

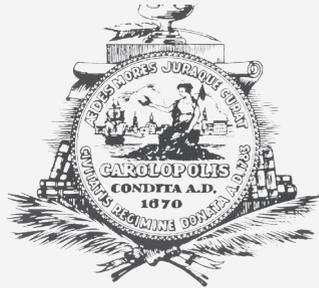
PLAN WEST ASHLEY



CHARLESTON, SOUTH CAROLINA



Prepared for:



City of Charleston, SC

**West Ashley
Revitalization Commission**

**West Ashley
Community Members**

Charleston City Council

Consultant Team:

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*urban design & land use,
community engagement*

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multi-modal transportation planning

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housing & economic development

CityFi
innovation & change management

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Ratification
Number 2018-016

A N O R D I N A N C E

TO AMEND THE CITY OF CHARLESTON CENTURY V 2010 COMPREHENSIVE PLAN UPDATE, ADOPTED BY CHARLESTON CITY COUNCIL ON FEBRUARY 22, 2011, TO INCORPORATE THE CHAPTER OVERVIEWS AND PLAN IMPLEMENTATION SECTIONS OF PLAN WEST ASHLEY, DATED DECEMBER 28, 2017, SAID OVERVIEWS AND IMPLEMENTATION SECTIONS BEING ATTACHED TO THIS ORDINANCE AS EXHIBIT A. (AS AMENDED)

BE IT ORDAINED BY THE MAYOR AND COUNCILMEMBERS OF CHARLESTON, IN CITY COUNCIL ASSEMBLED:

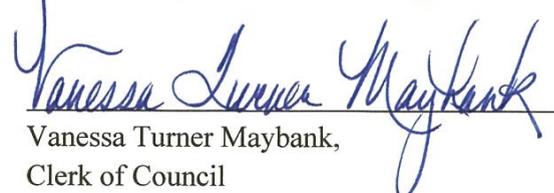
Section 1. The City of Charleston Century V 2010 Comprehensive Plan Update, adopted by Charleston City Council on February 22, 2011, is hereby amended by incorporating therein the Chapter Overview and Plan Implementation Sections of Plan West Ashley, dated December 28, 2017, said Overviews and Plan Implementation Sections being attached to this Ordinance as Exhibit A and incorporated herein by reference.

Section 2. This Ordinance shall become effective upon ratification.

Ratified in City Council this 26th day of February in the Year of Our Lord, 2018, and in the 242nd Year of the Independence of the United States of America


John J. Tecklenburg, Mayor

ATTEST:


Vanessa Turner Maybank,
Clerk of Council



1 EXECUTIVE SUMMARY

VISION 1.4

PLANNING PROCESS 1.8

West Ashley has always been a place of promise and hopefulness.

Here, at Charles Towne Landing, the modern settlement of Carolina began in the seventeenth-century under the Ashley Cooper Plan. In its day, that astonishing plan—now seen as an expression of the ideals of the Enlightenment—was perhaps the most forward-thinking, innovative document of its type in human history. It was far from perfect, but it was put forward as a hopeful model for wiser ways of living together in a New World.

The founding of Maryville / Ashleyville in the 1880s was another expression of hope and high aspirations. On land owned and governed by African Americans, a new town was laid out along the Ashley River. Fifth Avenue follows the alignment established by Carolina’s earliest settlers, making it one of the oldest roads in the state.

In the postwar era and the decades that followed, the land west of the Ashley River was again the scene of the search for progress. This is where many in Charleston’s hardworking Greatest Generation first moved to the suburbs, in search of a better life for themselves and their kids.

Those new suburbs offered their inhabitants many things, including green open space, fresh air, larger homes, a feeling of privacy, and good schools, to name a few. They still do. West Ashley residents love their neighborhoods, if not the rush hour traffic; this area of the city provides for a lifestyle not available in other parts of town. Several generations later, residents remain loyal to West Ashley, and are devoted to its community buildings, its green spaces, and each other.

Decades later, however, it has begun to be clear that the full promise of West Ashley has yet to be realized. A new generation of progress is needed to address the problems that have surfaced during rapid growth. Today citizens of West Ashley are deeply concerned about the loss of open space now covered in pavement, the degradation of their tranquil natural environment, and troubling episodes of flooding. They point to crippling traffic congestion, housing costs that are rising faster than incomes, and unsteady businesses as reasons why now is the time to be visionary and rethink what the future should be like, especially in any new development and along the aging commercial corridors.

The overarching idea behind the Plan for West Ashley is an embrace of Charleston’s traditional faith in progress. West Ashley should strive to reflect the very best balance of livability, efficiency, environmental stewardship, sensible transportation, prudent regulation, and private property rights.

This Plan was shaped by the input of hundreds of community members over numerous meetings and workshops held throughout West Ashley. The result is a thoughtful retooling of the public policies that help to shape growth and preservation in West Ashley. Crucially, these policies are not the City's alone to change; progress will require modernizing and bringing coherence to an interconnected web of rules, budget priorities and long-range visions on the part of the City, Charleston County, and the state. It will take sensible investment on the part of private property owners. This will not happen overnight. It will take time, vigilance, and diligent effort.

A primary purpose of the Plan for West Ashley is to direct the growth and maximize prosperity and other benefits while minimizing the negative impacts of any remaining future development.

It does this by calling for complete, livable neighborhoods, better connected to parks, open spaces, and their surroundings, designed with environmental sensitivity. At the same time, this plan calls for leveraging new mobility technology and making small, non-invasive infrastructure interventions in *existing* residential subdivisions, to give more people more chances for walking, biking and using public transit.

To achieve these realistic but ambitious goals, remaking certain nodes along West Ashley's commercial corridors into mixed-use centers and mobility hubs is a central strategy. These sites present the greatest opportunity for focused interventions to remedy West Ashley's challenges while strengthening surrounding neighborhoods. This strategy will direct growth on the right places to build instead of the wrong ones. It will bring jobs and services closer to where people live, and boost the value and utility of existing homes, while reducing how far people have to drive and reducing the number of trips taken by car. This approach stresses the preservation of the single-family residential character of existing neighborhoods by providing other, better locations for new growth. Introducing a range of new housing choices and prices will provide more options for an increasingly diverse population. Crucially, minimizing the amount of land consumed and paved to accommodate population growth will help to reduce flooding problems and, in time, better address the challenge of adapting to sea level rise.

A more resilient West Ashley, where life gets better in both the near term and long term, is within reach.

VISION

The purpose of *Plan West Ashley* is to set policies and identify future public and private actions aimed at enhancing quality of life and protecting the area's historic, cultural and natural environment. Five big ideas, organized around the topics of Community Design & Land Use, Transportation, Infrastructure & Sustainability, Housing, and Economic Development, form the foundation of the plan. Described on the following pages, these ideas assert that in the future West Ashley can be ***Upgraded, Connected, Resilient, Affordable, and Focused.***

Within the work of *Plan West Ashley*, through the broad public outreach and in-depth research, it is important to recognize not only the opportunities to envision a new community building effort for all citizens, but also the need to acknowledge the challenges that presently exist especially for underserved community members. Utilizing the lens of equity within this plan provides a road map for success in implementing the goals for land use, transportation, green infrastructure, housing, and economic development for all citizens.

Plan West Ashley gives needed attention and focus to planning for a sustainable future for this important collection of Charleston neighborhoods. Plan ideas were generated by community members through public input sessions, and informed by meetings with stakeholders and technical experts. Organized by topic, each chapter of this report contains a summary of existing conditions, community concerns, vision/goals to address community concerns, and finally implementation steps for immediate (1-2 years) near-term (2-5 years) and longer-term (greater than 5 years) timeframes.

Although there are some universal truths about the current built environment in all of West Ashley, to be effective recommendations have also been thought about and detailed at the neighborhood and block scale. Portions of this report define two distinct regions within West Ashley: “inner West Ashley”, the area east of I-526; and “outer West Ashley”, the area to the west of I-526. Settled over different timelines, each area has unique strengths and challenges to be addressed. Recommendations for focus areas within each illustrate how larger plan ideas could be applied to specific streets and parcels.

Inner West Ashley, the area east of I-526, is home to the oldest settlements in West Ashley and thus significant historic and cultural resources, including Charles Towne Landing (the birthplace of South Carolina), the Maryville/Ashleyville neighborhoods, and the Dupont Wappoo area, among others. Preservation of neighborhood character is a primary concern. Much of today's built environment was constructed just after World War II and, after more than 60 years, is now reaching a point where new investment is needed, particularly along the commercial corridors. *Plan West Ashley* can drive this “renew and refresh” effort. Aging commercial corridors that are generally located on the highest land, and along the path of important transportation infrastructure with access to downtown and North Charleston, contain sites with the great potential for future change. These areas can better serve surrounding neighborhoods with a new mix of uses, including places of employment and affordable living opportunities.

Outer West Ashley, the area west of I-526, is home to newer neighborhoods. Compared to the east, this area has larger recreational/open spaces, planned and built in conjunction with neighborhoods. Automobile traffic is a major concern because there is no other viable way for many people to reach places of work or places of leisure. A continued pattern of development that encourages single-uses and low densities has added to the existing congestion. There is an opportunity for the *Plan West Ashley* vision to guide interventions in focused areas, including making more destinations closer to existing residential areas, and increasing the availability of alternate viable transportation options, so that future, targeted growth can be better accommodated. In addition, the vision defines strategies to bring increased resilience in light of climate change and sea level rise, particularly for low-lying areas vulnerable to frequent flooding.

Plan West Ashley is just one of many initiatives currently underway to secure a more prosperous future. Among these initiatives are Charleston County's ½ cent sales tax projects, and numerous economic development, housing, open space, sustainability, and preservation plans. Completion of I-526 as it is now planned, in a multimodal fashion (to accommodate cars, pedestrians, cyclists and transit riders), is key among these initiatives. The City and County support I-526 to better connect West Ashley to the greater region and relieve pressure on other important corridors. The I-526 connection has been considered and integrated into each aspect of the Plan.

Other simultaneous efforts include an in depth study of stormwater/drainage for the Church Creek and Wappoo basins, and BCDCOG's regional transportation studies. *Plan West Ashley* has considered and incorporated the findings of relevant previous and current studies; this comprehensive vision can guide and inform more in-depth plans and studies, and focus funding for proposed improvements where it can be most effective to meet identified community needs.

UPGRADED

Community Design & Land Use



COMMUNITY CONCERNS

- The West Ashley community wants to preserve its unique neighborhood character.
- West Ashley's community character and identity is weakened by vacant strip malls, generic and aging shopping centers, and lack of identity at entryways.
- Many residents commute to work outside West Ashley, which contributes to traffic problems and decreases to quality of life.
- Many residents also are required to drive for shopping, dining, entertainment (particularly west of 526).
- There is a strong community belief that growth, particularly high density growth, happened in West Ashley without full regard to the infrastructure needed to support the growth and how this growth would impact the existing residential character.

VISION

Grow in the right places, in the right ways:

- Preserve neighborhood character; focus new development in clear, identified areas.
- Enhance community brand and identity.
- Reuse vacant commercial sites, and improve the character of those sites.
- Shorten trips with new work, entertainment, and recreation destinations.
- Provide better infrastructure to support the growing population.

CONNECTED

Transportation



COMMUNITY CONCERNS

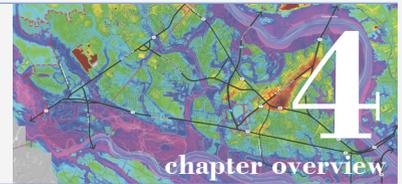
- Participants at community input workshops expressed congestion and traffic as top concerns today.
- The West Ashley community wants more/enhanced connections: complete I-526, extend Glenn McConnell Parkway, connect the neighborhoods.
- West Ashley needs more/enhanced water connections, which could include a pedestrian/bike bridge and/or a water taxi.
- The West Ashley Bikeway and Greenway should be connected.
- Pedestrian/bike facilities need to be upgraded to be a viable option: connect sidewalks/crosswalks, create separated bike lanes, make safety improvements.
- Transit needs to be upgraded to be a viable option: explore premium service (rail, LCRT, PRT), park-and-ride, express service, shuttle.

VISION

- West Ashley is envisioned to be CONNECTED: connected to the region and neighborhoods, connected to jobs and schools, connected to recreational activities, and connected to goods and services.
- The plan has two major areas of focus: addressing vehicular traffic congestion; and then, just as importantly, providing enhanced mobility options to stem the growth in car trips by getting a larger percentage of future trips to occur using shorter car trips, walking, biking and transit.

RESILIENT

Infrastructure & Sustainability



COMMUNITY CONCERNS

- Neighborhood flooding is affecting safety, value, and quality of life in West Ashley's neighborhoods. The community reports worsening conditions over the past decade.
- Many of West Ashley's existing neighborhood parks need revitalization, and many residents lack safe access to nearby park and recreation resources.
- Burying existing overhead utilities would add value by improving the quality and character of West Ashley's streetscapes.

VISION

- Plan West Ashley establishes a framework for resilient growth consistent with the community's vision for its future, enabling stable economic development while minimizing risk from external economic and environmental forces. The following over-arching elements guide the infrastructure vision:
 - **Where should West Ashley prioritize investment?**
Direct investment to higher, safer ground | Protect & heal natural resources | Connect natural and built systems
 - **How should West Ashley become more resilient?**
Reduce local flooding impacts | Prioritize infrastructure maintenance | Encourage green infrastructure (GI) | Provide high-quality, useful, convenient open spaces

AFFORDABLE

Housing



COMMUNITY CONCERNS

- The community does not offer enough variety of housing choices to meet needs and preferences.
- Housing is becoming too unaffordable, which also creates a risk that seniors and lower or middle income residents could be displaced.
- Community character, scale, and cultural legacies are threatened by new development and change.
- The Citadel Mall property needs reinvestment – possibly including housing.
- Any taller housing should be limited and targeted for appropriate locations.

VISION

- Preserve community character
- Maintain affordability
- Add more housing options and supply to meet market demand and need.
- Provide supportive and equitable infrastructure for housing at all income levels, including multimodal transportation options, parks and open space, and community facilities.

FOCUSED

Economic Development



COMMUNITY CONCERNS

- West Ashley will lose its character if new development does not accommodate small local businesses.
- There are too many vacant or visually blighted commercial properties along major arterial corridors.
- There are no small community-scale retail and services in outer West Ashley.
- Future jobs and economic development efforts should address the needs of residents at all skill levels.

VISION

- Attract a wider range of businesses so more people who live in West Ashley can also work in the community.
- Allow and encourage transformation of Citadel Mall into a mixed-use “town center” for the entire community. Also encourage the redevelopment of other key nodes and focus areas such as those shown on the map “Opportunities for Future Change/Improvements” on page 2.22-2.23.
- Cultivate a West Ashley where all kinds of small and local businesses can thrive.
- Offer a full range of recreational, cultural, and civic facilities to support both residents and workers.
- Facilitate refreshing/refurbishing shopping centers and commercial properties that have vacant spaces and/or a blighted appearance, including introducing a new mix of uses (such as office, housing) to create new nodes.
- Support more small-scale community shopping opportunities in outer West Ashley that look and feel more like Avondale in inner West Ashley.
- Improve plan review and permitting processes and work with local and regional economic development groups to entice revitalization and attract new businesses and employment centers.

PLANNING PROCESS

Community participation has been critical to shaping the vision for West Ashley.

The *Plan West Ashley* team began gathering input in March and April 2017 by conducting a series of stakeholder meetings to learn more about strengths and challenges, as well as previous and current plans and studies. These included meetings with members of the West Ashley Revitalization Commission (WARC), the Mayor and City Council members, the Chamber of Commerce, the Historic Charleston Foundation, commercial property owners, community advocates, and those involved in planning for preservation, housing, economic development, stormwater and park facilities, and transportation experts (including City and County staff, BCDCOG, and CARTA representatives). The Plan West Ashley website was launched to distribute information and provide an additional outlet for gathering feedback.

The centerpiece of the planning effort was a series of meetings and workshops to gather community input and test ideas, called a *charrette*. This began with four Kick-off and Community Input Workshops held in late April/early May. Ideas and opinions about the desired goals and future form of development in West Ashley was gathered from over 550 participants through 65 small group discussions, keypad polling questions, and via written feedback forms. A summary of the ideas discussed is included in the Appendix.



KICK-OFF & COMMUNITY INPUT WORKSHOPS



above: Four Kick-off & Community Input Workshops were held, one for each of the four areas of identified on the map



above and left: Participants at Community Input Workshops. Each meeting had an introductory presentation and small group brainstorming, and concluded with one member from each table reporting their ideas.

Outreach & Participation Overview:



charrette participants:

550+ at community input workshops
140+ at planning studio technical meetings
200+ at open house presentation
200+ at work-in-progress presentation



charrette feedback:

65 workshop group brainstorming sessions
178 written feedback forms
386 one word cards



planwestashley.com:

10,448 visits / 25,277 page views
7,851 unique visitors
244 survey responses



1,800+ reached by email:

West Ashley distribution lists (1,500+)
N'hood Council Presidents (West Ashley / City-wide)
City of Charleston agenda subscribers
City Planning Boards, Commissions, Employees



33,000+ reached by social media:

33,000+ by City of Charleston Facebook, Twitter
6,000+ by West Ashley community Facebook pages
400+ Nextdoor contacts



1,200+ flyers distributed

City press releases

(online, print, radio, tv)



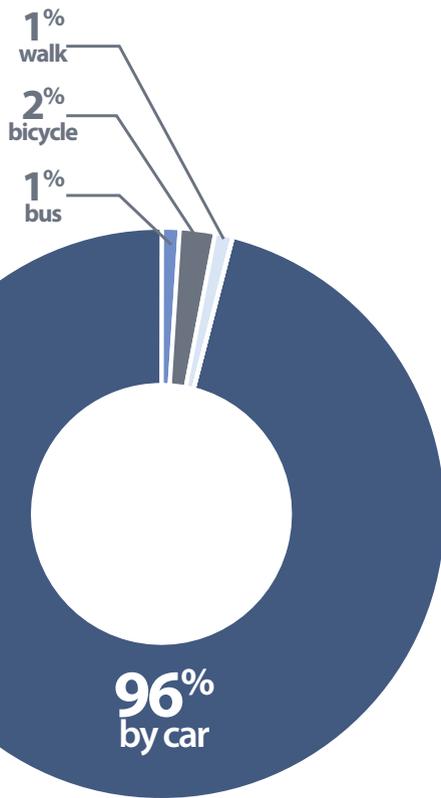
info booths/meetings:

booth at West Ashley Farmers Market (April & May)
booth at West Ashley United Day (April)
2 Chamber of Commerce meetings
5 West Ashley Revitalization Commission meetings
West Ashley coffee groups



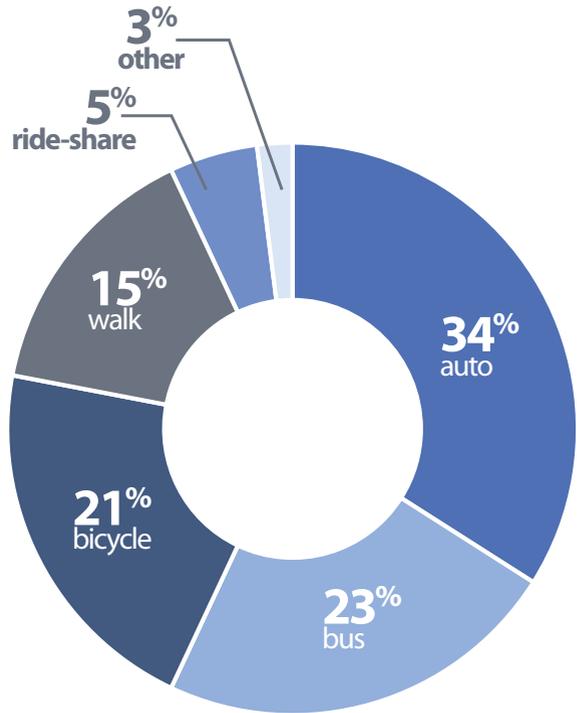
outreach partners:

Charleston County, Lowcountry Local First, ULI, WAJIBA, Charleston Metro Chamber of Commerce, Historic Charleston Foundation, Preservation Society, Old Charles Towne District Task Force, Charleston Moves, West Ashley United, Coastal Conservation League, Citadel Mall, Avondale Business District, South Windermere Merchants Association, Dupont Station Coalition, Mayor's Office of Youth and Families, St. Andrews PSD, BCDCOG, Life Guidance, Seniors Group, West Ashley Schools, 40+ Clergy contacts



left and below: Combined results of keypad polling questions at each of the four Kick-off Meetings. Although 96% of participants typically move around by car today, there was strong support for enhancements for all modes of travel (car, walk, bike, and transit).

Q: how do you typically move around West Ashley today?



Q: which transportation enhancements do you think are the most pressing? (pick 2)

Following the Community Input Workshops, the planning team set up an Open Planning Studio at Citadel Mall. At the studio, the team worked to synthesize community input, draw and test potential future improvements, and gather additional feedback.

Additional community meetings held at the Planning Studio included:

- Community Input Recap (Monday, May 8)
- Charleston Metro Chamber West Business in Your Backyard Meeting (Tuesday, May 9)
- Brown Bag Lunch with CityFi's Gabe Klein (Tuesday, May 9)
- West Ashley Revitalization Commission Meeting and Open House (Wednesday, May 10)

The planning team discussed draft ideas with stakeholders that came to technical meetings at the studio, including WARC members, City/County/BCDCOG staff, SCDOT and CARTA representatives, pedestrian and bicycle advocacy groups, environmental experts, local developers, architects and engineers, neighborhood groups, representatives from schools and institutions, major property owners, and others.

A mid-week open house provided an opportunity for WARC members and the community to review draft ideas. All of the work completed during the week, and input gathered, was presented to the community at a work-in-progress presentation on Saturday, May 13.



OPEN PLANNING STUDIO

Top and middle: The Open Planning Studio

bottom: Mid-week Open House at Citadel Mall

Q: write ONE WORD that comes to mind about WEST ASHLEY:

Today:

Congested



above: At each kick-off meeting, participants were handed a card and asked to write one word to describe West Ashley today, and one word in the future (in their vision).

Results are compiled above; the more often a word was written, the larger it appears.



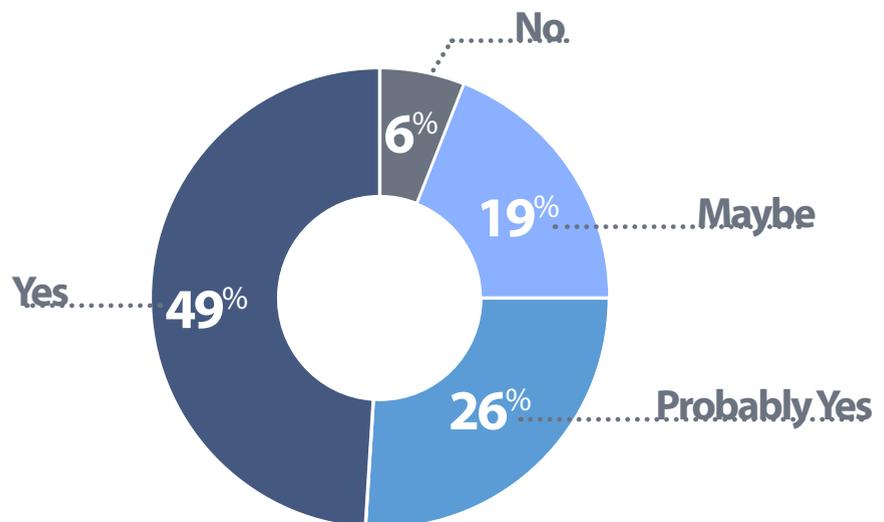
A Work-in-Progress and Feedback Session concluded the planning charrette activities. Over 200 people attended the session in the center court at Citadel Mall.

The session was conducted in two parts. A summary of key ideas and series of keypad polling questions constituted **Part 1**. Following a brief intermission, **Part 2** presentations covered greater detail about the ideas for each of the main topics (Community Design, Transportation, Environment, Housing and Economic Development). Highlights of participant keypad polling responses are included on the following pages.



WORK-IN-PROGRESS & FEEDBACK SESSION

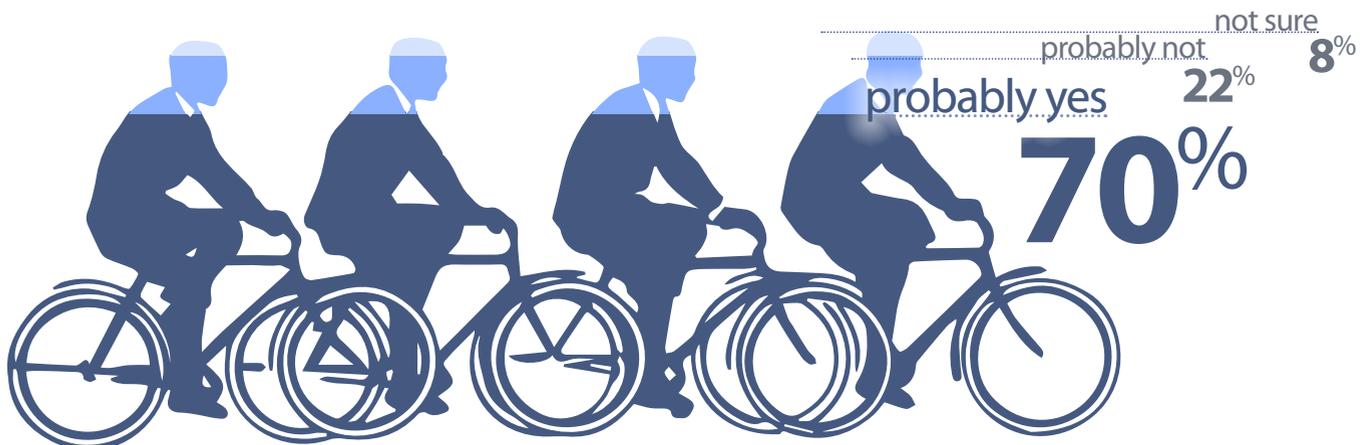
Q: do you think the vision/ideas presented (PART 1) are generally on the right track?



Highlights of community keypad polling responses:

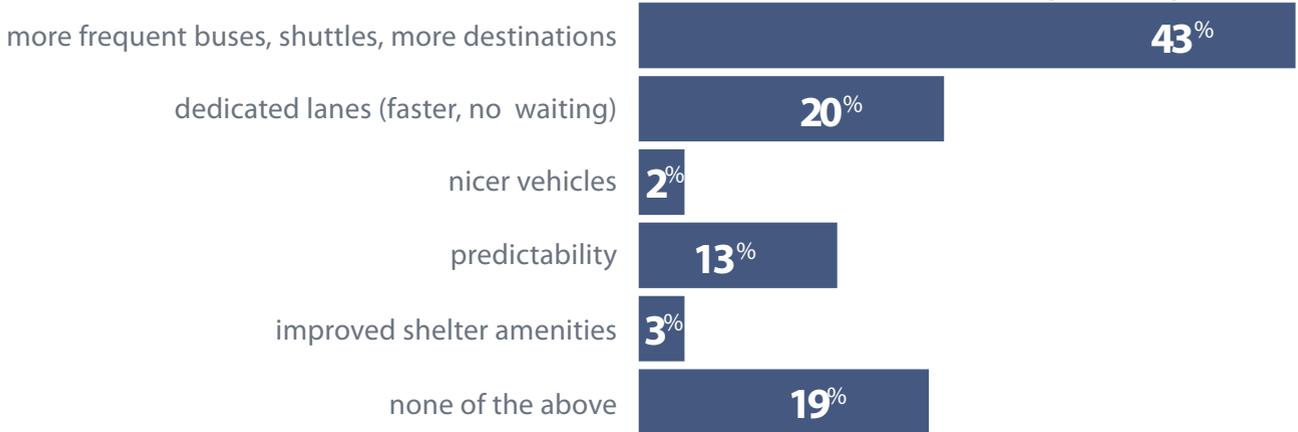


Q: are there any car trips that **YOU** would rather walk or bike, if safe/improved routes were available?

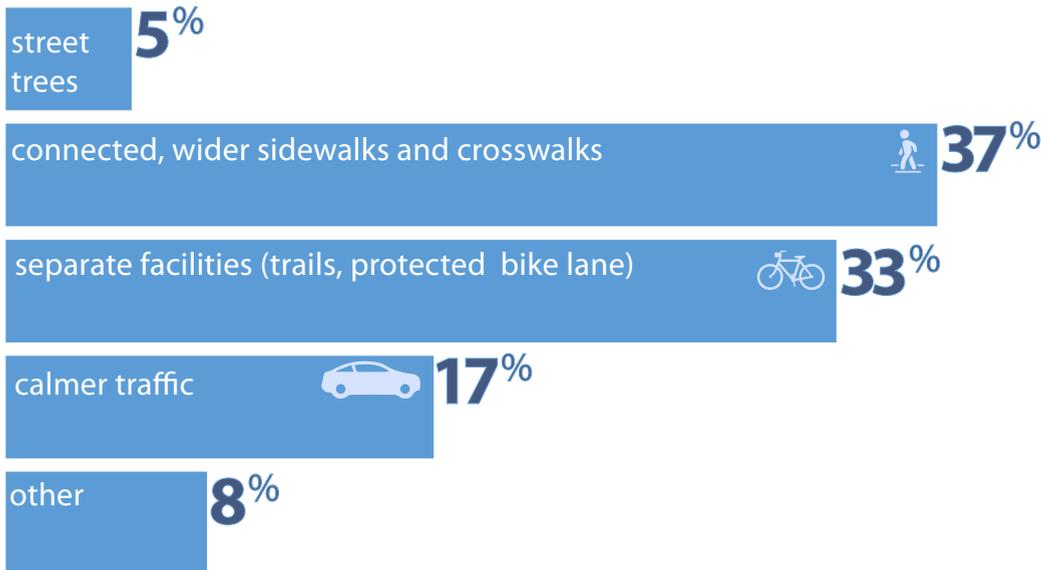


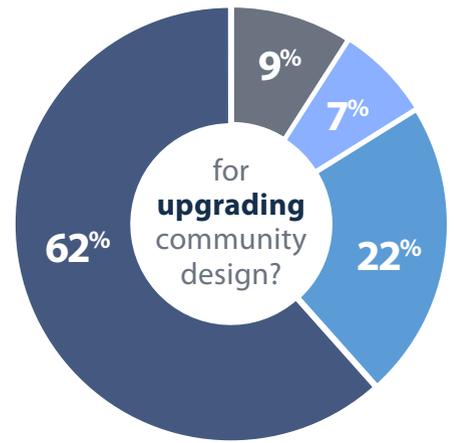
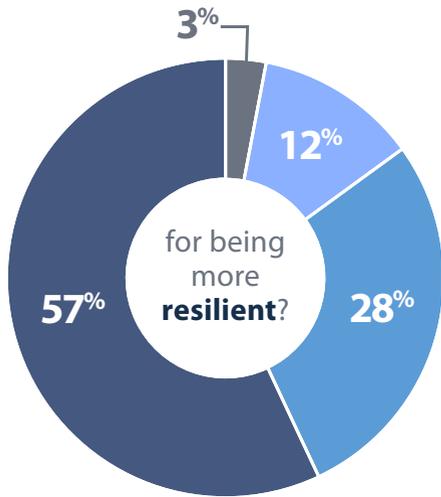
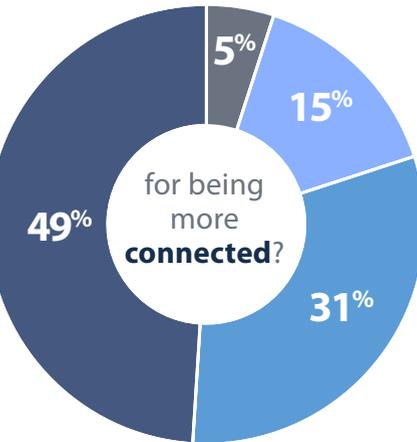
Highlights of community keypad polling responses:

Q: which of these features would *most* affect your desire to use a bus or shuttle?

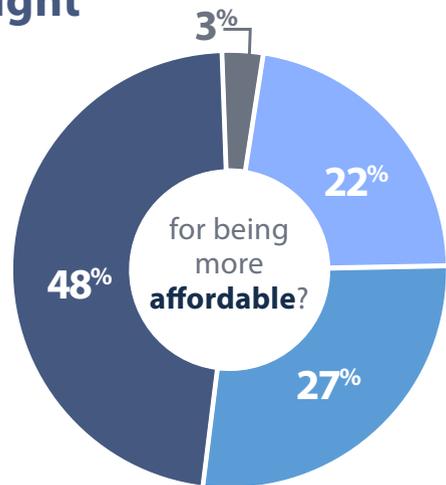
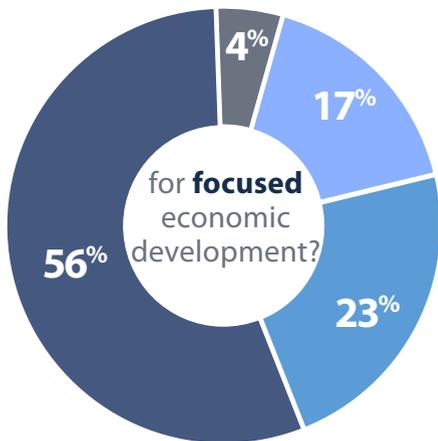


Q: which of these features would *most* affect your desire to walk or bike?





Q: do you think the vision/ideas presented (PART 2) are on the right track?



yes
 probably yes
 maybe
 no



2 COMMUNITY DESIGN & LAND USE

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COMMUNITY CONCERNS	2.16
VISION	2.18
IMPLEMENTATION	2.46

UPGRADED

Community Design & Land Use

CHAPTER OVERVIEW

EXISTING CONDITIONS

- The vast area “west of the Ashley” includes land within the City of Charleston, Charleston County, and St. Andrews Public Service District (PSD). City and County boundaries in West Ashley are intermingled and confusing, presenting planning and service challenges.
- Settlement in West Ashley dates to 1670 (Charles Towne Landing). Development has generally progressed from the east to the west. The Post-War period saw rapid expansion of suburban bedroom communities and small businesses. In the 1970s, West Ashley’s commercial corridors became lined with shopping centers and strip malls.
- West Ashley’s aging commercial corridors contain building sites with the greatest opportunity for change and improvement.

COMMUNITY CONCERNS

- The West Ashley community wants to preserve its unique neighborhood character.
- West Ashley’s community character and identity is weakened by vacant strip malls, generic and aging shopping centers, and lack of identity at entryways.
- Many residents commute to work outside West Ashley, which contributes to traffic problems and decreases to quality of life.
- Many residents also are required to drive for shopping, dining, entertainment (particularly west of 526).
- There is a strong community belief that growth, particularly high density growth, happened in West Ashley without full regard to the infrastructure needed to support the growth and how this growth would impact the existing residential character.

VISION

Grow in the right places, in the right ways:

- Preserve neighborhood character; focus new development in clear, identified areas.
- Enhance community brand and identity.
- Reuse vacant commercial sites, and improve the character of those sites.
- Shorten trips with new work, entertainment, and recreation destinations.
- Provide better infrastructure to support the growing population.

IMPLEMENTATION

- Formally adopt the *Plan West Ashley* vision.
- Coordinate implementation activities with Charleston County, Regional and State planning bodies.
- Develop community engagement strategies to improve communication, education, and participation for residents around locally important community design and land use issues.
- Develop a set of urban design principles for key sites and corridors.
- Establish a joint City/County Design Review Board (DRB) for key commercial corridors.
- Establish a West Ashley Community Brand & Identity Committee.
- Pursue neighborhood preservation.
- Draft and adopt mixed-use regulatory standards to replace and modernize existing zoning, to guide new development on commercial corridors, entryways, and other focused priority progress areas.
- Enhance and beautify West Ashley gateways with appropriate signage and landscaping.
- Add streetscaping (landscaping, lighting, sidewalks, etc.) along key commercial corridors.
- Evaluate progress.

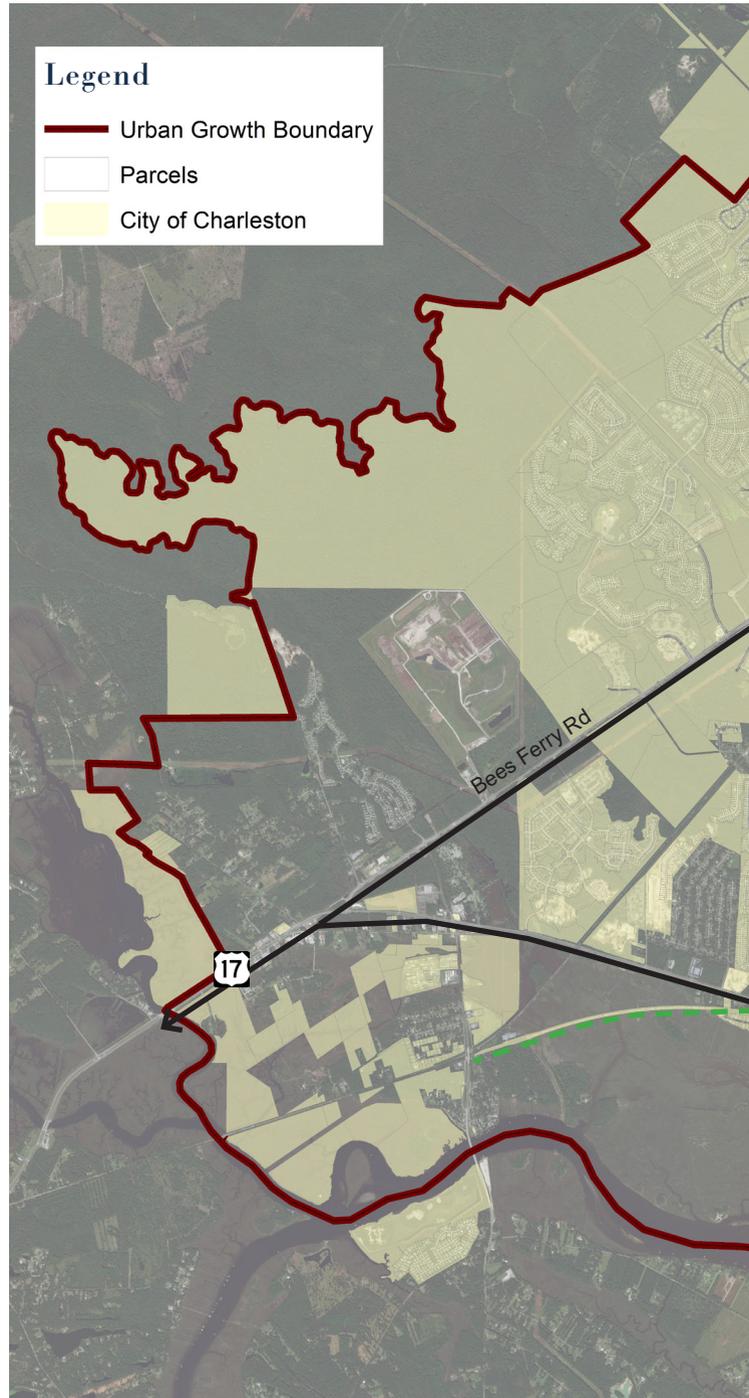
EXISTING CONDITIONS

The *Plan West Ashley* study area includes all lands bounded by the Ashley and Stono Rivers, the Wappoo Creek, and the City's Urban Growth Boundary.

The vast area “west of the Ashley” includes land within the City of Charleston, Charleston County, and St. Andrews Public Service District (PSD). The area is home to over 62,000 City residents; when combined with West Ashley's Charleston County / St. Andrews PSD residents, the population living here is more than half of the total City population. City and County boundaries in West Ashley are intermingled and confusing, producing a checkerboard pattern that presents planning and service challenges. The last century saw tremendous growth, change, and expansion. Today, West Ashley is known for its neighborhoods, parks and open spaces, and a growing and engaged community.

West Ashley's historic neighborhoods are located in the eastern portion of West Ashley, closer to downtown Charleston and the Ashley River Bridge. These older neighborhoods generally have connected street networks, and homes on smaller lots. Primary thoroughfares in eastern West Ashley include Savannah Highway (Hwy 17), Sam Rittenberg Boulevard (Hwy 7) and Ashley River Road (Hwy 61). These primarily auto-oriented commercial corridors have been widened over time to accommodate the growing population. The West Ashley Greenway and Bikeway trails are emerging assets. They are gaining in popularity and in use as connections between neighborhoods, and they continue to be improved.

Interstate 526 divides West Ashley roughly in half, providing an important connection to workplaces and destinations in North Charleston, Mount Pleasant and beyond. Development in West Ashley generally progressed from east to west, with the newest neighborhoods located west of I-526. Approved future development in the Long Savannah neighborhoods along the Urban Growth Boundary will form the permanent edge to West Ashley and Charleston's developed area. Beyond the Urban Growth Boundary, there is a vast area of publicly-controlled conservation land secured when Long Savannah was approved; this will form a greenbelt in perpetuity.



above: The *Plan West Ashley* study area includes all lands bounded by the Ashley and Stono Rivers, Wappoo Creek and the City's Urban Growth Boundary.



Brief Development History

The first settlement in West Ashley at Charles Towne Landing dates to 1670, and is the origin of the City of Charleston and of the state of South Carolina.

The Town of Maryville was laid out along the Ashley River. Fifth Avenue follows the alignment of one of the roads from the original 1670s settlement, and thereby qualifies as one of the oldest roads in South Carolina. In the late 1880s the land was subdivided and sold to African Americans; the town was named after community leader Mary Matthews Just. Later, St. Andrews Boulevard split the neighborhood in two (Maryville/Ashleyville).

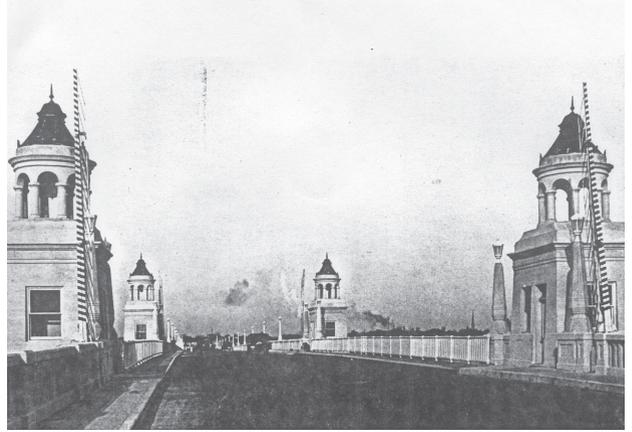
Beginning in 1850's the area known as Dupont Crossing was a hub for economic and community activity with ties to the greater Charleston region. The Dupont area had railroad stations, market farming, commercial enterprises, and civic places.

Formerly known as St. Andrews Parish, in the early 1900s, West Ashley was still primarily farmland with a few small businesses and homes. The Coburg Dairy, founded in the 1920s, was the largest industry at that time. In 1926, the Ashley River Memorial Bridge was constructed. The post-War period saw rapid expansion of suburban bedroom communities and small businesses. Neighborhoods such as Byrnes Downs, Windermere, Avondale, and Northbridge Terrace emerged.

In the 1970s, West Ashley's commercial corridors became lined with shopping centers and strip malls. The Citadel Mall opened in 1981. I-526 was built in the early 1980s, followed by Glenn McConnell Parkway in the 1990s as development and growth continued west. Ashley River Road, traveling through the historic plantation area, is on the National Register as a historic road.

top: Ashley River Bridge (1926)

middle and bottom: Windermere, one of West Ashley's Post-War neighborhoods





NAVY MEN
You can own your Home

JAMES M. LEA



Windermere

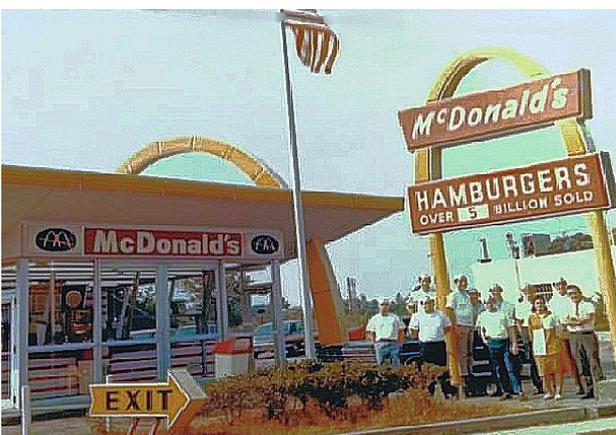
offers unusual opportunities for the man who wants a home for his family and for himself after retirement. You are invited to investigate our plan—A small monthly allotment will pay for your lot. We will finance and build your home. Convenient monthly payments, like rent, begin when you move in.

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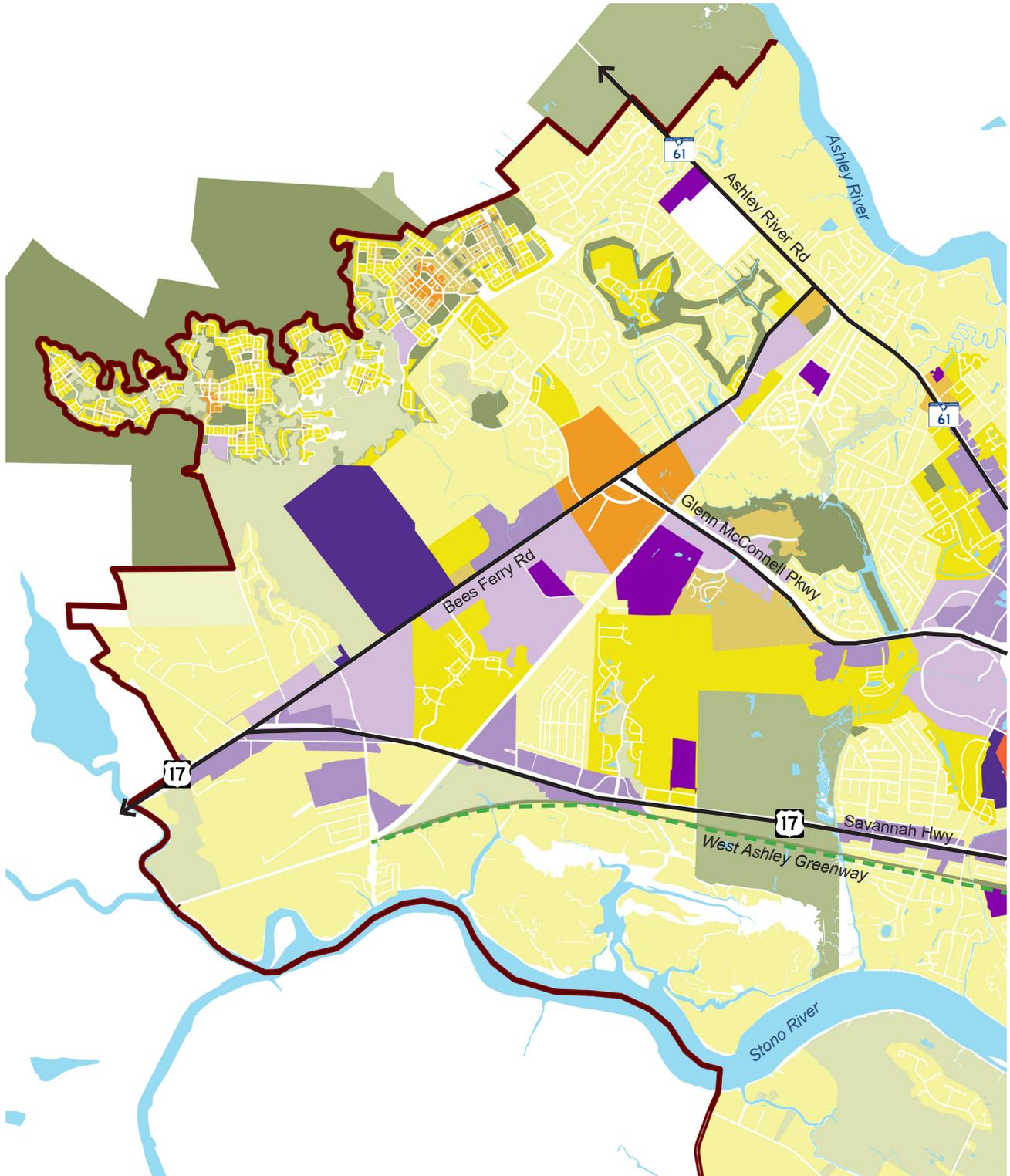
JAMES S. SIMMONS,
177 EAST BAY STREET
CHARLESTON, S. C.



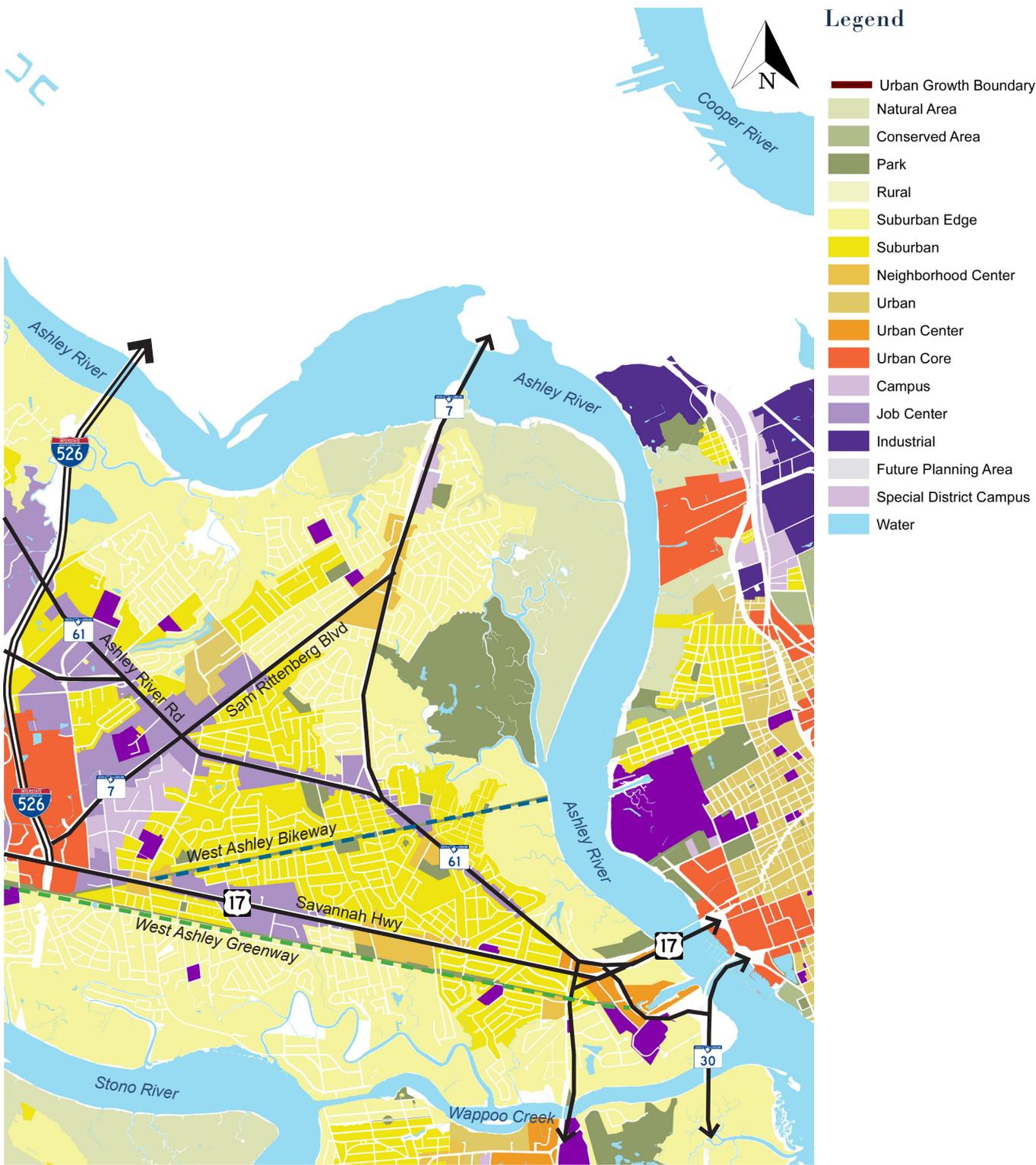


above: West Ashley's mid-century commercial businesses and corridors. (Images from community social media pages.)

Land Use Map (City of Charleston Century V Comprehensive Plan)

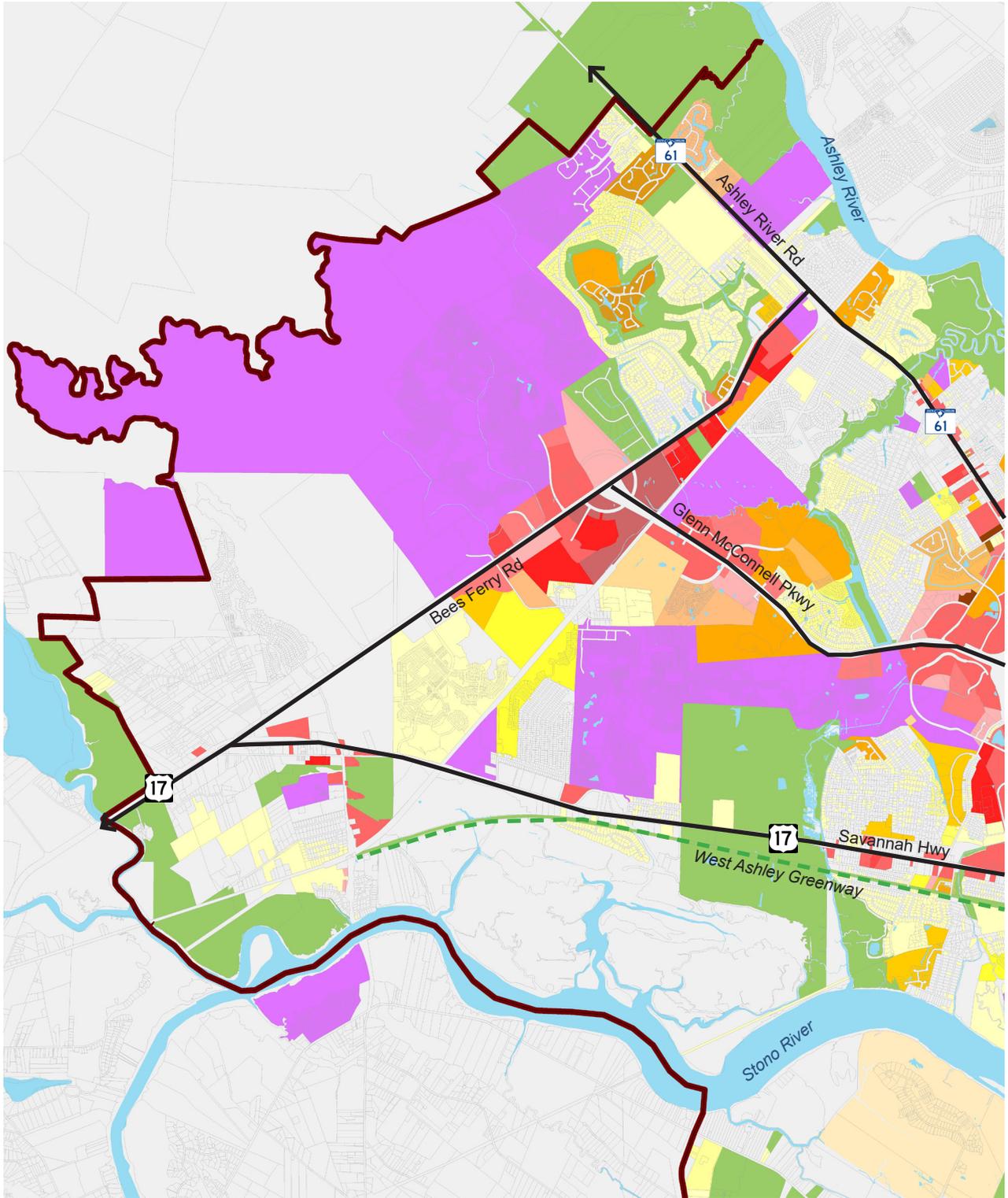


above: Outer West Ashley (west of I-526). A majority of land is allocated to Suburban or Suburban Edge categories. At key nodes, such as the West Ashley Circle and within the planned Long Savannah development, there are Urban designations intended to be neighborhood centers in the future. The Urban Growth Boundary is framed by a large scale greenbelt.



above: Inner West Ashley (east of I-526). A majority of land is allocated to Suburban or Suburban Edge categories, with Neighborhood Center, Urban Core and Special District along key transportation corridors. The historic Charles Towne Landing and natural areas line the Ashley River.

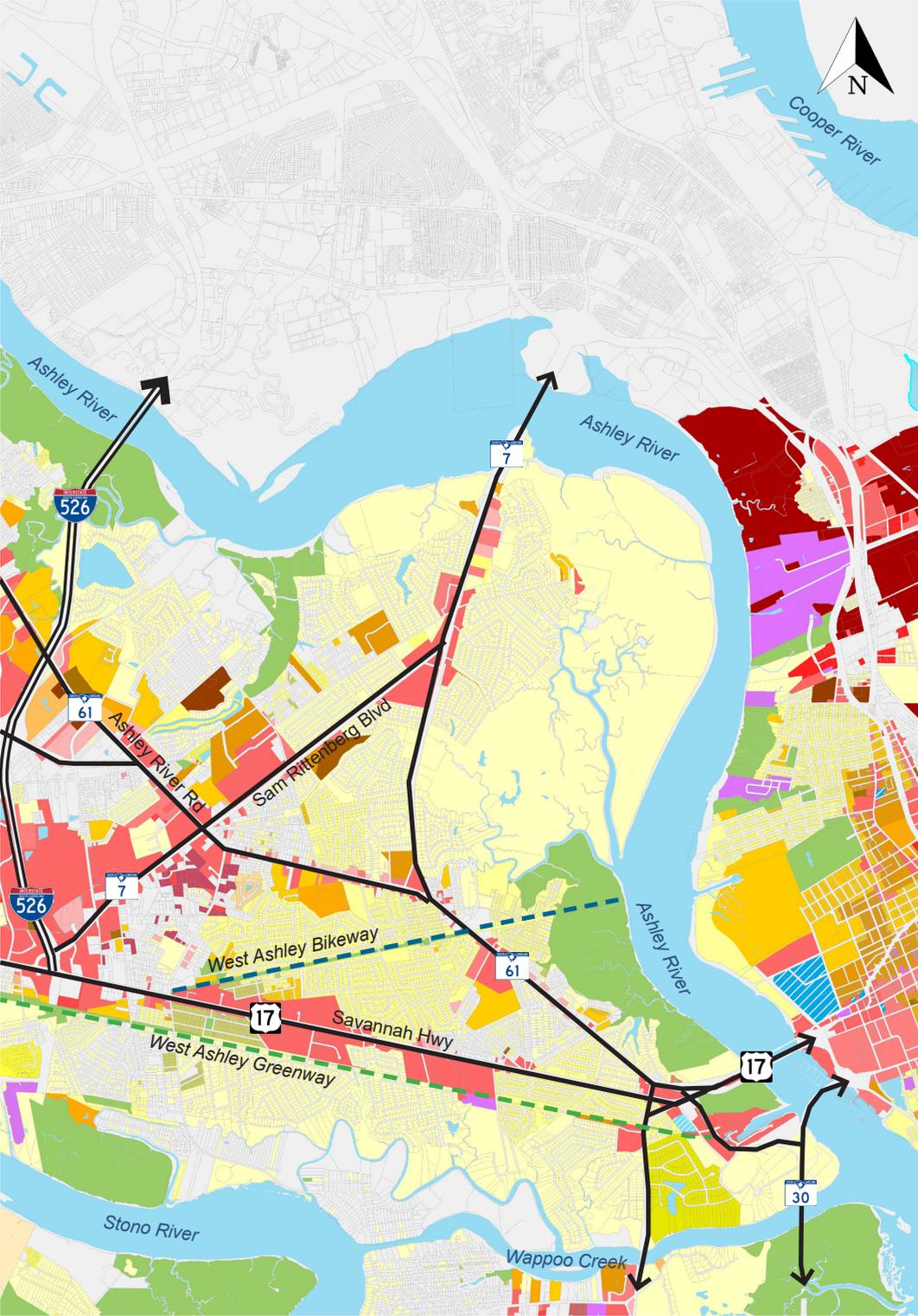
Zoning Map



above: Outer West Ashley (west of I-526). Existing zoning permits a variety of single family residential designations. Large areas are zoned for Planned Unit Development (PUD), which can allow a mix of land uses as well as parks and open spaces. Parcels in Charleston County are shown with no color.

Legend

- Urban Growth Boundary
- C Conservation
- RR-1
- SR-1 Single-Family Residential
- SR-2 Single-Family Residential
- SR-3
- SR-4
- SR-5
- SR-6
- SR-7
- SR-8
- STR
- DR-6
- DR-9
- DR-12
- DR-1F Multi-Family Residential
- DR-1
- DR-2F
- DR-2
- DR-3
- DR-4
- RO
- GO Office
- CT
- LB Limited Business
- GB General Business
- GP
- BP
- JC
- LI
- HI
- MU-1/WH
- MU-2/WH
- PUD



above: Inner West Ashley (east of I-526). Existing zoning in this area permits a variety of residential categories, with commercial/business designations along key transportation corridors (including Hwy 17, 7, and 61).

Built Environment

The built environment in West Ashley contains numerous assets, particularly in its older historic neighborhoods and inimitable natural areas; conversely, there is also aging infrastructure in need of improvement and updating.

West Ashley is known for its sense of community; this is reinforced through public spaces such as neighborhood parks and the popular farmers market. Public spaces with grand oaks and views to water contribute to the area’s identity. The Greenway and Bikeway are unique West Ashley resources; there is potential to improve access to and amenities along these trails (such as signage, landscape, benches) to further enhance the user experience. Inner West Ashley’s Post-War residential neighborhoods are highly desirable and gaining in value due to their close-in location and sense of place defined by tree-lined streets and consistent housing form and scale. Avondale has a popular neighborhood commercial center, with restaurants and shops that are walkable from surrounding homes. In outer West Ashley, newer neighborhoods have sidewalks and trails that connect residents to nearby parks and natural areas.

West Ashley’s aging commercial corridors contain building sites with the greatest opportunity for change and improvement. Vacant and outdated retail sites do not serve the needs of surrounding residents. Furthermore, the design of the primary commercial streets – widened in an effort to accommodate a maximum number of vehicles, with little landscaping – renders them unpleasant to walk, bike, and drive along. The prevailing land use pattern of West Ashley, which generally segregates residential uses and requires use of a car for most daily trips, combined with a transportation network that places all of these car trips on a few main roads that have grown busy and congested, has produced a built form along these corridors that is not working well for anyone.

