functions such as scheduling, service planning, maintenance, finance, and marketing require this data for decision making and reporting. Key considerations for establishing a service monitoring program include:

- Identification of the data categories to be collected
- Methods and sources to be used in data collection
- Procedures to be used to process and store the data
- Evaluating and reporting the data in a meaningful and ongoing format
- Determining where and ensuring required reports are properly transmitted

Program elements must be identified prior to the initiation of service as certain data must be recorded on a daily basis. While the majority of information may, in the case of a contract service provider, be collected and processed by the contractor, the agency must ensure the data is collected, evaluated, and reported in an accurate and timely manner. In addition to compilation of statistical data, periodic field observations of system operations and contract monitoring must also be regularly undertaken.

5.5.4 National Transit Database (NTD) Reporting Protocol

All recipients of FTA Section 5307 Program funding are required to report to the NTD. The annual report from each FTA funding recipient will contain information on capital investment, operation, and service provided with the funds. It will include total annual revenue; sources of revenue; total annual operating costs; total annual capital costs; fleet size and type and related facilities; revenue vehicle miles; and ridership.

6.0 PHASE 2 RECOMMENDATIONS

The next phase of the Transit Development Plan involves implementation of the TDP recommendations. AECOM suggests an ongoing relationship with LRTA and LCOG in the form of an on-call agreement to assist with project implementation and planning activities.

⁴ https://ops.fhwa.dot.gov/publications/fhwahop08024/fhwa_hop_08_024.pdf

APPENDIX A: PUBLIC INVOLVEMENT

Project Fact Sheet

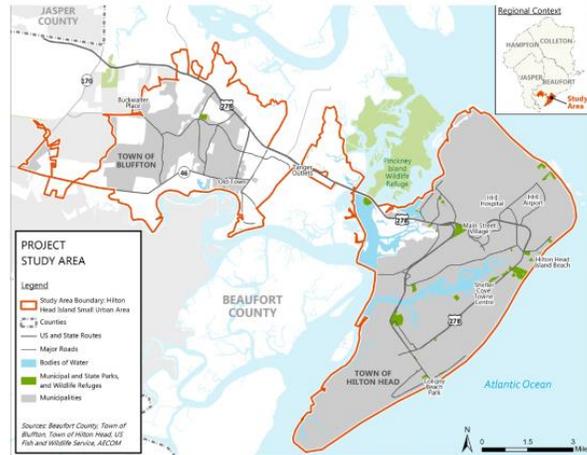
AECOM Imagine it. Delivered.

PALMETTO BREEZE PUBLIC TRANSIT PLANNING FOR HILTON HEAD ISLAND SMALL URBAN AREA



The Lowcountry Councils of Government (LCOG), on behalf of Palmetto Breeze, is currently conducting a transit services study for the small urbanized area of Beaufort County, including the Town of Hilton Head Island, the Town of Bluffton, and parts of unincorporated Beaufort County. The study, which is being conducted by consulting firms AECOM, LSC Transportation Consultants and Joyst Communications, will examine existing population demographics, US Census data, future development patterns, community outreach results and stakeholder input to determine what options exist for future public transportation within the community.

Planning potential public transportation options for a low-density community like the Hilton Head Island urbanized area is a challenge. Traditional fixed route local bus routes, like those operated in Spartanburg, Greenville or Myrtle Beach, may not work as well in the Hilton Head Island Small Urban Area as non-traditional transit services like shared-ride taxis, flexible bus routes, ridesharing, vanpooling, and employer-sponsored bus or van shuttles.



The study will determine the following:

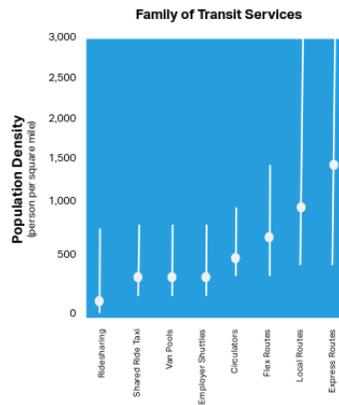
- Transit needs and desires of the community
- Community and stakeholder expectations for future transit services
- Transit service types that are viable options for the community
- Reasonable funding alternatives



PALMETTO BREEZE TRANSIT

Palmetto Breeze is the lead agency providing public transportation services within Beaufort County, offering weekday commuter and on-demand service between employment, medical appointments, and shopping destinations.

Expanding transit service must be effective in terms of generating ridership and passenger revenue. And equally important, both taxpayers and elected officials want to know that their tax dollars are supporting a worthwhile program. We will identify the market segments (e.g., work trips to major employers) with the highest ridership potential and design transit options that best satisfy those market needs.



BENEFITS OF PUBLIC TRANSIT

Public transit typically has positive economic community impacts that include both direct and indirect benefits. The American Public Transportation Association (APTA) estimates that:

- Every \$1 invested in public transportation generates approximately \$4 in economic returns
- Every \$1 billion invested in public transportation supports and creates more than 50,000 jobs

Furthermore, public transportation provides environmental incentives as well as quality of life benefits to limited mobility and low income populations.



CONNECT WITH US!

Your input is crucial to the development of the future transit services, and we invite you to be involved every step of the way. Please share your thoughts with us by completing an online survey or via email, and keep up to date on project news through our website.

SURVEY: <https://www.surveymonkey.com/r/SC-Travel-Survey>

AECOM

Chip Burger, Transportation Planner
chip.burger@aecom.com

LOWCOUNTRY COG

Ginnie Kozak Planning Director
gkozak@lowcountrycog.org

Focus Group Questions

**PALMETTO BREEZE
TRANSIT PLANNING SERVICES
FOCUS GROUP INTERVIEW QUESTIONS**

1. What are the primary destinations in the urbanized areas of Beaufort County?
What travel patterns have you observed? (i.e., When is the travel occurring? How are people traveling? (driving, transit, biking, walking, etc.))
2. How often and where do you travel to other destinations within Beaufort County?
3. In general, how do you view public transportation both currently and for the future?
4. What is your perception of the current Palmetto Breeze services and facilities?
5. What barriers do you see to transit service in the study area?
6. a. What opportunities do you see for an expanded transit system within the study area - both currently and in the future?

b. Who would be the primary users of this service?
7. a. What opportunities do you see for an expanded transit system to destinations outside Beaufort County - both currently and in the future?

b. Who would be the primary users of this service?

8. What do you think would affect someone's decision to use transit? (convenience, vehicle type, stops, schedule, quality, image, safety, understanding of service)

9. Do you use Transportation Network Companies (Uber or Lyft) or taxis? Tell us about your experience(s) with them.

10. Do you have any other ideas for enhancing mobility in the study area?

11. Are there any other comments or observations you have about the study or transit in general?

Focus Group and Steering Committee Meeting Summaries

FOCUS GROUP 1

April 4, 2018

3:00 p.m.

Bluffton Library

Introductions

- Colin Kinton, Beaufort County
- Eric Greenway, Beaufort County
- Heather Colin, Town of Bluffton
- Courtney Williamson, Montage Palmetto Bluff
- Michelle Wycoff, Hilton Head Island Bluffton Chamber
- Ben Boswell, Beaufort County
- Fred Leyda Beaufort County Human Services
- John Salazar, USCB

Survey Results

- The study team provided an overview of employer and resident survey results.
- Demographics for survey respondents are surprisingly affluent. Concerns were expressed that higher-income responders may not represent the views of travel dependent riders.
- Focus group members would like to see more diversity among responders, including a focus on Spanish-speaking individuals.

Transportation Demand Management

- Recent changes to tax laws including alterations to an employer tax deductions when supporting the purchase of transit passes.
- Survey respondents expressed interest in a Guaranteed Ride Home program. The study team discussed how Atlanta manages and markets its Guaranteed Ride Home program.
- How are school trips handled? How can transit help?

Existing Service Plans

- Trolley will begin in July once the fleet is delivered and ready for use. Service will run from 9am – 7pm until October 14th. Once service ends, Palmetto Breeze will conduct a full review to determine if any service changes should take place the following year.

Last Mile Connectivity

- “Neighbor-to-Neighbor” program – volunteer run program to provide free rides to elderly. This can be used as a resource to get more riders to bus stops and could help solve last mile connectivity issues.

- Discussion of Flex service in other markets. Service must be scheduled a day in advance and routes are created based on need. Trip patterns can inform future transit planning efforts.
- How do you get riders from “behind the gates?” Will plantations provide their own shuttles? Should service focus on getting workers behind the gates or getting residents out?

Commuter Travel Patterns

- May want to consider areas outside of the project study area to better capture traffic on roads. (Hardeeville, Savannah, Airport, Sun City, etc.)
- Discussion of possible park-and-ride locations (indicated on map)

Service Design

- See a need for circulators in Bluffton and on Hilton Head Island. Frequent service will be needed over the bridge to connect the two circulators.

FOCUS GROUP 2

April 5, 2018

10:00 a.m.

