

FEBRUARY 1, 2016

# APPENDIX

# RETHINK FOLLY ROAD

A COMPLETE STREETS STUDY





# RETHINK FOLLY ROAD

## A COMPLETE STREETS STUDY

CREATED BY:

**DOVER, KOHL & PARTNERS**  
town planning

**BCDCOG**

BERKELEY - CHARLESTON - DORCHESTER  
COUNCIL OF GOVERNMENTS

**DOVER, KOHL & PARTNERS**

*town planning, urban design & community engagement*

**ALTA PLANNING AND DESIGN**

*multi-modal transportation planning*

**JOSH MARTIN, TURNBERRY CONSULTING US**

*community outreach & implementation strategy*

**HORSLEY WITTEN GROUP**

*stormwater management & green infrastructure*

**BIHL ENGINEERING**

*transportation analysis*

**PARTNERS FOR ECONOMIC SOLUTIONS**

*economic analysis & implementation strategy*

**BERKELEY/CHARLESTON/DORCHESTER**

**COUNCIL OF GOVERNMENTS  
(BCDCOG)**

**SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
(SCDOT)**

**CHARLESTON AREA REGIONAL TRANSIT AUTHORITY  
(CARTA)**

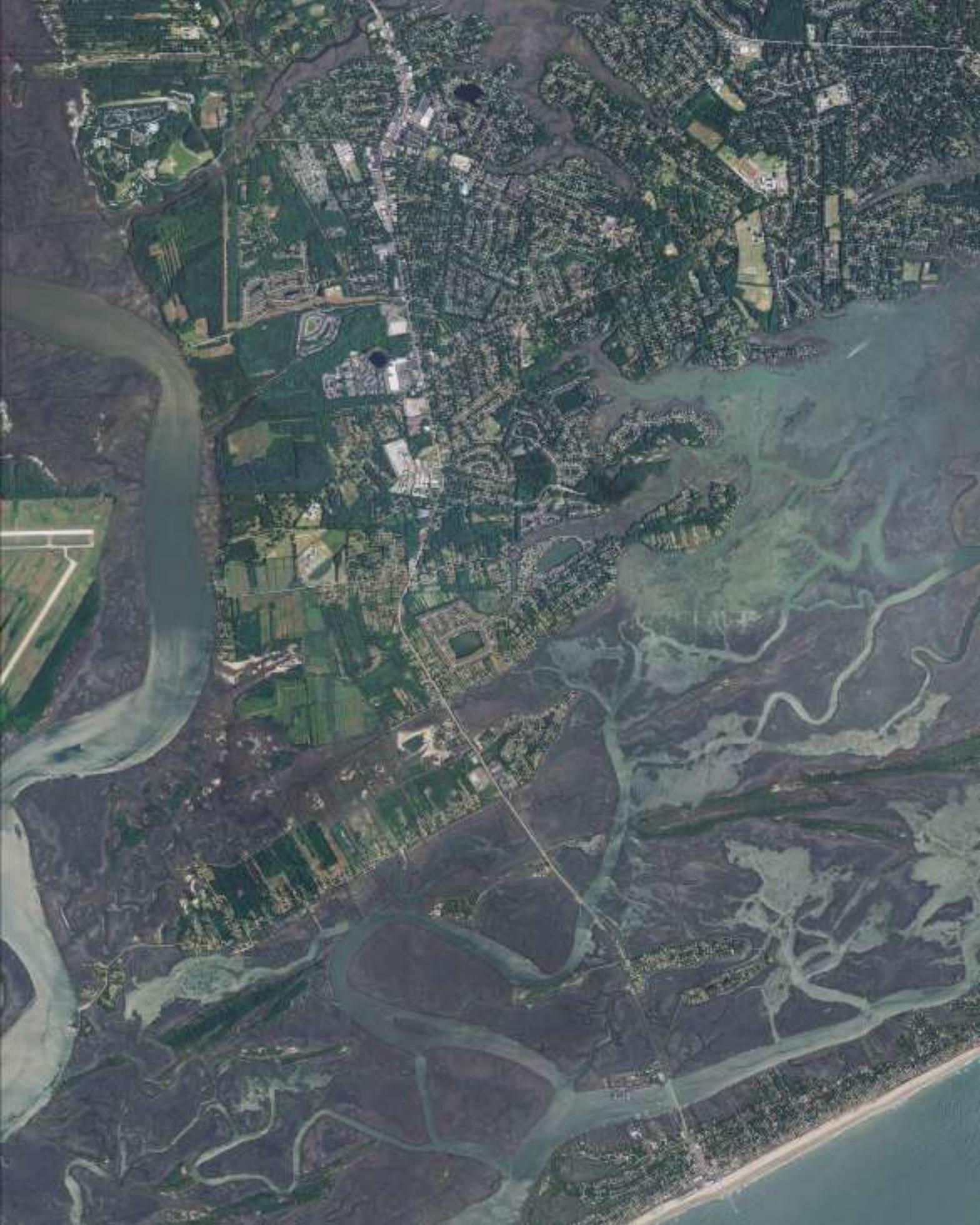
**THE CITY OF CHARLESTON**

**TOWN OF JAMES ISLAND**

**CITY OF FOLLY BEACH**

**CHARLESTON COUNTY**

**...ALONG WITH HUNDREDS OF RESIDENTS  
FROM THE CHARLESTON REGION**



# TABLE OF CONTENTS



## Overview

- 1 Guideposts
- 2 Public Participation
- 3 Corridor-Wide Strategies
- 4 Tour of the Corridor
- 5 Implementation

## Appendices

- A Urban Design Analysis
- B Transportation Analysis
- C Green Infrastructure Analysis
- D Economics Analysis



# A

# URBAN DESIGN

Rethink Folly Road is a planning initiative that will explore the potential to remake the Folly Road corridor (from the Wappoo Cut Bridge to Center Street on Folly Beach) into a more sustainable, multimodal corridor, which could become a precedent for the Charleston region. This appendix summarizes preliminary analysis of existing urban design conditions, including physical characteristics as well as the existing regulatory framework, which set the stage for planning and design work throughout the project.



**STREET DESIGN CHARACTERISTICS** **A.2**

**FOLLY BEACH/ CONSERVATION AREA** **A.8**

**NEIGHBORHOOD PRESERVATION AREA** **A.14**

**SOUTH VILLAGE AREA** **A.18**

**COMMERCIAL CORE AREA** **A.22**

**MAYBANK / NORTH VILLAGE AREA** **A.26**

# STREET DESIGN CHARACTERISTICS

## NORTHERN CORRIDOR

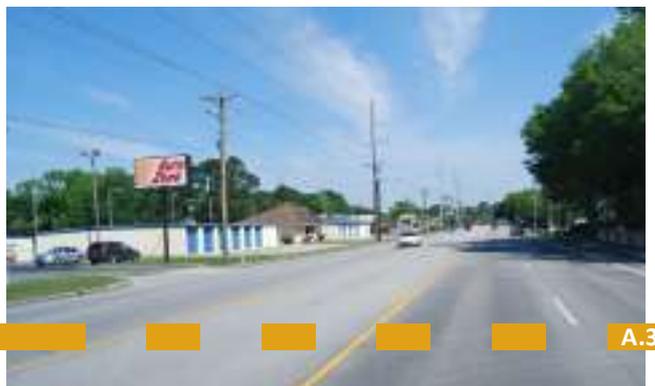
The northern section of the corridor, from the Wappoo Cut Bridge to Fort Johnson / Grimball Road, contains predominantly commercial land uses enfronting a five-lane roadway. As shown in the diagram at right, most of the road is composed of 2 vehicular travel lanes in each direction, plus a center turn lane.

This corridor serves as an important bike linkage for the region; it is part of the existing Battery 2 Beach trail, and also connects to the West Ashley Greenway (located just north of the corridor running east to west, this is part of the East Coast Greenway, which is planned to eventually connect from Key West to Canada). However, concerns have been identified about the existing bike infrastructure. Bike lanes are present in some areas, but they are not continuous, and have been designed to minimal widths (generally, +/- 3' plus a gutter). In addition, the Wappoo Cut bridge at the northern end of corridor was identified as a safety concern for bikers at the community kick-off meeting.

The street design through this area is characterized by multiple curb cuts and few sidewalks. Existing large live oak trees within private parcels, located intermittently, provide tree canopy. Of note, a row of mature oaks at southern edge of the North Village focus area provide positive, defining character for that segment of roadway. The typical right-of-way width is 70' - 80'; this widens to +/- 100' to the south.

The photos on the next page show typical conditions in this area.





## SOUTHERN CORRIDOR

South of the Fort Johnson Rd. / Grimball Rd. intersection, land uses are primarily residential in character (including homes and small businesses in detached dwellings); this transitions to conservation / open space and the beach area.

Bike lanes are not included in a few critical areas, making cycling difficult. This segment of the corridor transitions from five vehicular lanes (two in each direction and a center turn lane) to one lane in each direction through the conservation area.

The bridges to Folly Beach have recently been rebuilt. The new bridges include bike lanes and sidewalks, and retain one vehicular lane each direction.

As the corridor moves onto the beach it turns into Center Street, the main street of Folly Beach. This segment has street-oriented shops, sidewalks, and on-street parking. There is a plan in place to convert the existing four travel lanes (9' in width, two each direction) to 3 travel lanes (12' in width, one each direction and a center turn lane). The on-street parking, and existing curb-to-curb dimension will remain

Open drainage swales and overhead utilities are typical through the neighborhood areas; sidewalks are typically not present. Right-of-way width is approximately 80' - 100'. The character changes again in the conservation area, with long views of open space that typify the character of the lowcountry. Finally, the corridor ends as Folly Road turns into Center Street, the Main Street of Folly Beach.

The photos on the next page show typical conditions in this area.





# OPPORTUNITIES, CONSTRAINTS, PRIORITIES

The Preliminary Urban Design Analysis revealed opportunities to explore for near- or long-term improvements for Folly Road, potential constraints, as well as characteristics that are a priority to be maintained into the future. The following pages summarize these initial observations, which were further explored through the Rethink Folly Road planning process.

## Maybank / North Village Area

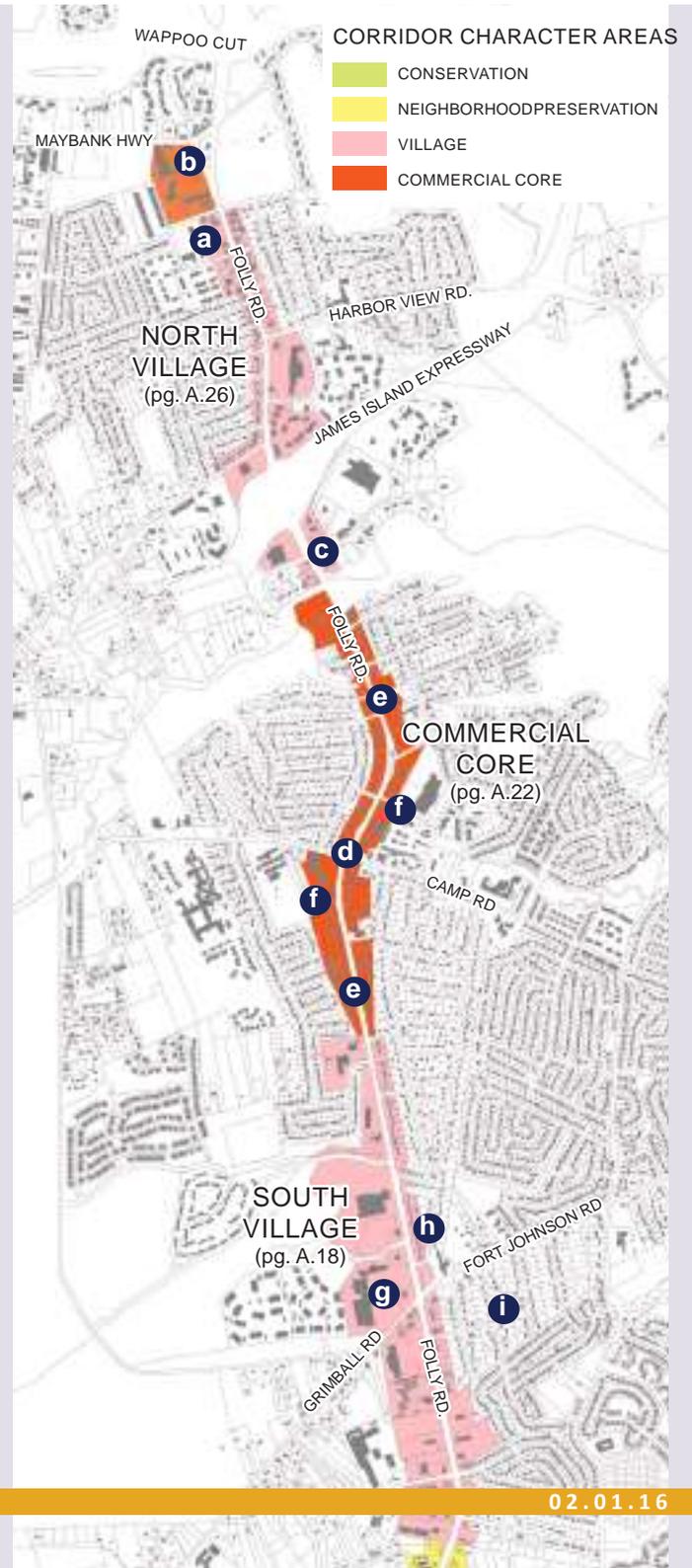
- a** Connections between commercial and residential are limited. Opportunities for more connectivity between residences and businesses for all modes (walking, biking, and vehicles) to be explored.
- b** Potential for secondary street network where parcels are larger to be studied.
- c** Concentration of mature live oaks in city park and lining corridor at Ellis Oak Drive define positive character; these can serve as a precedent for corridor open spaces.

## Commercial Core Area

- d** Potential for secondary street network near Camp Rd/ Folly Rd intersection to be explored.
- e** Relatively small parcels (compared to larger shopping centers found in other areas of the corridor) with continuous curb cuts (one for each business) and infrequent sidewalks make walking, biking, and driving a challenge. Potential for continuous sidewalks and consolidating curb cuts to be explored.
- f** Businesses are disintegrated from each other and disconnected from their surroundings. More connections to be studied.

## South Village Area

- g** Parcels within the City of Charleston are on the west side of the street, containing larger-format retailers and shopping centers; potential for secondary street network on larger parcels to be explored.
- h** Parcels within the Town of James Island are on the east side of street and are smaller; many contain residences and/or residences that have been converted to business uses.
- i** Neighborhoods surround the commercial uses on Folly Road. Opportunities for more connectivity between residences and businesses for all modes to be explored.





### Neighborhood Preservation Area

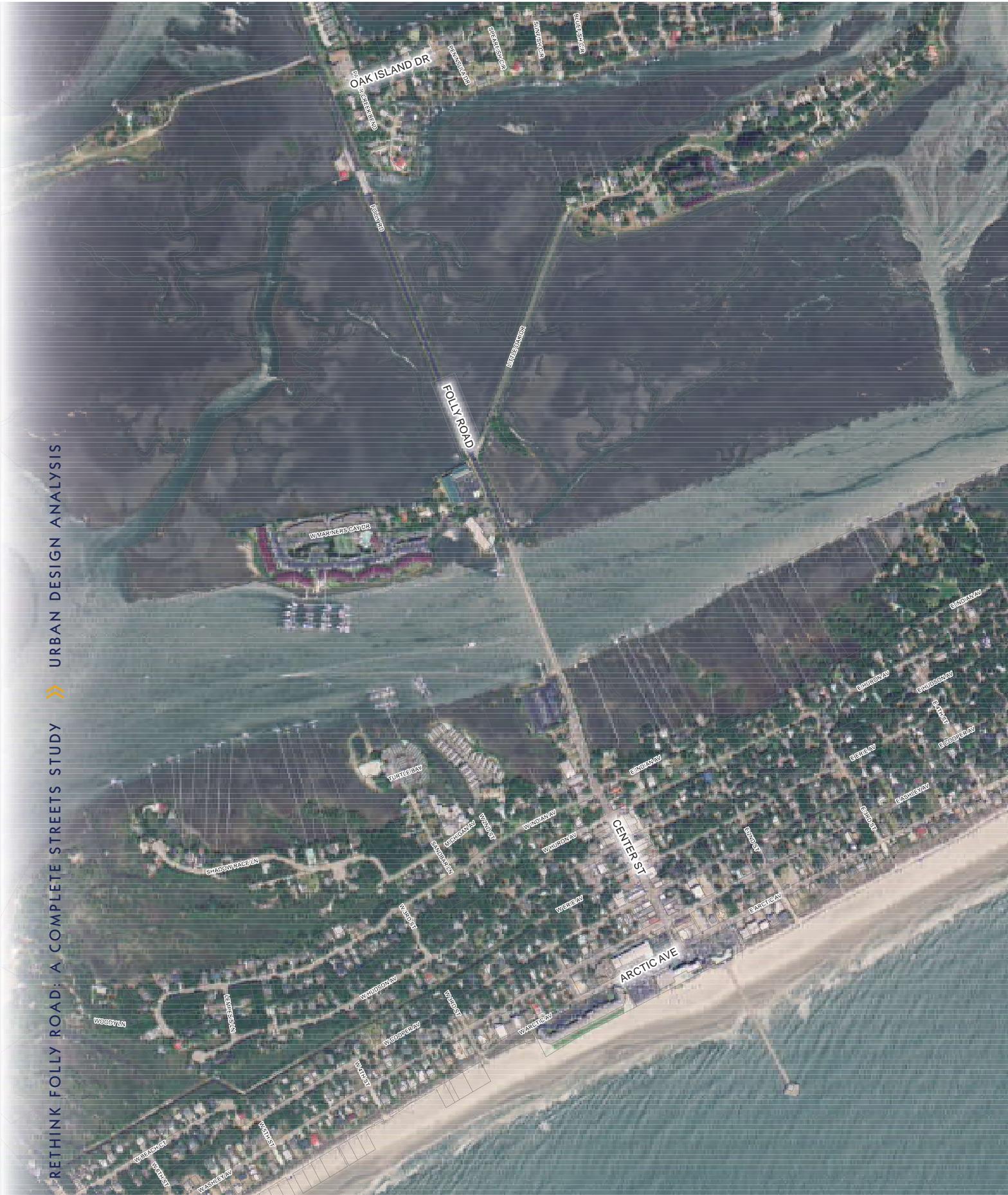
- j** The recent corridor zoning overlay allows neighborhood-oriented businesses in addition to residential uses. This study can help define the desired character for future commercial development.
- k** Potential challenges include irregular parcel patterns, overhead utilities and open drainage swales that line the corridor.
- l** Streets off the corridor have rural characteristics (narrow travel lanes, no sidewalks, deep setbacks). Approaches to retain the character to be explored.
- m** Mature tree canopies are common and contribute to the rural character of the area. Carefully located and small-footprint development to be studied.

### Conservation Area

- n** The bridges across the natural area have recently been replaced, with one travel lane in each direction. The new bridges contain a bike lane and sidewalk. Potential improvements to enhance transit, bike and pedestrian experience will need to be accommodated in limited bridge width, or consider alternate structure (such as boardwalk).
- o** Sections of Folly Road between developed areas are underutilized. Reconfiguring these areas to incorporate multiple modes of transportation (walk/bike path, bicycle lanes, transit) to be explored.

### Folly Beach

- p** The City of Folly Beach has plans underway to convert the four travel lanes to three - one in each direction and a dedicated center turn lane. The bridge to the north has two lanes (one each direction) already. The on-street parking and existing curbs will remain - four 9' lanes will become three 12' lanes.

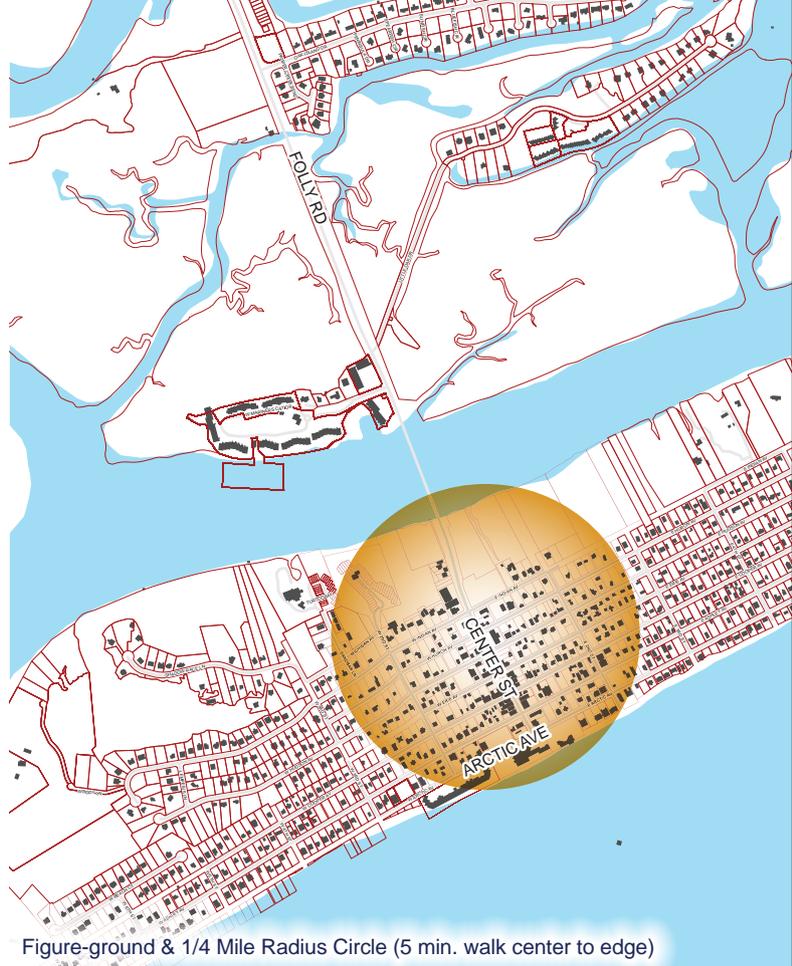


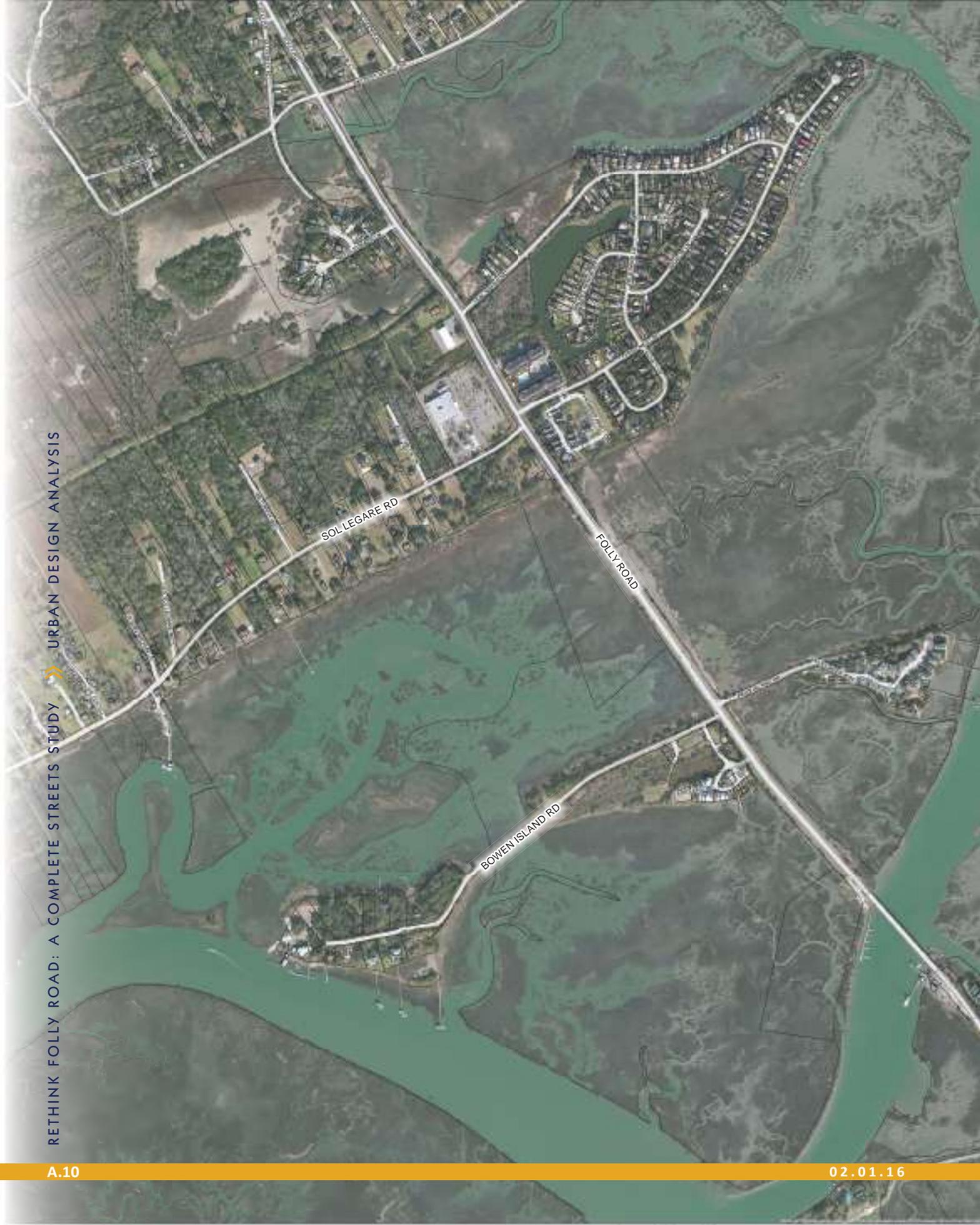
# FOLLY BEACH

As Folly Road arrives on Folly Island, it transitions to Center Street, which is the Main Street of Folly Beach.

Center Street contains four 9' travel lanes, on-street parking, sidewalks and street trees. Street-oriented shops line this segment of the road.

The City has plans underway to convert the four vehicular lanes to three - one each direction and a dedicated center turn lane. The bridge to the north is limited to two lanes (one each direction), and thus the extra lanes do not provide much benefit. The addition of a turn lane can help reduce rear-end accidents. The on-street parking and existing curbs are planned to remain (four 9' lanes will become three 12' lanes).





## CONSERVATION AREA

The Conservation area contains parcels in the City of Folly Beach, City of Charleston and Charleston County. This area contains the historic Sol Legare neighborhood and mosquito beach.

At this point in the corridor, Folly Road transitions from four lanes to two. Long vistas of open space provide a memorable experience. The bridges across the natural area have recently been replaced; the new bridges retained two travel lanes (one in each direction), with a bike lane and sidewalk.