Development in West Ashley continues; there are projects already approved, with others in planning stages, and more people moving to Charleston each year. The challenge for the future will be to accommodate this growing population while preserving the assets that make West Ashley unique, and improving the commercial corridors to better serve residents as well as those passing through.



top: Charles Towne Landing

middle: Avondale neighborhood center

bottom: Byrnes Downs home (inner West Ashley)



top: Vacant Piggly Wiggly store

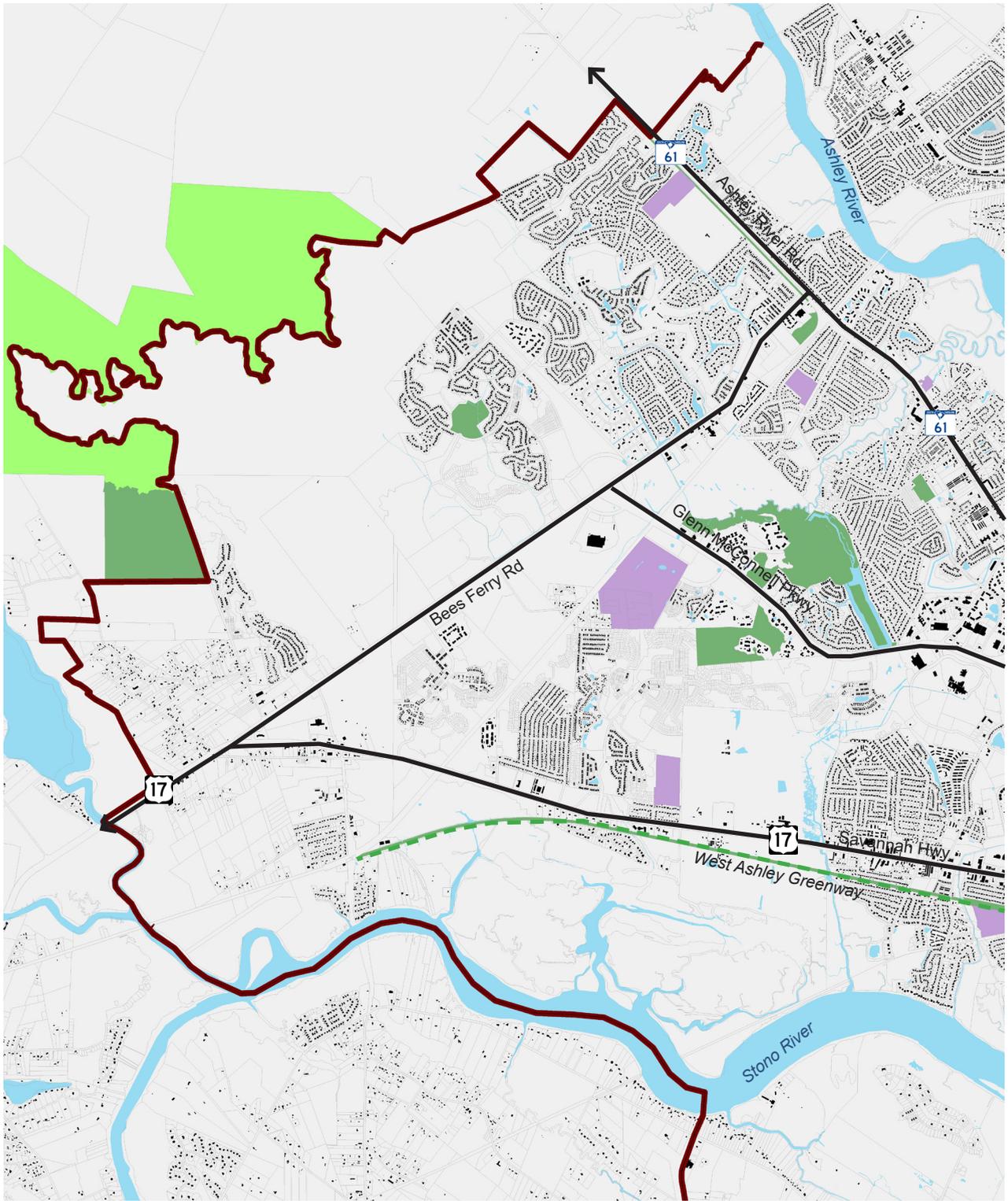
middle: Savannah Highway (US-17)

bottom: Carolina Bay homes (outer West Ashley)

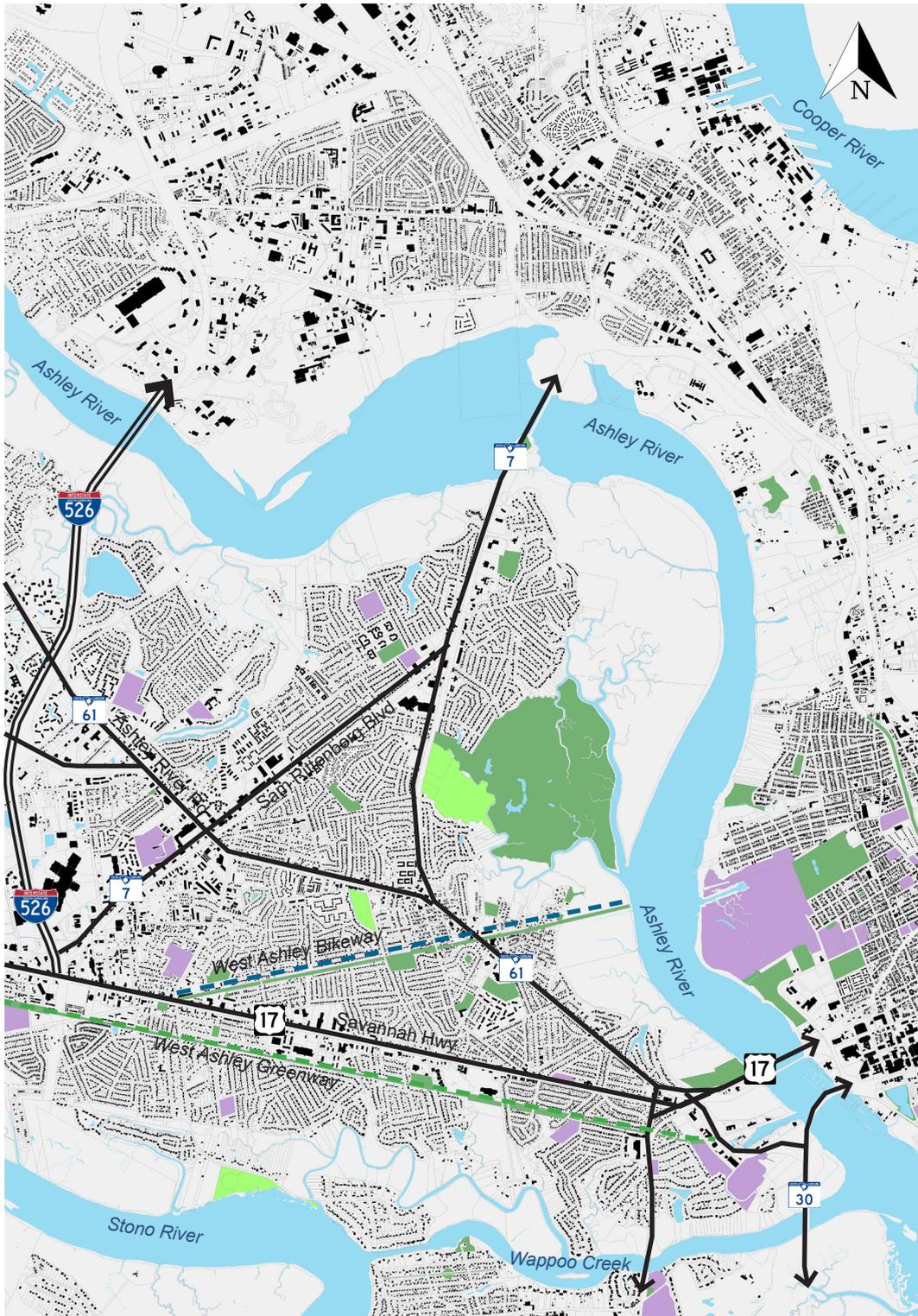
top: Farmers Market

bottom: West Ashley Greenway

Urban Form



above: Outer West Ashley (west of I-526). A majority of existing building footprints are single family detached homes on larger lots. This area also contains wetlands, conservation areas, and park spaces; future parks are anticipated in conjunction with the Long Savannah development along the Urban Growth Boundary.



Legend

- Urban Growth Boundary
- Parcels
- Water
- Schools
- Parks
- New / Future Parks

above: Inner West Ashley (east of I-526). The urban form varies dramatically. Larger buildings line the commercial corridors and are set far back from the edge of the right-of-way. Smaller footprint homes are located on small to medium lots which are for the most part, spaced fairly close together. Significantly, the West Ashley Greenway and Bikeway, and Charles Towne Lansing sites are located here.

COMMUNITY CONCERNS

Following is a brief summary of the most often voiced concerns related to *community design and land use*:

The West Ashley community wants to preserve its unique neighborhood character.

West Ashley has desirable neighborhoods with unique community character, matured over decades. Spanning from historic settlements in the east, to newer homes in the west, neighborhoods in West Ashley are different from each other and different from those found in downtown Charleston and other surrounding communities. Residents want to maintain the unique “West Ashley” character, and are concerned about new development that does not fit with the character and scale of existing neighborhoods, including new development and renovations. There is also concern about loss of older buildings and structures throughout West Ashley that are currently not protected (for example, the old Limehouse produce shed, the WWII camp chimney, and older buildings outside formal neighborhoods). In older neighborhoods, including the historic African American neighborhoods of Maryville / Ashleyville, there is further concern that future change could bring gentrification, displacement, and a loss of history and culture. *Plan West Ashley* policies can be directed to support preservation of West Ashley’s unique neighborhood characters.

West Ashley’s community character and identity is weakened by vacant strip malls, generic and aging shopping centers, and lack of identity at entryways.

Conversely, many of West Ashley’s commercial corridors are not unique; their appearance has been described as “anytown USA” predominated by aging strip commercial development along auto-oriented thoroughfares. The community desires streetscapes and commercial centers that benefit surrounding residents, with beautification at entry points, cohesive signage, and street designs that connect rather than divide neighbors. Opportunities to reuse vacant or aging commercial sites should be sought to improve community design and character, and better serve resident’s needs.

Many residents commute to work outside West Ashley, which contributes to traffic problems and decreases to quality of life.

A basic premise of suburban development, separating residences from workplaces, requires a considerable commute to and from work. A reliance on automobiles as the primary mode of transportation in West Ashley has resulted in a level of congestion in peak hours that is no longer acceptable to residents. Changes to future land uses on West Ashley’s commercial corridors, advancing new mixed-use centers, employment or live/work hubs throughout West Ashley, can be part of the solution.

Many residents also are required to drive for shopping, dining, and entertainment.

Today, vehicular trips are needed to perform most daily functions in West Ashley; however, community members expressed a desire to have choices in the ways one can move around, to spend less time driving, more time enjoying life. Potential solutions include changes to transportation facilities (see Chapter 3). Another solution is to shorten trips by mixing land uses and having more destinations closer to where people live. Community participants expressed a strong desire for more “Avondale” areas, with places to shop, dine, and seek entertainment closer to their homes. This was particularly important for communities in outer West Ashley (west of I-526), where drive times are currently the greatest.

There is a strong community belief that growth, particularly high density growth, happened in West Ashley without full regard to the infrastructure needed to support the growth and how this growth would impact existing residential character.

The West Ashley community expressed concern about recently proposed and/or built high density residential housing that seem to worsen existing traffic and drainage problems. The population is growing, and new places to live are needed and in demand. New development should occur where there is the infrastructure to support it, and can be accompanied by enhancements to transportation and stormwater systems, so that future change and growth can make things better rather than worse.

Sample of community responses from charrette feedback forms:

Of the many ideas you have heard or seen so far, which ones seem the most exciting to YOU?

“redevelopment at Citadel Mall ... mixed-use infill ... mixed-use town center at circle ... infill commercial development, use incentives to utilize abandoned/underutilized commercial/retail spaces ... festival/mixed use space at Citadel Mall ... use land better, housing above businesses ... town centers with employment opportunities ... “main street” model for Ashley Circle” ... fill and redesign empty stores before building more”

“connecting neighborhoods with one another, parks and stores, not necessarily relying on cars ... creation of villages within West Ashley to include parks and walkable areas ... develop Bees Ferry with intelligent planning, mixed use, storefront (no big box, parking lots, massive development), more “fun for quality of life” less gas stations ... better shopping areas, more common areas .. more places to live-work-play, not require a car to go everywhere”

“keep West Ashley affordable and diverse, don’t turn us into Downtown or Mt Pleasant ... avoid gentrification ... development without erasure of local diversity”

“signage that actually acknowledges that we are West Ashley ... create sense of place and destination, West Ashley “identity” and not “pass-through” area ... love the idea of welcome to West Ashley signs”

“I would like to see West Ashley better branded through signage, landscaping and redevelopment to create the “sense of place” that it is. Most of West Ashley looks as if it were “anywhere USA” with little connection to the fact that it is full of history, character and part of one of the more desirable coastal cities in the US.”

“creation of multiple Avondale type areas throughout West Ashley ... more “city centers” like in Avondale, some opportunities like this are at Citadel Mall and Bees Ferry Circle, should be mixed use with green space ... building community gathering places besides Avondale that are walkable from surrounding areas ... village-like destinations with shops, restaurants, that are attractive, no need to go to the Peninsula, Mt Pleasant, Summerville, if you don’t want to”

VISION | UPGRADED

The vision for West Ashley's land use and community design is to grow in the right places, in the right ways:

- Preserve neighborhood character; focus new development in identified areas
- Enhance community brand and identity
- Reuse vacant commercial sites, and improve the character of those sites
- Shorten trips with new work, entertainment, and recreation destinations
- Provide better infrastructure to support the growing population





Preserve neighborhood character; focus new development in clear areas

The vision for West Ashley’s future land use and community design is not an overhaul of the existing built form; there are many positive features of West Ashley’s current built environment that merit preservation and protection, and chief among those is existing neighborhood form and character. People moved to West Ashley to experience a certain suburban lifestyle, with detached single family homes on yards, tree-lined streets, and separation from the level of activity found on the Peninsula. These existing residential housing options will not be changed or altered.

Rather, the vision is to make strategic interventions in focused areas, where they can positively direct future change on West Ashley’s aging commercial corridors, particularly in inner West Ashley where commercial corridors are also on the highest ground and most environmentally suitable for future development. A primary purpose of the Plan is to direct growth and maximize prosperity and other benefits while minimizing the negative impacts of any remaining future development. Inserting a new mix of uses, specifically jobs, can change travel patterns. Changes to street design can make the experience of being on these primary commercial streets – whether by foot, bike, car, or on transit – more pleasant. Locations for future growth are needed to accommodate new households, in locations where transportation and environmental infrastructure can support them. Pockets of walkability provide opportunity for some trips to be made by foot or bike rather than by car.

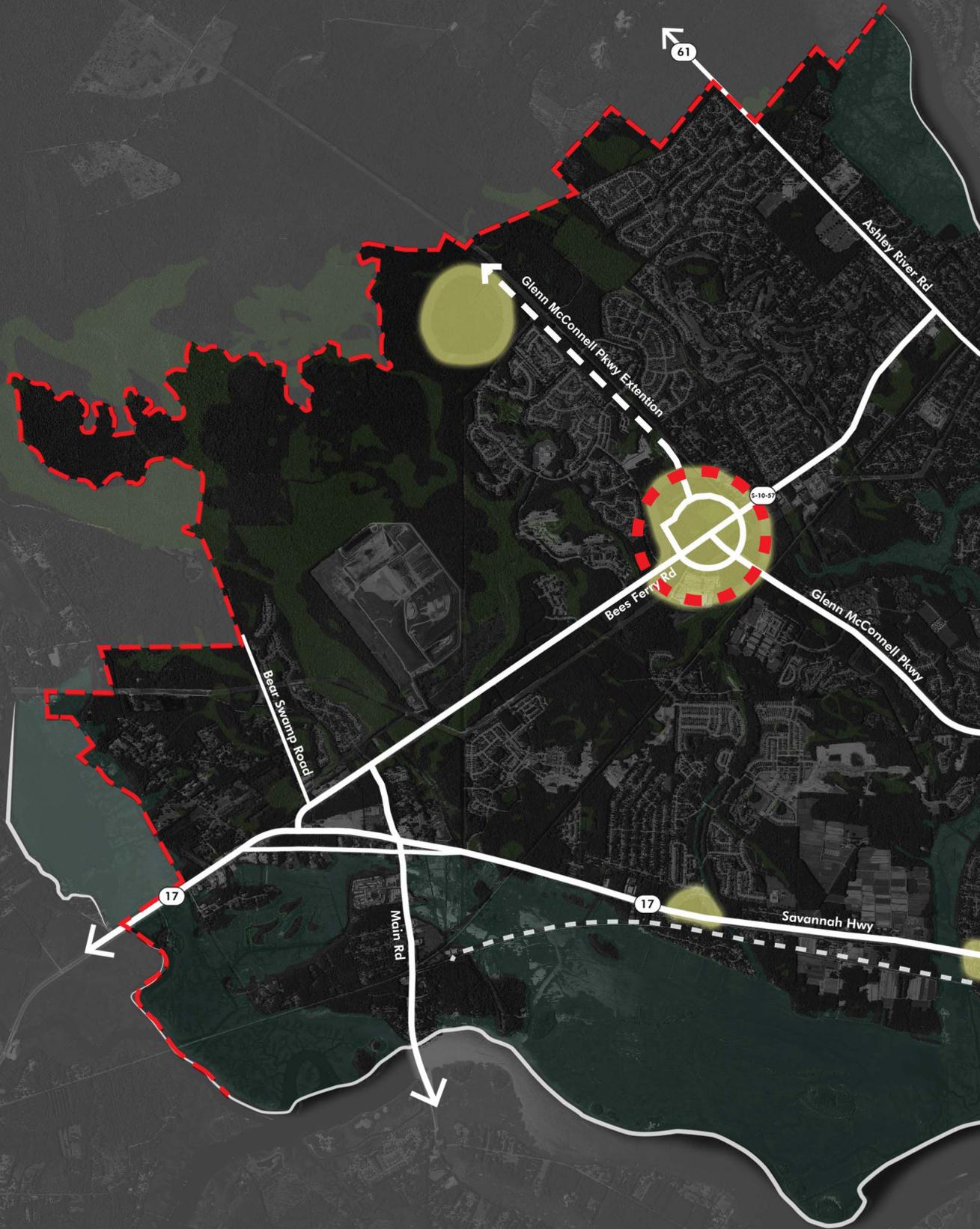
The vision for West Ashley’s future community design and land use identifies where changes to the existing built form to achieve these objectives can be focused, while preserving surrounding neighborhood character. The map on the next page highlights areas where future change and improvements are anticipated and desired. Analysis of West Ashley’s infrastructure formed the foundation for this map; Chapter 4 further describes these zones as priority progress areas as suitable for “growth” or “adaptation” due to their elevation, proximity to transportation connections, and environmental suitability. Future growth can be directed to these areas through new zoning standards that provide incentives for higher-density, mixed-use development in specific, targeted locations.

Although not the primary focus for change and intervention, there is potential for targeted improvements in and around West Ashley’s residential neighborhoods to expand mobility and enhance community open spaces, public facilities and quality of life (described further in Chapters 3 and 4). The City should continue efforts to provide improved recreation and park opportunities for residents, and pursue an Open Space, Parks, and Recreation Master Plan to address current and needed facilities, and identify land to purchase for parks (especially in the inner West Ashley areas). More connections between neighborhoods and parks should be made, including connected sidewalks, bike facilities and trail connections to encourage walking and cycling for at least some daily trips.

City policy can take proactive measures for preservation. The 2008 Preservation Plan includes discussion of the significance of West Ashley’s historic neighborhoods and assets. The City of Charleston conducted Area Character Appraisals for several of West Ashley’s Post-War residential neighborhoods. These documents can help to protect assets, and define each neighborhood’s prevailing architectural style, height, scale and mass, to better evaluate the appropriateness of any proposed future development. If desired, neighborhoods could gain further protection by pursuing formal historic designation or the adoption of Conservation Districts, which would require oversight of rehabilitations and new construction, to ensure they are consistent with existing neighborhood context.

People moved to West Ashley to experience a suburban lifestyle, with detached single family homes on yards, tree-lined streets, and separation from the level of activity found on the Peninsula. These existing residential housing options will not be changed or altered.

Rather, the vision is to make strategic interventions in focused areas, where they can positively direct future change on West Ashley's aging commercial corridors, particularly in inner West Ashley where commercial corridors are also on the highest ground and most environmentally suitable for future development.

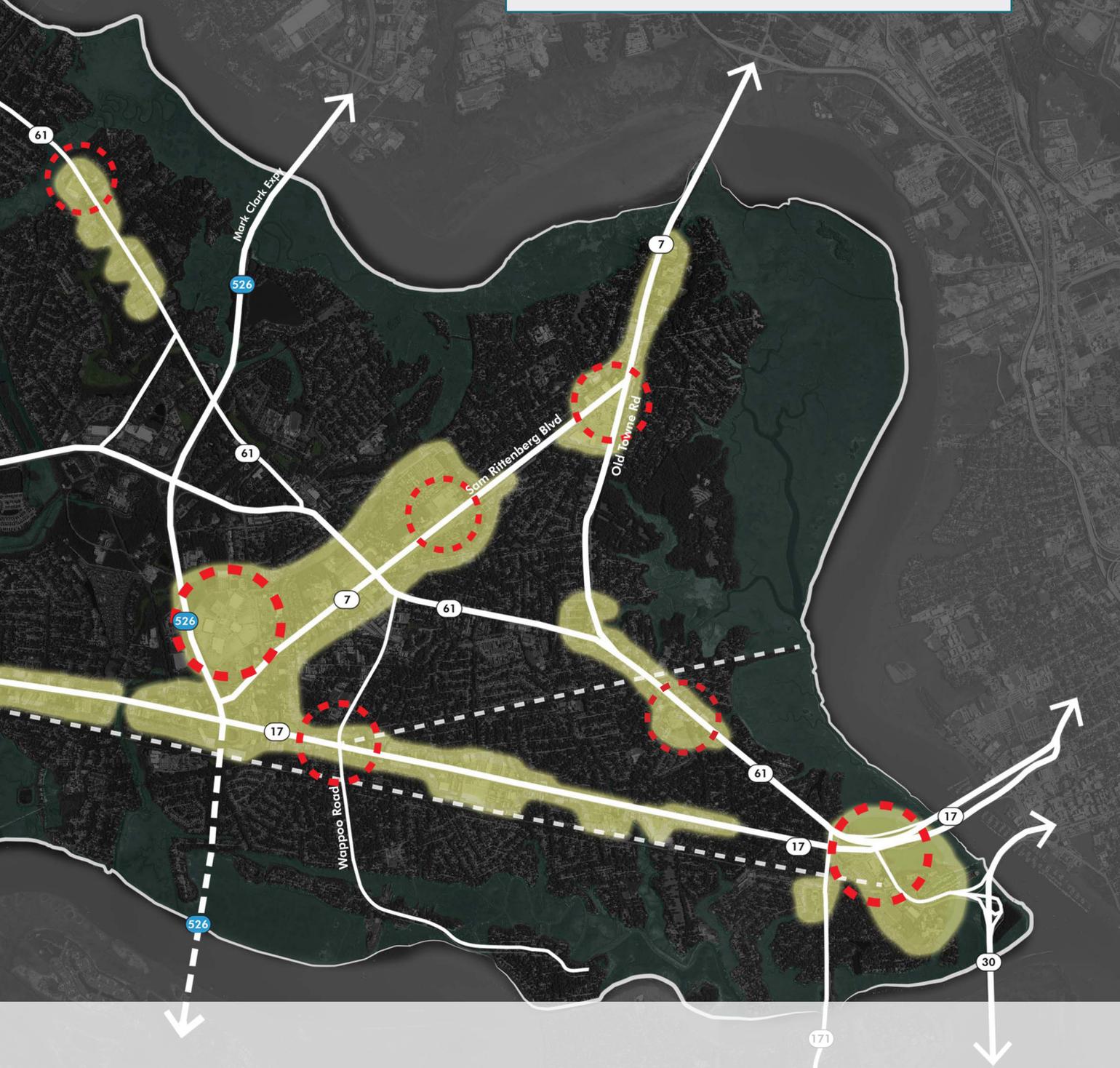


Legend

-  Change / Improvement Anticipated & Desired
-  Focus Areas
-  Major Roads
- 

OPPORTUNITIES FOR FUTURE CHANGE / IMPROVEMENTS

Map highlighting areas where future development and change/improvement are most desired and anticipated. Focus areas for future development (used to illustrate key principles of the vision later in this chapter) are circled in red.



Illustrating the Vision:

FOCUS NEW DEVELOPMENT IN CLEAR AREAS

The Citadel Mall site was identified through community workshops as a potential hub of activity in the future. Built in the 1980s, the property has recently undergone a change in ownership, and changes to upgrade the mall are anticipated. New development on and around the mall property can be complimentary to updates/changes to the mall itself.

There is opportunity at this site to use underutilized parking areas for new development with a greater

mix of uses, including workplaces, residential units, community facilities, and entertainment destinations, to better serve West Ashley. New public spaces can be used for community gathering. Enhanced transit services can use the surrounding roadway infrastructure to better connect people to the site. Improvements to stormwater infrastructure and environmental systems can mitigate impacts of development and make the area more resilient.



right: Citadel Mall, existing conditions

below: Citadel Mall, potential future conditions with new mixed-use development that includes workplaces, residences, and improved transit access.

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.



Potential for *Change Over Time*

Changes at the Citadel Mall and surroundings would likely happen over time. Illustrated in this report at two “snapshots” in time, showing how the area could evolve. Step 1 shows new walkable, mixed-use development on a portion of mall parking lot near Orleans Road. Just a couple of blocks could accommodate new workplaces and residences, and a new transit hub. Over time, longer-term goals, such as the return of some developed area back to natural area, could occur, particularly in environmentally sensitive areas to the south of the existing mall. Additional development could continue to be added to the eastern side of the mall. Areas on the western side of the mall (adjacent to I-526) could continue to be utilized for parking, mall expansion, or other mall-related uses.



Key Ideas Illustrated

- a** Mixed-use buildings with workplaces, residences, and ground floor shopfronts replace a portion of mall parking lots. The Citadel Mall represents an already developed site primed for new uses, at the intersection of existing transportation systems.
- b** A transit hub, including park-and-ride facilities and express transit service to regional destinations, supports new development.
- c** New buildings are oriented toward the street, with parking to the rear; this provides a high quality experience along the street, essential for encouraging walking, biking and transit use.
- d** New development should also reserve sites for civic buildings. This plan shows the footprint for a competitive swim facility, one of the many uses discussed at community meetings.
- e** Over time, opportunities for returning some parking/development areas to green infrastructure can be found in low-lying areas.
- f** New public spaces for community gathering should accompany new development.
- g** Structured parking, if/when needed, should occur in mid-block locations.
- h** Expansion of mall uses can occur along the mall’s western edge, with high visibility from I-526.

STEP 3



Hazelwood Dr.



Target

Belk

h

Dillard's

h

JCPenney

Sears

d

c

g

c

b

f

a

Orleans Rd

Orleans Rd



602 RAMP

602 RAMP

Sam Rittenberg Blvd.

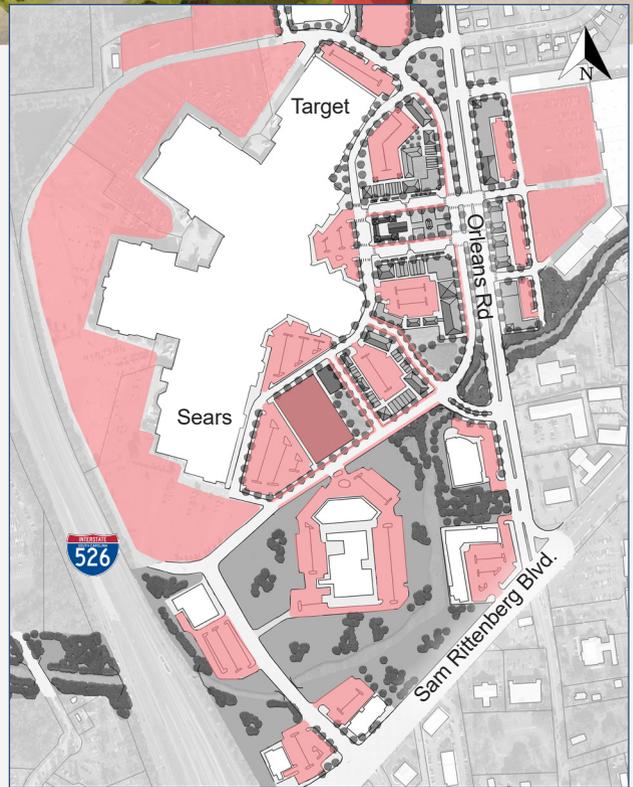
Orleans Rd



Where is the Parking?

As community participants reviewed draft sketches of potential future development in West Ashley, one often-heard question was “*where is all of the parking?*” Although there was an expressed desire to be able to walk, bike, or use transit for some future trips, and growing realization that changing transportation modes (such as ride-sharing services and self-driving cars) could bring less parking demand in the future, there is also an understanding that many trips (particularly in the near term) will be made by automobiles that require a parking space.

The plans and visualizations in this chapter show how targeted corridors and community centers in West Ashley could grow in sustainable ways, with mixed-use buildings lining walkable tree-lined sidewalks. ***This does not mean that automobiles are not provided for, and parking will be included; the difference is that in walkable centers parking should be located mostly out of view from pedestrians***, in mid-block lots (or structures, if needed). Additional parking spaces can be located on-street in parallel or angled parking. On-street parking is beneficial to ground-floor retail shops in mixed-use districts, providing a linear supply of close-in spots; it is also beneficial to pedestrians, providing a buffer between people and moving cars on the street.



In mixed-use districts, a “park-once” environment can be established, where users can accomplish many activities from one space, and parking can be shared among shops, offices, residences, and entertainment destinations. New zoning standards for mixed-use centers should be established, and strive to strike a balance between pedestrian-oriented development and necessary car storage, providing neither more nor less parking than is needed.

Enhance community brand and identity

One of the most-often heard messages from participants at *Plan West Ashley* workshops was that they desired greater community identity, and more high-quality public spaces to enhance their community image, particularly along commercial streets and at entryways.

A proliferation of generic strip commercial shopping centers is perhaps the greatest offender to community identity; although West Ashley is an important part of a highly desirable city with a rich, unique history, the commercial strips today resemble “Anytown USA”. Community members also voiced concerns over maintenance of public areas (to keep them clean from debris and trash) and lack of landscaping.

A number of steps can be taken to alleviate concerns, and enhance community identity. In the *short term*, simpler and less expensive improvements should be started to score quick victories. For example, the city is undertaking improvements to signage that will be installed soon. Increased City and neighborhood efforts to clean-up trash and debris from community spaces and simple landscape maintenance on key commercial corridors can also be initiated. These actions can improve community perceptions and increase confidence.

Actions should also be taken to enhance the West Ashley “brand”. West Ashley is the birthplace of the City of Charleston, with its own unique history, collection of neighborhoods and destinations, that form its identity. The Chamber of Commerce, Convention and Visitors Bureau, and other regional agencies can collaborate to improve the West Ashley brand, coordinated with other City efforts. Initial ideas for actions can be taken from the 2015 *Community Perceptions Survey*, which recommended creating interactive maps of parks, greenways, and destinations, and establishing a merchants association. Gateway signage should announce key West Ashley destinations; for example, the interstate exit for Cosgrove Road can be changed to the easily identifiable, historic Old Towne Road. Branding efforts can help to bolster community pride, and attract investment and redevelopment in targeted areas.

In the *mid-to long-term* horizon, larger projects must be undertaken to beautify the area and reinforce West Ashley identity. This should include streetscape beautification/enhancements along major corridors such as Savannah Highway, Sam Rittenberg Blvd., Ashley River Road, Folly Road Blvd., Old Towne Rd and St Andrews Blvd. The improvements should include enhanced landscaping (street trees, green medians), sidewalks, benches, and other amenities. Undergrounding of utilities should also be pursued as part of redevelopment and streetscape improvement projects. The City could take the lead on this with streetscape and utility improvements in conjunction with the new Fire Station/Memorial site in the Dupont/Wappoo area.

Another mid- to long-term initiative is to attract an expanded mix of land uses and services to support a diverse population. This includes new job centers, adding workforce/affordable housing, and providing age-friendly solutions that allow residents to comfortably age in place. All of these elements reinforce West Ashley’s “brand” as a desirable place to live.

Additional projects can be undertaken to honor the history and culture of West Ashley. For example, in the Maryville/Ashleyville neighborhoods, community members expressed a desire to celebrate their unique history, so that it will be understood and preserved for future generations. Examples could include the designation of a historic corridor along 5th Avenue, special neighborhood street signs, or historic markers. A community-based process should be undertaken to allow residents, descendants, local leaders, and historians an opportunity to work together to determine an appropriate way to honor the history of the neighborhoods.

The adoption of new zoning and design standards, particularly for sites at West Ashley’s entryways key commercial corridors, and other identified priority progress areas, can also enhance community identity. The urban design of these critical, highly-visible, potentially iconic parcels will set the tone for the rest of West Ashley. New buildings should be designed to fit seamlessly within the Lowcountry environment and its architectural traditions. Place-specific regulations should be established in priority areas for growth and/or preservation, so all the buildings belong together in an ensemble, while still allowing for each gateway or corridor to have its own creative architectural expression and variety.

These regulations can address (to a greater or lesser degree) architectural features such as materials, configurations of major elements (walls, doors and windows, roofs, columns, piers, porches, storefronts, balconies, and the like), and quality control. The extent to which architectural regulations are more (or less) strict or more (or less) flexible about architectural style can be adjusted to match the neighborhood’s culture; however, the new design regulation should firmly establish the relationships of new buildings to the streets and public spaces they front and shape. These relationships are a function of the combination of building height, setbacks, street widths, finished floor elevations, and overall massing.

New regulations should be focused primarily on building form, to implement the desired community vision, and support a great mix of uses. It may be desirable to also limit certain uses in some areas. For example, the Savannah Highway corridor contains a multitude of automobile service and sales uses; although these businesses do provide jobs and other benefits, many other neighborhood-serving uses are also needed in the area. For this reason, automobile service and sales uses should be limited to existing sites, so that other sites in the DuWap area can serve other community needs.

The implementation of new zoning and design standards can be overseen by a joint City/County Design Review Board (DRB) for key commercial corridors. A streamlined and improved DRB process can be established, to provide more predictability for developers as well as community members. The illustrations in Plan West Ashley (and key urban design ideas illustrated) can be used as a guide until new design guidelines that ensure activation of the street and architecture that belongs in the Lowcountry can be put into place.

Key ideas for focus areas throughout West Ashley are illustrated on the following pages.

right: Illustrative plan for Ashley Bridge District. This illustration builds upon ideas and issues expressed in the Ashley Bridge District Plan (1997).

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.

Illustrating the Vision:

ENHANCE COMMUNITY BRAND AND IDENTITY AT ENTRYWAYS

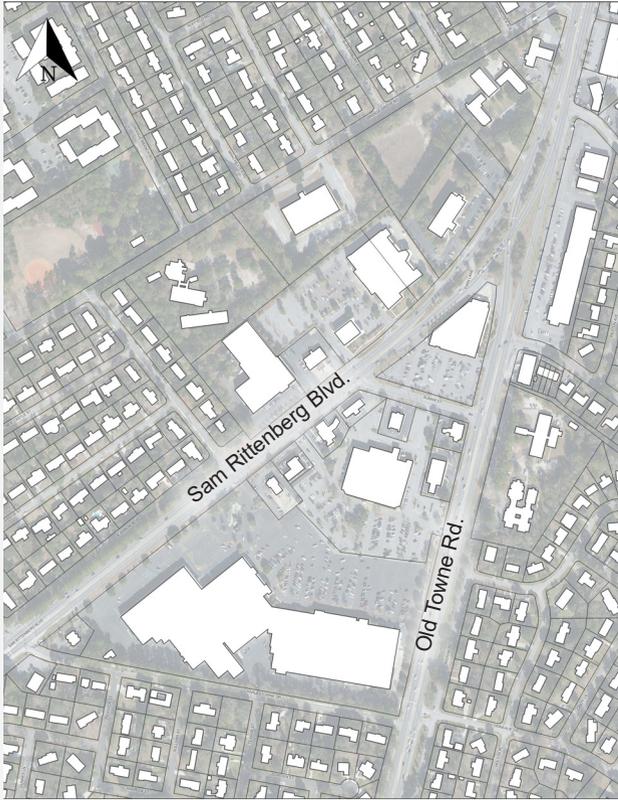


Key Ideas Illustrated

- a** New development at this entryway is focused on creating a visibly attractive public realm and better environment for pedestrians. Street-oriented buildings and plazas define a high-quality streetspace. Some new development is clustered around courtyard settings, with ample parking set behind the new buildings.
- b** An iconic taller building should be erected here on this unique site, as a new focal point for this district. The eyes of visitors crossing over the Ashley River will be drawn to the building's architecture instead of highway overpasses, and its silhouette can become a symbol for progress in West Ashley.
- c** Popular long-time establishments such as the *Ye Old Fashioned Ice Cream Parlor* can remain alongside new development, providing continuity and contributing to community identity.
- d** Trails connect new development, the bridge and the West Ashley Greenway.
- e** A new multi-modal bridge will link West Ashley to Downtown Charleston, providing a safe, reliable way for residents to have the option of a car-free commute.

Illustrating the Vision:

ENHANCE COMMUNITY BRAND AND IDENTITY AT ENTRYWAYS



above: Sam Rittenberg Blvd. / Old Towne Rd. intersection, existing conditions

right: Illustrative plan for Sam Rittenberg Blvd. / Old Towne Rd. intersection and surroundings

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.

Key Ideas Illustrated

- a** Community participants described the Sam Rittenberg / Old Towne intersection as the “suicide merge” - uncomfortable for motorists, and unsafe for pedestrians and cyclists. Rather than merging together, these streets can meet at a signalized intersection, regularizing traffic flow and allowing for safer movement. Details for this idea, including additional design options, can be found in Chapter 3.
- b** The City recently acquired the site of the vacant Piggly Wiggly; future use of this site should benefit the community, and given the prominent location positively contribute to West Ashley identity. A portion of the property is proposed to be used to facilitate intersection improvements. This sketch shows a new building and public space to front the improved intersection. Parking (which could include a parking structure) is lined from view of pedestrians on the street. This new building can be the architectural centerpiece to an improved entry district; special attention should be given its design.
- c** Street beautification on Sam Rittenberg Blvd. and Old Town Rd. can include street trees, landscaped medians, and continuous sidewalks. In the recent past, high vehicular speeds and lacking pedestrian infrastructure have dictated an auto-oriented form of development. Public street improvements that make walking viable can encourage additional building improvements by private property owners on surrounding parcels in a walkable, mixed-use, pedestrian-oriented fashion. More details about proposed street design can be found in Chapter 3.
- d** Over time, a network of streets can improve larger parcels such as the Ashley Landing plaza, providing greater pedestrian access, and an oasis of walkability at this key entry district. Initially drive aisles through parking lots, over time new streets can be lined by trees, new plazas/public spaces and new buildings that hold a variety of uses, including retail/entertainment destinations, workplaces, and residences. This sketch shows one of many possible alignments/layouts for a new connected street network through the area.



Northbridge Baptist Church

Bi-Lo

GDC Home

Publix

Frothy Beard Brewing

Pivotal Fitness

Reuse vacant sites, improve character

Reuse of vacant commercial sites can renew and refresh West Ashley's commercial corridors, to improve community character and better serve surrounding neighborhoods.

On inner West Ashley's commercial corridors (Savannah Highway, Sam Rittenberg Boulevard, and St. Andrews Boulevard), vacant commercial plazas and underutilized, aging commercial properties offer an opportunity for retrofit into walkable nodes

similar to the popular Avondale neighborhood center. Generic shopping areas can be transformed over time into mixed-use neighborhood centers, with street trees, sidewalks, and the fronts of buildings lining the streetspace rather than parking lots.

Ideas for economic development to achieve a more complete, diverse mix of land uses along these key corridors are described in Chapter 6.



right: Savannah Highway at Wappoo Road, existing conditions

below: Visualizing potential future conditions. Improved street design and new development on inner West Ashley's commercial corridors can contribute positively to community character.

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.



Illustrating the Vision:

REUSE VACANT SITES, IMPROVE CHARACTER

Pockets of new development along Savannah Highway, coupled with street and intersection improvements, can positively impact the character of the built environment over time. Street redesigns of these kinds can improve safety for all users, upgrade aesthetic appearance, stimulate private investment and property values, and make traffic operations more efficient, all while catching up on deferred maintenance and creatively addressing stormwater or fixing below-grade utility concerns. The intersection of Wappoo Road and Savannah Highway is one such location. This intersection is where the critical connection of the West Ashley Bikeway across Savannah Highway to the south (toward the West Ashley Greenway) will be made. This area could become a new walkable mixed-use neighborhood center, similar to nearby Avondale, better meeting the needs of both visitors and surrounding residents.

right: Illustrative plans for Savannah Highway / Wappoo Road intersection and surroundings, showing the critical connection of the West Ashley Bikeway across Savannah Highway, to the West Ashley Greenway.

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Key Ideas Illustrated

- a** As properties along Savannah Highway and Wappoo Road are redeveloped, new buildings (rather than parking lots) front the street, improving pedestrian conditions and providing distinctive architecture to improve community character. Parking is provided to the rear.
- b** Two options are shown for the alignment of the West Ashley Bikeway to this key intersection. In both, the Bikeway is enhanced and defined by the fronts of new buildings; businesses within these buildings also benefit from addresses on the trail.
- c** In the top image, the Bikeway bends toward Savannah Highway. This provides a contiguous development parcel for new street-oriented buildings at the intersection, with parking to the rear. A land swap with the property owner here can ensure the connection to Savannah Highway is completed; cyclists would continue along a trail on the north side of Savannah Highway and cross at the intersection.
- d** In the bottom image, a direct Bikeway alignment to Wappoo Road is preserved. Although this potentially results in more challenging development parcels, the distinctive flatiron building could quickly become a community landmark. This option would be more intuitive for cyclists.
- e** The existing Firefighters Memorial and new fire station anchor the western side of this intersection.
- f** The West Ashley Greenway East Coast Greenway must eventually be connected to the peninsula, via either bike lanes on an existing bridge or a new, independent bicycle/pedestrian bridge.
- g** Streetscaping improvements for Savannah Highway include street tree planting (near term) and burying utilities (longer term). More ideas for street design and intersection improvements along Savannah Highway can be found in Chapter 3.



Illustrating *Change Over Time*: REUSE VACANT SITES, IMPROVE CHARACTER

Sam Rittenberg Boulevard has some of the best opportunity sites in West Ashley for future development. Aging commercial centers, many with vacant storefronts, await a new future. On higher elevation and already developed/disturbed, this land is appropriate for new investment from an environmental perspective. The Sam Rittenberg corridor is a critical transportation linkage, with potential for enhanced transit connections, and access to North Charleston and beyond.

The City of Charleston’s Design Division previously studied the area near the intersection of Sam Rittenberg Boulevard and Ashley Hall Road. That illustrative plan showed a new network of walkable streets to allow better access across large parcels; new public spaces for community gathering; and new street-oriented buildings to define streets, with parking to the rear.

This sketch builds upon that earlier work. Streets are designed to replace parking lot drive aisles over time, so that new development could be gradually phased in as individual property owners make decisions regarding the use of their land. The illustrations on these pages show one potential way that could happen. Some existing buildings, including the regional library, remain, now fronting new walkable streets.

right: Illustrative plans showing potential change-over-time near the intersection of Sam Rittenberg Boulevard and Ashley Hall Road.

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.



STEP 3



Key Ideas Illustrated

- a** Parking lot drive aisles can be converted to a network of new walkable streets, faced by the fronts of new buildings.
- b** Parking for new buildings is provided in on-street mid-block locations. The surface parking areas shown can support 1 to 4 story buildings.
- c** New community spaces can be reclaimed from former parking lots.
- d** Existing buildings, such as the regional library and the St. Andrews Family Fitness facility, can remain and be incorporated into the new walkable street network.
- e** Wetlands and other environmentally-sensitive areas are preserved and enhanced.
- f** A green median and frontage road along Sam Rittenberg Boulevard provides a pedestrian-friendly frontage for new buildings. More information on street design is provided in Chapter 3.

Shorten trips with new destinations (work, entertainment, recreation)

In outer West Ashley, reaching most destinations requires an unpleasant drive along crowded roadways. Planning for small pockets of mixed-use development in outer West Ashley can help to alleviate this problem by providing more destinations closer to homes.

The City of Charleston Comprehensive Plan provides for “urban center” and “neighborhood center” designations in select areas of outer West Ashley, at the West Ashley Circle and within the planned Long Savannah development. Participants at community input workshops expressed support for an “mini-Avondale” model; in other words, mixed-use in outer West Ashley should not look like the Peninsula, but rather at a scale and appearance that is appropriate for the West Ashley context. Ideas for key sites are illustrated on the following pages.

right: Illustrative plan near the intersection of Ashley River Road and Old Parsonage Road.

Note: All illustrative redevelopment plans and visualizations in *Plan West Ashley* are conceptual, intended to explore future development potential and provide direction regarding key design elements such as building form, character of the public realm, street connectivity, open spaces, and use mix. Architectural style and specific site improvements are not mandated.



Illustrating the Vision:

SHORTEN TRIPS WITH NEW DESTINATIONS

Key Ideas Illustrated

- a** At the intersection of Ashley River Road and Old Parsonage Road is a vacant commercial site. This site could be repurposed for a small neighborhood center. Buildings front the streets, creating a great pedestrian environment. Ample parking is located behind the buildings.
- b** A public open space between the proposed buildings and Ashley River/Old Parsonage Road allows for the preservation existing large oak trees.
- c** Nearby parcels could also be redeveloped in a pedestrian-oriented manner.
- d** A plaza space terminates the street; an adjacent green has views/access to the water.
- e** Access to Church Creek can be provided via a winding picturesque pathway and a small boathouse pavilion.

**Illustrating the Vision:
SHORTEN TRIPS WITH NEW DESTINATIONS**



PLAN WEST ASHLEY | COMMUNITY DESIGN & LAND USE | VISION

above: Visualizing a new neighborhood center in Outer West Ashley. The preservation of oak trees and natural areas, character, and scale of buildings reinforce the outer West Ashley identity. Small pockets of walkability, or “mini-Avondales” as termed by community participants, can meet the desire for destinations within short distances of homes.



Illustrating the Vision:

SHORTEN TRIPS WITH NEW DESTINATIONS

The construction of the West Ashley Circle demonstrated the City's vision for a commercial center for outer West Ashley. Problems associated with long commutes were foreseen; residents would need services closer to homes. The Circle, as it exists today, does not yet serve that intended purpose. Approved development of a new neighborhood grocery will be a good start.

Future development is challenged by wetlands and natural areas. Solutions to area flooding are being studied; new development must not exacerbate the problem. Goals for making this area into a complete town center include creating a node of walkability (a park-once environment that is also a viable transit destination); a mix of uses including workplaces, shops for neighborhood services and entertainment destinations; and preserving and providing access to natural systems.

Key Ideas Illustrated

- a** The existing West Ashley Circle becomes a pedestrian-oriented neighborhood center, complete with workplaces, shops, civic structures, homes, and other amenities.
- b** Large areas around the West Ashley Circle are maintained as natural areas or passive park space, minimizing impact of development to existing wetlands and drainage systems.
- c** West Ashley Circle could be a park-and-ride transit hub in the future; creating a transit-viable destination here is a plan goal.
- d** The existing power line and easement is realigned to bend around the circle, to maximize contiguous development areas and create an attractive streetspace free from overhead power lines.
- e** The extension of Glenn McConnell Parkway should continue north of the circle. This extension should be designed as a “green” connection, with bioswales and other green infrastructure to offset impacts to environmentally-sensitive lands.
- f** This illustrative plan represents a “snapshot in time” at some point in the future, not a maximum or minimum buildout. Growth here will be gradual, over a long period of time.

right: Illustrative plan for the area of the West Ashley Circle.

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FULMAR PL
BRAMBLING LN

DAWN
HUNTER CREEK
SUGARBUSH WAY
FOXHALL
HEPPLEWHITE

HIALEAH CT
WINNERS CIR

Church Creek

Bees Ferry Rd

Glenn McConnell Pkwy

Grand Oaks Blvd

Walmart

West Ashley High School

IMPLEMENTATION

The following steps can be taken to implement the vision for UPGRADING community design and land use.

Implementation should integrate data collection and analysis in all future project studies and improvements. Types of data may include traditional data and/or more sophisticated analytics as available.

Immediate Steps (first 2 years):

- *Formally adopt the Plan West Ashley vision.* The Plan West Ashley document establishes a vision to guide future infill, redevelopment, and preservation. A next logical step would be for the main ideas of the vision to be adopted, in concept, by the City of Charleston. This will send an important message to residents, property owners, and investors that the City and community support the vision and intend to implement the main concepts. This report can be used as a tool to evaluate new development proposals, future budgets for public improvements, and rezonings for consistency with the community vision.
- *Coordinate implementation activities with Charleston County, Regional and State planning bodies.* Regular Plan West Ashley meetings should be established between the City, County, Regional (Berkeley-Charleston-Dorchester Council of Governments) and State planning representatives. The purpose of meetings is to review development proposals for consistency with the Plan vision, coordinate on public infrastructure improvements, implement stormwater/drainage recommendations, and coordinate other implementation activities.
- *The City and County should develop community engagement strategies to improve communication, education, and participation for residents around locally important community design and land use issues.*
- *Develop a set of urban design principles for key sites and corridors.* Based on the illustrative vision depicted for key sites in *Plan West Ashley*, a set of principles can be established to inform new development and public improvements. For example, new buildings on key sites and

corridors should contain a mix of uses, and front sidewalks, trails and open spaces, with parking located to the rear. Building setbacks, height and other design details should be calibrated based on context and location (for example, sites in outer West Ashley should have standards different from those east of I-526). Street improvements on key corridors should include connected sidewalks, street trees, appropriately-scaled lighting (pedestrian-scaled fixtures in walkable mixed-use centers), landscaping, and crosswalks at intersections. The principles can be used to inform and guide development and public improvements until new regulatory codes can be adopted.

- *Establish a joint City/County Design Review Board (DRB) for key commercial corridors.* The City has a DRB for commercial and multi-family projects but the County does not. Establishing consistency in regulation is key to predictable results. The joint DRB can use Plan illustrations as well as the urban design principles for key sites and corridors to inform decisions, until such time that new zoning standards can be put into place. A streamlined and improved approval process can be established, to provide more predictability for developers as well as community members.
- *Establish a West Ashley Community Brand & Identity Committee.* The purpose for this committee is to recognize and celebrate West Ashley's historic charm and quality neighborhoods as a unique area within the greater City of Charleston, and to work to improve community image and perception. This task can be undertaken as a coordinated effort of the Chamber of Commerce, the Convention and Visitors Bureau, and other regional agencies, and be coordinated with other City efforts. In the near-term, this task will include enhanced public and private clean-up efforts along commercial corridors. Guidance and other potential immediate and near-term action steps can be found in the opportunities and recommendations identified in 2015 *Community Perceptions Survey*, such as creating interactive maps of parks, greenways, and destinations, and establishing a merchant's association. Over time,

other goals such as implementing streetscape/beautification improvements, attracting diverse uses and services to West Ashley, and instituting design standards at entryways can be undertaken.

- *Pursue neighborhood preservation.* Some areas in inner West Ashley are eligible for historic designation. Pursuing official designation can provide additional protections for neighborhood form, character and architectural appearance.

Near-Term Steps (2 years – 5 years):

- *Draft and adopt mixed-use regulatory standards to replace and modernize existing zoning, to guide new development on commercial corridors, entryways, and other focused priority progress areas.* The vision for West Ashley’s future land uses is for preservation of neighborhoods, and for strategic, focused land use interventions to create more areas similar to the existing neighborhood center for Avondale.

By establishing clear standards that support plan goals and provide a visual guide to design criteria, people can be assured that new development will be beneficial to community character.

As the first step, the City can create a detailed map of parcels/areas that would benefit from new regulatory standards; this can be based on the map found on pages 2.22 – 2.23, and include the areas of the Citadel Mall and West Ashley Circle. New standards for these areas should implement the urban design principles established for key sites and corridors. Future growth can be directed to these areas through new zoning standards that provide incentives for higher-density, mixed-use development in specific, targeted locations. Development rights at these targeted sites could include earned incentives similar to the Upper Peninsula Eco District zoning with entitlements earned by the developer.

Specific standards for Lowcountry architectural details and character (materials, proportions, scale, etc.) should be included. Further description of potential elements to include as part of new design standards is provided on page 2.30.

Street and public space design in new mixed-use centers should also be addressed as part of regulatory updates. Requirements and standards for new streets to subdivide large parcels, and for new community open spaces to accompany future development should be included. In addition, desired pedestrian-friendly street design elements for key corridors (sidewalks and crosswalks, street trees and landscaping, lighting and other streetscape elements) can be codified through adopted public realm standards.

This plan is not recommending a wholesale change of West Ashley’s suburban development form. Much of West Ashley is envisioned to remain the same as it is today: quality single-family neighborhoods, served by auto-oriented commercial corridors. Inserting pockets of mixed-use, walkable development can change commute patterns (for at least some trips), providing jobs and other destinations closer to homes. Focused areas for new development, located based on study of existing built form and environmental systems, can strengthen economic development. The key is to map specific areas where a different urban form is desired, write land use regulations to guide private investments as they occur over time, and implement public investments (street design, public spaces) to support the changing built environment.

- *Enhance and beautify West Ashley gateways with appropriate signage and landscaping.* Gateway entries are along Savannah Highway, Ashley River Road, Sam Rittenberg Blvd., Old Towne Road, St. Andrews Blvd., and Folly Rd Blvd.
- *Pursue implementation of other transportation, green infrastructure, housing and economic development recommendations.* Important implementation ideas are found in other chapters of this document that relate to land use and community design. Implementation of these concepts can start in the near term and continue over the long term.
- *Transportation (Chapter 3):* Ideas to rethink street design on key corridors, including streetscape design (sidewalk, trees, medians)

and intersection crossings. Also, actions are recommended for connecting West Ashley Greenway to the Peninsula.

- *Green infrastructure (Chapter 4):* Requirements for green infrastructure should be incorporated into regulatory codes, to make each new development that occurs more resilient. Utilities should be undergrounded as part of redevelopment and streetscape improvements.
- *Housing choice (Chapter 5):* As part of new neighborhood centers, a mix of housing types is advocated, to give choices to residents and increase affordability.
- *Economic development (Chapter 6):* Ideas to encourage the reuse of vacant sites with a complete mix of uses, including workplaces.

Longer-Term Steps (5 years – ongoing):

- *Add streetscaping (landscaping, appropriately scaled lighting, sidewalks, curb and gutter, mast arms, etc.) along key commercial corridors.* Key corridors include Savannah Highway, Sam Rittenberg Blvd., Folly Road, Old Towne Road, St. Andrews Blvd., and Ashley River Road.
- *Evaluate progress.* At regular intervals (perhaps every 3 to 5 years), an evaluation should be conducted to check implementation progress, successes and failures. This evaluation should be led by the City, with participation from the County, BCDCOG, neighborhood councils, and other key stakeholders. The immediate and near-term strategies should be evaluated for effectiveness and re-prioritized for the next term. All aspects of the Plan, including community design and land use, transportation, infrastructure and sustainability, housing, and economic development, should be evaluated within the same timeframe. Members of the planning team could be invited to participate in the evaluation. New strategies can be developed, informed by experience and progress to date. The Plan West Ashley vision should be a “living” plan that is updated and used to guide future growth in sustainable forms for years to come.



3

TRANSPORTATION

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COMMUNITY CONCERNS	3.16
VISION	3.18
IMPLEMENTATION	3.42

CONNECTED

Transportation

CHAPTER OVERVIEW

EXISTING CONDITIONS

- The street network in West Ashley is characterized by several large multi-lane state-owned thoroughfares that carry significant amounts of vehicle traffic, supplemented by local neighborhood-scale streets that are either state-, county-, and city-owned. The system is constrained in that there are limited river crossings (Ashley and Stono Rivers), with major employment centers located across the rivers outside of West Ashley. It is also physically constrained on many corridors from further widening due to lack of available right of way.
- CARTA provides several transit routes; with the exception of Route 2 (the express route) all routes operate on 60-minute headways, which may be inadequate to encourage a mode shift to transit during peak travel times or in high density areas. Frequency of service is also currently limited due to budgetary restraints.
- In 2008, Charleston City Council passed a Complete Streets Resolution geared toward creating a network of streets that allows all modes of transportation (bicycle, pedestrian, public transit and automobile travel). Currently, West Ashley's multi-lane highway corridors are inaccessible and unsafe for pedestrians and cyclists, creating barriers to mobility between neighborhoods and to parks, schools and services.
- West Ashley offers opportunities related to active transportation and increased transit usage, including moderately dense residential neighborhoods with nearby commercial districts, and the West Ashley Bikeway and Greenway trails.

COMMUNITY CONCERNS

- Participants at community input workshops expressed congestion and traffic as top concerns for residents in West Ashley today.
- The West Ashley community wants more/enhanced connections: complete I-526, extend Glenn McConnell Parkway, connect the neighborhoods.
- West Ashley needs more/enhanced water connections, which could include a pedestrian/bike bridge and/or a water taxi.
- The West Ashley Bikeway and Greenway should be connected.
- Pedestrian/bike facilities need to be upgraded to be a viable option: connect sidewalks/crosswalks, create separated bike lanes, make safety improvements.
- Transit needs to be upgraded to be a viable option: explore premium service (rail, LCRT, PRT), park-and-ride, express service, shuttle.

VISION

- West Ashley is envisioned to be **CONNECTED**: connected to the region and neighborhoods, connected to jobs and schools, connected to recreational activities, and connected to goods and services.
- The plan has two major areas of focus: addressing vehicular traffic congestion; and then, just as importantly, providing enhanced mobility options to stem the growth in car trips by getting a larger percentage of future trips to occur using shorter car trips, walking, biking and transit.

IMPLEMENTATION

- The vision of a better-connected West Ashley where residents and visitors can actually choose among varying modes of mobility is comprised of a multitude of specific projects and policy measures for vehicular, pedestrian, bicycle, and transit system improvements. Some of these initiatives have been in process for many years, including the completion of I-526, and are reiterated in this plan as part of the regional network enhancements that are being moved forward by multiple jurisdictions and entities.
- Detailed implementation recommendations are described on pages 3.40-3.46, including projects and policy recommendations. Many initiatives are coupled with land use changes to create more walkable mixed-use nodes. The nexus of a walkable, mixed-use land use pattern coupled with supporting transportation network can help realize the community vision.

EXISTING CONDITIONS

Street Network

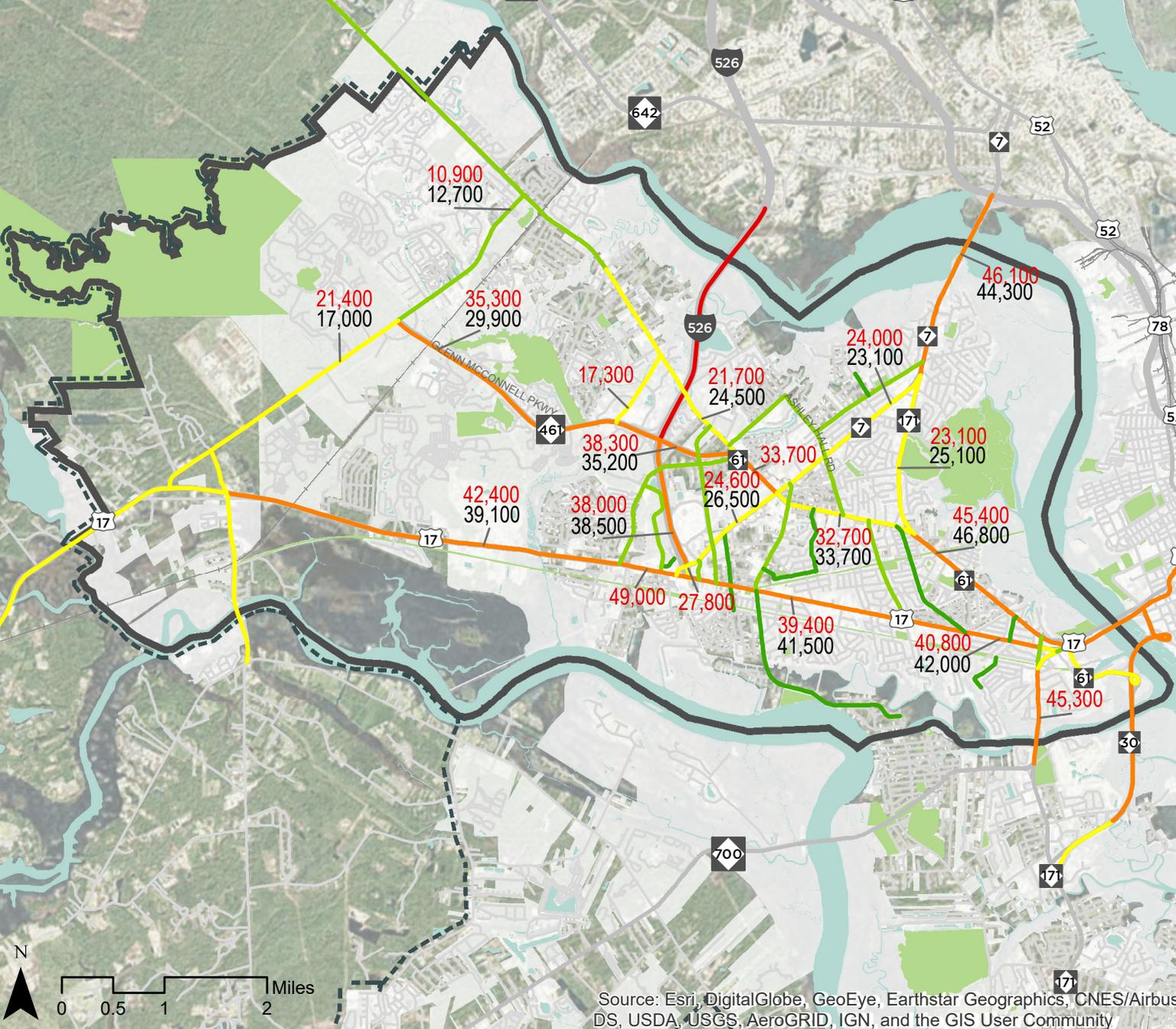
The street network in West Ashley is characterized by several large state-owned corridors that traverse the area and carry significant amounts of vehicle traffic, supplemented by many local neighborhood-scale streets that are either state-, county-, and city-owned that serve the residents of West Ashley. The system is constrained in that there are limited river crossings (Ashley and Stono Rivers) surrounding West Ashley, with major employment centers located on the Charleston Peninsula and North Charleston. Residents of West Ashley and James and Johns Islands are funneled onto two bridge crossings to North Charleston and areas north via SC 7 and I-526 and two bridge crossings onto the Peninsula and areas east in the Charleston Neck and Mount Pleasant via James Island Expressway and US 17/Savannah Highway. With large employers such as Boeing and The Medical University of South Carolina (MUSC) located across these bridge connections, commuter traffic experiences congestion during peak commute times. The map on the following page shows daily traffic data for year 2006 and 2016, which indicates that while traffic has grown in some places, it has actually decreased in others. Data shown is daily traffic volumes; it is likely that peak hour traffic may have increased in locations, and the community articulated that traffic today seems worse than it was a few years ago.