Hilton Head Library

Introductions

- Carol Horowitz
- Jocelyn Staiger, Hilton Head Area Association of Realtors
- Stan Stolarcyk, Volunteers in Medicine
- Anne Cyran, Town of Hilton Head Island

Survey Results

- The study team provided an overview of employer and resident survey results.

Circle to Circle Study

- Explore Park & Ride sites recommended within

Trolley Service

- Focus group members requested a better understanding of the target audience of the trolley. Palmetto Breeze provided a service overview and how it is being designed to attract tourist. Taking tourist trips off the roads will help local residents.
- Consider extended service hours on Tuesday nights for fireworks

Last Mile Connectivity

- “Neighbor-to-Neighbor” program – volunteer run program to provide free rides to elderly. This can be used as a resource to get more riders to bus stops and could help solve last mile connectivity issues.
- Discussion of Flex service in other markets. Service must be scheduled a day in advance and routes are created based on need. Trip patterns can inform future transit planning efforts.
- How do you get riders from “behind the gates?” Will plantations provide their own shuttles? Should service focus on getting workers behind the gates or getting residents out?
- Jitney service is available on the island. Discussions with these providers could help to inform the service design.

Service Design

- See a need for circulators in Bluffton and on Hilton Head Island. Frequent service will be needed over the bridge to connect the two circulators.
- Service should “split” North and South once crossing the bridge.

Steering Committee

April 6, 2018

12:00 p.m.

Lowcountry Technical College

Introductions

Focus Groups

- The study team provided an overview of feedback from focus group participants.
- Maps from focus group meetings were reviewed.

Themes

- See a need for circulators in Bluffton and on Hilton Head Island. Frequent service will be needed over the bridge to connect the two circulators.
- Bluffton needs local service that could leverage a perceived or real parking shortage.
- Service should maximize opportunities around festivals and other tourist attractions.
- Increase coordination with employers will be important moving forward. Employers are becoming more supportive of transit.

Funding

- Federal funds require a local match. Sustainable, recurring funding is preferable. Options are being evaluated and will be discussed in future meetings.

Implementation

- Steering committee members are concerned that the results from the planning effort won't be implemented. Don't want this transit plan to "sit on a shelf".
- Request that ridership projections be made part of the study.

Resident Survey Summary



364

Total Responses

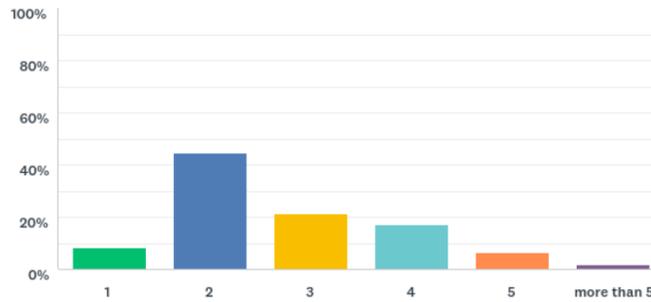
Date Opened: Thursday, February 15, 2018

Date Closed: Saturday, March 31, 2018

Q1: How many people live in your household?

Answered: 364 Skipped: 0

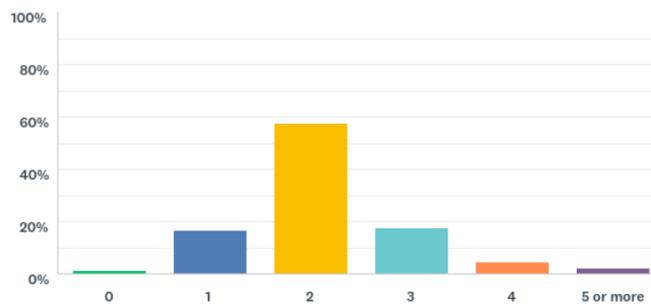
Q1 How many people live in your household?



Q2: Number of cars that are available to persons living in your home, including yourself, on most days:

Answered: 361 Skipped: 3

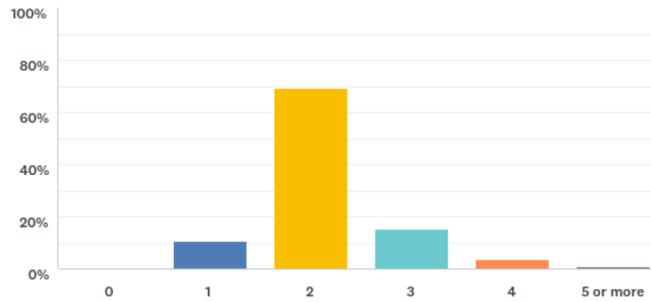
Q2 Number of cars that are available to persons living in your home, including yourself, on most days:



Q3: How many members of your household have a driver's license?

Answered: 363 Skipped: 1

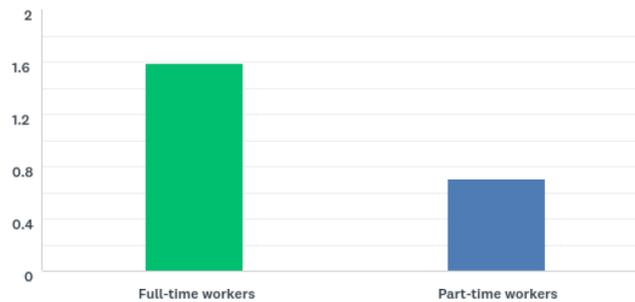
Q3 How many members of your household have a driver's license?



Q4: How many people have a full or part time job in your household?

Answered: 357 Skipped: 7

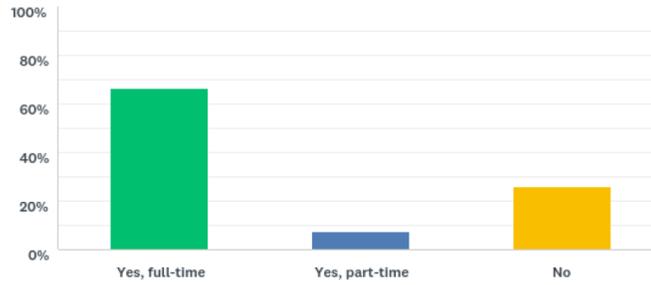
Q4 How many people have a full or part time job in your household?



Q5: Are you employed in the Bluffton or Hilton Head Island area?

Answered: 363 Skipped: 1

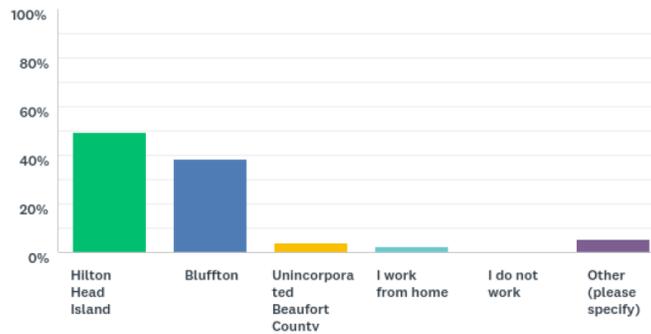
Q5 Are you employed in the Bluffton or Hilton Head Island area?



Q6: Where do you work?

Answered: 208 Skipped: 156

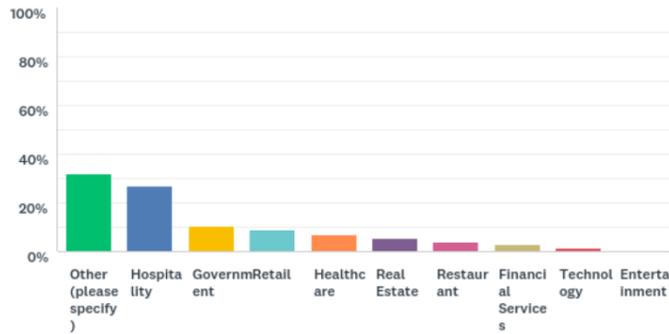
Q6 Where do you work?



Q7: What industry do you work in?

Answered: 206 Skipped: 158

Q7 What industry do you work in?



Q8: What is your typical work schedule?

Answered: 205 Skipped: 159

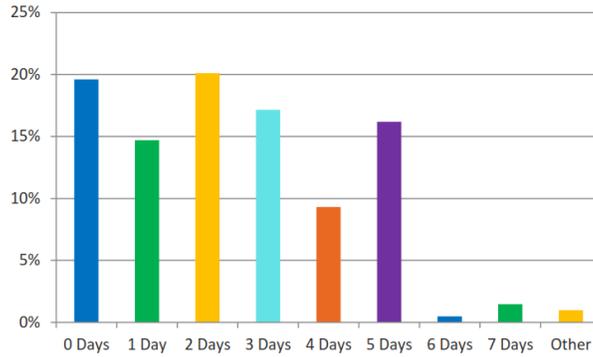
Q8 What is your typical work schedule?



Q9: In a typical week, how many days do you work 30 minutes or more past your usual departure time?