The recent corridor zoning overlay (adopted 2014 by the County, Town, and City of Folly Beach) identifies the intent of this area as “the least intensely developed area of the overlay zoning district and is to provide a natural scenic open space before entering the City of Folly Beach by preserving the marsh views and vistas of this area”

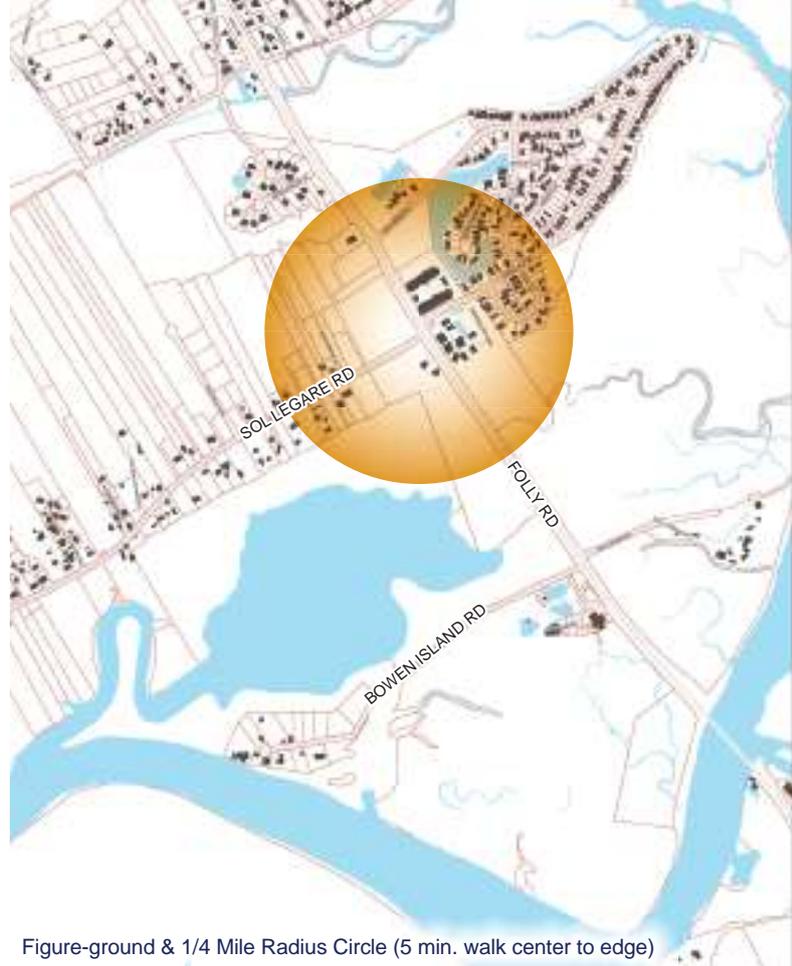


Figure-ground & 1/4 Mile Radius Circle (5 min. walk center to edge)



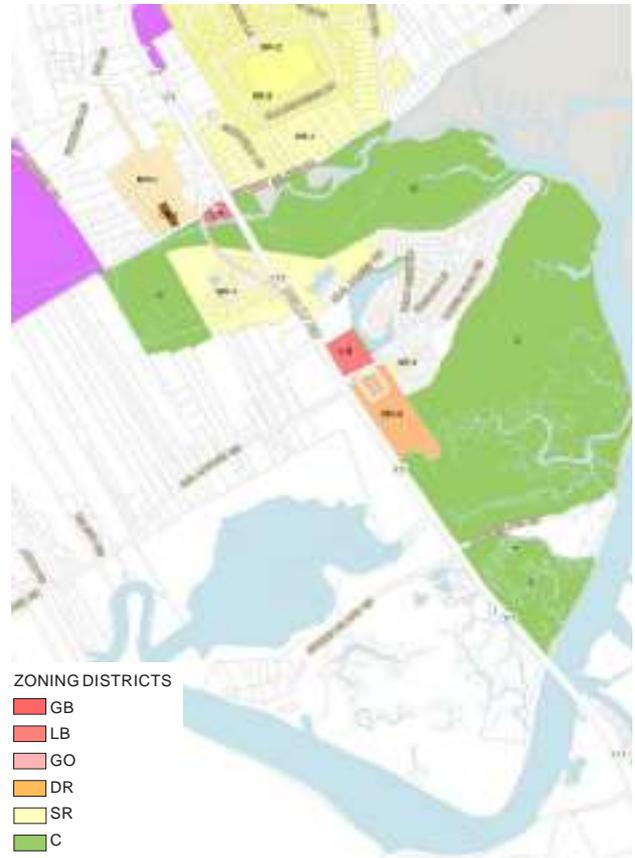
## FOLLY BEACH & CONSERVATION AREA: EXISTING ZONING

### City of Charleston

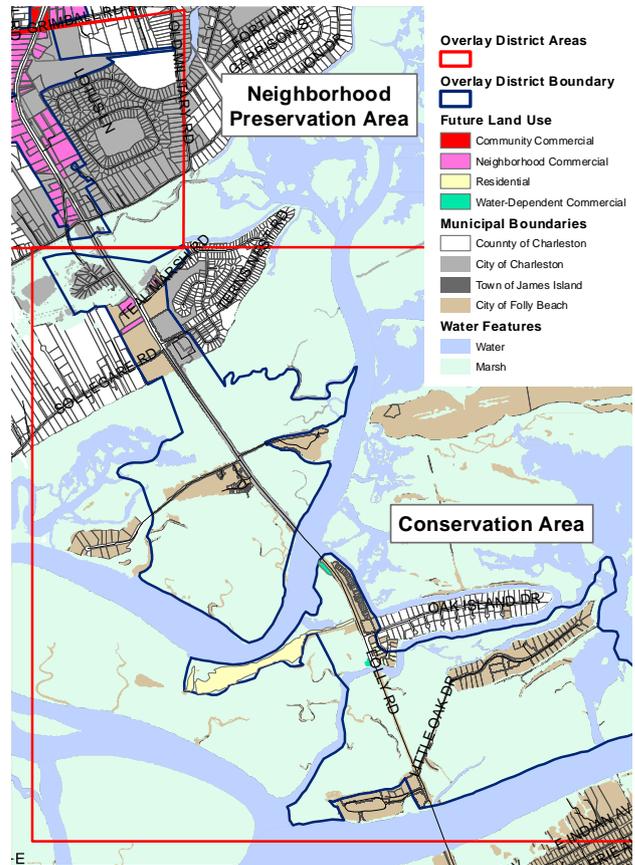
- The Limited Business (LB) District is intended to allow a limited variety of commercial uses and services associated with neighborhood retail, financial and office activities which are compatible with residential areas. The hours of operation for most permitted commercial uses are restricted to between 7 a.m. and 11 p.m. Gasoline service stations are permitted only as a special exception. Prohibited uses include liquor stores, car washes as a principal use, bowling alleys, billiard parlors, dance halls, restaurants with drive-thru service windows, and automobile sales.
- The Single-family Residential (SR) Districts allow for one single-family detached dwelling per lot with varying setback, height and building lot occupancy requirements. The SR-3, SR-4 and SR-5 Districts also permit one-family attached dwellings. Maximum densities are:

DISTRICT	SR-1	SR-2 & SR-3	SR-4	SR-5	SR-6	SR-7	SR-8
UNIT/ACRE	4.8	7.3	10.9	17.4	8.7	1.0	2.9

- The Conservation (C) District is intended primarily to protect and encourage the appropriate use of marshlands, forested areas, scenic areas, and agricultural areas that are not likely to be developed for urban purposes in the near future. The C district allows single-family dwellings and two-family dwellings if the requirements of the zoning ordinance are met.



City of Charleston: Zoning



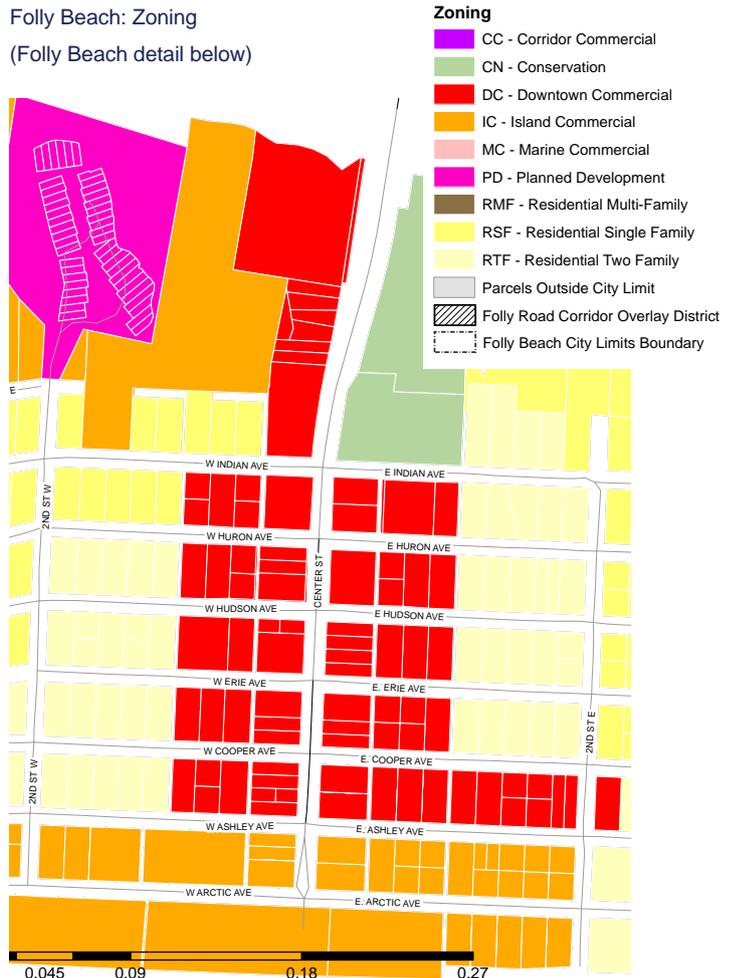
Charleston County: Overlay District

## Folly Road Corridor Overlay District (Charleston County & Folly Beach):

- Permitted uses shall include those allowed in the Neighborhood Commercial (CN) and the Special Management (S3) Zoning District.
- Uses Requiring Special Exception in the Commercial Area: Liquor, Beer, or Wine Sales (as defined in this Ordinance), Bar or Lounge, Consumer Vehicle Repair, Fast Food Restaurant, Gasoline Service Stations (with or without convenience stores), Indoor Recreation and Entertainment, Vehicle Service.
- Overlay District Buffers:
  - A minimum of a 25-foot vegetated right-of-way buffer shall be required along Folly Road in the commercial area which may be reduced to 15' when there is no parking or vehicular use area between buildings and right-of-way.
- Overlay District Buffers (continued):
  - A minimum of a 20-foot vegetated rear buffer shall be required adjacent to residential uses.
  - Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6' ht. opaque fence or wall is utilized the Planning Director may reduce the land use buffer by up to 1/2 its required depth when deemed appropriate however, no required vegetated buffer shall be less than 10' in depth.
- Building Size: no single building structure shall exceed 5000 square feet.



Folly Beach: Zoning  
(Folly Beach detail below)





## NEIGHBORHOOD PRESERVATION AREA

The Neighborhood Preservation area contains parcels in the City and County.

This area consists primarily of low-intensity residential uses with some commercial development primarily along the Northwest area of Folly Road.

Parcel patterns are irregular in this area, due in part to the long history of settlement here. Many parcels have been handed down through generations, platted as family estates before modern block-and-lot configurations were established. Some of the parcels may be subject to heirs property title concerns. In addition, several parcels were bisected by a previous realignment of Folly Road, further complicating parcel outline and ownership configurations.

Overhead utilities and open drainage swales line the corridor. Streets off the corridor have rural characteristics such as narrow travel lanes, no sidewalks, and deep setbacks to buildings.

The recent corridor zoning overlay (adopted 2014 by the County, Town, and City of Folly Beach) allows neighborhood-oriented businesses. The intent of the zoning overlay was to “provide an appropriate transition from the more intense commercial development on James Island before entering the Conservation Area and the City of Folly Beach by preserving the existing low density residential character.”

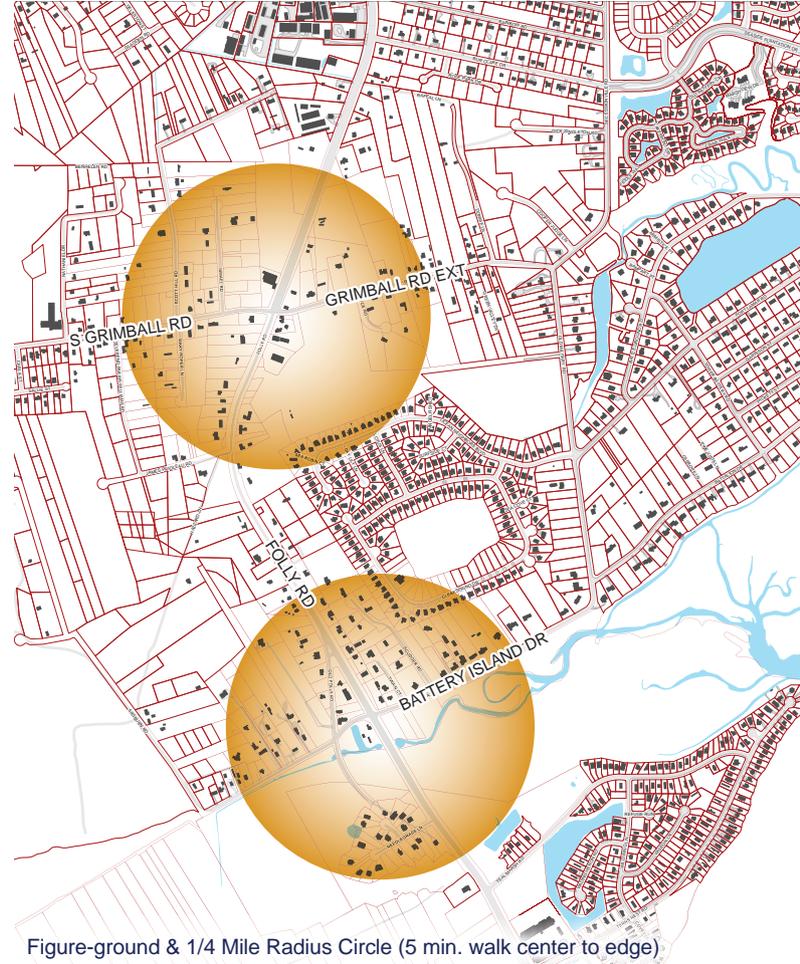
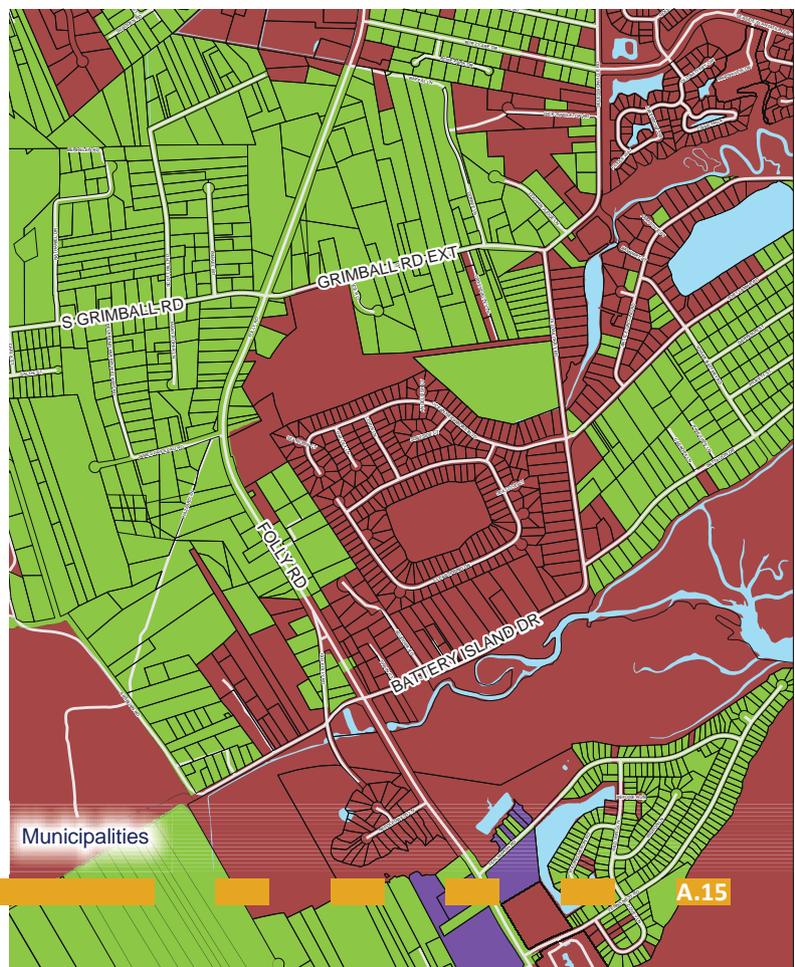


Figure-ground & 1/4 Mile Radius Circle (5 min. walk center to edge)

- City of Charleston
- Charleston County
- City of Folly Beach



## NEIGHBORHOOD PRESERVATION AREA: EXISTING ZONING SUMMARY

### City of Charleston

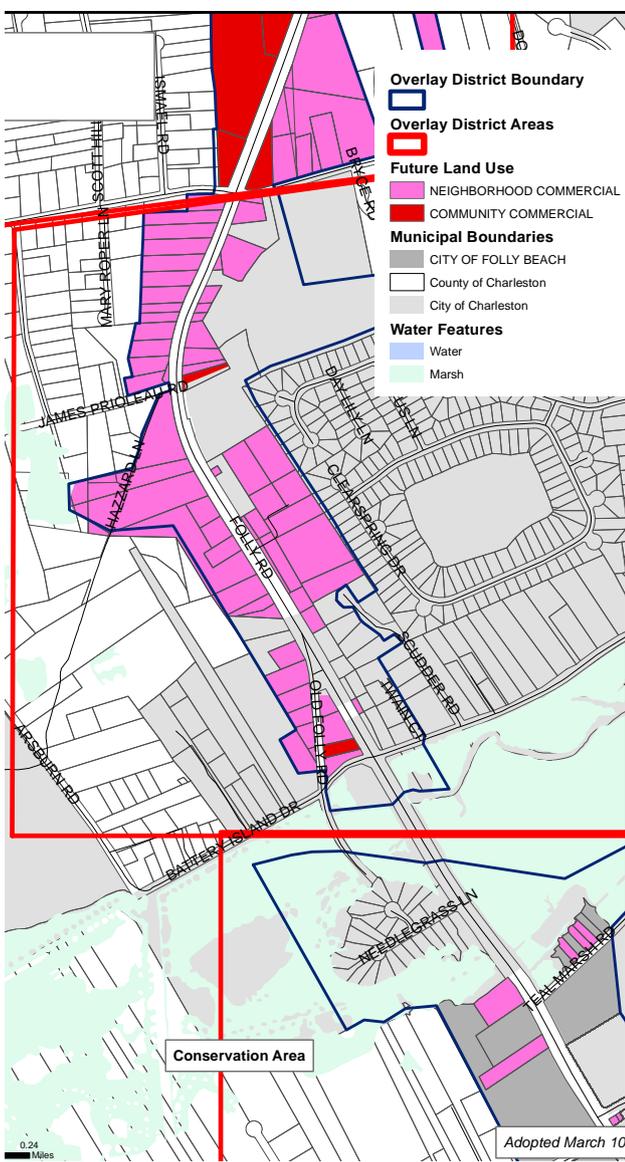
- The Limited Business (LB) District is intended to allow a limited variety of commercial uses and services associated with neighborhood retail, financial and office activities which are compatible with residential areas. The hours of operation for most permitted commercial uses are restricted to between 7 a.m. and 11 p.m. Gasoline service stations are permitted only as a special exception. Prohibited uses include liquor stores, car washes as a principal use, bowling alleys, billiard parlors, dance halls, restaurants with drive-thru service windows, and automobile sales.
- The Single-family Residential (SR) Districts allow for one single-family detached dwelling per lot with varying setback, height and building lot occupancy requirements. The SR-3, SR-4 and SR-5 Districts also permit one-family attached dwellings. Maximum densities are:

DISTRICT	SR-1	SR-2 & SR-3	SR-4	SR-5	SR-6	SR-7	SR-8
UNIT/ACRE	4.8	7.3	10.9	17.4	8.7	1.0	2.9

- The Conservation (C) District is intended primarily to protect and encourage the appropriate use of marshlands, forested areas, scenic areas, and agricultural areas that are not likely to be developed for urban purposes in the near future. The C district allows single-family dwellings and two-family dwellings if the requirements of the zoning ordinance are met.



City of Charleston: Zoning



Charleston County: Overlay District

## Folly Road Corridor Overlay District (Charleston County):

- Permitted uses shall include those allowed in the Special Management (S3) and Neighborhood Commercial (CN) Zoning Districts as indicated on the Overlay map and as described in Charleston County Zoning Table 6.1.1 (Use Table).
- Uses Requiring Special Exception in the Commercial Area: Liquor, Beer, or Wine Sales (as defined in this Ordinance), Bar or Lounge.
- Building Size: no single building structure shall exceed 5000 square feet.
- Overlay District Buffers:
  - A minimum of a 25-foot vegetated right-of-way buffer shall be required along Folly Road in the commercial area which may be reduced to 15' when there is no parking or vehicular use area between buildings and right-of-way.
  - A minimum of a 20-foot vegetated rear buffer shall be required adjacent to residential uses.
  - Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6' ht. opaque fence or wall is utilized the Planning Director may reduce the land use buffer by up to 1/2 its required depth when deemed appropriate however, no required vegetated buffer shall be less than 10' in depth.



## SOUTH VILLAGE AREA

The South Village area contains parcels in the City, County (primarily to the south), and Town of James Island.

City parcels are found on the west side of the street and are larger, containing large-format retailers and shopping centers (including a Walmart at the intersection of George Griffiths Blvd.)

The Town parcels are found on the east side of Folly Road and are smaller by comparison; typically these contain residences and / or residences that have been converted to business uses.

Neighborhoods surround the commercial uses on Folly Road. Generally, there is limited connectivity between residences and businesses.

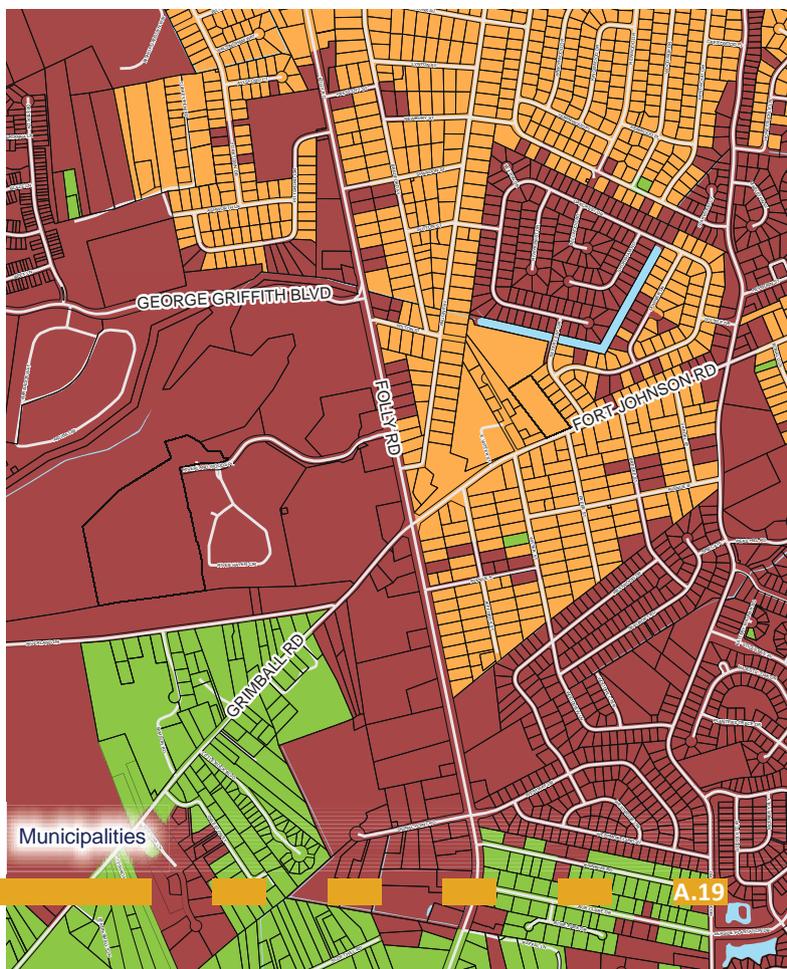
This segment contains one of the gaps in the existing bike lanes. Overhead utilities and open drainage swales line the corridor. There is precedent for building sidewalk on private property as part of new development at the Walmart site.

The recent corridor zoning overlay (adopted 2014 by the County, Town, and City of Folly Beach) states the intent for this area “developed similar to the North Village Area with less intense commercial development than the Commercial Core area. This area is intended to have a mix of high to medium intensity uses along the West side of Folly and low intensive development on the East side of Folly Road. Future development in this area is to be a mix of commercial and residential uses with increased right-of-way buffers along the West side of Folly Road, and increased land use buffers on both sides of Folly Road when commercial development occurs adjacent to single family detached residential uses”.