The major roads that serve West Ashley include:

Mark Clark Expressway/Interstate 526

Primarily four lanes that are divided by a median (2 in each direction), Interstate 526/Mark Clark Expressway connects US 17 in the south of West Ashley to North Charleston and the Charleston International Airport/Boeing. The interstate has wide outside shoulders and a large grass median. I-526 has an interchange connection at Paul Cantrell Boulevard within West Ashley and terminates at the US 17 and Sam Rittenberg Boulevard area. The terminus of I-526 is the source of some of the greatest traffic congestion within the study area, as regional trips terminate into the surface street network, exacerbating traffic issues already occurring on US 17/Savannah Highway. Additionally, the confluence of regional and local vehicular traffic at this point renders this area unaccommodating to cyclists and pedestrians. In 2016, per South Carolina Department of Transportation (SCDOT), I-526 carried a 2016 Annual Average Daily Traffic (AADT) of 80,900 in the vicinity of the Ashley River Bridge. SCDOT has plans to widen I-526 from the Rivers Avenue interchange to the Paul Cantrell Boulevard interchange. The State also has plans to extend/complete I-526 south to Johns Island. The City and County are fully supportive of I-526 completion but funding is waiting for approval from the State Infrastructure Bank.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Existing Traffic Counts (2016-2006) Showing Increases and Decreases

above: Annual Average Daily Traffic (AADT) for West Ashley. 2016 counts are shown in red. 2006 counts are shown in black.

left: Peak congestion on Savannah Highway.

Legend

- AADT (2016)**
- <5,000
- 5,000 - 15,500
- 15,500 - 33,000
- 33,000 - 67,500
- 67,500+
- 2016 AADT
- 2006 AADT
- Streets
- Railroads
- Parks
- Water
- West Ashley
- Charleston City Limits
- Urban Growth Boundary

US 17/Savannah Highway

Savannah Highway is four travel lanes with a grass median between Main Road and the vicinity of Dobbin Road; six travel lanes between Dobbin Road and I-526 with a continuous left turn lane; and four travel lanes with a continuous left turn lane between I-526 and the bridge to the Charleston Peninsula. Speed limits vary from 35 mph on the east end of the corridor to 55 mph as the corridor travels west. Land use along the corridor is characterized as auto-oriented strip development. On the eastern end, the corridor serves as a “main street” for Avondale and other neighborhood commercial nodes, with land uses that creates more of an entertainment and restaurant node, in spite of the auto-dominated character of the street itself. Sidewalks are present on most of the corridor, but lack adequate crossings, shade or separation from fast-moving traffic; and dedicated bike facilities are lacking. There is no access control along the corridor. The traffic signal timing along US 17 in West Ashley has recently been updated. Traffic signal coordination and updated timings allow for corridor efficiency for vehicular traffic. A neighborhood street grid system connects neighborhoods to the US 17 corridor. Savannah Highway (US 17) is an SCDOT principal arterial roadway. Savannah Highway has a 2016 SCDOT AADT of 49,000 west of I-526 and an AADT of 39,400 east of I-526.

Bees Ferry Road

Bees Ferry Road is four travel lanes divided by a grass median from US 17/Savannah Highway to West Ashley Circle; six travel lanes with landscaped median between West Ashley Circle and Winners Circle; and four travel lanes with landscaped median from Winners Circle to Ashley River Road/Highway 61. It also includes a shared use path along the north side and sidewalk along most of the south side, although separation from moving traffic is minimal in some places. Pedestrian/bicycle crossing locations are few between and are located at the signal controlled intersections. The land use along the corridor consists of residential subdivisions, commercial areas, and a significant amount of undeveloped land. Currently, the only area where buildings directly front the street is in the vicinity of its intersection with Ashley River Road on the east end.

Glenn McConnell Parkway/Paul Cantrell Blvd

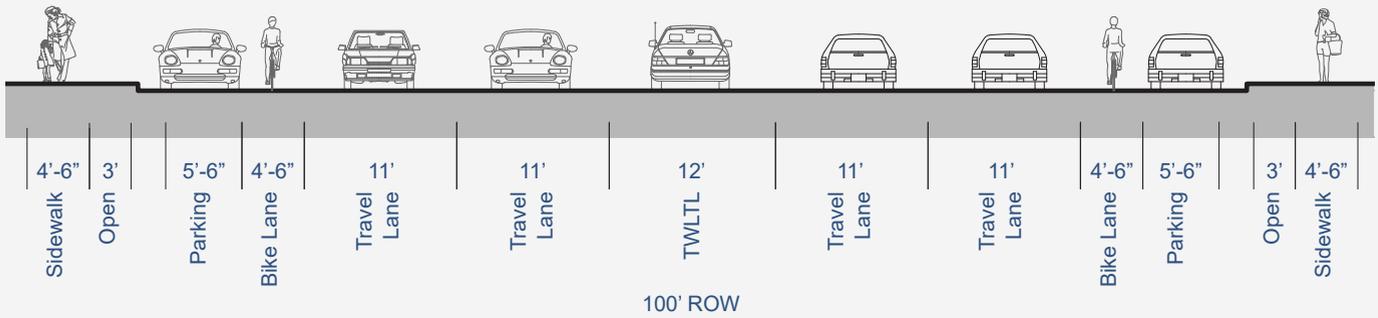
Glenn McConnell Parkway and Paul Cantrell Boulevard are primarily four travel lanes with a grass median, except in the vicinity of its interchange with I-526 where Paul Cantrell Boulevard widens to six travel lanes. Land uses transition from west to east through residential and commercial areas to big-box retail in the vicinity of the I-526 interchange, and to office and retail uses near its eastern terminus with Ashley River Road. The corridor lacks sidewalks, but includes a wide outside shoulder in most of the four-lane sections. Glenn McConnell Parkway (SC 461) has a 2016 SCDOT AADT of 35,300.

Ashley River Road/St Andrews Blvd/Hwy 61

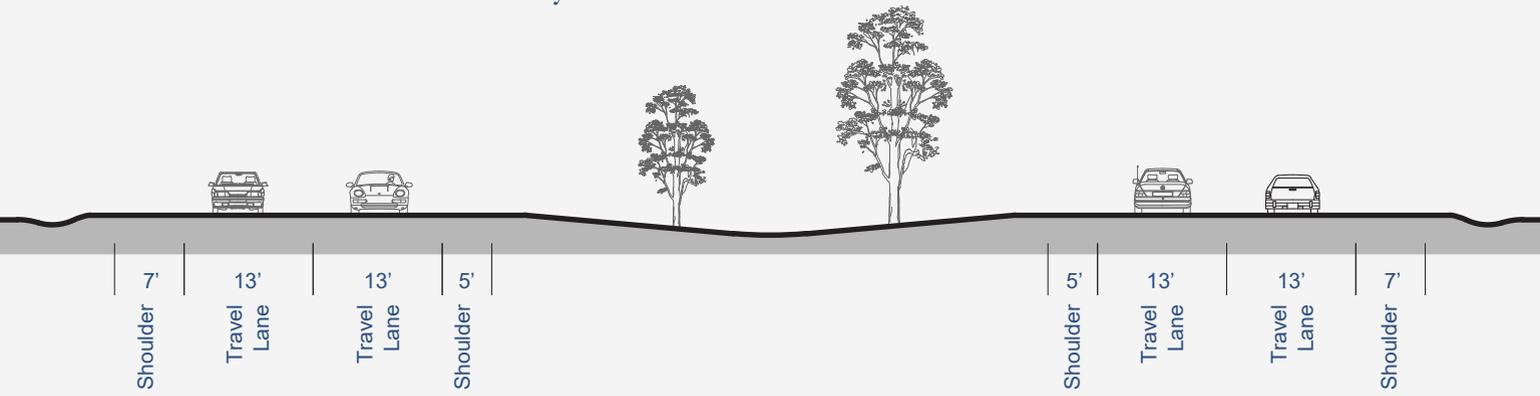
Ashley River Road (SC 61) is a two-lane SCDOT principal arterial roadway that connects West Ashley to areas north/northwest with a posted speed limit of 40 - 55 mph. The northern part of this street (north of Paul Cantrell Blvd./Glenn McConnell Pkwy.) is two lanes with intermittent left turn lanes, and is characterized by significant tree canopy. This section has small scale neighborhood retail and some single-family housing frontage. South of the intersection of Paul Cantrell Blvd./Glenn McConnell Pkwy. to the tie-in with US 17/Savannah Highway and the bridge to the Peninsula, it is four travel lanes with a continuous left turn lane and is characterized by auto-oriented development on both sides of the street. Sidewalks on Ashley River Road are limited, disconnected, and constrained by the rail viaduct and the Church Creek Bridge. Sidewalks are continuous south of Paul Cantrell Blvd., but in most cases, are contiguous to the curb, offering no separation from moving traffic. Bike lanes are present southeast of Old Town Road/SC 171. Ashley River Road (SC 61) has a 2016 SCDOT AADT of approximately 20,000-33,000. St Andrews Blvd. (SC 61) has a 2016 SCDOT AADT of 45,400 east of Old Towne Road.

Folly Road Blvd/Wesley Drive/Highway 171

The southern part of Folly Road (south of Broughton Road) has five lanes with intermittent center turn lanes. Three lanes travel southbound, while two travel north. North of Broughton Road, Folly Road is six lanes with intermittent left turn lanes. North of Windermere Boulevard, the roadway splits into Wesley Drive/Highway 171 and Folly Road Boulevard. Folly Road Boulevard continues northeast with five lanes, while Wesley Drive continues north with 4



St Andrews Boulevard: Today



Glenn McConnell Parkway: Today

lanes, divided and then four lanes with left turn lanes. Wesley Drive ends at the intersection of St Andrews Boulevard/SC 61. Folly Road Boulevard/Wesley Drive has adjacent residential and suburban retail land uses. Sidewalks are continuous; however, most lack separation from moving traffic. Folly Road Boulevard between Wappoo Cut and South Windermere Shopping Centers needs improved facilities for pedestrians, bicyclists and all commuters.

Old Towne Road/SC 171

Old Towne Road (SC 171) is a four-lane highway with a posted speed limit of 45 mph. Old Towne Road begins north of SC 61, where St Andrews Blvd. becomes Ashley River Road. The roadway is 4 lanes with continuous two-way left turns or left turn lanes. Intermittent right turn lanes are also present in the corridor. Old Towne Road ends at the intersection of SC 7 to the north. Old Towne Road serves primarily residential land uses. Suburban retail land uses currently exist at the northern and southern termini

of the roadway. Sidewalk is continuous on the east side of Old Towne Road from SC 61 to Donahue Dr, and is mostly separated from the roadway. Sporadic sidewalks exist on the west side of the roadway. Pedestrian crossing locations connecting the neighborhoods are few. Old Towne Road (SC 171) has a 2016 SCDOT AADT of 23,100 in the area.

Sam Rittenberg Boulevard/SC 7

Primarily six travel lanes with dedicated left turns, Sam Rittenberg Boulevard begins at Savannah Highway/US 17 to the south and connects to North Charleston via a bridge over Ashley River. The corridor is primarily suburban retail land uses with large parking lots and numerous driveways. Residential neighborhoods with street grid systems are prevalent in the northern portion of the corridor. Continuous sidewalks exist south of Ashley River Road, but lack separation from traffic and crossings are limited to the traffic signal controlled intersections. There are substantial sections of Sam

Rittenberg Boulevard where there are no sidewalks and inadequate drainage infrastructure (no curb/gutter). An asphalt shared use path east of Highway 7 provides bicycle and pedestrian connection to north of Poston Road to Northbridge Park (south of the Ashley River). A frontage road parallels the east side SC 7 from Orange Grove Road to the Ashley River. Sam Rittenberg Blvd. (SC 7) has a 2016 SCDOT AADT of 46,100 crossing the Ashley River, and 24,000 AADT west of the Old Town Road merge.

Main Road

Located at the western end of the study area, Main Road serves as an access to Johns, Kiawah, and Seabrook Islands. It serves residents who live in that area of Johns Island and work off the island. It also serves those who work on the Islands, and carries a significant amount of tourist traffic to the resort areas of Kiawah and Seabrook Islands. The intersection of Main Road and US 17/Savannah Highway is a source of congestion with queuing and delays. The US 17/Main Road intersection is difficult for pedestrians and cyclists. Main road also crosses the West Ashley Greenway.

Problem Areas

Crash hotspots in West Ashley are US 17 at I-526, US 17 at Wappoo Road, SC 7 at SC 61, Glenn McConnell Parkway at Magwood Drive, Glenn McConnell Parkway at I-526 based on discussions with police department staff. Many of these areas were also cited as problematic intersections during the stakeholder sessions that were held in late March 2017; in fact, the north end of SC 7 in the vicinity of the vacant Piggly Wiggly had numerous nicknames due to the high number of near misses experienced by stakeholders at that confusing intersection for walking, biking, and driving. Roadway safety, for all users, is an problem in Charleston County as a whole. In fact, the South Carolina Department of Public Safety reported that Charleston County has the highest rate of roadway fatalities in the entire state.

below: Intersection of Sam Rittenberg Boulevard/SC 7 and Old Towne Road/SC 171





Date: 8/24/2017

Constraints to Road Widening

If road widening was to be explored for any of the primary thoroughfares in West Ashley, there are a number of existing physical constraints, including existing buildings, tree canopies, and wetlands, that prohibit this approach (particularly in inner West Ashley). Corridors with physical constraints that prohibit future widening are highlighted on the map above.

Transit Network

CARTA provides several transit routes to and from West Ashley as shown at right, including Routes 2, 30, 31, 32, 33, and 301. With the exception of Route 2 (the express route) all routes operate on 60-minute headways, which are considered a basic level of service but may be inadequate to encourage mode shift to transit during peak travel times or in high density areas. Current transit routes should be evaluated to improve reliability, connections to job centers and travel time/headways to better serve West Ashley residents.

Route 2 is an express route staging at a park and ride at the Citadel Mall and operated on a 30-minute headway during peak commute times; these and all coach buses are equipped with Wi-Fi, which is attractive to commuters to the Peninsula and MUSC. Transit stops are generally devoid of facilities (shelters, benches, information) other than signs, and in many cases, are not served adequately by the pedestrian or bicycle network. In addition, buses are operating currently in mixed traffic and subject to congestion that can extend the trip for commuters and impact a service schedule. This is particularly impactful on the express route which operates on US 17/Savannah Highway.

Though not currently planned for West Ashley, Lowcountry Rapid Transit (LCRT) is being considered for the I-26 corridor north of the Peninsula. The BCDCOG is currently working on a regional transit framework plan to identify future LCRT Corridors in the region, which could include corridors in West Ashley.

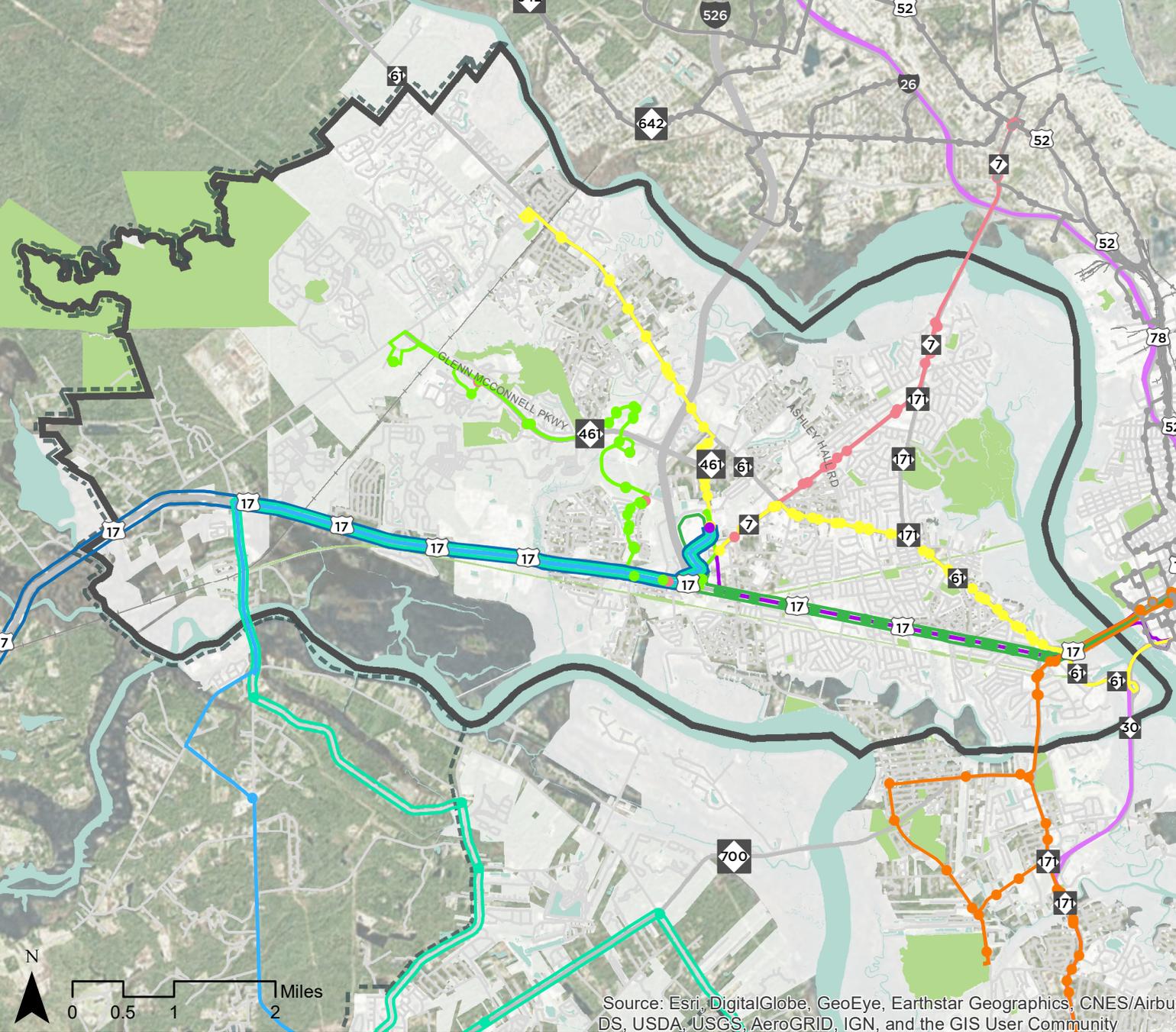


above: Many existing bus stops, particularly along arterials, lack amenities such as benches, shelters, and trash receptacles.

below: CARTA provides a number of bus routes through West Ashley. (source: <http://www.postandcourier.com>)



right: Existing transit service in West Ashley.



Existing Conditions: Transit Services

Legend

CARTA Routes

- non-West Ashley route
- 30
- 31
- 32
- 33
- 301
- Express 1
- Express 2

TriCounty Link Routes

- C-201
- C-204 Blue
- C-204 Green

- Streets
- Railroads
- Parks
- Water
- West Ashley
- Charleston City Limits
- Urban Growth Boundary

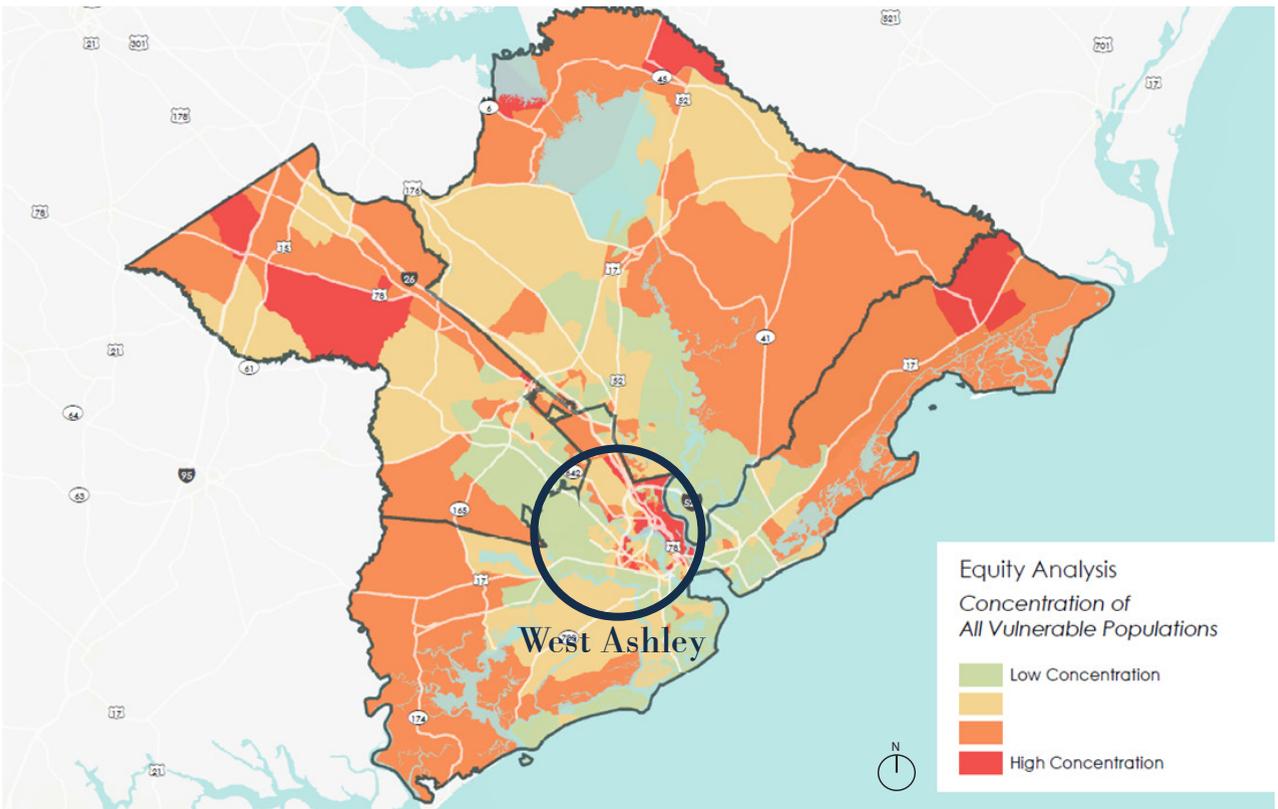
Bicycle + Pedestrian Network

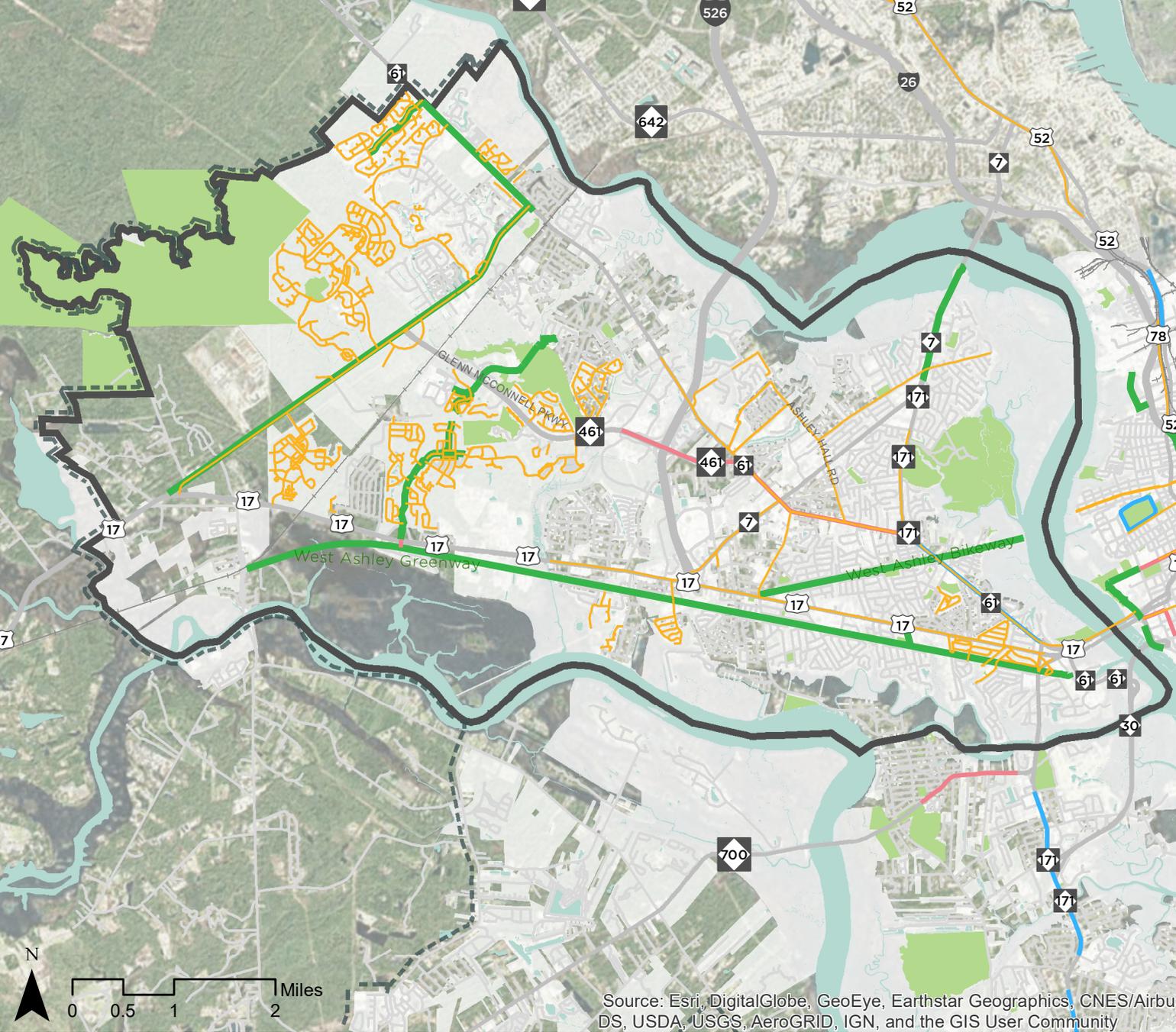
In 2008, Charleston City Council passed a Complete Streets Resolution geared toward creating a network of streets that allows all modes of transportation including bicycle, pedestrian, public transit and automobile travel. Complete Streets is the popular term that emphasizes accommodations for all modes of transportation in a public thoroughfare. This concept was reinforced by the City’s Comprehensive Plan, which developed a primary mobility goal that “seeks to offer as many choices for mobility in the City as possible, from modes to routes.” Also in the Comprehensive Plan, the 2009 Citizen’s Survey indicated that over 90% of respondents agreed that streets need to emphasize more connectivity and more low-speed, pedestrian friendly character.

The Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) commissioned a study of walking and bicycling in the region (Walk Bike BCD). Walk Bike BCD identified West Ashley area as having increased safety concerns with significant concentrations of reported pedestrian and bicycle crashes including fatalities (particularly east of I-526) and the two highest tiers of demand for walking and biking trips.

The Walk Bike BCD Level of Traffic Stress Analysis revealed dense networks of low-stress roadways within the residential neighborhoods, which are generally suitable for bicyclists of all ages and abilities. These networks, however, are bisected by high-stress arterials. The multi-lane highways are essentially inaccessible and uncrossable for a pedestrian or cyclist, creating enormous barriers to mobility between neighborhoods, to parks, to schools and services. The high-stress corridors must be addressed to not only provide pedestrian and bicycle access to the destinations that are located along them, but also, to leverage the surrounding network of quiet residential streets that, if safely and conveniently linked to one another, could exponentially increase the area’s overall connectivity and access.

The plan also conducted an equity analysis, (see below) which identifies vulnerable populations in the region, specifically targeting community members most likely to suffer health disparities and/or who may have to walk or bike for daily transportation in conditions that are unsafe. The equity analysis incorporates six socioeconomic criteria: seniors, children, non-white populations, low-income





Existing Bicycle & Pedestrian Facilities

Legend

- Sidewalks
- Marked Shared Lane
- Bicycle Lane
- Shared-Use Path
- Streets
- Railroads
- Parks
- Water
- West Ashley
- Charleston City Limits
- Urban Growth Boundary

above: Existing bicycle and pedestrian facilities in West Ashley.

left: Equity analysis map from Walk Bike BCD

households, vehicle access, and linguistic isolation. According to the National Complete Streets Coalition, counties where more than 20 percent of households have incomes below the federal poverty line, the pedestrian fatality rate is over 80 percent higher than the national average. In addition, children of color are at least 20 percent more likely than their white peers to have asthma and live in communities that exceed air quality standards for ozone. Active transportation investments in these areas could help alleviate a broader range of issues, such as access to jobs, education, and healthcare. The analysis also provides a starting point for identifying priority areas where improvements could be focused.

In contrast to these significant challenges of safety, access, and equity, West Ashley also offers clear opportunities related to active transportation and outdoor recreation. This includes the moderately dense residential neighborhoods and nearby commercial districts. Additionally, the area includes the existing West Ashley Bikeway and West Ashley Greenway, the latter of which is included in the nationally-recognized East Coast Greenway route. These assets are popular and well-loved; however, there is currently a 4/10 of a mile gap between the two facilities. The Walk Bike BCD public input process reflected support for maintaining, improving, and expanding these trails.

In response to these findings, as they relate to regional goals, Walk Bike BCD recommends a network of on-street bikeway and off-street shared-use path and sidewalk improvements, as well as three key spot (intersection or crossing) improvements in West Ashley. The Walk Bike BCD recommendations incorporate planning recommendations from previous studies, including but not limited to the East Coast Greenway, People2Parks plan, Rethink Folly Road study, and initiatives from Charleston Moves. Critical factors for advancing mobility in this area include the following:

- Providing safe and convenient access for active transportation across the Ashley River. This is needed at both the Legare Bridge (US 17) and SC 7 to provide a basic level of connectivity to jobs, destinations, and services.
- Providing a seamless user experience along Wappoo Road to connect the West Ashley Bikeway to the West Ashley Greenway. This requires providing a shared-use (both walking and bicycling accessible) facility that is appropriate for all ages and abilities, similar to the bikeway and greenway.
- Providing access to the parks and greenways. This will center on safe intersection and crossing improvements on the bikeway, greenway and surrounding the park entryways.
- Prioritizing sidewalk and bike access to transit.

below: Many streets, particularly arterials, lack designated sidewalks, bike lanes, and pedestrian crossings.



Ongoing Studies

The Charleston region has an integrated approach to transportation planning projects with coordination between the state, regional planning agencies, counties and municipalities. The following major planning efforts are in process in the region:

- Long Range Transportation Plan (BCDCOG)
- Walk Bike BCD (BCDCOG)
- Bus Rapid Transit Plan (BCDCOG)
- Regional Transit Framework Plan (BCDCOG)
- I-26 and I-526 Transportation Demand Education, Marketing and Promotion Plan (BCDCOG)
- City of Charleston Citywide Transportation Study (City of Charleston in cooperation with BCDCOG)
- Regional Park & Ride Study (BCDCOG)
- Charleston City Parking Study (City of Charleston)

These plans review the projected future conditions of the region and the City of Charleston and integrate multimodal aspects to the transportation framework of the region. In addition, the Transportation Demand Management Education is a unique project that is working with large employers in the region on potential opportunities for adjusting their transportation facility demands during peak times through strategies such as flexible time schedule or increase in carpooling and vanpooling.

Ongoing Projects

Existing and planned transportation projects include large scale and intersection level improvements across the West Ashley region. These projects are at various stages in the planning, design and construction process, and include the following:

- I-526 Completion (SCDOT)
- Improvements to the existing I-526 (SCDOT)
- Glenn McConnell Parkway Widening (Charleston County)
- SC 7/SC 61 – Sam Rittenberg at Ashley River Road Improvements (Charleston County)
- Savannah Highway Capacity and Intersection Improvements (Charleston County)
- US 17 at Main Road Improvements and Main Road Widening (Charleston County)
- US 17/Crosstown Study (Charleston County)
- SC 7/SC 171 Area Study (Charleston County)
- Legare Bridge Bicycle and Pedestrian Path (Charleston County/City of Charleston)
- James Island Connector Bicycle and Pedestrian Path (City of Charleston)
- West Ashley Greenway Extension (City of Charleston)

COMMUNITY CONCERNS

Following is a brief summary of the most often voiced concerns related to *transportation*:

Participants at community input workshops expressed CONGESTION and TRAFFIC as top concerns for residents in West Ashley today.

Participants were asked to write down one word that described West Ashley today – the results clearly show **congestion** and **traffic** as the most-often written identifiers of what people experience in West Ashley today. But when asked what they would like to see in the future, attendees at all four sessions said that being **connected** was one of the most important considerations. Keypad polling results showed that while participants currently accomplish most of their travel today in West Ashley by personal motor vehicle, they would consider other modes of travel if they were more reliable and connected.

According to the Federal Highway Administration’s 2009 National Household Travel Survey, only 22% of household vehicle trips are work related; these trips tend to be routine, predictable, peak hour trips related to congestion and much longer regional trips. The remaining 78% of all household trips are for recreation, school shopping, appointments, much shorter in distance and normally local and occur mostly during non-peak periods. An opportunity to impact the daily lives of many West Ashley residents therefore lies in providing viable alternative travel modes, improved connectivity and enhanced public transportation. The community doesn’t have adequate choices today, as all are relegated to personal vehicles for nearly all trips.

West Ashley needs more/enhanced water connections, which could include a pedestrian/bike bridge and/or a water taxi.

Another recurring theme with regard to connectivity was the recognition that there are limited bridge connections across the water barriers of the Stono and Ashley Rivers. Residents of West Ashley must contend with traffic from James and Johns Islands while commuting to and from the Charleston Peninsula, Mount Pleasant, and North Charleston/airport areas. Gaps identified included not only

a lack of connection across the water for motor vehicles, but also a lack of connection and reliability for transit and active transportation modes. There has been an ongoing discussion about an active transportation connection across the Legare Bridge from West Ashley to the Peninsula, but since it would impact vehicle carrying capacity some commuters in West Ashley and beyond have opposed that effort. Regardless of the outcome of that initiative, the community simply needs better connectivity across the water for all modes of travel.

The West Ashley community wants more/enhanced connections: complete I-526, extend Glenn McConnell Parkway, connect the neighborhoods.

The community was supportive of creating more vehicular connections where possible, including major infrastructure such as the completion of I-526 and extending the Glenn McConnell Parkway. The design of these new connections should accommodate multiple modes of travel (as should be with such a significant investment); the design should also respect both the natural and built environments through which the roads pass.

The West Ashley Bikeway and Greenway should be connected.

The 4/10 of a mile gap between the two trails should be connected with a shared-use (both walking and bicycling accessible) facility that is appropriate for all ages and abilities, similar to the bikeway and greenway. This short connection would expand the usability of both trails, increasing the number of destinations easily within reach.

Pedestrian/bike facilities need to be upgraded to be a viable option: connect sidewalks/crosswalks, create separated bike lanes, make safety improvements.

At the charrette Work-in-Progress presentation, 70% of participants responded (via keypad polling) that there are car trips they make today that they would rather walk or bike, if safe/improved routes were available. Providing connected sidewalks, safe

crosswalks, separated bike lanes, and other strategic improvements can make walking and biking a feasible option, and help to reduce vehicular congestion.

Transit needs to be upgraded to be a viable options: explore premium service (rail, LCRT, PRT), park-and-ride, express service, shuttle.

Existing transit service, with 60-minute primarily headways, is not a viable option for many trips. New technologies, premium services (such as Bus Rapid Transit or Personal Rapid Transit), new strategically-located park-and-ride facilities, express service, and shuttles could be explored.

Sample of community responses from charrette feedback forms:

Of the many ideas you have heard or seen so far, which ones seem the most exciting to YOU?

“more connections between people to neighborhoods ... better connectivity to all parts of West Ashley by all modes of transportation (walk, bike, drive, bus) ... more connectivity for not only cars but bikes and walkers ... connections that utilize “forgotten modes of transportation” especially biking/walking ... interconnected West Ashley with bike paths and sidewalks”

“bridge from West Ashley bikeway to peninsula ... connecting across Ashley River at north bridge and old bridge area with bike and walking ability ... getting pedestrians and bikes across the bridges ... make avenues of travel (roads, sidewalks, bridges, intersections) safe and pleasant for pedestrians and bicyclists”

“address vehicular congestion ... time the lights, especially 17, 61, Sam Ritt and Glenn McConnell ... finish 526 ... traffic calming”

“creative public transit ... make it easier to ride buses, run more often ... using mass transit to move people and lessen number of cars on the road ... alternative transit from West Ashley to downtown ... public transit improvements ... solutions to traffic problem like shuttles, rapid transit”

VISION | CONNECTED

West Ashley is envisioned to be CONNECTED: connected to the region and neighborhoods, connected to jobs and schools, connected to recreational activities, and connected to goods and services. To achieve this vision, the plan has two major areas of focus, addressing:

- Vehicular traffic congestion; and then, just as importantly,
- Enhanced mobility options: ways to stem the growth in car trips by getting a larger percentage of future trips to occur using short car trips, walking, biking and transit.



above: Existing Conditions, Sam Rittenberg and Old Towne Rd.

right: Proposed intersection reconfiguration of Sam Rittenberg Boulevard/SC 7 and Old Towne Road/SC 171. An important part of the vision for this area is subdividing large blocks to create additional street network, and additional ways for people to move between their homes and new workplaces, shops and other destinations.



What Can be Done for Vehicular Congestion?

An overwhelming sentiment from the community is the amount of traffic congestion they have to deal with on a daily basis. Local social media sites have multiple discussions about congestion and backups on Savannah Highway on a daily basis, and when asked what the biggest community concern was in the listening sessions the consensus was TRAFFIC. The situation has manifested itself over decades of auto-oriented development focused on major corridors with little connectivity or options for vehicle routes. As the pattern of build and widen has continued, West Ashley now finds itself where most major roads cannot be widened further, yet congestion still exists. There are options for relief from vehicle traffic congestion; while roads can no longer be widened further, network enhancements, spot safety improvements at intersections, and the use of technology can all play a part in relieving daily traffic congestion in West Ashley.

Capacity and Safety Improvements in Targeted Areas

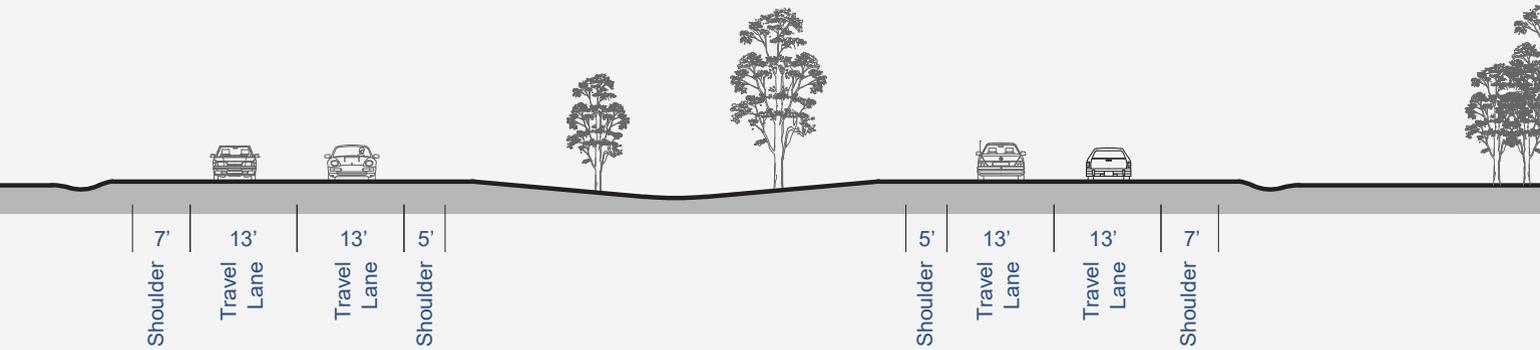
The following actions are currently in various stages of planning, and represent targeted initiatives to alleviate regional and local traffic congestion:

Sam Rittenberg Boulevard/SC 7 and Old Towne Road/SC 171 – The City has recently purchased the vacant Piggly Wiggly adjacent to this intersection. Charleston County is initiating a study to determine how to reconfigure the intersection to address safety concerns. During the interactions with the community, this area was referred to repeatedly as the “suicide merge” because of safety concerns with the unconventional traffic patterns. The convergence of the City’s purchase and Charleston County study allows for focus on solutions; this plan developed some initial starter ideas for reconfiguration as shown below that could be used as a starting point

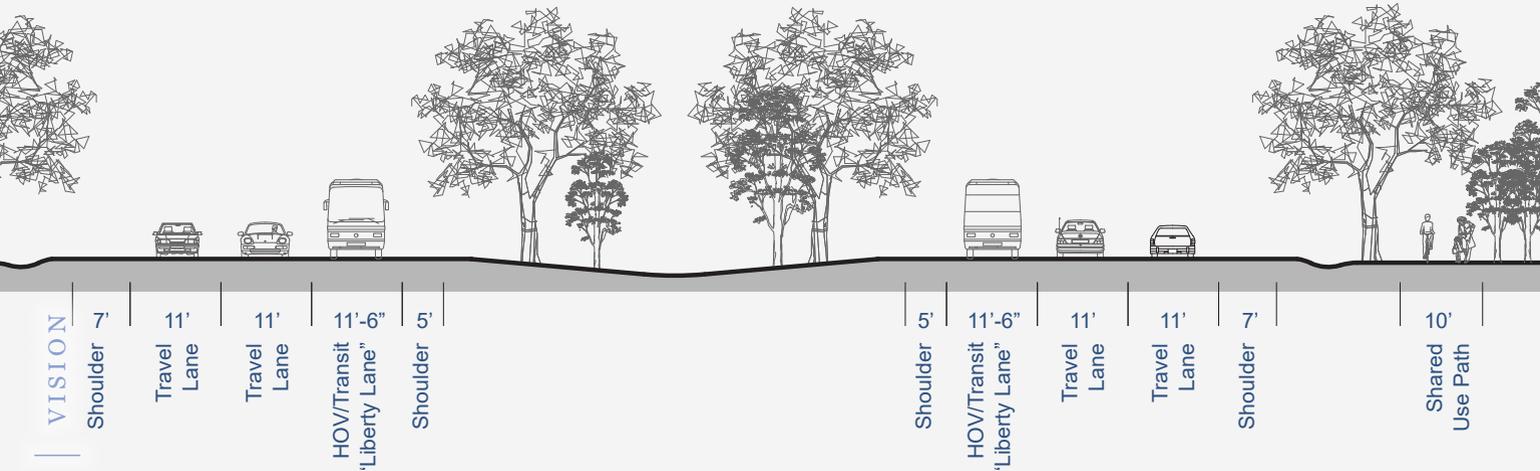
Sam Rittenberg Boulevard and Old Towne Road



above: Potential roadway reconfiguration options of the intersection of Sam Rittenberg Blvd. and Old Town Rd., which include alignments for “T” intersections or the use of one or more roundabouts to improve safety and movement through this area. Implementation will require further study and engineering. Blue areas indicate potential development. Pink indicates potential property impacts.



Glenn McConnell Parkway: Today



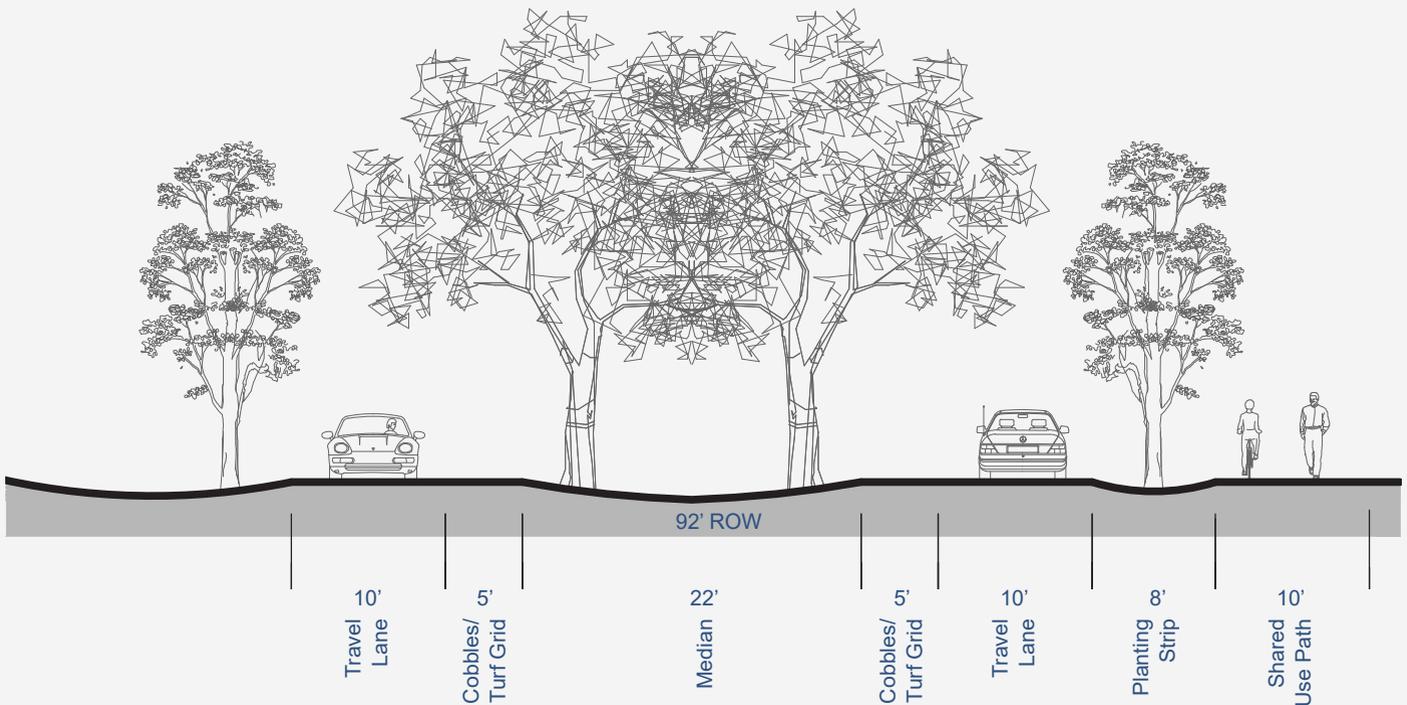
Glenn McConnell Parkway: Potential Widening

above: In addition to addressing congestion issues, the widening of the existing Glenn McConnell Parkway can accommodate multiple modes of travel. The design speed of this section of roadway is 45mph. Additional study will be needed in the future regarding design details such as transit stop locations and lane positions.

for those studies. Focusing on a “T” intersection, additional connectivity options were explored (see diagrams page 3.19), which also identifies potential development opportunities area (in blue). Whether normalizing the intersection into a T-intersection or using roundabouts in some configuration is determined preferable, all concepts address the safety and circulation issues while reinforcing this area as a gateway to West Ashley and a real place. Additional data collection and engineering will be required to further define the final solution.

Glenn McConnell Widening – A separate project from the Glenn McConnell Parkway Extension, the

Glenn McConnell Parkway widening project is also projected to add additional capacity to the traffic system. Conventional road widening projects typically have limited return on investment due to “induced demand”; as soon as more capacity is available, pent up demand quickly fills that void (as people change commute patterns and travel decisions). Therefore, the proposed widening project should also consider multiple modes of travel to reduce the dependence on single occupancy vehicles in outer West Ashley. Any new lanes should be dedicated high occupancy vehicle and transit lanes. These new Liberty Lanes and shared use paths are both potential solutions to accommodate other modes to manage congestion.



Glenn McConnell Parkway: Proposed Extension West of Bees Ferry Road

above: The extension of Glenn McConnell Parkway will traverse environmentally-sensitive lands. A context-sensitive design that provides the needed vehicular connection while also minimizing impervious areas, and incorporating green infrastructure and pedestrian/bike facilities (which can include a sharrow lane and shared use path) is warranted; the design speed here is 25-35 mph.

The City also has a grant to build separated multi-use path along the north side of Glenn McConnell from Mary Ader to West Ashley Circle. Specific design and project schedule has yet to be determined.

Glenn McConnell Extension – This plan recognizes that the extension of Glenn McConnell Parkway to Long Savannah will provide a needed piece of roadway network for West Ashley and the region, offering yet another travel route alternative. This plan also would direct that the design of the proposed extension be sensitive to the natural context through which it passes, and incorporate provisions for multiple modes of travel as well.

Main Road/US 17 Intersection – This intersection was cited as a major point of traffic congestion, and there is currently a study underway to investigate the feasibility of creating a flyover interchange to eliminate the heavy left turn movement from westbound US 17 to southbound Main Road. Main Road is also planned to be widened in conjunction with the intersection project.

While the study is being conducted, lower cost and more immediate alternates should be evaluated, such as additional street connectivity to relieve the stress of the singular intersection. While the fly-over is an effective long-term solution, connectivity options could be accomplished in a relatively short timeframe while adding more immediate relief to the situation. Initiatives should also be explored to improve the intersection for more direct travel and shorter delays.

I-526 Extension/Completion – Public support for completing I-526 to Johns Island has been at the forefront of discussion in the region. This plan supports building roadway network and offering options that the completion of I-526 would accomplish, as it would provide another water crossing for people traveling to and from Johns Island. The extension will better connect West Ashley to the region, and potentially make office investment more attractive. Care should be taken with the design of the road, to insure that multiple modes of travel are accommodated within

its envelope as should be with such a significant investment; and that the design respects both the natural and built environments. Without additional network connectivity, the completion of the I-526 corridor could potentially offer short-term relief, but induce demand for new car trips and add congestion to other existing intersections and corridors. The City and County are fully supportive of I-526 completion; funding is still waiting for approval from the State Infrastructure Bank.

Additional Intersection Enhancements – There are currently many projects programmed as part of the sales tax initiatives that focus on intersections in West Ashley, either directly or indirectly. Each of these projects has the potential to reduce traffic congestion along the corridors by focusing on intersections and enhancing vehicle operations in those specific locations. The projects include the following:

- Intersection Improvement at Bees Ferry Road and Glenn McConnell Parkway (\$25M) – project is undefined at this time but will likely add intersection capacity in terms of turn lanes and signal enhancement.
- Adaptive or responsive signal system along US 17/Savannah Highway (\$1.5M, 30 intersections) – upgrade of signal system along US 17 to allow for real-time adjustments and coordination to enhance carrying capacity and to be responsive to incidents that cause traffic congestion at intersections through upgraded signal technology.
- Adaptive or responsive signal system along SC 7/Sam Rittenberg Boulevard (\$0.5M, 8 intersections) – upgrade of signal system along Sam Rittenberg to allow for real-time adjustments and coordination to enhance carrying capacity and to be responsive to incidents that cause traffic congestion at intersections through upgraded signal technology.
- Complete Streets and Beautification Projects – includes provisions for continuous sidewalk and bike network facilities, street lighting, and addition of landscaped medians on many major and minor corridors in West Ashley. These projects will add capacity by creating access control with the medians, and will enhance safety through the access control and lighting. They

will also provide additional connectivity for the active modes of transportation. Specific projects and their allocations are as follows:

- US 17/Savannah Hwy (4.7 miles, \$12.9M)
- SC7/Sam Rittenberg (4.5 miles, \$12.4M)
- SC 61 (4.5 miles, \$12.4M)
- Old Towne Road (1.5 miles, \$4.1M)
- Traffic Operations Improvements on SC 61 (5 miles, \$25.2M) – includes geometric intersection improvements along this stretch of SC 61 that may include installation of roundabouts at existing signalized intersections and other low-impact improvements to improve traffic flow.
- SC 7 and SC 171 Intersection Improvements (\$10M) – redesigning the existing “suicide merge” to improve safety and operational conditions at the existing triangle intersection. Charleston County recently kicked off a study to evaluate concepts and *Plan West Ashley* sets forth concepts that integrate land use and transportation at the intersection, including the use of roundabouts.

In many of these projects, the focus is squarely on improving congestion issues; however, the solutions often include more innovative measures such as the use of roundabouts to improve not only traffic flow, but also congestion. Care must be taken to “do no harm” and develop solutions that address traffic flow without causing unanticipated consequences for all other modes of transportation.

Access Management

Access management involves the planning of the location, design, and operation of driveways, median openings, interchanges, and street connections. Proper access management solutions should provide access to land development, while preserving the safety and efficiency of the transportation system. Numerous access management strategies should be used for major roadways in West Ashley, such as US 17, Sam Rittenberg Blvd., St Andrews Blvd. and others. These include elements such as strategic consolidation and/or elimination of driveways, secondary access locations and/or secondary street access (corner properties, streets to the rear, etc), and/or medians to regulate turning movements.

Vehicular Connectivity + Traffic Flow

West Ashley's transportation network serves a myriad of needs: West Ashley residents commuting to and from work and school; residents of James and Johns Island commuting through West Ashley to cross one of the four bridges into North Charleston or the Peninsula for work or recreation; West Ashley residents accessing shopping, dining, or recreational activities in West Ashley; residents accessing shopping, dining, or recreational activities outside of West Ashley; visitors to the Charleston area using West Ashley roads to access the beaches or other attractions; and many other purposes. Each of these types of vehicle trips may not individually account for the traffic congestion that the community experiences; however, combined they represent a significant amount of traffic that is exacerbated by other physical conditions in West Ashley:

- The amount of through, connected roadway network is sparse, which focuses the majority of vehicle trips on the few regional routes such as Savannah Highway, Glenn McConnell Pkwy., Sam Rittenberg Blvd., and Ashley River Road;
- All traffic coming into and out of West Ashley from the Islands, the Peninsula, Mount Pleasant, and North Charleston and Summerville is focused on a limited number of opportunities to cross the rivers that form the boundaries of West Ashley;
- Because these major roads have been widened to the point to where they can no longer be expanded, they create barriers for active modes of transportation such as biking and walking due to fast moving vehicular traffic and long crossing distances; and
- The physical development pattern in West Ashley has been focused on the major corridors since the 1950's, and the development that has occurred has been an auto-oriented strip typology that exacerbates the issues. New walkable neighborhood centers, such as in Avondale, are part of the community land use vision for the future.

One way to alleviate vehicular traffic is through network connections in an improved street grid. In many places built since the 1950s, roadway design usually means a system of widely spaced, large arterials fed by smaller roadways that rarely connect with each other. This system concentrates motorized traffic on a limited number of large roads, which causes longer, indirect trips and limits opportunities for alternate routes. Such a network also makes it difficult for people who might walk, bike or take public transportation because the indirect routes lengthen their trips and force them onto roads that are usually not designed for their safety and comfort. Public transportation also has difficult time serving isolated neighborhoods with only one or two entry or exit points. The net result is that people end up driving, even for very short trips. Opportunities to increase street connectivity in order to give people choices when traveling between home, medical offices, schools, shops and workplaces is essential in building a robust street network. It also increases the options for people who are driving.

Another aid to the vehicular traffic system is by improving existing intersections, through realignment, remedying offset or dog-leg intersections, as well as improved signal function. Making these connections more direct helps traffic flow easier and reduces friction or slowdowns from cars navigating through those specific intersections. Where possible, the offsets should be lined up in a direct connection without having to turn onto another street (usually a main arterial like Savannah Highway) only to turn again to continue on the next leg of the intersection. Making these direct connections can also help make these areas more walking and bicycle-friendly.

Any major roadway improvement will likely involve coordination with SCDOT, Charleston County, and the City of Charleston. The state owns and/or manages most of the major roadways in West Ashley, including Savannah Highway, Sam Rittenberg Boulevard, Glenn McConnell Parkway, Old Towne Road, and others.

New Technologies

A wealth of technology is available to West Ashley to make inroads into alleviating traffic congestion. Integrated real-time signal monitoring and adjustment could be used for streets like Savannah Highway, Sam Rittenberg, Bees Ferry, Glen McConnell, Old Towne Road, and Ashley River Road. Real time information systems can also be implemented to alert drivers as to accidents and blockages, and to help redirect them to other routes. Real time information on bus arrivals sent to a user's

phone can also aid in planning travel by bus. Finally, emerging technologies such as autonomous vehicles are considered in this plan as part of a longer range set of solutions, and the facilities described in the plan are able to accommodate those technologies in the future.

One recommendation where the technologies can come together in a physical sense is the idea of "Liberty Lanes". Liberty Lanes could allow users of transit, autonomous vehicles, electric vehicles, and even high occupancy vehicles to travel in a dedicated lane on corridors such as Savannah Highway and Glenn McConnell Parkway. With the proposed widening of Glen McConnell Parkway, there could be an opportunity to test this concept on the new lanes to be constructed. As usage of existing and new modes of non-single occupancy vehicles travel increases, West Ashley could consider implementation of additional Liberty Lanes on other major corridors.



left: Autonomous rideshare concept in Pittsburgh. (source: wired)

below: Liberty Lanes, a concept for high occupancy vehicle lanes that could be used along West Ashley's multi-modal corridors (photo source: 1st Avenue, NYC, NYCDOT)





above: Existing Savannah Highway at Stinson Drive.



above: Potential interim improvements, including right-sizing the overly wide lanes, streetscape enhancements, bus shelters, and medians.

below: Potential near-term enhancements, including access management (driveway consolidation coordinated with property owners), shared use paths, transit/high occupancy vehicle lanes (Liberty Lanes), and pedestrian/bicycle wayfinding.



Enhancing Mobility Options

Land Use + Transportation

“The best transportation plan is a good land use plan” – former Vancouver planning director Brent Toderian

For too long streets have been designed for one function – to move cars quickly and without delay. The reality is that streets can do more than just move cars. They can move people on foot, on bikes, and on transit, often without impacting vehicular throughput. They can also be more than just a way to get somewhere else. Good streets can be good places, too. They are public places where people meet, sit and socialize, conduct business, wander about, play, and more. The Avondale area along Savannah Highway is a great example of how specific land uses, in proximity to residential areas and alternative transportation options (West Ashley Greenway) can transform the aesthetics and impression of major roadways, without significant impact to regional vehicular flow. The demand to be in close proximity to walkable areas was expressed by community participants. Many residents asked to see more “little Avondales” throughout West Ashley. The nexus of a walkable, mixed-use land use pattern coupled with supporting transportation network can help realize this community vision, by reducing the need for longer vehicular trips, and encouraging the use of other modes.

It is important to note that development does not necessarily equate to more cars or traffic. By creating the right mix of land uses and arranging them in a pattern by which people can choose not to drive to access them, and supporting it by a robust set of mode choices, other cities have found that a paradigm shift is not only possible but beneficial for the long term sustainability of the community. In Charlotte for instance, over 2,000 new housing units and over two hundred thousand square feet of new commercial development has taken place along the South Boulevard corridor in less than a decade, which is a gateway corridor to Downtown Charlotte. This new development is in a walkable form and is supported by not only the CATS Blue Line light rail line, but also a greenway trail along the Blue Line corridor. This amount of development in a conventional auto-oriented development pattern would result in approximately 20,000 new vehicle trips per day, many of them expected to show up on South Boulevard as it is the primary artery. However, since the development activity started in 2007 with the opening of the Blue Line, traffic volumes on South Boulevard have remained steady and have even dropped in locations. By providing travel mode choices, better connectivity, and orienting development in a way that people can easily access destinations by other means than personal motor vehicle, a similar outcome could be in the future for West Ashley.



Balancing a Mix of Options

Establishing this alternate future isn't as simple as creating safe facilities for biking and walking. It is also not as simple as creating a better, more reliable, and more frequent transit service, with premium options such as Lowcountry (Bus) Rapid Transit (LCRT) or Light Rail Transit (LRT). It is also not enough to just build emerging technologies such as Personal Rapid Transit (PRT) or facilities for autonomous vehicles. The answer lies with all of the above, including vehicular improvements. Rethinking how new development occurs within West Ashley will also be able to support more travel mode choices. Auto-oriented development over the past 70 years and continuous focus on providing as much vehicular capacity as possible at the expense of every other mode of transportation is the reason West Ashley finds itself at an important crossroads: should the community continue to foster an auto-dominated pattern of land use and transportation in a framework where it is rapidly running out of physical space to accommodate it, or is the next chapter one where land use and transportation options foster true choices on how people move? During community workshops, participants strongly articulated a desire for the latter future.



above, top: Bus Rapid Transit services in Nantes.

above, bottom: Conceptual Personal Rapid Transit (PRT) (source: SkyTran)



above: Existing Savannah Highway at Avondale Avenue

left: Proposed streetscape and crossing improvements.

General Supportive Density
(adjacent to transit stop
1/2 mi-rail or 1/4 mile-bus)

Cost Range
Capital Operating

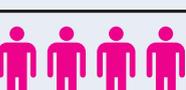
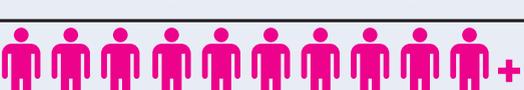
Dedicated
Right-of-Way
(ROW)*

Supported by current West Ashley Framework

VISION

TRANSPORTATION

PLAN WEST ASHLEY

Walking		\$	\$	no
Biking/ Bike Share		\$	\$	no
Ride Share		N/A	N/A	no
Autonomous Vehicles		N/A	N/A	no
Trolleys (bus)		\$-\$	\$	no
Bus	 - 	\$-\$	\$	no
Water	 - 	\$-\$	\$	no
Ded. Transit Lanes/LCRT	 - 	\$-\$-\$-\$	\$-\$-\$	ideally
PRT	 - 	\$-\$-\$-\$	\$-\$-\$	yes**
Light Rail	 +	\$-\$-\$-\$-\$+	\$	yes

above: Matrix of potential transportation improvements in West Ashley.

Regarding density, one graphic figure generally represents the existing average density of West Ashley. For some potential mobility options, additional density would be needed in proximity to transfers and transit stations to support the future service(s). For rail, increased density would be measured within half of a mile for the transit station. For bus, density is typically measured within one quarter of a mile of the bus stop. The potential range of increased density is shown above.

*the legal right, established by usage or grant, to pass along a specific route through grounds or property belonging to another

**will require air rights in addition to right-of-way

Can Exist
within
current
Frameworks

Technology +
Partnerships

✓	Potential public/private partnership.
✓	Potential public/private partnership.
✓	Potential public/private partnership. Existing options in WA.
✗	Potential public/private partnership. Technology in testing.
✓	Potential economic development partnership. Potential new technologies.
✓	Existing operating framework. Signal preemption, cue jumping, real-time route information, etc.
✓	Potential public/private partnership. Interim bike/ped connector.
✗	Dedicated lane + enhanced stations: potential shared use with HOV, autonomous vehicles, ride share, etc.
✗	Potential public/private partnership. Emerging technology. Unproven as urban transport solution.
✗	Requires regional transportation network, + partnerships.