Answered: 204 Skipped: 160

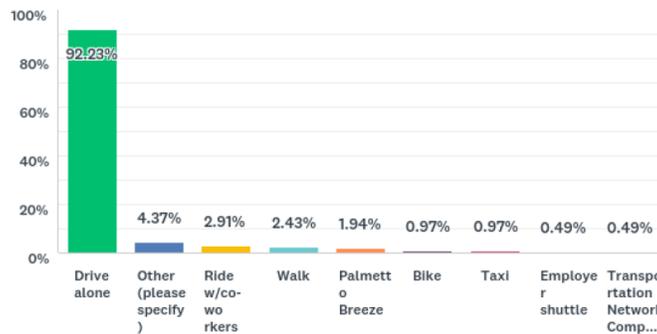
Q9 In a typical week, how many days do you work 30 minutes or more past your usual departure time?



Q10: On a typical workday, how do you travel to work? (check all that apply):

Answered: 206 Skipped: 158

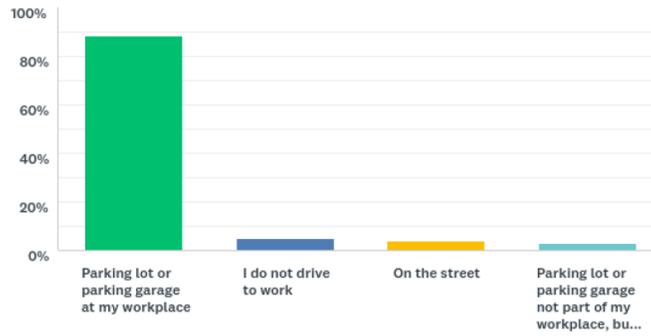
Q10 On a typical workday, how do you travel to work? (check all that apply):



Q11: If you drive to work, where do you park your car while at work?

Answered: 208 Skipped: 156

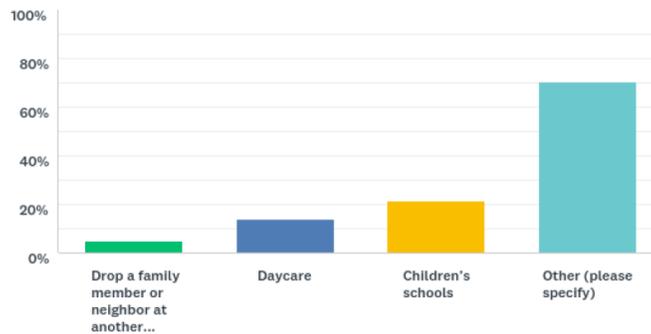
Q11 If you drive to work, where do you park your car while at work?



Q12: In a typical week, what additional stops do you make on your trips to work?

Answered: 187 Skipped: 177

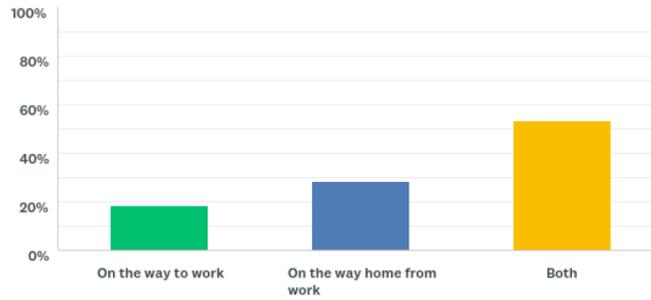
Q12 In a typical week, what additional stops do you make on your trips to work?



Q13: When do you make these additional stops?

Answered: 184 Skipped: 180

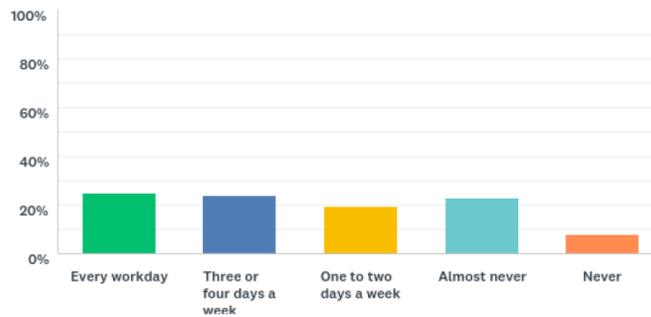
Q13 When do you make these additional stops?



Q14: When you are at work, how often do you leave your office or work location during the work day to go to other locations in the area?

Answered: 207 Skipped: 157

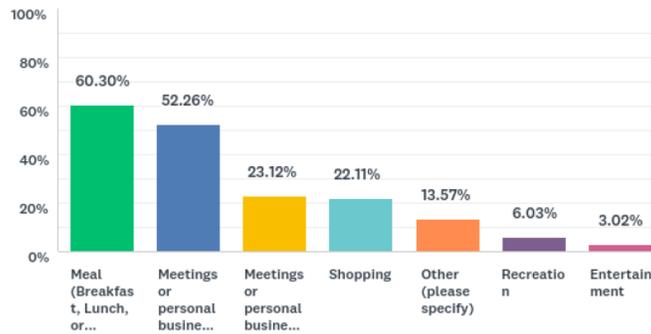
Q14 When you are at work, how often do you leave your office or work location during the work day to go to other locations in the area?



Q15: What is the purpose of these trips?

Answered: 199 Skipped: 165

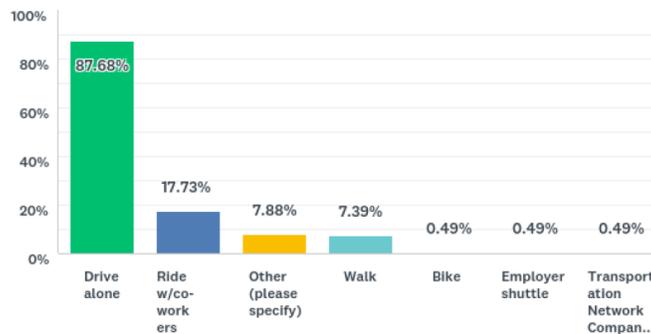
Q15 What is the purpose of these trips?



Q16: When you go to other locations during the workday, how do you get to that location? (Check all that apply):

Answered: 203 Skipped: 161

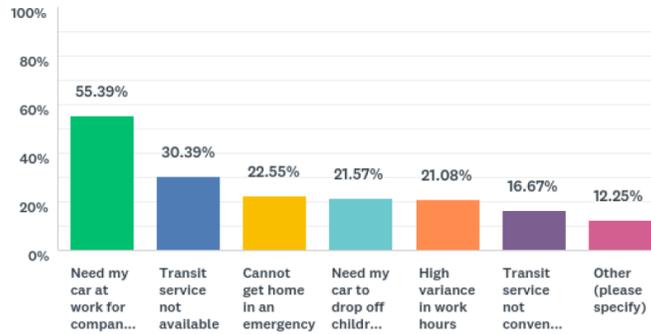
Q16 When you go to other locations during the workday, how do you get to that location? (Check all that apply):



**Q17: If you drive alone to work, what are your main reasons for doing so?
Check no more than three:**

Answered: 204 Skipped: 160

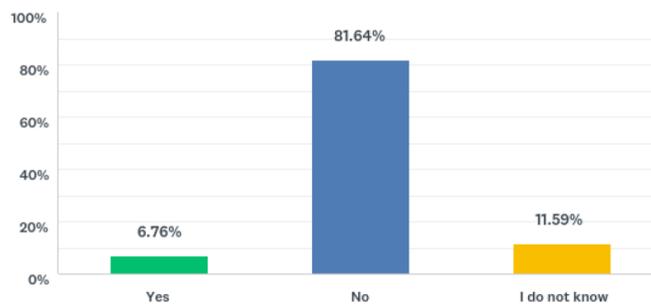
Q17 If you drive alone to work, what are your main reasons for doing so? Check no more than three:



Q18: Does your employer provide a commuter benefit or subsidized discounted ridesharing or transit passes?

Answered: 207 Skipped: 157

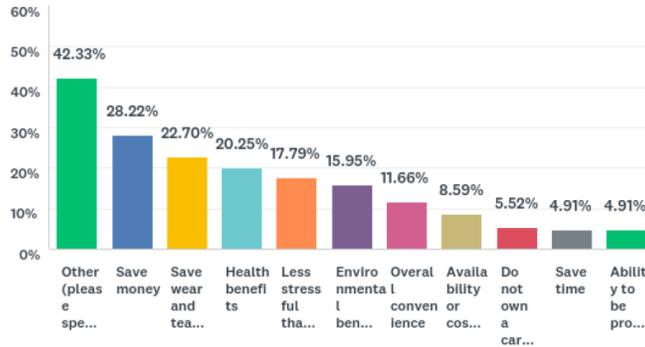
Q18 Does your employer provide a commuter benefit or subsidized discounted ridesharing or transit passes?