Figure-ground & 1/4 Mile Radius Circle (5 min. walk center to edge)

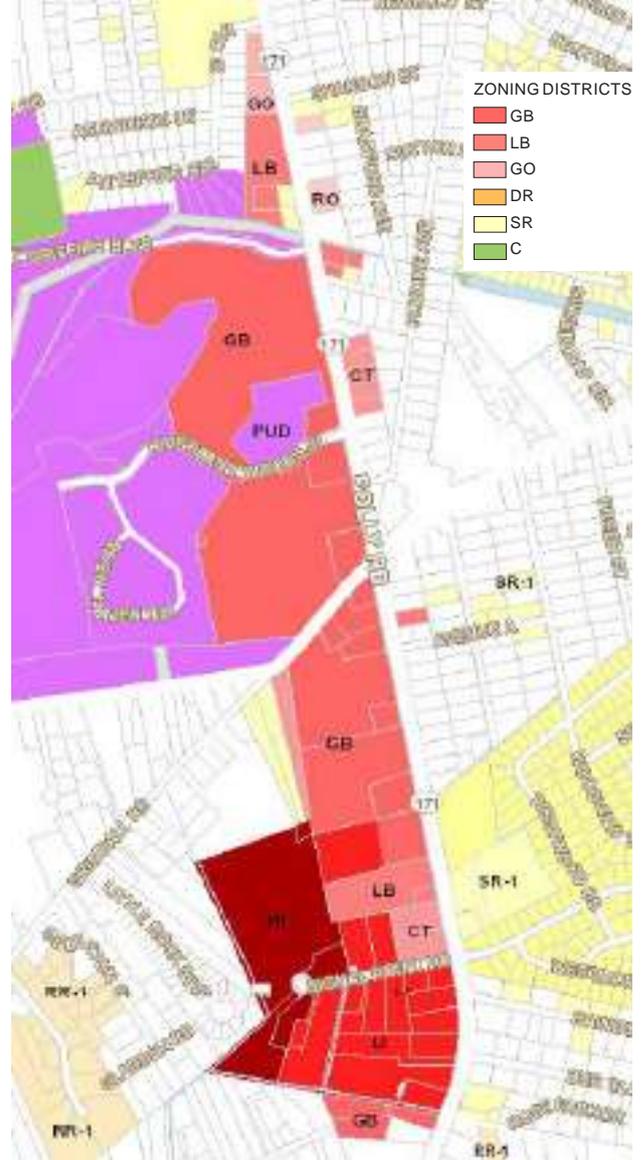
- City of Charleston
- Charleston County
- Town of James Island



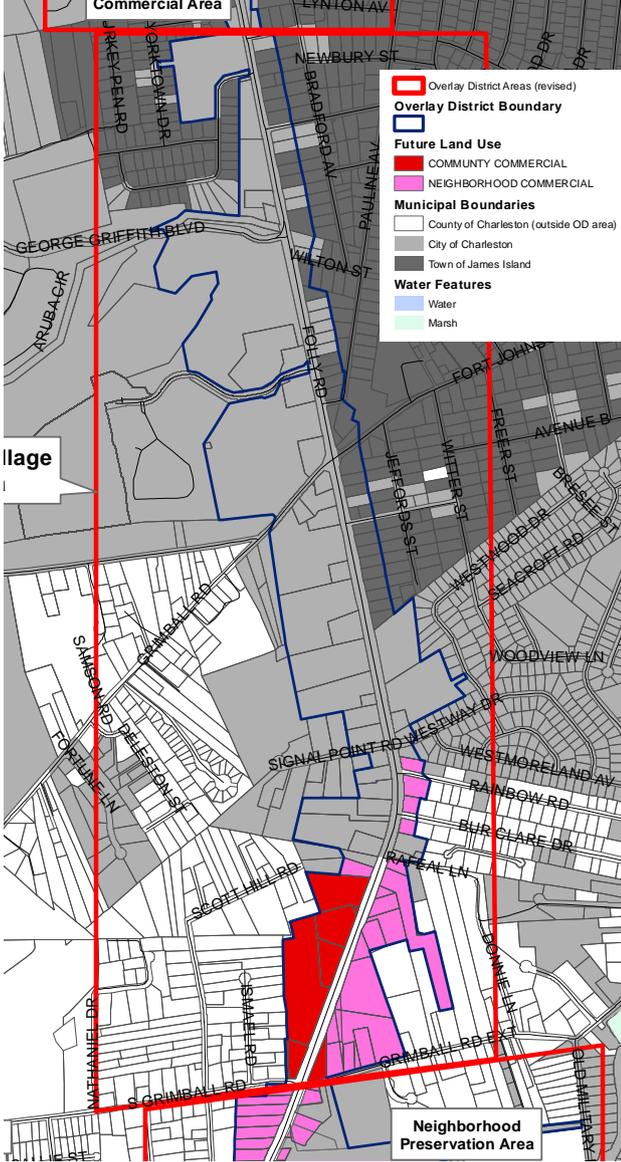
## SOUTH VILLAGE: EXISTING ZONING SUMMARY

### City of Charleston

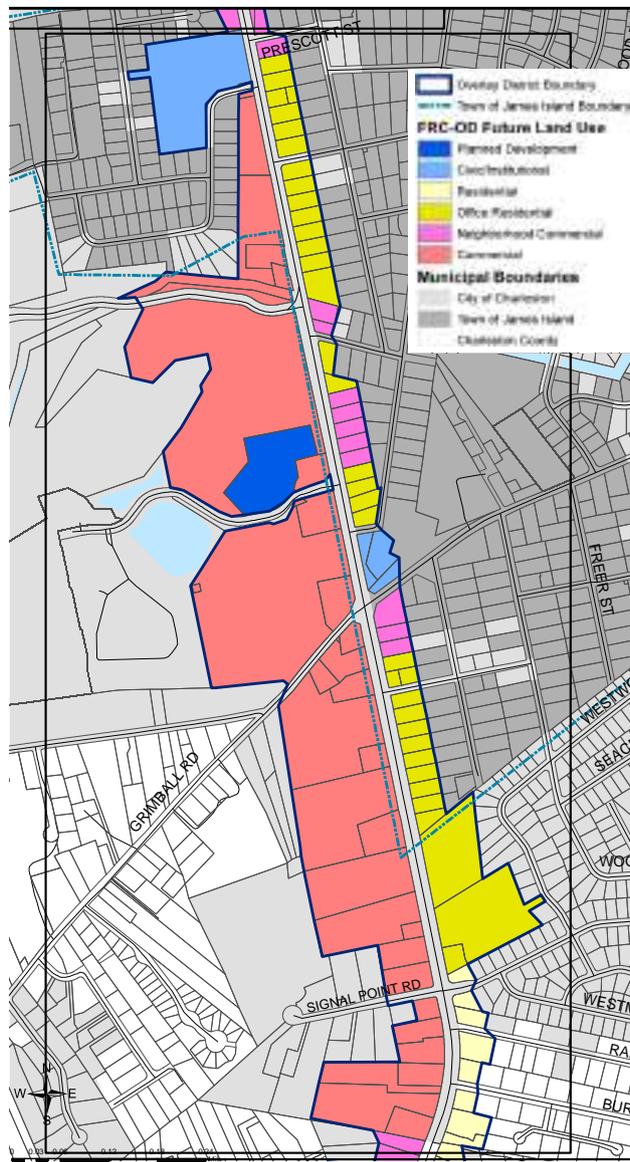
- The General Business (GB) District allows a broad range of commercial uses and activities. It is the most intensive commercial zoning district. Prohibited uses include junk and salvage yards, storage yards (except for vehicles and boats). Automotive repair shops, gasoline service stations, veterinary clinics, and stables are permitted only as special exceptions.
- The Limited Business (LB) District is intended to allow a limited variety of commercial uses and services associated with neighborhood retail, financial and office activities which are compatible with residential areas. The hours of operation for most permitted commercial uses are restricted to between 7 a.m. and 11 p.m. Gasoline service stations are permitted only as a special exception. Prohibited uses include liquor stores, car washes as a principal use, bowling alleys, billiard parlors, dance halls, restaurants with drive-thru service windows, and automobile sales.
- A Planned Unit Development (PUD) consists of a tract or tracts of land under unified control, planned and developed as a whole in a single development stage of phased series of development stages according to an approved PUD Master Plan. The PUD conditional use is intended to provide flexibility in the design of developments; to encourage comprehensive planning of major developments; to permit innovation in neighborhood design that includes incorporation of open space and other amenities; and to insure compatibility of developments with surrounding areas.



City of Charleston: Zoning



Charleston County: Overlay District



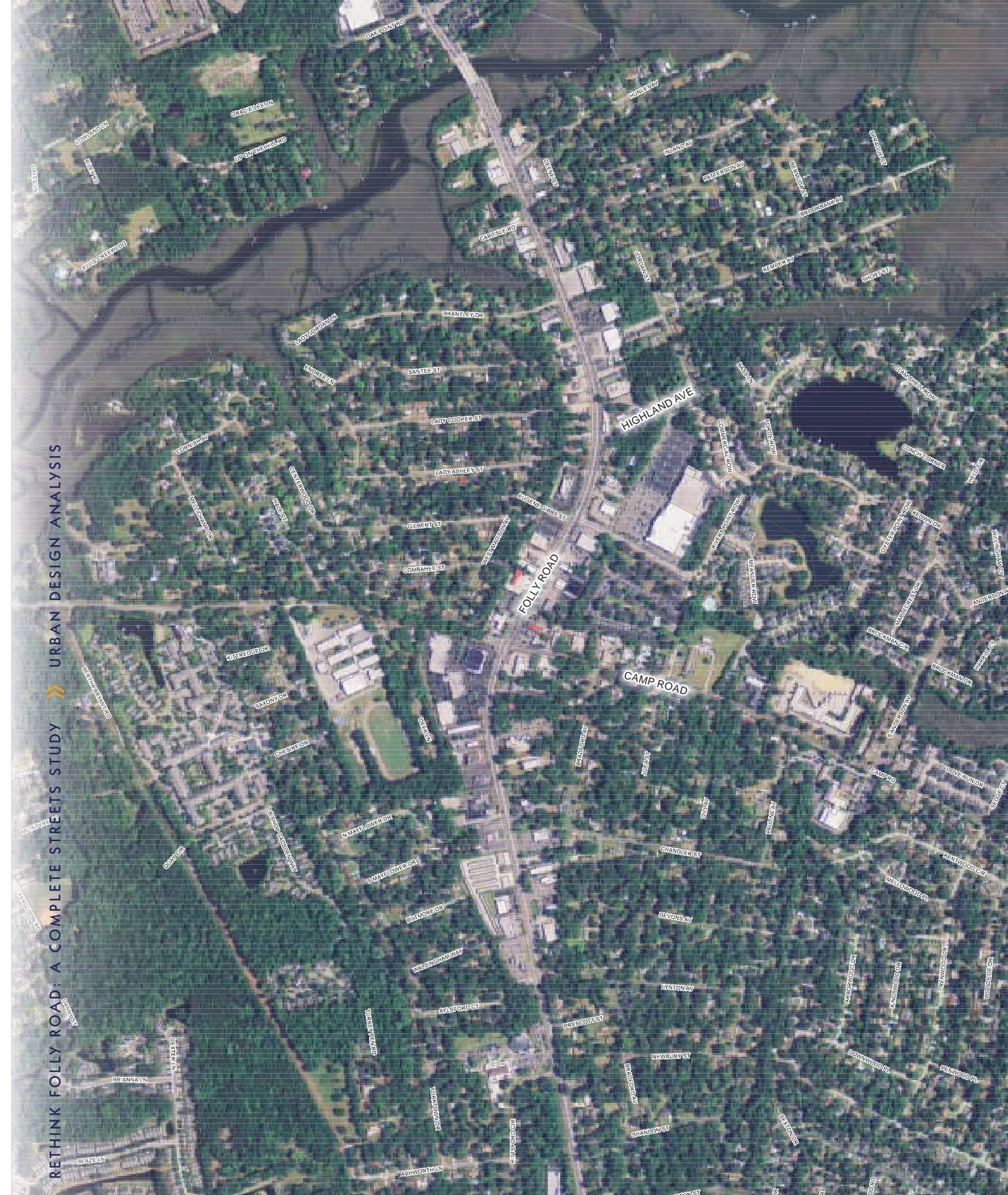
Town of James Island: Overlay District

### Folly Road Corridor Overlay District (Charleston County & Town of James Island):

- Permitted uses shall include those allowed in the Residential (R), Residential Office (OR) Neighborhood Commercial (CN) zoning districts on the East side of Folly Road and Community Commercial (CC) zoning districts on the west side of Folly Road as indicated on the Overlay map and as described in Charleston County Zoning Table 6.1.1 (Use Table).
- Uses Requiring Special Exception: Vehicle Storage, Boat/RV Storage, Bar or Lounge, Consumer Vehicle Repair, Fast Food Restaurant, Gasoline Service Stations (with or without convenience stores), Indoor Recreation and Entertainment, Consumer Vehicle Repair.

- Overlay District Buffers:
  - A minimum 15-foot vegetated right-of-way buffer shall be required along the east side of Folly Road and a minimum 35-foot vegetated right-of-way buffer shall be required along the west side of Folly Road.
  - A minimum 20-foot vegetated rear buffer shall be required adjacent to residential uses.
  - Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6' height, opaque fence or wall is utilized the Planning Director may reduce the land use buffer by up to 1/2 its required depth when deemed appropriate however, no required vegetated buffer shall be less than 10' in depth.

RETHINK FOLLY ROAD: A COMPLETE STREETS STUDY >> URBAN DESIGN ANALYSIS



## COMMERCIAL CORE AREA

The Commercial Core area is the gateway and commercial center of the Town of James Island. Parcels are primarily in the Town with some parcels in the City of Charleston.

This area consists of commercial uses such as chain restaurants, vehicle service and repair, drug stores and shopping centers with minimal buffering along Folly Road. Commercial land uses along the corridor are backed up to by residential neighborhoods.

Most businesses are designed to accommodate automobiles over pedestrians. Parcels are relatively small (compared to larger shopping centers found in other areas of the corridor). Continuous curb cuts (one for each business) make walking and driving/vehicular flow a challenge. Existing sidewalks are infrequent.

The recent corridor zoning overlay (adopted 2014 by the County, Town, and City of Folly Beach) states the intent for this area is “higher intensity commercial uses than those found in the other areas of the corridor. Future development in this area should place high priority on pedestrian connectivity between businesses and neighborhoods with attractive planted streetscapes and building architecture.”

There are existing bike lanes in much of this area, but they are narrow (+/-3 feet plus a gutter); coupled with relatively high travel speeds cycling is uncomfortable for all but experienced bikers.

There is an existing plan for improvements to the Camp Rd/Folly Rd intersection that will include the addition of turn lanes, sidewalks and a transit pull-off. Funding is planned to be provided through the County’s half-cent transportation program.

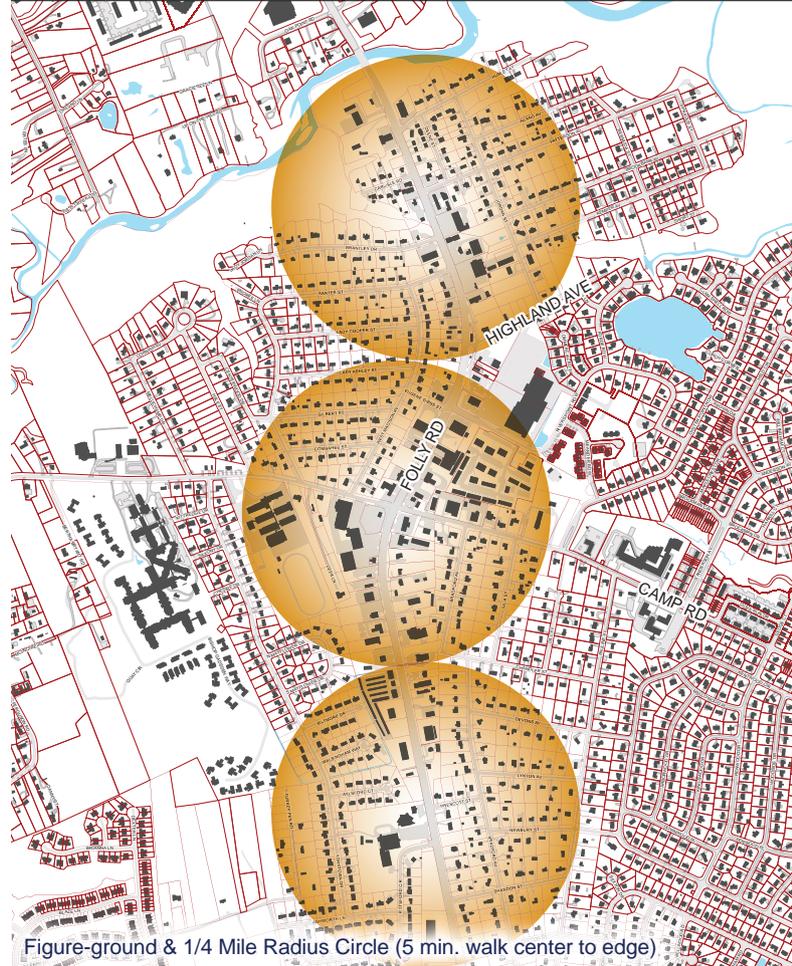
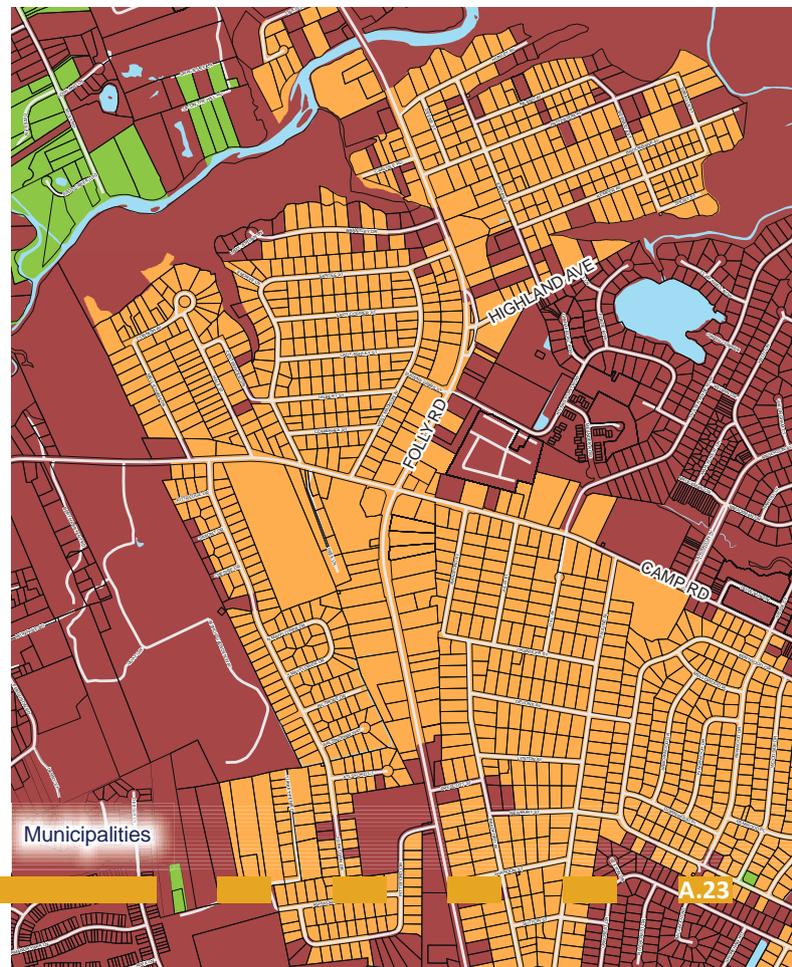


Figure-ground & 1/4 Mile Radius Circle (5 min. walk center to edge)

- City of Charleston
- Charleston County
- Town of James Island



Municipalities

## COMMERCIAL CORE: EXISTING ZONING SUMMARY

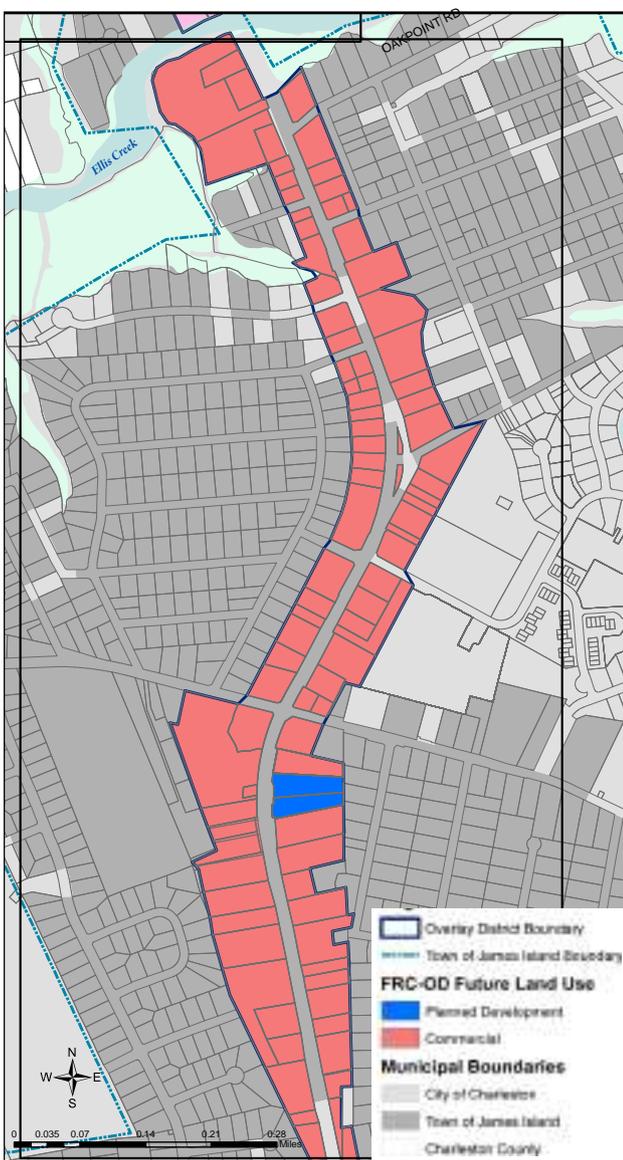
### City of Charleston

- The General Business (GB) District allows a broad range of commercial uses and activities. It is the most intensive commercial zoning district. Prohibited uses include junk and salvage yards, storage yards (except for vehicles and boats). Automotive repair shops, gasoline service stations, veterinary clinics, and stables are permitted only as special exceptions.
- The Diverse Residential (DR) zoning districts allow one-family detached dwellings, one-family attached dwellings, two-family dwellings, and multi-family residential (3 or more) dwellings. Within the DR-1, DR-1F, DR-2, DR-2F districts, the Board of Zoning Appeals may approve as a special exception, churches, homes for the elderly, and other low impact uses as described in the zoning ordinance. Density limitations are:

DISTRICT	DR-6	DR-9	DR-12	DR-1 & DR-1F	DR-2 & DR-2F
UNIT/ACRE	6.0	9.0	12.0	19.4	26.4



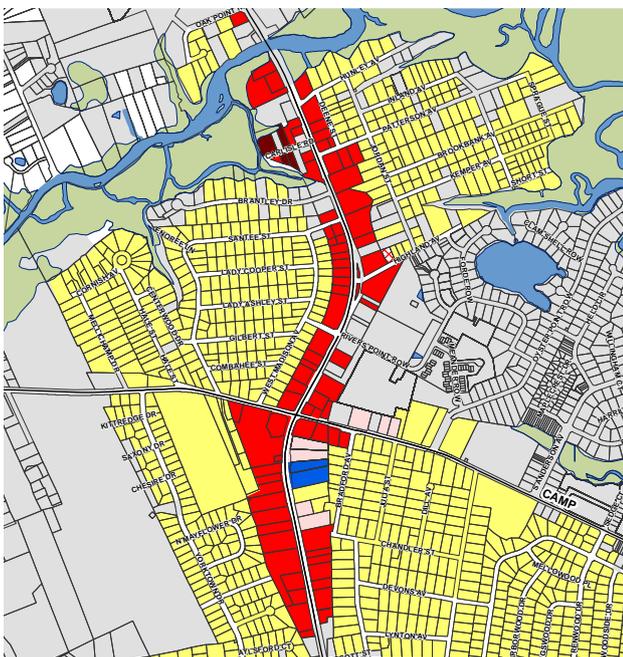
City of Charleston: Zoning



### Folly Road Corridor Overlay District (Town of James Island):

- Permitted uses shall include those allowed in the Community Commercial (CC) Zoning District as indicated on the Overlay map and as described in Charleston County Zoning Table 6.1.1 (Use Table).
- Uses Requiring Special Exception: Liquor, Beer, or Wine Sales (as defined in this Ordinance), Bar or Lounge, Consumer Vehicle Repair, Fast Food Restaurant, Gasoline Service Stations (with or without convenience stores), Indoor Recreation and Entertainment, Vehicle Service.
- Overlay District Buffers:
  - A minimum of a 15-foot vegetated right-of-way buffer shall be required along Folly Road.
  - A minimum of a 25-foot rear vegetated buffer shall be required adjacent to residential uses; and
  - Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6' height opaque fence or wall is utilized the Planning Director may reduce the land use buffer by up to 1/2 its required depth when deemed appropriate; however, no required vegetated buffer shall be less than 10' in depth.
- Parcels that surround the Folly Road corridor are primarily in the RSL (Low-Density Suburban Residential) District (see map below).

Town of James Island: Overlay District (above) | Zoning (below)





## MAYBANK / NORTH VILLAGE AREA

The Maybank / North Village area is primarily in City of Charleston, with some parcels in the County. This area currently consists of mixed medium and low intensity commercial uses such as shopping centers, professional office and vehicle services. There are also higher intensity residential uses such as apartment complexes. Connections between commercial uses and surrounding residences are limited. Most businesses have an auto-oriented design.

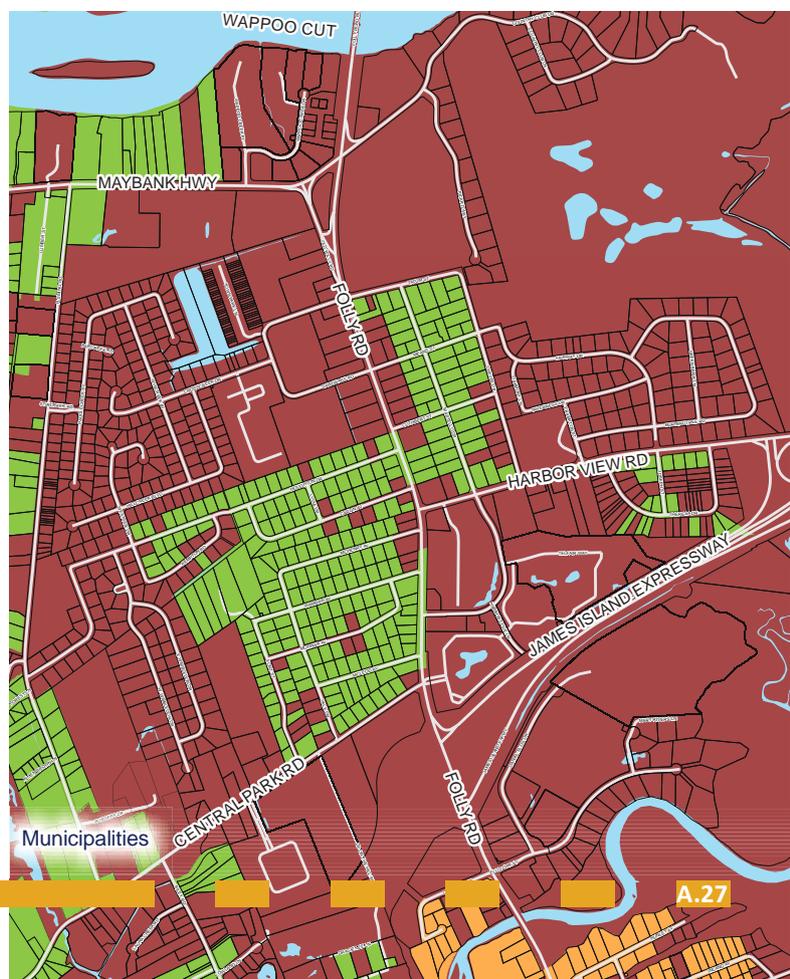
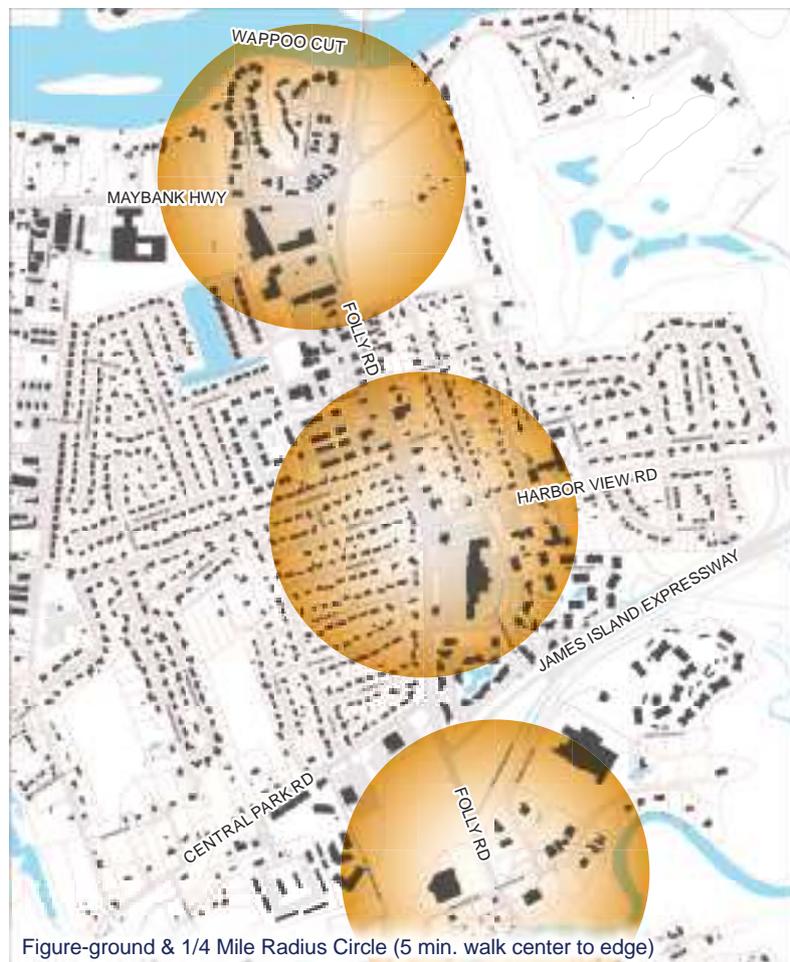
The Wappoo Cut bridge (northern boundary of project study area) was identified as a concern during the community kick-off meeting, both for its design (safety for cyclists) as well as the timing of openings (too frequent and irregular, causing delays on the roadway).