Mobility Options for West Ashley

The matrix on this page explores some of the transportation options for West Ashley. These options, which were initially identified through the public input process, were each vetted against the existing and potential future conditions of West Ashley.

In the near-term, expansion of bus, water, walking, biking, and ride share options is feasible and encouraged. In conjunction with the existing Lowcountry Rapid Transit (LCRT) study, LCRT should be studied as a longer-term solution to provide reliable transit service for commuters to and through West Ashley.

Density is needed to support more efficient and improved transit options. Higher density in key locations such as along Savannah Highway, not necessarily across the entire region, is necessary to support transit. Longer-term high capacity transit options would likely require increased housing/population density and significant economic investment from both private and public sectors. Autonomous vehicles would require shifts in regulation, as well as increased advancement in the technology and testing of the technology.

Additional Congestion Strategies:**Transportation Demand Management (TDM)**

TDM is an alternative strategy to address congestion to infrastructure enhancements. TDM focuses on understanding how people make their transportation decisions and helping people use the infrastructure in place for transit, ridesharing, walking, biking, and telework. It is cost-effective in guiding the design of our transportation and physical infrastructure so that alternatives to driving are naturally encouraged and our systems are better balanced. At its most basic level, TDM is a program of information, encouragement and incentives provided by local or regional organizations to help people know about and use all their transportation options to optimize all modes in the system – and to counterbalance the incentives to drive that are so prevalent in subsidies of parking and roads.

School Accessibility

West Ashley residents noted that school traffic had a negative impact on congestion. There is no single program or tool that universally reduces auto congestion around schools. A variety of tools exist that schools, other civic institutions, parents, and students can employ or adapt singly and in combination to reduce auto congestion around schools. These include Safe Routes to School walking programs at elementary schools, mandatory unlimited access transit pass at a universities, enhanced busing services, staggering school start times, survey of school transportation needs, analysis of school attendance, or school origination and destination traffic modeling.

Schools can also take advantage of TDM strategies. When it comes to schools, jurisdictions have typically focused their TDM efforts on student trips. Arlington County, Virginia created a program, called “ATP Schools,” which is being administered by Arlington Transportation Partners (ATP), the employer-outreach arm of Arlington County Commuter Services. Funded by a grant from Virginia’s Department of Rail and Public Transportation, it is aimed at reducing traffic by reducing the drive-alone rate of the more than 5,000 employees of Arlington Public Schools (APS), one of the top employers in the county.

Ashley River Bicycle Pedestrian Crossing

In October 2017 the City of Charleston applied for TIGER grant funding from the United States Department of Transportation to construct a stand alone 0.4 mile bicycle and pedestrian crossing to connect West Ashley and Downtown Charleston. Grant awards will be announced Spring 2018. The Ashley River Crossing is a significant transportation initiative that demonstrates the value of creating livable, equitable, and connected communities through strategic infrastructure investments.

An Ashley River Bicycle/Pedestrian Crossing is one of the priority projects identified in the mobility framework on the following page. Conceptual renderings from the grant application are shown at right.



top: Conceptual rendering of stand-alone pedestrian-bicycle bridge alongside existing bridges.

middle: Raised or pivoted bridge would be controlled by existing bridgetender operations

bottom: Ground level conceptual rendering of stand-alone pedestrian-bicycle bridge alongside existing bridges.

Supporting the Vision: A Transportation Plan for West Ashley

This map shows the mobility framework, or the multimodal network, that is recommended for West Ashley. The elements explored relate to enhancing or completing the network of transportation options.

Recommended priority projects are called out on the map by **yellow circles**. These transformative projects include the following:

- A. Glenn McConnell Parkway Extension
- B. West Ashley Circle Mobility Hub
- C. Citadel Mall Mobility Hub
- D. Sam Rittenberg Boulevard + Ashley River Road Intersection Improvements
- E. Sam Rittenberg Boulevard + Old Towne Road Intersection Improvements
- F. Ashley River Road + Old Towne Road Intersection Improvements
- G. West Ashley Bikeway Crossing at St Andrews Boulevard
- H. Ashley Landing District Enhancements
- I. Ashley River Bicycle/Pedestrian Crossing
- J. West Ashley Greenway Crossing at Folly Road
- K. Wappoo Road + Savannah Highway Intersection Improvements / West Ashley Bikeway + West Ashley Greenway Connection
- L. I-526 Completion (Multi-modal river crossing)
- M. Carolina Bay Drive + Savannah Highway Bicycle/Pedestrian Crossing
- N. Main Road + Savannah Highway Intersection Improvements

Potential improvements are further described on the following pages as well as in the implementation section.

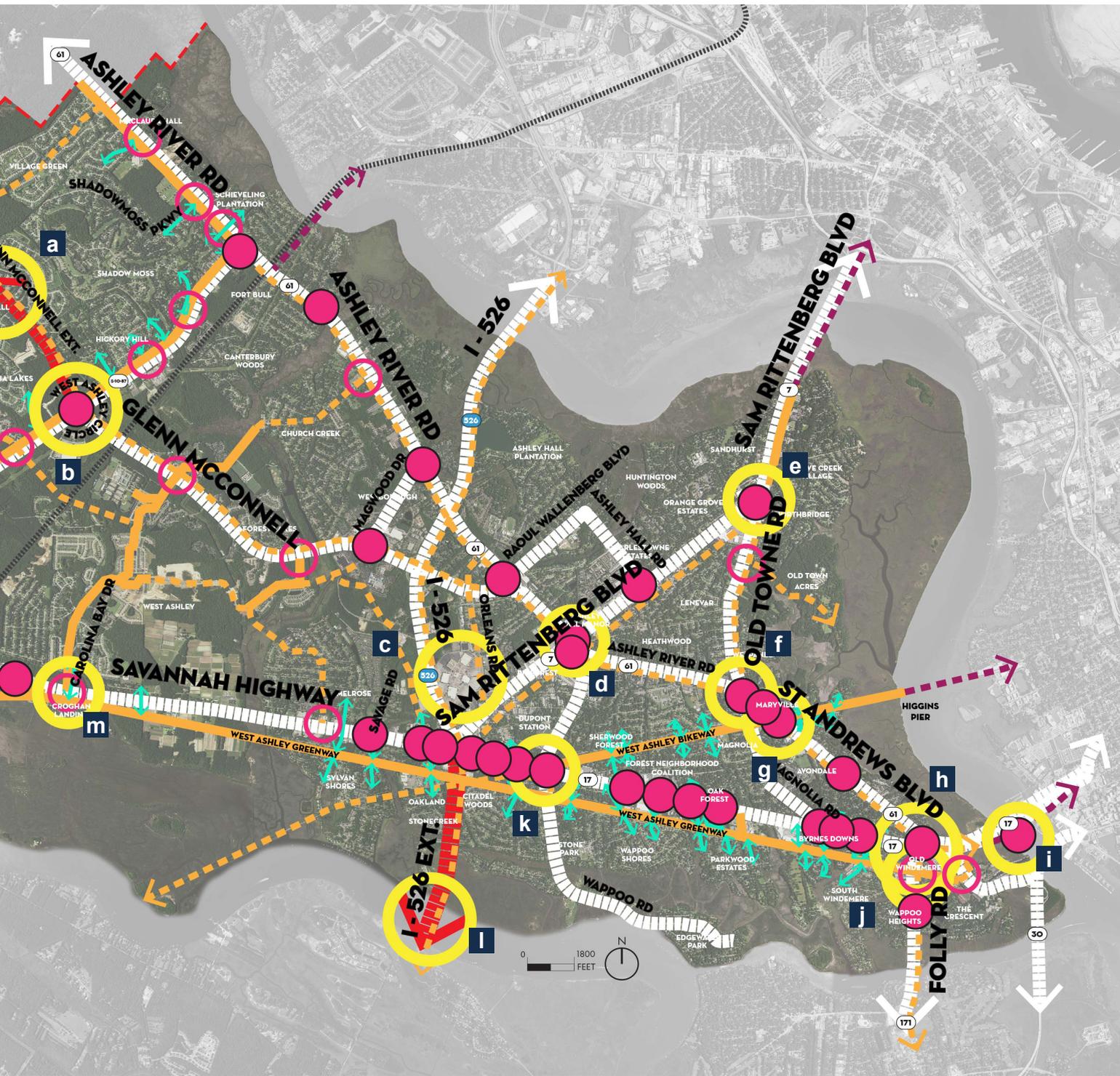
The **dashed white lines** on the map are proposed multi-modal corridors; these include existing arterial and collector streets such as Savannah Highway/US 17, Ashley River Road, and Sam Rittenberg Boulevard, which are existing major roads that provide regional connectivity and connect neighborhoods within West Ashley. These corridors provide opportunities to retrofit missing modes (bike, walk and transit) or to complete the gaps in the systems such as providing well-connected sidewalks on both sides of the street, spot medians to serve as pedestrian refuge islands, landscaping treatments, and high-visibility crosswalks. Longer term improvements could include dedicated transit



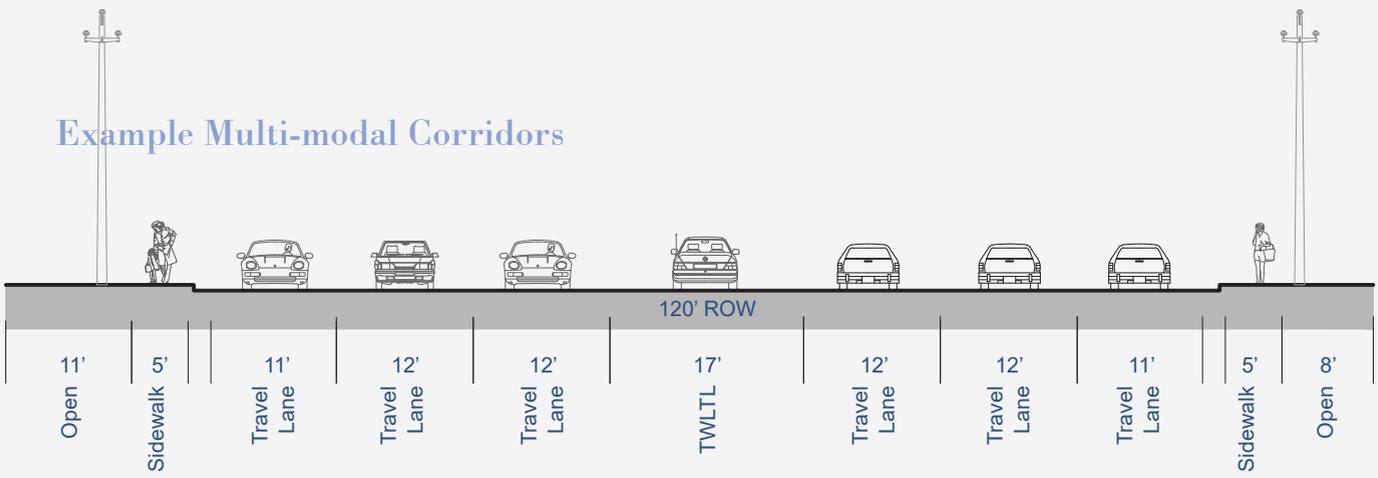
Legend

- Potential Crossing Improvements
- Priority Project Areas
- ↔ Neighborhood Connectors
- - - Bike/Pedestrian Facilities
- Multi-modal Streets
- ▬▬▬ Roadway Extension/Completion
- ■ ■ Priority Pedestrian/Bike Bridge Crossings

above: Multi-modal framework for West Ashley

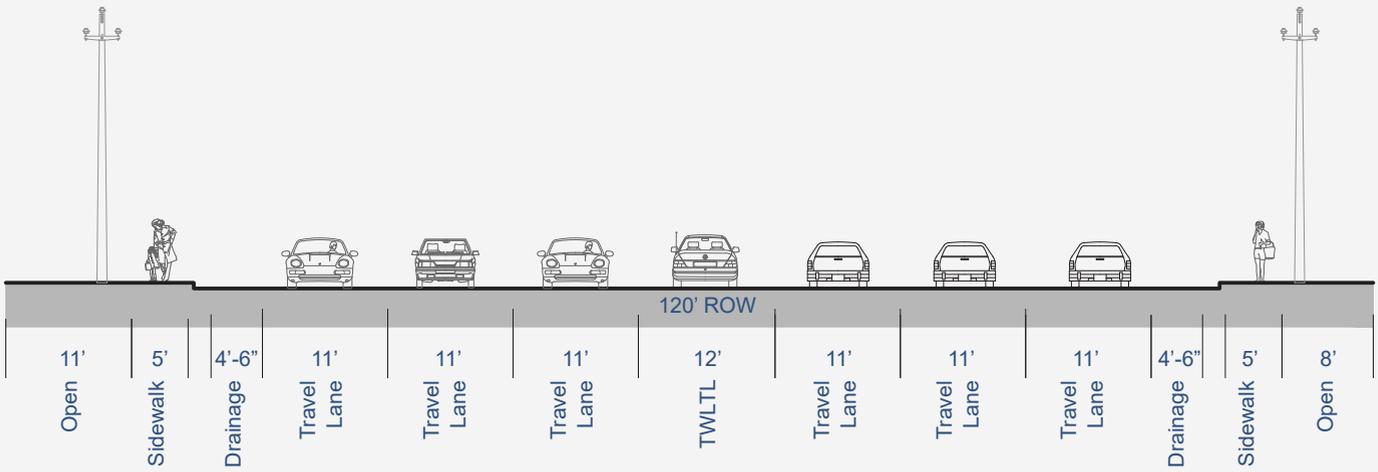


Example Multi-modal Corridors



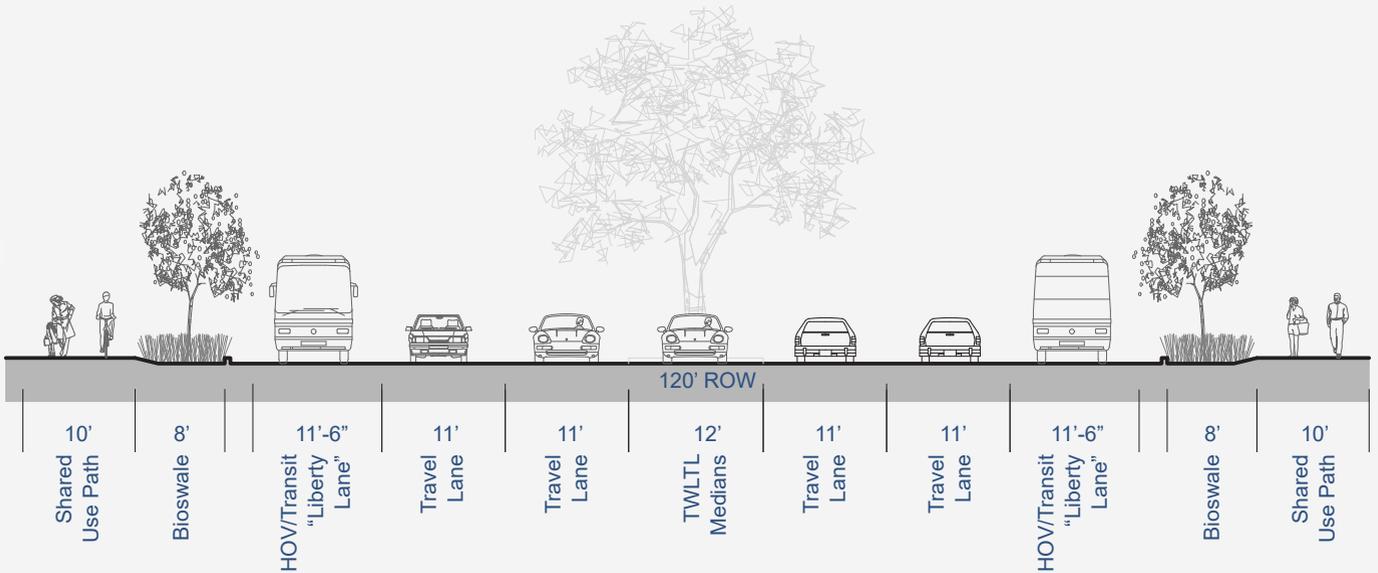
Sam Rittenberg Blvd: Today

VISION



Sam Rittenberg Blvd: Interim (Lane Narrowing)

TRANSPORTATION



Sam Rittenberg Blvd: Ultimate (Complete Street)

PLAN WEST ASHLEY

lanes for transit and other high-occupancy vehicles. The concept of “Liberty Lanes” was developed to brand this potential multi-use high occupancy lane. Multi-modal infrastructure for active transportation encourages more people to bike and walk regularly. A recent analysis of Safe Routes to Schools programs in the District of Columbia, Florida, Oregon and Texas showed that engineering improvements for walking and bicycling were associated with an 18% relative increase of children walking or biking to school. Much of the proposed multi-modal corridor network is addressed in existing City and/or County projects, as well as in recommended complete streets projects in this study. Still, many additional corridors are identified on the map and are not identified as specific priority projects. This study recommends that all white dashed lines are further studied for enhanced pedestrian crossings (refuge islands + signals), bicycle facilities, and enhanced sidewalks. These include, Folly Road Blvd., Ashley River Road, Main Road, Wappoo Road, Ashley Hall Road, etc.

The orange **lines** are shared use paths and trails that are often separated from the street network. The solid lines are existing trail facilities, and the dashed orange lines are proposed trail facilities. These recommendations are consistent with previous planning efforts, including the recent Bicycle and Pedestrian Master Plan completed by BCDCOG. Having a well-connected system of trails is important because the comfort of being off-street is more desirable for novice cyclists and families bicycling or walking with small children.

left: Sam Rittenberg Boulevard Cross Sections: Complete Street enhancements may include narrowing travel lanes (interim step), potential transit/HOV lanes, bioswales, and streetscape enhancements including planted medians, and shared use paths. **Note:** These sections are conceptual and longer term options that could be considered in the future depending on land use, the improvement of other transportation modes, and the increased use of other mobility options. Any future right-of-way changes will require significant analysis and data collection.

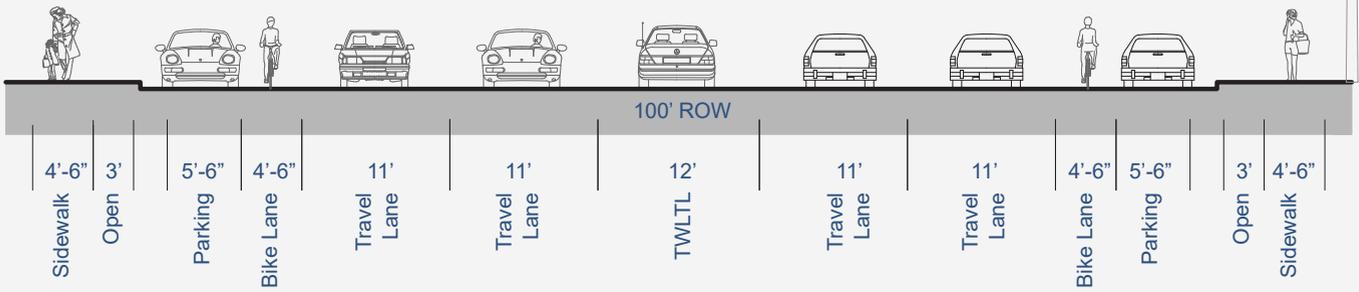
right: Potential crossing enhancements on Bees Ferry Road along the existing shared use path. High visibility cross walks, HAWK signals, and wayfinding should all be considered to improve the pedestrian and bicycle network.

Small **aqua-colored arrows** are street or potential public land connections that could be enhanced with sidewalk, multi-use path, bicycle lane or shared lane striping, or wayfinding signage to direct people to the existing trails.

Pink dots identify areas for crossing improvements, both for the bicycle and pedestrian network, but also to better accommodate transit users. These crossing improvements improve neighborhood connectivity but also connect residents to services and retail. In 2013, a Portland State University study on consumer behavior by mode of transportation found that bicyclist and pedestrians have a significant impact on local economies. Surveys revealed that although pedestrians and bicyclists generally spent fewer dollars per visit, they made more frequent trips and actually spent more on average per month than consumers who drove. In a controlled study of 90,000 houses in 15 US metropolitan housing markets, houses with the above-average levels of walkability were found to command a premium of about \$4,000 to \$34,000 over houses with just average levels of walkability (source: Cortright, 2009). The Swamp Rabbit Trail in Greenville and Travelers Rest, SC is also a great example of the return on investment in bicycle and pedestrian infrastructure. A summary of impacts can be found here: <http://greenvillerec.com/wp-content/uploads/2009/02/GSA-BUSINESS-1.12.15-SWT-infographic-Revised-Nov-21.pdf>

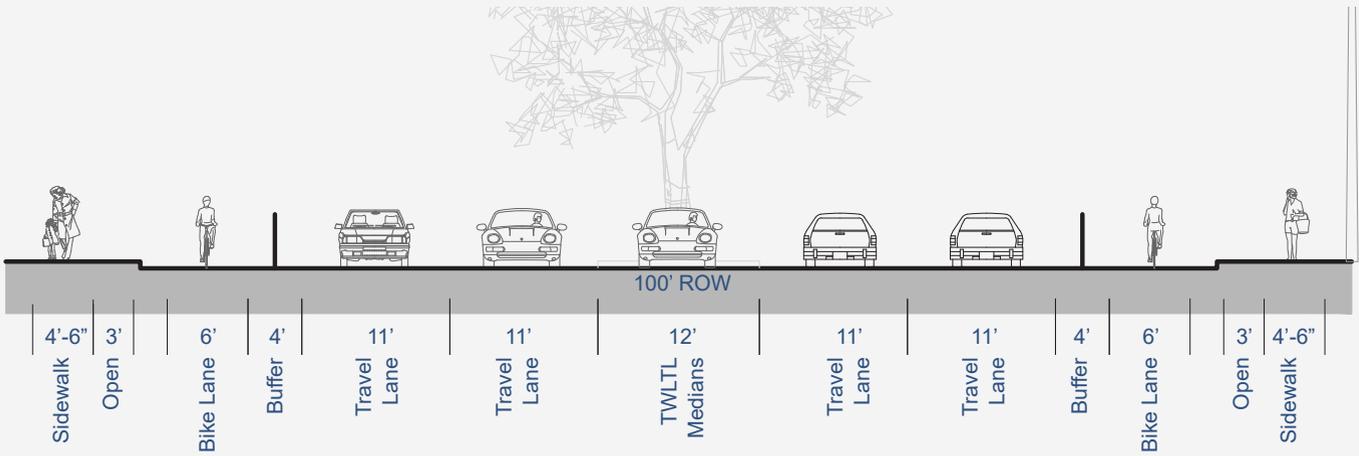


Example Multi-modal Corridors



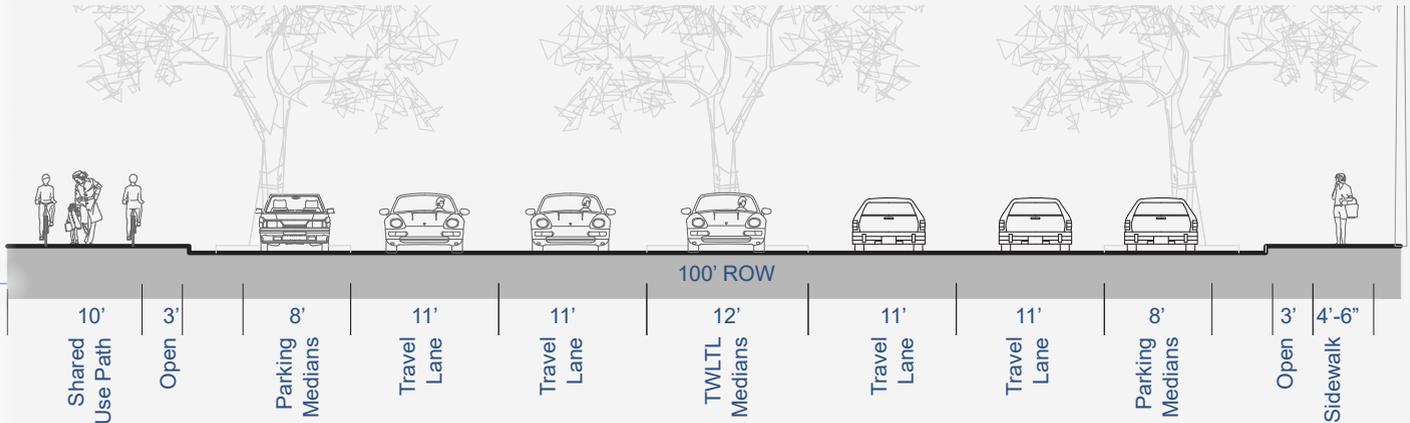
St Andrews Blvd: Today

VISION



St Andrews Blvd: Option A (Buffered/Separated Bike Lanes + Medians)

TRANSPORTATION

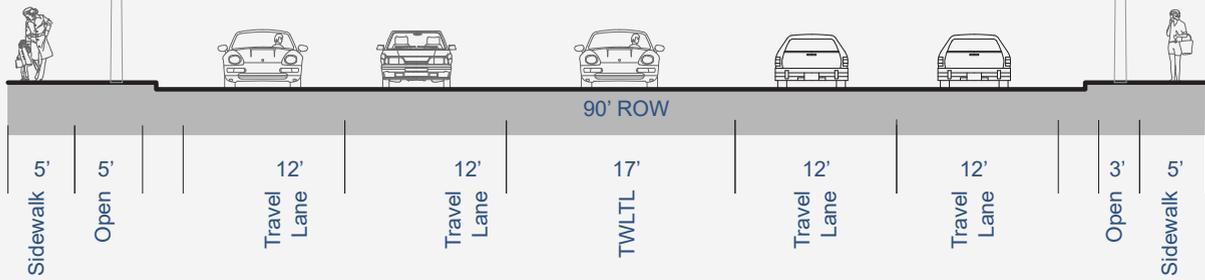


St Andrews Blvd: Option B (Parking, Shared Use Path + Medians)

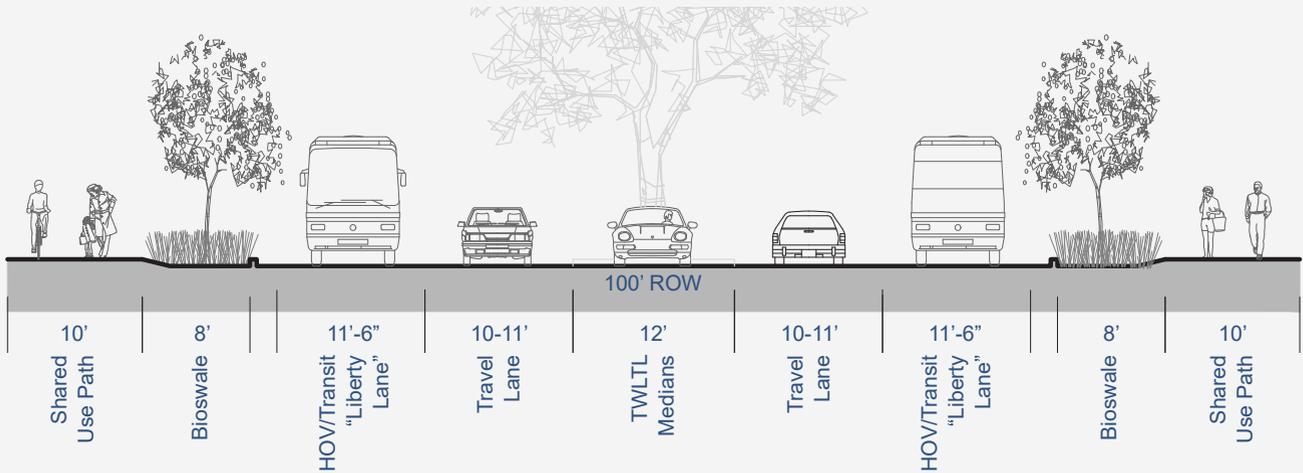
PLAN WEST ASHLEY

above: St Andrews Blvd Cross Sections: Complete Street enhancements may include either separated/buffered bike lanes or shared use paths, parking, and/or streetscape enhancements including planted medians and lighting. **Note: These sections are conceptual and longer term options that could be considered in the future depending on land use, the improvement of other transportation modes, and the increased use of other mobility options. Any future right-of-way changes will require significant analysis and data collection.**

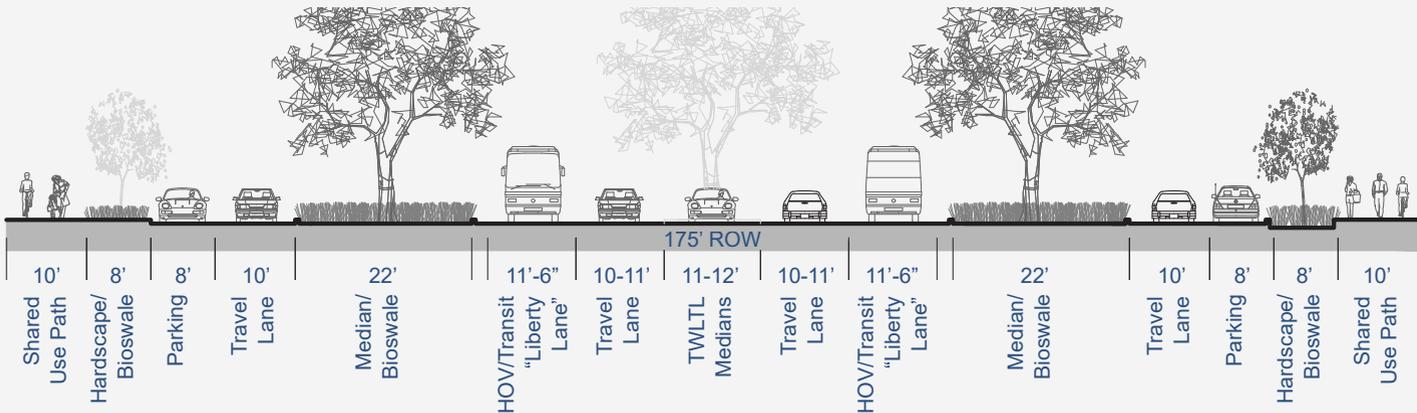
Example Multi-modal Corridors



US 17 / Savannah Highway: Today



US 17 / Savannah Highway: Option A (Shared Use Paths, Liberty Lanes + Medians)



US 17 / Savannah Highway: Option B (Multi-way Boulevard)

above: US 17 / Savannah Highway Cross Sections: Complete Street enhancements may include narrowing travel lanes (interim step), potential transit/HOV lanes, bioswales, and streetscape enhancements including planted medians, and shared use paths. **Note: These sections are conceptual and longer term options that could be considered in the future depending on land use, the improvement of other transportation modes, and the increased use of other mobility options. Any future right-of-way changes will require significant analysis and data collection.**

Public transportation in the United States is a crucial part of the solution to the nation’s economic, energy, and environmental challenges – helping to bring a better quality of life. In increasing numbers, people are using public transportation and local communities are expanding public transit services. Every segment of American society – individuals, families, communities, and businesses – benefits from public transportation. However, the key to successful transit usage is convenience and reliability. While CARTA has made great strides to improve both in the past few years, to truly become a mode of choice for residents of West Ashley further improvements will be necessary such as reducing headways and taking steps to ensure on-time performance. The Transit Framework Map shows potential improvements to the transit network. The elements explored include transit lanes, enhancing transit services with additional service and shuttle routes. Shuttle routes, much like the free DASH trolley on the Peninsula, can provide residents and visitors better mobility options when circulating within West Ashley. To ensure prioritization of West Ashley transit improvements, the community should to let public and elected officials know that transit is a priority for West Ashley.

The **solid white lines** are the existing bus routes that come through West Ashley. Methods to increase ridership on the existing transit service lines can include reducing headways (wait time between buses) for both the express to 15 minutes and local buses to 30 minute headways. Transit stop amenities can include bus shelters that provide shade and shelter from the elements, seating for comfort, and smartphone apps that tracks the buses on the route and estimates bus arrival times. Proper placement of the transit stops in close proximity to destinations is needed, such as at main entrances and linked directly with sidewalks or pathways is preferred. Stops should be located close to designated pedestrian crossing locations like signalized intersections. Where transit stops must be located midblock and transit use is high, protected pedestrian crosswalks, refuges and curb extensions should be provided. Visibility of transit stops increases use if they are easily visible by nearby building occupants, passing travelers or neighbors. Stops and shelters should be close to the front door landing area to facilitate timely passenger loading.



Legend

- Existing Bus Routes
- Employment-based Express Routes
- Water Taxi
- Shuttle Circulators
- Mobility Hub
- Roadway Extension/Completion

above: Transit framework for West Ashley

Dashed pink, yellow, and orange lines are potential additional employment-based routes that provide express connections to downtown Charleston, Boeing, and the Leeds Avenue employment centers. A study of Census demographics reveals 84% of West Ashley residents work elsewhere in the region (see Chapter 6); these routes could provide a quick commute service for riders while helping to reduce traffic on West Ashley's streets, especially during the peak hours. Two park-and-ride locations should be provided, using underutilized parking at the Citadel Mall (a current park-and-ride for the express route) and the West Ashley Circle area.

The **blue dashed line** is a potential water taxi service that can provide another mode of transport between West Ashley and the Peninsula. Initially, operations simply between marinas located on either side of the Ashley River can be considered, with the intent to provide another mode for pedestrian and bicycle access. Over time, a water taxi service could be expanded to serve other areas in West Ashley. The water taxi could be a bicycle-friendly service that provides connections in lieu of bridge connections, and it can also be an interim solution until a multimodal bridge connection can be constructed. Water taxis are popular with tourists and can further reduce vehicular traffic.

Another consideration is the development of shuttle circulators for West Ashley, as depicted by the **dashed teal and purple lines**. Circulator routes typically provide free (low fee) transit within a defined area connecting people and local destinations such as shopping, cultural centers, parks, entertainment districts and other civic nodes. Often times, these circulator routes also strategically stop at major parking areas to create a park once environment. Circulator routes can be targeted to visitors and commuters alike with the ability to notably benefit traffic circulation during peak commuter hours, weekends and during special events. In fact in many cities these routes are only run during certain times where the demand exists to maintain cost feasibility.

Each of the corridors identified on the map currently serving as transit routes are good candidates to ultimately become transit streets in the future. The genesis of an initiative such as this starts with enhanced transit service and other reliable travel



above: Precedent for Mobility Hub in Hamburg, image source: <http://www.nisto-project.eu/nl/projecten/pilot-projects.html>

modes along the street and in the region, which over time can elicit a shift in mode choice that manifests in a reduction in traffic volumes along the corridor. This reduction creates opportunity to repurpose pavement for other modes, which in turn can result in even more mode shift. Transit streets emphasize buses and trains and employ designs that make it easy for people to use alternative modes. Similar to bike streets, dedicated transit lanes create excellent transit streets. The dedicated lanes remove some of the delays associated with car traffic and increase reliability for passengers. Dedicated lanes also signal to businesses, property owners and developers that this amenity will be around for a long time, which emphasizes predictability to the private market, and catalyzing economic development known as transit-oriented development. An example of the benefits of transit streets is exemplified by Euclid Avenue in Cleveland, Ohio; after travel lanes were converted to bus only lanes and transit stations were installed in a new center median to create a bus rapid transit system, \$5.5 billion in private investment along the corridor was realized, with property values doubling in value. Ridership increased 46% over prior bus service and continued to increase by 62% over its first year of service.

These new and expanded transit opportunities could be connected to the existing West Ashley transportation network through the two identified mobility hubs, shown via **red asterisks** at the Citadel Mall and West Ashley Circle. Mobility Hubs are a transit access point with frequent transit service, high development potential and a critical point for trip generation or transfers within the transit system. They should include mixed use development, transit stops/transfers, park + ride lots, bikeshare, and rideshare pickup/dropoff. These sites currently offer the most opportunities for development, and are located ideally to serve the existing residential communities.

Defining Transportation Success

For many years successful transportation efforts have been defined simply by a letter grade for Level of Service (LOS). The LOS reflects a variety of different measurements, including travel delay, queuing, vehicle volume versus capacity, travel speed, and others.

Essentially, LOS A indicates a street or intersection that is lightly-used and possesses much more capacity than needed for given traffic volumes, present or future. LOS B and C indicate progressively busier streets and intersections that may also have greater capacity than is needed for current traffic demands.

LOS D and E indicate streets and intersections that are approaching their traffic-handling capacity for a given peak hour. These intersections move higher volumes of traffic. Because streets and intersections are expensive to build and maintain, many if not most cities specify LOS D or E as an acceptable LOS in built-up areas. Operating at LOS D or E ensures that intersections are performing at their most effective traffic-handling capacity.

LOS F indicates that a street or intersection has greater demand than capacity for a given peak hour. In many such instances however, a trade-off of motor vehicle congestion and traffic delay may be acceptable in exchange for other benefits, such as in a very successful commercial area where addressing the vehicle congestion issue would have negative impacts on the economic vitality of the corridor.

The fact that this procedure assigns a letter grade of A through F to gauge the “success” of a street corridor skews the perception to the community that a street is receiving a “failing” grade when in fact it may be operating well within acceptable parameters for a street in its context.

One way to better articulate street performance is to strip away the letter grade and focus on the anticipated amount of time it takes to travel a corridor and the amount of delay over unimpeded travel that congestion and signals may cause. Reporting this parameter gives the community a more tangible idea of the impact that a particular corridor and congestion can have on their day to day activities.

For instance, the City of Chattanooga no longer reports roadway performance based on letter grade Level of Service, but reports the delay in seconds and more importantly the difference in anticipated delay for various enhancement options. The state of California has gone a step further and bases decisions on transportation on the metric of vehicle miles traveled and vehicle hours traveled; letter grade Level of Service is no longer considered in the decision-making process.

In West Ashley, the performance of streets and the decision-making process (especially at the state level with SCDOT) will continue to be measured by Level of Service for the foreseeable future. However, it is imperative that other metrics such as safety improvements (for all modes), connectivity, and availability of choices in routes and modes be considered as measures of success for transportation initiatives.

Complete streets take into account many parameters beyond letter grade Level of Service. It is clear that West Ashley is constrained in the ability to provide additional vehicular capacity due to simply “running out of room to expand.” Defining success in a transportation system for West Ashley becomes measuring parameters such as accessibility, connectivity, reliability, efficiency, safety, and availability of travel choices. This plan focuses on improving each of those parameters within the framework of a multi-pronged approach to transportation.

IMPLEMENTATION

Transportation Plan Elements

The vision of a better-connected West Ashley where residents and visitors can actually choose among varying modes of mobility is comprised of a multitude of specific projects and policy measures. Some of these initiatives have been in process for many years, and are reiterated in this plan as part of the regional network enhancements that are being moved forward by multiple jurisdictions and entities, such as many of the Charleston County Sales Tax projects. Other initiatives are new services entirely, such as premium transit services (LCRT, LRT, PRT), new transit circulator services, new express bus services, and new water taxi services. Many initiatives represented in this plan are “tweaks” on existing corridors: initiatives such as the addition or completion of a shared use path along a major traffic artery, filling missing gaps in the pedestrian or bicycle network, or providing better intersection configurations for all modes of travel. This plan also seeks to add definition to ongoing initiatives; for instance, there is currently a sales tax project to retrofit complete streets elements along Savannah Highway, and this plan defines what set of enhancements should be included to give Savannah Highway more of a complete street character.

The plan elements are summarized in the following manner: projects and policy recommendations according to timeframe anticipated to accomplish (immediate, near-term, and longer term). Projects are summarized by a description, interim and eventual outcomes, and the process for implementation. Many initiatives are coupled with land use changes to create more walkable mixed-use nodes, as community participants expressed, more “little Avondales” throughout West Ashley. The nexus of a walkable, mixed-use land use pattern coupled with supporting transportation network can help realize this community vision. Proposed improvements (complete streets, landscape islands, land-use) are meant to provide mobility options, and should not significantly increase congestion.

Implementation should integrate data collection and analysis in all future project studies and improvements. Types of data may include traditional data (counters, surveys, demographics), mobility analytics, predictive analytics, and/or future analyses not yet developed.

below: Potential streetscape and crossing enhancement between the Greenway and the Bikeway.



Immediate Steps (first 2 years):

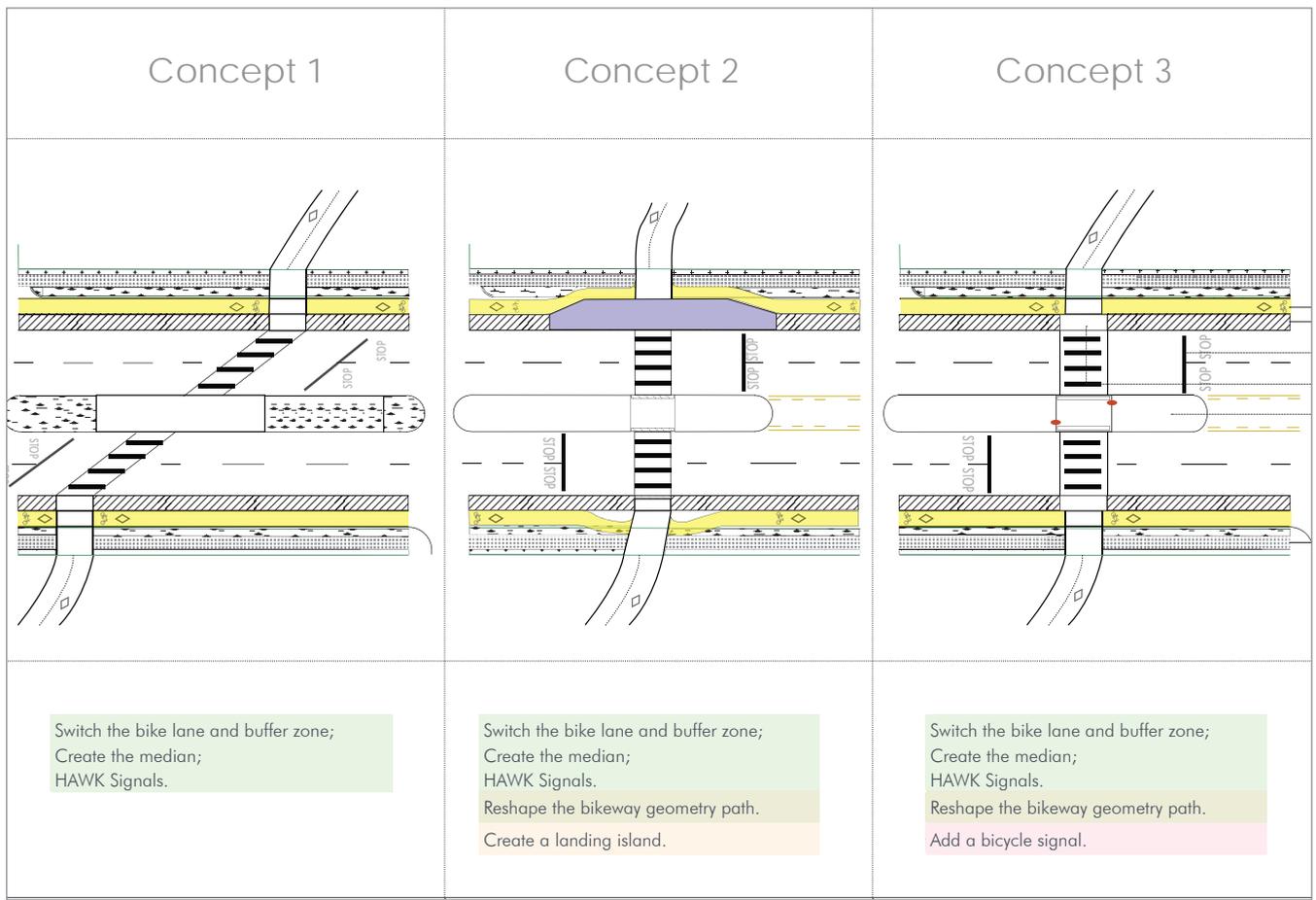
These initiatives could happen in the very near term, and certainly within an 18-24 month timeframe maximum, depending on funding and regulatory constraints.

Immediate Policies/Studies:

- Develop design guidelines for the West Ashley Greenway and West Ashley Bikeway to provide guidance in amenitizing and expanding the system to allow it to become a transportation facility in addition to a recreational facility.
- Prepare a feasibility study for potential federal grant projects, such as Transportation Investment Generating Economic Recovery (TIGER) grants.
- Evaluate access management strategies to include strategic consolidation and/or elimination of driveways and medians along major arterials/roadways (i.e. US 17, St. Andrews Blvd., Sam Rittenberg Blvd., etc).
- Develop community engagement strategies to improve communication, education, and participation for residents around locally important transportation issues.

Immediate Projects:

- Install amenities at all current bus stops such as benches, shelters, and signage.
- Implement St. Andrews Boulevard shuttle circulator service.
- Conduct a data driven feasibility study to determine the viability of a private water taxi service to connect West Ashley to the Charleston peninsula. If warranted, initiate an RFP process for the water taxi provider.
- Provide enhanced high visibility pedestrian and bicycle crossings on St. Andrews Blvd. for the West Ashley Bikeway.
- Provide enhanced high visibility pedestrian and bicycle crossings on Folly Road Boulevard for the West Ashley Greenway.
- Install crosswalks where they are missing at all signalized intersections, all four approaches (include accessible ramps, where needed).
- Evaluate the need for midblock pedestrian crossings (where signalized intersections are more than 1/2 mile apart) and the demand is evident based on complementary land uses, schools, places of worship, trailheads or transit stops.
- Reduce speed limits to no more than 35 MPH on arterial streets and 20 MPH on residential streets and provide traffic calming on streets with a demonstrated safety problems. (Prioritize Savannah Highway, Sam Rittenberg Blvd., Old Towne, and St Andrews Blvd.)
- Evaluate and optimize signal timing to provide for consistent pedestrian phases and achieve target speeds within the West Ashley boundaries; re-evaluate on an annual or biannual basis.



above: Proposed designs for crossing of the West Ashley Bikeway at St. Andrews Boulevard developed by the City of Charleston.

below: Potential Water Taxi crossing / landing areas for the interim/immediate bike/pedestrian river crossing.



Near-Term Steps (2 years – 5 years):

The set of near-term initiatives are items that could be implemented within the next 2-5 year timeframe, contingent on funding availability and other constraints. Some of these initiatives would require additional study as noted; those studies could be conducted in the interim timeframe.

Near-Term Policies/Studies:

- Gather local and regional commuter data and analyze. By understanding the travel patterns of commuters in West Ashley and the environs, decision-making for commuter-gearred enhancements such as premium transit services such as LCRT/LRT and PRT can be effectively evaluated and the appropriate services chosen.
- Complete a Regional Transit Feasibility Study and Regional Transit Framework Plan. A study of transit needs and demands for West Ashley and the surrounding areas can help determine new regional (LCRT/LRT/PRT) services and the appropriate technologies as well as set these initiatives up for federal funding through the Federal Transit Administration (FTA).
- Evaluate potential for dedicated high occupancy vehicle and transit lanes (Liberty Lanes) on existing major corridor roadways such as Savannah Highway and Sam Rittenberg Blvd. (also known as LCRT light, City of Toronto uses these lanes in downtown to maximize effectiveness of the street system). Study the impacts of converting an outside lane to an HOV or transit lane at some point in the future by monitoring not only traffic volumes but also transit ridership and bicycle and pedestrian counts within the corridors, and determine at what point in time consideration could be given to converting a lane to this type of use.
- Develop and adopt land use and zoning code modifications that allow for mixed-use land uses and intensification of land uses along critical transit streets/corridors (see Chapter 2).
- Develop and adopt design guidelines and development regulations that require livable development principles.
- Develop and adopt parking regulations that minimize auto dependency by mandating travel demand management techniques be applied prior to increasing additional parking on any given site.
- Develop and adopt a Vision Zero policy that targets the elimination of all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.
- Integrate data collection and analysis in all future project studies and improvements. Types of data may include traditional data (counters, surveys, demographics), mobility analytics, predictive analytics, and/or future analyses not yet developed.

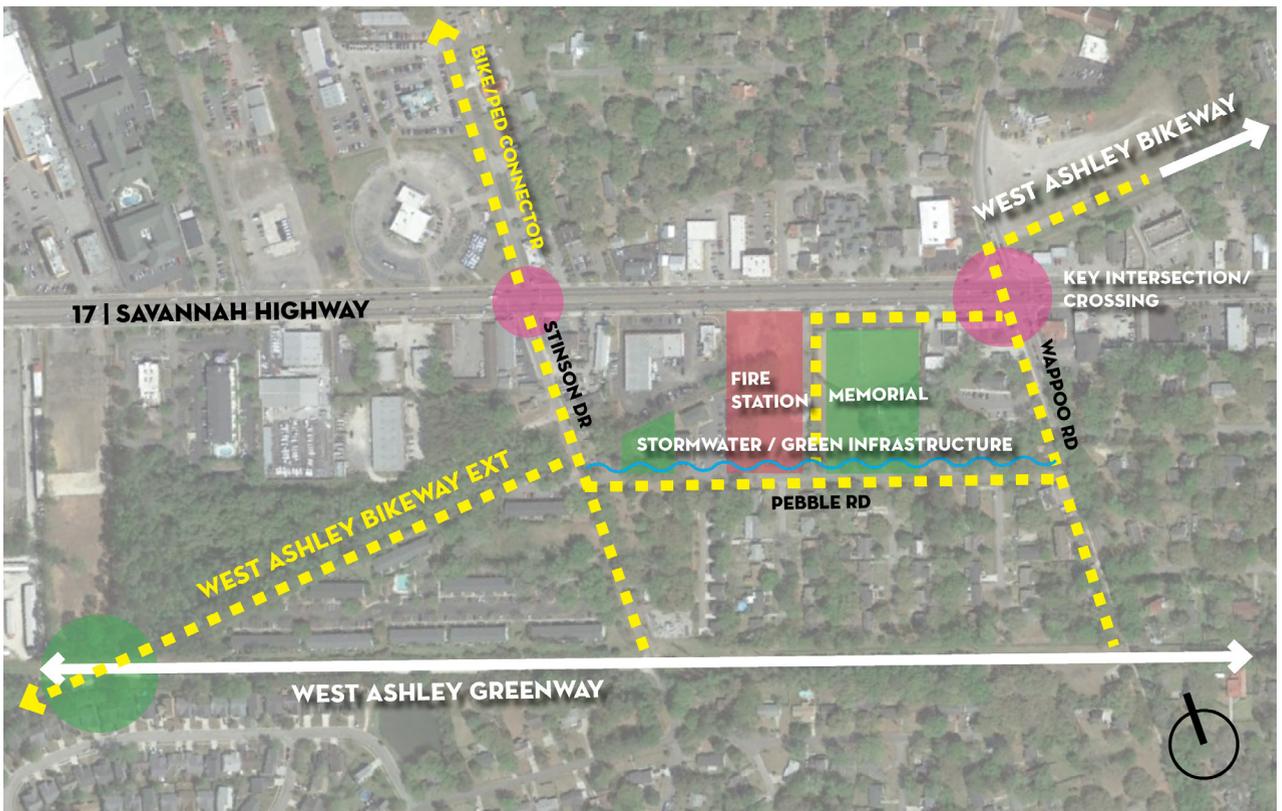
Near-Term Projects:

- Implement Charleston County 1/2 cent sales tax transportation projects.
- Evaluate/provide a physical connection between West Ashley Greenway and the Peninsula via a bridge, using existing infrastructure, a cantilevered structure, or a new standalone facility.
- Reconfigure intersection of Sam Rittenberg and Old Towne Road. A Charleston County study to determine the configuration of this intersection is just starting, and the redevelopment proposal for the Piggly Wiggly site which was recently acquired by the City and studied during this process should drive the ultimate configuration of the intersection reconfiguration.
- Reduce headways on CARTA express routes from 30 to 15 minutes in the peak hours; reduce regular headways from 60 minutes to 30 minutes on regular routes as travel demand, funding, and land use densities allow.



above: Potential improvements to the West Ashley Bikeway related to developing design guidelines for the West Ashley Greenway and West Ashley Bikeway. Improvements may include wayfinding, site furniture, green infrastructure, lighting, trail dimensions, etc.

below: Potential connectivity options for the West Ashley Greenway to the West Ashley Bikeway at Wappoo Road.



Near-Term Projects (Continued):

- Install or complete continuous shared use paths on major corridors: Savannah Highway, Sam Rittenberg Blvd., Old Towne Road, St. Andrews Blvd., Ashley River Road, Glenn McConnell Parkway, Bees Ferry Road, and Folly Road Blvd.
- Connect West Ashley Greenway to West Ashley Bikeway at Wappoo Road. As the West Ashley Greenway and Bikeway become a true transportation corridor for West Ashley beyond simply a recreational facility, it is important to close the gap that currently exists between these facilities. This connection includes the Savannah Highway crossing enhancements as well as on and off-road connectors between the two facilities in the area.
- Create a mobility hub at Citadel Mall; enhance transit services and connections at this location. A redevelopment illustration for this area is in Chapter 2, and can guide the street network configuration in this location. It is anticipated that this mobility hub would include stops/transfers among express bus, local bus routes, and the proposed shuttle circulators. It would also include an enhanced park-and-ride facility, shared mobility providers such as bikeshare, carshare opportunities, curb space for Uber/Lyft drop zones, and eventually connections to any premium transit services such as LCRT/LRT/PRT.
- Create mobility hub at West Ashley Circle; enhance transit services and connections at this location. The approach here would be similar to that at Citadel Mall.
- Implement express bus service to Boeing/Airport and Leeds Avenue. A study of the travel patterns of commuters should be conducted to determine the feasibility of expanding the existing express bus service.
- Implement a pedestrian/bike scale destination based wayfinding system to connect residents and visitors to major commercial destinations, parks, greenways, schools, and civic destinations.
- Install spot center medians and/or consolidate driveways for access management, streetscape enhancement, crossing enhancements (high visibility crosswalks, smaller curb radii and elimination of high-speed slip/turn lanes), sidewalk enhancements, and access management on roadways slated for Complete Street and Beautification Projects through the Charleston County Sales Tax program: Savannah Highway, Sam Rittenberg Blvd., Ashley River Road, and Old Towne Road. St Andrews Boulevard and Folly Road Boulevard should include similar improvements.
- Install adaptive controls for real-time adjustments (or current state of the art technology at the time of implementation) to signal timing along major corridors. In addition to being responsive to changing traffic conditions to aid in reducing congestion during peak times, the installation of this technology will allow transit to operate more efficiently and allow more premium services such as express buses to utilize signal preemption and queue-jumping. Similar technology is already in use in the region on Johnnie Dodds Boulevard in Mount Pleasant.
- Reconfigure intersection of 5th Avenue and St. Andrews Boulevard to provide safe vehicle and pedestrian access and crossing opportunities.
- Provide a canal walk pedestrian/bike crossover of Tiger Samp (see page 4.52).

Longer-Term Steps (5 years – ongoing):

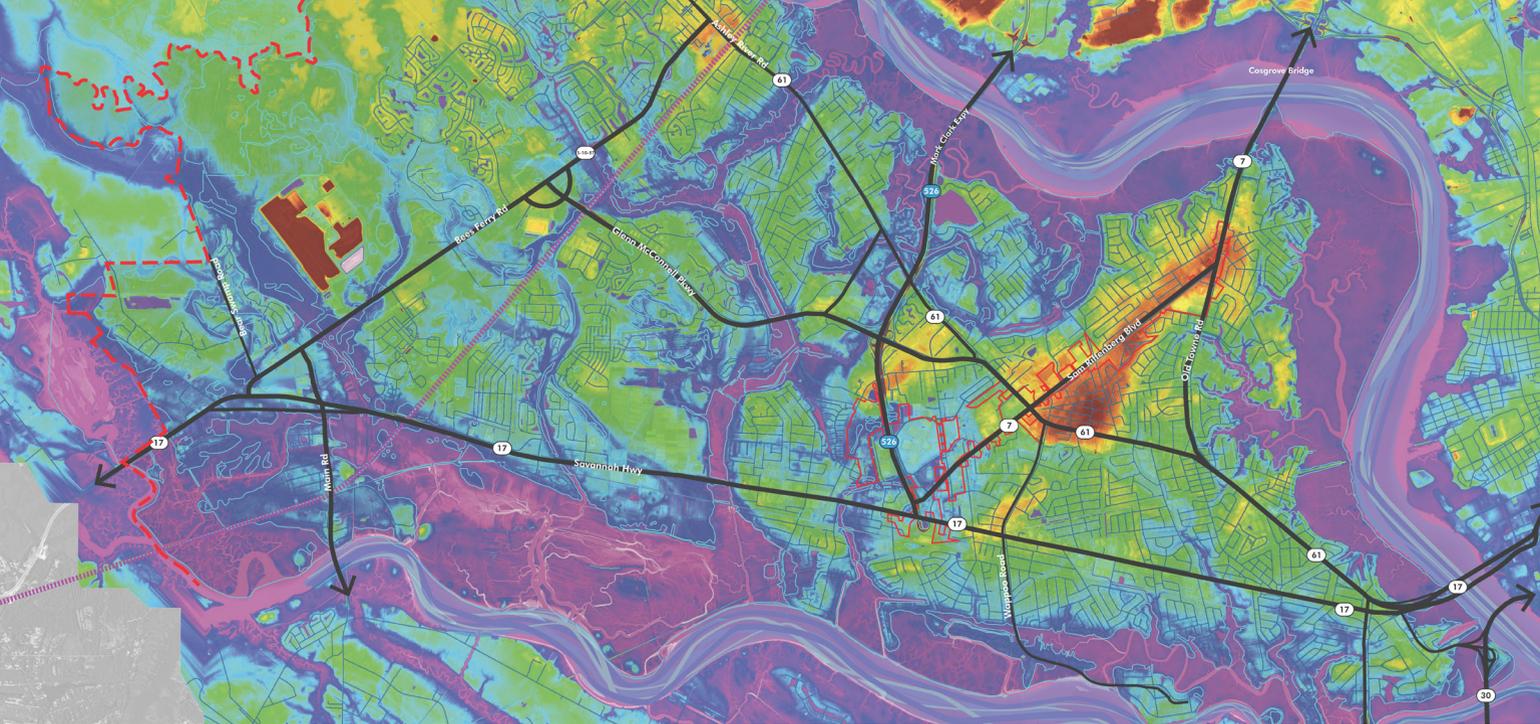
These initiatives are much longer-range in scope and unlikely to be implemented within a 10-year timeframe due to constraints related to funding and regulatory controls. Projects in this group are much higher cost but also greater impacts and benefits.

Longer-Term Policies/Studies:

- Complete a District-Wide (to include West Ashley, Johns Island, and Johns Island) Traffic Management Study. Develop a scenario-based study focused on current and future trends related to traffic in the West Ashley Area and the impacts of implementation of various mobility-focused measures such as enhanced transit, premium transit such as LCRT/LRT/PRT, regional roadway initiatives such as I-526 and the Glenn McConnell extension, and an enhanced bike/ped network such as the connection of the West Ashley Bikeway and Greenway and connections across the rivers via either one or both of the existing bridges and water taxi. The study would also measure the impacts of various land use scenarios such as a continuation of the existing trend of auto-oriented isolated single use developments, a scenario where mixed use walkable nodes were located in strategic locations as envisioned in this plan, and any other applicable scenarios.
- Complete a District-Wide (schools serving West Ashley residents) School Accessibility and Circulation Plan. Develop a plan to determine what access enhancements are needed for schools within West Ashley and how they are served by the transportation elements of *Plan West Ashley*. Improvements may include staggering school start times, improved bus services, survey of school transportation needs, analyze school attendance, school origination and destination traffic modeling, or other enhancements to address school impacts to congestion.

Longer-Term Projects:

- Regional network additions with the I-526 completion and Glenn McConnell Parkway Extensions. Support the construction of these two pieces of regional network in a context-sensitive manner that accommodates multi-modal transportation such as premium transit (LCRT/LRT/PRT) and active transportation.
- Support the inclusion of a multi-use path and the ability of the proposed Glenn McConnell Parkway widening to accommodate a future dedicated transit/HOV/autonomous vehicle lane.
- Support intersection improvements at Sam Rittenberg Boulevard/Ashley River Road, Savannah Highway/Carolina Bay Drive, and Ashley River Road/St. Andrews Boulevard and Old Towne Road to resolve vehicle operational and safety issues while enhancing the ability of the intersections to accommodate pedestrians and cyclists, lessening the current barriers these intersections pose to the active transportation modes.
- Support the proposed reconfiguration of Main Road and Savannah Highway intersection, and insure that access to developed or potential development parcels is not compromised by the design for any mode of transportation.
- Support the installation of sidewalks and/or shared use paths throughout West Ashley along streets where sidewalks currently do not exist.



4

GREEN INFRASTRUCTURE & SUSTAINABILITY

EXISTING CONDITIONS	4.4
COMMUNITY CONCERNS	4.26
VISION	4.27
IMPLEMENTATION	4.64

RESILIENT

Green Infrastructure & Sustainability

CHAPTER OVERVIEW

EXISTING CONDITIONS

- West Ashley’s low, waterfront terrain and historical development patterns are integral to what makes West Ashley unique and special to residents and visitors alike.
- At the same time, terrain may be the most significant challenge to West Ashley’s future. Conversion of natural “sponge” wetlands to impervious surfaces and development in the floodplain over time have reduced the land’s natural capacity to handle storm events, and have resulted in more and more flood-prone public and private investment. The Lowcountry Land Trust and South Carolina Conservation Bank are focused on land conservation, and will be important partners moving forward.
- West Ashley is increasingly vulnerable to more frequent and intense coastal storm events as well as the daily stresses of nuisance flooding and projected sea level rise.
- Multiple infrastructure projects and studies are underway, including drainage studies and improvement projects, water and sewer infrastructure upgrades, open space and recreation investments, and numerous City and County investments. At the scale of West Ashley as a whole, West Ashley is lacking a holistic and comprehensive vision to align actions and funding priorities with a long-term vision for the future.

COMMUNITY CONCERNS

- Neighborhood flooding is affecting safety, value, and quality of life in West Ashley’s neighborhoods. The community reports worsening conditions over the past decade.
- Many of West Ashley’s existing neighborhood parks need revitalization, and many residents lack safe access to nearby park and recreation resources.
- Burying existing overhead utilities would add value by improving the quality and character of West Ashley’s streetscapes.