Q20: If you use Palmetto Breeze, a carpool, walk or ride a bike, what motivates you to do so? Check no more than three:

Answered: 163 Skipped: 201

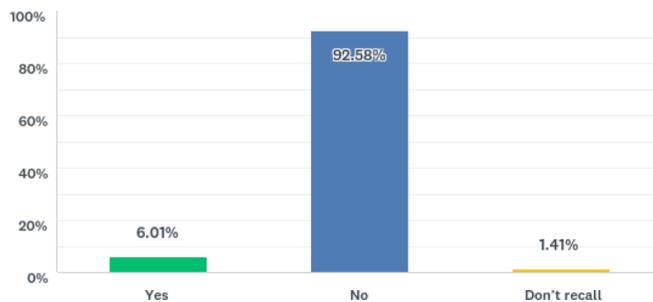
Q20 If you use Palmetto Breeze, a carpool, walk or ride a bike, what motivates you to do so? Check no more than three:



Q21: Have you ever ridden Palmetto Breeze?

Answered: 283 Skipped: 81

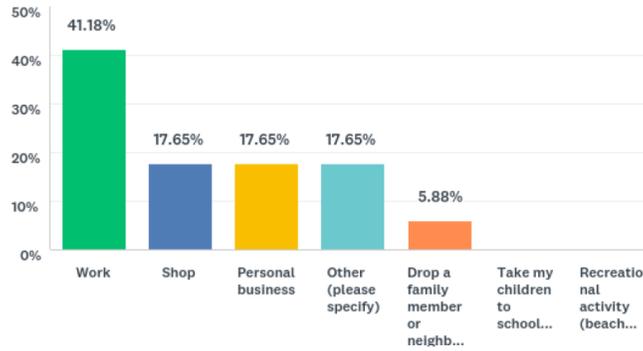
Q21 Have you ever ridden Palmetto Breeze?



Q22: Using Palmetto Breeze, what is has been your most frequent destination?

Answered: 17 Skipped: 347

Q22 Using Palmetto Breeze, what is has been your most frequent destination?



Q23: How likely is it that you would recommend Palmetto Breeze to a friend or colleague?

Answered: 16 Skipped: 348

-6.25

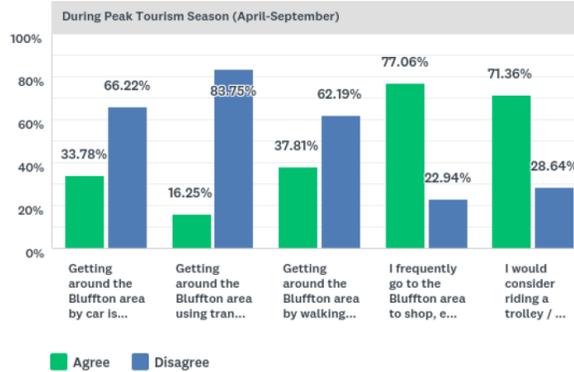
Net Promotor Score

An indicator of brand loyalty

Q24: Please read each of the following statements about BLUFFTON and indicate whether you agree or disagree with each of them.

Answered: 226 Skipped: 138

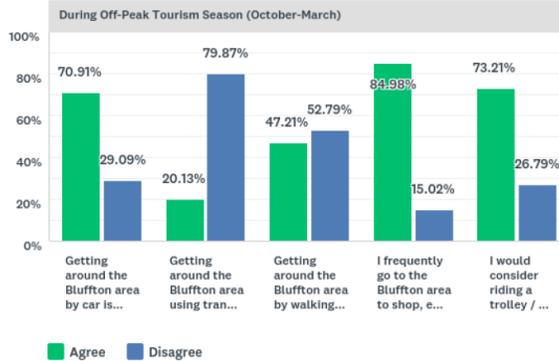
Q24 Please read each of the following statements about BLUFFTON and indicate whether you agree or disagree with each of them.



Q24: Please read each of the following statements about BLUFFTON and indicate whether you agree or disagree with each of them.

Answered: 226 Skipped: 138

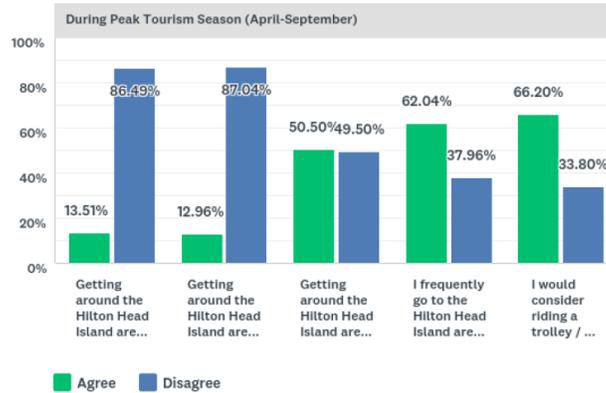
Q24 Please read each of the following statements about BLUFFTON and indicate whether you agree or disagree with each of them.



Q25: Please read each of the following statements about HILTON HEAD ISLAND and indicate whether you agree or disagree with each of them.

Answered: 224 Skipped: 140

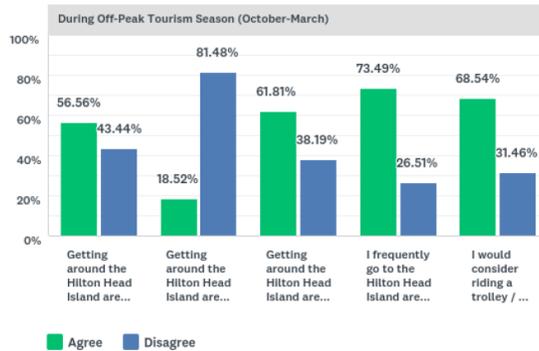
Q25 Please read each of the following statements about HILTON HEAD ISLAND and indicate whether you agree or disagree with each of them.



Q25: Please read each of the following statements about HILTON HEAD ISLAND and indicate whether you agree or disagree with each of them.

Answered: 224 Skipped: 140

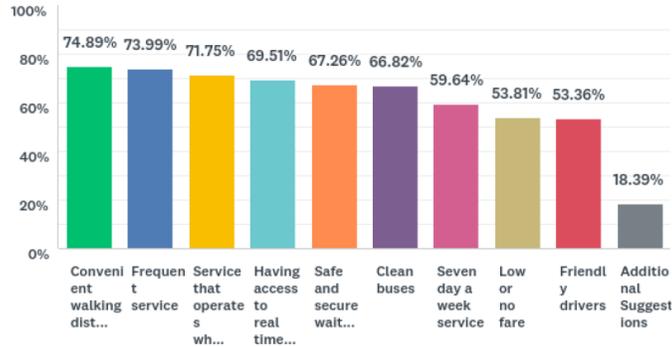
Q25 Please read each of the following statements about HILTON HEAD ISLAND and indicate whether you agree or disagree with each of them.



Q26: Tell us what would make transit service more appealing to you. Check as many as apply:

Answered: 223 Skipped: 141

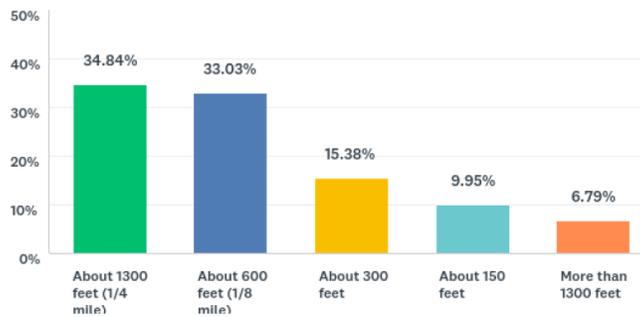
Q26 Tell us what would make transit service more appealing to you. Check as many as apply:



Q27: To access transit, how far are you willing to walk to a bus stop?

Answered: 221 Skipped: 143

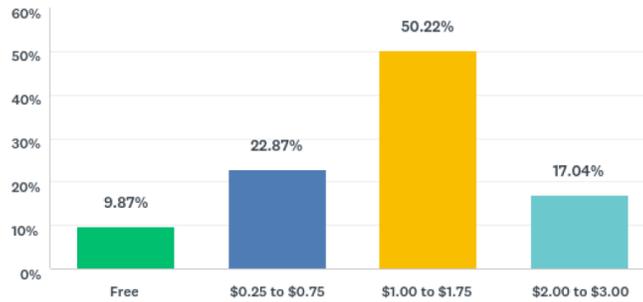
Q27 To access transit, how far are you willing to walk to a bus stop?



Q28: How much would you be willing to pay for a one-way transit ride?

Answered: 223 Skipped: 141

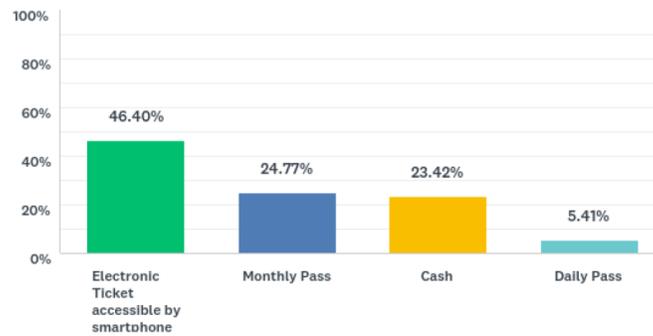
Q28 How much would you be willing to pay for a one-way transit ride?