Maybank Highway is an important regional street connection. Parcels at the Maybank Highway / Folly Road intersection could form a gateway to James Island. The McLeod Plantation is found to the east side of Folly Road; commercial parcels are found on the west side.

South of Maybank is the area designated as the North Village in the recent corridor zoning overlay (adopted 2014 by Charleston County, Town of James Island, and City of Folly Beach). The stated intent for this area is “less intense commercial uses than the commercial uses found in the Commercial Core area, particularly along the north side of Central Park Road and west side of Folly Road. This area is not intended for large scale commercial development such as big box stores or mega-shopping centers. Future development in this area is to be a mix of medium to lower intensity commercial, office and residential uses with increased buffers along Folly Road for more intensive commercial uses”

The James Island Expressway meets Folly Road in this area. The City has plans underway to extend this roadway west toward Johns Island, with an elevated intersection at the Folly Road crossing.

South of the expressway intersection, a concentration of mature live oaks that line the corridor at Ellis Oak Drive provide a memorable, positive experience.



## MAYBANK / NORTH VILLAGE: EXISTING ZONING SUMMARY

### City of Charleston

- The General Business (GB) District allows a broad range of commercial uses and activities. It is the most intensive commercial zoning district. Prohibited uses include junk and salvage yards, storage yards (except for vehicles and boats). Automotive repair shops, gasoline service stations, veterinary clinics, and stables are permitted only as special exceptions.
- The Limited Business (LB) District is intended to allow a limited variety of commercial uses and services associated with neighborhood retail, financial and office activities which are compatible with residential areas. The hours of operation for most permitted commercial uses are restricted to between 7 a.m. and 11 p.m. Gasoline service stations are permitted only as a special exception. Prohibited uses include liquor stores, car washes as a principal use, bowling alleys, billiard parlors, dance halls, restaurants with drive-thru service windows, and automobile sales.
- The General Office (GO) District allows a wide variety of office uses.
- The Diverse Residential (DR) zoning districts allow one-family detached dwellings, one-family attached dwellings, two-family dwellings, and multi-family residential (3 or more) dwellings. Within the DR-1, DR-1F, DR-2, DR-2F districts, the Board of Zoning Appeals may approve as a special exception, churches, homes for the elderly, and other low impact uses as described in the zoning ordinance. Density limitations are:

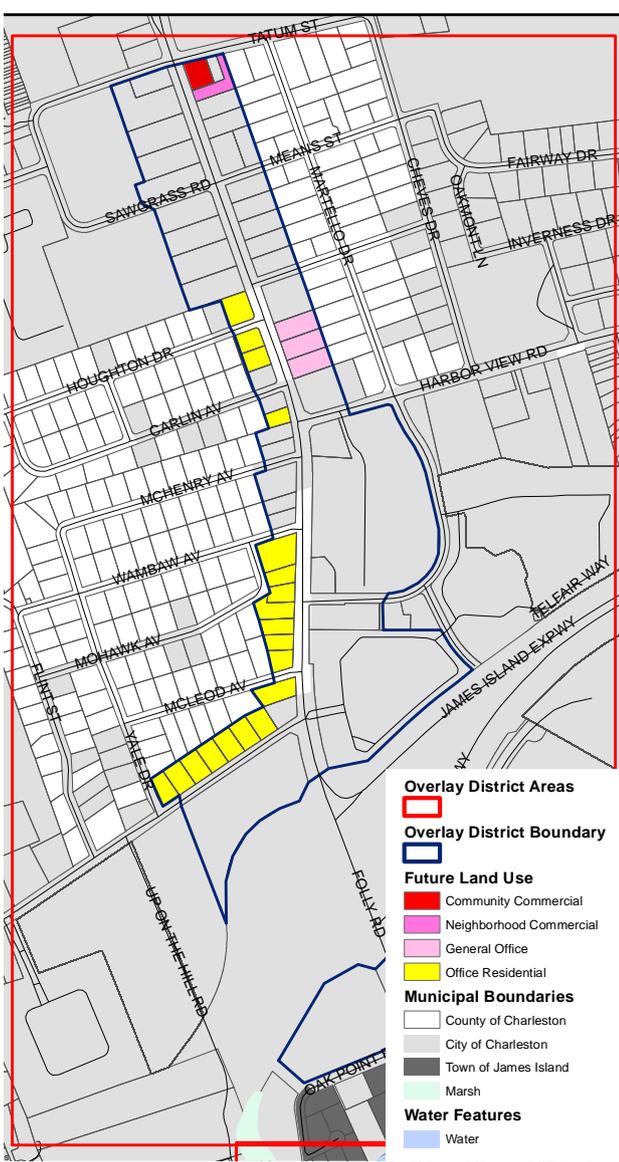
DISTRICT	DR-6	DR-9	DR-12	DR-1 & DR-1F	DR-2 & DR-2F
UNIT/ACRE	6.0	9.0	12.0	19.4	26.4

- The Single-family Residential (SR) Districts allow for one single-family detached dwelling per lot with varying setback, height and building lot occupancy requirements. The SR-3, SR-4 and SR-5 Districts also permit one-family attached dwellings. Maximum densities are:

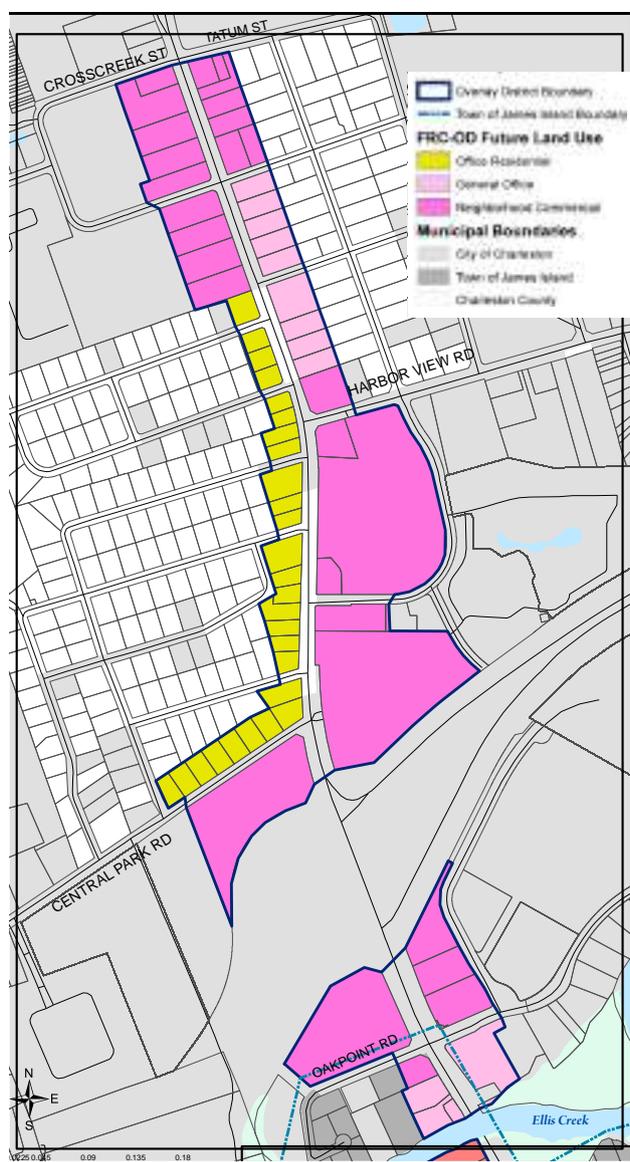
DISTRICT	SR-1	SR-2 & SR-3	SR-4	SR-5	SR-6	SR-7	SR-8
UNIT/ACRE	4.8	7.3	10.9	17.4	8.7	1.0	2.9



City of Charleston: Zoning



Charleston County: Overlay District



Town of James Island: Overlay District

### Folly Road Corridor Overlay District (Charleston County & Town of James Island):

- Permitted uses shall include those allowed in the Residential Office (OR), General Office (OG), Neighborhood Commercial (CN), and Community Commercial (CC) Zoning Districts as indicated on the Overlay map and as described in Charleston County Zoning Table 6.1.1 (Use Table).
- Overlay District Buffers:
  - A minimum 25-foot vegetated right-of-way buffer shall be required along Folly Road in the CN or OG designated areas.
  - A minimum 15-foot vegetated right-of-way buffer shall be required along Folly Road in the OR designated areas.
- In the CN or OG designated use areas, a minimum 20-foot rear vegetated buffer shall be required adjacent to residential uses;
- In the OR designated use areas a minimum 15' vegetated rear buffer shall be required adjacent to residential uses; and
- Where appropriate, fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6' height, opaque fence or wall is utilized the Planning Director may reduce the land use buffer by up to 1/2 its required depth when deemed appropriate; however no required vegetated buffer shall be less than 10' in depth.



# B

# TRANSPORTATION

This appendix highlights strengths, weaknesses, opportunities, and challenges as they pertain to transportation and mobility for Folly Road.



**TRANSPORTATION  
CONDITIONS**

**B.2**

**STRENGTHS & WEAKNESSES/  
OPPORTUNITIES & CONSTRAINTS**

**B.3**

**EXISTING CONDITIONS**

**B.12**

# TRANSPORTATION CONDITIONS

The key issues under exploration for transportation and mobility are how to accomplish the following:

- improve safety and operational efficiency of all modes of travel, including storm evacuation;
- implement multimodal conversions along the corridor;
- integrate public transportation in existing and future developments; and
- determine how locations of new development/redevelopment on James Island should be served from a mobility standpoint.

Or, more simply put, how do we move and connect people so that neighborhoods, communities, business commercial districts, and beach tourism can reach their potential in a sustainable (fiscal, coordinated, environmental, and public health & safety) manner?

Roadways are often designed and constructed with the sole intent of moving vehicles. Folly Road is not an exception, and as a result acts as a vehicle-centric transportation corridor dividing communities, while struggling to move and connect people within the community. As a result, neighborhoods, communities, and business districts are not achieving their potential.

This Complete Streets Corridor Study evaluates land use and transportation individually and how they interact and support one another. The study identifies ways to enhance the communities' character, connectedness and potential through transportation; consequently, this may require a fundamental shift in what is measured and how success is determined. This approach requires "redefining" the problem we are trying to solve so that new solutions can present themselves and align with community values and needs.

To set the stage for the development of the Complete Streets Corridor Study during the design charrette, the team reviewed existing conditions of the transportation system to understand the framework of what has been done previously and what is currently planned. Items reviewed included background conditions; and the Strengths, Weaknesses, Opportunities and Challenges as they pertain to travel lanes and speed of motorists, access management, bicycle infrastructure, pedestrian infrastructure, bridges, transit services, traffic signals and intersection operations, connectivity and network, and existing cross sections for Folly Road.

## BACKGROUND

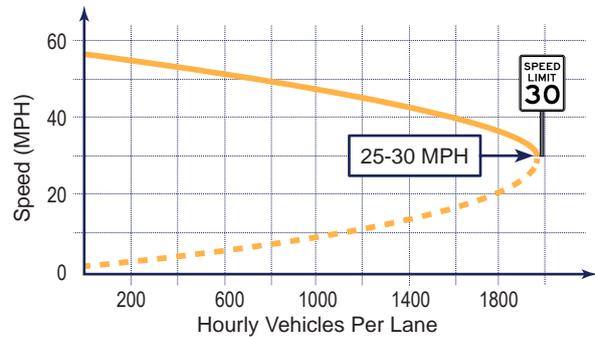
Folly Road is a South Carolina Department of Transportation (SCDOT) major arterial road. It serves as a regional evacuation corridor during natural emergencies such as hurricanes.

Multiple agencies have responsibilities along the Folly Road corridor. Their vision, goals, values, and core services for Folly Road may not currently be in alignment or integrated. SCDOT has ownership of the corridor for design, access, and right-of-way, the City of Charleston maintains and operates the traffic signals, and local agencies oversee land uses. Berkeley/Charleston/Dorchester Council of Governments (BCDCOG) administers federal funding from various sources for transportation system upgrades and transportation enhancement projects; Charleston County has funding from a half cent sales tax for capital projects. The Charleston Area Regional Transit Authority (CARTA) provides transit service. Other entities with jurisdiction over Folly Road include the Town of James Island and City of Folly Beach. Integration and coordination among municipalities is critical to the success of Folly Road.

# STRENGTHS & WEAKNESSES / OPPORTUNITIES & CHALLENGES

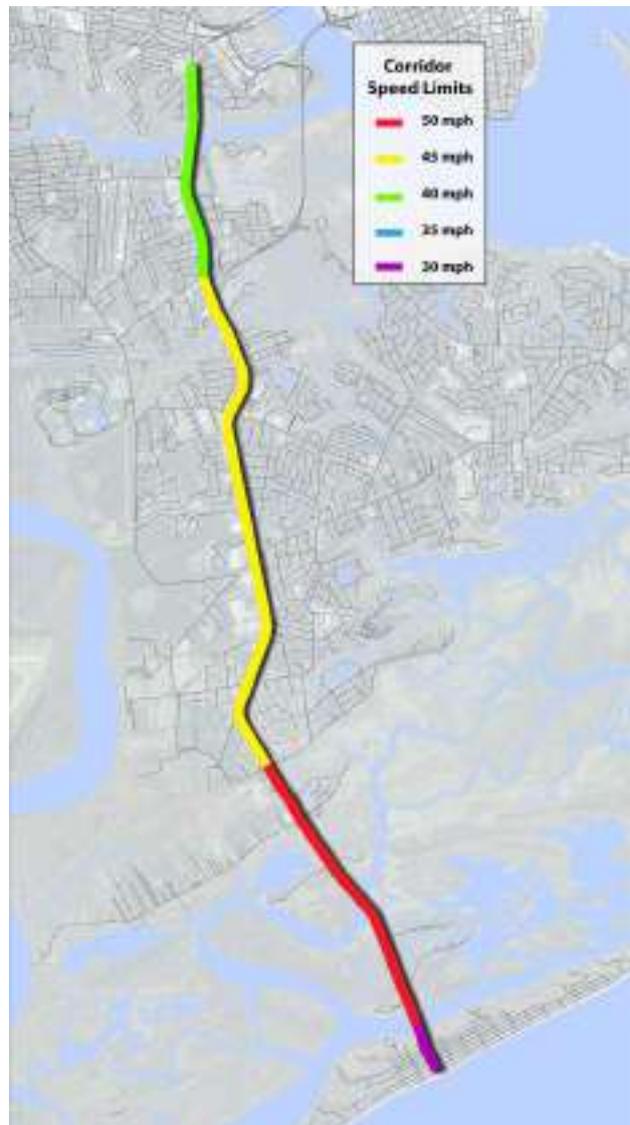
## TRAVEL LANES AND SPEED OF MOTORISTS

Travel lanes for vehicles are continuous and connected along the corridor and to the corridor from adjacent roadways and neighborhoods. Travel lanes along the corridor are designed to accommodate maximum width vehicles. Narrower travel lanes are one way to potentially repurpose space within the public right of way for other users and enhance safety. Speeds range between 40-50 MPH along the corridor, except within the core of Folly Beach where 30 MPH is posted (see map at right). When roadways are designed for higher speed ranges they are not as efficient at moving the maximum amount of cars as are roadways designed to facilitate speeds in the 25-30 MPH range. As speeds increase, spacing between vehicles increases, which results in fewer vehicles being moved within a period of time. During the peak hour when speeds are normally lower, a closer spacing naturally occurs, resulting in maximum carrying potential of the street. Furthermore, roadways in the lower speed range are also safer for pedestrians, bicyclists, and motorists and reduce the severity of injury and fatal collisions. The effect of reduced speed limits on commute times is further discussed in the recommendations portion of the report.



above: The Speed - Capacity Diagram, illustrating the optimal speed (25-30 mph) to move the most vehicles per hour, per lane.

below: Existing speed limits. Note: A speed study on a portion of Folly Road was conducted in the summer of 2015, which resulted in the reduction of the 50 mph section to become 45 mph.



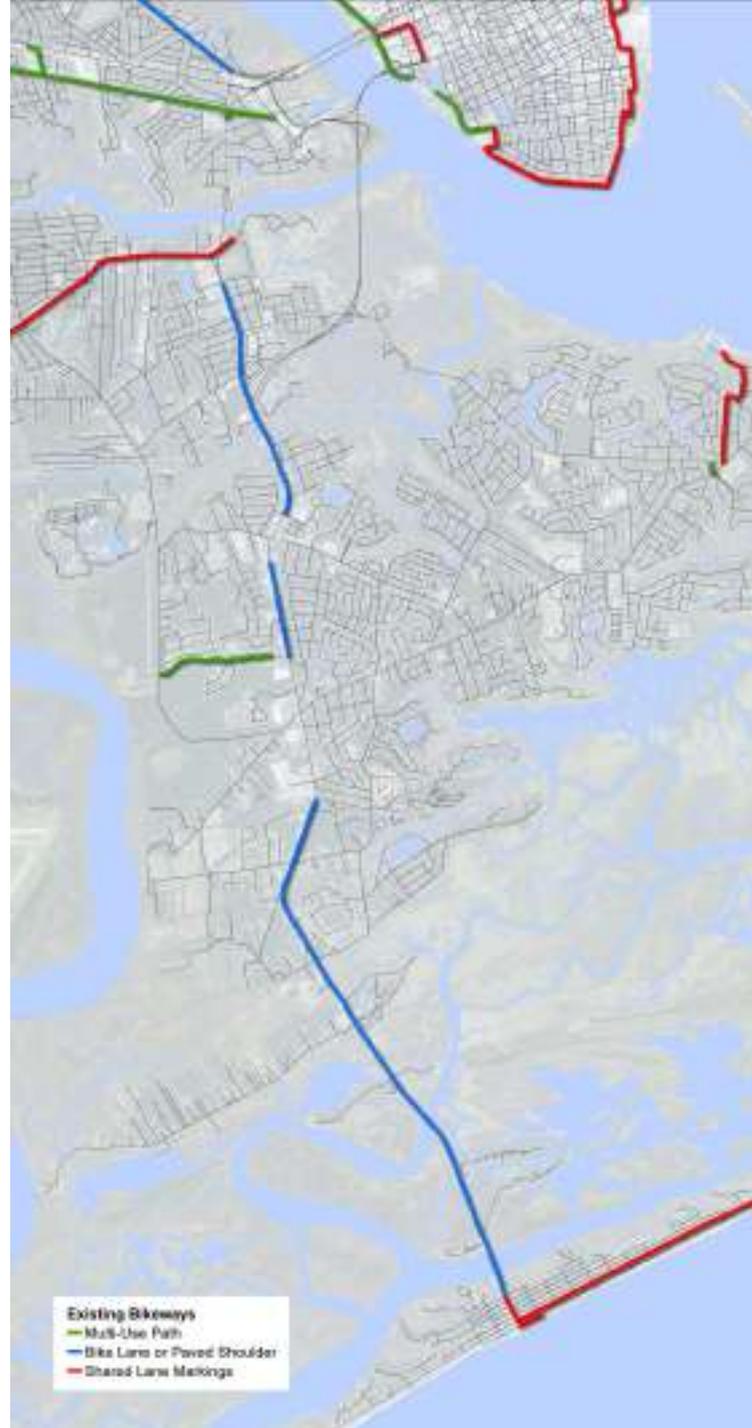
## ACCESS MANAGEMENT

Driveways in the commercial areas are numerous and spaced frequently and close together, with many often serving only one parcel or property. This condition creates a lot of friction and safety issues along the corridor for pedestrians, bicyclists, and motorists trying to navigate Folly Road, which not only results in safety conflicts but also reduces the vehicle carrying-capacity of the roadway. In addition, there are very few parcels with cross access easements or connections for motorists, pedestrians, or bicyclists to go from one business to an adjacent business. This often necessitates trips to utilize Folly Road that would otherwise not need to be on Folly Road. Reducing the number of driveways by sharing driveways and parking lots along with providing access to these businesses from the rear of the properties and from neighborhoods is a key opportunity. This will require some cooperation between land owners through the use of easements and shared investments in improvements. These connections do not necessarily need to look or feel like a public street as long as they can provide connectivity between parcels. Connections from residential neighborhoods could include wider sidewalks or paths for bicyclists and pedestrians to provide convenient and safe access without a circuitous route.

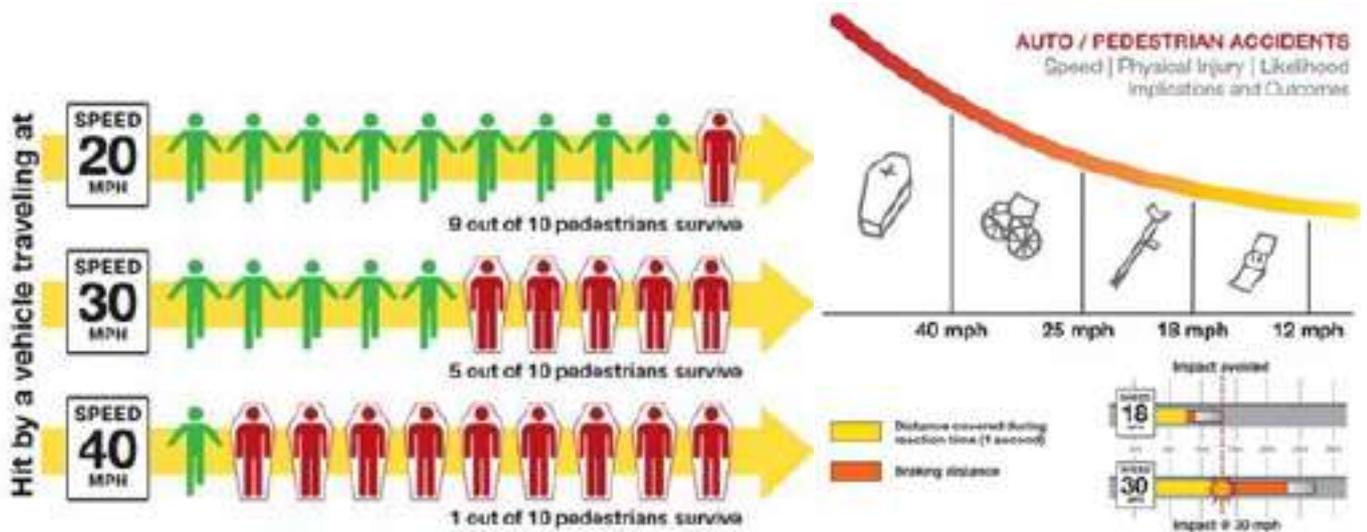
## BICYCLE INFRASTRUCTURE

Bike lanes for cyclists are discontinuous and not connected along the corridor or to the corridor from adjacent roadways and neighborhoods. Where bike lanes do exist the width of the bike lanes is the minimum width or even less. Minimum width (4 feet) bike lanes present challenges as less experienced bike riders feel more vulnerable especially when adjacent to high speed and volume traffic, such as what exists on Folly Road. From field observation, more experienced riders also utilize alternate roadways due in part to the discontinuity, lack of width & space, and maintenance of bike lanes from debris and objects. To better accommodate the more vulnerable users of the roadway wider bike lanes or separated bike ways or trails are desirable. Bicycle accommodations from James Island across the Ashley River do not exist and create barriers to mobility.

The West Ashley Greenway exists north of Wappoo Cut and is part of an interstate trail system called the East Coast Greenway, which is planned to connect Key West, Florida



above: Existing bicycle and pedestrian facilities



above: Relationship between speed and pedestrian fatality rates (Source: Killing Speed and Saving Lives, UK Dept. of Transportation, London, England.)

to Canada. Currently the East Coast Greenway is about 40% complete and has the potential to be a key regional tourism attraction. Connecting Folly Road and James Island to the West Ashley Greenway/East Coast Greenway could have both transportation and economic benefits to the region.

## PEDESTRIAN INFRASTRUCTURE

Sidewalks for pedestrians are discontinuous along the corridor, and in many instances connections do not exist from adjacent roadways and neighborhoods. Sidewalk widths are minimal at 4'-6'. Due to the long distances between signalized intersections, pedestrians need to often walk ¼- ½ a mile in some instances to cross Folly Road using a signal. This often results in many pedestrians crossing at their desired location, midblock in-between traffic signals, rather than walking to a crosswalk. This becomes problematic as pedestrians become trapped in the center turn lane while crossing a wide roadway without sufficient gaps in traffic volumes at the same time in both directions.

Crossing distance for pedestrians at intersections impacts traffic signal cycle lengths because the Americans with Disabilities Act requires signal cycle time of 3.5 feet/second to cross. Not all intersections have crosswalks at all four legs of the intersection and as a result some pedestrians have to cross three legs of an intersection rather than just one which significantly increases the delay pedestrians ex-

perience and triples their exposure to collisions. Pedestrians on Folly Road are often observed walking in dirt, grass, or the center turn lane.

The infographics above show the important correlation between speed and pedestrian safety. On higher speed roadways, people are often more inclined to drive across the roadway than walk as they do not feel safe crossing such a wide and fast facility. As a result, a new vehicle trip on the roadway and at the intersections is introduced that otherwise would not be on the roadway if people could walk or bike. These additional vehicle trips often necessitate bigger, wider, and faster roadways and intersections which further exacerbates the congestion experienced on the roadway.

## BRIDGES

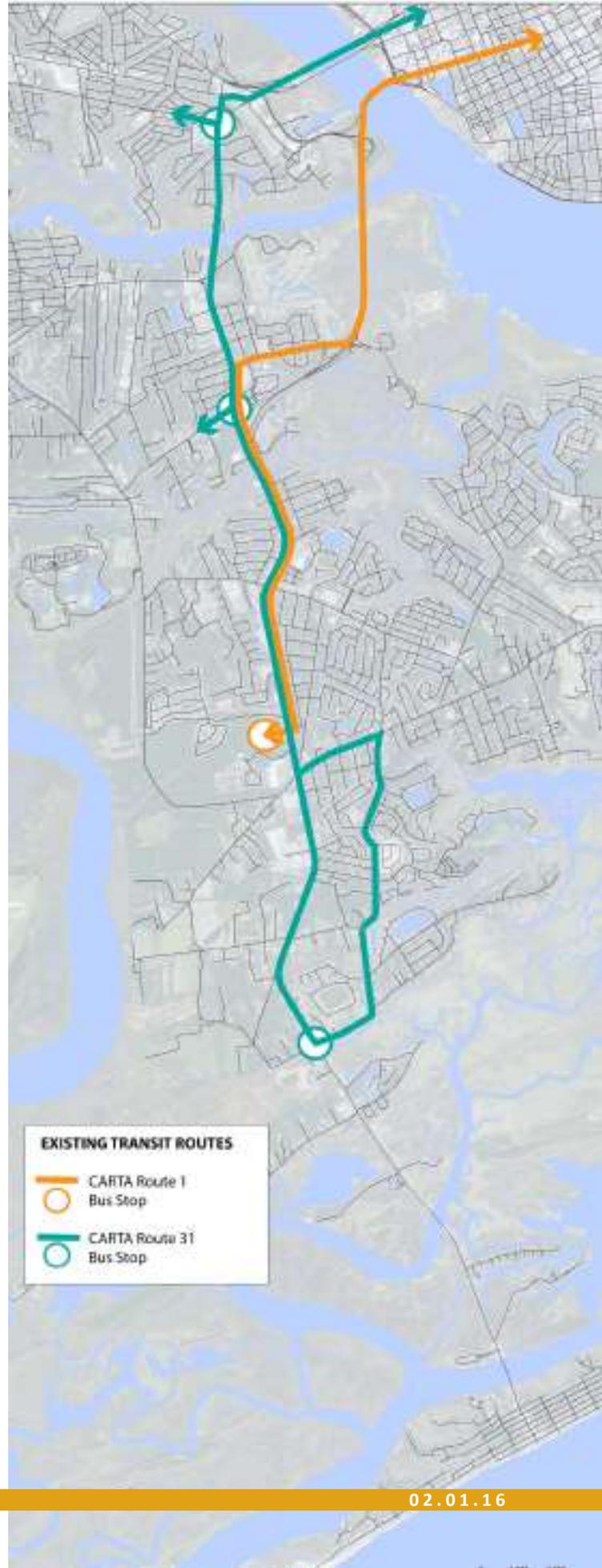
James Island and Folly Road are accessed regionally by crossing bodies of water with bridges. Some of these bridges serve taller ships and sailboats and are commercially navigable routes. As a result, drawbridges over the Wappoo Cut and Ashley River frequently are closed to vehicle traffic to open to allow a vessel to pass underneath. This creates significant challenges for motorists especially during peak commute periods or if the bridge is closed for 5-15 minutes as it backs traffic up through adjacent signalized intersections.