VISION

- Plan West Ashley establishes a framework for resilient growth consistent with the community’s vision for its future, enabling stable economic development while minimizing risk from external economic and environmental forces. The vision for a resilient West Ashley is a combination of policies, strategies, priorities, guidelines, toolkits, prototypes, and demonstration projects spanning from the watershed and neighborhood scale down to the block, street, and individual building. The following over-arching elements guide the infrastructure vision:
 - **Where should West Ashley prioritize investment?**
Direct investment to higher, safer ground | Protect & heal natural resources | Connect natural and built systems
 - **How should West Ashley become more resilient?**
Reduce local flooding impacts | Prioritize infrastructure maintenance | Encourage green infrastructure (GI) | Provide high-quality, useful, convenient open spaces

IMPLEMENTATION

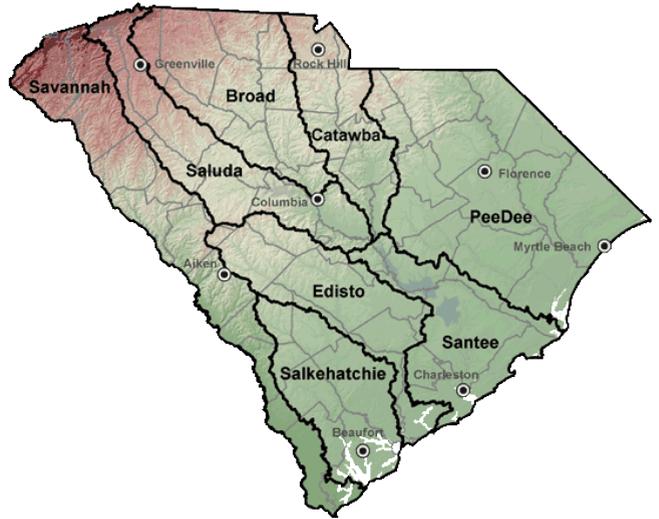
- The implementation plan provides a matrix of actions to achieve these goals; see detailed implementation recommendations pages 4.64-4.71.
- Some recommended actions (such as inclusion of green infrastructure, flood control, and undergrounding of overhead utilities into the Fire Station and Memorial design) are immediate and may provide near term results to build awareness and momentum.
- Some recommended actions are long-term in nature (such as regulatory and policy actions to limit and heal development in the floodplain) requiring further study and monitoring of results over a long period of time.

EXISTING CONDITIONS

Watersheds & Water Resources

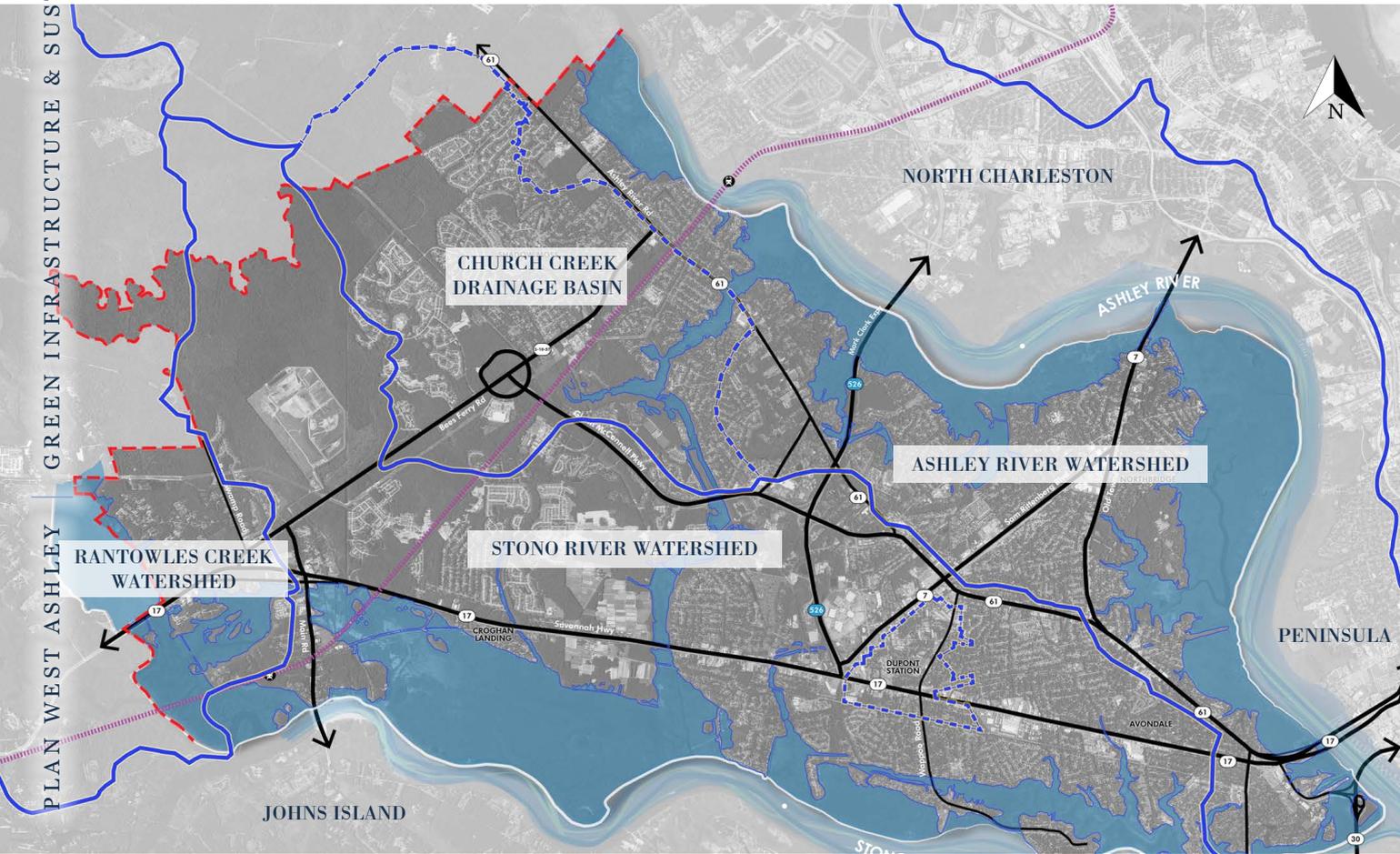
Watersheds

Connection to the water is one of Charleston’s most unique and special assets. Beaches, marshes, rivers, creeks, and estuaries provide an economic engine for recreation, tourism, shipping, and the commercial fishing industry. Watersheds define areas of land that flow to different rivers, river systems, or bodies of water, and are important planning tools for evaluation of environmental health and infrastructure systems. West Ashley is composed of three subwatersheds, the Ashley River, Stono River, and Rantowles Creek subwatersheds - all of which are part of the larger Santee River Basin Watershed. The Ashley River has an approved Total Maximum Daily Load (TMDL) for dissolved oxygen, meaning a maximum pollutant limit has been exceeded and a regulatory restoration plan has been developed.



above: South Carolina Watersheds (SCDHEC)

below: West Ashley subwatersheds



Most outfalls in West Ashley are tidally influenced. Rainfall is sometimes highly localized, with different locations across West Ashley experiencing significant variation in rainfall intensity and depth.

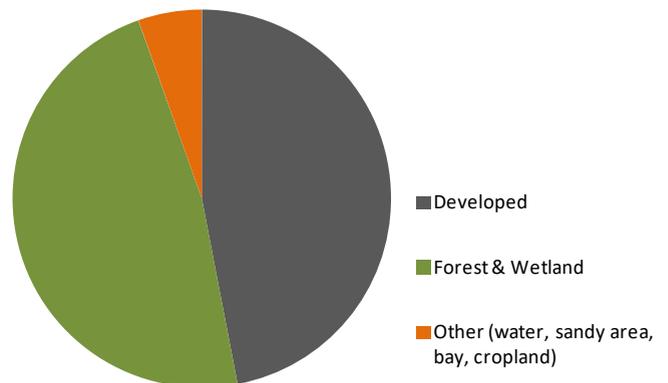
Land Cover

Land cover in West Ashley includes extensive natural wetland systems and forested areas. Natural systems have been shrinking and are increasingly disconnected over time, as the City’s growth expands and transportation and utility infrastructure bisect formerly contiguous natural resources.

Developed “urban” land cover conditions in West Ashley vary widely, including older residential neighborhoods with open swale drainage, mature landscaping, and tree cover generally closer to the Peninsula; newer single-family and multi-family residential development; and highly impervious commercial centers and corridors such as the Citadel Mall and Sam Rittenberg corridor. Several major development projects since 2000 in outer West Ashley will continue to affect land cover conditions, including Long Savannah and Grand Oaks. In general, the Ashley River watershed is more impacted by development and built infrastructure, as evidenced by the higher urban/impervious land cover and water quality impairments.

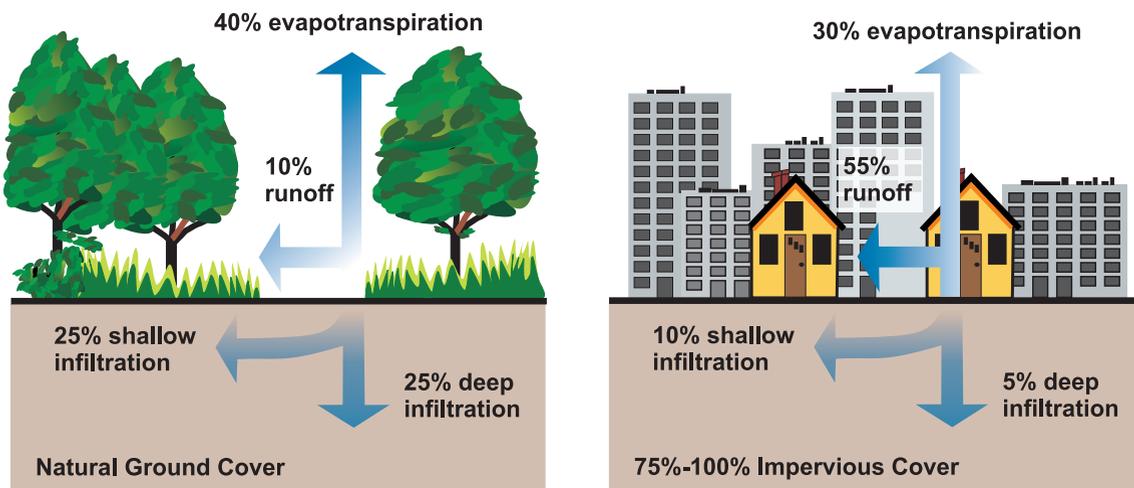
Existing natural wetland and forest systems act as sponges, filtering precipitation and returning it to the ground and atmosphere. Over time, replacement of natural ground cover with building roofs, pavement, and other impervious surfaces has altered the natural balance in West Ashley, increasing stormwater runoff quantity, affecting water quality, and adding to flooding impacts.

In addition to changes in land cover with development over time, filling in of natural floodplain volume has increased local flooding impacts by removing storage capacity.



2017 Land Cover

below: Increased impervious cover results in increased runoff. (graphic: US Environmental Protection Agency)



LAND COVER

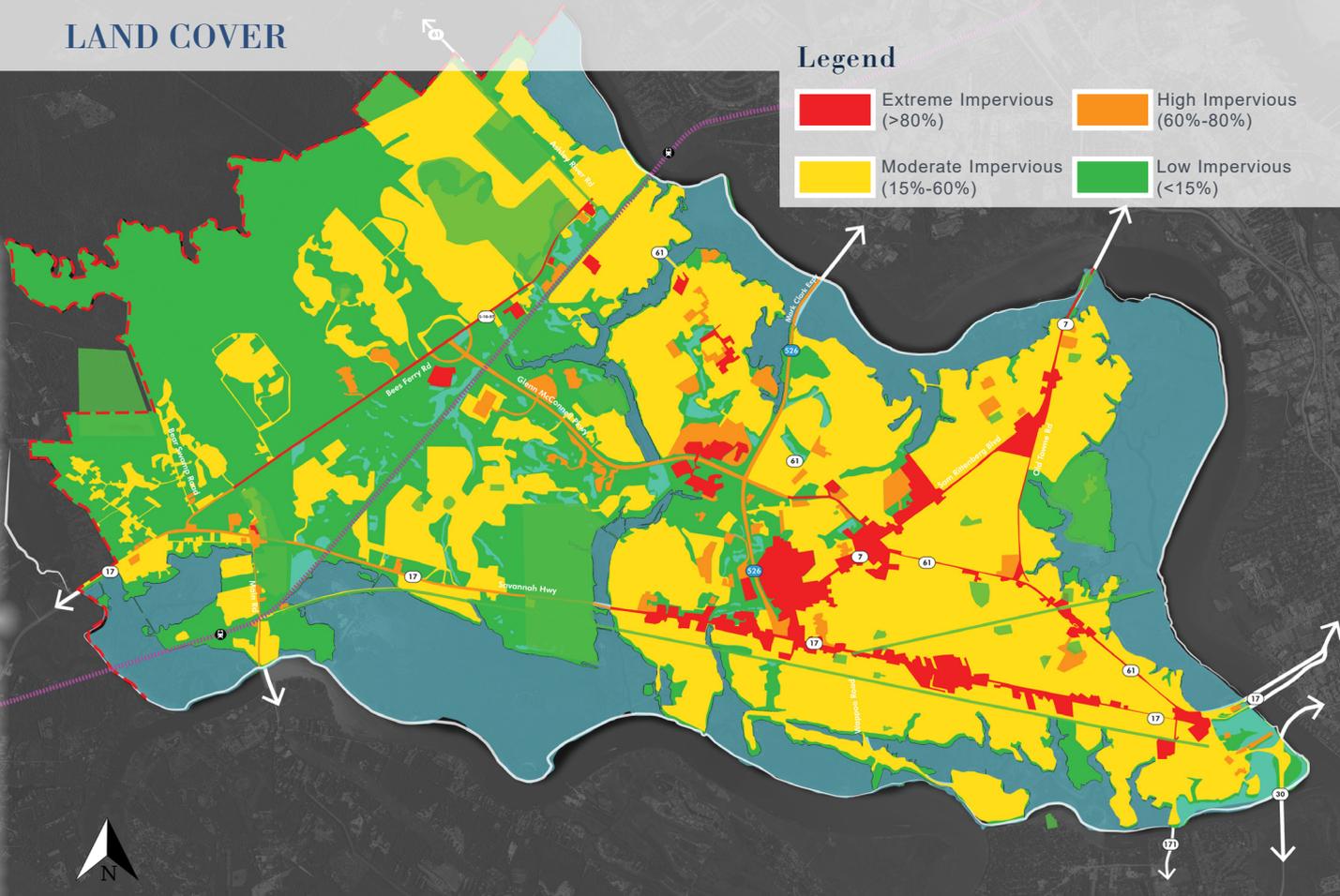
EXISTING CONDITIONS

GREEN INFRASTRUCTURE & SUSTAINABILITY

PLAN WEST ASHLEY

Legend

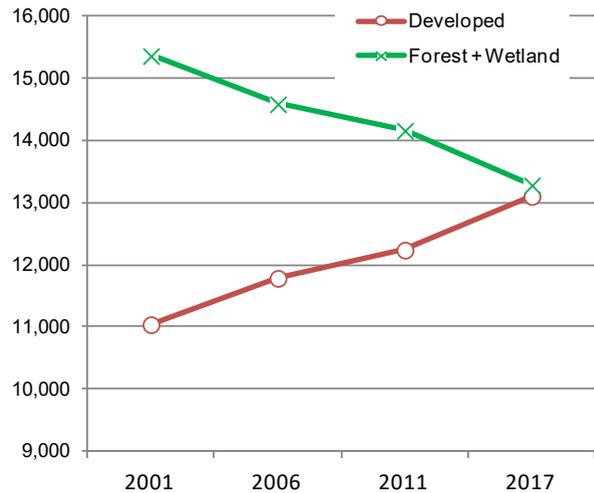
- Extreme Impervious (>80%)
- High Impervious (60%-80%)
- Moderate Impervious (15%-60%)
- Low Impervious (<15%)



Striving for Balance

Since 2001, over 2,000 acres in West Ashley have been converted from natural forests and wetlands to accommodate human expansion - that's 80 football fields per year.

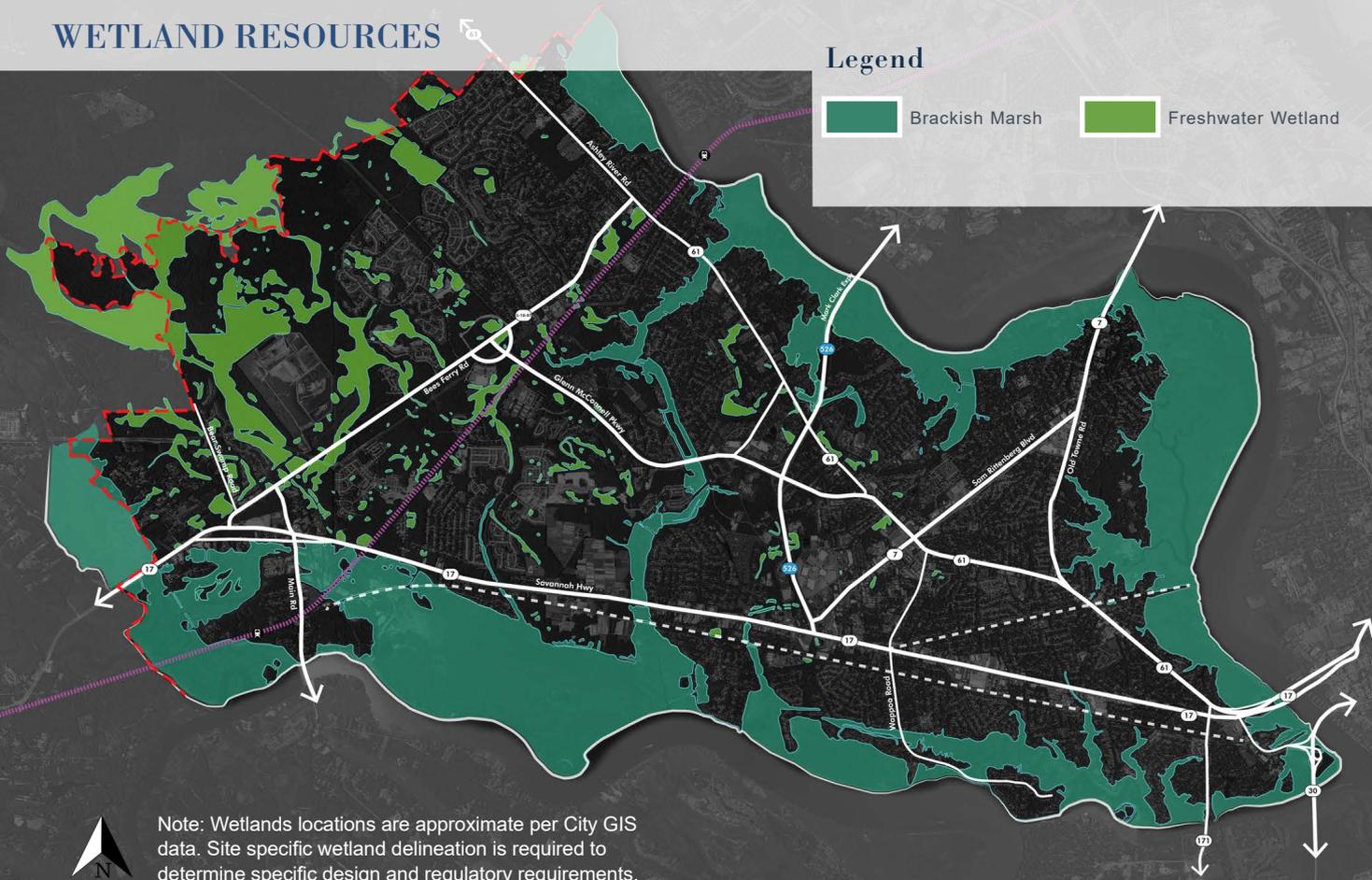
Working with the land by protecting natural systems and incrementally reconnecting fragmented nature corridors can help balance restoration of natural systems with environmentally-friendly development and redevelopment in the most logical locations.



West Ashley Land Cover Over Time (acres)

Legend

- Brackish Marsh
- Freshwater Wetland



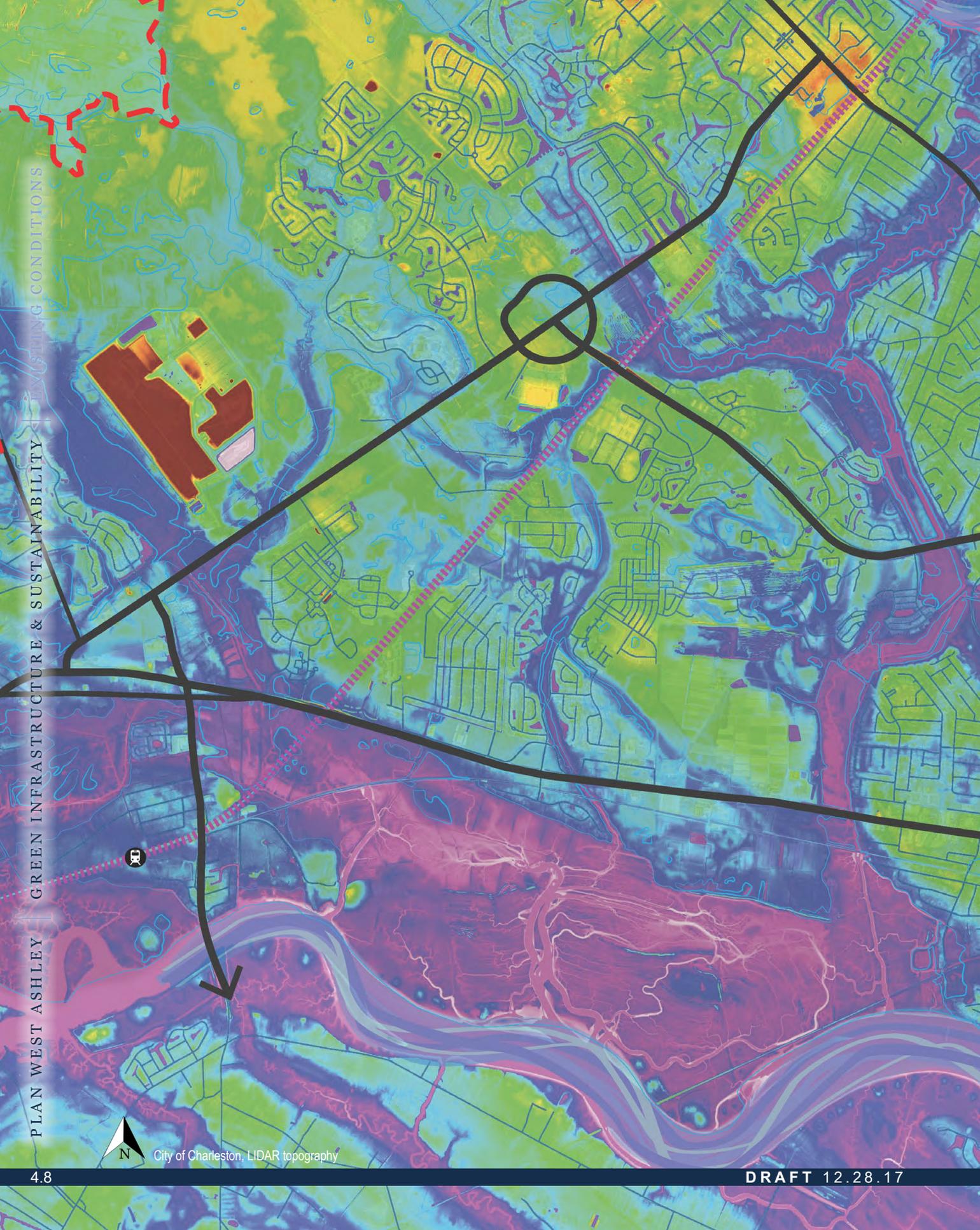
Note: Wetlands locations are approximate per City GIS data. Site specific wetland delineation is required to determine specific design and regulatory requirements.

Wetlands

Wetlands provide critical environmental, economic, and community benefits. Although City ordinances and regulations require delineation of wetlands, there are no local wetlands protection ordinances or local regulations. South Carolina does have a joint permitting process with the Charleston District of the U.S. Army Corps of Engineers (ACOE). Often wetland impacts in West Ashley are offset with compensatory mitigation by securing credits from a mitigation bank or in-lieu fee program; however, compensatory mitigation and restoration activities are often implemented outside West Ashley therefore not providing the intended local benefit. A South Carolina Department of Health and Environmental Control (SCDHEC) permit is required for filling, dredging, draining, or erection of structures in critical areas, defined as coastal waters, tidelands, beaches, and dune systems. A healthy vegetative buffer is an effective and cost-efficient method to protect wetland resources. Charleston has adopted a Critical Line Buffer Ordinance (CLBO) requiring a 25-foot buffer for single-family residential, two-family residential, and conservation; and a 40-foot buffer for commercial, industrial, office, or multi-family residential uses.

Benefits of Wetlands

- reducing flooding by absorbing & retaining water;
- improving water quality by filtering out sediments and contaminants;
- dissipating energy from heavy rains & floods;
- providing erosion control;
- providing habitat;
- providing recreational opportunities;
- providing open space; and
- supplying groundwater flow.

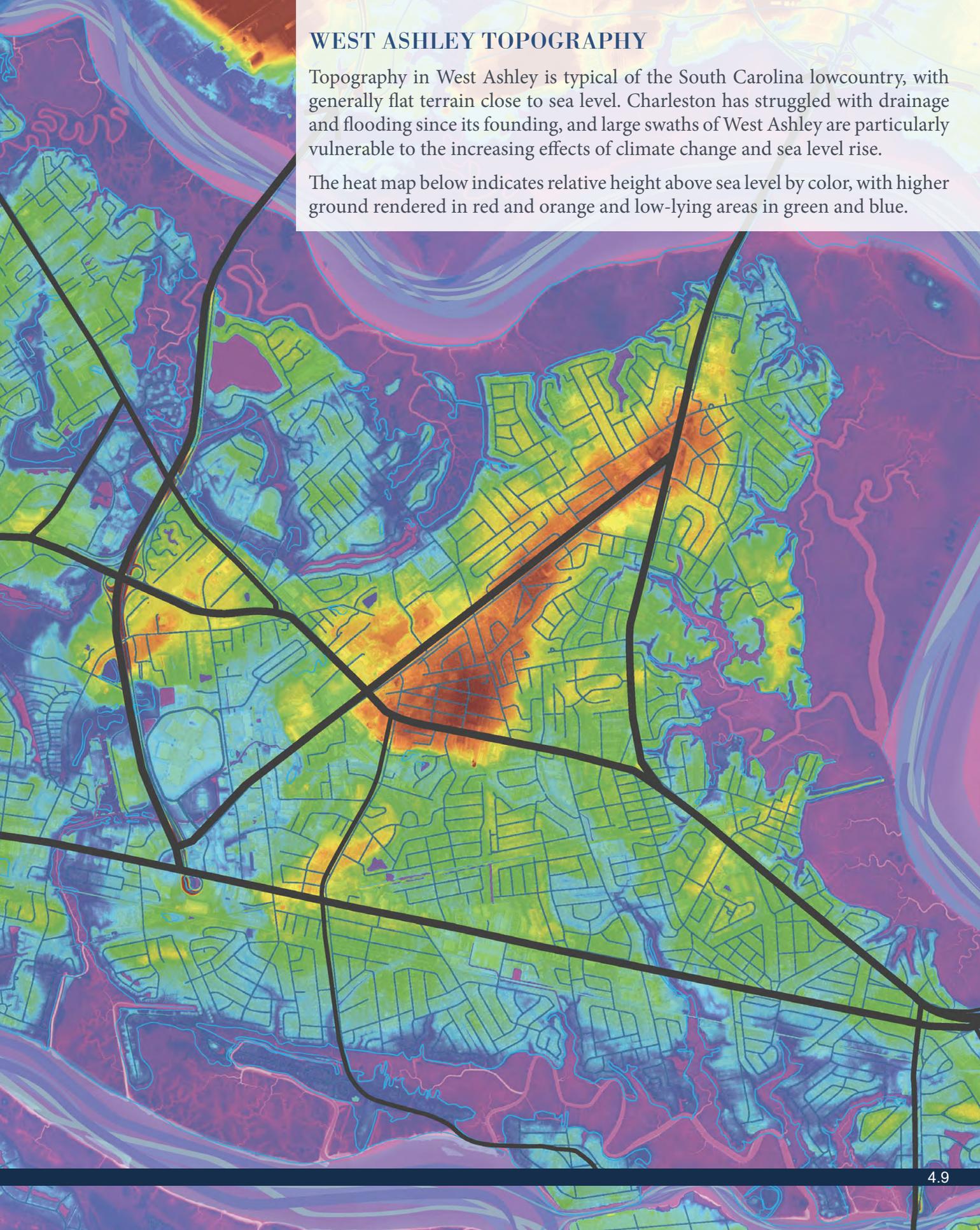


City of Charleston, LIDAR topography

WEST ASHLEY TOPOGRAPHY

Topography in West Ashley is typical of the South Carolina lowcountry, with generally flat terrain close to sea level. Charleston has struggled with drainage and flooding since its founding, and large swaths of West Ashley are particularly vulnerable to the increasing effects of climate change and sea level rise.

The heat map below indicates relative height above sea level by color, with higher ground rendered in red and orange and low-lying areas in green and blue.



Flooding Impacts

The West Ashley area struggles with flooding, including coastal/tidal flooding, riverine flash flooding from intense localized precipitation, and storm surge inundation from coastal events including hurricanes. Impacts are due to multiple causes, including:

- Low lying areas are challenged by tidal influence, and flows through conveyance systems vary depending on outfall elevation compared to sea level. According to a tidal gauge located in Charleston at the mouth of the Cooper River, the average tidal fluctuation is 6-7 feet between low and high tides.
- Obstacles prevent efficient overland flow, and trash and debris clog inlets;
- Some infrastructure is undersized, i.e. culverts; and
- The frequency and severity of storm events is increasing.



above: Forest Acres flooding, August 28, 2012
(City of Charleston)

Stormwater Drainage

In the City of Charleston, stormwater is managed by the Charleston Department of Public Service. Charleston Water System acts as a billing agent for collection of the city's stormwater fee. Stormwater utility fees are used for maintenance, operation, and improvement of the stormwater drainage system, and are charged based on the amount of impervious surface a property contains. Stormwater utility fees are also used for the City's Stormwater Management Program, funding processes and programs required for compliance with federal Clean Water Act requirements. Charleston County also owns and operates drainage infrastructure in West Ashley, which sometimes leads to complications due to multiple jurisdictions.

The stormwater drainage system in West Ashley is comprised of both open drainage (swales and channels) and closed drainage (catch basins, manholes, and underground pipes) elements. Many areas rely upon overland flow due to topography. Development pace often results in standard "pipe and pond" stormwater management strategies, implementing wet detention ponds for their predictability and expediency as well as suitability to high groundwater tables. Limited green infrastructure (bioretention systems, permeable pavement, green roofs) are currently implemented in West Ashley. The flat, low-lying topography, poorly draining soils, and high groundwater typical of the coastal plain can be a challenge to implementation of stormwater Best Management Practices (BMPs).

City Stormwater Regulatory Summary

The City will be revising the Stormwater Design Standards Manual, and will include more provisions for green infrastructure. There is currently limited implementation of green infrastructure in West Ashley. Porous pavement is currently not permitted within the City right-of-way.

The Charleston County Public Works Department regulates stormwater design within County 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.

Utility Infrastructure - Water & Sewer

Charleston Water System is the public water and wastewater utility serving West Ashley. The Hanahan Water Treatment Plant north of the airport produces drinking water sourced from the Bushy Park Reservoir and Edisto River. A new 36-inch diameter waterline connection from North Charleston to West Ashley is currently under construction, replacing an aging 24-inch line. The \$15.5 million work is scheduled for fall 2017 completion. The third connection across or under the Ashley River, “the new Ashley River waterline will enhance fire protection for the areas it serves and help meet demand at peak usage times. The new waterline will also help meet demand related to growth.”

Charleston Water System’s Wastewater Collection Department operates and maintains the sewer system in West Ashley. Stormwater and wastewater systems are separate in Charleston; however groundwater and stormwater do still enter and influence capacity as well as contribute to sewer overflows during periods of heavy rain. Flow from West Ashley travels to the Plum Island Wastewater Treatment Plant via the West Ashley Tunnel. The West Ashley Tunnel is undersized and structurally unsound, and is currently being replaced with completion of the new tunnel expected in late 2017. This work is the fifth and final phase of the \$196 million Sewer Tunnel Replacement Project, begun in the 1990s, and will address sanitary sewer overflows and impacts to water quality. Charleston’s Plum Island facility is permitted for 36 mgd capacity, with current average daily flow approximately 19 mgd.



Source: Charleston Water System

Communications, Electric & Gas

South Carolina Electric & Gas (SCE&G) provides electric and natural gas service to West Ashley. Comcast/Xfinity, WOW, and AT&T provide communications services. The City has actively communicated with SCE&G to obtain cost estimates for utility undergrounding and/or relocation to factor into infrastructure cost estimates for several redevelopment corridors.

Subwatersheds of Concern

1. Forest Acres Drainage Basin

The City of Charleston is in the midst of addressing flooding in the Forest Acres and 5th Avenue drainage basins, replacing the outdated and undersized stormwater pump station with a safe and efficient system of open stormwater channels and box culverts along the West Ashley Bikeway, under St. Andrews Boulevard, and under 5th Avenue. Runoff will discharge into Oldtown Creek which flows into the Ashley River, and will no longer be at risk of flooding due to failure of pump systems during storm-related power outages. Phase I began construction as of January 2017 and construction is scheduled for 18 months. Phase II of the Forest Acres Drainage Improvement project will tie into Ashley River Road to the north and west of the intersection of Heathwood Drive.

2. Church Creek Drainage Basin

The 5,000 acre Church Creek drainage basin today is approximately 80% developed with mainly residential and some commercial development, including the residential neighborhoods of Shadowmoss, Hickory Hill, Hickory Farms, Grand Oaks, Village Green, Forest Lakes, and Canterbury Woods. The Church Creek drainage facilities consist of a natural drainage channel and marsh area located between the outlet under U.S. Highway 61 and the CSX Railroad. Upstream of the CSX Railroad, portions of the existing channel have been improved between Bees Ferry Road and the railroad.

In 1986, responding to local flooding, Charleston County, SCDOT, and the City of Charleston combined efforts to increase the capacity of the basin's main outfall beneath the CSX railroad, adding three 72-inch culverts to the existing 66-inch culvert.

In 2000, after continued flooding impacts, the city approved a nine month building moratorium and initiated a detailed study of the drainage basin. The study resulted in new design standards for new

development in the basin and recommendations for system improvements that could lower flood levels. In 2005, capacity was added to provide additional stormwater storage in conjunction with construction of the Middleboro section of Shadowmoss, and in 2007, the city completed a diversion project that intercepted a significant portion of stormwater runoff from the eastern side of Shadowmoss Plantation. In 2010 the city constructed a 4x12 box culvert to add additional capacity from the Bridge Pointe pond to the main channel.

So far the city has spent over \$3.5 million to construct improvements and monitor the effect of stormwater runoff from new development so that it does not adversely affect existing development.

(Source: City project webpage background)

3. Dupont/Wappoo Drainage Basin

The Watershed Master Plan for the Dupont/Wappoo (DuWap) subwatershed, a joint effort between the City and County, is currently underway with completion expected by end of 2018. The DuWap watershed is made up of a mix of high density commercial, including the Citadel Mall, and older residential areas. The primary drainage feature is a large drainage canal conveying runoff from the Citadel Mall area to a tidal creek flowing under Ashley Town Center Drive and discharging to the Stono River.

The plan scope includes inventory of drainage infrastructure, wetland and stream assessment, watershed analysis and hydrologic modeling, SLR assessment, conceptual stream improvement design, development of design recommendations and design standards for future development within the watershed, and production of a watershed master plan to identify drainage improvement projects based on future build-out.

Forest Resources

Current street tree and vegetation conditions within West Ashley vary, but are especially limited in the commercial core areas. Private property vegetation varies. Some areas of West Ashley, especially the longer established historic neighborhoods, include more abundant tree cover and vegetated buffer conditions. Existing commercial corridor 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. SCE&G has vegetation (tree) maintenance requirements. New vegetation within the right-of-way and easements is acceptable contingent on meeting their planting guidelines. SCE&G does have some flexibility within requirements; however a 15-foot mature height limit is a typical standard.

The City’s forest resources were last studied comprehensively in 2006, inventorying 15,244 street trees (citywide) providing \$1.34 in benefits for every \$1 spent on tree care. Management recommendations at the time included continuing to diversify mix of species, sustaining an annual planting program, and increasing maintenance investment. The 2006 study was limited to the City’s publicly managed street trees, not including parks, traffic medians, wooded buffers, and drainage areas.

The City is currently working with the South Carolina Forestry Commission and the Green Infrastructure Center on a study to link urban tree canopy to stormwater mitigation. Preliminary draft recommendations identify “potential planting areas” City-wide. Preliminary maps clearly demonstrate the need for green retrofit of existing inner West Ashley

paved commercial parking lots that are almost completely devoid of trees. Tree canopy analysis also begins to demonstrate the difference between inner and outer West Ashley residential neighborhoods. Historic inner West Ashley neighborhoods generally include mature tree canopy and grown-in planted landscapes providing tremendous benefits, while more recent outer West Ashley subdivisions and streetscapes generally lack mature canopy cover.

Flood Zones

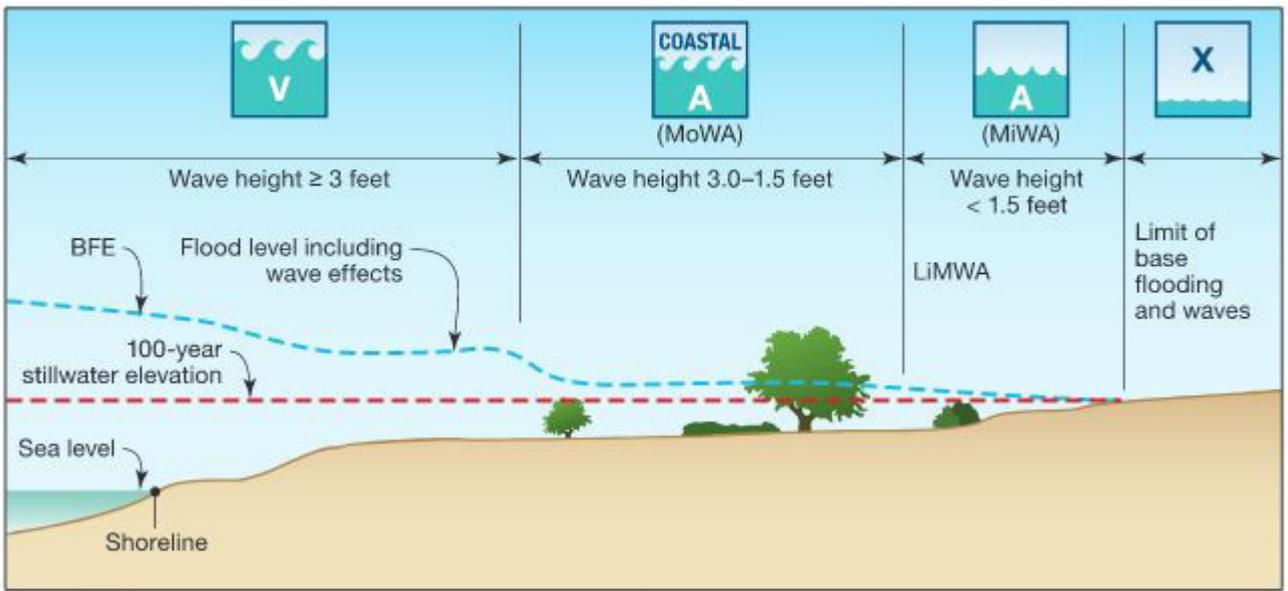
The Federal Emergency Management Agency (FEMA) creates and updates Flood Insurance Rate Maps (FIRMs), identifying Special Flood Hazard Areas (SFHAs). State and local government rely upon FEMA FIRM mapping as an integral tool for floodplain management. SFHAs, including zones A, AE, and VE, are defined as the areas that will be inundated by the 100-year flood (the flood that has a one percent chance of happening in any year – also referred to as the “base flood”). V zones are areas subject to 100-year flood inundation and face additional coastal impacts due to wave velocity action from waves greater than 3 feet in height. 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.

To mitigate flooding risk, the City and County require a “freeboard” safety factor for first floor elevations, setting the top of the lowest floor level of the lowest floor above the defined flood elevation for new construction and substantial improvements within flood zones (City freeboard requirement = 1 foot, County freeboard requirement = 2 feet).

Benefits of Urban Trees:

- Reduced traffic speeds
- Safer walking environment
- Aesthetics, placemaking & security
- Rain, sun, heat, and skin protection
- Reduced tailpipe emissions
- Emotional and physical health
- Pollutant adsorption & lower ozone
- Lower urban air temperatures
- Improved local economy
- Added value & tax base
- Longer pavement life

Adapted from Burden, Dan “22 Benefits of Urban Trees”, August 2006.

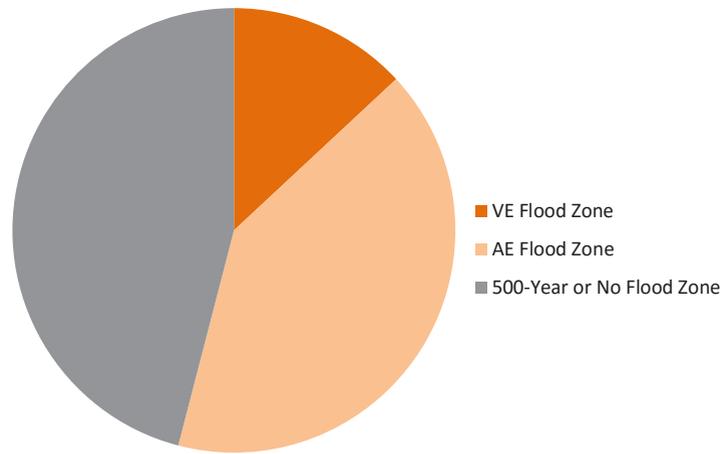


above: Typical shoreline transect showing stillwater and wave crest elevations with associated flood zones
 Source: FEMA Coastal Construction Manual

Non-residential structures generally require additional modifications above base flood level such as watertight spaces 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 more substantial requirements, such as pilings and columns built to resist wind and water loading, and raised elevation so that the bottom of the lowest horizontal structural member of the lowest floor is one foot above the base flood level.

The City of Charleston participates in the National Flood Insurance Program (NFIP) to promote and increase flood preparedness, directly impacting homeowners in flood zones.

Flood Zone Area Summary (2004 Data)



Approximately 54% of the study area is in a FEMA VE or AE flood zone. (per 2004 data, updated flood zones are expected in 2018)

Definitions:

FLOODPLAIN – land that is subject to flood inundation. Typically this area is classified as the area at risk of flooding from the 1% chance event: the 100-year flood.

100-YEAR FLOOD – flood that has one chance in one-hundred (1%) of being equaled or exceeded in any year, also referred to as the base flood.

500-YEAR FLOOD – flood that has one chance in five-hundred (0.2%) of being equaled or exceeded in any year.

FREEBOARD – an additional amount of height above the base flood elevation used as a factor of safety in determining elevation of a structure’s lowest floor.

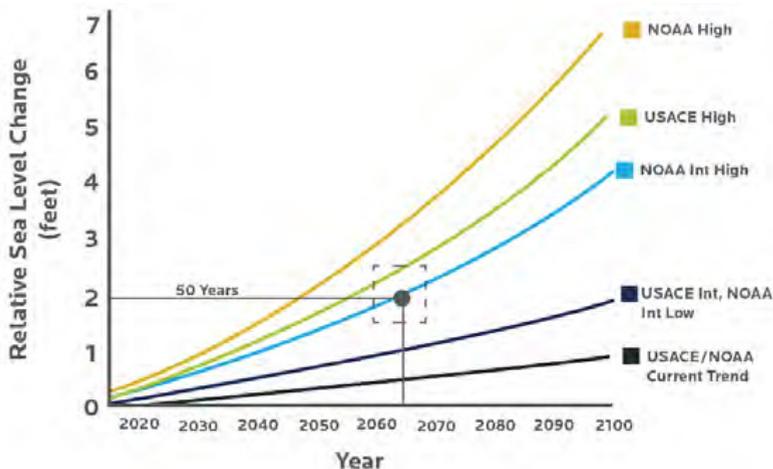
Climate Change & Sea Level Rise

In the 1970s Charleston experienced an average of 2 days of tidal flooding per year; in 2010 the City experienced 11 days of tidal flooding, in 2015 38 days, and in 2016 50 days. It is projected that by 2045, the City could experience as many as 180 days of tidal flooding per year. On top of the increasing threat of sea level rise and tidal flooding, the City has been tested with the impacts of extreme storm events in recent years, including record setting rain and tides in October of 2015 (over twenty inches of rain in three days) and Hurricane Matthew in October of 2016 (over ten inches of rain).

In addition to public safety and community impacts, major environmental impacts from sea level rise and storm surge include:

- Land Alteration: coastal erosion, extreme sedimentation, wetland migration, and loss of wetland.
- Resource Degradation: water and air quality, trash and debris, sewer overflow, over fertilization, etc.
- Clean Up: trash and debris, damage to habitat (aquatic and riparian), sensory (looks, smell, noise)

The National Oceanic and Atmospheric Administration (NOAA) estimates a sea level rise of 2 to 7 feet in Charleston over the next 100 years. The City's 2015 Sea Level Rise Strategy uses a sea level rise assumption of 1.5 feet to 2.5 feet above sea level by 2065, to be re-evaluated as new data becomes available. The Sea Level Rise strategy is comprehensive, featuring 76 goals and points focused on a reinvest/respond/ready path to resilience – reducing impacts, ensuring public safety, and ensuring community recovery in the event of flooding. Sea level rise as well as the increasing frequency and severity of storm events should inform infrastructure assessment and prioritization of capital projects to predict and evaluate impacts on health, safety, public welfare, and quality of life.

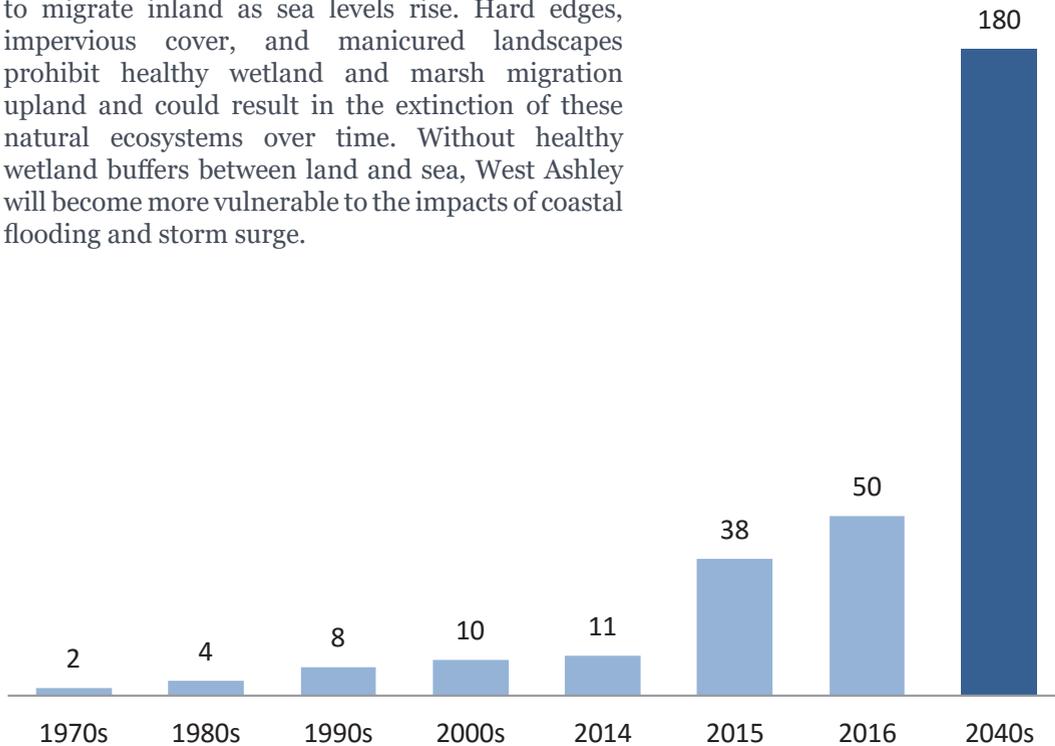


Sea Level Rise Projections

above: from Charleston Sea Level Strategy, 2015, UCS Analysis; Morales and Alsheimer 2014; NOAA Tides and Currents 2013.

The maps on page 4.17 show the future mean high tide marks with two, four, and six feet of sea level rise. Land adjacent to the coast will be subject to more coastal flooding impacts as sea levels rise and storm frequency and intensity are projected to increase. Cumulatively, if urban development continues to expand to currently undeveloped natural areas, additional runoff from upland areas will further compound flooding where land meets water.

Wetlands and brackish marsh systems will attempt to migrate inland as sea levels rise. Hard edges, impervious cover, and manicured landscapes prohibit healthy wetland and marsh migration upland and could result in the extinction of these natural ecosystems over time. Without healthy wetland buffers between land and sea, West Ashley will become more vulnerable to the impacts of coastal flooding and storm surge.



Days with Flooding Events

above: From Charleston Sea Level Strategy, 2015, planning parameters for 50-year outlook, based on US Army Corps of Engineers and NOAA (Charleston, SC).

right (page 4.17): 2, 4, and 6 foot Sea Level Rise. The maps indicate high tide location and do not include coastal storm event inundation or runoff inundation.

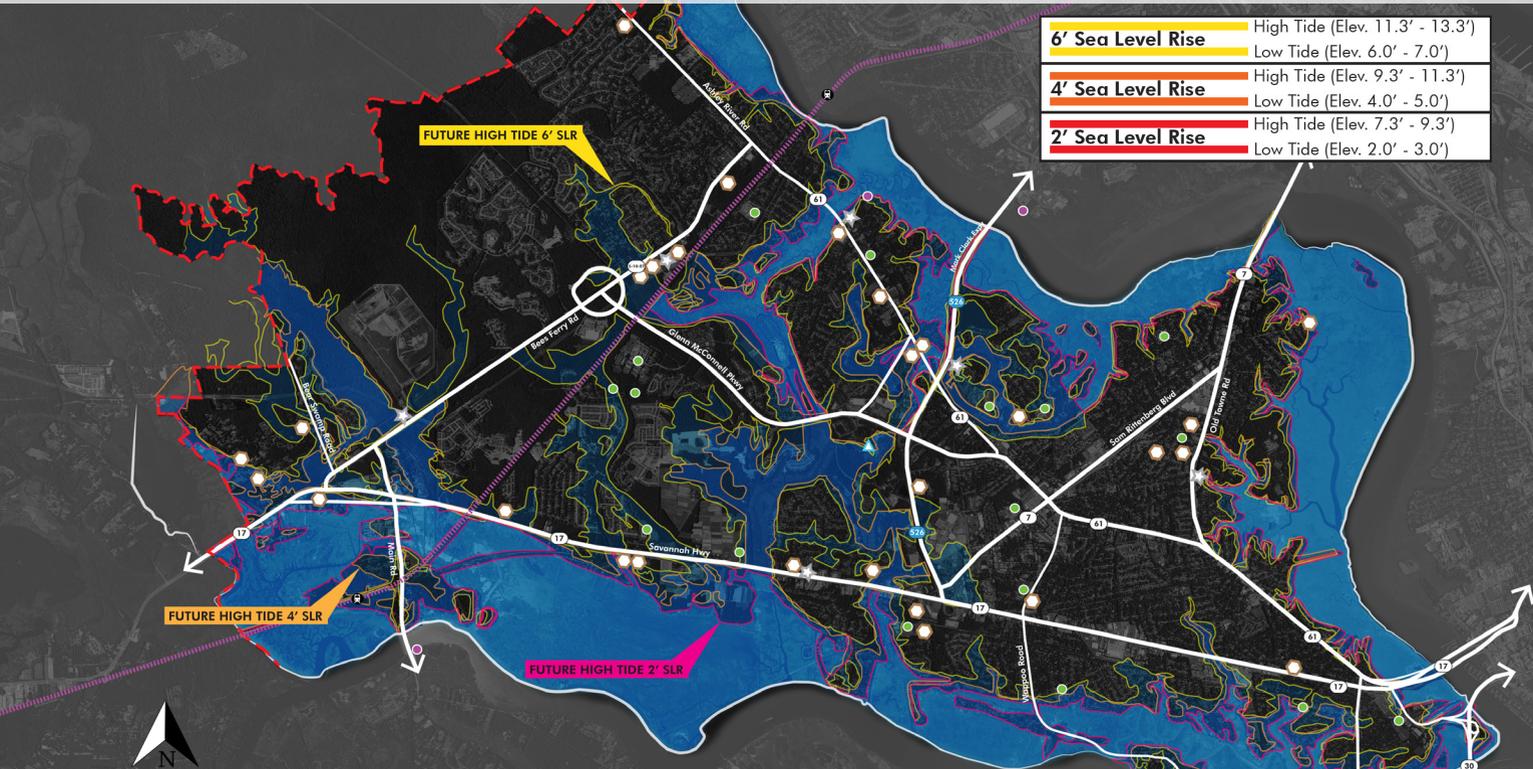
SEA LEVEL RISE - 2 FEET AT HIGH TIDE



Civic Structures

-  Fire Station
-  Hospital
-  Church
-  School
-  Public Water Access

SEA LEVEL RISE - 2, 4, 6 FEET AT HIGH TIDE



West Ashley Greenway & Bikeway

Both the West Ashley Greenway and the West Ashley Bikeway are community trails within repurposed abandoned rail corridors. The West Ashley Greenway is an 8.25 mile long multi-use trail spanning West Ashley along the Stono River from the South Windermere Shopping Center on Folly Road to John's Island. The Greenway corridor is approximately 100 feet wide parallel to Savannah Highway, traversing through neighborhoods and natural ecosystems, with convenient access to adjacent commercial nodes. The Greenway is currently paved between Albemarle Road and Stinson Drive, with 3 additional miles scheduled for paving in 2017. The West Ashley Bikeway is a nearby, though unconnected, 2.5 mile long paved trail spur from Wappoo Road at Savannah Highway to Higgins Pier overlooking the Ashley River towards the Peninsula. The West Ashley Greenway is a segment of the East Coast Greenway, a developing 3,000 mile long trail system linking Canada and Key West.

Pedestrian and bicycle connections to the Peninsula and James Island over the Ashley River bridges are currently hostile crossings for pedestrians and bicyclists. The connection between West Ashley and the Peninsula is identified by the East Coast Greenway Alliance as a key missing link in the statewide spine. Several proposals to accommodate pedestrian/bicycle mobility have been considered in recent years, including a cantilevered structure on the Legare Bridge and adaptation of a vehicular travel lane for pedestrian/bicycle travel. The lane adaptation was tested using temporary barriers in 2016. (Future ped/bike connectivity vision ideas are included in Chapter 3.)

The 2009 West Ashley Greenway Master Plan is a conceptual framework for future improvement of the Greenway, including improvements to the Greenway corridor as well as definition of nodes and connections to the surrounding neighborhoods. The Charleston Parks Conservancy (CPC) recently contracted to have a more robust Greenway Master Plan prepared, which will also include the West Ashley Bikeway. The City will be working with CPC in this effort.

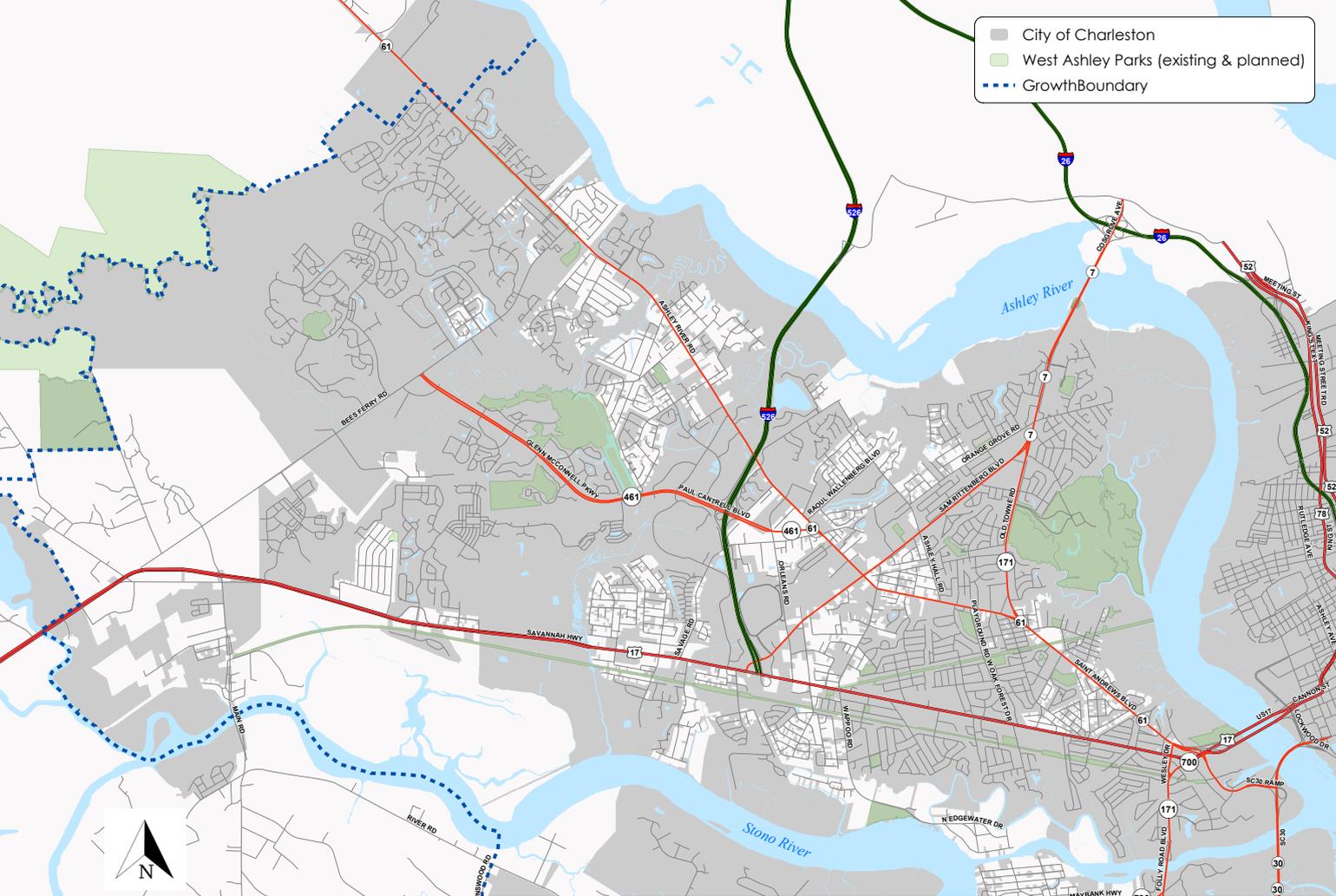
Open Space & Landscape

Inventory of Resources

The City currently owns 35 parks in West Ashley, totaling approximately 800 acres. West Ashley also includes parks owned by the St. Andrews Public Service District, Charleston County, and the state. As shown in the City's Existing Parks Map, resources vary in typology, size, and on-site amenities – including mini parks, neighborhood-scale parks such as Randolph Park, regional/district parks such as West Ashley Park, parks combining passive and active spaces such as Northbridge Park, County Parks, and a state park (Charles Towne Landing). Compared to parks and open spaces on the Peninsula, parks in West Ashley evolved to support more dispersed, auto-oriented development patterns – often as a part of private development projects. As a result, resources are spread out across West Ashley and are more suburban in nature compared to the Peninsula, especially west of I-526.

Even with these park resources, the amount of parks, community open space, and recreational space is inadequate for the area/population served. The City does not currently have a Parks Master Plan. Per the Century V Plan, from 2000 to 2016 the City of Charleston has acquired over 300 acres in West Ashley for future use and conservation of green space – including supporting Charleston County's Greenbelt Plan. During visioning sessions the City has stated needs for lighted soccer fields, gym, pool facilities, and volleyball facilities, as well as funding for upgrades and enhanced maintenance within existing West Ashley parks.

The County's People 2 Parks Plan (P2P) is a countywide comprehensive plan to better connect parks to neighborhoods, schools, greenbelts, and trails. The plan's mission is to better connect all residents to parks, schools, and other important destinations via comfortable and safe pedestrian/bicycle infrastructure. The plan establishes a long-term vision for interconnected walking and bicycle networks, includes recommendations to better link existing and future West Ashley parks/open space resources across jurisdictions.



above: West Ashley Parks (City of Charleston - August, 2016)

OPEN SPACE FRAMEWORK

EXISTING CONDITIONS

PLAN WEST ASHLEY GREEN INFRASTRUCTURE & SUSTAINABILITY



Open Space Typologies

- Active Recreation
- Passive Recreation
- Schools
- Linear Connection
- Conservation Land

WALKABILITY ANALYSIS - ACTIVE RECREATION



5 MIN WALKING RADIUS
10 MIN WALKING RADIUS

WALKABILITY ANALYSIS - SCHOOLS



Accessibility

★ ★ ★ Formal Access Point

○ — Formal Connection

WALKABILITY ANALYSIS - TRAILS AND LINEAR RESOURCES



15 MINUTE WALKING RADIUS

15 MINUTE WALKING RADIUS

OVERALL PROXIMITY MAP

The Overall Proximity Map combines analysis of walkability and bikability to existing West Ashley open spaces, trails, parks, and schools - identifying neighborhoods within a 5-minute and 10-minute walk of existing resources.

It is important to note that neighborhood access to open space resources is not an “as the crow flies” measurement. Often routes to resources are constricted by disconnected street grids, difficult street crossings, and limited access points. These disconnections affect routes, as shown in the maps on this and the previous page.

EXISTING CONDITIONS

GREEN INFRASTRUCTURE & SUSTAINABILITY

PLAN WEST ASHLEY



JOHNS ISLAND

Open Space Typologies

- Active Recreation
- Passive Recreation
- Schools
- Linear Connection
- Conservation Land

NORTH CHARLESTON

PENINSULA



Accessibility

★ Formal Access Point

— Formal Connection



National Open Space Trends

Community parks and recreation opportunities are a critical element of living and working in West Ashley, tied closely to housing, economic development, and environmental sustainability. Recreation Management Magazine’s 2016 State of the Industry Report included a national survey highlighting the top ten amenities being added to parks nationwide (see list to right). National trends towards natural and accessible playgrounds, park shelters and restroom facilities, outdoor sports, community centers, and bike trails were echoed in West Ashley visioning sessions.

Childhood obesity is a major public health concern that affects 17% of children ages 2-19 nationwide. Nearly one-third of children ages 10-17 are considered overweight. In South Carolina, the adult and childhood obesity rates are above the national averages. Current nationwide data indicates childhood obesity rates have more or less leveled off around 17%. Although this may be a step in the right direction, the US still ranks remarkably higher than other countries for childhood obesity rates, and South Carolina ranks above the national averages. Trends indicate that fewer and fewer children are participating in organized sports each year, regardless of national trends towards healthier lifestyles.