Q29: How would you pay for fares? Check all that apply:

Answered: 222 Skipped: 142

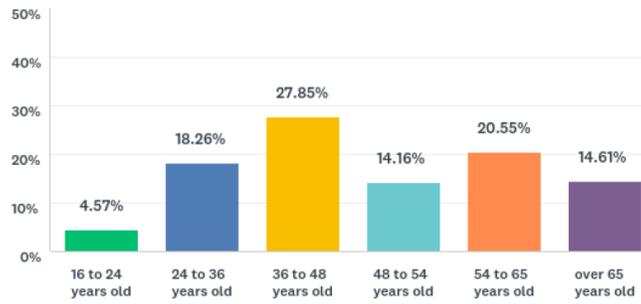
Q29 How would you pay for fares? Check all that apply:



Q31: Age:

Answered: 219 Skipped: 145

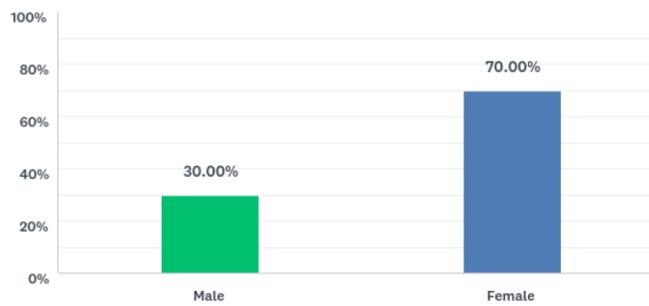
Q31 Age:



Q32: Gender:

Answered: 220 Skipped: 144

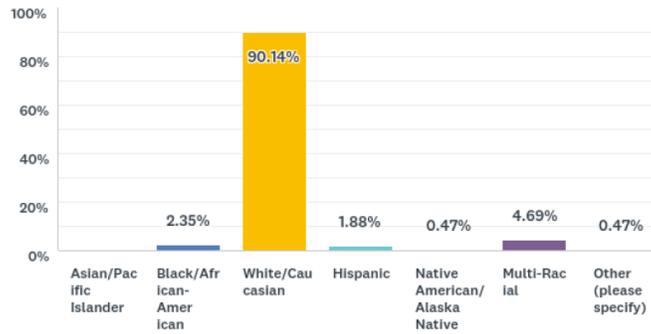
Q32 Gender:



Q33: Race or ethnicity:

Answered: 213 Skipped: 151

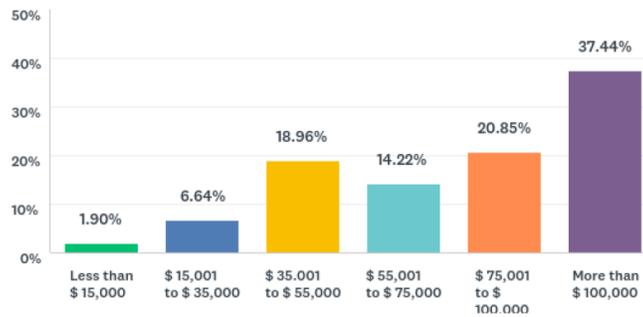
Q33 Race or ethnicity:



Q34: Average annual household income:

Answered: 211 Skipped: 153

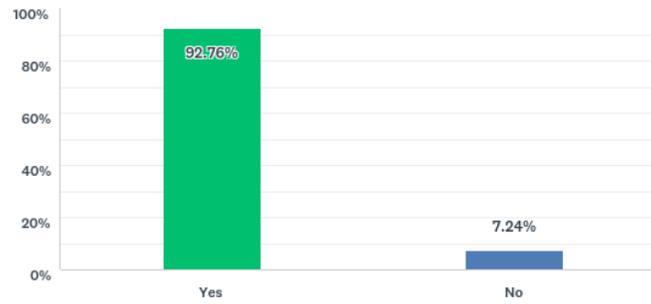
Q34 Average annual household income:



Q35: Do you use a smart phone to access the internet?

Answered: 221 Skipped: 143

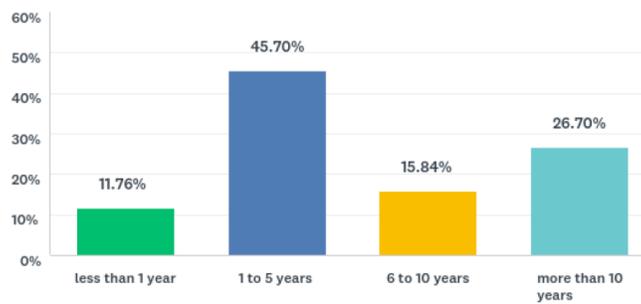
Q35 Do you use a smart phone to access the internet?



Q36: How long have you lived in your current home?

Answered: 221 Skipped: 143

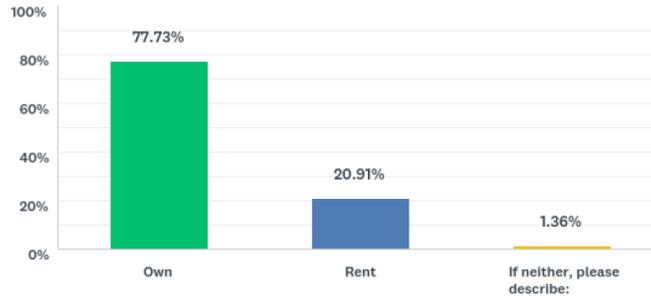
Q36 How long have you lived in your current home?



Q37: Do you own or rent your residence?

Answered: 220 Skipped: 144

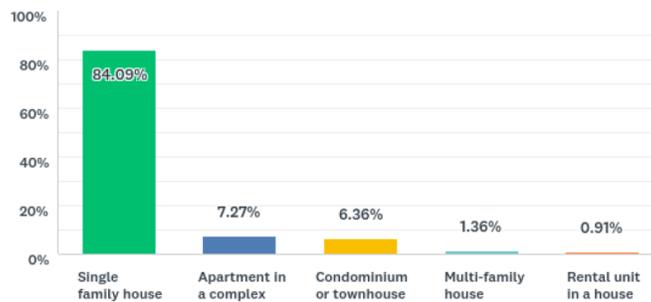
Q37 Do you own or rent your residence?



Q38: Which best describes your residence:

Answered: 220 Skipped: 144

Q38 Which best describes your residence:



Employer Survey Summary



7

Total Responses

Date Launched: Monday, February 26, 2018

Q1: Address at Primary Location
Q3: Address at Secondary Location

Answered: 7 Skipped: 0

Answered: 3 Skipped: 4

6

Primary Business Locations

3

Secondary Business Locations

Q2: Number of Employees at Primary Location

Answered: 7 Skipped: 0

Q2 Number of Employees at Primary Location

ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Full Time	168	1,176	7
Part-Time	21	104	5
Seasonal / Additional Contract	48	242	5
Total Respondents: 7			

Q4: Number of Employees at Secondary Location

Answered: 3 Skipped: 4

Q4 Number of Employees at Secondary Location (If applicable):

ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Full Time	67	200	3
Part-Time	15	30	2
Seasonal / Additional Contract	38	75	2
Total Respondents: 3			

Q5: Do your employees work primarily onsite or offsite?

Answered: 7 Skipped: 0

Q5 Do your employees primarily work onsite at these locations, or do they work offsite/elsewhere throughout the region? (i.e., housecalls, deliveries, etc.). Please enter the percentage that work onsite versus offsite (should total to 100).

Percentage of Employees Onsite

10%
1 Response

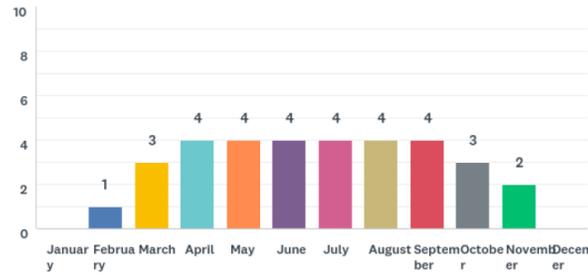
50%
1 Response

100%
5 Responses

Q6: If you indicated you have seasonal employees above, please check during which months you typically have additional staffing:

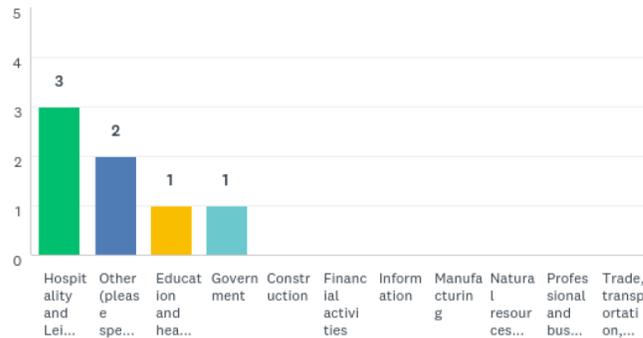
Answered: 4 Skipped: 3

Q6 If you indicated you have seasonal employees above, please check during which months you typically have additional staffing:



Q7: Which of the following categories best describes your business?