The bridges also serve as barriers to mobility for bicyclists and pedestrians as several of them do not have infrastructure in their current configuration to accommodate people crossing them in ways other than in motor vehicles. The newer bridges near Folly Beach are being constructed with sidewalks and bike lanes to alleviate this disconnect. On older bridges, repurposing existing lanes or space to pedestrians and bicyclists should be considered. In addition, open grate bridges like Wappoo Cut should have a shoulder area filled in with a flat surface so that bicycle wheels and pedestrian's shoes do not have challenges crossing.

The Arthur Ravenel, Jr. Bridge connecting Charleston with Mount Pleasant is a great example of a bridge designed to connect and move people across it regardless of their choice of travel mode. As part of the West Ashley Greenway/East Coast Greenway the Savannah Highway is currently being evaluated by Charleston County for a lane reduction to repurpose a travel lane into a two way shared path. As an alternative, the James Island Connector is also being evaluated for constructing an addition of a bicycle and pedestrian path.

## TRANSIT SERVICE

Transit service is provided by CARTA and is infrequent for transit users with approximately 90 minute headways, and as a result has low ridership. Public transit does not service Folly Beach, although a small privately-operated trolley does serve patrons on a contract basis in the Folly Beach area. Transit stops lack amenities such as benches and shelters for people while they wait for buses. Shade at transit stops is critical in warmer weather months, and shelters help protect transit users from the wind, rain, and sun. A park-n-ride pick up express transit bus stop exists at the Wal-Mart parking lot and is depicted by the orange

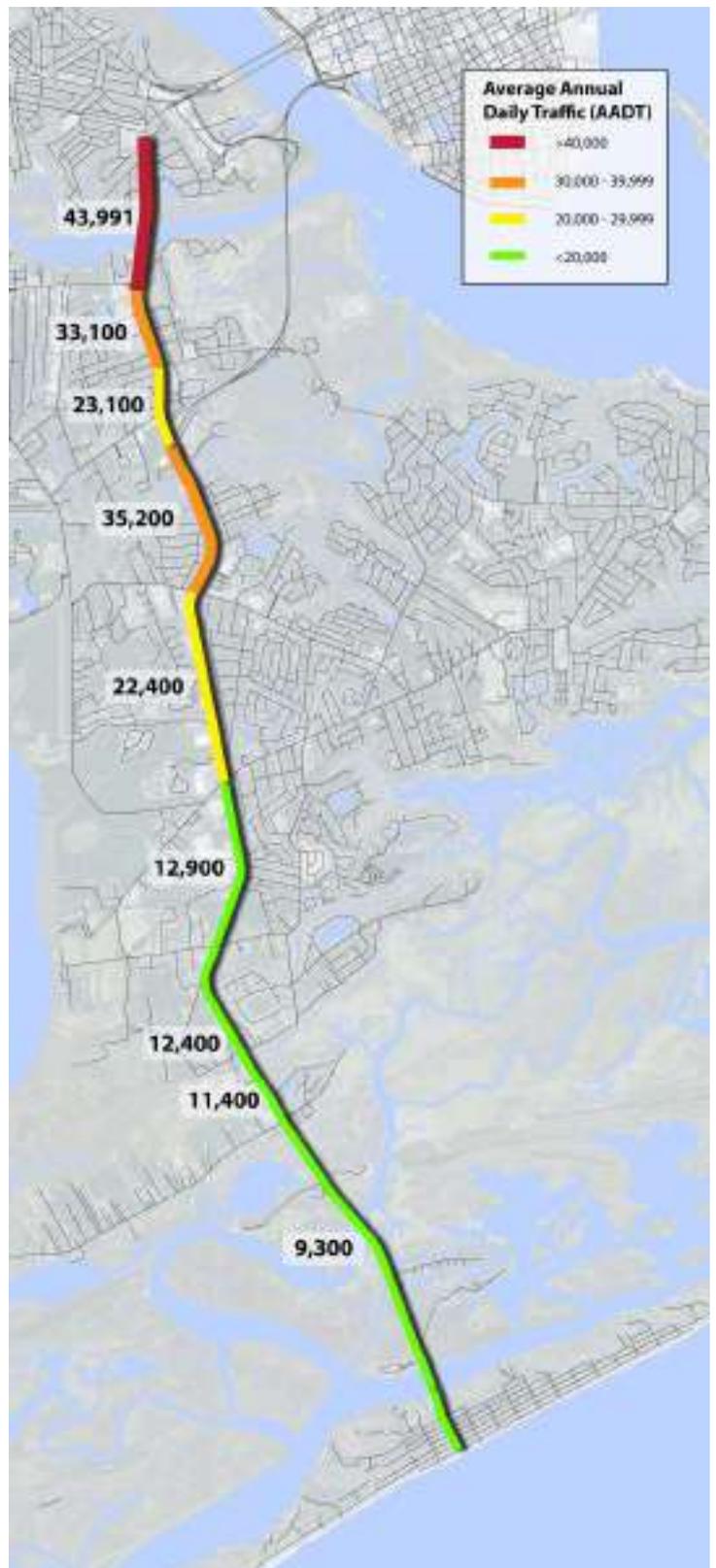


route on the map at left. This service has half hour headways but is only available during morning and evening commuting hours. The teal route is the 90 minute headway route. Transit stops are a great potential way to incorporate public art or place making along a corridor and make it interesting while users wait for a bus.

Creating frequent transit connections with 20-30 minutes headways between Folly Beach, James Island and downtown Charleston for employment/tourism is a key opportunity as well as frequent service along the Folly Road corridor and its surrounding neighborhoods. Creating increased headways often requires additional funding for buses and drivers, which can be a challenge.

### CORRIDOR VEHICLE TRAFFIC VOLUMES

Folly Road's Average Daily Traffic (ADT) volumes range from 44,000 across the Wappoo Cut Bridge to approximately 9,300 ADT across the causeway to Folly Beach, as seen in the map at right. While the volumes vary along the corridor and have clear distinctions where the volumes change, the roadway's character and cross-section do not change; opportunities exist to reallocate of space for all roadway users.



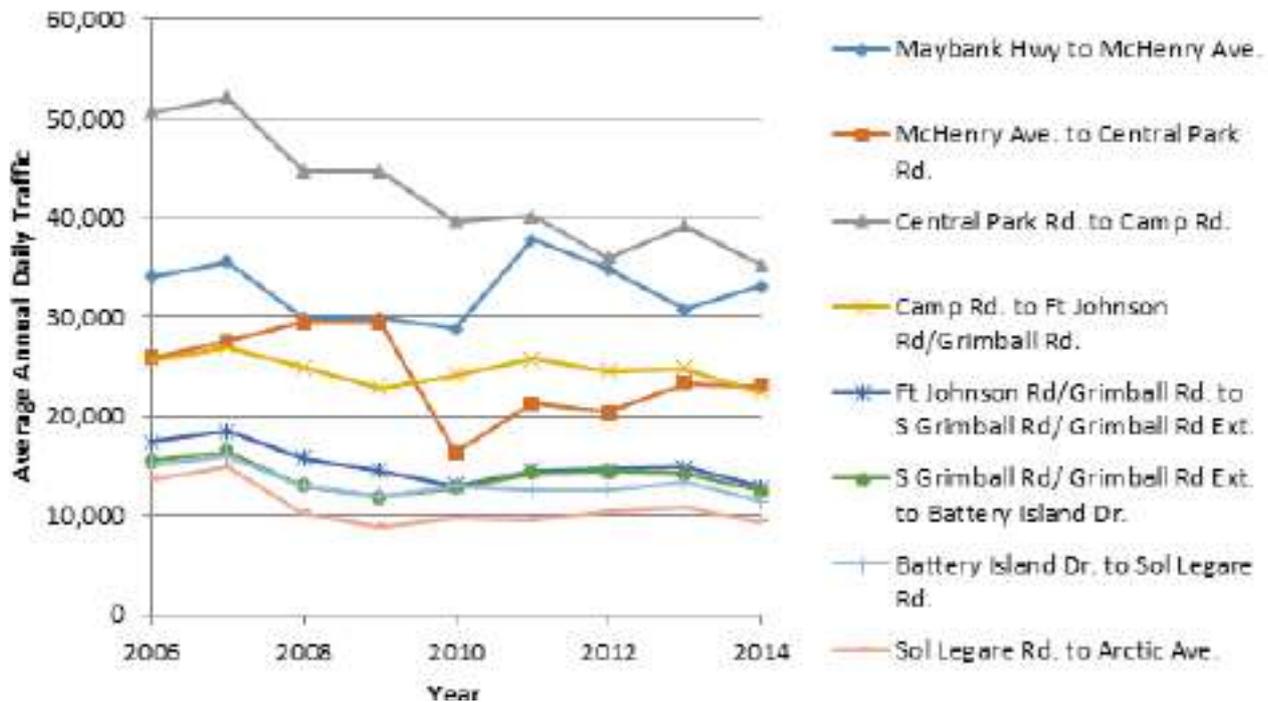
left: Existing transit routes

right: Existing average daily traffic volumes (ADT)

Historically Folly Road in most locations has served more average daily traffic volume than it does today. Average daily traffic volumes along the entire Folly Road corridor are declining from peak historical volumes. This trend is experienced throughout the United States as the vehicle miles travelled and number of vehicle trips has been on a decline since 2007/2008. This decline is occurring faster in communities that have invested in bicycle, pedestrian, carpool/rideshare, and transit infrastructure and programs so that people have choices to their mobility besides the automobile. Even without all of those investments Folly Road is experiencing a decline in daily trips.

There is significant reserve capacity along the corridor for the majority of the hours in a day, even though peak times are quite congested. A roadway with one travel lane in each direction and a center turn lane designed for a speed of 25-30 MPH can often accommodate 20,000-25,000 vehicles per day or 1,800-1,900 vehicles per travel lane per hour. The charts on the next page show the hourly volumes per direction at three different segments along the corridor. Folly Road, like many streets, is sized exclusively to accommodate the peak vehicle travel times of the day. The peak times occur during the AM and PM commute times.

below: Historic average daily traffic volumes at different points along Folly Road

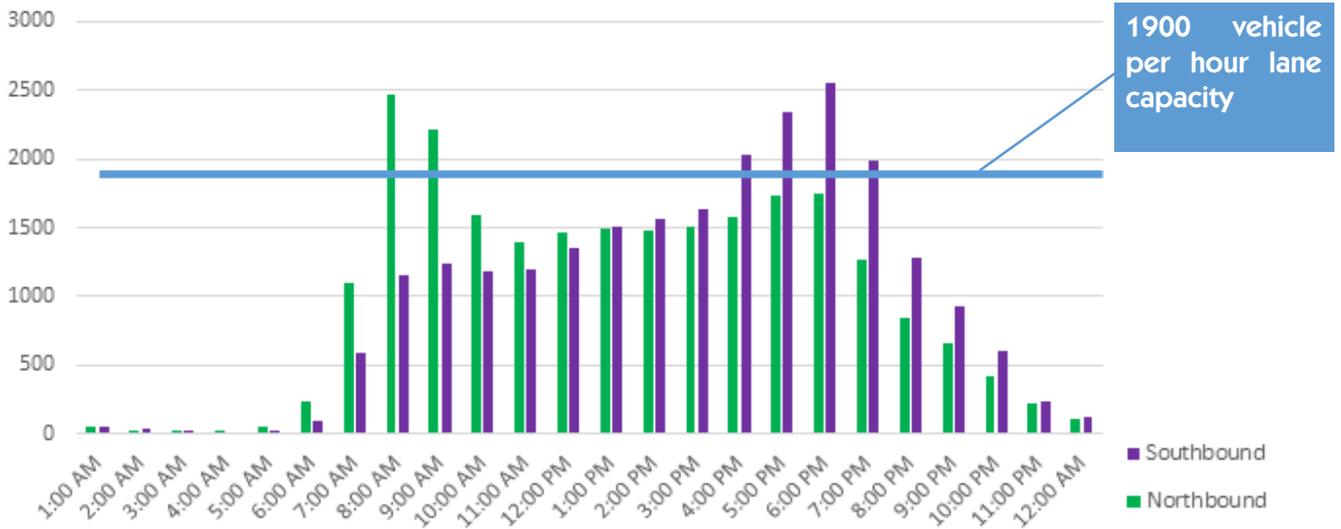


next page, top: Hourly traffic volumes on Folly Road between US-17 and Wappoo Cut Bridge

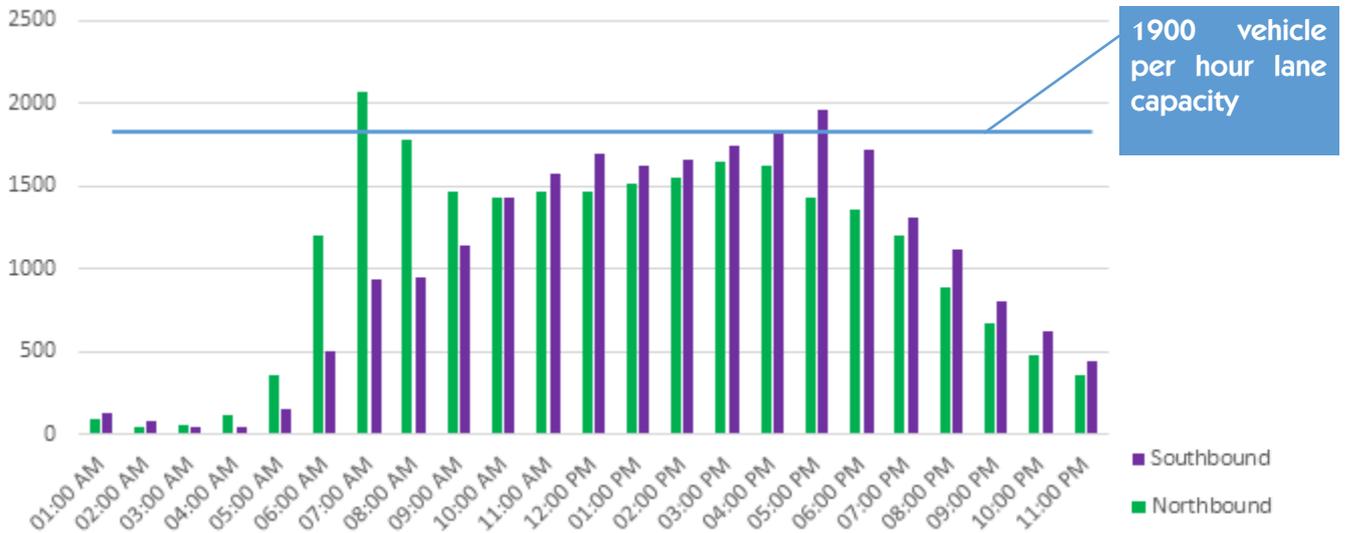
next page, middle: Hourly traffic volumes on Folly Road just north of Brantley Road

next page, bottom: Hourly traffic volumes on Folly Road just north of Grimball Road

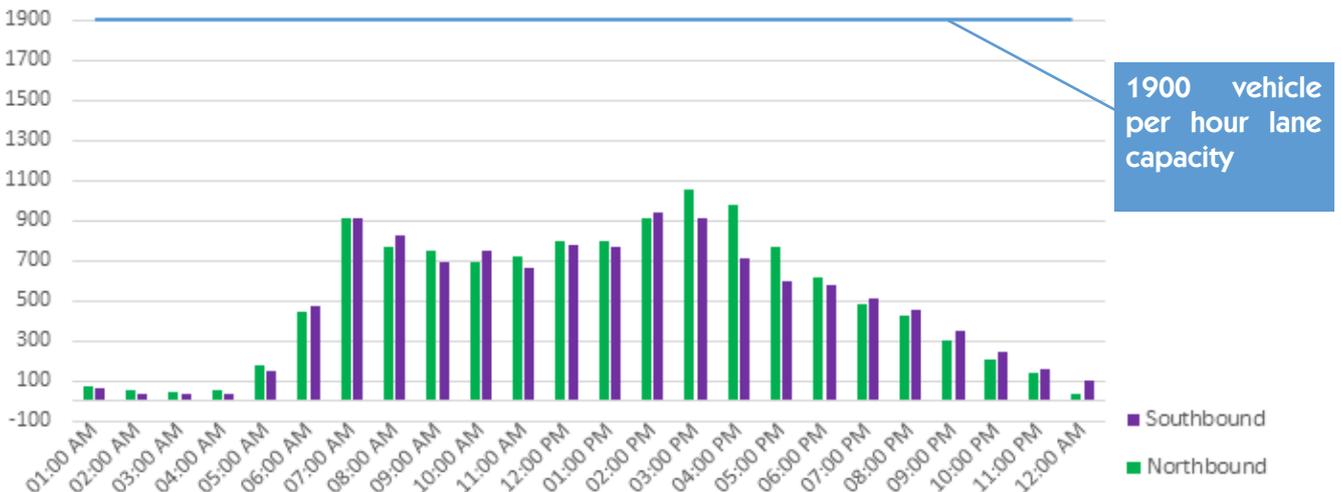
Folly Road between US-17 and Wappoo Cut Bridge



Folly Road just North of Brantley Road



Folly Road just North of Grimball Road



## TRAFFIC SIGNALS AND INTERSECTION OPERATIONS

Traffic signals along the corridor have long cycle lengths (120-180 seconds) and do not appear to be synchronized or coordinated (or updated regularly since the last time they were synchronized). Traffic patterns and signal timings should be re-evaluated every 1-2 years to identify changes in traffic characteristics that affect optimization.

Intersections along the corridor are spaced at irregular and large distances, which create challenges to maintain tight platoons of motorists, and to serve the platoons effectively with synchronized traffic signals. The platoons created by properly-synchronized traffic signals start to break

down when signals are spaced more than ¼ mile apart, which is the case on much of Folly Road. Furthermore, the preponderance of driveways exacerbates the breakdown of the platoons, effecting the ability to maintain signal progression. The higher design and operating speeds of the corridor also contribute to the greater spacing distance between motorists, which then requires more green time for Folly Road vehicles to proceed through an intersection. These high speeds and lack of platoons also create challenges for exiting motorists at driveways to find an acceptable gap in traffic to enter the roadway. Some of the fast food restaurants along the corridor have difficulties serving their customers in drive-throughs as they can control their process but do not have control of customers' ability to exit the parking lot which can back up.

**TABLE 1 - LEVEL OF SERVICE AND DELAY (AVERAGE SECONDS PER VEHICLE)**

Intersection	Traffic Control	Existing	
		AM Peak Hour	PM Peak Hour
Folly Road at Maybank Highway	Signalized	F - (102.6)	F - (93.4)
Old Folly Road at Maybank Highway	Signalized	B - (15.1)	C - (26.4)
Old Folly Road at Folly Road	Signalized	A - (5.3)	F - (89.3)
Folly Road at Harbor View Road	Signalized	C - (28.6)	D - (43.4)
Folly Road at Central Park Road	Signalized	C - (31.5)	B - (13.6)
Folly Road at the James Island Connector off-ramp	Signalized	C - (26.7)	C - (26.7)
Folly Road at the James Island Connector on-ramp	Signalized	B - (14.1) – SB LEFT	B - (11.0) – SB LEFT
Folly Road at Camp Road	Signalized	F - (92.3)	E - (66.6)
Folly Road at Grimball Road/Fort Johnson Road	Signalized	C - (28.3)	C - (22.4)
Folly Road at Signal Point Road	Unsignalized	F - (62.3) – EB	F - (752.8) – EB
Folly Road at S. Grimball Road/Grimball Road Extension	Un/Signalized	F - (67.7) – EB	F - (86.5) – EB

Capacity analyses were performed for the AM and PM peak hours for the 2015 existing conditions using the Synchro Version 8 software to determine the operating characteristics of the corridor. The analyses were conducted with methodologies contained in the 2010 Highway Capacity Manual (Transportation Research Board, December 2010).

Capacity of an intersection is defined as the maximum number of vehicles that can pass through an intersection during a specified time, typically an hour. Capacity is described by level of service (LOS) for the operating characteristics of an intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The Highway Capacity Manual defines six levels of service, LOS A through LOS F, with A being free-flow and F being the most congested. At unsignalized intersection the delay is reporting the worst movement approach at the intersection so other movements such as on Folly Road could be operating accessibly.

Peak hour intersection turning movement counts were performed in April 2015 and May 2015 from 7 AM to 9 AM and 4 PM to 6 PM. Peak hours varied by location but generally were from 7:15 AM to 8:15 AM or 7:30 AM to 8:30 AM north of the James Island Connector. During the PM peak hour, the peak hour varied based on location from with some peaking as early as 4:00 PM to 5:00 PM, yet others 4:15 PM to 5:15 PM, 4:30 PM to 5:30 PM and one as late as 5:00 PM to 6:00 PM.

A traffic signal is planned for Folly Road at S. Grimball Road/Grimball Road Extension.

A \$15-\$18 million dollar intersection improvement project is planned at Camp Road and Folly Road. This project will also fill sidewalk and bike lane gaps.

For unsignalized intersections, the level of service of the poorest performing minor approach is reported. Due to geometric configuration, HCM 2000 methodologies reported.

Folly Road currently experiences congestion at several major intersections during peak times. Specific areas of high traffic volumes include Folly Road at Maybank Highway, Folly Road at Camp Road and Folly Road at the James Island Connector ramps. Yet, many intersections in-between these more congested intersections have significant reserve capacity, operating between Levels of Service A and C. The transportation industry measures congestion in terms of Level of Service. While Level of Service is a measurement of intersection and roadway corridor operations in terms of vehicle delay, it should not be the sole determining measurement for success of an intersection or corridor. Level of service as it exists today falls short of measuring, moving, and connecting people, as it focuses solely on the movement of cars. When roadway design focuses on cars and traffic, the areas in which they occur get more cars and traffic. Conversely, when roadway design focuses on people and places, the areas get more people and places.

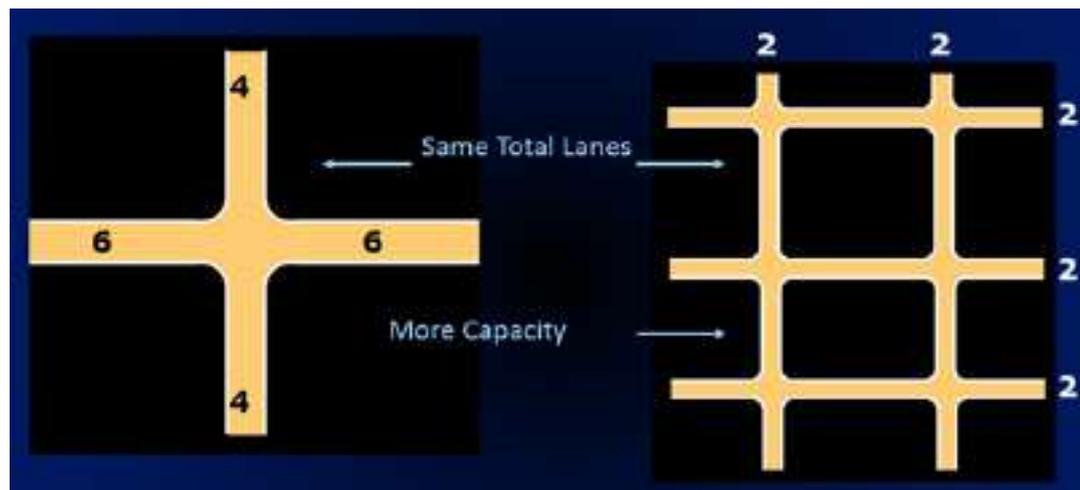
## CONNECTIVITY AND NETWORK

Due to the lack of connectivity and network for roadways, sidewalks, and bike lanes/trails, there are not a lot of choices in routes other than Folly Road or modes other than personal motor vehicles for people to choose from to access their destination. As a result, certain intersections and roadway segments are forced to carry more of the burden and they struggle to move motorists as all vehicles have to go through the same locations. This is even more significant of an issue when heavily burdened roadways intersect as opposed to the same volumes being dispersed through a network.

James Island area transportation infrastructure is asked to serve a diverse mix of travel types: residents accessing goods and services; workers commuting through the area to access jobs; and visitors accessing the multitude of attractions and beach. Each of these travel types has a differing set of needs, and the challenge will be to define a system that enables the movement of people and not just cars. It is important during the development of a complete streets vision to define street and facility typologies that serve this range of travel needs, balancing the desire to move “to” destinations with the desire to move “through” the area, while increasing safety for all mode choices, especially for the more vulnerable users of the roadway.

## CONCLUSION

In conclusion, Folly Road is asked to serve a multitude of users and roles. In its current configuration, it serves no one in an exemplary manner. Through a strategy of rebalancing, expanding the range of travel mode choices, increasing safety for all users, and establishing an integrated plan to connect land use vision and transportation facilities, over time Folly Road can become a Complete Street. Opportunities exist to rebalance the way that Folly Road looks and operates; these opportunities are explored and expanded upon in the recommendations section of this report.



*left: Comparison of lane configurations to road network capacity; a network of two-lane roads can provide the same number of lanes and capacity as two wider roads. (Source: Walter Kulash)*

# EXISTING CONDITIONS

The following pictures show the corridor from various perspectives of roadway users; existing conditions cross-sections are included in Section 4 of the report.



*top:* Two lane section in the conservation area; no pedestrian facilities.

*middle:* Bike lanes along a portion of Folly Rd.

*bottom:* Folly Rd, looking south, approaching conservation district. Most traffic signals are hung by wires rather than poles.

*top:* Folly Rd, looking south, before Grimbald Rd. Right turn lane increases capacity and speed.

*middle:* Five lane section of Folly Rd. No pedestrian infrastructure within the public or private space.

*bottom:* Folly Rd, looking north, in the commercial district. Overgrown landscape encroach into bike lanes.



*top:* Folly Rd in the commercial core. Driveway spacing creates safety challenges and friction for all roadway users.

*middle:* Folly Road, looking north. High speed traffic adjacent to bicyclists creates safety challenges.

*bottom:* Looking north along Folly Rd. Debris exists within the bike lanes and gutter.

*top:* Center St, looking south. Slower speeds allow bicyclists to take the lane, however bike riders do not feel safe taking the travel lane.

*middle:* Shoulders/bike lanes along Folly Rd are minimal width (4'); travel lanes are 11'-12'.

*bottom:* A family walks single file along sidewalks on Folly Rd.





# GREEN INFRASTRUCTURE

This appendix summarizes a preliminary assessment of green infrastructure in the Folly Road corridor, including civil engineering and environmental planning opportunities and constraints.