Public open space amenities and innovative design can help enable healthier lifestyles in West Ashley by providing affordable, encouraging, and fun environments for play. Natural and accessible playgrounds are a popular current option for child wellness and activity utilizing interactive, fun materials and play equipment, and designed for accessibility for children of all levels and abilities. Data collected by the National Recreation and Park Association indicates:

- 73% of adults believe parks, trails, and open space are an essential part of the healthcare system.
- People who use parks and open spaces are 3 times more likely to achieve the recommended levels of physical activity than nonusers.
- Organized activities in parks in low-income neighborhoods can increase park use by as much as 25%.
- Older adults engage in over 3.5 times more physical activity in parks with walking loops.

Top 10 Amenities Being Added to Parks (Nationwide)

1. Playgrounds
2. Park Shelters
3. Park Restrooms
4. Outdoor Sports Courts
5. Community Centers
6. Bike Trails
7. Skate Parks
8. Dog Parks
9. Community Gardens
10. Disc Golf Courses

Natural and Accessible Playgrounds

- Utilize sand, water, boulders, hills and logs
- Less costly than conventional manufactured playgrounds
- Child development experts agree that children learn more creativity and autonomy when engaged with “loose parts” like mud and sticks
- Encourage children to explore natural elements
- Equally as safe as manufactured play equipment
- Ever-changing dynamic design constantly provides different experiences for children
- ADA accessible playgrounds with for children and adults with special needs.



COMMUNITY CONCERNS

Following is a brief summary of the most often voiced concerns related to *green infrastructure & sustainability*:

Neighborhood flooding is affecting safety, value, and quality of life in West Ashley's neighborhoods.

The West Ashley community consistently voiced concerns about neighborhood flooding. Low-lying, flat topography combined with development of wetlands and forest over time have drastically altered the balance between the natural and built environment in West Ashley – and meeting participants often voiced that the impacts appear to be worsening over the last decade. The community desires options and action to address flooding – including neighborhood-scale drainage improvements, better control of new development, retrofit of existing pavement using “green” approaches, policies to direct growth to where it causes the least drainage impacts, and improved maintenance of existing drainage infrastructure.

Many of West Ashley's existing neighborhood parks need revitalization, and many residents lack safe access to nearby park and recreation resources.

Clearly the West Ashley Greenway and Bikeway are well-loved by the community. Residents voiced frustration about challenges traveling safely to and from the Greenway, Bikeway, and other community open spaces walking and by bicycle, as well as a desire for improved quality of existing “tired” neighborhood parks. A desire for new open spaces within easy walking and biking distance of residents was commonly heard – especially for larger-scale gathering spaces and recreation facilities in West Ashley's older and more historic neighborhoods east of I-526. Plan West Ashley priorities should also support the addition of coordinated wayfinding and signage improvements to improve community character and access to resources, including the water.

Burying existing overhead utilities would add value by improving the quality and character of West Ashley's streetscapes.

Community residents and meeting participants voiced a desire for undergrounding unsightly

overhead utilities, especially in active neighborhood centers and commercial corridors. Understanding that the main impediment to undergrounding lines is cost, the community supported prioritizing funding to pay for utility undergrounding as part of streetscape and neighborhood improvements.

Sample of community responses from charrette feedback forms:

Of the many ideas you have heard or seen so far, which ones seem the most exciting to YOU?

“bury power lines on major roadways ... more civic/park/green space on abandoned areas improve parks and create park maps, better signage”

“more trees, environmentally friendly green spaces ... interconnected greenways/bikeways/green spaces ... add green space, pocket parks and green medians ... connecting greenways to blueways ... replace asphalt medians where possible with green spaces / bioswales”

“green infrastructure and more resilience ... using natural and man-made areas (functional and beautiful) to help with drainage, green infrastructure ... fix neighborhood stormwater ... drainage issues ... plan for saving wetlands ... concern for flooding”

VISION | RESILIENT

How is this plan different?

Plan West Ashley establishes a framework for resilient growth consistent with the community’s vision for its future, enabling stable economic development while minimizing risk from economic and environmental forces. Multiple infrastructure analyses and construction projects are underway in West Ashley focused on specific sub-areas, including the Church Creek Drainage Study, DuWap Watershed Master Plan, and Forest Acres Drainage Improvement Project. The Plan West Ashley is different. The Plan West Ashley takes a big-picture view to connect dots across neighborhoods, disciplines, and City departments, as well as analyzing at multiple scales.

From an infrastructure perspective, this means the vision includes policies and guidelines applicable throughout West Ashley and city-wide as well as redevelopment strategies, prototypes, and toolkits that might be applied incrementally at the scale of the block, street, or even single building. The West Ashley infrastructure plan is broken into the following over-arching vision elements:

1. Watershed + Neighborhood:

Where should West Ashley prioritize investment?

- GROW – direct investment to higher, safer ground
- ADAPT – develop & redevelop to embrace water
- PROTECT – maintain sensitive natural resources
- HEAL – grey to green: add wetlands & floodplain

2. Block, Street, & Building:

How should West Ashley become more resilient?

- FILTER – use natural practices to filter pollutants
- ABSORB – get rainfall into the ground & atmosphere
- BEAUTIFY – improve aesthetics & community value



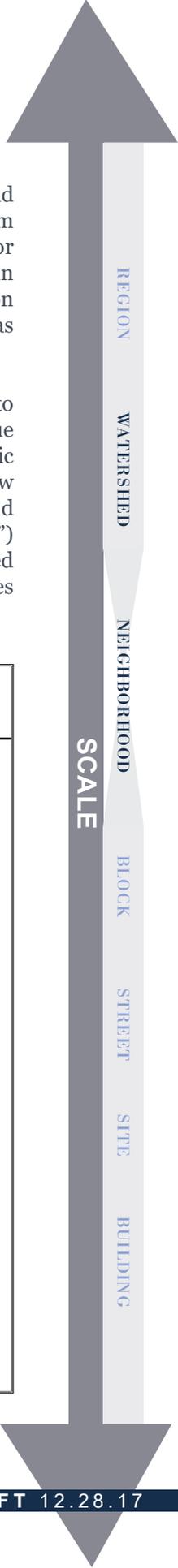
Overview: Watershed + Neighborhood

Where Should West Ashley Prioritize Investment?

Until the 1940s and 1950s West Ashley remained largely farmland and forest, with regional road and rail connections bisecting extensive wetlands systems and marsh fingers extending from the Stono and Ashley Rivers. The region grew post World War II as a bedroom community for the Peninsula, then subsequently welcoming shopping centers, strip malls, and subdivisions in the 1970s through 1990s like many similar suburban regions across the country. The conversion of existing wetlands and vast vegetated systems – nature’s sponges – to roofs and pavement has caused a dramatic shift in the natural balance.

The future vision for West Ashley at the watershed/neighborhood scale is to direct growth to where it makes the most sense over the long term (“priority progress areas”), maximizing value while minimizing risk from potential external influences such as sea level rise and economic instability. Coordinated steps must also be taken towards restoring the natural balance to slow the impact of development on natural systems using policies, management strategies, and funding/implementation priorities to protect existing sensitive natural systems (“protect”) and restore natural systems (“heal”) wherever possible. The four strategies are explained in more detail on the following pages, including maps showing application of the strategies geographically across West Ashley.

Watershed Goals Summary	Watershed Master Plan Solutions
<ul style="list-style-type: none"> • Direct investment to higher, safer ground • Protect & heal natural resources • Connect natural & built systems 	<ul style="list-style-type: none"> • Pursue mechanisms to restore wetlands, streams, and floodplain in existing developed flood-prone areas, and protect existing wetlands and floodplain from future development • In conjunction with the above, pursue mechanisms to incentivize redevelopment on higher, safer ground • Implement findings from the Church Creek and DuWap Drainage Basin Studies • Increase budget for inspection, operation, and maintenance of drainage infrastructure • Establish updated regulatory standards for wetland protection, stormwater management, and floodplain development • Include sea level rise considerations in development requirements and guidelines • Raise community awareness of sensitive environmental concerns, green infrastructure, and open space preservation • Develop a West Ashley Open Space, Parks, and Recreation Master Plan



Grow

Growth areas are “priority progress areas” including more high-elevation land that is also part of West Ashley’s historic development patterns and future areas of economic development. Moving forward, policies and growth management tools should guide development to corridors and commercial centers in this area. High density, walkable communities will be a primary focus and could potentially absorb development rights from other areas of West Ashley.



Adapt

Adaptation areas are “priority progress areas” generally encompassing development and critical transportation links that are at lower elevations. There are important opportunities for mixed use and commercial development in these zones, but will require a degree of risk and safety precautions due to climate uncertainties. Flooding – from storm event runoff, storm surge, and tidal influences, is a challenge in these areas and adaptive measures will be a focus on making development more resilient.



Source: FEMA Coastal Construction Manual

Protect

High risk assets both natural and built are worth protecting. Critical transportation links, such as bridges and roadways that are at risk have been identified and require further investigation to determine the best means for protection. Natural systems and floodplain, such as large wetlands, flood prone parks and woodlands, and riverine systems, should remain open space to act as a sponge and maintain flood capacity.



Heal

Opportunities to return developed areas to a natural state and restore floodplain may play an important role moving forward to alleviate flooding, improve water quality, create wildlife habitat, and promote a balance between the natural and built environment.



PRIORITY PROGRESS AREAS

PLAN WEST ASHLEY
GREEN INFRASTRUCTURE & SUSTAINABILITY
VISION



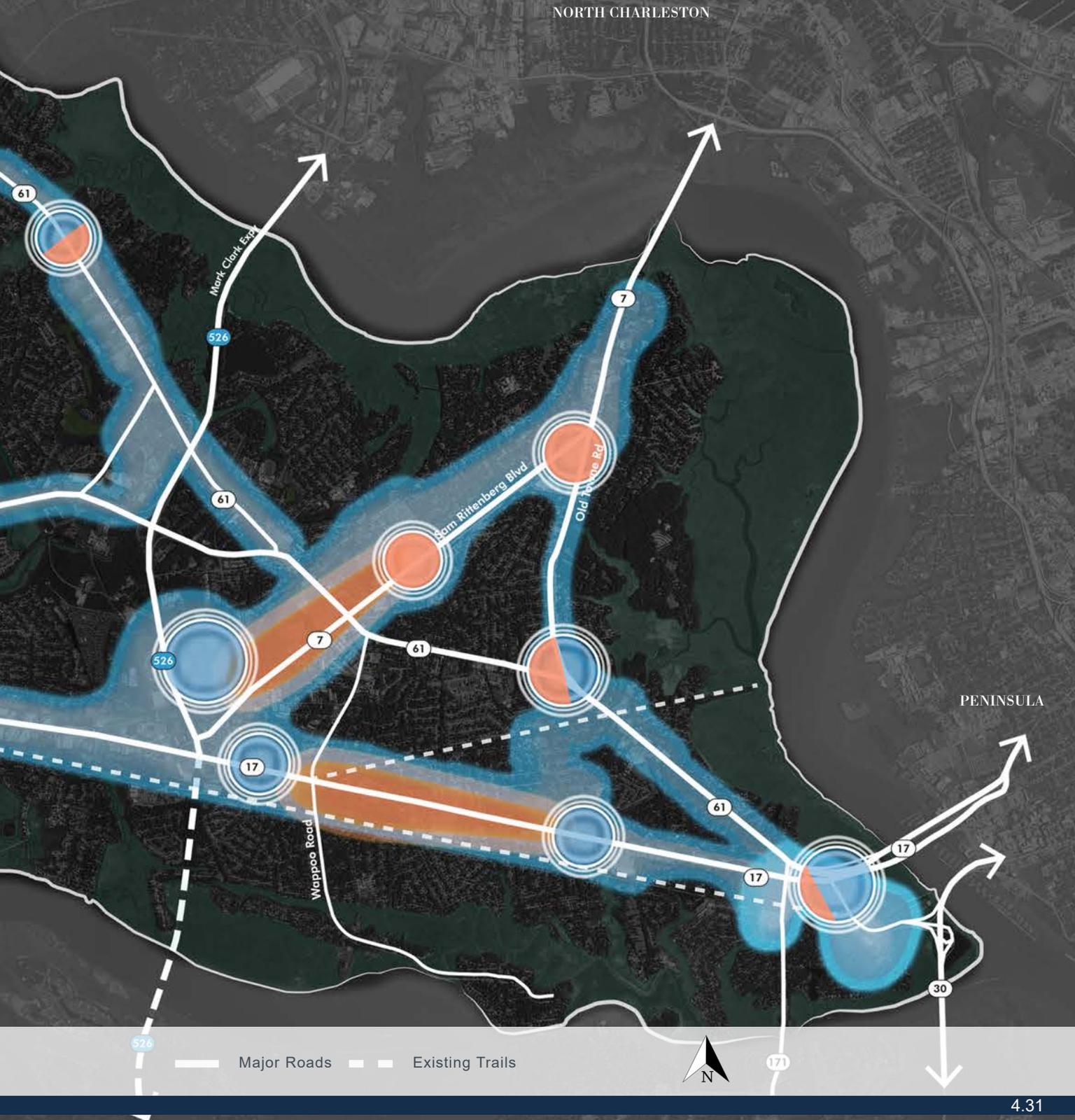
JOHNS ISLAND

Legend

- Growth Areas
- Adaptation Areas
- Priority Progress Areas
- Existing Wetlands

PRIORITY PROGRESS AREAS: GROW & ADAPT

Areas highlighted in orange and blue below are designated for priority focus using “grow” and “adapt” scenarios due to their elevation, proximity to transportation connections, and environmental suitability. Additional detail and an adaptation toolkit is provided on the following pages.



Grow and Adapt: What's the Difference?

In land use planning, the idea of “growth” is well understood—communities attempt to foster increases in density, commerce, and investment, often in targeted areas. For this plan, these areas were identified by reviewing previous planning efforts, looking at historic patterns of development, and listening to the public. The identification of these areas also considered whether they can more easily accommodate higher levels of development from an environmental perspective. Looking at growth through the lens of West Ashley's terrain adds a critical component of sustainability to the discussion of growth. The areas and roadways shown in orange on the grow/adapt figure on the previous page represent places most suited to growth.

With the idea of adaptation, planning for growth includes an additional layer of complexity based on environmental constraints and influences. Development sites and transportation infrastructure in low-lying areas, subject to periodic flooding, or potentially vulnerable to sea level rise (see figure on following page) still represent economic opportunities for West Ashley. But in order to achieve their economic potential, design techniques that account for frequent flood conditions and high groundwater must be used to provide for health, safety, and welfare of West Ashley's people as well as protect investments.

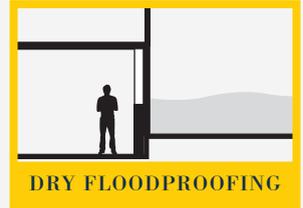
A Closer Look at Adaptation

Successful development in adaptation areas can use a broad suite of tools designed to redirect flood waters, allow flood waters to pass through, and/or temporarily store portions of flood waters. The overarching approach is to embrace the reality of frequent flooding and design in a manner that integrates these conditions into the lived experience. The Adaptation Toolkit provided on the following page provides a list of the primary techniques applied to building and site design. The Areas to Adapt figure (pg 4.34-4.35) highlights many of the areas in West Ashley that will need to employ adaptation techniques in order to accommodate or support future growth.

Adaptation TOOLKIT

Dry Floodproofing

Water tightening structures using external coating or internal membranes can prevent flood waters from entering. On-going maintenance is required and dry floodproofing may not always be the most aesthetically pleasing. As a first step, flood shields for windows and doors may protect vulnerable openings.



Wet Floodproofing

Building modifications such as breakaway walls designed to break free when subjected to flood forces can safely allow flood waters to enter and leave the lower level. Elevating utilities above the base flood elevation is critical. Often requires repair costs by the owner after flood events.



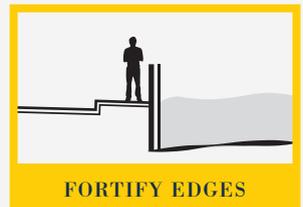
Raise Finish Floor Elevation

The most common form of adaptation is to elevate the entire first floor elevation above the base flood elevation. This can be accomplished on piles or earth fill. This technique can create accessibility issues depending on the site's surroundings, and can sometimes be difficult to retrofit into historic neighborhoods.



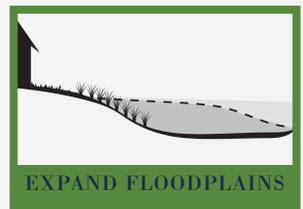
Fortify Edges

Seawalls, bulkheads, berms, and levees are common techniques to repel flood waters at the edges of sites or neighborhoods. An important role for the hard edge is to dissipate the velocity of flood forces from direct storm surge. Over time, scouring from constant wave energy can undermine the structural integrity of the structure from underneath. Requires periodic inspections to ensure stability.



Expand Floodplains

Development in West Ashley often hugs the coastline, infringing upon the riparian buffer/edge. Development along the coastal bank replaces a natural healthy riparian edge with manicured lawns, roads, and docks. Healing the riparian edge in balance with reasonable human uses and access to the water will expand floodplains by recreating a natural living shoreline.



Reforestation

Transforming forests into pavement results in more runoff, higher pollutant loads, and erosive concentrated flows. Savannah Highway, commercial development along the Sam Rittenberg corridor, and the Citadel Mall are prime examples of highly impervious areas that have tremendous opportunity for tree canopy cover improvements - also adding to land value and public health.



Restore Wetlands

Wetlands are extremely productive living ecosystems, and also attenuate wave velocity, provide water quality treatment, and act as a natural buffer between the built environment and water resources. Restoring degraded wetland systems by enforcing and regulating buffer protection zones is critical to sustain West Ashley's healthy relationship with water.



AREAS TO ADAPT

VISION
GREEN INFRASTRUCTURE & SUSTAINABILITY
PLAN WEST ASHLEY



JOHNS ISLAND

Legend

Growth Areas

Adaptation Areas

Priority Progress Areas

Existing Wetlands

ADAPT

A process of changing our standard methods for expansion to better suit future climate uncertainties

NORTH CHARLESTON



AREAS TO PROTECT & HEAL



Legend



Protect Opportunity



Heal Opportunity



Potential Constraints



Priority Progress Areas



Growth Areas

HEAL

Restoring predevelopment drainage patterns will enhance the current system with better connectivity

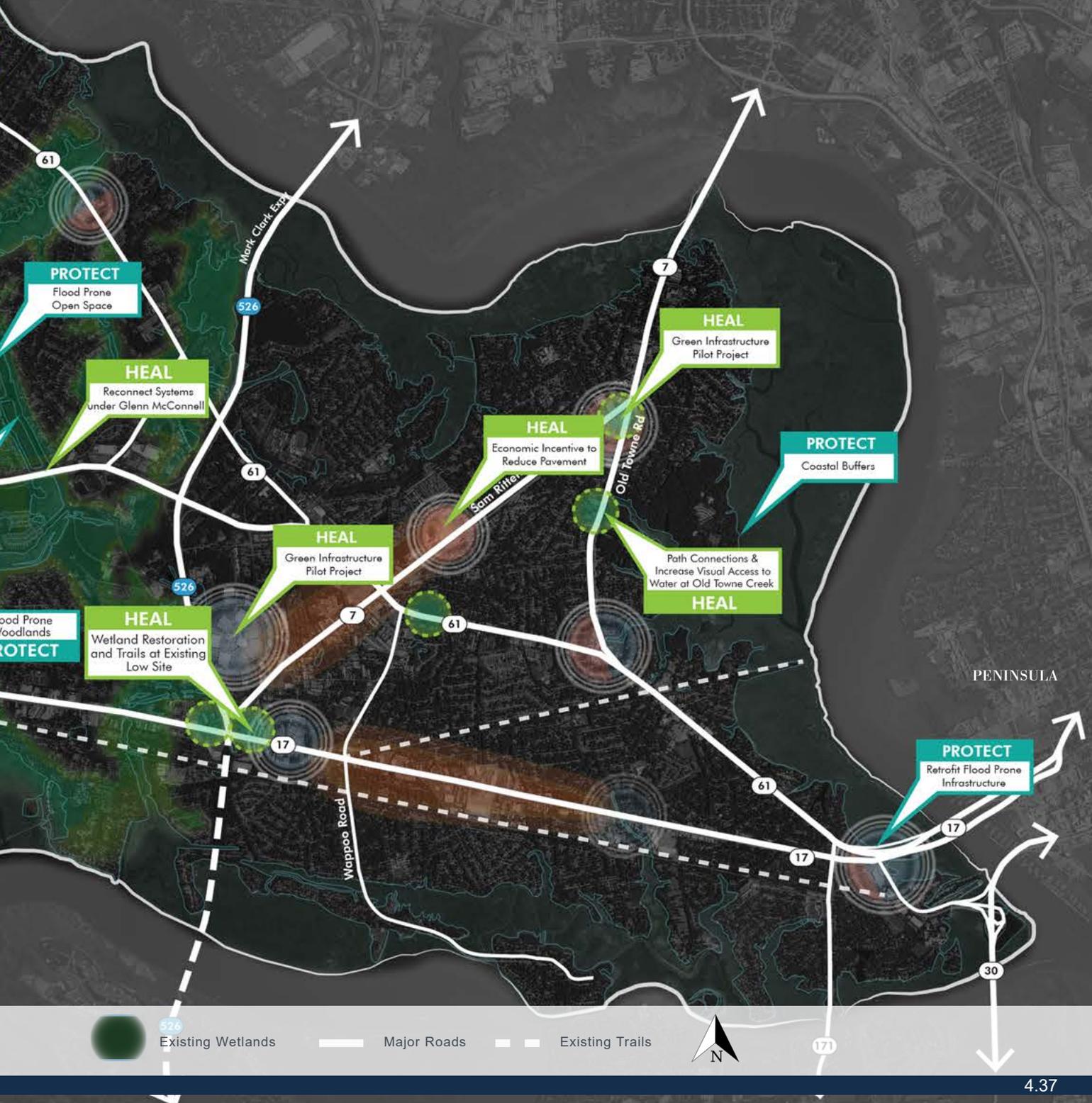
PROTECT

Preserving natural sponge features, like woodlands and wetlands is essential to improve current conditions

CONSTRAINT

Pinch points at road culverts, railroad tracks, utility R.O.Ws will require site specific solutions

NORTH CHARLESTON



Protect and Heal: What's the Difference?

Similar to the term “grow” as it is used in land use planning, the idea of “protect” is well understood—communities look to preserve elements of both the natural and built environment that are identified as critical assets. In this plan, protection areas in West Ashley were identified primarily as existing natural systems or corridors that provide natural conveyance or storage of flood waters (pg 4.38-4.39). Unspoiled wetlands and stream channels are components of a larger network that has been significantly altered, resulting in continued degradation of roadways, damage to property, and public safety hazards. The value of these remaining unspoiled areas to West Ashley is enormous and aggressive measures to ensure their protection are warranted.

The idea of “healing” within this plan speaks to opportunities for restoring degraded areas back to a condition where they are, once again, assets to the community. As previously discussed, West Ashley's larger watershed systems have been significantly altered over decades of development and restoration opportunities must be captured to return the community to a more sustainable condition.

A Closer Look at Healing

Healing ecosystems and localized hydrology is becoming more of a focus in urban planning because of the multiple benefits yielded by this approach.

Numerous case studies have shown that even small-scale projects can make notable ecological gains and improve flood conditions. This section of the plan looks more at large-scale healing opportunities at the watershed and neighborhood scale. For West Ashley, healing natural systems will focus on hydrologic impacts and will include measures to restore or expand wetlands, streams, and flood plains. Techniques for large-scale restoration include:

In-Stream Channel Improvements

Streams in urban and suburban environments often suffer significant impacts during and after construction. As part of the development process, meandering streams with considerable flood plain areas are often straightened with steep embankments designed to channel stormwater away from newly developed areas. This speeds the flow of water, increases erosion, eliminates habitat, and can cause significant downstream flooding. Stream restoration practices return these waters to a more meandering pattern and return flood plain areas for holding back large rain events. Some of these flood plain areas can be designed as habitat, or as useable open space (see Open Space vision). An example of where stream restoration could provide significant benefit is with the currently channelized stream in the Tiger Swamp/Citadel Mall redesign scenario (page 4.54)



Culverts

Culverts play an important role in managing cumulative flow of stormwater in West Ashley. In flood prone areas, careful assessment is required to properly size culverts in a way that understands the entirety of the watershed. In many cases, culverts were built before changing weather patterns (increasing frequency and severity of storm events) now dictate larger sizes. This can cause water to back up in a subwatershed or “overtop” the culvert roadway. In other instances, some communities purposefully restrict flow and provide flood area upstream of the culvert in an effort to hold water back from downstream areas. In these instances, overflow mechanisms are provided to allow waters to safely pass through in larger storms without overtopping roadways. In either scenario, careful subwatershed analyses such as those currently underway in the Church Creek and DuWap subwatersheds are required to identify the correct approach.

Wetland Restoration

Wetlands can be altered through the onslaught of invasive plants, sedimentation from stormwater, removal during construction, or changes to local hydrology resulting from adjacent land development. In any of these scenarios, natural flood storage can be reduced dramatically causing major disruption to the flow of water during storm events.

Restoration of wetlands can come in many forms depending on the different opportunities presented by each site. In some cases, the overall footprint of the wetland will remain the same but the quality of flow through the system, the inventory and species of plants, and overall “clean up” will dramatically improve its function. In other cases, adjacent filled lands or impervious cover can be reclaimed or graded to connect to an adjacent wetland. This type of restoration expands a wetland system and provides additional habitat and flood mitigation benefits. Restoration could be performed as part of public space improvements, particularly in parkland adjacent to streams. Restoration could also be performed as part of larger stormwater management strategies where appropriate. Developers can receive credit toward flood water retention by restoring on-site wetlands that may be already impaired.

below: Restored wetland made into active open space.



SEA LEVEL RISE

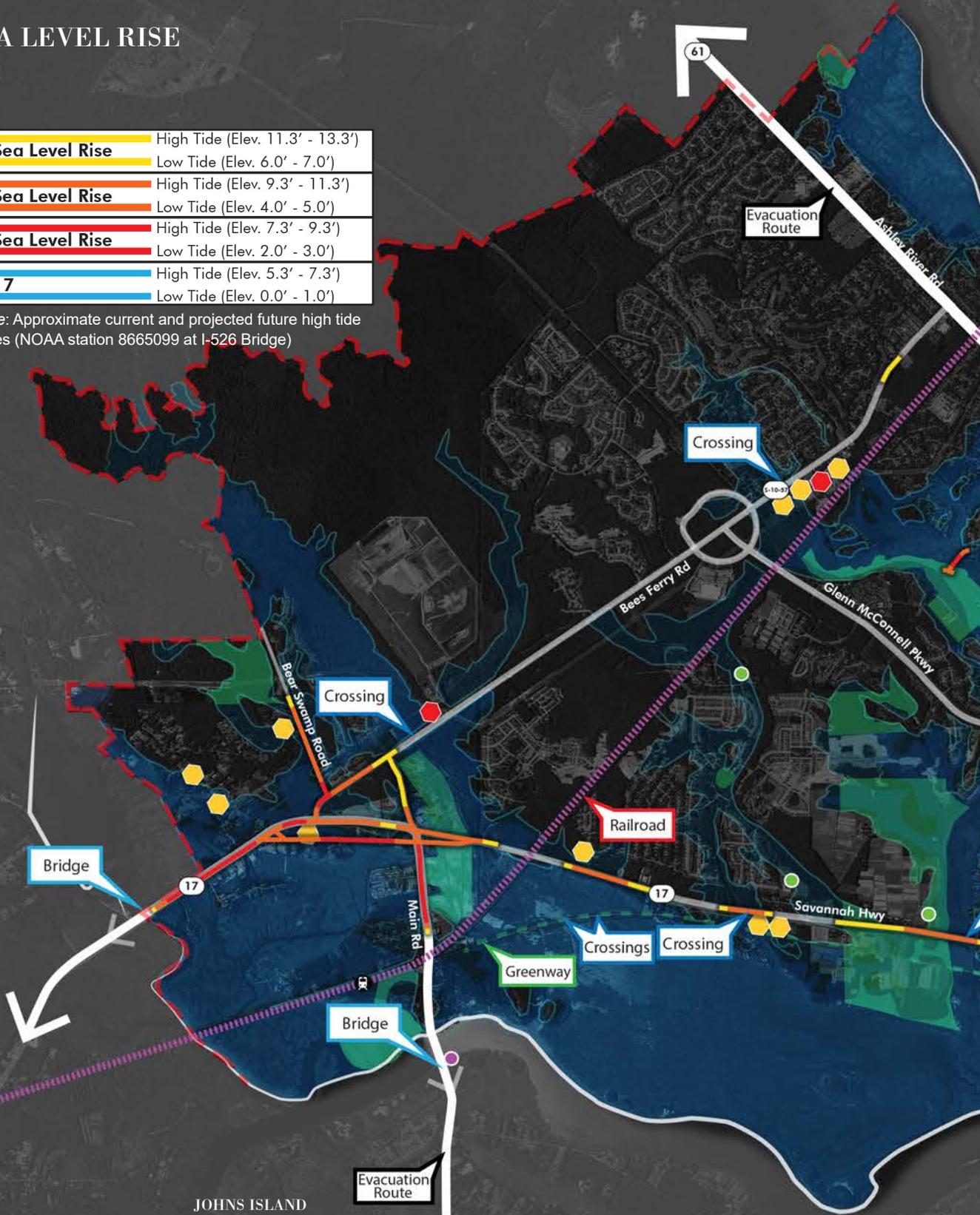
6' Sea Level Rise	High Tide (Elev. 11.3' - 13.3')
	Low Tide (Elev. 6.0' - 7.0')
4' Sea Level Rise	High Tide (Elev. 9.3' - 11.3')
	Low Tide (Elev. 4.0' - 5.0')
2' Sea Level Rise	High Tide (Elev. 7.3' - 9.3')
	Low Tide (Elev. 2.0' - 3.0')
2017	High Tide (Elev. 5.3' - 7.3')
	Low Tide (Elev. 0.0' - 1.0')

above: Approximate current and projected future high tide ranges (NOAA station 8665099 at I-526 Bridge)

VISION

GREEN INFRASTRUCTURE & SUSTAINABILITY

PLAN WEST ASHLEY



JOHNS ISLAND

Legend

- -
 -
 -
- At Risk with 2' SLR
 At Risk with 4' SLR
 At Risk with 6' SLR
 At Risk Open Space

WHEN AND WHERE?

The City of Charleston has accepted sea level rise as inevitable. As the City projects infrastructure investments as well as regular maintenance and repairs, cost/benefit analyses should include expected impacts of sea level rise balanced with infrastructure lifespan and maintenance requirements. Vulnerabilities highlighted as at-risk are based on approximate projected high tide ranges for various sea level rise scenarios as illustrated in the legend.



What is Green Infrastructure?

Green infrastructure (GI) emphasizes simple site design techniques and natural stormwater practices to clean and infiltrate rainwater and restore the natural water cycle. GI can often be a more cost-effective stormwater management approach when compared to more highly engineered traditional structural stormwater practices. When creatively incorporated into an overall site design, these nature-based techniques can provide additional community benefits including preservation of open space and natural systems, creation of wildlife habitat, traffic calming, public health, and beauty. Simply put, GI can be simpler, cheaper, and more valuable.

The GI approach is based on four fundamental principles:

- Embrace stormwater as a resource rather than a waste product.
- Preserve and/or re-create natural landscape features and systems.
- Minimize the effects of impervious cover.
- Implement stormwater control measures that rely on natural systems to manage runoff.

In other words, GI emphasizes simple site design techniques and natural stormwater practices to get rainfall filtered and absorbed back into the ground and atmosphere as closely to where it falls as possible.

GI can be implemented as part of public and private development projects, and at a wide range of scales, in place of or in addition to more traditional stormwater control elements. Common green infrastructure tools, referred to as Best Management Practices (BMPs), include bioretention systems, tree box filters, flow-through planters, permeable paving, tree planting, and green roofs.



top: Dry bioswale

middle: Bioretention system during a storm event

bottom: Constructed wetland

Green Infrastructure TOOLKIT

Bioswales

Bioswales are linear landscape elements designed to convey runoff. Typically bioswales are vegetated and provide water quality treatment. Bioswales designed with pretreatment facilities will perform higher filtering function and will require less maintenance over time.



BIOSWALE

Bioretention Basins

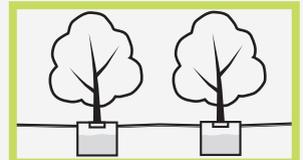
Bioretention basins are depressions in the landscape designed to collect and filter stormwater. A more highly engineered rain garden, bioretention basins typically have pretreatment forebays, perforated pipe underdrains, and special soils that help filter and enhance infiltration.



BIORETENTION BASIN

Tree Filter Pits

Tree filter pits use stormwater runoff for irrigation. Primarily a water quality practice, runoff enters the systems from a deep sump inlet structure as a form of pretreatment. Stormwater is stored in the gravel reservoir below ground which allows the tree roots to soak up runoff.



TREE FILTER PIT

Stormwater Planters

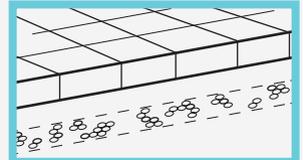
Raised planters are ideal stormwater solutions for projects with space constraints adjacent to buildings. Roof runoff is diverted via downspouts into above-ground planters where microbes in the soil and around plant roots help to filter runoff before overflow into the storm system.



RAISED PLANTER

Porous Pavement

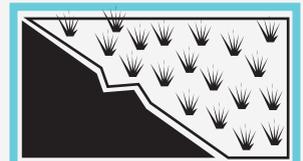
A range of free-draining alternatives to typical impervious bituminous pavement and concrete are available, such as pervious concrete, porous asphalt, pervious pavers, and structured grass. Proper design of the system base and review of the existing subbase for infiltration capacity is required.



POROUS PAVEMENT

Revert Pavement to Green Space

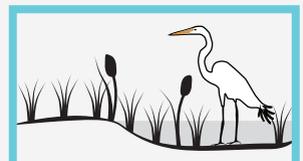
Often the simplest and most cost-effective green infrastructure retrofit, “grey to green” interventions replace extraneous pavement with planted landscape, including tree planting if possible.



REVERT PAVEMENT

Constructed Wetlands

Constructed wetlands mimic natural wetland function. Systems are designed for water at all times, either in saturated soil or as standing water. They are often designed with engineered soils and can include small islands and pools. Typically they are constructed as part of larger projects or systems.



CREATE WETLANDS

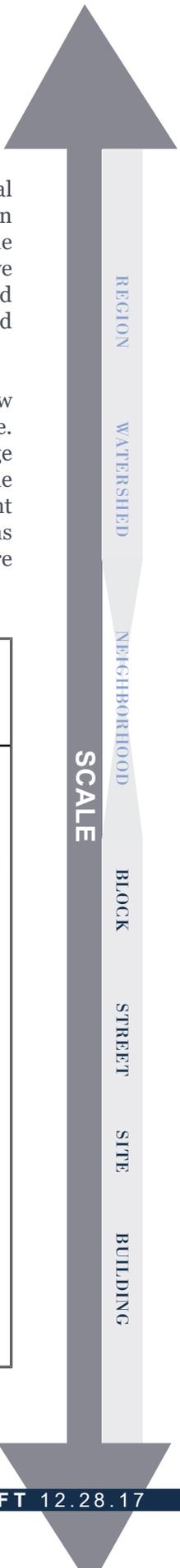
Overview: Block / Street / Site / Building

How does West Ashley become more resilient?

Compared to the big-picture watershed scale, changes in the balance between built and natural systems are more readily observable at the scale of residents’ day-to-day lives - observed within West Ashley’s streets, blocks, and individual neighborhoods. At present, local impacts in the form of development or redevelopment projects are sometimes viewed as having a negative impact on environmental health, local flooding, and community value. Properly designed and implemented growth in West Ashley can and should help to address local flooding, build resiliency against external impacts, and improve aesthetics and community value.

The future vision for West Ashley at the block, street, site, and building scale weaves “Low Impact Development” (LID) and Green Infrastructure (GI) principles into the built landscape. LID is an approach to land development or redevelopment that works with nature to manage stormwater as close to its source as possible, reducing the impact of development on the environment and promoting the natural flow of water. LID often utilizes GI Best Management Practices (BMPs) such as permeable pavement surfaces, rain gardens, and bioretention systems to naturally filter and absorb stormwater runoff, thus minimizing runoff. These principles are described in more detail on the following pages.

Block/Street/Site/ Building Goals Summary	Block/Street/Site/Building Master Plan Solutions
<ul style="list-style-type: none"> • Reduce local flooding impacts • Prioritize maintenance • Encourage green infrastructure (GI) • Provide high-quality, useful, convenient open spaces 	<ul style="list-style-type: none"> • Integrate neighborhood-scale flood control and West Ashley appropriate green infrastructure practices (such as bioretention, rain gardens, and created wetlands) into upcoming infrastructure investments such as streetscape, park, drainage basin, and open space projects • Partner with private developers such as at the Citadel Mall and West Ashley Circle to implement depaving, floodplain restoration, wetlands protection, tree planting, and pilot GI improvements • Fund undergrounding of overhead utilities as part of redevelopment and streetscape improvements, and require private developers to construct utilities underground • Raise community awareness of sensitive environmental concerns, green infrastructure, and open space preservation • Create new neighborhood parks, especially in underserved areas – as determined by the West Ashley Open Space, Parks, and Recreation Master Plan



Filter

Filtration BMPs predominantly treat stormwater runoff, not manage increases in runoff rate or volume. Practices are typically vegetated shallow depressions or open channels, including bioretention areas, bioswales, and vegetated sand filters. Some sites with high groundwater or poorly draining soils may still be appropriate for filtering GI, using “wet systems” such as vegetated wet swales or constructed wetland systems designed to mimic natural wetlands. Wetland systems are nature’s original filters - a high priority is placed on protection of existing wetlands and creation of new systems wherever possible.



Absorb + Store

Porous surfaces, planted GI BMPs, green roofs, and trees (nature’s original green infrastructure) absorb stormwater - promoting infiltration and evapotranspiration and reducing runoff. Practices such as infiltration basins, recharge basins, dry wells, and sub-surface chambers are designed to store collected stormwater onsite and release it slowly, mitigating flooding impacts downstream and providing groundwater recharge where possible.



Beautify

Context-appropriate, strategically designed, GI stormwater management strategies provide additional value as aesthetically pleasing landscape amenities - “green design” features that with more bang for the buck. Very often, green site design is also a more cost effective means to meet stormwater management regulations when compared to conventional “pipe-and-pond” approaches.



GREEN INFRASTRUCTURE OPPORTUNITIES

Filtering, absorbing, and beautification improvements across West Ashley will incrementally improve water quality, mitigate flooding, and improve aesthetics.

VISION GREEN INFRASTRUCTURE & SUSTAINABILITY PLAN WEST ASHLEY



JOHNS ISLAND

Legend



Priority Progress Areas



Existing Wetlands

Major Roads



FILTER

Green Infrastructure that is designed to treat the water quality volume

FILTER & STORE

Green Infrastructure that is designed to treat the water quality volume and also provides storage capacity

ABSORB

Best Management practices that manage large volumes of stormwater or reduce the generation of excess runoff

OUTREACH

A better informed community can help gain support and encourage continued investment

NORTH CHARLESTON



Trees: Health, Happiness, & Value

Trees are stormwater machines, the original green infrastructure. In addition to providing a host of other environmental, economic, and community benefits, trees draw moisture from the ground and intercept and store rainfall, which can significantly reduce local flooding, delay the onset of peak flows, and lessen requirements for additional stormwater infrastructure. Street trees can also be planted within “tree box filters”, which are in-ground tree containers designed to receive, naturally filter, and infiltrate runoff from adjacent impervious areas such as streets and walks. Tree box filters with side and bottom openings in conjunction with structural soils can encourage infiltration and promote healthy root growth.

Maintenance: Lovable Infrastructure

Current monitoring data shows that GI practices have a better chance of long-term success because they are typically visible, simple, easily understood, and most important, well loved by the surrounding community. The most technologically advanced solutions lose functional value quickly if they are abandoned because they are too complicated or costly for the end user to maintain.

Across the country workforce training programs and private landscaping businesses are capitalizing on the increasing trend towards GI, creating “green jobs” by training staff with simple and straightforward GI installation and maintenance skills. Beyond regulation and guidelines, many states directly support GI financially with green economy bond money and other actions.

Lowcountry GI

As with any stormwater management design, GI practices must be carefully designed to account for existing soil conditions, seasonal high groundwater elevation, topography, built context, and proposed uses. Because conditions vary from site to site in West Ashley, field determination of existing soil characteristics and groundwater elevation is required for proper site and stormwater management design. Sites with high groundwater or poorly draining soils can still be appropriate, but a “wet system” such as vegetated wet swales or constructed wetlands designed to mimic natural wetlands may be more applicable.

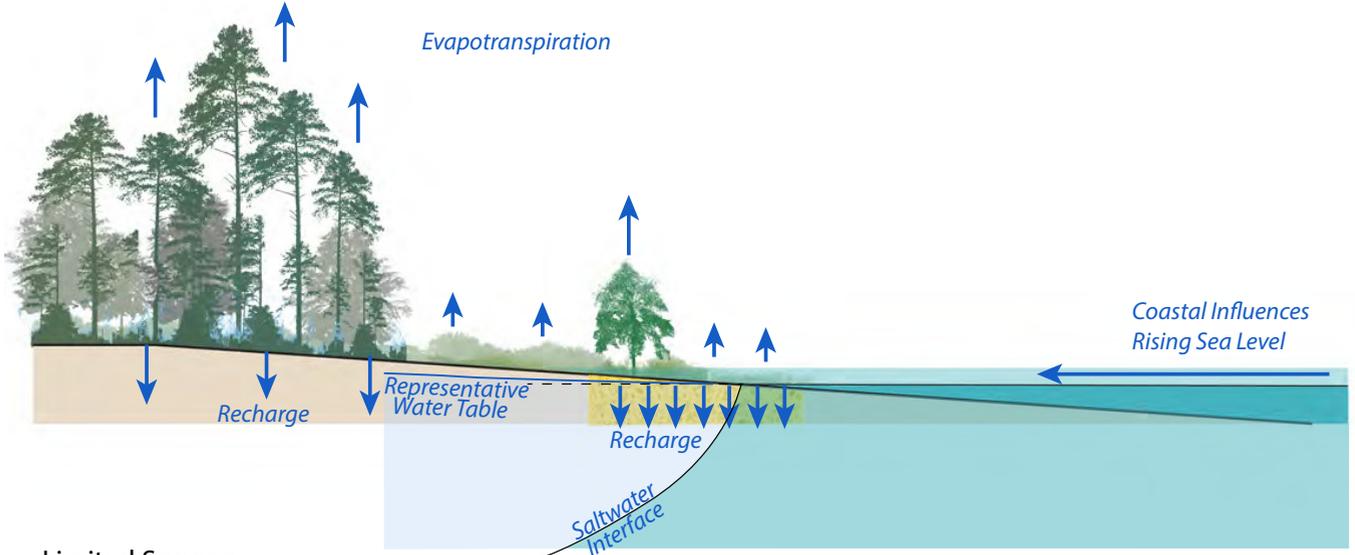
Wetland Preservation

In the past, wetlands were frequently found in coastal areas, acting as a buffer between the sea and land, soaking up water from both heavy storms and rising water levels during tides and floods. Today, development and impervious surfaces have expanded, creating more runoff and less space to hold water during storms and floods. Green Infrastructure utilizes bioengineering tools to help recreate and reconnect pieces of the larger sponge that has been lost.

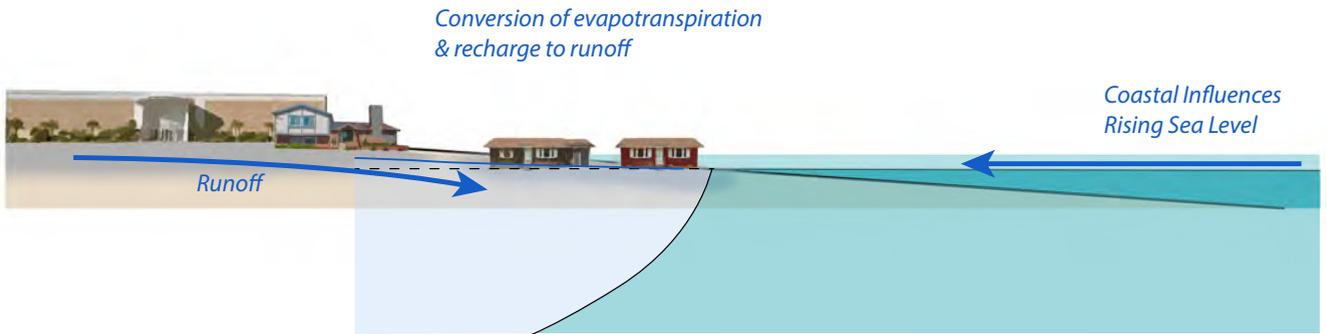
Wetlands may be the most important feature in any landscape when it comes to flood control. These areas can provide enormous amounts of flood storage and release rain water from heavy storms at slow rates, protecting downstream channels from erosion and low-lying areas from flash floods. Discussions with local officials and City staff suggest that the current wetland permit structure should be improved to help with localized flooding. Under the current structure, proposed wetland disturbance is reviewed by the U.S. Army Corps of Engineers (ACOE). The ACOE process allows for filling of wetlands as long as it can be demonstrated that impacts are mitigated elsewhere to compensate.

Wetland Preservation & Green Infrastructure: HOW IT WORKS

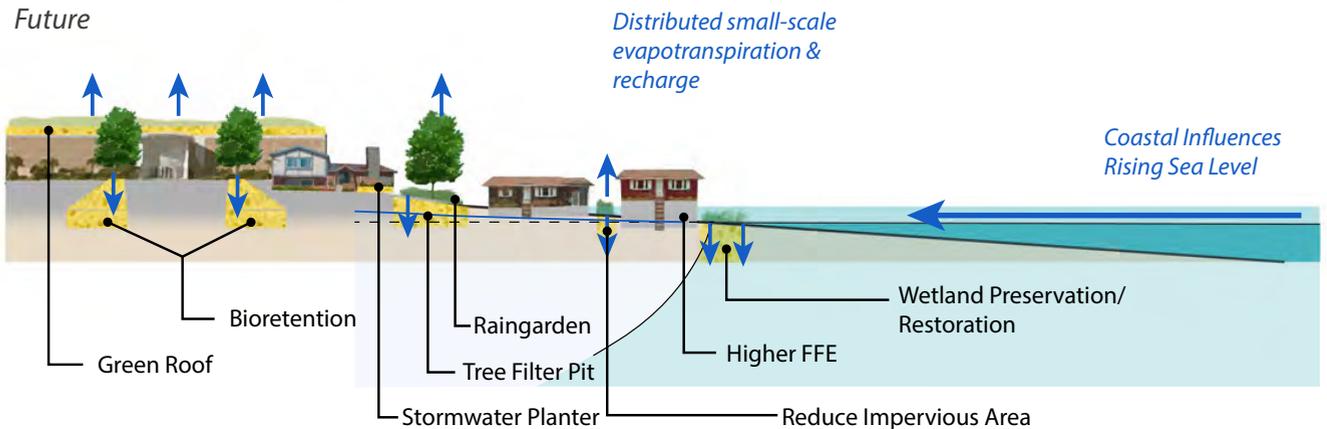
Natural Wetland Sponge
Before



Limited Sponge
Current



Green Infrastructure Sponges
Future



Stormwater Tools: Community and Environmental Benefits

Practice	Low Elevation, High GW and Tidal Constraints	Ease of Maintenance	Affordability	Compatibility in Urban Context	Wildlife Habitat	Plant Community	Aesthetic Value
Bioswale	●	●	●	●	● / ●	●	●
Bioretention	●	●	●	●	●	●	●
Tree Filter Pit	●	●	●	●	●	●	●
Stormwater Planter	●	●	●	●	●	●	●
Porous Pavement	●	●	●	●	●	●	●
Pavement to Green	●	●	●	●	●	●	●
Constructed Wetlands	●	●	●	●	●	●	●
Underground Chambers	●	●	●	●	●	●	●
Detention/Retention Basin	●	●	●	●	● / ●	● / ●	● / ●

- : Low Benefit
- : Medium Benefit
- : High Benefit

A Note Regarding Community and Environmental Benefits

The matrix above compares traditional and non-traditional stormwater management practices with regard to maintenance, cost, plant communities, habitat, urban development/redevelopment compatibility, and aesthetics. Some practices can have significant secondary benefits that may meet specific site goals beyond stormwater management. Likewise, some practices may have frequent maintenance and operation requirements that are beyond the capabilities of the responsible maintenance party. For example, infiltration practices are generally considered to have a relatively high maintenance burden because of high failure history and consequently, a higher pre-treatment maintenance burden and/or replacement burden.

It should be noted that all practices require routine maintenance. Affordability depends on site context and design constraints, and should be judged weighing cost/benefit against other stormwater management practices that achieve desired water quantity and quality targets.

GI Examples in Context



top: Permeable bituminous parking spaces (to R) directly infiltrate rainfall

middle: Underground perforated pipe system under a parking lot stores runoff and recharges to groundwater (where groundwater separation allows)

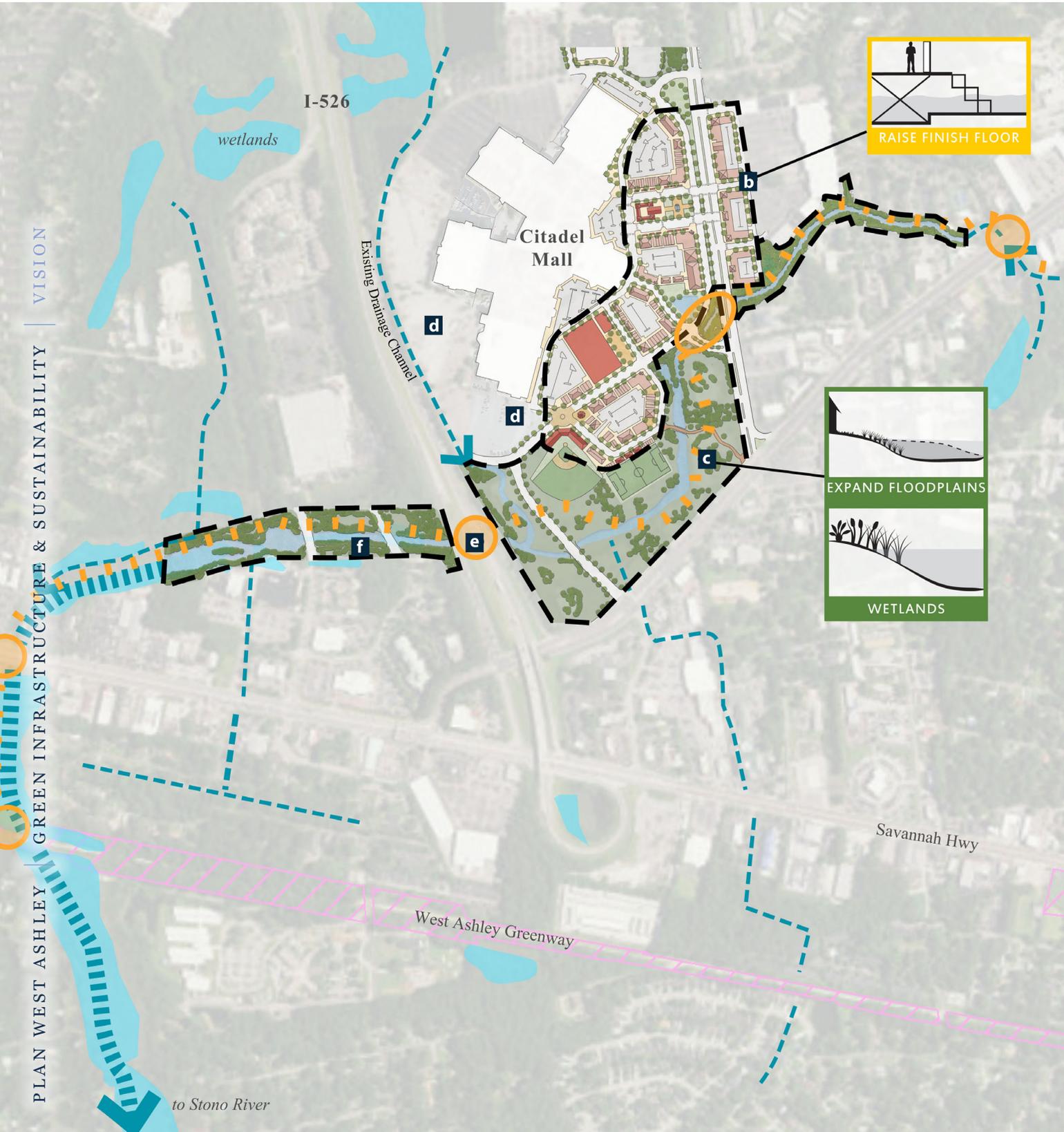
bottom: Coastal bioretention system with filtering, absorption, and dune stabilization functions

top: Bioswales & bioretention pockets woven through a housing infill project provide filtering & absorbing function and add aesthetic value

middle: Porous concrete & pavers absorb rainfall, and simple bioretention systems at the edges filter and absorb while adding landscape value

bottom: Flow-in flow-out bioretention retrofit provides simple, low-cost filtering

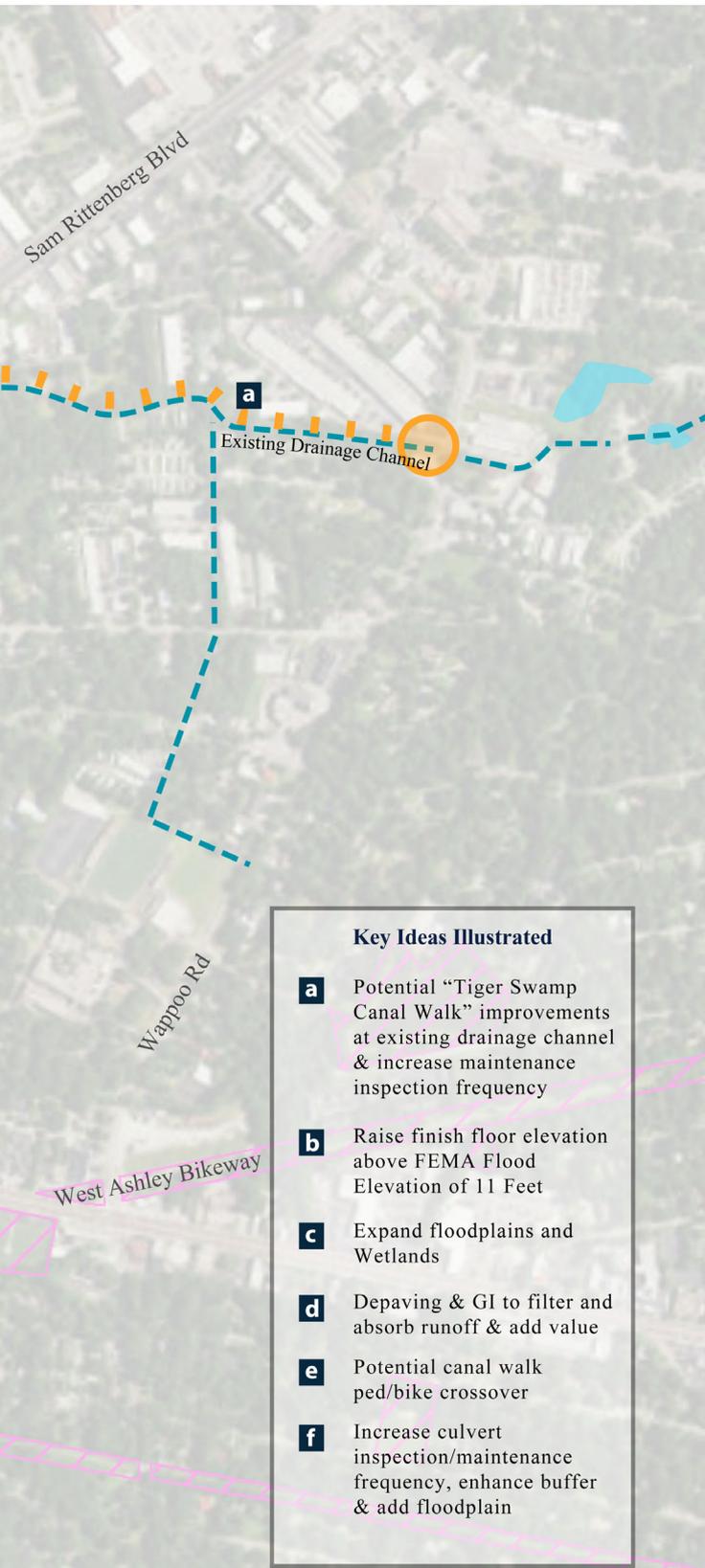
Illustrating the Vision: Tiger Swamp & Citadel Mall



VISION

PLAN WEST ASHLEY GREEN INFRASTRUCTURE & SUSTAINABILITY

PLAN WEST ASHLEY GREEN INFRASTRUCTURE & SUSTAINABILITY



- Key Ideas Illustrated**
- a** Potential “Tiger Swamp Canal Walk” improvements at existing drainage channel & increase maintenance inspection frequency
 - b** Raise finish floor elevation above FEMA Flood Elevation of 11 Feet
 - c** Expand floodplains and Wetlands
 - d** Depaving & GI to filter and absorb runoff & add value
 - e** Potential canal walk ped/bike crossover
 - f** Increase culvert inspection/maintenance frequency, enhance buffer & add floodplain

Background

Over time, Tiger Swamp natural wetlands and vegetated areas were transformed, adding building roofs and pavement to accommodate development. Neighborhood drainage systems have been highly channelized and pushed to the edges of sites and seams between neighborhoods. In addition to increases in runoff due to changes in land cover, much of the area is within the FEMA AE flood zone and subject to impacts from sea level rise and more frequent and severe storm events in the coming decades.



above: Typical existing drainage canal condition

Adaptive Redevelopment Strategies

The Citadel Mall, surrounding commercial areas, and transportation infrastructure are clearly identified for future redevelopment and infrastructure investment. Redevelopment must adapt to current and future environmental stresses, “working with the water” to increase resilience while adding value to redevelopment character.

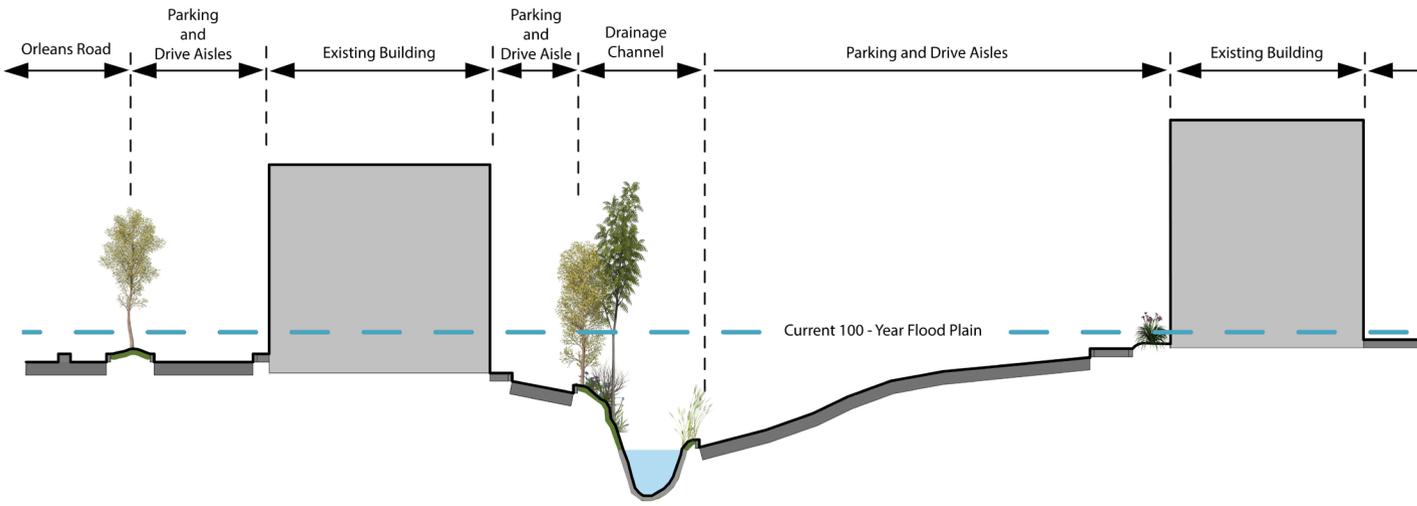
Note: All illustrative redevelopment plans and visualizations in Plan West Ashley are conceptual, intended to explore future development potential and provide direction regarding key design elements. Architectural style and specific site improvements are not mandated. In this illustration, a hypothetical long-term development scenario is shown to explore sustainable approaches to site infrastructure.