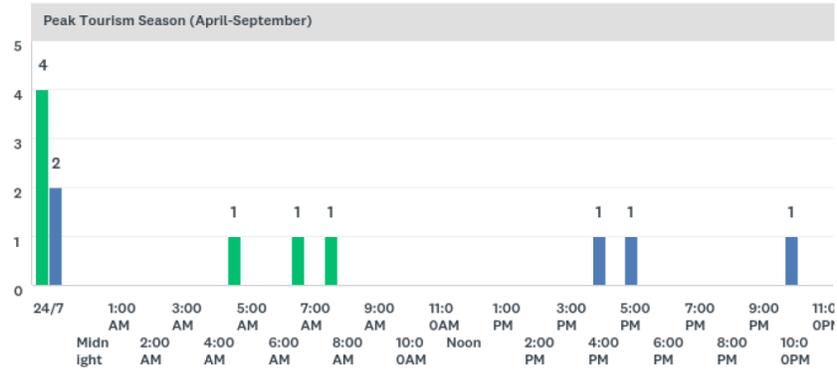
Answered: 7 Skipped: 0



Q8: What are your hours of operation?

Answered: 7 Skipped: 0

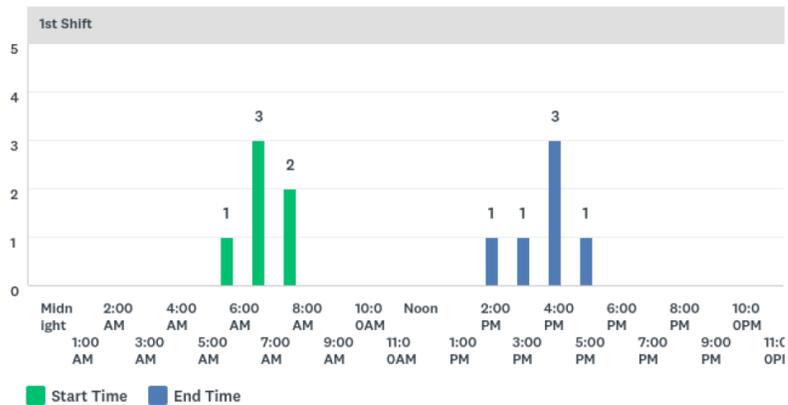
Q8 What are your hours of operation?



Q9: Please list the regular/scheduled shifts at your workplace.

Answered: 6 Skipped: 1

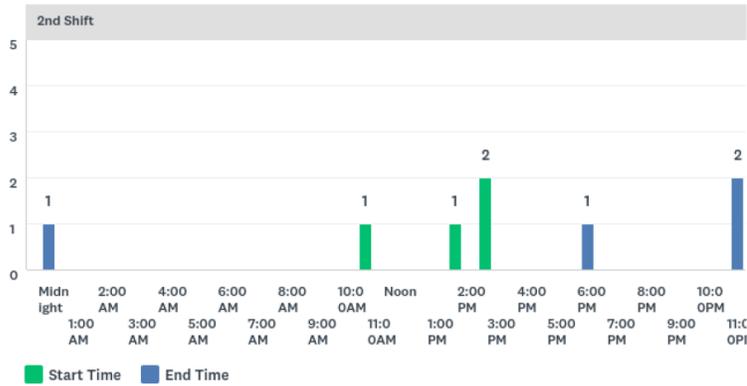
Q9 Please list the regular/scheduled shifts at your workplace.



Q9: Please list the regular/scheduled shifts at your workplace.

Answered: 6 Skipped: 1

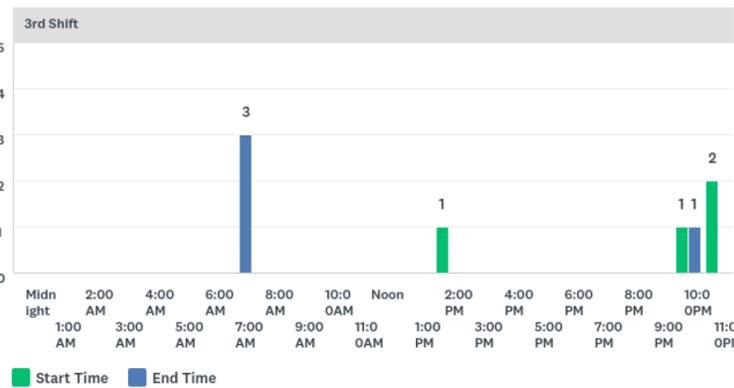
Q9 Please list the regular/scheduled shifts at your workplace.



Q9: Please list the regular/scheduled shifts at your workplace.

Answered: 6 Skipped: 1

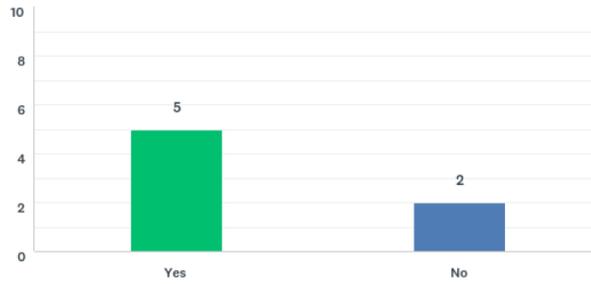
Q9 Please list the regular/scheduled shifts at your workplace.



Q10: Is there adequate parking for your employees (capacity/paved)?

Answered: 7 Skipped: 0

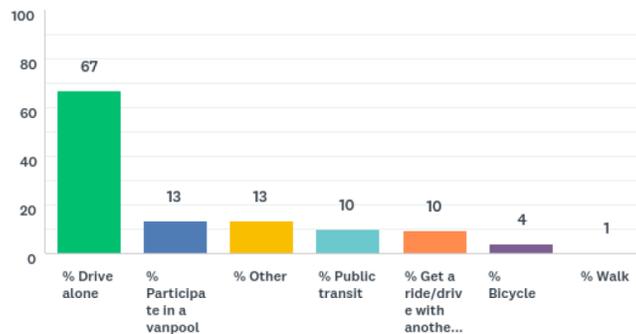
Q10 Is there adequate parking for your employees (capacity/paved)?



Q11: Please estimate the percentage of your employees that commute by each travel mode. Total responses should add to 100.

Answered: 7 Skipped: 0

Q11 Please estimate the percentage of your employees that commute by each travel mode. Total responses should add to 100.



Q13: If public transportation were more convenient to your workplace, what percentage of your employees do you feel would consider using it?

Answered: 6 Skipped: 1

Q13 If public transportation were more convenient to your workplace, what percentage of your employees do you feel would consider using it?

10%
Minimum

33%
Average

65%
High

Q14: What is your general perception of public transportation?

Answered: 7 Skipped: 0

Q14 What is your general perception of public transportation?

- Public transportation is great when it is easily accessible and available when users need it.
- Limited routes
- I think it's a great, needed option for the area.
- Convenient
- OK
- It is underutilized
- Long hours on bus

APPENDIX B: SERVICE STATISTICS

Operating Statistics and Ridership Estimates

Trolley - Phase I

30 Minute Frequency Totals	
<u>Annual Service Statistics</u>	
Peak Vehicles	2
Fleet Vehicles	3
Vehicle Revenue Hours	4,300
Vehicle Revenue Miles	43,000
Estimated Low Ridership ¹	38,700
Estimated Moderate Ridership	51,600
Estimated High Ridership	64,500
Annual O&M Cost ²	\$322,500
<i>Estimated Cost per Revenue Hour</i>	<i>\$75.00</i>

Trolley - Phase II HHI and Bluffton

30 Minute Frequency Totals	
<u>Service Statistics</u>	
Peak Vehicles	4
Fleet Vehicles	5
Annual Vehicle Revenue Hours	8,600
Annual Vehicle Revenue Miles	86,000
Estimated Low Ridership ¹	77,400
Estimated Moderate Ridership	103,200
Estimated High Ridership	129,000
Annual O&M Cost ²	\$645,000
<i>Estimated Cost per Revenue Hour</i>	<i>\$75.00</i>

Paratransit - HHI

On-Call Service Totals	
<u>Service Statistics</u>	
Peak Vehicles	1
Fleet Vehicles	1
Annual Vehicle Revenue Hours	2,150
Annual Vehicle Revenue Miles	21,500
Estimated Low Ridership ¹	387
Estimated Moderate Ridership	516
Estimated High Ridership	645
Annual O&M Cost ²	\$129,000
<i>Estimated Cost per Revenue Hour</i>	<i>\$60.00</i>