**WATERSHED C.2**

**TOPOGRAPHY & SOILS C.5**

**TREES & VEGETATION C.5**

**STORMWATER DESIGN &  
GREEN INFRASTRUCTURE C.8**

**WATER & WASTEWATER  
INFRASTRUCTURE C.9**

**COMMUNICATIONS &  
ELECTRIC INFRASTRUCTURE C.9**

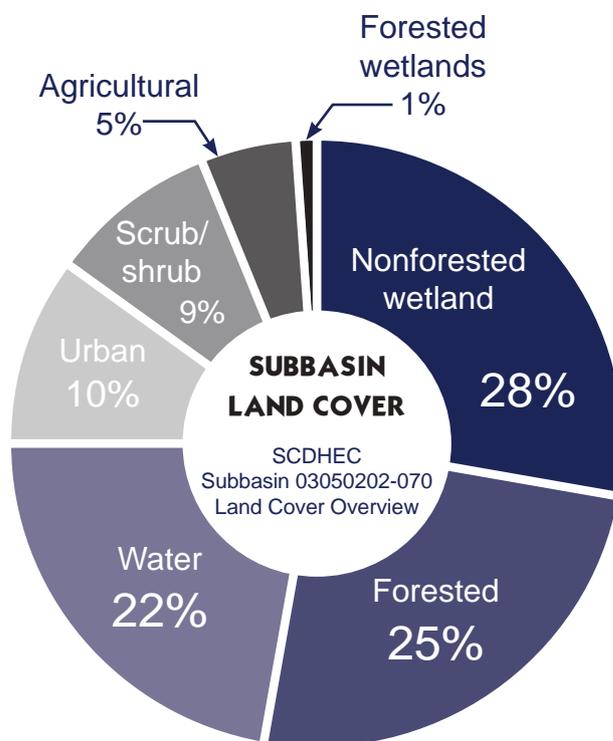
# WATERSHED

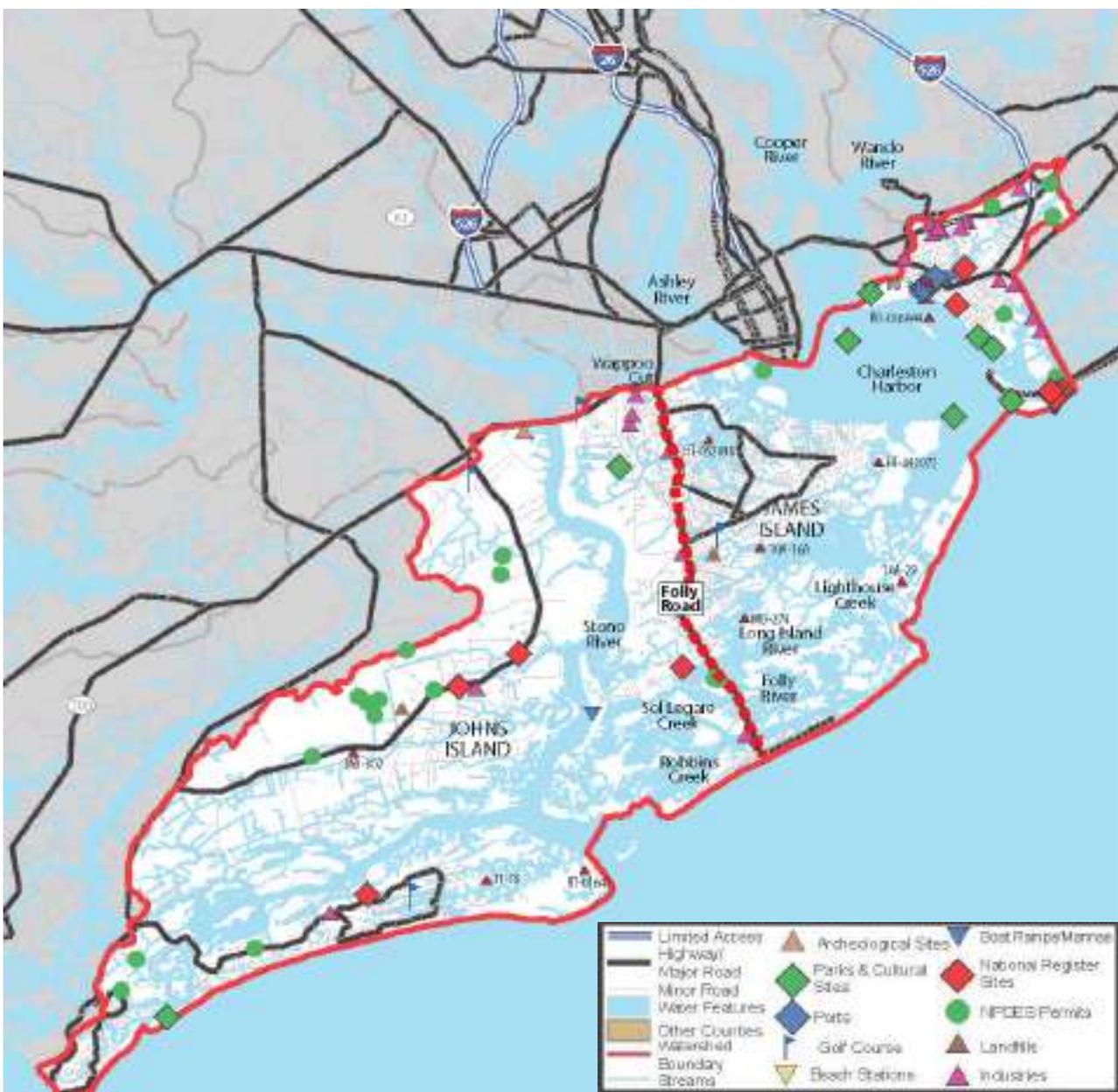
James Island is located south of the convergence of the Ashley and Cooper Rivers and Wappoo Creek, east of the Stono River, and west of Charleston Harbor. The island is part of South Carolina Department of Health and Environmental Control (SCDHEC) subbasin 03050202-070, which includes James Island and Johns Island. See watershed overview and land cover figures for additional detail.

Two Total Maximum Daily Loads (TMDLs) addressing dissolved oxygen were developed by SCDHEC for the Charleston Harbor Estuary: one covering the Ashley River and the other covering the Charleston Harbor, the Cooper River, and the Wando River. Freshwater/saltwater balance is also an ongoing concern due to increased runoff quantity affecting the natural balance and resulting effect on the local economy (shellfish).

Localized flooding is also a concern. Flooding areas noted by stakeholders include Camp/Folly Roads, Grimball Road, and Central Park Road. Input from BCDCOG and municipalities noted that flooding is generally limited to a few areas in the corridor, sometimes due to undersized infrastructure, and only during larger storm events – i.e. three to five times per year.

The Folly Road drainage system includes closed drainage systems (catch basin structures and underground pipe) within the more densely developed northern corridor. Surface drainage systems (open swales and wetland systems) are one of the most significant natural features of the landscape within the southern corridor.





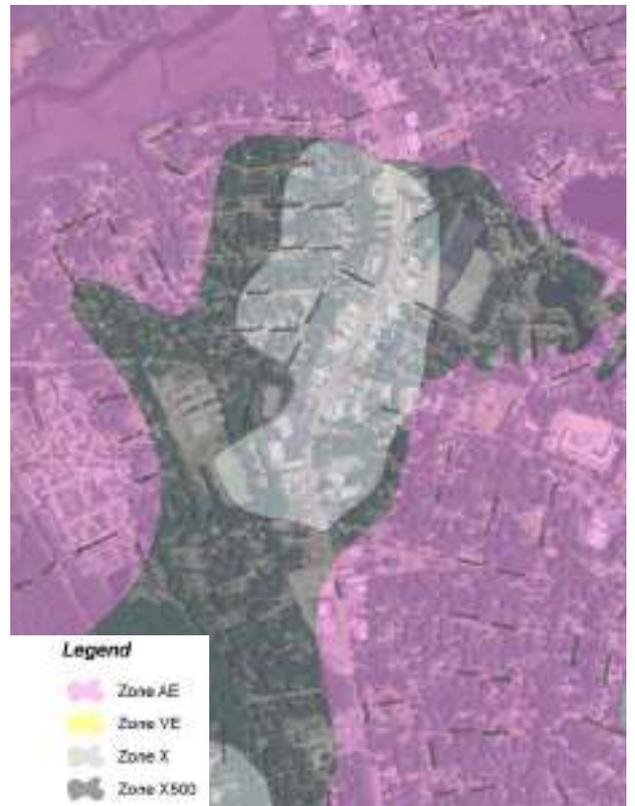
SCDHEC Basin 03050202-070 (source map: BCDCOG Water Quality Management Plan Update)

### SCDHEC 303(d) LIST OF IMPAIRED STATIONS

STATION	DESCRIPTION	STATUS	IMPAIRMENT
11-35	BASS CREEK AT PUBLIC DOCK (5TH BEND FROM CONFLUENCE WITH CINDER CREEK)	Impaired	SHELLFISH FECAL COLIFORM
RT-01642	TRIBUTARY TO STONO INLET, 11 M SW OF CHARLESTON	Impaired	TURBIDITY
MD-802	ABBAPOOLA CREEK @ BLIND ROAD	Impaired	ENTEROCOCCUS
MD-274	FOLLY CREEK AT SECESSIONVILLE POLLUTION LINE (10A-15A)	Impaired	TURBIDITY
10A-29	OUTFALL OF MORRIS ISLAND DISCHARGE	Impaired	SHELLFISH FECAL COLIFORM
10A-16A	FLUDD'S CREEK AT CLARK SOUND	Impaired	SHELLFISH FECAL COLIFORM
RT-042072	UNNAMED TRIBUTARY TO PARROT POINT CREEK 0.8 MI S OF FT JOHNSON	Impaired	TURBIDITY
RT-052098	JAMES ISLAND CREEK N OF WHITE HALL PLANTATION	Impaired	DO, ENTEROCOCCUS
RO-036044	CHARLESTON HARBOR 0.5 MI SE OF MOUTH OF SHEM CK	Impaired	COPPER
MD-071	SHEM CK AT BRIDGE ON US-17	Impaired	ENTEROCOCCUS



FEMA Flood Zones: Wappoo Creek to James Island Creek (*above*)

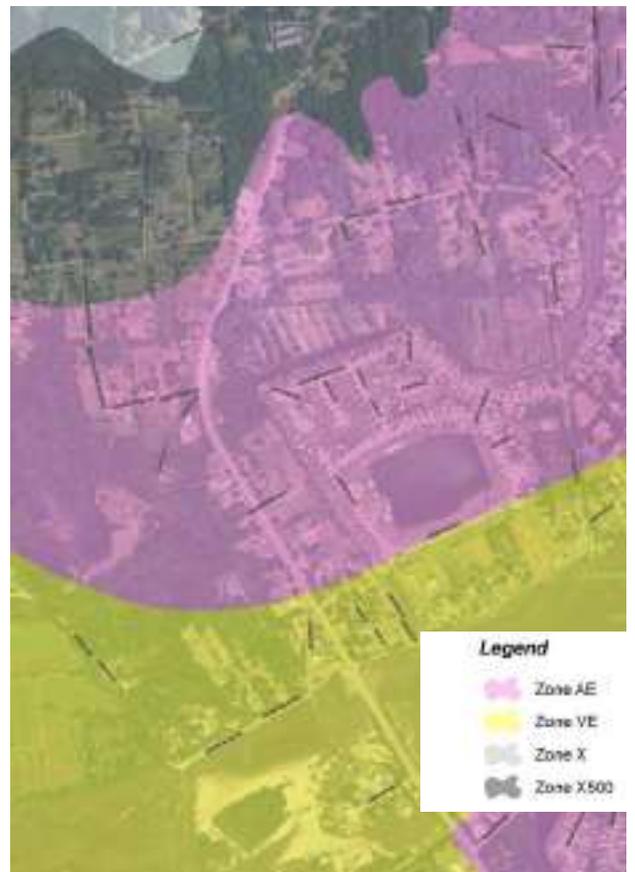


FEMA Flood Zones: James Island Creek to Prescott Street (*above*)

FEMA Flood Zones: Prescott Street to Bur Claire Drive (*below*)



FEMA Flood Zones: Bur Claire Drive to Terns Nest Road (*below*)





FEMA Flood Zones: Folly Beach (above)

Significant portions of the northern corridor are within Federal Emergency Management Agency (FEMA)<sup>1</sup> AE and X zones. The majority of the southern corridor is within FEMA AE zones, with VE zones north and south of Folly Beach. Two endangered species locations are mapped near Folly Beach and one northeast of Folly/Camp Roads.

In general, jurisdictions within the corridor require one to two feet of freeboard over the 100-year flood elevation (top of the lowest floor level of the lowest floor) for new construction and substantial improvements of residential structures within A, AE, AO, and AH FEMA flood zones. Non-residential structures generally require one foot above the base flood level the structure be watertight with walls substantially impermeable to the passage of water and structural components having the capability of resisting hydrostatic and hydrodynamic loads and buoyancy. New construction and substantial improvements in zones V and VE generally include additional requirements, such as pilings and columns built to resist wind and water loading and elevated so that the bottom of the lowest horizontal structural member of the lowest floor is one foot above the base flood level.

<sup>1</sup> FEMA creates and updates Flood Insurance Rate Maps, identifying Special Flood Hazard Areas (SFHAs). SFHAs, including zones A, AE, and VE are defined as the areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. Moderate flood hazard areas, including zone X, are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. State and local government rely upon FEMA FIRM mapping as an integral tool for floodplain management. (fema.gov)

Low-lying James Island is particularly vulnerable to the effects of climate change and sea level rise. The National Oceanic and Atmospheric Administration (NOAA) projects a potential for two feet of sea level rise in the next 50 years, and four feet in the next 100.



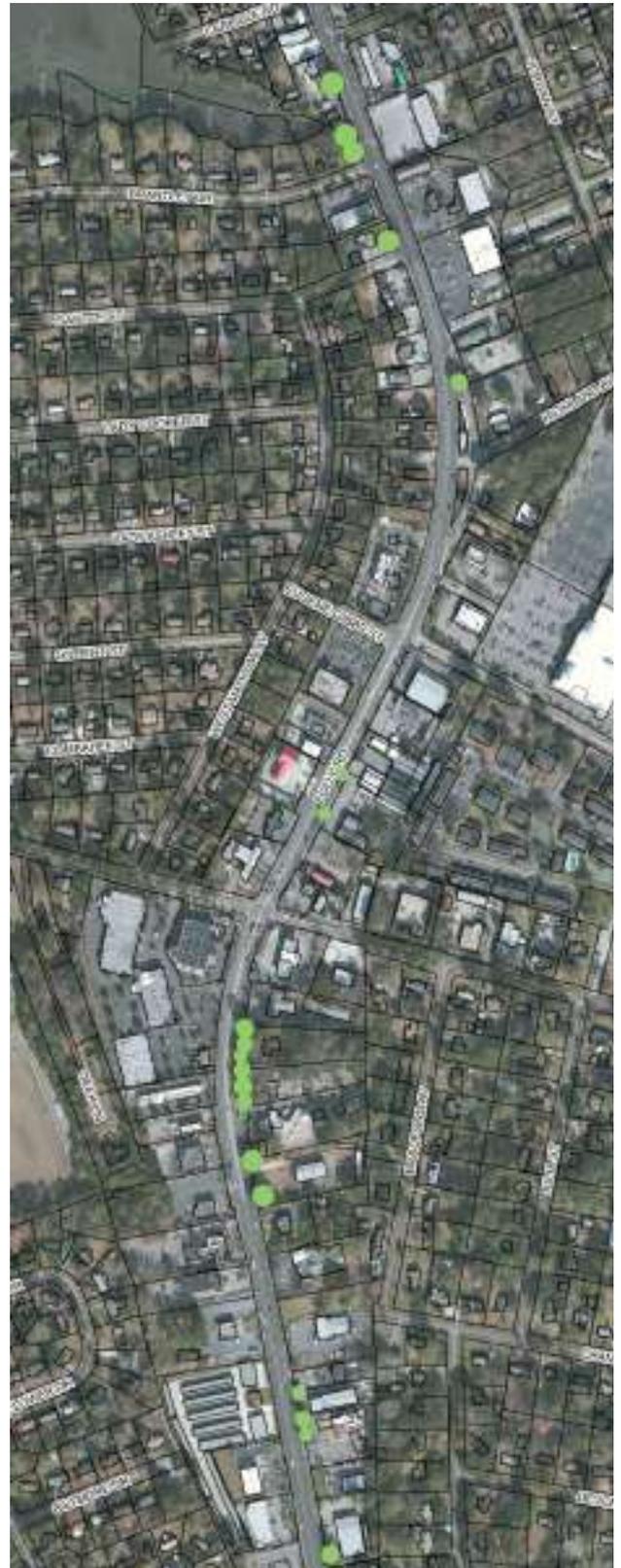
*left*. The effects of two feet of sea level rise; *right*. The effects four feet of sea level rise. (NOAA, Climate Central)

## TOPOGRAPHY & SOILS

The corridor is characterized by flat topography (the terrain averages a 1% slope, with a range of 0-6% slope) and poorly draining soils, with pockets of well-draining soils distributed throughout the corridor. The predominant soil types consist of an association of the Bohicket-Capers-Kiawah-Foxworth series. Capers series are formed in silty clay to silty clay loam sediments of the tidal flats that are very poorly drained and are saturated with salt water. The Foxworth series consists of very deep, moderately well to somewhat excessively drained, rapid to very rapid permeable soils on broad uplands and side slopes. Soil evaluation to determine seasonal high groundwater elevation and infiltration rates will be critical to efficiently locate and properly design stormwater management Best Management Practices (BMPs), encouraging maximum infiltration in pockets of well-draining soils within the corridor.

## TREES & VEGETATION

Street trees and vegetation within the right-of-way varies, but is especially limited in the commercial core areas. Live oaks provide shade and comfort. Palmetto trees are attractive and hardy but provide limited shade. Private property vegetation varies. Some properties and segments of the corridor, such as the Neighborhood Preservation character zone, include more abundant tree cover and vegetated buffer conditions. The neighborhood and commercial core zones are primarily characterized by asphalt vehicular access and parking lots with limited vegetation. Existing Folly Road sidewalks are typically immediately adjacent to the travel way – existing street trees do not serve as a buffer between the travel way and pedestrian realm. The Walmart parking lot is an example of an existing private parking lot including shade trees.



*right:* Commercial Core: Existing shade street trees are limited, and generally set behind existing sidewalks.



## **FRC-O, FOLLY ROAD CORRIDOR OVERLAY ZONING DISTRICT BUFFER SUMMARY**

### **1. CONSERVATION AREA (Charleston County and City of Folly Beach)**

- a. A minimum of a 25-foot vegetated right-of-way buffer shall be required along Folly Road in the commercial area which may be reduced to 15 feet when there is no parking or vehicular use area between buildings and right-of-way;
- b. A minimum of a 20-foot vegetated rear buffer shall be required adjacent to residential uses; and
- c. Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6 foot high opaque fence or wall is utilized, the Planning Director may reduce the land use buffer by up to one-half (1/2) its required depth, when deemed appropriate; however, no required vegetated buffer shall be less than 10 feet in depth.

### **2. NEIGHBORHOOD PRESERVATION AREA (Charleston County and City of Charleston)**

- a. A minimum of a 25-foot vegetated right-of-way buffer shall be required along Folly Road in the commercial area. This buffer may be reduced to 15 feet when there is no parking or vehicular use area between buildings and right-of-way.
- b. A minimum of a 20-foot vegetated rear buffer shall be required adjacent to residential uses.
- c. Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6 foot high opaque fence or wall is utilized, the Planning Director may reduce the land use buffer by up to one-half (1/2) its required depth when deemed appropriate; however, no required vegetated buffer shall be less than 10 feet in depth.

*left:* South Village: Existing shade street trees are more plentiful, but also set behind existing sidewalks.

**3. SOUTH VILLAGE AREA (City of Charleston, Town of James Island, and Charleston County)**

- a. A minimum 15-foot vegetated right-of-way buffer shall be required along the east side of Folly Road and a minimum 35-foot vegetated right-of-way buffer shall be required along the west side of Folly Road;
- b. A minimum 20-foot vegetated rear buffer shall be required adjacent to residential uses; and
- c. Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6-foot high opaque fence or wall is utilized, the Planning Director may reduce the land use buffer by up to one-half (1/2) its required depth when deemed appropriate; however, no required vegetated buffer shall be less than 10 feet in depth.

**4. COMMERCIAL CORE AREA (Town of James Island and City of Charleston)**

- a. A minimum of a 15-foot vegetated right-of-way buffer shall be required along Folly Road.
- b. A minimum of a 25-foot rear vegetated buffer shall be required adjacent to residential uses; and
- c. Fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6-foot high opaque fence or wall is utilized, the Planning Director may reduce the land use buffer by up to one-half (1/2) its required depth when deemed appropriate; however, no required vegetated buffer shall be less than 10 feet in depth.

**5. NORTH VILLAGE AREA (City of Charleston and Charleston County)**

- a. A minimum 25-foot vegetated right-of-way buffer shall be required for parcels along Folly Road with a future land use designation of CC, CN and OG;
- b. A minimum 15-foot vegetated right of way buffer shall be required for parcels along Folly Road with a future land use designation of OR;
- c. Properties with a future land use designation of CC, CN and OG shall be required to have a minimum 20-foot rear vegetated buffer adjacent to residential uses;
- d. Properties with a future land use designation of OR shall be required to have a minimum 15-foot vegetated rear buffer adjacent to residential uses; and
- e. Where appropriate, fencing may be required to screen adjacent or surrounding residential uses. When a minimum 6-foot high opaque fence or wall is utilized, the Planning Director may reduce the land use buffer by up to one-half (1/2) its required depth when deemed appropriate; however, no required vegetated buffer shall be less than 10 feet in depth.

**TREE PROTECTION REGULATORY SUMMARY:**

AGENCY	GRAND TREE (DBH)	PROTECTED TREES (DBH)	SEPARATION FROM PAVEMENT
Charleston County	24"	8"	-
City of Charleston	24"	8"	8'-12'+ (see standards)
James Island	18"	18"	Drip Line (see standards)
Folly Beach	6"-12" (table 166.02)	6"-12" (table 166.02)	-

# STORMWATER DESIGN AND GREEN INFRASTRUCTURE (GI)

Mean annual precipitation in the area is approximately 56 inches. Most stormwater design standards within the corridor require mitigation of peak flow rate, with South Carolina Department of Transportation (SCDOT) and Charleston County typically requiring 80% total suspended solids (TSS) removal.

Other than roadside open swale vegetated systems within the southern corridor, there are limited existing green infrastructure (GI) systems (bioretention, swales, permeable pavement, etc.) within the corridor right-of-way. Green infrastructure on private property was observed at the recently constructed First Baptist Church Center parking lot (tree preservation, bioretention, and swales). The Folly Road/Camp Road intersection stormwater / improvement plans have not yet been reviewed by the team.

The BCDCOG encourages the use of green practices at all planning levels and timescales. Facilities should consider including outreach efforts in the planning of any new green policy or practice. Green practices as identified in the 2011 BCDCOG 208 Water Quality Plan Update include Green Facility Practices. According to BCDCOG, facility practices may include:

- Incorporating green infrastructure practices such as bioswales and cisterns (note: cisterns are likely difficult to implement within the Folly Road right-of-way due to high groundwater and SCDOT requirements)

- Utilizing reuse wastewater and captured stormwater to irrigate public and private greenspace and to supplement industrial cooling water
- Pursuing purchasing strategies designed to ensure that a portion of materials used in maintenance and for capital projects are sustainably harvested, manufactured, and/or transported.

jurisdiction, and according to County staff has under certain conditions taken over maintenance of stormwater infrastructure within SCDOT rights-of-way. Requirements are typically runoff quantity pre/post mitigation and mitigation of 80% of TSS. Permeable pavement and bioretention are supported. The County has been experimenting with bioretention and permeable pavement BMPs, including several permeable bituminous pavement installations. County maintenance staff prefers simple bioretention media and plantings to ease annual maintenance requirements and simplify occasional BMP replacement over time. The County owns a vacuum truck for maintenance of permeable pavement systems.

## STORMWATER REGULATORY SUMMARY:

AGENCY	TSS REMOVAL	DISCHARGE RATES (24-HOUR)	WATER QUALITY VOLUME
SCDHEC	-	2, 10-year Frequency	-
SCDOT	80%	-	.5" - 1.5" (see standards)
City of Charleston	80%	2, 10, 25-year Frequency	.5" - 1.5" (see standards)
Charleston County	80%	2, 10, 25-year Frequency	.5" - 1" (see standards)
James Island	-	-	-
Folly Beach	80%	2, 10, 25-year Frequency	.5" - 1" (see standards)

## WATER & WASTEWATER INFRASTRUCTURE

The James Island Public Service District (JIPSD) provides services for fire protection, wastewater collection, and solid waste collection. The majority of wastewater service on James Island is provided by the City of Charleston (Charleston Water System), the City of Folly Beach, and JIPSD. Charleston Water System’s Plum Island facility provides treatment via agreements with the various local management agencies. Charleston’s Plum Island facility is permitted for 36 mgd capacity, with current average daily flow approximately 19 mgd. Portions of the City of Folly Beach rely on on-site treatment (septic). The BCDCOG 208 Water Quality Plan Update recommends construction of a Folly Beach low pressure sewer system to address groundwater and surface water pollution resulting from on-site wastewater treatment.

## COMMUNICATIONS & ELECTRIC INFRASTRUCTURE

South Carolina Electric & Gas (SCE&G) provides electric and natural gas service to James Island. AT&T provides communications service to the island. Recent reconstruction of the Folly River and Folly Creek crossings by SCDOT did not permit utilities to be attached to the new bridge, requiring directional drilling under the Folly River to accommodate an 8-inch sewer force main, three four-inch communications conduits, and a 6-inch gas line.

Electric upgrades within the Folly Road corridor are built to coastal wind load standard. Folly Road includes a high-transmission radial line, meaning redundancy would be required for underground replacement (2 pipe types). SCE&G supports shared use off-road paths within maintenance easements underneath their overhead wires, as it improves maintenance access. SCE&G has faced threats to continuous service on James Island due to fast growing vegetation and wind loading, and has statutory vegetation (tree) maintenance requirements. Vegetation within easements is acceptable as long as it fits within planting guidelines. SCE&G does have some flexibility within requirements; however a 15-foot mature height is a typical standard.

# D

# ECONOMICS ANALYSIS

Employment, population and household trends determine the demand for development. The regional outlook sets the framework for change and development in the Folly Road Corridor. This analysis reviews recent trends and current conditions to provide guidance to the plan for Folly Road Corridor investments.



<b>TRENDS</b>	<b>D.2</b>
<b>CURRENT CONDITIONS</b>	<b>D.7</b>
<b>IMPLICATIONS</b>	<b>D.11</b>
<b>DATA TABLES</b>	<b>D.12</b>

# TRENDS

## EMPLOYMENT TRENDS

As shown in Table 1, the Charleston-North Charleston Metropolitan Statistical Area is enjoying a growing economy supported by tourism, the Port of Charleston, a strong manufacturing sector led by Boeing, education and health services. The metro area unemployment rate was only 4.9 percent in February 2015, as compared with the national rate of 6.7 percent in the U.S. and the state rate of 6.1 percent. Year-by-year employment trends are shown in Data Table A-1 provide at the end of this analysis.

The anticipated continued expansion in the jobs base will drive future development of office space, housing, hotels and commercial retail space.