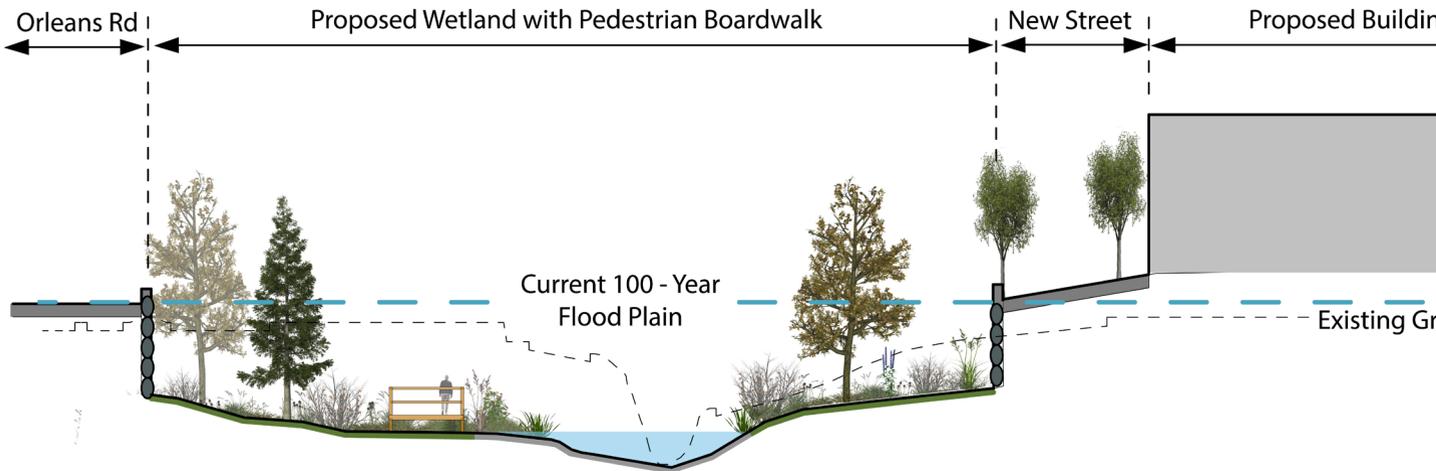
above: Existing conditions, Citadel Mall building to the north



above: Potential future long-term buildout conditions



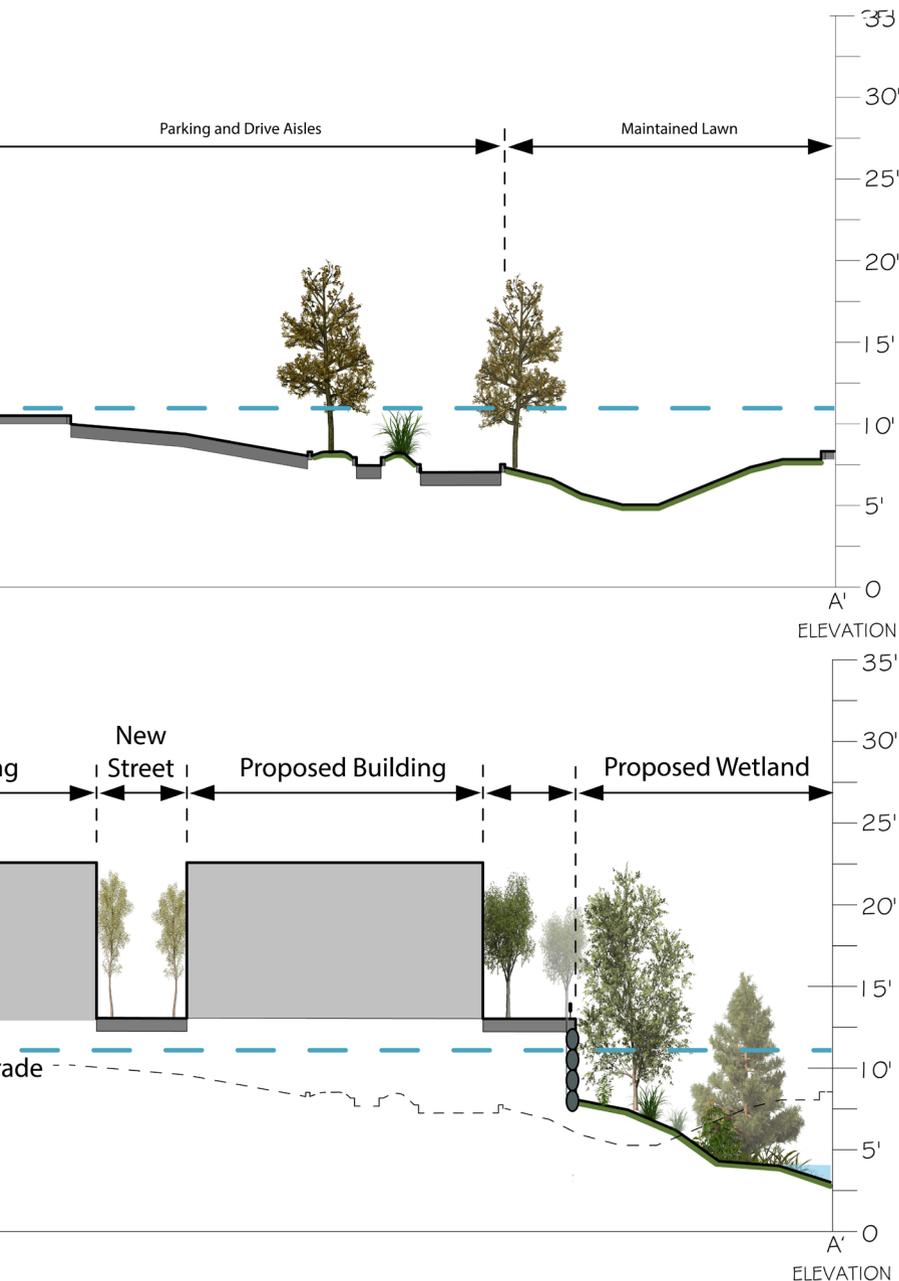
A



A

below, top: Cross section of existing conditions looking south, showing channelized drainage and buildings currently below FEMA flood elevation

below, bottom: Cross section of long-term buildout looking south, showing new buildings above flood elevation (R) and new wetlands systems & cut for expanded floodplain (L)



The following strategies are recommended:

- Raise future buildings above current flood elevation by at least two feet, higher if possible, to elevate first floors above the current FEMA flood elevation and provide additional freeboard for future conditions.
- Offset fill in the floodplain to raise buildings and infrastructure with expansion of floodplain volume along Sam Rittenberg Boulevard to accommodate for the loss.
- Revegetate existing impervious areas, plant trees and add green infrastructure, recreate contiguous wetland systems to absorb and slow stormwater runoff, and revegetate channel buffers.
- Create eco-amenities, weaving nature trails and boardwalks, including wayfinding and educational signage, through recreated floodplain/wetland systems.
- Build a “Tiger Swamp Canal Walk” as an alternative east-west ped/bike link connecting Sam Rittenberg Boulevard to the Greenway through the mall redevelopment area and natural systems.
- Increase frequency of infrastructure inspection (canals, culverts, catch basin structures, vegetation, trees) and level of maintenance funding for required repairs and management.
- Require relocation of overhead utilities underground, allowing flexibility for floodplain and sea level rise constraints.

Open Space Vision: Protect, Connect, Create

PROTECT

Preserve Existing Passive and Active Recreational Opportunities

Preserve, enhance and maintain passive and active recreational opportunities for residents and visitors of all ages, abilities and interests. To accomplish this, **the City should move forward with an Open Space, Parks, and Recreation Master Plan that will address current facilities, needed facilities, trends to sustain our residents over the next 10 years, and identify land to purchase for parks especially in the inner West Ashley areas.**

1. Develop a recreational needs assessment, including a community survey and recommendations aligning needs with regional/statewide trends to improve access to funding mechanisms.
2. Develop a West Ashley Open Space, Parks, and Recreation Master Plan.
3. Improve the management of City-owned open space and recreational areas, specifically targeted at User Groups (coaches/Commissioners) to better understand existing field use (scheduling practice and games/maintenance).
4. Investigate incentive programs that offer property owners tax breaks to preserve open space. Often these may not be permanent, but could be a good starting point.

Preserve Conservation Lands & Community Character

Preserve, maintain and increase accessibility to conservation lands for residents and visitors of all ages, abilities and interests. Protect coastal areas, wetlands, streams and other natural resources from future adverse impacts and improve appropriate types of access. Identify and take steps to protect cultural and landscape assets critical to sense of community.

1. Incentivise preservation (see Regulatory Toolkit).
2. Raise awareness regarding sensitive environmental issues in the community (i.e. climate change, flooding) and value of preservation. Encourage collaboration between appropriate boards and committees to implement projects which heighten public awareness of West Ashley’s unique natural and cultural resources.
3. Set a goal: preserve at least half of the remaining undeveloped land in West Ashley as open space for recreation, resource protection, wildlife habitat, flood mitigation, and groundwater recharge; to maintain the esthetic beauty and character of the community; and to limit the visual and fiscal impacts of over-development. See regulatory tools on page 4.66.
4. Identify and protect existing cultural and landscape assets critical to sense of community. They provide linkages between the history and the present and help shape the areas unique character.

CONNECT

Increase access to open space and park lands to and from West Ashley's neighborhoods, highlighting safe pedestrian/bicycle travel and signage/wayfinding improvements.

1. Prioritize improvements increasing safe pedestrian/bicycle connectivity between existing parks and West Ashley bicycle/pedestrian circulation networks as a critical element of the Master Plan transportation improvements.
2. Improve public awareness of open space and recreation assets, adding wayfinding and signage at existing and proposed open spaces.
3. Connect conservation land and wetland restoration for contiguous green networks and corridors.
4. Prioritize connections between the West Ashley Greenway, Bikeway, and adjacent neighborhoods - including the Peninsula and Johns Island.

CREATE & Revitalize

Increase new open space and recreation assets in currently underserved areas, restore and revitalize underutilized assets, and increase conservation and restoration acquisition.

1. Create new neighborhood parks in underserved areas, with size, location, design typology, and amenities to be determined by the Open Space, Parks, and Recreation Master Plan.
2. Prioritize park spaces within a 10 minute walking distance for all neighborhoods in West Ashley.
3. Acquire new conservation lands as part of green networks and corridors.
4. Create new wetlands, floodplain, and buffers (see Water Smart Parks on next page).
5. Support evolution and implementation of the West Ashley Greenway Master Plan.

What is a Water Smart Park?

Water Smart Parks, including land slated for future open space, or retrofit of existing spaces, provide for community enjoyment and recreation in addition to stormwater control. These spaces can be designed to filter, absorb, and store on-site AND off-site runoff to help address neighborhood-scale flooding. Park spaces can transform the community perception of rainwater and stormwater runoff, viewing it as a resource rather than a waste product.

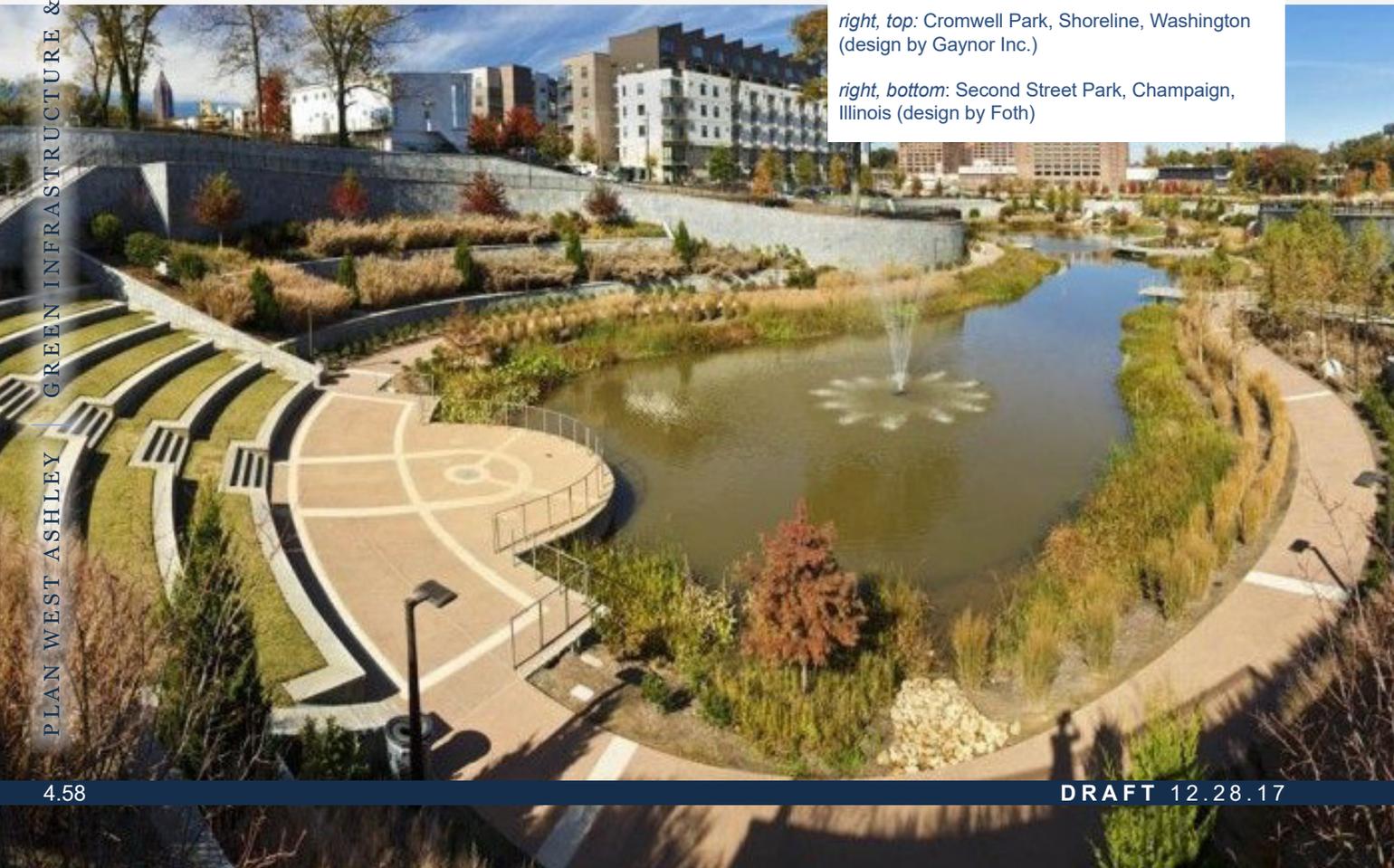
- Water Smart Parks can be a shared stormwater solution in vulnerable low-lying areas that are high risk for development.
- Stormwater control and treatment must be complimentary to other active and passive uses of the park. Stormwater design should be secondary to ensure the recreational value and lovability of the park.
- Water Smart Parks require a commitment to operation and maintenance.

Any park or open space in West Ashley, whether large or small, new or retrofit, urban or natural, can incorporate filter, absorb, and store principles to serve as a shared neighborhood stormwater management and flood control resource. For example, new parks as part of Citadel Mall redevelopment, retrofitting natural systems into the Church Creek Basin, creation of a new park as part of Long Savannah neighborhood development, integration of flood control into the new fire station and memorial on Savannah Highway, and new wetlands/trails systems at existing low and underutilized paved areas such as Orleans Road and Savannah highway should be considered.

below: Historic Fourth Ward Park, Atlanta Georgia (design by HDR)

right, top: Cromwell Park, Shoreline, Washington (design by Gaynor Inc.)

right, bottom: Second Street Park, Champaign, Illinois (design by Foth)





OPEN SPACE: NATURAL CORRIDORS

VISION
GREEN INFRASTRUCTURE & SUSTAINABILITY



JOHNS ISLAND





NORTH CHARLESTON

CREATE

During improvement projects, consider the recommended modifications

CONNECT

Fragmented natural space, tree canopy across roadways and parking lots, transit links for pedestrians

PRESERVE

Natural features to retain drainage patterns, provide flood storage and wildlife habitat for rare species

CONNECT

Ashley River Road

CREATE

Outdoor Sports Courts

CREATE

Green Street Green Infrastructure

CONNECT

Pedestrians Across Glenn McConnell

CREATE

Green Street Increase Canopy Cover

CREATE

Green Community Center

CREATE

Encourage G.I. as part of Park Improvements

CREATE

Trail Connections off Ashley River Road

New Parks for Active & Passive Recreation

CREATE

Viewsheds to Better Connect with Water

CREATE

Incorporate G.I. as part of Greenway Improvement Projects

CREATE

Incorporate G.I. and Flood Control to Fire Station & Memorial Sites

CREATE

CREATE

Green Infrastructure Educational Components

PENINSULA

OPEN SPACE: OPPORTUNITIES

- ① Future Bear Swamp Park
- ② Future Public Boat Landing
- ③ Future Community Park
- ④ Future County Park
- ⑤ Future City Park at 35 Folly Apartments

PLAN WEST ASHLEY GREEN INFRASTRUCTURE & SUSTAINABILITY VISION

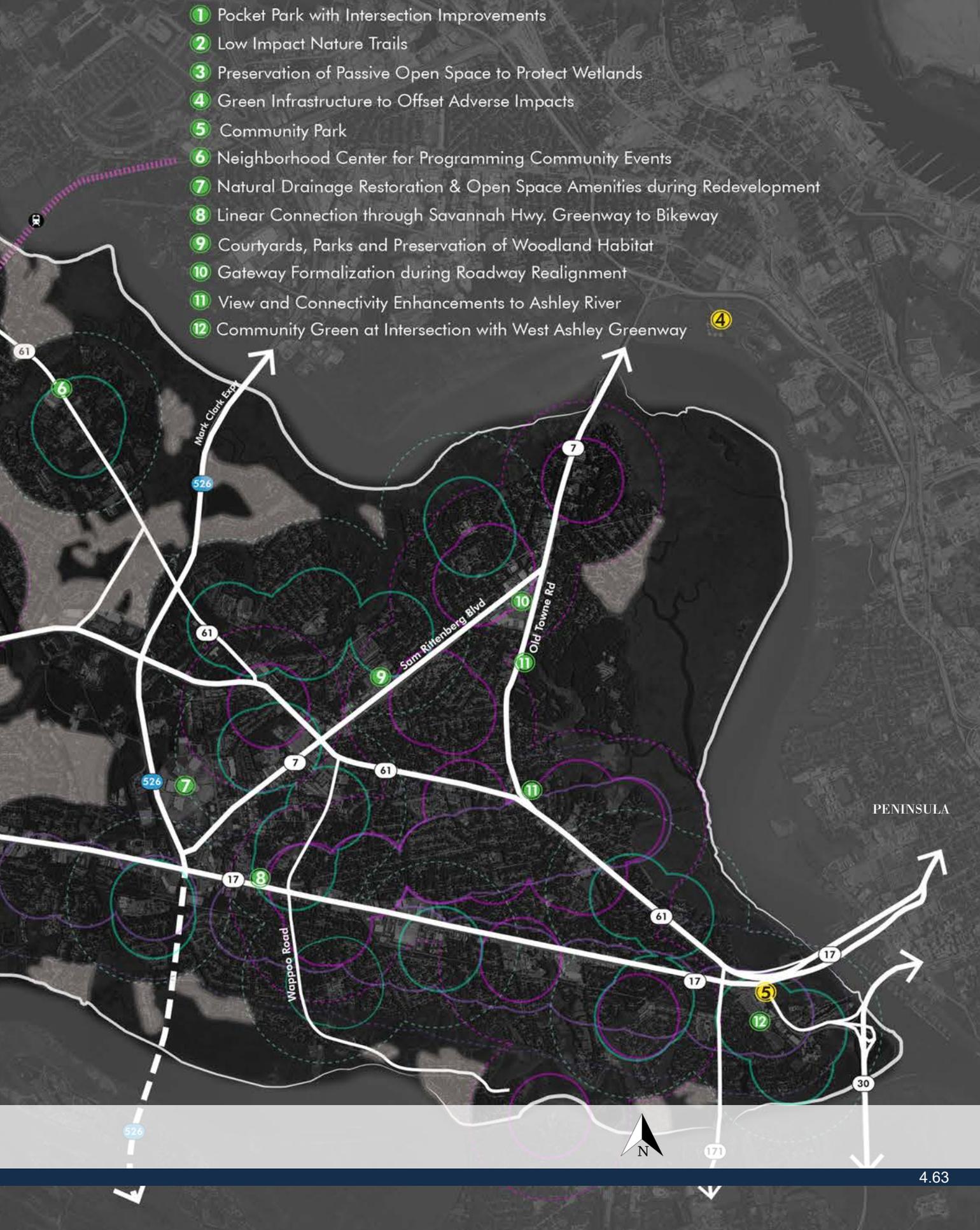


JOHNS ISLAND

Legend

- Potential for Community Open Space
- Proposed / Future Park (City and/or County)
- Underserved Neighborhoods (Outside of 10-Minute Walking Radius)

- 1 Pocket Park with Intersection Improvements
- 2 Low Impact Nature Trails
- 3 Preservation of Passive Open Space to Protect Wetlands
- 4 Green Infrastructure to Offset Adverse Impacts
- 5 Community Park
- 6 Neighborhood Center for Programming Community Events
- 7 Natural Drainage Restoration & Open Space Amenities during Redevelopment
- 8 Linear Connection through Savannah Hwy. Greenway to Bikeway
- 9 Courtyards, Parks and Preservation of Woodland Habitat
- 10 Gateway Formalization during Roadway Realignment
- 11 View and Connectivity Enhancements to Ashley River
- 12 Community Green at Intersection with West Ashley Greenway



IMPLEMENTATION

Regulating the “Big Picture”

The maps showing West Ashley’s Priority Progress Areas, Adaptation areas, and those areas to Protect and Heal illustrate a broad, systemic view of West Ashley that is more sustainable from a land use perspective. Identifying areas that are better suited for increased levels of development obviously implies that there are areas deemed less suitable...areas that should be either protected or returned to a natural state. As discussed throughout this plan, local terrain and drainage patterns are the primary drivers for determining those areas that are poorly suited for new or increased development.

This is an urgent issue in several neighborhoods as localized flooding regularly causes property damage and can cut off access to specific areas of residential development, creating a serious public safety issue. Part of the solution for West Ashley is to have as much of the remaining developable land in the less suitable areas remain in a natural state. This can be accomplished through a variety of growth management tools designed to compensate land owners for their development rights and/or incentivize them to enter into these arrangements. Tools are described to the right and on the following pages.

Purchase of Development Rights (PDR) or Fee-Simple Acquisition

Successful PDR programs are often run by local governments by establishing a dedicated “open space” fund. These funds are then used to purchase development rights from land owners, placing permanent conservation easements on the land. One of the obvious core questions for this type of program is how to establish the fund—where will the money come from? Elected officials should explore options for West Ashley to consider:

1. **Public funds:** Seeding a PDR fund with a one-time investment of public money (e.g., bond, budget line item, etc.) can help to get these programs off the ground while other tools are used to maintain the fund over time. In Charleston County, the half cent sales tax approved in 2004 was used to create the Greenbelt Program.
2. **Real estate surcharge:** Other jurisdictions have adopted an innovative financing tool through real estate transaction surcharges.
3. **Impact fees:** Impact fees are enabled through state law in South Carolina and are assessed as part of development activities of a certain scale as determined by the permitting authority. For example, the Charleston Water System assesses fees to finance maintenance and expansion of water supply and sewer infrastructure. Based on flooding issues with existing infrastructure and potential future impacts, Charleston could consider an impact fee that would fund drainage improvements and acquisition of open space in West Ashley, potentially purchase of land if it were demonstrated it would be used for flood storage even if the primary purpose were a park (see Stormwater Design below). Further legal analysis is required.
4. **Partnering with non-profit organizations:** In any effort to increase the purchase of development rights or fee-simple acquisition of land, local governments should look for opportunities to partner with land trusts. The most notable land trust operating in West Ashley is the Lowcountry Open Land Trust. This non-profit organization is “focused on protecting ecologically, agriculturally, and historically significant

Lowcountry lands.” Where the City and the trust have mutual interest in a particular tract of land, resources can be pooled—including financial, legal, administrative, and management.

Another important potential partner is the County Greenbelt Program, which is funded exclusively by the “half-penny sales tax” increase. The program began in 2004 when voters passed the first half-penny sales tax increase. At the outset, the program borrowed money against project revenues and then divided the borrowed funds among jurisdictions. Seventy percent went to rural areas (outside the growth boundary) and thirty percent went to urban areas (inside the growth boundary). Of the urban communities, Charleston received the largest guaranteed allocation at approximately \$10M.

At the time this plan was developed, the County was revising its Comprehensive Greenbelt Plan and discussing several important administrative issues. Examples include whether to borrow against future revenues in order to provide substantial funds at the outset of the program. If borrowing does not occur, the program will require several years to build up significant resources. Another important policy decision is how to split money between rural and urban areas. For example, will urban areas receive thirty percent of the funds again, or could there be a larger percentage allocated to communities inside the growth boundary? Representatives from West Ashley should find opportunity to insert themselves into the Comprehensive Greenbelt Plan update process to ensure that their preferences on these policy and administrative decisions are heard. The Lowcountry Land Trust and South Carolina Conservation Bank are both focused on land conservation and protection of ecological, agricultural, and historically significant resources in West Ashley and beyond, and their success can serve as a foundation for future efforts.

South Carolina Code of Laws

Section 6-1-70. Prohibition on real estate transfer fees; exceptions.

(A) Except as provided in subsection (B), the governing body of each county, municipality, school district, or special purpose district may not impose any fee or tax of any nature or description on the transfer of real property unless the General Assembly has expressly authorized by general law the imposition of the fee or tax.

(B) A municipality that originally enacted a real estate transfer fee prior to January 1, 1991 may impose and collect a real estate transfer fee, by ordinance, regardless of whether imposition of the fee was discontinued for a period after January 1, 1991.

Transfer of Development Rights (TDR)

Another tool that can help alleviate growth pressures on sensitive land is TDR. This tool, generally offered as an optional incentive, removes the development rights from sensitive areas (such as flood prone lands) but moves those development rights to other areas where growth is desirable. For West Ashley, sending areas could include almost any residentially zoned land outside the areas targeted for growth during the charrette. The targeted growth areas could become the receiving areas depending on the ultimate scale of development needed. Importantly, TDR is a complex land use management tool that combines preservation, density bonuses, government administration, and an understanding of market forces that can change from year to year. West Ashley would probably require at least a full year of pre-planning before adopting a program that would include a professional consultant. Questions that need to be answered include:

- Where would the sending areas be? It is important that this be clearly defined and it should be able to be easily read on a map.
- Which growth areas would be receiving areas? The areas with the highest market pressure to grow will be the most successful.
- In receiving areas, what will developers be allowed to do with TDR, and what will they be allowed to do without TDR? In other words, how much development get they get “by right”, and then how much can get get with TDR?
- What is the financial relationship between single family development in the sending area and multi-family development in the receiving area? How many bonus units will make it worthwhile to buy the development rights in sending areas?
- Are design standards needed to accompany bonus development in the receiving areas?

These core questions, and others, will be part of the planning process leading up to the adoption of TDR in West Ashley. In terms of research, local officials should look at the Beaufort County program as a potential starting point (Division 2.10 of the Community Development Code). Critical differences include the fact that it is administered at the county level, and the planning objectives are very different from West Ashley. Despite those differences, the program is more sophisticated than most other in the country and shows promise because it includes:

- A certification process for sending area land owners that allows them to certify the number of available development rights they have and make those available to property owners in the receiving area more easily.
- A “fee-in-lieu” process that allows developers to pay cash into a TDR Bank instead of buying actual certified development rights if those rights may be unavailable for any reason. This money is then used by the County at a later date to purchase development rights.

West Ashley should communicate with Beaufort County about the successes and failures of that program then begin to map out their own pre-planning process for TDR. As of July of 2017, the County had not yet calculated the dollar value for the fee-in-lieu payment, but were moving forward with a consultant to do so.

Regulating Site Specific Conditions

Wetlands

The ACOE model of regulating wetland impacts is not serving West Ashley well under current conditions, and the City may wish to consider adding local controls to the wetland permitting process. Options to consider might include:

1. Use zoning or local wetland regulations to establish additional local jurisdiction and review wetland impacts as part of local review procedures.
2. Prohibit the fill of any wetlands or disturbance of any upland area within 100 feet of a designated wetland area. Under this approach, off-site mitigation would not be an option.
3. Prohibit the discharge of stormwater to areas inside of the 100-foot protective buffer.
4. Restoration requirements for properties where the protective buffer is already disturbed.
5. Flexibility for redevelopment opportunities that can create a “net improvement.”

Importantly, the standards for buffers listed above are examples of what other jurisdictions do across the country. However, standards will differ from one jurisdiction to another for things like a protective buffer. Some examples across the country are as low as 50 feet while others are as large as 300 feet. Also, in some cases, limited activities are allowed in some buffers while others are treated as “no disturb.” West Ashley will need to consider carefully how the individual elements of such a program would be fashioned to best meet its needs.

Finally, the City may wish to administer these new requirements in conjunction with provisions of a new TDR program. For example, this local control may only apply, or may be strongest in designated sending areas. Further, the protective wetland buffer would apply for proposed development activity, but could be ignored when calculating development rights. Allowing the buffer to count as “developable” when certifying development rights would therefore incentivize participation in the TDR program. As an example, if a 10-acre site contained three acres of wetland, only seven acres could be considered developable. However, if the property owner wished

to sell development rights, he/she could sell the rights for the entire 10 acres.

Stormwater Management

Stormwater management continues to be a major focus for several agencies in West Ashley. Both the County and the City are at different phases of revising stormwater management standards, and intensive hydrologic/hydraulic studies are ongoing—the most recent is the ongoing study of the DuWap area. West Ashley has taken an aggressive approach to how stormwater management is regulated with these intensive studies. For example, a previous study on the Church Creek area resulted in a special management district that has more intensive requirements related to flood prevention. Moving forward, amendments to stormwater management standards for development applications should be consistent with the findings of these studies, and local and county standards should be consistent.

The following actions should be undertaken as part of a comprehensive West Ashley regulatory initiative:

1. Increasing the requirements for matching predevelopment and post development discharge rates to the 100-year storm frequency.
2. Increasing the design storm frequency for pipes, culverts, and other features in areas where doing so would alleviate flood pressure. Sensitive areas would be identified through the results of ongoing study.
3. Incorporating requirements for retention of small storm volumes (e.g., 1-year, 2-year event, or water quality volume) where this would be beneficial for mitigating downstream flooding or in areas identified for protection in this plan.
4. Review downstream analysis requirements for West Ashley at the watershed scale to ensure regulatory requirements are comprehensive and properly calibrated.
5. Continue to refine the recently adopted standards for stormwater management on redevelopment properties to allow for more site-specific numeric targets and to make redevelopment in growth areas easier than in low-lying areas designated for protection.

6. Using fee-in-lieu options to build funds that can be used to update infrastructure in public areas and/or establish neighborhood scale solutions in the form of open spaces and parks that can periodically flood when needed.
7. Investigating creation of a state drainage authority that establishes a formal process for multi-jurisdictional coordination with regards to watershed planning, stormwater management, and drainage system operation and maintenance.

Flood Plain Development

As discussed earlier (Page 4.13) flood plain areas are of particular concern in West Ashley as they play a critical role potentially mitigating post-storm impacts from flood waters. As is common practice, West Ashley requires one foot of freeboard over the 100-year flood elevation (top of the lowest floor level of the lowest floor) for new construction. Development is allowed in flood plain areas using a general set of development criteria including “All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.” (Sec 27-16.3.) More stringent and specific criteria are applied to specific uses (e.g., manufactured homes) and areas of special flood hazard (e.g., floodways, V-Zones, etc.). As storm intensity, storm surge, and sea level rise are expected to become more

challenging over time, West Ashley could consider changes to flood plain development requirements:

1. Increase freeboard requirement for residential and non-residential development from one foot to two feet. Pursue and encourage adaptive solutions for retrofit of historic structures, potentially including raising, floodproofing, or relocation.
2. Provide a more detailed description of the type of analyses (e.g., downstream flooding) and measures (e.g., compensatory storage) that will be required to determine there will be no increase in impacts from a development proposal.
3. Apply select standards from areas of special flood hazard to the 100-year flood plain. Specifically: “No encroachments, including fill, or new construction or substantial improvements or any other developments shall be had until and unless certification (with supporting technical data) by a registered professional engineer is provided to the city engineer or his designated agent demonstrating that such activity shall not result in any increase in flood levels during occurrence of the base flood discharge.”



Implementation Actions

Implementation of the vision to make West Ashley more resilient will include physical improvements/projects by the public and private sector, as well as policy actions by the City, County, BCDCOG, and others. Enhanced coordination at identified focus areas and as part of immediate action items will be critical to build a stronger pattern for successful collaboration.

Recommended immediate, near term and longer term actions to pursue are outlined on the following pages. Additional details, including estimated cost and parties responsible for each, is included in Chapter 7. Implementation should integrate data collection and analysis in all future project studies and improvements. Types of data may include traditional data and/or more sophisticated analytics as available.

Immediate Steps (first 2 years):

Immediate Policies/Studies:

- Pursue mechanisms and funding to purchase property for the purpose of reversion to wetlands and addition of floodplain.
- Seek authorization from the General Assembly to allow local real estate transaction surcharge to seed open space acquisition.
- Strengthen tree protection and tree planting requirements for new development and redevelopment.
- Advocate for the Greenbelt Program to borrow money against future revenues on the half penny sales tax in order to provide immediate funding.
- Raise community awareness of sensitive environmental concerns, green infrastructure, and open space preservation.
- Develop a West Ashley Recreational Needs Assessment.
- Develop a West Ashley Open Space, Parks, and Recreation Master Plan.
- Strengthen requirements for undergrounding of overhead utilities for new development and redevelopment, and pursue alternative sources and partnership models to acquire implementation funding.
- Develop community engagement strategies to improve communication, education, and participation for residents around locally important green infrastructure and sustainability issues.

- Develop incentives to encourage developments to include green infrastructure practices. If more restrictive stormwater standards are implemented to address drainage issue and open space preservation, more flexible zoning standards may be needed.

Immediate Projects:

- Perform a storm drainage system inventory (including condition assessment) and maintenance schedule with cooperation between the City, County and State DOT. Cross train City staff (i.e. sanitation, inspection, zoning, police) to recognize and report blocked drains or other drainage issues requiring maintenance.
- Integrate neighborhood scale flood control, with traditional stormwater management improvements as well as Lowcountry appropriate green infrastructure practices (such as bioretention, rain gardens, created wetlands, and depaving), and undergrounding of overhead utilities into upcoming infrastructure investments such as streetscape, park, drainage basin, and open space projects.
- Include green infrastructure and local neighborhood drainage improvements as part of the Fire Station and Memorial design.
- Plant trees

Near-Term Steps (2 years – 5 years):

Near-Term Policies/Studies:

- Pursue mechanisms for transfer of development rights (TDR).
- Increase budget for inspection, operation, and maintenance of drainage infrastructure.
- Pursue mechanisms for purchase of development rights (PDR).
- Pursue green infrastructure maintenance workforce training programs.
- Strengthen local wetlands regulations and jurisdiction (see Wetlands Preservation details on page 4.48).
- Prohibit the fill of any wetlands or disturbance of any upland area within a fixed distance of a designated wetland area. Consider 100 feet as a potential distance.
- Prohibit the discharge of stormwater to areas inside of a 100-foot protective buffer.
- Promulgate restoration requirements for properties where the protective buffer is already disturbed.
- Implement flexible wetland protection measures for redevelopment opportunities that can create a “net improvement.”
- Include green infrastructure requirements/guidelines reflecting the Master Plan vision for West Ashley in the updated City stormwater management standards.
- Increase the requirements for matching predevelopment and post development discharge rates to the 100-year storm frequency.
- Increase the design storm frequency for pipes, culverts, and other features in areas where doing so would alleviate flood pressure. Sensitive areas would be identified through the results of ongoing study.
- Incorporate requirements for retention of small storm volumes (e.g., 1-year, 2-year event, or water quality volume) where this would be beneficial for mitigating downstream flooding or in areas identified for protection in this plan.
- Include requirements for downstream analyses in identified flooding areas to ensure that new measures do not exacerbate and can even improve existing problems.
- Increase freeboard requirement for residential and non-residential development from one foot to two feet.
- Provide a more detailed description of the type of analyses (e.g., downstream flooding) and measures (e.g., compensatory storage) that will be required to determine there will be no increase in impacts from a development proposal.
- Apply select standards from areas of special flood hazard to the 100-year flood plain.
- Explore ways to assist coordination efforts from federal programs such as FEMA and SBA to assist homeowners within flood plain that are impacted by recurring flooding.

Near-Term Projects:

- Partner with the Citadel Mall and other private developers to implement depaving, floodplain restoration, wetlands protection/restoration, tree planting, and pilot GI improvements.
- Incorporate “Water Smart Park” concepts into the next park construction or retrofit as a pilot. Opportunities include the Citadel Mall redevelopment, Church Creek Basin, Fire Station and memorial, Sam Rittenberg redevelopment at Old Towne Road or elsewhere, the Greenway, DuWap area, and many others.
- Increase wetland preservation/restoration and floodplain management as part of West Ashley Circle development.
- Implement the findings of the Church Creek and DuWap Drainage Studies.
- Implement a green infrastructure retrofit into an existing West Ashley street.
- Implement flood control and drainage improvements with traditional stormwater management techniques coupled with green infrastructure practices.
- Plant more trees

Longer-Term Steps (5 years – ongoing):

Longer-Term Policies/Studies:

- Incorporate resiliency, sea level rise considerations, and adaptive design strategies into long-range infrastructure/transportation planning and policy other features in flood prone areas.
- Investigate incentive programs offering tax abatements for open space preservation.
- Set a specific goal for open space preservation of remaining developable land.
- Identify and protect existing cultural and landscape assets for preservation.
- Create new neighborhood parks in underserved areas - to be determined by the Open Space, Parks, and Recreation Master Plan.
- Support evolution and implementation of the West Ashley Greenway Master Plan.
- Enhance connections between the West Ashley Greenway, Bikeway, and adjacent neighborhoods - including the Peninsula and Johns Island.

Longer-Term Projects:

- Partner with the Citadel Mall to construct pilot depaving, wetlands enhancement, and floodplain improvements.
- Fund undergrounding of overhead utilities as part of redevelopment and streetscape improvements.
- Build a “Water Smart Park” with green infrastructure as part of West Ashley Circle neighborhood development.
- Pursue the “Tiger Swamp Canal Walk” as part of neighborhood scale Citadel Mall, Sam Rittenberg, and I-526 extension transportation planning and drainage infrastructure improvements.
- Plant more trees



5 HOUSING

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AFFORDABLE

Housing

CHAPTER OVERVIEW

EXISTING CONDITIONS

- West Ashley’s value as a residential community is, and always has been, its centrality within the region and easy access to the Peninsula via early bridges and, later, I-526.
- Housing in West Ashley is becoming increasingly expensive, endangering its longtime status as a community affordable to middle income households.
- As rising home prices place homeownership out of reach for more West Ashley households, demand for rental properties is also increasing from a wider range of demographics and household income levels.
- Most recent and planned new single-family and multifamily residential development in West Ashley is occurring at previously-undeveloped greenfield sites in the outer West Ashley area west of I-526. As a relatively affluent area of planned growth, outer West Ashley is in need of additional amenities, services, infrastructure, and traffic solutions to support this growth.
- Rising housing prices are driving rapid change in many inner West Ashley neighborhoods – particularly in historically affordable neighborhoods. These neighborhoods are increasingly desirable due to the comparatively low prices of their housing stock, convenient proximity to existing shopping, services, and commute routes to jobs throughout the region, and locations adjacent to long-desirable neighborhoods.
- Increased housing prices are also threatening the physical “community character” of West Ashley’s oldest neighborhoods as new homes are built and older homes are changed.
- Rising housing prices increase the need for attainable, affordable, and workforce housing at all income levels. While Charleston and other agencies already offer programs and policies to address these needs, a variety of additional public policy and funding tools can be deployed or refined to expand affordability.

COMMUNITY CONCERNS

- The community does not offer enough variety of housing choices to meet needs and preferences.
- Housing is becoming too unaffordable, which also creates a risk that seniors and lower or middle income residents could be displaced.
- Community character, scale, and cultural legacies are threatened by new development and change.
- The Citadel Mall property needs reinvestment – possibly including housing.
- Any taller housing should be limited and targeted for appropriate locations.

VISION

- Preserve community character
- Maintain affordability
- Add more housing options and supply to meet market demand and need.
- Provide supportive and equitable infrastructure for housing at all income levels, including multimodal transportation options (pedestrian, bicycle, automobile, and transit), parks and open space, and community facilities.

IMPLEMENTATION

- Implementation actions at the end of this chapter directly support achieving each component of this vision. See more detailed implementation recommendations pages 5.18-5.24

EXISTING CONDITIONS

West Ashley's residential neighborhoods are one of the community's essential defining characteristics. The eclectic mix of housing styles, sizes, prices, and neighborhoods – combined with the street network and the natural terrain – all contribute to what makes this area unique. However, planning for West Ashley's future requires addressing the challenges facing its housing stock and the people who live here today, as well as those who would like to live here in the future.

Historical Context

West Ashley's value as a residential community is, and always has been, its centrality within the region. The earliest residential neighborhoods west of the Ashley River were built in the late-19th and early-20th century because they had easy access to Downtown via the Ashley River Bridge, and to agricultural areas south of Wappoo Creek via Folly Road. These neighborhoods included the communities of Ashleyville and Maryville in the 1880s, and subsequent development of areas including Wappoo Heights and The Crescent in the 1920s.

The economic effects of World War II were transformational for West Ashley. The Navy yard in North Charleston began rapidly expanding, and the Charleston area needed a large workforce to fill these jobs. However, the region lacked sufficient housing to accommodate this new workforce. In response to the housing crisis, developers and property owners responded by constructing hundreds of new homes in neighborhoods like Avondale, Byrnes Downs, Old Windermere, South Windermere, and Moreland during and immediately after World War II. Many families of the burgeoning middle class continued moving to West Ashley in the post-war period, drawn by the relatively strong Charleston economy and a desire for a contemporary alternative to the Peninsula's older housing stock. West Ashley's oldest residential communities, with their unique architectural character and tree-lined streets, are often a point of pride among residents today.

By 1960, the first time for which U.S. Census subarea data is available, West Ashley had a population of approximately 26,000 people, equivalent to just over

40 percent of Charleston's total population¹. In the two decades between 1960 and 1980, West Ashley added 25,000 people, and by 1980 accounted for the equivalent of 75 percent of the City's total population. Most of this growth continued to occur in inner West Ashley, to the east of Interstate 526. After 1980, however, growth in other parts of Charleston started to accelerate while West Ashley's growth slowed. Between 1980 and 2000, West Ashley added only about 8,400 people and its population dropped to 63 percent of the City total.

Population growth in West Ashley began to accelerate again in 2000, and by 2015 the area's population had increased by almost 12,000. However, for the first time, this growth primarily occurred in outer West Ashley, on the west side of Interstate 526. These shifting growth patterns within West Ashley, combined with very rapid growth in other parts of the region, form a basis for understanding the existing housing context in the area, as well as West Ashley's retail evolution – which is discussed in the Economic Development chapter of this Plan.

While most of West Ashley was developed as post-war suburban homes, shopping centers and small office and industrial clusters, the area also includes the older and historically significant community of Maryville/Ashleyville. The town of Maryville was founded in the 1880s under the leadership of Mary Just, an African American woman, and the home sites were sold to African Americans working in local phosphate mines or as farm laborers.² Maryville remained an incorporated community until the 1930s when, following a legal battle, “the town charter was revoked...”³ and the area was absorbed into St. Andrew's parish. However, the African American residents have, for the most part, remained.

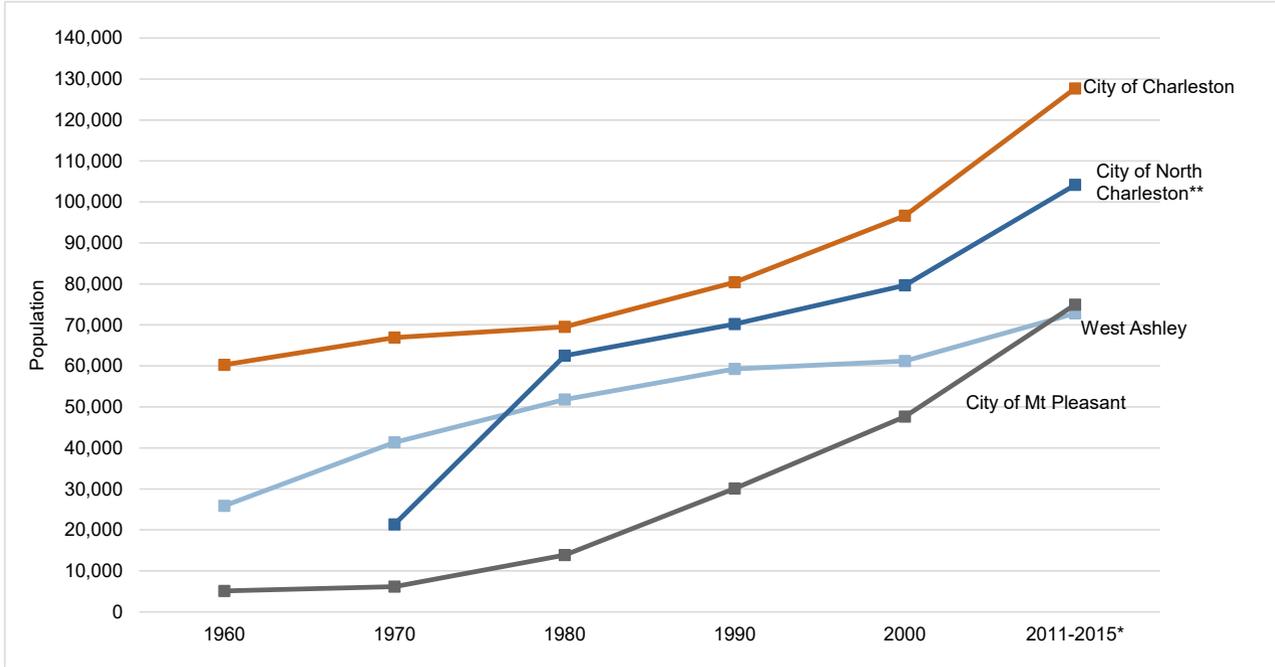
There are two other more modern neighborhoods in West Ashley that were also built expressly for African Americans, although these were both built in the twentieth century and were marketed to middle

¹ The West Ashley population numbers and demographic characteristics described throughout this chapter are not a direct subset of the City of Charleston's population. West Ashley incorporates a mix of incorporated and unincorporated land on a parcel-by-parcel basis, which U.S. Census tract-level data does not distinguish.

² Jacobs, Donna. West Of. <http://www.westof.net/main.test.php?category=citizen&id=37>

³ Ibid.

Population Growth in West Ashley and Surrounding Jurisdictions, 1960-2015



*This represents the U.S. Census ACS 5-year estimates, 2011-2015.

** North Charleston was incorporated in 1972, which explains the lack of data for 1960. Population for 1970 represents the city's population in 1972.

Source: U.S. Census Bureau 1960, 1970, 1980, 1990, 2000 and 2011-2015 ACS 5-year estimates. North Charleston Comprehensive Plan, Population & Demographics.

class families. The neighborhoods are Washington Park, which is still a recognized neighborhood within the City of Charleston; and Heritage Park, which is a very small subdivision off of Wappoo Road including only about five houses. Although these three neighborhoods make up a relatively small part of West Ashley’s residential neighborhoods, they are located within a larger group of neighborhoods that are primarily occupied by African American families. These neighborhoods – including Orleans Woods, the Savage Road community, Ardmore/Sherwood Forest, West Oak Forest, and East Oak Forest – are some of the most stable African American neighborhoods in the City of Charleston. However, these areas are all under pressure to change for a variety of reasons that are discussed in more detail below.

Housing in West Ashley is Becoming Increasingly Expensive

The market forces that traditionally shaped housing development in West Ashley were focused on demand for “workforce” housing. Although the area’s median household income has historically been higher than that of the City and the region, this was more a reflection of lower incomes in other places than significant affluence of West Ashley residents. In fact, West Ashley has, for virtually all the twentieth century and into the new millennium, been primarily a place for middle income families to live. However, recent strong economic growth trends in the Charleston region have increased demand for all of the advantages created by West Ashley’s location. This is especially true for the older neighborhoods in inner West Ashley east of Interstate 526.

As rents and housing prices rise in response to increased demand for housing in West Ashley, middle and lower income households are less able to afford the area as they have in the past – particularly in inner West Ashley. As shown in the table on page 5.7, inner and outer West Ashley median rents increased by 40 percent and 28 percent, respectively, from 2011 to 2016. Inner West Ashley rent growth particularly outpaced the 30 percent increase in the City of Charleston overall. Median home sales prices have also increased dramatically since 2014 in inner West Ashley, where the median sales price per square foot roughly matched the City overall as

of June 2016; outer West Ashley’s sales prices per square foot were approximately 80 percent of those in the City and inner West Ashley.

As rising rents and housing prices in West Ashley outpace income growth in the area and region, more West Ashley households are experiencing increased housing “cost burdens” – i.e., households are dedicating high shares of their incomes to housing expenses. Between 2000 and the 2011-2015 period, the share of West Ashley households paying more than half their income toward housing expenses jumped from 19 percent to 26 percent of renter households, and from 8 percent to 11 percent of homeowner households.⁴ Households paying high shares of their income toward housing expenses are in greater danger of being unable to keep up with rents/payments or afford other needs.

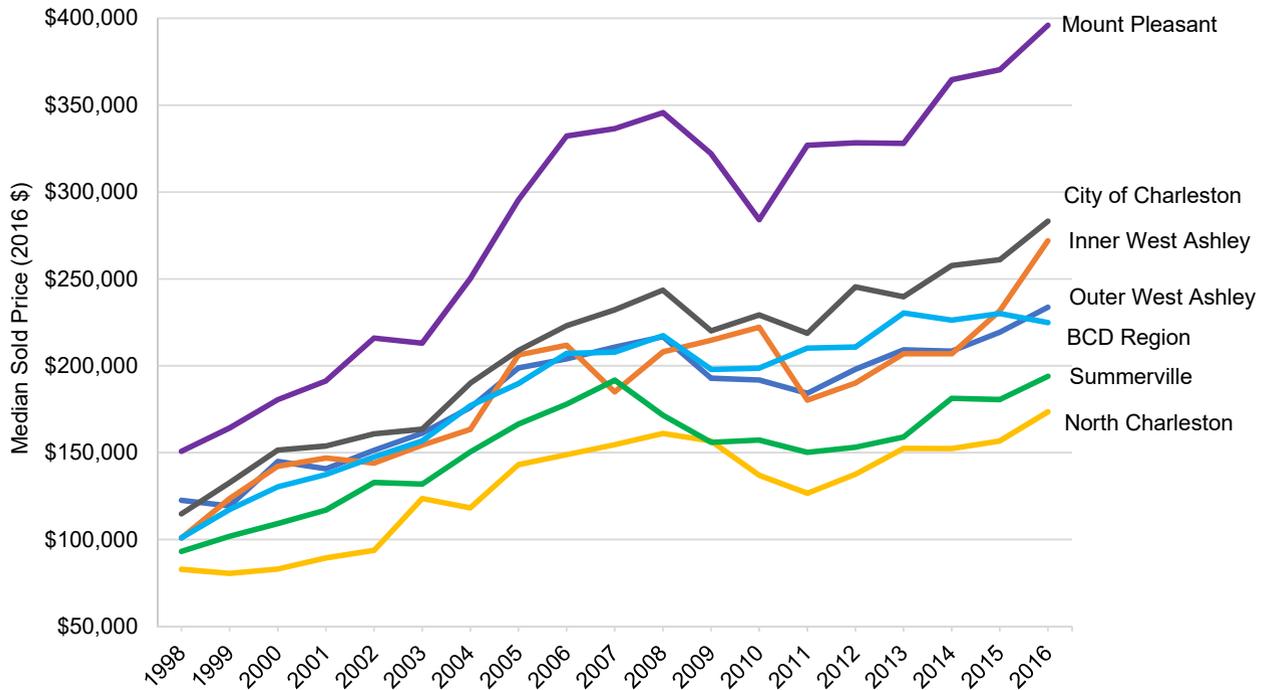
As housing and associated transportation cost rise, diversity of a community can be impacted. Rising home prices, combined with higher property taxes, may entice or force long-term residents to leave the area in a process often referred to as gentrification. Low- to moderate-income earners and families may be deterred by home prices resulting in a diminishing school-age population in some neighborhoods. In short, the high cost of living threatens a loss of diversity on multiple fronts. One of the goals of this plan is to recommend ways to address these housing equity issues.

Historically, rental units were the lowest-priced option for entering the West Ashley housing market, and served as an affordable option both for long-term renters and for residents saving to purchase a home. As rising home prices place homeownership out of reach for more West Ashley households, demand for rental properties is increasing from a wider range of demographics and household income levels. This increasing demand for rental housing is resulting in apartments becoming a more desirable product in West Ashley, driving rents higher.

While rents are going up overall, location still matters. Within West Ashley, attainable rents – and the types of apartment designs that developers pursue – vary

⁴ Data from the U.S. Census: 2000 decennial census and 2011-2015 American Community Survey estimate.

Median Sold Price for All Homes in West Ashley and Surrounding Jurisdictions, 1998 to 2016



Data is shown for June of each year.
Source: Zillow, 2017; Strategic Economics, 2017.

Median Rent in West Ashley and Surrounding Jurisdictions, June 2011 and June 2016

	Median Rent 2011	Median Rent 2016	Percent Change
Charleston	\$1,171	\$1,519	30%
Inner West Ashley	\$948	\$1,323	40%
Outer West Ashley	\$1,034	\$1,319	28%
North Charleston	\$845	\$1,068	26%
Mount Pleasant	\$1,181	\$1,545	31%
Summerville	\$923	\$1,107	20%
BCD Region	\$1,164	\$1,500	29%

Source: Zillow, 2017; Strategic Economics, 2017.

depending on the desirability of a given location. For example, 35 Folly (on the corner of Albemarle Rd and Folly Rd Blvd near the Highway 17 merge) is a relatively tall and dense four-story apartment project with an integrated parking garage, taking advantage of the higher rents that can be attained by offering easy access to the Peninsula and proximity to the retail offerings of South Windermere. Apartments in outer West Ashley do not offer equivalent access to urban job centers, but instead compete by providing larger amounts private space, greater amounts of indoor and outdoor shared amenities, and more convenient parking to their residents.

The increased demand for multifamily housing is amplified by two generational trends. Millennials – people born after 1980 – are a relatively large generation that tends to occupy rental housing at high rates since they are still building the wealth necessary for purchasing a home. Simultaneously, the Baby Boomer generation is entering retirement age and, while the majority of Baby Boomers prefer to stay in their existing homes, some members of this large generation are seeking more compact housing options. Based on these generational trends and robust projected population growth in the Charleston region overall, demand for rental housing in the region and West Ashley is likely to remain strong in coming years – though development activity will vary depending on cyclical year-to-year changes in market conditions. Both inner and outer West Ashley are likely to continue attracting renters and investment in multifamily development, with each competing for different segments of renters based on their respective strengths.

Outer West Ashley Continues to Grow

Most recent and planned new single-family and multifamily residential development in West Ashley is occurring at greenfield sites in outer West Ashley. Leveraging the availability of large parcels of land, these development projects generally consist of entire new planned unit development subdivisions of homes that often include single-family homes, townhouses, and apartment complexes – though the different housing types are usually segregated from each other. This housing mix provides diverse options that accommodate different household preferences. The outer West Ashley residents purchasing and renting these homes are relatively affluent. Median household incomes in outer West Ashley were 35 percent higher than inner West Ashley as of the 2011-2015 period.⁵ As a relatively affluent area of planned growth, outer West Ashley is in need of additional amenities, services, infrastructure, and traffic solutions to support this growth – a very different set of needs compared to the older development found in inner West Ashley.

⁵ U.S. Census American Community Survey, 2011-2015 estimate.

See Appendix B for more data regarding:

- West Ashley Demographics in the Regional Context
- City of Charleston Fast Facts & 2017 Population Estimates (includes West Ashley building permit information)
- West Ashley Housing Affordability and Opportunity
- West Ashley Tapestry Segmentation Examples
- List of Major Employers in the Charleston Metro Area.

Many Inner West Ashley Neighborhoods are in Transition

Rising housing prices are driving rapid change in many inner West Ashley neighborhoods – particularly historically affordable neighborhoods located roughly within the area bounded by Wappoo Road, Savannah Highway, Sycamore Avenue, and extending just north of St. Andrews Boulevard. This area also encompasses West Ashley’s greatest concentration of African American residents. As housing prices increase throughout the region and West Ashley, desirability and prices for homes in this area are likely to increase due to the comparatively low prices of its housing stock, convenient proximity to existing shopping, services, and commute routes to jobs throughout the region, and the location adjacent to highly-desirable neighborhoods that attract high home sales prices per square foot, such as Avondale, Byrnes Downs, and Old Windermere.

Generational turnover and the demographic characteristics of existing households also increase the susceptibility to change of historically affordable neighborhoods in inner West Ashley. Compared to outer West Ashley, inner West Ashley overall includes a greater share of residents over 65 years old – 17 percent of the population, versus 13 percent in outer West Ashley.⁶ 45 percent of inner West Ashley households rent their homes, with anecdotal evidence suggesting a growing share of single-family homes are being rented in parts of inner West Ashley. The large presence of older residents increases the likelihood that properties will change hands as residents age out of their current homes. At the same time, rising prices create a strong incentive for landlords to sell single-family homes rather than continue renting them out. This potential for residential turnover induces community concerns about gentrification.

There is also considerable speculative pressure on existing home owners in African American neighborhoods where home owners receive frequent inquiries from people wanting to buy their homes. This raises two issues: 1) do these homeowners, especially the elderly, understand the value of their real estate asset and are they managing this asset to their advantage; and 2) people who live near homes that are selling for very high prices are concerned that

their property taxes will increase beyond what they can afford to pay and they will be displaced. The latter concern’s impact is mitigated by South Carolina’s Act 388, which significantly limits property tax increases for owner-occupied homes, but was approved in 2006 and may not be widely understood. Additional property tax exemptions apply to homes occupied by disabled residents and seniors over 65 years old. Despite this tax relief, an owner of a home with a rapidly rising value may still gradually pay more in property taxes over time – creating an additional burden for homeowners on fixed incomes.

South Carolina’s “heirs’ property” laws can also contribute to the turnover of properties and transition of neighborhoods over time. When a property owner passes away without a will, common ownership of the property passes to all living family members. Any one of these heirs can trigger sale of the entire property, resulting in a loss of the property from the family as a whole. Properties can also sit vacant due to lack of certainty over which parties can occupy the property, and therefore lack of incentive to invest in maintenance and tax assessments. Longstanding African American communities – such as Maryville/Ashleyville – are particularly impacted by heirs’ property issues due to historic lack of access to or knowledge of legal processes.

Finally, increased housing prices are also threatening the physical “community character” of West Ashley’s oldest neighborhoods as new homes are built and older homes are changed. Inner West Ashley’s aging housing stock and rising prices are creating incentives for new buyers to reinvest in and significantly alter existing properties, including tearing down, replacing, or substantially modifying existing homes. Community members have raised concerns that the outcomes of this process result in changes that do not match the scale and character of existing housing. The overall magnitude of this activity appears to be limited, but still has a highly-visible impact on neighborhoods. Addressing this impact will require balancing the need for housing in West Ashley, the rights of property owners, and the need for new development to respect its existing neighbors and neighborhood.

⁶ Ibid.

Rising Housing Prices Increase Need for Attainable, Workforce, and Affordable Housing at All Income Levels

“Affordable” housing is defined in many formal and informal ways. The U.S. Department of Housing and Urban Development considers housing costs to be affordable when they are 30 percent or less of a household’s income. Given this definition, much private, unsubsidized housing sold or rented at current market asking rates is “affordable” to households with sufficient means. Hence, in its more affordable days, West Ashley provided a large pool of market rate housing – without limits on sales prices or rental rates – that was affordable to much of its resident workforce.

At a regional scale and over the long-term, housing costs rise in response to increasing demand and fall as additional supply is added to meet demand. It is possible to reduce market rate housing costs by producing more units to meet demand (though prices will always vary between neighborhoods based on their desirability). In recent years, however, the growth of Charleston’s regional economy has attracted new residents to the region, boosting demand for housing that exceeds new construction, and driving rents and sales prices higher. West Ashley is particularly susceptible to increasing housing prices and rents, since the area is in a desirable location adjacent to major employment destinations.

As rents and prices increase in West Ashley and outpace income growth, more households that could once afford housing in West Ashley based on their income are now at risk of being priced out of the community. Adding new housing units can help lower overall housing costs in the long-term by increasing the overall supply of units, but a developer of new housing is likely to target the highest attainable sales prices or rents in order to provide a competitive return on the project’s investment risk.

Households that face challenges in affording housing at current market rates span a range of incomes, especially at a time when many employers do not provide sufficient salaries to support their workers’ housing costs. “Workforce housing” often refers to housing affordable to households defined as “low income” and “moderate income,” or earning between roughly 50 percent and 80 percent of the

“area median income” in a region. Given that this translates to a Charleston family of three earning between \$31,000 and \$74,400 a year, there are many teachers, firefighters, and workers of all kinds who need workforce housing. “Affordable housing” often formally refers to households whose jobs and other sources of income provide less than 50 percent of area median income – that is, less than \$31,000 per year. Even households earning 120 percent of the area median income – or \$74,400 for a family of three – now struggle to afford housing in locations with access to work, parks, and neighborhood retail.

One means of addressing the need for attainable, affordable, and workforce housing is to provide income-restricted housing available only to households earning specifically defined income levels. These units often require subsidy since housing developers typically prefer to charge the highest possible rents or sales prices they can attract. For example, as shown in the following chart, a “very low income” household of three in Charleston could only afford to pay \$775 a month for housing and utilities, yet median monthly rents in West Ashley were \$1,320 in 2016.⁷ More detail on housing affordability levels and required interventions is shown in the table on the following page.

Subsidies to improve housing affordability take many forms, and are administered by a variety of agencies and jurisdictions; examples of public subsidies include public housing projects and Section 8 Housing Choice Vouchers (administered by the Housing Authority of the City of Charleston) that fill the gap between what residents can afford to pay and rents that private landlords are charging, “low income housing tax credits” that incentivize private investment in income-restricted housing developments in exchange for tax credits, and partnerships in developing publicly-owned land. Cities can also require developers of market rate housing projects to contribute to affordable housing funds or provide on-site income-restricted housing units – often in conjunction with a regulatory incentive such as increases to allowable density.

Additional tools exist for improving overall affordability for households of all incomes, including moderate and higher income households. For

⁷ Zillow.com, Zillow Rental Index estimate, June 2016.

Why Subsidies Can Help Provide Housing Affordable to Lower Income Households in West Ashley



Source: City of Charleston, 2017; Zillow, 2016; Strategic Economics, 2017.

example, new market rate development projects can become more affordable to middle-income households through “affordable by design” measures, such as building compact and efficient single-family homes, duplexes, townhomes, and a range of multi-unit apartment or condominium buildings that are complemented by shared open spaces or other amenities. Many of these housing products are comparable to the height and scale of single-family homes. The potential future mixed-use nodes identified in Plan West Ashley are promising opportunity sites for these high quality yet potentially more affordable housing products.

As another example, housing located near job centers and robust transit service can improve overall affordability by reducing transportation costs, thus freeing additional income for housing and/or reducing total household housing and transportation costs. As in the United States overall, transportation is the second-highest cost for Charleston’s households after housing. The Center for Neighborhood Technology estimates that an average Charleston

household pays 22 percent of its income toward transportation, versus 33 percent toward housing.⁸

Finally, workforce and economic development efforts also play a role in improving housing affordability by ensuring that workers earn a sufficiently high wage from their employers to afford housing without additional assistance. These efforts require investments in worker training and skills, worker access to job opportunities, and growth of employers that pay livable wages. The Economic Development chapter of Plan West Ashley includes implementation strategies related to these needs.

⁸ Center for Neighborhood Technology, H+T Affordability Index; data for Charleston gathered October 2017.

Housing Affordability and Income Levels in Charleston County, 2017

Income Category	Range of Area Median Income (AMI)	Annual Household Income Levels for a 3-Person Household*	Maximum Available for Monthly Rent and Utilities**	Eligibility for Income-restricted Housing	Addressing Housing Need***
Above Moderate Income	More than 120% of AMI	More than \$74,400	\$1,858 or more	Not eligible for income-restricted housing.	This income group is very likely to find market-rate housing that matches their maximum supportable payment amounts.
Moderate Income	Between 80% and 120% of AMI	\$49,550 - \$74,400	\$1,240 - \$1,858	In the vast majority of cases, not eligible for income-restricted housing.	This income group is very likely to find housing that matches their maximum supportable payment amount, but can benefit from reduced costs through production of “affordable by design” housing.
Low Income	Between 50% and 80% of AMI	\$31,000 - \$49,550	\$775 - \$1,240	Eligible for income-restricted housing.	This income group is somewhat likely to find housing within their maximum supportable payments, but some households will need payment assistance or income-restricted subsidized housing units. Production of “affordable by design” market-rate housing units, such as compact units, can also help address need.
Very Low Income	Between 30% and 50% of AMI	\$18,600 - \$31,000	\$465 - \$775	Eligible for income-restricted housing.	Maximum income available for housing is considerably lower than West Ashley’s median rents; assistance is likely to be required, either through payment assistance or by providing income-restricted, subsidized housing units.
Extremely Low Income	Less than 30% of AMI	Less than \$18,600	Less than \$465	Eligible for income-restricted housing.	Maximum income available for housing is considerably lower than West Ashley’s median rents; assistance is required, either through payment assistance or by providing income-restricted, subsidized housing units.