Paratransit - Bluffton

On-Call Service Totals	
<u>Service Statistics</u>	
Peak Vehicles	1
Fleet Vehicles	1
Annual Vehicle Revenue Hours	2,150
Annual Vehicle Revenue Miles	21,500
Estimated Low Ridership ¹	19,350
Estimated Moderate Ridership	25,800
Estimated High Ridership	32,250
Annual O&M Cost ²	\$129,000
<i>Estimated Cost per Revenue Hour</i>	<i>\$60.00</i>

Flex - HHI

On-Call Service Totals	
<u>Service Statistics</u>	
Peak Vehicles	1
Fleet Vehicles	1
Annual Vehicle Revenue Hours	3,570
Annual Vehicle Revenue Miles	35,700
Estimated Low Ridership ¹	32,130
Estimated Moderate Ridership	42,840
Estimated High Ridership	53,550
Annual O&M Cost ²	\$214,200
<i>Estimated Cost per Revenue Hour</i>	<i>\$60.00</i>

Flex - Bluffton

On-Call Service Totals	
<u>Service Statistics</u>	
Peak Vehicles	1
Fleet Vehicles	1
Annual Vehicle Revenue Hours	3,570
Annual Vehicle Revenue Miles	35,700
Estimated Low Ridership ¹	32,130
Estimated Moderate Ridership	42,840
Estimated High Ridership	53,550
Annual O&M Cost ²	\$214,200
<i>Estimated Cost per Revenue Hour</i>	<i>\$60.00</i>

Connector Route

30 Minute Frequency Totals	
<u>Service Statistics</u>	
Peak Vehicles	2
Fleet Vehicles	3
Annual Vehicle Revenue Hours	5,100
Annual Vehicle Revenue Miles	102,000
Estimated Low Ridership ¹	45,900
Estimated Moderate Ridership	61,200
Estimated High Ridership	76,500
Annual O&M Cost ²	\$382,500
<i>Estimated Cost per Revenue Hour</i>	<i>\$75.00</i>

Interstate Route

60 Minute Frequency Totals	
<u>Service Statistics</u>	
Peak Vehicles	2
Fleet Vehicles	3
Annual Vehicle Revenue Hours	5,590
Annual Vehicle Revenue Miles	215,000
Estimated Low Ridership ¹	50,310
Estimated Moderate Ridership	67,080
Estimated High Ridership	83,850
Annual O&M Cost ²	\$419,250
<i>Estimated Cost per Revenue Hour</i>	<i>\$75.00</i>

APPENDIX C: MARKETING PLAN

Each proposed service model and route will have unique characteristics that will attract a distinctive set of riders. The development of a targeted messages aimed at the appropriate audiences will be critical to building support and ridership for the routes.

There are a variety of influencers in the Hilton Head UZA that are positioned to support the Palmetto Breeze system. All communication to these stakeholders will share a common theme with adjustments made as-needed based on target audience. Closer to implementation,

messages and brand alterations should be further refined through targeted focus groups. Below is a listing of priority audiences, the general tone of marketing outreach, and sample messages.

Palmetto Breeze recently contracted with Lost Art Communication to develop brand and marketing plan for their new Hilton Head Island Trolley service. Every effort should be made to coordinate the ongoing marketing and branding efforts for the trolley service with a complimentary Palmetto Breeze marketing plan.

Audience	Campaign Tone/Imagery	Messages
Beaufort County Community Leaders	<ul style="list-style-type: none"> ▪ Professional ▪ Imagery of tourists and employees using the range of Palmetto Breeze's services. ▪ Photos of major tourist attractions and destinations that will be serviced. 	<ul style="list-style-type: none"> ▪ Palmetto Breeze is a transit service that connects tourists and our workforce to employment and activity centers. ▪ New routes reduce traffic, foster ridership growth and help create a larger, more productive, and happier workforce. ▪ Promotional effort: "First two weeks of service are FREE!"

Audience	Campaign Tone/Imagery	Messages
<p>Employers recruiting workers and interested in attracting additional business</p>	<ul style="list-style-type: none"> ▪ Professional ▪ Commuters wearing business casual and professional attire (e.g., button up shirts, medical scrubs, cleaning uniform, etc.) We recommend a few images of riders in business suits. ▪ Some pictures of professionals with luggage in support of the Savannah service. ▪ Tourist imagery for hospitality sector. 	<ul style="list-style-type: none"> ▪ Palmetto Breeze is a transit service that connects you to your workforce. ▪ New routes start soon and your employees will have questions. We have resources to help. ▪ Palmetto Breeze is not your typical transit service. It is affordable, comfortable, and features great amenities for commuters: Palmetto Breeze app, refurbished buses, climate control, and WiFi. ▪ New routes can help you recruit and retain employees. ▪ Transit pass subsidies are a great employee benefit and can help YOUR bottom line. ▪ Promotional effort: “First two weeks of service are FREE!” ▪ We bring you business! We will be connecting tourist to major locations throughout Bluffton and Hilton Head. ▪ Sponsorship opportunities.
<p>Local Residents taking trips around Bluffton or Hilton Head</p>	<ul style="list-style-type: none"> ▪ Fun, casual, social ▪ Lifestyle photos showing people with their co-workers, family and friends. Some people dress in business casual or work clothes while others have shopping bags and beach gear. 	<ul style="list-style-type: none"> ▪ Palmetto Breeze is a transit service that connects you to where you want to go: <ul style="list-style-type: none"> ▪ Festivals, fireworks, beach, shopping, restaurants, work, etc. ▪ New and enhanced service launches soon! ▪ Palmetto Breeze is convenient and comfortable. It can also help you save money and avoid stress. <ul style="list-style-type: none"> ▪ “No more waiting on the bus! The Palmetto Breeze app can help you locate your bus in real time”. ▪ “Stay connected with our FREE WiFi” ▪ “Skip the traffic and enjoy the ride”. ▪ “Tired of driving in circles looking for parking? Front door service to major attractions coming soon!” ▪ “Skip your car and bring your bike”. ▪ Promotional effort: “First two weeks

Audience	Campaign Tone/Imagery	Messages
		<p>of service are FREE!”</p> <ul style="list-style-type: none"> ▪ Accessible to riders of different abilities.
<p>Choice riders commuting during peak hours, over the bridges connecting Hilton Head Island to the mainland</p>	<ul style="list-style-type: none"> ▪ Upbeat but professional ▪ Boutique service and boutique experience ▪ Southern hospitality from drivers attracts and maintains choice riders ▪ Imagery that shows riders relaxing or being productive on their commutes ▪ Commuters wearing business casual and professional attire (e.g., button up shirts, medical scrubs, cleaning uniform, etc.) We recommend a few images of riders in business suits 	<ul style="list-style-type: none"> ▪ Palmetto Breeze is a transit service that connects commuters from Hardeeville, Bluffton, and Hilton Head Island. ▪ New and enhanced service launches soon! ▪ Palmetto Breeze is convenient and comfortable. It can also help you save money and avoid stress. <ul style="list-style-type: none"> ▪ “No more waiting on the bus! The Palmetto Breeze app can help you locate your bus in real time”. ▪ “Get a jump on your day or wind down after work with our FREE WiFi”. ▪ “Skip the traffic and enjoy the ride”. ▪ Promotional effort: “First two weeks of service are FREE!” ▪ If commuter coaches are acquired for express service, refer to the vehicles as “coaches” as opposed to “buses.” ▪ Accessible to riders of different abilities.

Audience	Campaign Tone/Imagery	Messages
Commuters/Travelers to Savannah-Chatham County	<ul style="list-style-type: none"> ▪ Upbeat but professional ▪ Boutique service and boutique experience ▪ Southern hospitality from drivers attracts and maintains choice riders ▪ Imagery that shows riders relaxing on their trip ▪ Commuters wearing a blend of casual, business casual, and professional attire 	<ul style="list-style-type: none"> ▪ Palmetto Breeze is a transit service that connects Beaufort County to Savannah. ▪ New and enhanced service launches soon! ▪ Palmetto Breeze is convenient and comfortable. It can also help you save money and avoid stress. <ul style="list-style-type: none"> ▪ “No more waiting on the bus! The Palmetto Breeze app can help you locate your bus in real time”. ▪ “Stay connected with our FREE WiFi”. ▪ “Skip the traffic and airport parking”. ▪ “Enjoy the ride” ▪ Promotional effort: “First two weeks of service are FREE!” ▪ If commuter coaches are acquired for express service, refer to the vehicles as “coaches” as opposed to “buses.” ▪ Accessible to riders of different abilities.
Paratransit Riders & Caretakers	<ul style="list-style-type: none"> ▪ Upbeat but professional ▪ Boutique service and boutique experience ▪ Trained paratransit drivers ▪ Imagery showing trust between driver and rider 	<ul style="list-style-type: none"> ▪ Use Driver Training as marketing ▪ Palmetto Breeze drivers connect you safely to where you want to go. ▪ Palmetto Breeze drivers know the geographic layout of the region and get you there safely.
Tourists visiting Bluffton and/or Hilton Head Island	Brand, campaign tone, related imagery, and supporting messages are being developed and implemented in a separate, in depth, Trolley marketing plan. To increase the brand awareness of the entire Palmetto Breeze service, the feel of all marketing pieces should visually relate to each other.	