**TABLE 1. EMPLOYMENT TRENDS, CHARLESTON-NORTH CHARLESTON METRO AREA, 2003-2014**

Industry	2003	2007	2010	2014	2003-2014 Change		2010-2014 Change	
					Number	Percent	Number	Percent
<b>GOVERNMENT</b>								
Federal Government	8.1	8.3	9.7	10.1	2.0	24.7%	0.4	4.1%
State Government	22.5	23.8	24.5	25.1	2.6	11.6%	0.6	2.4%
Local Government	24.0	26.0	27.1	27.1	3.1	12.9%	0.0	0.0%
Total Government	54.5	58.1	61.2	62.3	7.8	14.3%	1.1	1.8%
<b>PRIVATE-SECTOR EMPLOYMENT</b>								
<b>GOODS-PRODUCING SECTORS</b>								
Construction, Natural Resources and Mining	18.8	21.8	14.2	16.1	-2.7	-14.4%	1.9	13.4%
Manufacturing	20.7	22.5	20.7	24.7	4.0	19.3%	4.0	19.3%
Total Goods-Producing	39.5	44.3	34.9	40.8	1.3	3.3%	5.9	16.9%
<b>SERVICE-PRODUCING SECTORS</b>								
Transportation and Utilities	11.7	12.0	11.0	13.8	2.1	17.9%	2.8	25.5%
Wholesale Trade	7.8	9.3	8.2	8.0	0.2	2.6%	-0.2	-2.4%
Retail Trade	34.2	37.7	34.3	38.3	4.1	12.0%	4.0	11.7%
Information	4.8	5.6	5.0	5.2	0.4	8.3%	0.2	4.0%
Financial Activities	10.0	12.9	11.5	13.4	3.4	34.0%	1.9	16.5%
Professional and Business Services	32.3	42.0	41.8	48.5	16.2	50.2%	6.7	16.0%
Education and Health Services	28.7	30.9	33.7	36.5	7.8	27.2%	2.8	8.3%
Leisure and Hospitality	32.8	36.9	35.4	41.6	8.8	26.8%	6.2	17.5%
Other Services	9.8	11.6	10.5	13.3	3.5	35.7%	2.8	26.7%
Total Service-Producing	172.1	198.9	191.4	218.6	46.5	27.0%	27.2	14.2%
Total Private	211.6	243.2	226.2	259.3	47.8	22.6%	33.1	14.6%
<b>TOTAL EMPLOYMENT</b>								
Total Employment	266.1	301.3	287.4	321.6	55.5	9.8%	34.2	11.9%

Note: Data in thousands of jobs.

Source: Bureau of Labor Statistics, 2015; Partners for Economic Solutions, 2015.

## POPULATION & HOUSEHOLD TRENDS

The Charleston-North Charleston Metro Area<sup>1</sup> population base has grown rapidly since 2000, adding more than 156,000 new residents or 28.4 percent. ESRI, a national data provider estimates the three-county region's population at 705,171 in 2014. With just over one-half of the region's residents, Charleston County had over 367,000 residents in 2014, an 18.3-percent increase over the 2000 base.

The Folly Road Corridor (shown on the map next page) stretches from Wappoo Creek south to Center Street on Folly Island, but excludes much of the City of Folly Beach. From a market perspective, however, Folly Road Corridor businesses draw customers from Folly Beach as well. Therefore, the data show trends in the corridor and in the City of Folly Beach, collectively referred to as "Folly Road Market Area". The Folly Road Market Area had a total population of 39,300 year-round residents in 2014, of which, 37,200 or almost 95 percent lived in the corridor.

<sup>1</sup> The Charleston-North Charleston Metro Area" includes Berkeley, Charleston and Dorchester counties.

Of course, total population is much higher during the tourist season as visitors and part-time residents join the year-round residents.

The Folly Road Corridor's residents lived in 16,535 households in 2014, a 23.7-percent increase over the 2000 level. Roughly 3,160 new households were added to the corridor market area from 2000 to 2014. In each geography, the rate of household growth has outstripped the population growth rate, resulting in a decline in household size. Whereas the market area households averaged 2.25 persons in 2000; that size had declined to 2.22 by 2014.

**TABLE 2. POPULATION AND HOUSEHOLD TRENDS, 2000-2014**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>POPULATION</b>										
2000	31,992		1,879		33,871		310,294		549,033	
2010	36,238		2,011		38,249		350,209		664,607	
2012	35,673		2,075		37,748		352,548		N/A	
2014	37,208		2,084		39,292		367,071		705,171	
2000-2014 change	5,216	16.3%	205	10.9%	5,421	16.0%	56,777	18.3%	156,138	28.4%
2000-2010 change	4,246	13.3%	132	7.0%	4,378	12.9%	39,915	12.9%	115,574	21.1%
2010-2014 change	970	2.7%	73	3.6%	1,043	2.7%	16,862	4.8%	40,564	6.1%
<b>HOUSEHOLDS</b>										
2000	13,372		927		14,299		123,442		207,957	
2010	15,933		1,037		16,970		144,309		259,987	
2012	15,869		1,074		16,943		140,932		259,430	
2014	16,535		1,088		17,623		152,911		278,646	
2000-2014 change	3,163	23.7%	161	17.4%	3,324	23.2%	29,469	23.9%	70,689	34.0%
2000-2010 change	2,561	19.2%	110	11.9%	2,671	18.7%	20,867	16.9%	52,030	25.0%
2010-2014 change	602	3.8%	51	4.9%	653	3.8%	8,602	6.0%	18,659	7.2%

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: ESRI, Demographic and Income Profile, 2010 Census Profile, Community Profile, 2008-2012 ACS; Partners for Economic Solutions, 2015.



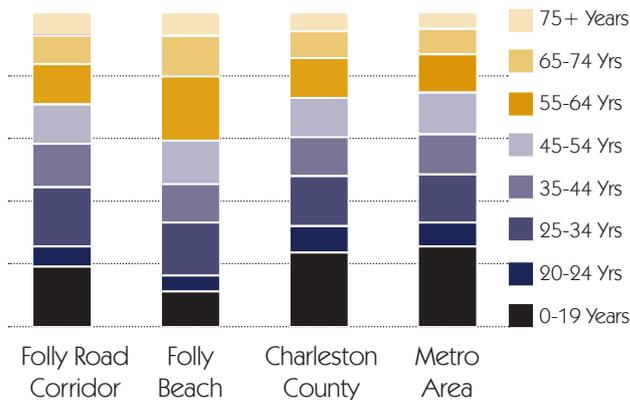
top: Folly Road Corridor Market Area  
 above: Folly Beach Market Area

## POPULATION BY AGE

The metro area had a relatively young population as of 2014. The average age was 36.1 years with 25.5 percent of the population under the age of 20, 7.7 percent from 20 to 24 and another 15.3 percent aged 25 to 34. A total of 13.1 percent of all metro area residents were aged 65 or over, as shown in Data Table A-2.

On balance, the Corridor population is somewhat older with an average age of 39.5 in 2014. Only 19.1 percent of residents were under 20 years and 6.4 percent were aged 20 to 24. The age cohort between 25 and 34 was significantly larger at 19.0 percent, and seniors aged 65 or older represented 16.3 percent of the population. The City of Folly Beach's population is decidedly older with an average age of 48.6 and 20.1 percent aged 65 or older.

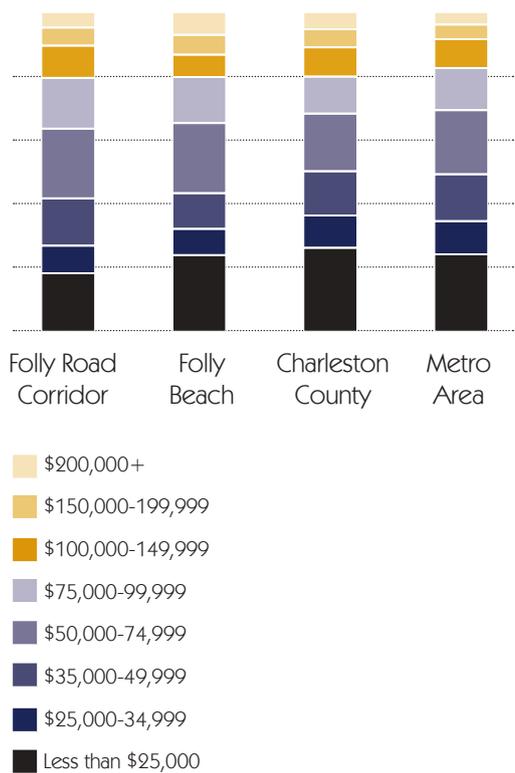
## POPULATION DISTRIBUTION BY AGE, 2014



## HOUSEHOLDS BY INCOME

Year-round households in the Folly Road Corridor had a median household income of \$57,005 in 2014 – 12.7 percent above the metro area median of \$50,581. Among Corridor households, 18.2 percent had incomes below \$25,000, 37.9 had incomes between \$50,000 and \$100,000, and 20.4 percent had incomes above \$100,000. See Data Table A-3 for income distributions for each of the five geographic areas.

### HOUSEHOLD DISTRIBUTION BY INCOME, 2014



## HOUSEHOLD CHARACTERISTICS

Folly Road Corridor households are distinctly smaller than those in the region as a whole. Single-person households constituted 35 percent of all Corridor households in 2012, according to the American Community Survey, and two-person households accounted for another 37 percent. In the City of Folly Beach, 41 percent of households had one person, and 42 percent had two persons. These compare with the region's 28 percent with one person and 35 percent with two persons, as shown in Data Table A-4.

Less than 5 percent of Folly Road Corridor households had no cars in 2012 while 59 percent had two or more cars. Charleston County data were somewhat different with 8.8 percent of households without cars and 54 percent with two or more cars. This reflects better access to transit, a more walkable environment that makes it possible to function without a car, and a higher share of low-income households that cannot afford cars. (See Data Table A-4.)

Younger householders under the age of 35 represented more than 27 percent of Folly Road Corridor households in 2012 as compared with less than 24 percent of metro area households. On the other end of the age spectrum, almost 12 percent of Folly Road Corridor householders were aged 65 or older as compared with 8 percent of regional households, as shown in Data Table A-5.

Homeowners dominated within the Folly Road Corridor with more than 71 percent of households in 2012. This compared with 65 percent region-wide. Shown in Data Table A-6, more than 68 percent of homeowners were aged 45 or older in 2012, including 41 percent between 45 and 64 and 27 percent aged 65 or over. Among renters, 43 percent of Folly Road Corridor renter households were headed by a person aged 25 to 34, 12 percent aged 34 to 44, and 33 percent aged 45 or older. Renters in the region as a whole were somewhat older with 38 percent of renter households with a householder aged 45 or older.

## EMPLOYMENT & COMMUTING

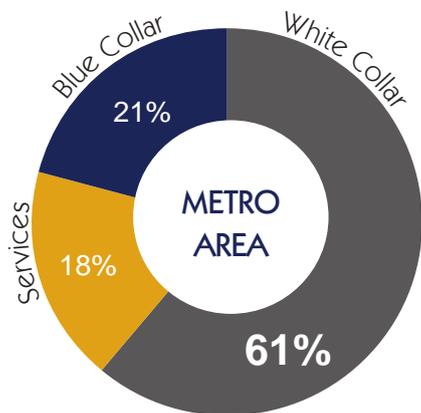
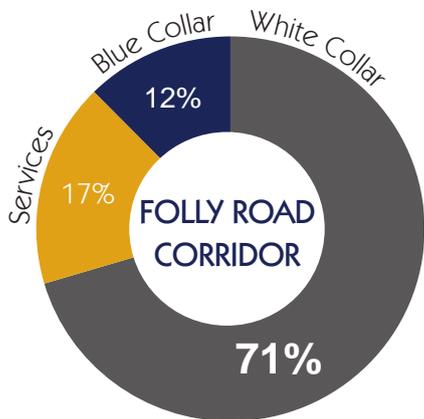
Among employed residents aged 16 and over, 25 percent of Folly Road Corridor residents were employed in educational, health care or social assistance jobs with another 16 percent in art, entertainment, recreation, accommodation or food service jobs. This compares with 22 and 12 percent, respectively, in the region as a whole, as shown in Data Table A-7.

Consistent with the Corridor’s higher incomes, Corridor residents are more heavily employed in white-collar<sup>1</sup> occupations – 71 percent versus 61 percent regionwide. Only 12 percent of Corridor residents work in blue-collar<sup>2</sup> jobs.

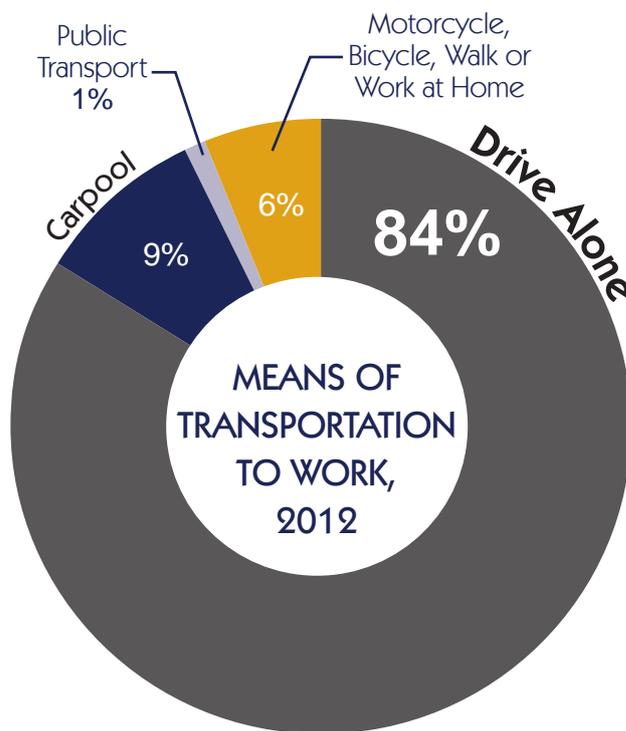
<sup>1</sup> White-collar occupations include management, business and financial; computer, engineering and science; education, legal, community service, arts and media; healthcare practitioner and technical; sales; and office and administrative support.

<sup>2</sup> Blue-collar occupations include farming, forestry and fishing; construction and extraction; installation, maintenance and repair; production; and transportation and material moving.

### EMPLOYED WORKERS BY OCCUPATIONS, 2012



Reflecting the paucity of public transportation in the Folly Road Corridor, less than one percent of employed workers used public transportation to commute to work in 2012. (See Data Table A-9.) Eighty-four percent drove alone while an additional nine percent carpooled. Six percent commuted by motorcycle, bicycle, walking or other means or worked at home. Commuting times were similar to the regional average of 22 minutes. As shown in Data Table A-10, in 2012, 23 percent of employed Corridor residents commuted less than 15 minutes to work and 44 percent commuted 15 to 29 minutes.



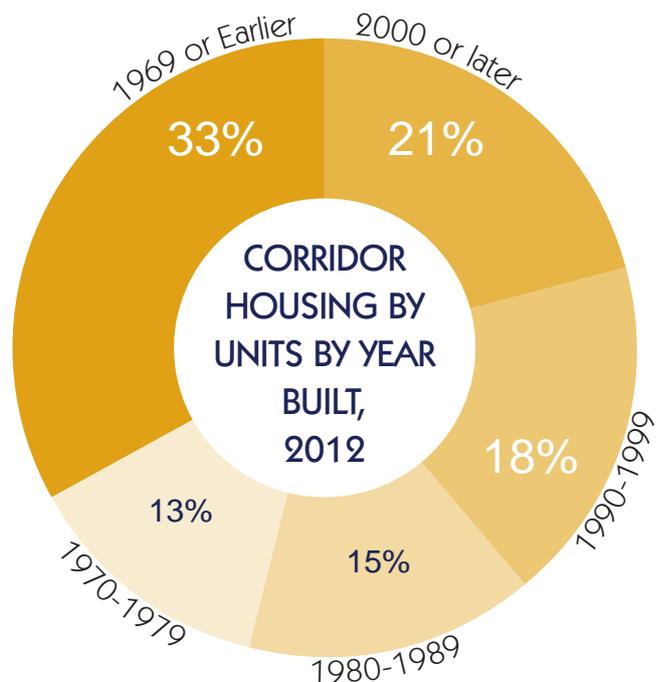
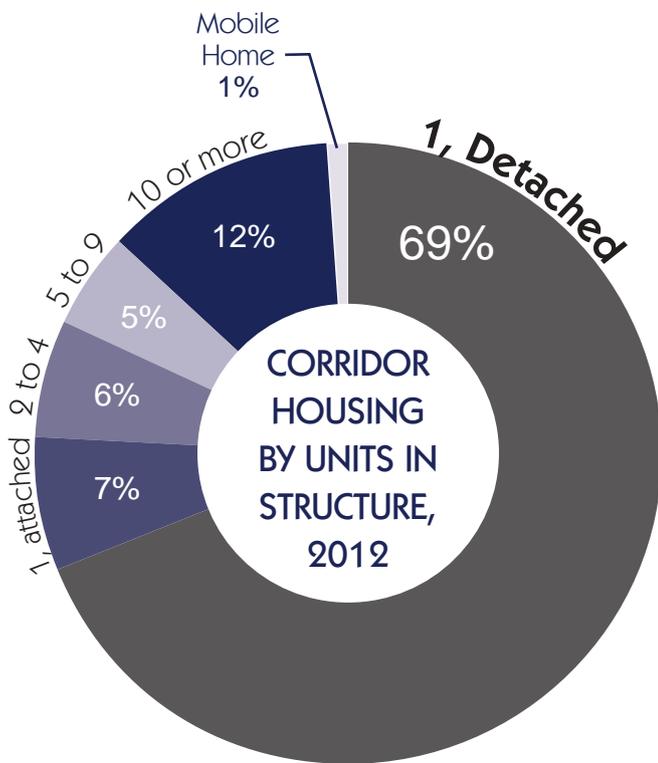
# CURRENT CONDITIONS

The following discussion profiles real estate market conditions for housing, retail and office uses.

## RESIDENTIAL DEVELOPMENT

The Folly Road Corridor housing is dominated by single-family units – 69 percent were single-family detached units and 7 percent were attached townhouses in 2012. The almost 2,200 units in multi-family structures with 10 or more units represented less than 12 percent of total units. Three new multi-family developments in the City of Charleston portion of James Island are shifting the balance somewhat between single- and multi-family housing. (See Data Table A-11.)

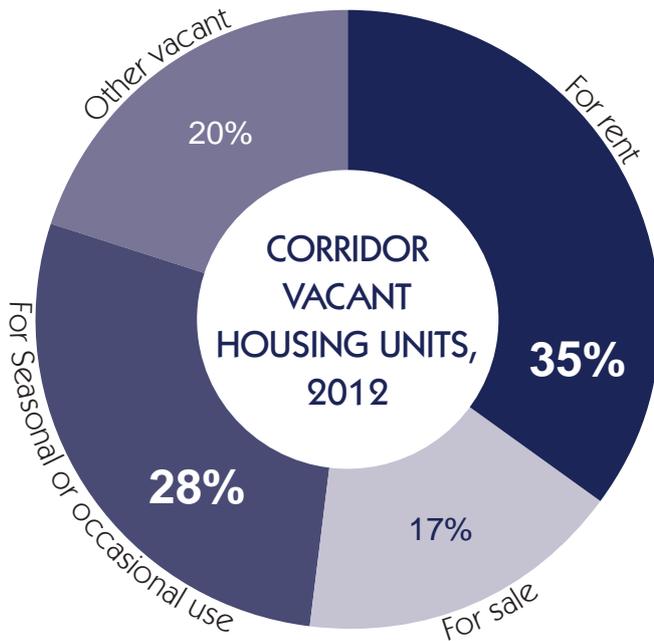
Half of the housing units in the Folly Road Corridor were built since 1983. That makes the stock a little older than in the region as a whole where the median year built was 1986 as of 2012. Folly Beach housing was significantly older with a median year built of 1971, as shown in Data Table A-12.



## VACANT UNITS

The Census Bureau reported that the Folly Road Corridor had almost 2,200 vacant units in 2012 – 12 percent of the total inventory. Another 969 units were vacant in the City of Folly Beach.

However, the Census only considers a unit to be occupied if there is a year-round resident (more than six months per year). The Corridor had 608 vacant units that were held for seasonal, recreational or occasional use with an additional 517 such units in Folly Beach. Vacant rental units account for 712 units in the Corridor and 369 units in Folly Beach. The majority of these rental units are targeted to vacation rentals. The tourists and other partial-year residents that occupy these units provide additional market support for local retailers and restaurants.



## RECENT SALES

Multiple Listing Service reports of units sold during the last three months indicate the following average sales prices:

Type	Number Sold	Average Price	Average Price per Square Foot
Condominium	20	\$192,300	\$154
Single-Family	196	\$337,800	\$165
Townhouse	10	\$276,300	\$154

## APARTMENT DEVELOPMENT

The Folly Road Market Area has two major multi-family developments currently under construction. The Standard at James Island is a four-story development built around a parking garage as part of the 22-acre mixed-use Gathering Place at Maybank on Maybank Highway just west of Folly Road. The 280-unit high-amenity development is scheduled to open in the third quarter of 2015. Rents are tentatively expected to start at \$1,500 for a one-bedroom apartment, \$2,040 for a two-bedroom apartment and \$2,320 for a three-bedroom apartment.

A second development – Broadstone Seaside – will open this summer with 296 units on Folly Road at Grimball Road. Pre-leasing has just begun with one-bedroom unit rents starting at \$1,500, two-bedroom units at \$2,000 and three-bedroom units at \$2,550.

## RETAIL DEVELOPMENT

A series of smaller shopping centers and freestanding retailers serve the Folly Road Corridor. Most are anchored by grocery stores. National and regional grocery store chains are well represented, including:

- Publix
- Harris Teeter
- Food Lion
- Super Bi-Lo

Walmart also operates a freestanding store in the Corridor.

Avison Young tracks retail space in the region by subarea. Its West Islands subarea had a total inventory of 1,375,900 square feet of retail space in the first quarter of 2015. Vacancies were a very low 1.9 percent. Average asking rents of \$16.45 per square foot were the region's highest subarea rents outside of the Downtown Charleston and East Cooper/Clements Ferry subareas. In 2014, the West Islands added 19,736 square feet of occupied retail space – a 1.5-percent increase. The Tri-County Area as a whole increased its occupied retail space by 93,639 square feet.

## TYPES OF RETAIL

In understanding retail markets, analysts break down retail goods into three main categories:

- **Neighborhood goods and services**, which serve the every day needs of local residents, including grocery stores and drugstores;
- **Eating and Drinking**, including both fast food and sit-down restaurants and bars; and
- **Shoppers goods**, the types of goods sold in department stores that customers prefer to compare among different stores before buying – general merchandise, apparel and accessories, furniture and home furnishings, and other goods (also known as GAFO).

Neighborhood goods and services stores tend to attract customers from within a 5- to 10-minute distance, while shopping centers and other shoppers goods nodes may bring customers from a 15- to 20-minute distance or even further.

Shoppers goods retailers tend to prefer to locate in large shopping centers with department store anchors that will attract customers who like to comparison shop. Historically, shoppers goods retailing west of the Ashley River was dominated by Citadel Mall. In recent years, the opening of Tanger Outlet Center and the loss of some of the mall's anchors and national chain stores have led to the mall's decline. The City prepared an economic development strategy for West Ashley in 2014, which includes redevelopment of the mall, green space development and upgrades in the San Rittenberg corridor.

Folly Road retail will continue to be focused on neighborhood goods and services and eating and drinking due to the size of the nearby population base and the competition offered by West Ashley.

## SUPPLY AND DEMAND BALANCE

Data Table A-14 compares expenditures by residents to the estimated sales of market area retailers. Spending in food and drugstores totaled an estimated \$125 million in 2014. Compared with sales of \$97 million, this implies that at least \$28 million in residents' spending occurred outside the Folly Beach market area. Eating and drinking expenditures totaled \$61 million. The annual sales of \$50 million means that at least \$11 million of residents' dollars were spent outside of the market area. Outflow of eating and drinking dollars is quite common as people eat lunch near work, travel downtown for special occasions and eat out while on vacation.

In fact, outflow was likely significantly higher due to the inflow of dollars from beach and other visitors. That suggests that the market would support additional retail and restaurant development in the Corridor.

## OFFICE DEVELOPMENT

The Tri-County area had a total of 9,719,907 square feet of office space in the first quarter of 2015, according to data compiled by Avison Young. Though no new space was built during the year, the amount of occupied office space increased by 40,551 square feet or 0.5 percent in 2014, followed by a 158,095 square-foot increase in the first quarter of 2015. That absorption of space brought the regional vacancy rate down from 10.9 percent in the first quarter of 2014 to 8.5 percent in the first quarter of 2015. That vacancy rate indicates that the market is almost in balance between supply and demand.

The West Ashley inventory was restricted to 1,274,974 square feet with a 13.2-percent vacancy rate in 2015. Its vacancy rate fell more rapidly than in the region as a whole, from 19.2 percent in the first quarter of 2014 to 13.2 percent the first quarter of 2015. West Ashley's average asking rent of \$16.74 was significantly lower than those of other subareas and the \$21.95 regional average.

Office development in the Folly Road Corridor is limited to a handful of small buildings housing banks, medical uses and other professionals serving the local residents.

# IMPLICATIONS

These market conditions have a number of implications for the Folly Road Corridor and the overall Rethink Folly Road effort. In planning for future traffic loads, development potentials on James Island will have direct impact on traffic generation and on the potential to change the look of Folly Road.

Residential development in the Corridor and Folly Beach slowed somewhat during the Great Recession. Demand for single-family housing on James Island is high, but hampered by lack of supply. Also constraining the growth in year-round households was the growing share of housing units devoted to short-term vacation rentals, a trend that is likely to continue until the supply of beach and waterfront properties suitable for development or redevelopment is exhausted. Limitations imposed by environmental conditions as well as local zoning will continue to influence the pace of development as well.

Complete streets treatment of Folly Road should increase the demand for apartments from residents seeking easy bike access to Folly Beach. Only one apartment complex in the Maybank Gathering Place offers structured parking. Other developments continue to rely on surface parking, limiting the potential density. At this time the value of land in most parts of the Corridor does not justify investing in structured parking to increase potential densities.

The outflow of retail dollars coupled with the growing resident population and tourist base would support incremental new retail and restaurant development. The key constraint will be the small supply of suitable sites with adequate size, access and frontage, particularly in the northern half of the corridor.

The tightness of the commercial market will work against near-term redevelopment of existing retail buildings. Minimal vacancies and reasonably high rental rates create a value premium for existing commercial facilities. Significant increases in development density and resulting property values achievable through redevelopment will be needed to convince property owners to demolish existing uses and redevelop their properties. That may be possible on certain properties that do not fully utilize the available site, possibly allowing the addition of new structures or expansion of existing structures.

Any office development is likely to occur slowly in small increments given the historic demand pace and the focus on local population-serving uses. Most will be accommodated in smaller space – either freestanding or part of larger retail centers.