Strategy

Keeping the goals in mind, the approach outlined in this marketing plan is crafted to offer abundant opportunity to engage community leaders, stakeholders, and the public in support of the new transit services. In preparation for new service, coordination will be conducted with local, regional, state, and federal agencies that have an interest in the project, and it will continue as needed throughout the service launch. If and when appropriate, local governments, agency partners and community organizations will be asked to pass along project information to

their stakeholders including but not limited to promotional materials and social media content. Stakeholders will also be asked to help identify and provide introductions to additional stakeholders and major employers that have a vested interest in the success of the service.

Successful Transportation Demand Management (TDM) outreach efforts frequently work directly with employers to establish custom commute options programs and offer incentives to motivate commuters to try new modes for traveling to work. Employers are uniquely positioned to empower their employees to make changes in commuting habits. Starting with the region's largest employers, TDM outreach professionals will provide one-on-one assistance to design and implement customized commute options programs at employer sites. Typical services include: coordinating employer training and networking events, launching and promoting employer transit pass sales and subsidies, and delivering marketing tools to promote the new transit service.

Frequently, transit providers make their services more affordable by offer discounted passes to employers that purchase a pre-defined number of passes every month. Providers can also coordinate with employers to provide free "try-it" passes for potential customers. Incentives, like these, have been shown to successfully move some drive alone commuters to change their commute. During the planning process, Palmetto Breeze should work with stakeholders to determine the structure and feasibility of incentives that would be affordable to implement and ultimately increase ridership.

Businesses in the hospitality industry with access to transit routes are positioned to receive benefits from increased business from Palmetto Breeze customers. Partnerships with these companies to encourage patrons to arrive via Palmetto Breeze will increase awareness and ridership. Some companies may even choose to offer discounts for taking transit to their location or wish to advertise on Palmetto Breeze assets. Whenever possible, every effort should be made to provide these businesses with transit information to use onsite (e.g., fliers, posters, route brochures) and on their website (e.g., convenient routes, current promotions, links to Palmetto Breeze).

Local residents will become aware of the service enhancements at the stores, restaurants, and community spaces they visit, from their employer, and through a robust PR campaign. Employer partners will be asked to pass route information along to their employees and if warranted, allow outreach staff to come onsite to meet directly with commuters. Staff will be able to promote the service, create trip plans, answer questions, and provide free "try-it" passes.

Accompanying this direct outreach, an extensive public relations campaign should be launched to promote the new service to as many people as possible. This earned media will introduce the service to many new potential riders.

Tactics

To increase awareness and recognition of the Palmetto Breeze brand, each audience will be exposed to the content multiple times and in multiple formats leading up to service launch. Content will be delivered in five ways:

1. Meetings and Events
2. Print Materials
3. Digital Presence
4. Promotions and Incentives
5. Public Relations

In-Person Events

In-person events will raise awareness of the Palmetto Breeze brand and help potential riders familiarize themselves with the service. Employers and community leaders will learn about the service and its benefits. Potential riders will have the chance to step onto a bus, learn how to pay their fares, enjoy the amenities, and obtain answers to any questions they may have. These events should leave all stakeholders excited about the new Palmetto Breeze options available in the region.

1. Hilton Head Island-Bluffton Chamber of Commerce Event

Audience: Business and Community Leaders

Goal: Educate stakeholders on the launch of the new routes and the existing service. Discuss how employers can improve commutes for their employees and congestion in the area. Transit is an important part of economic growth.

Topic: The future of transit in Hilton Head and Bluffton.

Materials for distribution: Service fact sheet for employers and route-specific information.

Incentive to attend: Meal, networking, and helpful information.

2. Community Events

Audience: Residents/Local Users.

Goal: Raise awareness and educate residents on the launch of the new routes.

Location: Festivals, fairs, community meetings.

Content: Staff will set up a table and possibly bring a bus to the event.

Materials for distribution: Service fact sheet for riders and route-specific information.

3. Touch-a-Bus Events

Audience: Commuters.

Goal: Raise awareness of Palmetto Breeze service in the region.

Location: large employers located along the routes.

Content: Palmetto Breeze will provide a bus and staff to table at the events.

Materials for distribution: Palmetto Breeze branded items, service fact sheet, route-specific information, balloons.

Incentive to attend: First 100 visitors on the coach get a free scoop from the Hilton Head Ice Cream truck!

Print Materials

To spread awareness and understanding of Palmetto Breeze service, two printable documents will need to be created; one for community leaders and another for potential riders. All documents should be made available in Spanish and English.

1. To support community leaders, a high-level summary document will be created. The document should include:
 - Overview of Palmetto Breeze service
 - Benefits to the community and businesses
 - System map
 - Fare information
 - Launch date

2. To support potential Palmetto Breeze riders, a commuter facing document will be created. This document will include:
 - Overview of Palmetto Breeze service
 - Route schedules and maps
 - Fare information
 - Launch date

Note: This document could be replaced with a comprehensive route brochure.

Digital Content

Palmetto Breeze currently uses digital communications channels to engage with its stakeholders. These assets will be leveraged to introduce more people to Palmetto Breeze. The primary digital channels to utilize are:

1. Websites
2. Email
3. Social Media

1. Palmetto Breeze Website: The Palmetto Breeze website is a valuable resource for the region's business leaders and property managers, as well as area commuters. This website will be updated to reflect the enhanced transit service in the region.
 - a) <http://palmettobreezetransit.com>
 - Announce and highlight the new routes on homepage.
 - Create permanent standalone link to Maps & Schedule on homepage.
 - Create a new landing page of the website highlighting the service changes in more detail.
 - Consider creating a transit blog to discuss routes, highlight amenities, employee spotlights, and engaging topics like: "Our Favorite Commute Playlist", "Take the Breeze on a Dessert Crawl!"
 - b) <http://palmettobreezetransit.com/employers/>
 - Create a new section of the website with resources for employers.
 - Topics should include reasons why employers should support transit, how to purchase pass sales, and who to contact at Palmetto Breeze for more information.
 - Example: <http://www.xpressga.com/employer-toolkit/>
2. Employer and local business websites: As part of an ongoing partnership, Palmetto Breeze should request that employers update their intranet sites to include information on the Palmetto Breeze routes that can help their employees get to work. Local business could post similar information for customers research how to visit their location.
3. Email: Through the significant outreach effort leading up to service launch, Palmetto Breeze will develop an extensive contact list for sending messages and information to stakeholders throughout the region. This list can serve as a great avenue for educating people on the availability and benefits of transit service.
 - a) Customer Newsletter
 - Promote route launches, offer trip planning assistance, links to blog articles, and highlight upcoming events.
 - Newsletter should only have two to three articles per edition.
 - b) Community Leader Newsletter
 - Promote route launches and speaking engagements.
 - c) Individual email with employers
 - Target employers directly along the route.
 - Promote route launches, offer trip planning assistance, commuter facing events, links to employer section of the website, and attach employer and rider-facing documents.

4. *Social Media*: Palmetto Breeze has cultivated a healthy following on Facebook. This platform will provide additional reach for commuter-facing marketing material.

a) Facebook (<https://www.facebook.com/palmetto.transit>)

- Post blog content.
- Post photos from events and of the coaches running the routes.
- Repost stakeholder generated content promoting the routes.
- Repost news articles highlighting the service enhancements.

Promotions and Incentives

When launching new service, it is important to quickly attract new riders to the service. These incentives will be leveraged to introduce more people to Palmetto Breeze:

1. “Try-it” passes – offered to potential new riders that have a commute or and origin/destination pairing that compliments the new routes.
2. Event giveaways – Small promotional items that can attract potential customers to your table and event. This could range from fans, pencils, and water bottles to free ice cream from a local onsite provider.
3. Launch promotion – It will be important to show ridership on the first day of the service. By offering the service free for a set time period, the barrier for hopping on board is greatly reduced. The added benefit is that operationally, there could be a few bumps in the first few days of the service. Mistakes can be more easily forgiven when the trip was free.
4. Bulk pass sales discounts – Consideration should be given to give employers who support the sales of passes a percentage discount. Palmetto Breeze should require an agreement that the employer must make a minimum monthly order and that the discount must be passed along to the rider.

Public Relations

Transit spending on mass advertising is often wasteful because resources are too limited to make an impact when competing with more than 5,000 logos and brands daily. Public relations and recognition activities provide support at a much lower cost.

1. News coverage – Palmetto Breeze should work with local media to obtain positive media coverage of the service expansion. This can be done through press releases but also through direct engagement with a local reporter. Launch promotions should be touted for coverage.
2. Op-Eds – Throughout the planning process, Palmetto Breeze will identify influential and vocal supporters. Before and after service launch, Op-Eds from these leaders will provide an unbiased support for the service.