# DATA TABLES

TABLE A-1. EMPLOYMENT TRENDS, CHARLESTON-NORTH CHARLESTON METROPOLITAN AREA, 2003-2014

Industry	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
(Data in thousands of jobs)												
<b>GOVERNMENT</b>												
Federal Government	8.1	8.0	8.1	8.3	8.3	8.4	8.6	9.7	9.9	10.1	10.3	10.1
State Government	22.5	22.8	22.9	23.0	23.8	24.7	24.3	24.5	24.7	25.3	25.0	25.1
Local Government	24.0	24.5	25.1	25.0	26.0	27.1	27.0	27.1	26.5	26.9	27.3	27.1
<b>Total Government</b>	<b>54.5</b>	<b>55.2</b>	<b>56.1</b>	<b>56.3</b>	<b>58.1</b>	<b>60.2</b>	<b>59.9</b>	<b>61.2</b>	<b>61.2</b>	<b>62.4</b>	<b>62.6</b>	<b>62.3</b>
<b>PRIVATE-SECTOR EMPLOYMENT</b>												
<b>GOODS-PRODUCING SECTORS</b>												
Construction, Natural Resources and Mining	18.8	20.2	20.4	21.5	21.8	19.0	15.4	14.2	13.9	13.7	15.0	16.1
Manufacturing	20.7	21.1	21.3	21.3	22.5	22.8	20.9	20.7	22.3	23.6	24.0	24.7
<b>Total Goods-Producing</b>	<b>39.5</b>	<b>41.3</b>	<b>41.7</b>	<b>42.8</b>	<b>44.3</b>	<b>41.8</b>	<b>36.3</b>	<b>34.9</b>	<b>36.2</b>	<b>37.3</b>	<b>39.0</b>	<b>40.8</b>
<b>SERVICE-PRODUCING SECTORS</b>												
Transportation and Utilities	11.7	12.1	11.4	11.4	12.0	12.4	11.1	11.0	11.8	13.1	13.6	13.8
Wholesale Trade	7.8	8.1	8.5	8.7	9.3	8.9	8.1	8.2	8.0	7.9	7.9	8.0
Retail Trade	34.2	35.1	37.1	37.9	37.7	36.3	34.1	34.3	35.3	36.0	36.9	38.3
Information	4.8	4.9	5.1	5.4	5.6	5.6	5.3	5.0	4.9	4.9	5.0	5.2
Financial Activities	10.0	10.5	11.9	12.2	12.9	12.8	11.8	11.5	11.9	12.6	12.9	13.4
Professional and Business Services	32.3	34.5	35.7	38.1	42.0	43.1	40.3	41.8	44.3	45.9	46.4	48.5
Education and Health Services	28.7	28.8	28.9	29.7	30.9	32.4	32.9	33.7	34.8	34.7	35.3	36.5
Leisure and Hospitality	32.8	34.0	34.4	35.0	36.9	37.2	35.6	35.4	36.6	38.2	39.5	41.6
Other Services	9.8	10.4	11.6	11.8	11.6	11.4	10.9	10.5	11.0	12.6	13.0	13.3
<b>Total Service-Producing</b>	<b>172.1</b>	<b>178.4</b>	<b>184.6</b>	<b>190.2</b>	<b>198.9</b>	<b>200.1</b>	<b>190.1</b>	<b>191.4</b>	<b>198.6</b>	<b>205.9</b>	<b>210.5</b>	<b>218.6</b>
<b>Total Private Employment</b>	<b>211.6</b>	<b>219.6</b>	<b>226.1</b>	<b>232.7</b>	<b>243.2</b>	<b>241.7</b>	<b>226.2</b>	<b>226.2</b>	<b>234.7</b>	<b>243.1</b>	<b>249.6</b>	<b>259.3</b>
<b>TOTAL EMPLOYMENT</b>												
<b>Total Employment</b>	<b>266.1</b>	<b>274.9</b>	<b>282.3</b>	<b>289.0</b>	<b>301.3</b>	<b>301.9</b>	<b>286.2</b>	<b>287.4</b>	<b>295.8</b>	<b>305.4</b>	<b>312.1</b>	<b>321.6</b>

Source: Bureau of Labor Statistics, 2015; Partners for Economic Solutions, 2015.

**TABLE A-2. POPULATION BY AGE,  
2014**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>POPULATION BY AGE</b>										
0 to 19 Years	7,122	19.1%	233	11.2%	7,355	18.7%	86,796	23.6%	179,980	25.5%
20 to 24 Years	2,373	6.4%	106	5.1%	2,479	6.3%	30,686	8.4%	54,178	7.7%
25 to 34 Years	7,065	19.0%	352	16.9%	7,417	18.9%	58,633	16.0%	108,098	15.3%
35 to 44 Years	5,124	13.8%	255	12.2%	5,379	13.7%	45,295	12.3%	90,599	12.8%
45 to 54 Years	4,696	12.6%	291	14.0%	4,987	12.7%	46,504	12.7%	93,444	13.3%
55 to 64 Years	4,757	12.8%	428	20.5%	5,185	13.2%	46,446	12.7%	86,619	12.3%
65 to 74 Years	3,412	9.2%	269	12.9%	3,681	9.4%	31,513	8.6%	57,460	8.1%
75 to 84 Years	1,811	4.9%	106	5.1%	1,917	4.9%	14,750	4.0%	25,148	3.6%
85 Years and Over	848	2.3%	44	2.1%	892	2.3%	6,448	1.8%	9,645	1.4%
<b>Total Population</b>	37,208	100.0%	2,084	100.0%	39,292	100.0%	367,071	100.0%	705,171	100.0%
<b>Median Age</b>	38.7		48.6		39.5		36.6		36.1	

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: ESRI, Demographic and Income Profile; Partners for Economic Solutions, 2015.

**TABLE A-3. HOUSEHOLDS BY INCOME, 2014**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>INCOME</b>										
Less than \$15,000	1,643	9.9%	91	8.4%	1,734	9.8%	22,848	14.9%	37,447	13.4%
\$15,000 to \$24,999	1,367	8.3%	168	15.4%	1,535	8.7%	17,089	11.2%	29,952	10.7%
\$25,000 to \$34,999	1,424	8.6%	91	8.4%	1,515	8.6%	15,577	10.2%	28,791	10.3%
\$35,000 to \$49,999	2,470	14.9%	122	11.2%	2,592	14.7%	21,190	13.9%	41,105	14.8%
\$50,000 to \$74,999	3,624	21.9%	239	22.0%	3,863	21.9%	27,835	18.2%	56,262	20.2%
\$75,000 to \$99,999	2,639	16.0%	157	14.4%	2,796	15.9%	17,787	11.6%	37,005	13.3%
\$100,000 to \$149,999	1,656	10.0%	77	7.1%	1,733	9.8%	13,954	9.1%	24,880	8.9%
\$150,000 to \$199,999	954	5.8%	68	6.3%	1,022	5.8%	8,667	5.7%	12,980	4.7%
\$200,000 or More	758	4.6%	75	6.9%	833	4.7%	7,964	5.2%	10,224	3.7%
<b>Total Households</b>	16,535	100.0%	1,088	100.0%	17,623	100.0%	152,911	100.0%	278,646	100.0%
Median Household Income	\$57,005		\$55,405		N/A		\$49,764		\$50,581	
Mean Household Income	\$77,044		\$79,490		N/A		\$71,615		\$68,051	

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: ESRI, Demographic and Income Profile; Partners for Economic Solutions, 2015.

**TABLE A-4. HOUSEHOLD TENURE, TYPE, SIZE AND VEHICLE OWNERSHIP, 2012**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>TENURE</b>										
Owner	11,296	71.2%	578	53.8%	11,874	70.1%	86,515	61.4%	168,636	65.0%
Renter	4,573	28.8%	496	46.2%	5,069	29.9%	54,417	38.6%	90,794	35.0%
<b>Total</b>	<b>15,869</b>	<b>100.0%</b>	<b>1,074</b>	<b>100.0%</b>	<b>16,943</b>	<b>100.0%</b>	<b>140,932</b>	<b>100.0%</b>	<b>259,430</b>	<b>100.0%</b>
<b>HOUSEHOLDS BY TYPE</b>										
Family Households	8,688	54.7%	372	34.6%	9,060	53.5%	83,068	58.9%	167,365	64.5%
Married-Couple Families	6,376	40.2%	350	32.6%	6,726	39.7%	57,489	40.8%	119,702	46.1%
With Related Children	2,028	12.8%	45	4.2%	2,073	12.2%	20,697	14.7%	46,799	18.0%
Other Family (No Spouse)	2,312	14.6%	22	2.0%	2,334	13.8%	25,579	18.1%	47,663	18.4%
With Related Children	946	6.0%	22	2.0%	968	5.7%	16,375	11.6%	25,612	9.9%
Non-Family Households	7,181	45.3%	702	65.4%	7,883	46.5%	57,864	41.1%	92,065	35.5%
<b>Total</b>	<b>15,869</b>	<b>100.0%</b>	<b>1,074</b>	<b>100.0%</b>	<b>16,943</b>	<b>100.0%</b>	<b>140,932</b>	<b>100.0%</b>	<b>259,430</b>	<b>100.0%</b>
<b>HOUSEHOLDS BY SIZE</b>										
1 Person Household	5,501	34.7%	441	41.1%	5,942	35.1%	44,931	31.9%	73,370	28.3%
2 Person Household	5,834	36.8%	450	41.9%	6,284	37.1%	49,941	35.4%	89,585	34.5%
3-4 Person Household	3,992	25.2%	183	17.0%	4,175	24.6%	37,828	26.8%	77,562	29.9%
5+ Person Household	542	3.4%	-	0.0%	542	3.2%	8,232	5.8%	18,913	7.3%
<b>Total</b>	<b>15,869</b>	<b>100.0%</b>	<b>1,074</b>	<b>100.0%</b>	<b>16,943</b>	<b>100.0%</b>	<b>140,932</b>	<b>100.0%</b>	<b>259,430</b>	<b>100.0%</b>
<b>VEHICLE OWNERSHIP</b>										
None	707	4.5%	39	3.6%	746	4.4%	12,334	8.8%	17,721	6.8%
Owens 1 vehicle	5,849	36.9%	497	46.3%	6,346	37.5%	53,019	37.6%	91,340	35.2%
Owens 2 or more vehicles	9,313	58.7%	538	50.1%	9,851	58.1%	75,579	53.6%	150,369	58.0%
<b>Total</b>	<b>15,869</b>	<b>100.0%</b>	<b>1,074</b>	<b>100.0%</b>	<b>16,943</b>	<b>100.0%</b>	<b>140,932</b>	<b>100.0%</b>	<b>259,430</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
 Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS), ESRI, Census 2010 Summary Profile; Partners for Economic Solutions, 2015.

**TABLE A-5. HOUSEHOLDERS BY AGE, 2012**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>Age of Householder</b>										
15 to 24 years	768	4.8%	22	2.0%	790	4.7%	8,834	6.3%	13,310	5.1%
25 to 34 years	3,551	22.4%	174	16.2%	3,725	22.0%	27,057	19.2%	48,543	18.7%
35 to 44 years	2,314	14.6%	179	16.7%	2,493	14.7%	23,031	16.3%	45,760	17.6%
45 to 54 years	2,883	18.2%	180	16.8%	3,063	18.1%	26,819	19.0%	52,239	20.1%
55 to 64 years	2,735	17.2%	399	37.2%	3,134	18.5%	26,119	18.5%	48,718	18.8%
65 to 74 years	1,749	11.0%	67	6.2%	1,816	10.7%	15,921	11.3%	30,230	11.7%
75 to 84 years	1,436	9.0%	53	4.9%	1,489	8.8%	9,747	6.9%	15,556	6.0%
85 years and over	433	2.7%	-	0.0%	433	2.6%	3,404	2.4%	5,074	2.0%
<b>Total</b>	<b>15,869</b>	<b>100.0%</b>	<b>1,074</b>	<b>100.0%</b>	<b>16,943</b>	<b>100.0%</b>	<b>140,932</b>	<b>100.0%</b>	<b>259,430</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
 Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS); Partners For Economic Solutions, 2015.

**TABLE A-6. TENURE BY AGE OF HOUSEHOLDER, 2012**

Age of Householder	Folly Road Corridor				Folly Beach				Folly Road Market Area			
	Owner		Renter		Owner		Renter		Owner		Renter	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
15 to 24 years	183	1.6%	585	12.8%	22	3.8%	-	0.0%	205	1.7%	585	11.5%
25 to 34 years	1,603	14.2%	1,948	42.6%	-	0.0%	174	35.1%	1,603	13.5%	2,122	41.9%
35 to 44 years	1,778	15.7%	536	11.7%	31	5.4%	148	29.8%	1,809	15.2%	684	13.5%
45 to 54 years	2,288	20.3%	595	13.0%	125	21.6%	55	11.1%	2,413	20.3%	650	12.8%
55 to 64 years	2,380	21.1%	355	7.8%	304	52.6%	95	19.2%	2,684	22.6%	450	8.9%
65 to 74 years	1,570	13.9%	179	3.9%	43	7.4%	24	4.8%	1,613	13.6%	203	4.0%
75 to 84 years	1,162	10.3%	274	6.0%	53	9.2%	-	0.0%	1,215	10.2%	274	5.4%
85+ years	332	2.9%	101	2.2%	-	0.0%	-	0.0%	332	2.8%	101	2.0%
<b>Total</b>	<b>11,296</b>	<b>100.0%</b>	<b>4,573</b>	<b>100.0%</b>	<b>578</b>	<b>100.0%</b>	<b>496</b>	<b>100.0%</b>	<b>11,874</b>	<b>100.0%</b>	<b>5,069</b>	<b>100.0%</b>
Age of Householder	Charleston County				Metro Area (2013)							
	Owner		Renter		Owner		Renter					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent				
15 to 24 years	914	1.1%	7,920	14.6%	1,715	1.0%	11,595	12.8%				
25 to 34 years	10,154	11.7%	16,903	31.1%	20,464	12.1%	28,079	30.9%				
35 to 44 years	13,988	16.2%	9,043	16.6%	29,041	17.2%	16,719	18.4%				
45 to 54 years	18,163	21.0%	8,656	15.9%	36,745	21.8%	15,494	17.1%				
55 to 64 years	19,631	22.7%	6,488	11.9%	38,365	22.8%	10,353	11.4%				
65 to 74 years	13,179	15.2%	2,742	5.0%	25,555	15.2%	4,675	5.1%				
75 to 84 years	7,866	9.1%	1,881	3.5%	12,891	7.6%	2,665	2.9%				
85+ years	2,620	3.0%	784	1.4%	3,860	2.3%	1,214	1.3%				
<b>Total</b>	<b>86,515</b>	<b>100.0%</b>	<b>54,417</b>	<b>100.0%</b>	<b>168,636</b>	<b>100.0%</b>	<b>90,794</b>	<b>100.0%</b>				

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS); Partners For Economic Solutions, 2015.

**TABLE A-7. EMPLOYED POPULATION AGED 16 AND OVER BY INDUSTRY, 2013**

Industry/ Occupation	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>EMPLOYED RESIDENTS BY INDUSTRY</b>										
Agriculture, forestry, fishing and hunting, and mining	67	0.4%	0	0.0%	67	0.3%	922	0.5%	1,440	0.5%
Construction	1,115	5.8%	57	3.8%	1,172	5.7%	11,487	6.7%	22,110	7.0%
Manufacturing	949	5.0%	84	5.6%	1,033	5.0%	11,894	6.9%	31,159	9.9%
Wholesale trade	352	1.8%	37	2.5%	389	1.9%	4,058	2.4%	7,426	2.4%
Retail trade	2,358	12.4%	133	8.9%	2,491	12.1%	19,739	11.4%	37,027	11.8%
Transportation and warehousing, and utilities	670	3.5%	23	1.5%	693	3.4%	7,645	4.4%	15,842	5.0%
Information	438	2.3%	53	3.5%	491	2.4%	4,034	2.3%	6,936	2.2%
Finance and insurance, and real estate and rental and leasing	1,272	6.7%	106	7.1%	1,378	6.7%	10,403	6.0%	17,130	5.4%
Professional, scientific, and management, and administrative and waste management services	2,617	13.7%	145	9.7%	2,762	13.4%	22,088	12.8%	37,839	12.0%
Educational services, and health care and social assistance	4,940	25.9%	176	11.7%	5,116	24.9%	39,023	22.6%	67,641	21.5%
Arts, entertainment, and recreation, and accommodation and food services	2,741	14.4%	604	40.3%	3,345	16.3%	24,199	14.0%	36,188	11.5%
Other services, except public administration	818	4.3%	0	0.0%	818	4.0%	8,399	4.9%	15,683	5.0%
Public administration	732	3.8%	80	5.3%	812	3.9%	8,637	5.0%	18,435	5.9%
<b>Total</b>	<b>19,069</b>	<b>100.0%</b>	<b>1,498</b>	<b>100.0%</b>	<b>20,567</b>	<b>100.0%</b>	<b>172,528</b>	<b>100.0%</b>	<b>314,856</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
 Source: U.S. Census Bureau, 2009-2013 American Community Survey (ACS); Partners for Economic Solutions, 2015.

**TABLE A-8. EMPLOYED POPULATION AGED 16 AND OVER BY OCCUPATION, 2013**

Industry/ Occupation	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>EMPLOYED RESIDENTS BY OCCUPATION</b>										
White Collar	13,425	70.4%	773	51.6%	14,198	69.0%	108,704	63.0%	191,463	60.8%
Management, Business, Financial	2,894	15.2%	253	16.9%	3,147	15.3%	25,489	14.8%	44,946	14.3%
Computer, Engineering, and Science	1,629	8.5%	87	5.8%	1,716	8.3%	9,617	5.6%	17,034	5.4%
Education, Legal, Community Service, Arts, and Media	2,439	12.8%	79	5.3%	2,518	12.2%	18,468	10.7%	30,559	9.7%
Healthcare practitioner and technical	1,936	10.2%	98	6.5%	2,034	9.9%	12,599	7.3%	19,816	6.3%
Sales	2,425	12.7%	172	11.5%	2,597	12.6%	22,421	13.0%	38,635	12.3%
Office and Administrative Support	2,102	11.0%	84	5.6%	2,186	10.6%	20,110	11.7%	40,473	12.9%
Services	3,282	17.2%	498	33.2%	3,780	18.4%	33,714	19.5%	58,048	18.4%
Blue Collar	2,362	12.4%	227	15.2%	2,589	12.6%	30,110	17.5%	65,345	20.8%
Farming, Forestry, Fishing	33	0.2%	-	0.0%	33	0.2%	451	0.3%	739	0.2%
Construction, Extraction	754	4.0%	57	3.8%	811	3.9%	8,339	4.8%	16,332	5.2%
Installation, Maintenance, Repair	558	2.9%	88	5.9%	646	3.1%	5,076	2.9%	12,785	4.1%
Production	565	3.0%	29	1.9%	594	2.9%	6,979	4.0%	17,268	5.5%
Transportation, Material Moving	452	2.4%	53	3.5%	505	2.5%	9,265	5.4%	18,221	5.8%
<b>Total</b>	<b>19,069</b>	<b>100.0%</b>	<b>1,498</b>	<b>100.0%</b>	<b>20,567</b>	<b>100.0%</b>	<b>172,528</b>	<b>100.0%</b>	<b>314,856</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: U.S. Census Bureau, 2009-2013 American Community Survey (ACS), Partners for Economic Solutions, 2015.

**TABLE A-9. MEANS OF TRANSPORTATION TO WORK, 2012**

Workers 16 and Over	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent
<b>MEANS OF TRANSPORTATION</b>										
Car, Truck, or Van	17,609	92.6%	1,107	76.9%	18,716	91.5%	148,684	88.1%	286,484	90.1%
Drove alone	15,986	84.1%	1,097	76.2%	17,083	83.6%	132,667	78.6%	257,075	80.8%
Carpooled	1,623	8.5%	10	0.7%	1,633	8.0%	16,017	9.5%	29,409	9.2%
Public Transportation (excluding taxicab)	171	0.9%	-	0.0%	171	0.8%	3,222	1.9%	4,499	1.4%
Motorcycle, Bicycle, Walked, Other Means or Worked at Home	1,226	6.5%	332	23.1%	1,558	7.6%	16,885	10.0%	27,068	8.5%
<b>Total</b>	<b>19,006</b>	<b>100.0%</b>	<b>1,439</b>	<b>100.0%</b>	<b>20,445</b>	<b>100.0%</b>	<b>168,791</b>	<b>100.0%</b>	<b>318,051</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS), Partners For Economic Solutions, 2015.

**TABLE A-10. JOURNEY TO WORK, 2012**

Workers 16 and Over	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent	Employed Residents	Percent
<b>COMMUTE TIME</b>										
Less than 15 minutes	4,474	23.2%	361	25.1%	4,835	23.4%	43,599	25.8%	72,232	22.7%
15 to 29 minutes	8,503	44.1%	671	46.6%	9,174	44.3%	72,624	43.0%	127,753	40.2%
30 to 44 minutes	3,492	18.1%	178	12.4%	3,670	17.7%	30,949	18.3%	67,594	21.3%
45 to 59 minutes	1,258	6.5%	128	8.9%	1,386	6.7%	8,504	5.0%	23,255	7.3%
60 or more minutes	585	3.0%	27	1.9%	612	3.0%	5,516	3.3%	14,490	4.6%
Work from home	954	5.0%	74	5.1%	1,028	5.0%	7,599	4.5%	12,727	4.0%
<b>Total</b>	<b>19,266</b>	<b>100.0%</b>	<b>1,439</b>	<b>100.0%</b>	<b>20,705</b>	<b>100.0%</b>	<b>168,791</b>	<b>100.0%</b>	<b>318,051</b>	<b>100.0%</b>
Commuting 30+ Minutes	5,335	27.7%	333	23.1%	5,668	27.4%	44,969	26.6%	105,339	33.1%

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS); Partners For Economic Solutions, 2015.

**TABLE A-11. HOUSING UNITS BY NUMBER OF UNITS IN STRUCTURE, 2012**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>UNITS IN STRUCTURE</b>										
1, Detached	12,462	69.1%	1,386	67.8%	13,848	68.9%	100,133	58.8%	183,313	60.8%
1, Attached	1,198	6.6%	48	2.3%	1,246	6.2%	8,864	5.2%	13,739	4.6%
2	366	2.0%	151	7.4%	517	2.6%	6,533	3.8%	8,343	2.8%
3 to 4	711	3.9%	97	4.7%	808	4.0%	8,899	5.2%	11,477	3.8%
5 to 9	850	4.7%	158	7.7%	1,008	5.0%	14,985	8.8%	21,660	7.2%
10 to 19	866	4.8%	40	2.0%	906	4.5%	10,281	6.0%	14,841	4.9%
20 or more	1,310	7.3%	102	5.0%	1,412	7.0%	9,218	5.4%	14,135	4.7%
Mobile Home	280	1.6%	61	3.0%	341	1.7%	11,431	6.7%	33,805	11.2%
Other	-	0.0%	-	0.0%	-	0.0%	57	0.0%	164	0.1%
<b>Total</b>	<b>18,043</b>	<b>100.0%</b>	<b>2,043</b>	<b>100.0%</b>	<b>20,086</b>	<b>100.0%</b>	<b>170,401</b>	<b>100.0%</b>	<b>301,477</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS); Partners For Economic Solutions, 2015.

**TABLE A-12. HOUSING UNITS BY YEAR BUILT, 2012**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>YEAR BUILT</b>										
2010 or later	8	0.0%	-	0.0%	8	0.0%	611	0.4%	3,272	1.1%
2000 to 2009	3,828	21.2%	338	16.5%	4,166	20.7%	34,274	20.1%	78,552	26.1%
1990 to 1999	3,232	17.9%	333	16.3%	3,565	17.7%	26,903	15.8%	49,771	16.5%
1980 to 1989	2,688	14.9%	303	14.8%	2,991	14.9%	29,413	17.3%	53,314	17.7%
1970 to 1979	2,268	12.6%	252	12.3%	2,520	12.5%	26,063	15.3%	47,341	15.7%
1969 or Earlier	6,019	33.4%	817	40.0%	6,836	34.0%	53,137	31.2%	69,227	23.0%
<b>Total</b>	<b>18,043</b>	<b>100.0%</b>	<b>2,043</b>	<b>100.0%</b>	<b>20,086</b>	<b>100.0%</b>	<b>170,401</b>	<b>100.0%</b>	<b>301,477</b>	<b>100.0%</b>
Median Year Built	1983		1971		1982		1982		1986	

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.  
Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS); Partners For Economic Solutions, 2015.

**TABLE A-13. HOUSING BY TENURE AND VACANCY STATUS, 2012**

	Folly Road Corridor		Folly Beach		Folly Road Market Area		Charleston County		Metro Area (2013)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>OCCUPIED UNITS</b>										
Owner-Occupied Units	11,296	62.6%	578	28.3%	11,874	59.1%	86,515	50.8%	168,636	55.9%
Renter-Occupied Units	4,573	25.3%	496	24.3%	5,069	25.2%	54,417	31.9%	90,794	30.1%
<b>VACANT UNITS</b>										
Vacant Units	2,174	12.0%	969	47.4%	3,143	15.6%	29,469	17.3%	42,047	13.9%
For rent	712	3.9%	369	18.1%	1,081	5.4%	8,403	4.9%	11,782	3.9%
Rented, not occupied	38	0.2%	-	0.0%	38	0.2%	554	0.3%	1,062	0.4%
For sale only	372	2.1%	45	2.2%	417	2.1%	4,221	2.5%	4,980	1.7%
Sold, not occupied	-	0.0%	-	0.0%	-	0.0%	346	0.2%	1,044	0.3%
For seasonal, recreational or occasional use	608	3.4%	517	25.3%	1,125	5.6%	10,064	5.9%	13,056	4.3%
For migrant workers	-	0.0%	-	0.0%	-	0.0%	51	0.0%	86	0.0%
Other vacant	444	2.5%	38	1.9%	482	2.4%	5,830	3.4%	10,037	3.3%
<b>Total Units</b>	<b>18,043</b>	<b>100.0%</b>	<b>2,043</b>	<b>100.0%</b>	<b>20,086</b>	<b>100.0%</b>	<b>170,401</b>	<b>100.0%</b>	<b>301,477</b>	<b>100.0%</b>

Note: Folly Road Corridor consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.05, 20.06, 20.07; Folly Beach consists of census tract 20.04; Folly Road Market Area combines Folly Road PMA and Folly Beach.

Source: U.S. Census Bureau, 2008-2012 American Community Survey (ACS), 2009-2013 ACS; Partners For Economic Solutions, 2015.

**TABLE A-14. FOLLY ROAD MARKET AREA 1 SALES & EXPENDITURES BY RETAIL CATEGORY, 2014**

NAICS	Industry Group	Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Number of Businesses
<b>Neighborhood Goods and Services</b>					
445	Food & Beverage Stores	\$82,263,616	\$61,483,527	\$20,780,089	36
4451	Grocery Stores	\$75,880,837	\$58,272,124	\$17,608,713	15
4452	Specialty Food Stores	\$1,276,625	\$1,413,731	-\$137,106	18
4453	Beer, Wine & Liquor Stores	\$5,106,154	\$1,797,672	\$3,308,482	3
446	Health & Personal Care Stores	\$42,471,272	\$35,091,453	\$7,379,819	21
	<b>Total Neighborhood Goods and Services</b>	\$124,734,888	\$96,574,980	\$28,159,908	57
<b>Eating and Drinking</b>					
722	Food Services & Drinking Places	\$60,935,343	\$49,882,573	\$11,052,770	60
7221	Full-Service Restaurants	\$23,630,178	\$18,819,779	\$4,810,399	26
7222	Limited-Service Eating Places	\$30,368,059	\$27,494,490	\$2,873,569	18
7223	Special Food Services	\$1,840,177	\$1,958,661	-\$118,484	7
7224	Drinking Places - Alcoholic Beverages	\$5,096,929	\$1,609,643	\$3,487,286	9
	<b>Total Eating and Drinking</b>	\$60,935,343	\$49,882,573	\$11,052,770	60
<b>Shoppers Goods (General Merchandise, Apparel and Accessories, Furniture and Furnishings and Other Shoppers Goods (GAFO))</b>					
452	General Merchandise Stores	\$89,251,203	\$40,708,861	\$48,542,342	11
448	Clothing & Clothing Accessories Stores	\$35,247,970	\$3,652,893	\$31,595,077	19
442	Furniture & Home Furnishings Stores	\$12,696,712	\$3,845,945	\$8,850,767	13
443	Electronics & Appliance Stores	\$16,044,391	\$2,762,848	\$13,281,543	6
451	Sporting Goods, Hobby, Book & Music Stores	\$11,194,034	\$3,052,139	\$8,141,895	20
453	Miscellaneous Store Retailers	\$11,110,206	\$6,189,153	\$4,921,053	47
	<b>Total Shoppers Goods</b>	\$175,544,516	\$60,211,839	\$115,332,677	116

Note: <sup>1</sup> Market Area consists of the following census tracts: 19.01, 19.02, 20.02, 20.03, 20.04, 20.05, 20.06 and 20.07.

Source: ESRI, Retail Marketplace Profile; Partners for Economic Solutions, 2015.