*These example income limits are for a 3-person household, based on the published HUD HOME program income limits effective June 15, 2017, provided by the City of Charleston Department of Housing and Community Development. The area median income for a 3-person household in Charleston County is \$62,000.

**Based on the assumption that 30% or less of household income should be spent on housing expenses (HUD definition of housing cost burden).

***Households that own their homes “free and clear” (without a mortgage) will still be limited in the amount of housing-related expenses they can support, but different tools are used to assist these households, with a focus on helping them maintain and stay in their homes.

Source: City of Charleston, 2017; Strategic Economics, 2017.

Demand for Attainable, Workforce, and Affordable Housing

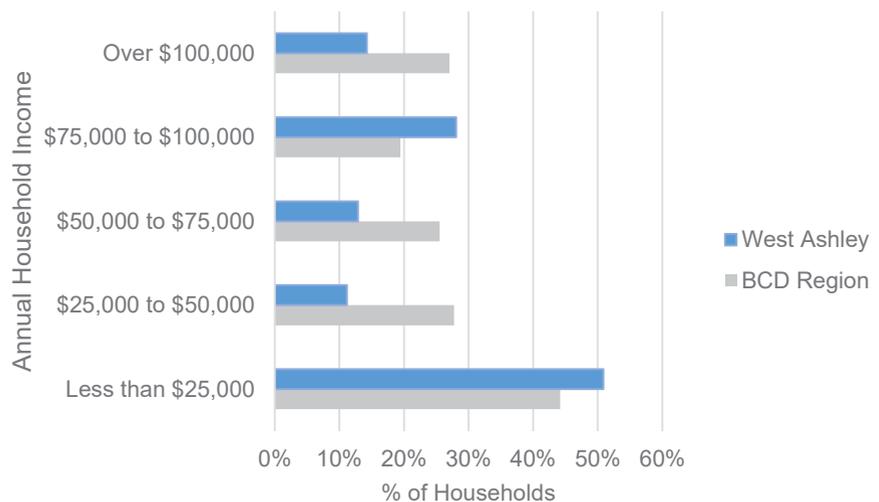
While there is clearly demand for housing in West Ashley, the data sources described below help indicate the magnitude of this demand and the need for housing that is affordable at different income levels. It is important to first understand that West Ashley competes for a share of overall demand for housing that exists at the regional level. Out of this pool of regional demand, individual households decide where to live by balancing their own preferences and needs for affordability, housing type, commute, transportation, school quality, neighborhood amenities, etc. West Ashley’s ability to “capture” regional housing demand in the future will vary depending on the extent to which the community’s ongoing evolution meets the right combination of these needs.

Existing unmet need based on income: The U.S. Census estimates that approximately 6,000 West Ashley households pay between 30 and 50 percent of their income toward housing expenses, and nearly 5,400 West Ashley households – 17 percent of total households – pay more than half their income. While some portion of these households may have voluntarily chosen higher cost housing in order to fulfill other preferences, the high number of cost-burdened households demonstrates the scale of current unmet need for more attainable, affordable housing in West Ashley.

Future demand: The Berkeley-Charleston-Dorchester Council of Governments’ Our Region Our Plan, released in December 2012, projected that the region would add 88,000 additional households between 2010 and 2040. If West Ashley were to maintain its current share of the region’s households, this would translate to potential capture of roughly 10,000 additional households in West Ashley over that period; this is a blunt measure since West Ashley has lagged the region’s overall growth in recent years, but it demonstrates the approximate magnitude of additional housing demand that could potentially be captured.

The projected growth also demonstrates the continued need for additional attainable, affordable, and workforce housing in West Ashley, and to work toward improving incomes paid to residents. As shown, households earning relatively low incomes are growing faster than any other income segment in West Ashley and the region.

Percent Growth of Households by Inflation-Adjusted Income Range, West Ashley and BCD Region, 2000 to 2015



2013 data identifies that although Charleston’s average wage per hour is \$19.80, a worker needs to earn at least \$32.37 per hour to afford a median priced home of \$202,000.

Source: U.S. Census, 1990 decennial census and 2011-2015 American Community Survey.

Existing Public Programs and Policies are Helping to Address Housing Needs for Lower-Income Households, but More Tools are Needed

Numerous agencies provide programs and incentives to support attainable, affordable, and workforce housing for West Ashley’s community members who are unable to afford the cost of housing on their own.

- The housing authorities of the City of Charleston and Charleston County operate subsidized public housing and administer the Section 8 Housing Choice Voucher Program, which provides a rent subsidy for qualifying households residing in privately owned market rate rental housing.
- The City of Charleston itself operates homeowner rehabilitation assistance programs and a first-time homebuyer assistance program.
- The City has recently strengthened regulatory incentives for private developers to produce income-restricted housing units or pay in-lieu fees as part of new housing developments through the Mixed Use Workforce Housing District Zoning Ordinance.
- The City also actively partners with non-profit developers to rehabilitate and build income-restricted housing, including supporting projects pursuing low income housing tax credit allocations.
- A community land trust is also being formed, which will pursue development and retention of income-restricted affordable housing on properties held by the trust.

Existing programs and funding, however, cannot keep pace with the scale of need for attainable, affordable, and workforce housing in West Ashley and Charleston generally, particularly as rising rents and housing prices make more market rate units out of reach while diminishing the ability of public agencies to deliver income-restricted housing. For example, the number of apartment owners accepting Section 8 vouchers has dramatically fallen in West Ashley as demand for rental housing makes it easier to find tenants and raise rents. Since few apartment complexes are run by non-profit housing providers with a commitment to maintaining income-restricted units with low rents, the relatively affordable market rate apartments are often in a state of disrepair.

Additional and expanded tools and funding sources will be needed to provide access to housing for households of all income levels. No single action or tool can address housing affordability needs, but a variety of tools can together bring about significant change. In recent years, Charleston has begun to deploy or consider tools that have been in use for many years in other communities confronted with high housing costs. Adopting and improving these time-tested tools will lay the basic groundwork for more aggressively addressing affordability issues. The Implementation section of this chapter explains ways to adopt, refine, and expand tools for improving housing affordability based on proven experience by other communities, while also exploring new options.



above: Examples of affordable / workforce housing in the Charleston region

COMMUNITY CONCERNS

Following is a brief summary of the most often voiced concerns related to *housing*:

The existing mix of housing is too limited.

West Ashley's current mix of single-use, lower-density single-family homes, apartments, and condominiums offers few options for those residents, including millennials and retirees, seeking alternatives such as housing integrated with commercial uses, or communities with townhomes and slightly denser condominium and apartment products.

Housing is becoming unaffordable.

Rising housing costs are creating concerns that existing residents will leave West Ashley to find more affordable options, and that the community will no longer be able to welcome new residents of diverse income levels.

Seniors are at risk of displacement.

Options are needed to ensure West Ashley's older residents can remain in the community. This concern includes allowing seniors to support ongoing maintenance and property tax costs of their current homes, and providing options for seniors who are no longer able to live in their current homes.

New projects do not consistently respect existing community character and local scale.

Existing homes are sometimes substantially modified or replaced with new houses that are significantly different from the surrounding neighborhood's otherwise consistent scale and character.

The Citadel Mall property needs reinvestment, possibly including housing development.

With its high vacancy rates and dated format, Citadel Mall needs reinvestment – which could include targeting of growth and higher-intensity or mixed-use housing at the existing activity node surrounding the mall.

Taller housing should be limited and targeted for appropriate locations.

Housing projects exceeding typical heights in West Ashley should be limited and targeted to appropriate locations so they do not exacerbate traffic concerns, diminish the character of residential communities, or overwhelm existing neighborhoods and services.

The historic legacy of Maryville/Ashleyville needs protection.

The increasing desirability of Maryville/Ashleyville is creating concerns that new residents and new reinvestment or development projects may not recognize and uphold the legacy of these neighborhoods as historic African American communities.

Cultural diversity is at risk of decline.

Rising housing prices are shrinking the pool of potential renters and buyers in West Ashley, increasingly favoring households with higher incomes and greater educational attainment.

Historical resources are at risk of being lost or forgotten.

Residents generally want to ensure that West Ashley's longstanding and historic neighborhoods, communities, and sites are celebrated, respected, and preserved. Particular attention should be paid to neighborhoods throughout West Ashley that include diverse housing opportunities at various income levels.

Sample of community responses from charrette feedback forms:

**Of the many ideas you have heard or seen so far,
which ones seem the most exciting
to YOU?**

“development without erasure of local diversity... maintaining character (ie, not building tall buildings obscuring beauty /views, etc) ... slow down housing, study impact of new growth before add more growth”

“there is a need to provide affordable housing in more areas of West Ashley so that our neighbors that struggle economically are not isolated in one area and they are not left behind in the beautification efforts”

“protect affordability of housing, improving the quantity and quality of affordable housing... keep West Ashley affordable and diverse, don't turn us into downtown or Mount Pleasant.”

“provide mixed use... mixing commercial and residential areas... mixed-use town center at circle ... village feel - eat, live, shop, work, play pockets”

VISION | AFFORDABLE

To achieve the community vision for housing in West Ashley, the following goals shall be pursued:

1. Preserve community character.
2. Maintain affordability.
3. Add more housing options and supply to meet market demand and need for all income levels.
4. Provide supportive and equitable infrastructure for housing at all income levels, including multimodal transportation options (pedestrian, bicycle, automobile, and transit), parks and open space, and community facilities.

IMPLEMENTATION

Implementation actions on the following pages directly support achieving each component of this vision. Implementation should integrate data collection and analysis in all future project-specific studies and improvements. Types of data may include traditional data and/or more sophisticated analytics as available.

Community Engagement

The City and County should develop community engagement strategies to improve communication, education, and participation for residents around locally important housing issues, existing programs (rehabilitation, homeownership, affordable rental units, etc.), and future programs.

Maintain Affordability

Maintaining affordability in West Ashley represents a significant, large-scale challenge that requires numerous individual solutions at a variety of scales. The following implementation projects focus primarily on opportunities to assist residents of West Ashley who are likely to suffer the greatest consequences of declining affordability. The strategies represent a variety of scales of intervention, from advocacy for changes at the state level, to local City and County programs and funding resources. Many of the actions provide policy direction on pursuing and adopting tools or policies that are already under consideration. These actions represent adoption of or appropriate modifications to fundamental time-tested changes/programs that provide basic funding, capacity, and tools to address affordability needs. An additional “near-term” action focuses on studying – at the citywide level – additional tools that the City of Charleston could adopt if deemed appropriate, including recently-adopted innovative programs from other areas of the country and other ideas raised in conjunction with this implementation item. Implementation of this policy shall avoid gentrification of communities.

Immediate Steps (first 2 years):

- *Pursue passage of a citywide housing bond, and use resulting funds to expand subsidized income-restricted housing in West Ashley.* The City of Charleston is currently pursuing passage of a citywide bond that would provide funding to support income-restricted affordable housing in the City. Efforts should be made to ensure that funding is distributed to projects in West Ashley. Given the scale of need, future housing bonds should be considered.
- *With public input, elected officials should explore passage of an inclusionary housing enabling law at the state level.* Such a law would allow communities to require inclusion of income-restricted housing units in multi-unit housing development projects; similar laws already exist in cities across the United States. If enabling legislation is passed, Charleston should pursue passage of inclusionary housing requirements for the City.
- *With public input, elected officials should explore changes to state enabling law and city ordinances to allow for incentivized affordable housing programs.* Develop local voluntary incentive programs that encourage developments to incorporate affordable and workforce housing. Explore potential for incentives such as real estate tax abatement, density bonuses, height bonuses or other mechanisms that incentivize developers to voluntarily include levels of affordable housing.
- *Adjust zoning and land development regulations to further support development of affordable housing, including prioritizing and incentivizing affordable housing, streamlining and expediting the review and approval process for affordable housing, and enabling staff level approvals for affordable housing.*
- *Pursue changes to state criteria that negatively impact the ability of income-restricted affordable housing developers to obtain adequate LIHTC funding allocations.* Feedback from developers of income-restricted affordable housing indicates that the current state-level scoring system for LIHTC funding allocations tends to favor projects in rural locations. Given growing unaffordability within the Charleston region, the City and County should advocate for modifications to LIHTC criteria that recognize the metropolitan area's increasing needs. By directing additional LIHTC funding allocations to urban areas, a broader network of non-profit affordable housing developers are likely to emerge in Charleston and other South Carolina communities.
- *Expand application of Mixed-Use Workforce Housing zoning districts, and pursue modifications to increase the program's effectiveness.* The City of Charleston's "mixed-use workforce housing" zoning districts provide voluntary incentives for developers to incorporate income-restricted affordable housing units into large multifamily housing projects. The districts currently exist in limited locations and have not generated significant quantities of income-restricted housing units; recent modifications strengthened the duration of affordability requirements and allowed payment of an in-lieu fee rather than provision of on-site housing units. The current incentive structure should be studied to determine further appropriate modifications, and the districts themselves should be expanded wherever appropriate – likely in areas of West Ashley targeted for future infill growth, such as along major corridors in inner West Ashley.
- *Maintain and expand homeowner rehabilitation assistance programs and funding.* The City of Charleston's low-interest loan programs to low-income homeowners for major housing repairs and roof replacement help to ensure that residents stay in their homes and maintain control of their most valuable asset.
- *Explore the potential to offer expedited review of income-restricted affordable or mixed-income housing development projects.* Expedited review accelerates the timing before development can proceed, thus reducing developer risk and reducing carrying costs for land.
- *Provide assistance to residents through the Center for Heirs Property Preservation, and pursue modifications to state heirs property laws that harm the ability of families to maintain control of properties.* Assistance through the Center for Heirs Property Preservation can help

address the needs of today’s residents, including counseling with older property owners who do not currently have wills in place. Changes to state law would create greater certainty for future inheritors of property while expanding opportunities for families to retain their homes across generations.

Near-Term Steps (2 years – 5 years):

- *Explore adoption of pre-approved housing designs/plans – compatible with the existing character of targeted areas – to reduce development costs and time.* The City should assess the advantages, drawbacks, and practicality of adopting neighborhood-specific pre-approved housing designs that could potentially lower costs for developers by eliminating challenges to construction approval.
- *Ensure housing is well-served by multimodal transportation options that allow residents to reduce their travel costs.* Affordability in West Ashley goes beyond the cost of housing itself, with residents also impacted by transportation costs – typically a household’s second-highest category of costs. The City and County should ensure robust transit, pedestrian, and bicycle transportation options are available to West Ashley residents so they can access employment and shopping needs at a lower relative cost compared to automobile ownership and use.
- *Target use of affordable housing in-lieu fees collected in West Ashley to support development and retention of income-restricted affordable housing in West Ashley.* When West Ashley developers choose to pay affordable housing “in-lieu” fees rather than provide required or agreed-upon on-site affordable housing, these fees should be dedicated to use in West Ashley rather than other parts of the City. While fee revenue is limited today, it may grow as a source over time if the Mixed-Use Workforce Housing zoning districts are expanded or if inclusionary housing legislation is approved.
- *Inventory all land currently owned by a public agency, determine if any properties could be used for housing in the future, and prioritize these*

sites for subsidized income-restricted housing development. Publicly-owned sites can provide the greatest flexibility to pursue affordable housing development through partnerships with affordable housing developers.

- *Study potential adoption of additional tools deployed by other communities to address affordable housing needs.* The prior actions represent a potential major expansion of Charleston’s funding capacity and legal requirements for providing workforce and affordable housing. This is merely a first step, however, and the City should continue to study and consider adopting other tools – both common and innovative – deployed in other communities.
- *Explore creation of a “Staying-Put Initiative” when new developments occur within vulnerable communities to assist in finding ways for long-term residents to remain as property values and taxes increase.* A similar initiative was utilized with the proposed Magnolia development in the upper peninsula area of downtown Charleston. The City, in conjunction with the Magnolia developers, addressed local residents’ concerns that property taxes would force them to leave by creating the ‘Staying Put Fund’, a public-private partnership designated to assist residents in paying increased property taxes. Similar funds should be considered for future developments in West Ashley sited near existing vulnerable neighborhoods.

Longer-Term Steps (5 years – ongoing):

- *Enhance capacity to grow income-restricted subsidized affordable housing by increasing public land purchases and by pursuing development/land banking via the community land trust and collaboration with third-party non-profit affordable housing developers.* Charleston’s new community land trust creates an additional opportunity to dedicate land for affordable housing development. Deploying this land and any publicly-owned land for affordable housing may also require expansion and attraction of non-profit affordable housing developer capacity.

Other Tools to Explore for Supporting Housing Affordability in West Ashley

Solutions for maintaining and expanding the supply of attainable, affordable, and workforce housing fall into three primary categories. These are 1) finding sources of funding, 2) increasing the capacity to deliver lower-cost housing, and 3) increasing capacity to manage affordable housing. Success requires a broad range of responses within each of these categories; for example, development of additional subsidized, income-restricted housing units requires layering of multiple sources. Given these challenges, efforts to address affordability in high-cost regions across the country do not focus on single big ideas, but about combining and tailoring solutions. Charleston should explore the following ideas for addressing housing affordability as part of its own tailored approach.

Third-party comprehensive evaluation of tools and approach: In response to rapidly escalating housing costs, Durham, North Carolina and Oakland, California retained Enterprise Community Partners to conduct a comprehensive evaluation of their affordable housing policy tools and then provide a roadmap of changes and additions to improve coordination and efficacy. Charleston could potentially pursue a similar study in conjunction with any future affordable housing bond revenue.

Additional tax revenue sources: Communities across the country have increasingly recognized the need for additional funding sources to assist development of affordable housing, and have pursued new revenue sources. Examples include impact fees on new development, sales taxes dedicated to housing production, and real estate transfer taxes.

Employer-assisted housing: Major institutional employers may be willing to individually or collectively create an employer-assisted housing initiative to reinvest in their communities and improve worker access and productivity. For example, the City of Charleston offers assistance to employees as part of the City's First Time Homebuyer Program. Other examples referenced in a Harvard University white paper include:

- Phoenix, Arizona: Downtown Phoenix Home Ownership Program where four major employers set aside \$150,000 to fund their employee assisted housing programs.
- Portland, Oregon: Emanuel Hospital/Legacy Health System Neighborhood Home-Ownership Program where the hospital provides forgivable grants for down-payment assistance.
- New Haven, Connecticut: Yale University Homebuyer Program provides home ownership grants to employees for up to 10 years.
- Milwaukee, Wisconsin: Harley Davidson Walk-to-Work Home Purchase Program that provides forgivable loans to cover closing costs and down payments.

Programs to permanently preserve affordability at small rental properties: Preventing displacement of current lower income residents in market rate housing can be especially difficult. Using affordable housing trust fund revenues and developer fees, the City of San Francisco provides subordinate loans on favorable terms to affordable housing development partners to acquire and rehabilitate buildings of between 5 and 25 units occupied by lower income renters.

Expanded renter protections: Popular options include measures such as tenant eviction protections, requiring tenant relocation payments for no-fault evictions, and rent review programs that include mandatory notices of rent increases by landlords and mediation between landlords and renters.

Accessory dwelling unit financing assistance: Accessory dwelling units represent a major potential source of additional housing that also provides additional revenue to homeowners. However, obtaining a construction loan from a traditional mortgage lender is challenging since future rents are typically not incorporated into calculations of income. Some cities have addressed this issue through low-interest loan programs and reduction of costs through relaxed land use regulation and provision of fee waivers.

Preserve Community Character

The “character” of West Ashley’s different neighborhoods includes both their physical appearance and the people and history that make up residents’ lived experience. Plan West Ashley has begun the process of defining this character and addressing changes to support it. The recommended implementation projects will complement this work at an even more local, granular level. The following strategic implementation approach to preserving community character focuses on a multi-step process that begins with first using local outreach and resident engagement to define the character, contributing assets, affordability issues, and community concerns present in each of West Ashley’s neighborhoods. Based on this information, the implementation projects then focus on adjusting land use regulation and project approvals processes to ensure that reinvestment and future development respect existing community character while also welcoming new residents. Finally, the outreach and education projects provide an opportunity to build capacity for future grassroots action by West Ashley’s neighborhoods. These outreach efforts must be inclusive to empower all community members across all demographics.

Near-Term Steps (2 years – 5 years):

- *Reach out to and work with individual neighborhood councils to provide resident outreach and education to better understand and address concerns, and to explore acceptable ways to accommodate newer housing types.* Given that concerns and needs vary from neighborhood to neighborhood in West Ashley, the City and County should play a role in building the capacity and empowering of neighborhood organizations to represent local interests, as well as provide communication and education to residents around locally-important issues. For example, neighborhood groups in West Ashley’s historic African American neighborhoods can potentially expand their roles in leveraging community networks to connect residents with information about programs and opportunities for homeownership and home retention within these neighborhoods. Outreach to the Maryville/Ashleyville community during the development of Plan West Ashley allowed residents to express concerns around gentrification, rising costs and

neighborhood change, and also provided an outlet to share information about property tax relief programs.

- *Align zoning, design review, and land use control regulations and processes to ensure new housing development can proceed while also respecting the character and design of existing neighborhoods.* This implementation project should ensure that land use regulation and permitting processes appropriately control demolition activity and replacement of existing housing with new housing. New regulations should have a focus on building design and character, to ensure adherence to community design standards.
- *Identify and preserve historic community assets and character in West Ashley.* Within inner West Ashley’s oldest neighborhoods, the neighborhood descriptions and recommendations of the City’s Preservation Plan and the subsequent “Area Character Appraisals” completed for Byrnes Downs and Old Windermere provide a resource for understanding physical character and historic assets, and tools for preserving these assets.⁹ The City should implement pre-existing recommendations from the Preservation Plan. This understanding of assets and priorities should also be updated based on other historic community assets identified by West Ashley residents subsequent to the adoption of the preservation plan and Area Character Appraisals. The City should also engage with neighborhood and other local organizations to help contribute to any future Area Character Appraisals, with this process also used as an educational and capacity-building exercise for neighborhood residents.

Longer-Term Steps (5 years – ongoing):

- *Complete detailed assessments of key issues, affordability needs, unique demographic and physical characteristics, and appropriate housing options of individual neighborhoods.* These neighborhood assessments will require resident outreach and participation.

⁹ *Vision, Community, Heritage: A Preservation Plan for Charleston, South Carolina*, authored by Page & Turnbull for the City of Charleston, January 2008. Subsequent Area Character Appraisals were completed for Byrnes Downs and Old Windermere in August 2009 by Robert and Company.

Add more Housing Options

Expanding the overall housing supply and diversifying West Ashley's mix of housing – beyond today's largely consistent mix of single-family homes and low-rise condominiums and apartments – would allow West Ashley to compete for attracting regional housing demand by appealing to new market segments of households while still serving existing market segments. At the same time, some new housing products could provide more affordable options by offering efficient designs. While some of these housing products may be more dense than West Ashley's traditional development pattern, higher-density housing products provide the added benefit of potentially providing an efficient use of existing infrastructure – such as roads and sewers – that results in lower public service costs compared to lower-density single-family communities. The following implementation projects focus on revising land use regulations and approvals processes to allow and encourage development of diverse housing products in West Ashley.

Immediate Steps (first 2 years):

- *Explore the potential to offer expedited review of townhome and multifamily housing projects in locations where such housing is allowed by right, particularly targeted to infill locations that already have the infrastructure to support additional housing.* As described in other chapters of this document, many locations in inner West Ashley are appropriate for infill housing development, both to support the emergence of walkable community nodes and to make use of existing infrastructure more efficiently. Expedited review can help incentivize the development of preferred housing products in targeted locations by reducing the developers' holding costs and risks.
- *Prioritize expansion of senior housing options for households of all incomes.* The City and County should set forth a policy of prioritizing senior housing in West Ashley as a means of helping residents stay in their community as they age.
- *Explore other tools for supporting housing affordability in West Ashley as noted on page 5.21.*

Near-Term Steps (2 years – 5 years):

- *Adjust zoning and land use regulations to allow and support development of “affordable by design” housing products, including prioritization of enabling and incentivizing accessory dwelling units.* Examples of other affordable by design products include small-lot single-family homes, townhomes, and smaller multifamily units. Efforts should be made to ensure that any changes are sensitive to protecting the character of existing neighborhoods. Allowing and incentivizing accessory dwelling units should be prioritized since these secondary units result in minimal impacts on the visual character of neighborhoods; production of these units requires adjustments to zoning (including review of on-site parking requirements).
- *Promote “green” energy-efficient homes that are less costly to maintain and operate. Homes that integrate energy-efficient design can reduce long-term operating costs for owners, thereby improving overall affordability.* Programs and incentives that promote the use of energy-efficient features should be explored.
- *Based on the Community Design and Land Use recommendations, revise zoning to allow/encourage a diverse set of housing product types in appropriate locations.* These housing products include townhomes, multifamily housing targeted along significant corridors, and mixed-use housing with retail/commercial uses in targeted neighborhood nodes at intersections of major streets. Given that increases in overall housing inventory will also help to reduce costs, this process should also identify sites for West Ashley's more typical single-family homes and one- to three-story apartments and condominiums.

Provide Supportive Infrastructure

The functionality and desirability of housing in West Ashley are ultimately determined by the public amenities/facilities, basic infrastructure, and transportation access that support each neighborhood’s residents. Examples of public amenities include parks and recreation facilities. Examples of basic infrastructure include stormwater, sewer, electrical, and communications access. Transportation options include all transportation modes that can enable residents to access neighborhood amenities – including public amenities and private amenities such as retail, restaurants, and day-to-day services – as well as employment and other destinations throughout the region. In addition, acknowledging that aging and low-income Americans are more likely to use transit, bike and walk as means of traveling, it is imperative that the new vision for West Ashley provides the appropriate infrastructure and equitable opportunities for all residents, including under-served populations, to reside in livable communities.

While other chapters provide detailed coverage of infrastructure and public amenities/facilities, the following implementation projects focus on policy priorities and infrastructure needs that are critical for improving affordability in West Ashley, allowing housing growth to proceed in targeted locations, and ensuring all residents enjoy easy access to amenities that support a high quality of life.

Near-Term Steps (2 years – 5 years):

- *Provide and ensure access to effective, low cost transportation options, including public transit and safe, comfortable walking and biking infrastructure.* The Transportation chapter of this plan describes locations of major transportation improvements, including improvements to transit service in the inner West Ashley area. Lower-cost transportation access, to both local and regional destinations, enables residents to reduce their overall cost of living in West Ashley while also benefitting from greater access to economic opportunities.

- *Fund and implement infrastructure to address flooding issues in the Church Creek and Tiger Swamp areas to support existing housing and enable housing growth.* Flooding in these areas must be resolved to stabilize impacted neighborhoods and to remove a constraint on future development and reinvestment in West Ashley.
- *Cross-train City field workers to identify and report blocked drains and other drainage issues that can exacerbate flooding and constrain housing investment.* Existing and future stormwater infrastructure can be operated more effectively by ensuring all City workers note and report any drainage issues that can lead to flooding.

Longer-Term Steps (5 years – ongoing):

- *Implement land use and transportation recommendations of this report to ensure all neighborhoods enjoy equitable access to parks and public/private amenities and services.* The land use and transportation recommendations help ensure that all West Ashley residents have easy access to parks, recreation, and day-to-day shopping and service needs.
- *Target development and retention of mixed-income and affordable housing to locations in close proximity to community amenities and transportation.* In order to reduce barriers to opportunity for West Ashley’s most vulnerable residents, mixed-income and affordable housing should be targeted to locations closest to robust multimodal transportation options and local amenities.



6 ECONOMIC DEVELOPMENT

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VISION	6.16
IMPLEMENTATION	6.17

FOCUSED

Economic Development

CHAPTER OVERVIEW

EXISTING CONDITIONS

- West Ashley historically functioned as a bedroom community that supported job centers elsewhere.
- There are now about 30,000 jobs in West Ashley, yet 84 percent of employed West Ashley residents commute elsewhere for work.
- A fundamental mismatch exists between the type of jobs in West Ashley and the types of jobs held by West Ashley residents. The majority of West Ashley jobs are in industries focused on household consumption, such as retail, restaurant, personal services, and medical businesses. Yet West Ashley residents are more likely to work in office-based professional jobs and manufacturing/warehouse jobs.
- One opportunity to diversify West Ashley's economy is to reposition the area to better attract growth of businesses/sectors that are tied to the regional export-based economy. The One Region Global Competitiveness Strategy identified five "high impact clusters," (groups of industries that are driving the regional economy). These include: aerospace, information technology, life sciences, advanced logistics, and automotive.
- West Ashley is well-positioned to begin addressing this office shortage for these high impact clusters; it already provides a range of housing choices to support a future diverse workforce. Second, extension of I-526 will make West Ashley much more accessible to all parts of the region.
- Much of West Ashley's retail space suffers from a popular perception of poor performance, but many of West Ashley's formerly grocery-anchored shopping centers are experiencing re-investment, with property owners optimistic about West Ashley's long-term growth and evolving demographics.
- Certain historic retail nodes have also made a "comeback" in West Ashley, such as Avondale. In the future, other nodes could emerge at locations in which major streets intersect with each other.
- Inner West Ashley likely has more retail space than the market will be able to support, especially in coming years as more retail activity shifts to the internet. Some commercial property owners will need to consider repositioning their property such that they can still take advantage of West Ashley's central location within the region. Housing and some office space are likely to emerge in the near- to mid-term to drive this process.
- Despite its ownership challenges, age, and vacancies, Citadel Mall represents an outstanding opportunity to rethink the mall concept, including adding new uses such as high-density housing and class A office space.

COMMUNITY CONCERNS

- West Ashley will lose its character if new development does not accommodate small local businesses.
- There are too many vacant or visually blighted commercial properties along major arterial corridors.
- There are no small community-scale retail and services in outer West Ashley.
- Future jobs and economic development efforts should address the needs of residents at all skill levels.

VISION

- Attract a wider range of businesses so more people who live in West Ashley can also work in the community.
- Allow and encourage transformation of Citadel Mall into a mixed-use "town center" for the entire community. Also encourage the redevelopment of other key nodes and focus areas such as those shown on the map *Opportunities for Future Change/Improvements* on page 2.22-2.23.
- Cultivate a West Ashley where all kinds of small and local businesses can thrive.
- Offer a full range of recreational, cultural, and civic facilities to support both residents and workers.
- Facilitate refreshing/refurbishing shopping centers and commercial properties that have vacant spaces and/or a blighted appearance, including introducing a new mix of uses (such as office, housing) to create new nodes.
- Support more small-scale community shopping opportunities in outer West Ashley that look and feel more like Avondale in inner West Ashley.
- Improve plan review and permitting processes and work with local and regional economic development groups to entice revitalization and attract new businesses and employment centers.
- See more detailed implementation items on pages 6.17-6.26.

EXISTING CONDITIONS

Overview

West Ashley historically functioned as a bedroom community that supported job centers elsewhere in the region. In fact, West Ashley’s transition from a rural to residential area was driven first by demand from people moving out of the Peninsula, then by strong job growth at the Charleston Navy Yard. There are now about 30,000 jobs in West Ashley, yet over 80 percent of employed West Ashley residents commute elsewhere for work.¹ Only a few areas of West Ashley – near Bon Secours St. Francis Hospital and key commercial corridors – are also commute destinations for the area’s residents.

As the region’s economy has continued to grow, West Ashley has retained its identity and function as a bedroom community, with all the challenges inherent with this status. Nearly 64 percent of the jobs located in West Ashley are in the retail, restaurant/hotel, personal service, or medical industries. Yet, these are not the types of industries in which most West Ashley residents work, with only 43 percent of residents holding jobs in these industries. Instead, a higher share of residents work in office-based professional jobs and manufacturing/warehousing jobs. This demonstrates a fundamental mismatch between the resident work force in West Ashley and the types of jobs that are available locally. This mismatch partly explains the high rates at which West Ashley residents commute to jobs outside the area, but also creates opportunities to reinvigorate and repurpose some of West Ashley’s existing commercial areas by attracting more diverse types of businesses.

Connecting West Ashley to the “One Region” Strategy

Employment and workforce data suggest that West Ashley’s economy is missing opportunities to benefit from growth in the regional economy. In 2014, the most recent year for which data are available, West Ashley’s 30,000 jobs accounted for about ten percent of the Berkeley, Charleston, Dorchester (BCD) region’s 300,000 jobs.² West Ashley also accounted for about ten percent of the region’s population, indicating that, while the area supports a significant number of jobs, West Ashley is not a major regional employment destination. Furthermore, West Ashley’s

largest industry sectors are retail, personal services, and health care, together accounting for almost half of the jobs in the area. These sectors are primarily driven by household consumption, rather than export activity targeted to places outside the region. In contrast, the BCD regional economy is more diversified, with a greater share of jobs in export-based sectors such as manufacturing, logistics, information services, and finance, insurance, and real estate. The regional economy has been growing more quickly than the economy in West Ashley. Over the ten-year period from 2004 to 2014, the West Ashley economy grew by 6 percent whereas the BCD regional economy grew by 9 percent. Even retail trade, West Ashley’s single largest employment sector, declined by 6 percent during this same period, while retail employment in the region increased by 9 percent.

One opportunity to reinvigorate and diversify West Ashley’s economy is to reposition the area to better attract businesses and sectors that are tied to the regional export-based economy. The Charleston Regional Development Alliance and the Charleston Metro Chamber of Commerce released their most recent five-year economic development strategy in 2016, which offers insights into options for West Ashley. This One Region Global Competitiveness Strategy identified five “high impact clusters,” i.e., groups of industries that are driving the regional economy. These include: aerospace, information technology, life sciences, advanced logistics, and automotive. However, the Strategy also identified a major need for office space – including everything from corporate headquarters to less expensive space to house smaller firms – to support most of these industry clusters in the long-term, and to reinforce the region’s ability to support innovation and business start-ups.³

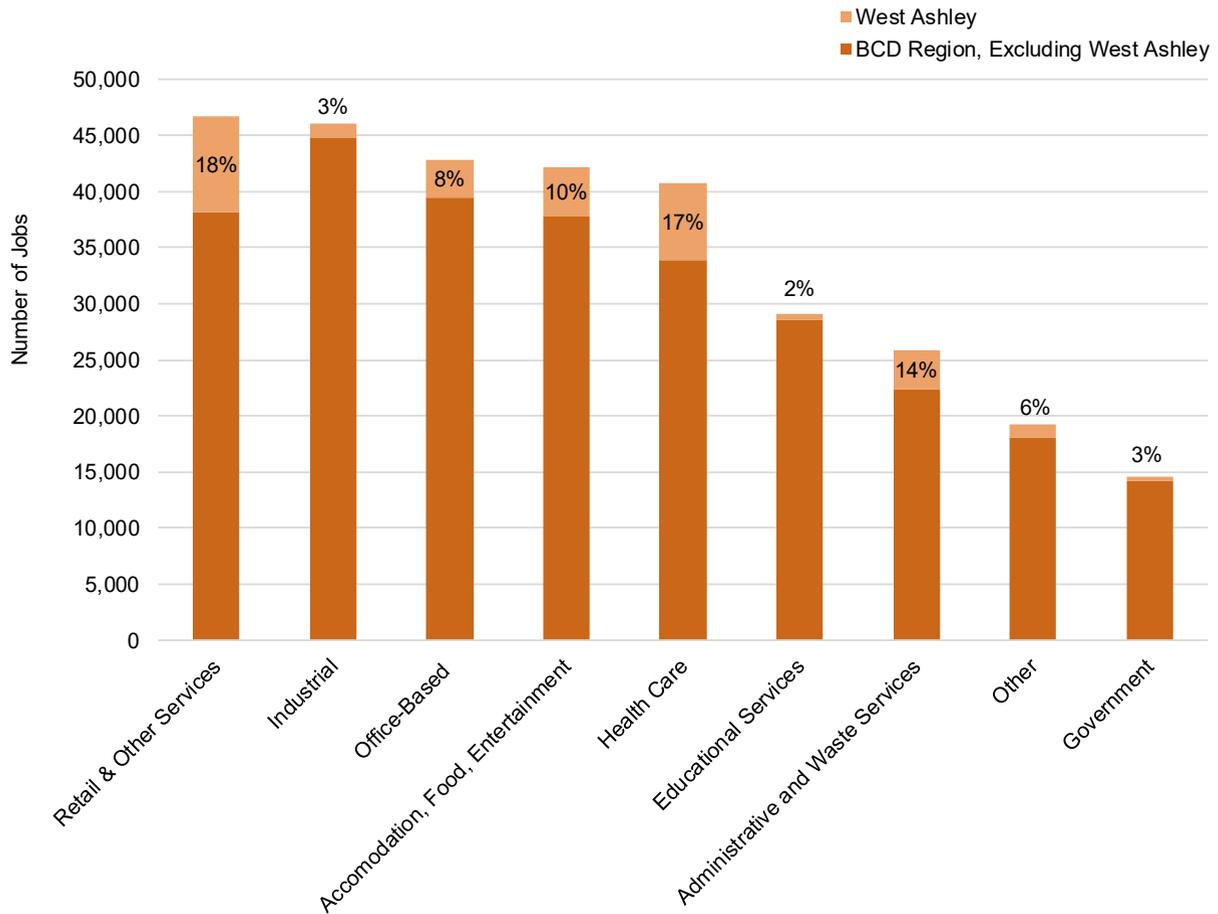
West Ashley is well-positioned to begin addressing this office shortage for these high impact clusters, particularly for industry sectors concentrated near West Ashley such as aerospace, information technology, and health care and life sciences. By serving the regional need for office space, West Ashley would accomplish multiple objectives including: 1) providing resources to support the One Region

¹ Employment and commute data come from the U.S. Census Longitudinal Employer-Household Dynamics dataset for the year 2014.

² Ibid.

³ Charleston Regional Development Alliance. One Region, a Global Competitiveness Strategy, Executive Summary, Page 10. 2016. <http://www.charleston-sc.gov/DocumentCenter/View/15118>

West Ashley Employment by Industry Group*, as a Share of the BCD Region's Employment, 2014



* "Industry groups" are comprised of the following industry sectors: Retail & Other Services: NAICS Codes 44-45 and 81; Industrial: NAICS Codes 31-33, 42, and 48; Accommodation, Food, and Entertainment: NAICS Codes 71 and 72; Health Care and Social Assistance: NAICS Code 62; Office: NAICS Code 51, 52, 53, 54, and 55; Administrative and Waste Services: NAICS Code 56; Government: NAICS Code 92; Educational Services: NAICS Code 61; Other: NAICS Codes 11, 21, 22, and 23.

Source: U.S. Census Longitudinal Employer-Household Dynamics, 2014, West Ashley and 3-County BCD Region Work Profile (All Jobs).

Competitiveness Strategy, 2) diversifying the area's economic base, 3) potentially providing new users for underutilized spaces in West Ashley's existing retail centers (see below for further discussion of West Ashley's shopping centers); and 4) creating opportunities for more West Ashley residents to work near their homes, rather than commuting long distances.

West Ashley's existing office inventory is relatively small and is not classified as a premium product, currently serving primarily as comparatively inexpensive back-office support. The area's existing office inventory accounts for roughly nine percent of regional office inventory. However, this is a small supply of space compared to nearby competing submarkets like North Charleston (38 percent of regional inventory) and the remaining areas of Charleston. According to real estate data service CoStar Group, only two office buildings (160,000 square feet) in West Ashley are Class A, while most of the inventory consists of Class B and C buildings. These office classifications reflect the build quality, condition, desirability, accessibility, and on-site and off-site amenities of the office space. Competing office markets offer a much higher share of Class A space, including North Charleston (such as the newly constructed Faber Place), and other parts of Charleston (Downtown and Daniel Island) and Mount Pleasant.⁴

While previous market studies have projected modest future office demand for West Ashley, local experts agree that these findings could underestimate West Ashley's competitive advantages. First, the area already provides a diverse range of housing choices, offering the opportunity for a future workforce, across occupations and incomes, to live and work in close proximity. Younger people, who are entering the workforce today, are demonstrating a strong market preference to this connection between home and work.

Second, the completion of I-526 would allow West Ashley to be much more accessible to all parts of the region, including the existing employment concentrations that are currently focused along I-26. Already, the connection from the airport to West

Ashley via I-526 offers a locational advantage over other regional locations. Existing concentrations of large parcels of land, including the Citadel Mall, also offer opportunities to create a more centralized office node that can take advantage of the regional connectivity, as well as serve as an intra-area transit node for the West Ashley community. Citadel Mall and the Sam Rittenberg corridor would also place existing retail, dining, and service amenities within easy access of workers.

Other promising locations for adding office space in the future include sites near major roadway connections to the Peninsula, including the Ashley Bridge District. The intersection of Sam Rittenberg Boulevard and Old Towne Road also offers a unique opportunity for transformation, since the area is a major entry to West Ashley from the Peninsula, and the City now controls significant property at the former Piggly Wiggly grocery store site. Other appropriate locations for office growth include existing concentrations along Ashley Town Center Drive, near Bon Secours St. Francis Hospital, and smaller office uses in former houses on appropriately zoned parcels along major arterial streets. The potential mixed-use nodes described later in this chapter could also include smaller increments of additional office space.

Achieving office growth in West Ashley will require a rethinking of the types of office space offered in the area, and of the accompanying amenities and transportation access demanded by many workers. The industry clusters identified in the One Region Global Competitiveness Strategy require employers and the region to compete for top technical talent that drives innovation and business growth. If West Ashley is to succeed in competing for, growing, and diversifying its business activity, several trends in work environment preferences should be considered. New work spaces often focus on fostering creativity and collaboration by encouraging interaction between workers. Within the work space itself, this translates into open designs, informal gathering spaces, and a flexible culture that encourages use of these spaces. The emphasis on shared space at the expense of personal space is also increasing the density of workers within office buildings.

⁴ Strategic Economics, Plan West Ashley Market Assessment, 2017.

Commercial and Industrial Inventory and Share of Regional Inventory, 2016

	Inventory (sq. ft.)	Share of Regional Inventory
Retail		
City of Charleston		
Downtown Charleston	1,619,000	8%
West Ashley	3,758,000	18%
North Charleston / Hanahan	5,627,000	27%
East Islands / Mount Pleasant	3,822,000	18%
BCD Region	20,982,000	100%
Office		
Downtown Charleston	4,783,000	25%
West Suburbs (includes West Ashley)	1,564,000	8%
North Charleston	7,331,000	38%
East Suburbs (includes Mount Pleasant)	3,840,000	20%
BCD Region	19,216,000	100%
Industrial		
City of Charleston		
Downtown Charleston	734,000	1%
East Cooper / Clements Ferry	4,938,000	9%
West Ashley and Greater Charleston	1,874,000	3%
North Charleston	24,595,000	43%
East Islands / Mount Pleasant	1,026,000	2%
BCD Region	56,737,000	100%

Note: Totals may not sum due to rounding.

Source: Avison Young Retail, Office, and Industrial Market Reports, published Q2 2017, with data reflecting Q4 2016.

See Appendix B for more data regarding:

- West Ashley Demographics in the Regional Context
- City of Charleston Fast Facts & 2017 Population Estimates (includes West Ashley building permit information)
- West Ashley Housing Affordability and Opportunity
- West Ashley Tapestry Segmentation Examples
- List of Major Employers in the Charleston Metro Area

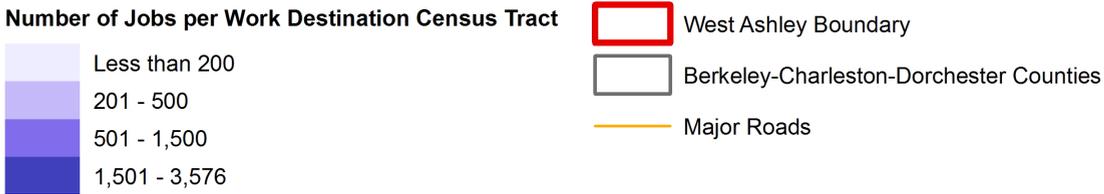
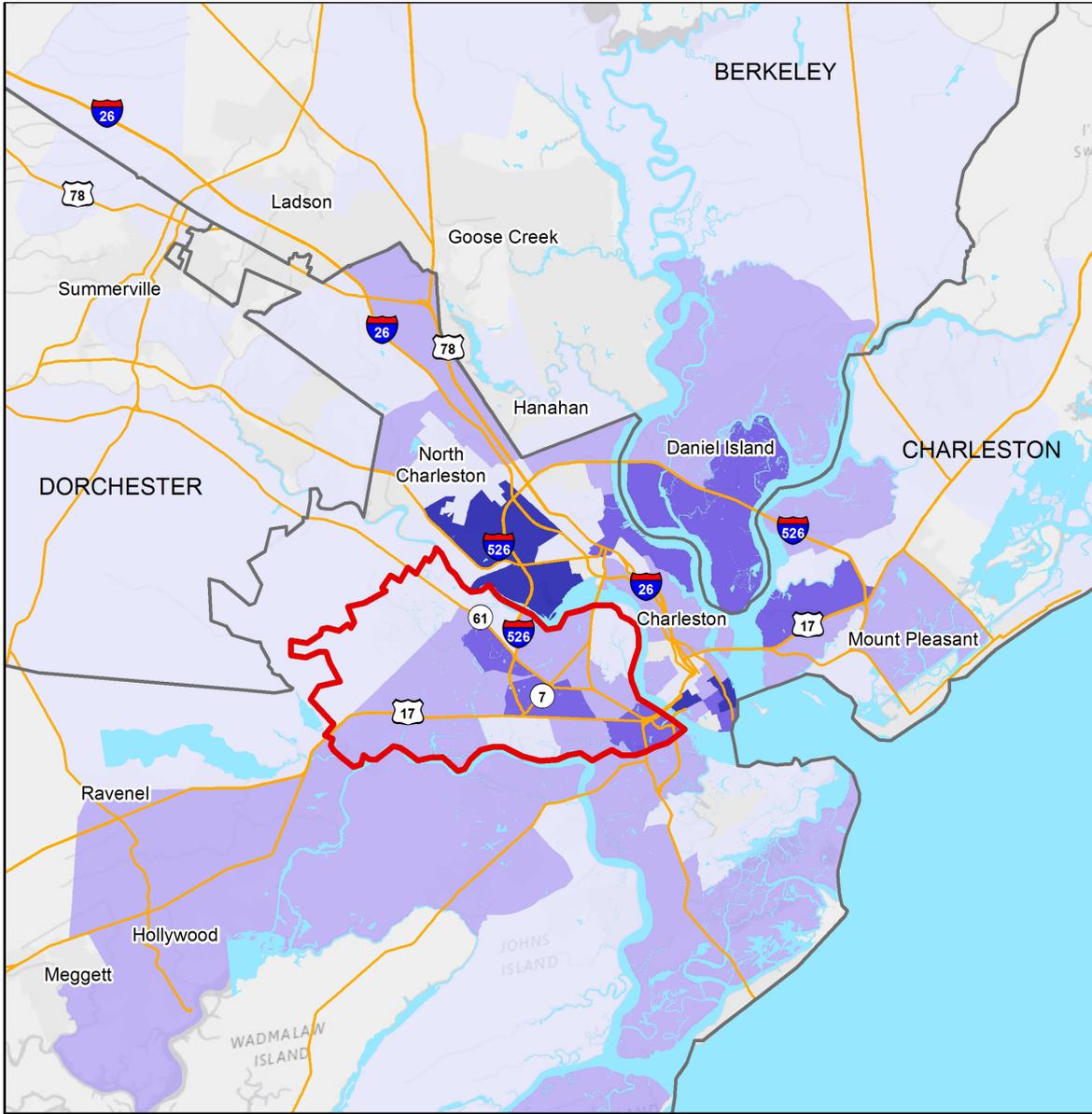
See also Appendix C *The Value of Placemaking*

Where Employed Residents of West Ashley Commute to Work, 2014

EXISTING CONDITIONS

ECONOMIC DEVELOPMENT

PLAN WEST ASHLEY



Sources: LEHD, 2014. Data pulled for the West Ashley area for 2014, All Jobs. Strategic Economics, 2017.



The location of the work space also matters, with workers drawn to areas offering multimodal access and immediately adjacent amenities such as coffee shops, restaurants, bars, and gyms. Coupled with a concentration of office space, the amenities provide a venue for further chance encounters that foster economic “spillover effects” that boost growth and innovation from the resulting sharing of ideas and information. These amenities also enhance the appeal of working in an office rather than working remotely. Meanwhile, multimodal access allows greater concentration of employment space while generating less automobile congestion, and also provides options for younger Millennial workers who are receptive to alternatives to driving to work.

Finally, innovation-focused businesses also benefit from concentrations of low-cost, flexible spaces for companies in all stages of their growth. This can include incubators, co-working spaces for independent entrepreneurs, as well as traditional office spaces in a range of sizes. The City of Charleston has gained experience with developing incubators from the Flagship and Flagship2 incubators located in Downtown. An incubator in West Ashley could serve a variety of business types, including specialized facilities for “makers” (creative small-scale manufacturers). Co-working facilities – which lease out shared work space to individuals – could also complement or be incorporated into the physical space of a business incubator. A variety of different models exist for providing space for innovative new companies; for example, the Cambridge Innovation Center – with multiple locations across the world – focuses specifically on start-up companies and provides office space, shared amenities, and an ecosystem of events, businesses, and venture capital firms to support business growth.

Commute Patterns for West Ashley Residents

Given that there are 30,000 jobs in West Ashley and about 32,000 housing units, or almost one job per household, it is significant that the U.S. Census’ most recent “Longitudinal Employer-Household Dynamics” data estimates that 84 percent of West Ashley residents commute to other parts of the region for work.⁵ Most residents commute to North Charleston, Downtown Charleston, Daniel Island, or

Mount Pleasant, all of which are major employment centers. Only a few areas of West Ashley, such as around the hospital, at Citadel Mall, and along key commercial corridors (including retail, offices, and automobile dealers), serve as employment destinations for area residents.

This high out-commute rate is indicative of the fact that West Ashley has historically served as a bedroom community for the rest of the region. But this also reinforces the mismatch between the occupations and skill levels of West Ashley’s resident labor force, and the types of jobs that are available locally. As was discussed above, this resident labor force presents an opportunity for attracting more employers to West Ashley by being able to offer shorter commutes and a better live/work balance. Attracting more diverse jobs to West Ashley can also help to resolve the area’s transportation challenges by balancing commute hour outflows and inflows, and by allowing more residents to easily access local jobs via short automobile trips, transit, and walking and bicycling.

West Ashley’s Many Shopping Centers, Small Shopping Districts, and Neighborhood Nodes

The retail space inventory in West Ashley is at least 3.7 million square feet.⁶ This includes everything from Citadel Mall to small individual stores in areas like Avondale, or along Ashley River Road near Magnolia Road. Overall, West Ashley’s retail space accounts for 18 percent of the total retail space in the Charleston region, despite West Ashley accounting for only 10 percent of the region’s population. Almost 90 percent of the area’s retail space is located in inner West Ashley,⁷ within centers ranging from mid-size centers of 30,000 square feet or more, up to the largest concentration of retail at Citadel Mall. Outer West Ashley’s retail primarily consists of smaller strip centers and general retail space, although this subarea also has one large community center located on Glenn McConnell Parkway.

Much of West Ashley’s retail space suffers from a popular perception of poor performance. Although all of inner West Ashley’s major arterial roads have a significant proportion of retail space, Sam

⁵ U.S. Census Longitudinal Employer-Household Dynamics dataset, 2014.

⁶ Avison Young Retail, Office, and Industrial Market Reports, published Q2 2017, with data reflecting Q4 2016.

⁷ CoStar Group, 2017.

Rittenberg Boulevard has the highest concentration of neighborhood and community shopping centers with larger parking lots along the street. Virtually all of this space was built out from the 1950s to the 1990s, with no major new inventory added in almost 30 years. In addition to the age of the retail inventory in inner West Ashley, several other factors have contributed to residents feeling like its retail offerings are sub-par. First, during the recession, many stores closed or left the area, resulting in a noticeable amount of vacant space. Second, several major grocery store chains, including Food Lion and Piggly Wiggly, have closed stores in West Ashley and left several shopping centers without their key anchor tenants. And, finally, West Ashley appears dated when compared by residents to conditions in nearby Mount Pleasant, including landscaping along that community's major arterial corridors and the existence of several new or repositioned shopping centers that feel more "modern" and attractive.

Despite these challenges and high-visibility vacancies, many of West Ashley's formerly grocery-anchored shopping centers are experiencing re-investment, with property owners optimistic about West Ashley's long-term growth and evolving demographics. Centers such as St. Andrew's Center, Westwood Plaza, and Ashley Oaks Plaza have recently undergone major renovations, façade improvements, additions of outdoor seating, and/or parking repaving. In some cases, these improvements are being driven by incoming anchors asking for explicit site layouts – but in other cases, these renovations are being initiated by property owners themselves to better position their center. There are also a small number of new retail projects in the development pipeline for outer West Ashley, including a new shopping center (Bees Ferry Road at Shadowmoss Parkway) and a center anchored by a grocery store along West Ashley Circle.

Certain historic retail nodes have also made a "comeback" in West Ashley. The largest and most notable of these is the Avondale area located along Savannah Highway at Magnolia Road. While not all the historic storefronts in this area are occupied, there is a critical mass of activity including bars, restaurants, cafes, and a few shops, art galleries and personal services. This has become a popular

destination for West Ashley residents in the evenings and on weekends, such that parking is now highly constrained and many residents want better bicycle and pedestrian routes from their neighborhoods to this area. Avondale has become a model for the kind of centrally-located local retail space that residents want in their own neighborhoods, especially for residents who do not live near Avondale. Although designed differently, South Windermere Plaza serves a similar function for the surrounding neighborhood. Other potential or emerging commercial "hot spots" include the area near the intersection of Playground Road and Ashley River Road, and portions of Wappoo Road. In the future, other nodes could emerge at locations in which major arterial streets intersect with each other or other through streets, such as in the area surrounding the intersection of Sam Rittenberg Boulevard and Old Towne Road.

Even with the reinvestment in some of the existing shopping centers and the re-emergence of Avondale, inner West Ashley still likely has more retail space than the market will be able to support, especially in coming years as more retail activity shifts to the internet. Given these circumstances, some commercial property owners will need to consider ways to reposition their property such that they can still take advantage of West Ashley's central location within the region. Housing and some office space are likely to emerge in the near- to mid-term to drive this redevelopment process.

The conversion of older commercial properties to housing and office uses can potentially contribute to the emergence of additional mixed-use neighborhood nodes that include housing, retail, parks, and other community amenities. In addition to the previously-cited intersections, previous chapters of this plan envisioned potential nodes at the "Ashley Bridge District," at Savannah Highway and Wappoo Road, Sam Rittenberg Boulevard at Ashley Hall Road, and at Ashley River Road and Old Parsonage Road. Most major arterial streets in inner West Ashley are also lined with commercial uses that could experience similar transformations and support neighborhood nodes at these key intersections.

Citadel Mall: Opportunities to “Anchor” Future Economic Transformation

The Citadel Mall, at approximately 1.1 million square feet, is one of the largest regional malls in South Carolina and a major employment location in West Ashley. Built in 1981, this mall is relatively new; Northwoods Mall, the only other traditional enclosed mall in the Charleston region, was built in 1972. The developers who built Citadel Mall chose this location because of its centrality to the entire Charleston region at the intersections of Highways 7, 17, and the later-completed I-526. Although Citadel Mall has struggled in recent years with changes in anchor tenants, the mall’s location is still its greatest asset.

Citadel Mall has recently experienced high vacancies in its inline shops, and anchor store JCPenney recently closed. There is also some perception that the mall feels outdated and needs improvement. Citadel Mall’s history of acquisition and ownership compounds these struggles: during the recession, the mall went into foreclosure and struggled for several years. However, the mall’s new ownership represents an outstanding opportunity to rethink the entire mall concept, including adding new uses such as high-density housing and class A office space. Other uses under consideration for the area at and surrounding the mall include a facility that could support regional or national athletic tournaments for sports like swimming, volleyball, or basketball, as well as other mid-sized events including concerts and small conventions.

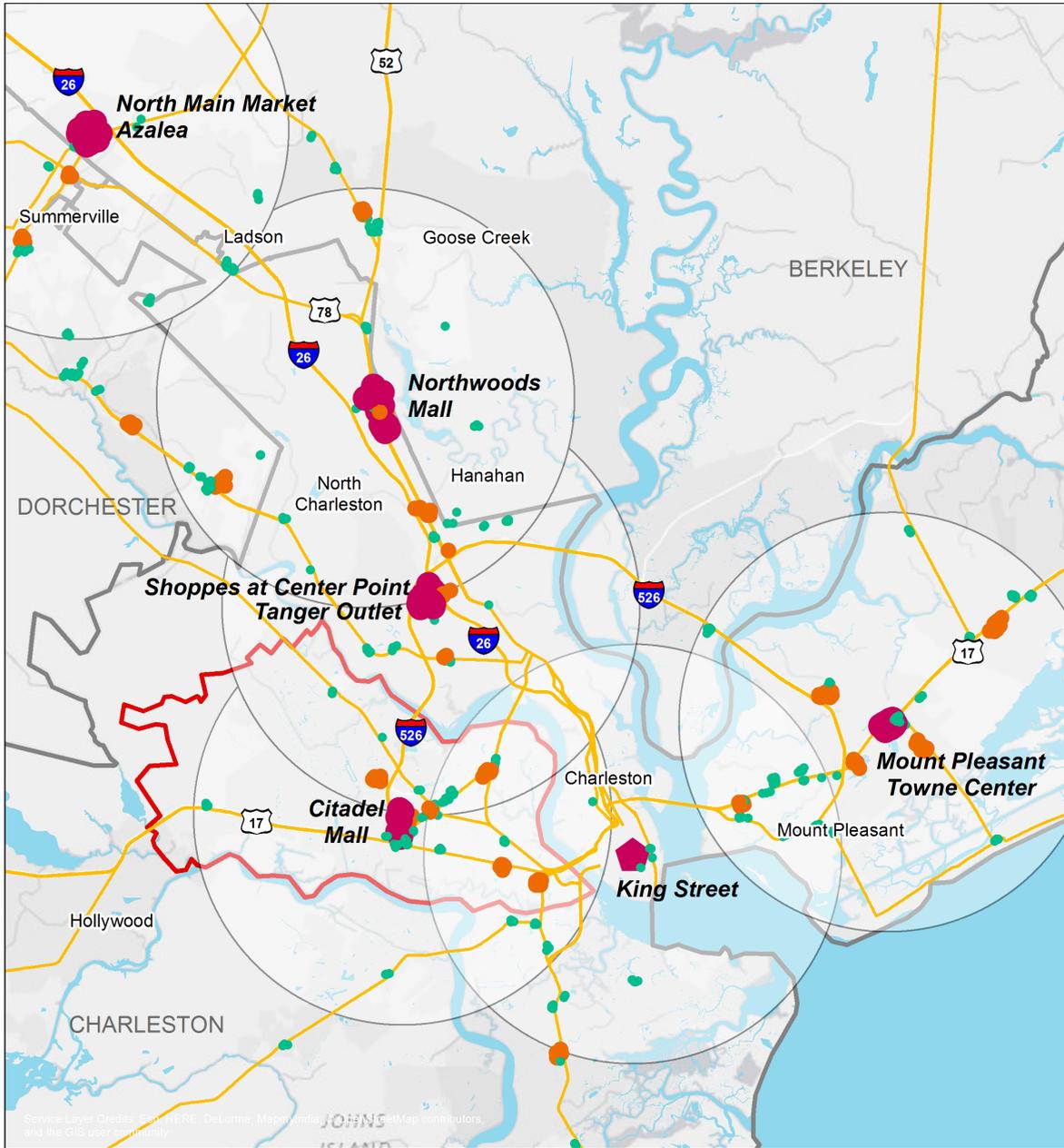
This potential transformation process represents an extraordinary opportunity both for the West Ashley community, and for the Charleston region. However, achieving this outcome will require a close partnership among the mall’s owners and with a wide range of public agencies including, but not limited to, the City of Charleston, Charleston Regional Transportation Authority, Charleston County, etc.; and community members, especially those who live close by and provide a core base of support for the mall’s shops and department store anchors. Infrastructure investments focused on creating better local and regional access to the mall will be critical, as well as stormwater improvements that will incorporate the mall into a solution to address flooding associated with Tiger Swamp. In addition, any sports facilities that are incorporated into the mall should serve a local recreation function in addition to drawing large regional or national competitions. Ultimately, the owners of Citadel Mall will craft their own vision, but the City of Charleston can work with them to ensure a successful outcome for the community as a whole.

Citadel Mall and Other Regional Retail Centers in the BCD Region, 2017

EXISTING CONDITIONS

ECONOMIC DEVELOPMENT

PLAN WEST ASHLEY



Not in Shopping Center

King Street Shopping Destination

Shopping Center Type

- Super Regional / Lifestyle / Power / Outlet Center
- Community Center
- Neighborhood Center

5-mile Trade Area

West Ashley Boundary

Berkeley-Charleston-Dorchester Counties

Major Roads

Sources: CoStar, 2017. Strategic Economics, 2017.



Small Businesses and West Ashley's Eclectic Character

West Ashley is distinguished from other “suburban” residential communities by close involvement of local community members with the area’s development process and ongoing evolution. This connection is sometimes multigenerational and adds to people’s deep sense of pride in the West Ashley community. For example, the revitalization of the Avondale business district was largely driven by area residents who started businesses in its stock of older commercial spaces. Even the South Windermere Center is thriving with many locally owned small businesses as tenants.

There is also demand for small office spaces to support non-retail businesses that are mainly owned by West Ashley residents. The recently opened Schoolhouse project, located at Magnolia Road and Sycamore Avenue, demonstrates this demand. The building was purchased by its current owners in 2015, who completed a major renovation and fully leased its 20 small office spaces to a variety of small businesses and non-profit organizations in less than two years. This tight link between local people, their families, and their businesses is part of what gives West Ashley its eclectic character, and something that people want to preserve and enhance even as the area continues to evolve.

The Public “Value” and Benefits of Reinvestment in Infill Locations

The Sam Rittenberg corridor in West Ashley is particularly in need of transformation. This area has the highest concentration of shopping centers in the area, but also the most extensive “blight” conditions. The City has already moved proactively to create the West Ashley Tax Increment Financing (TIF) District, which will provide a major funding source for many of the public improvements necessary to incentivize great private reinvestment. Public improvements may include:

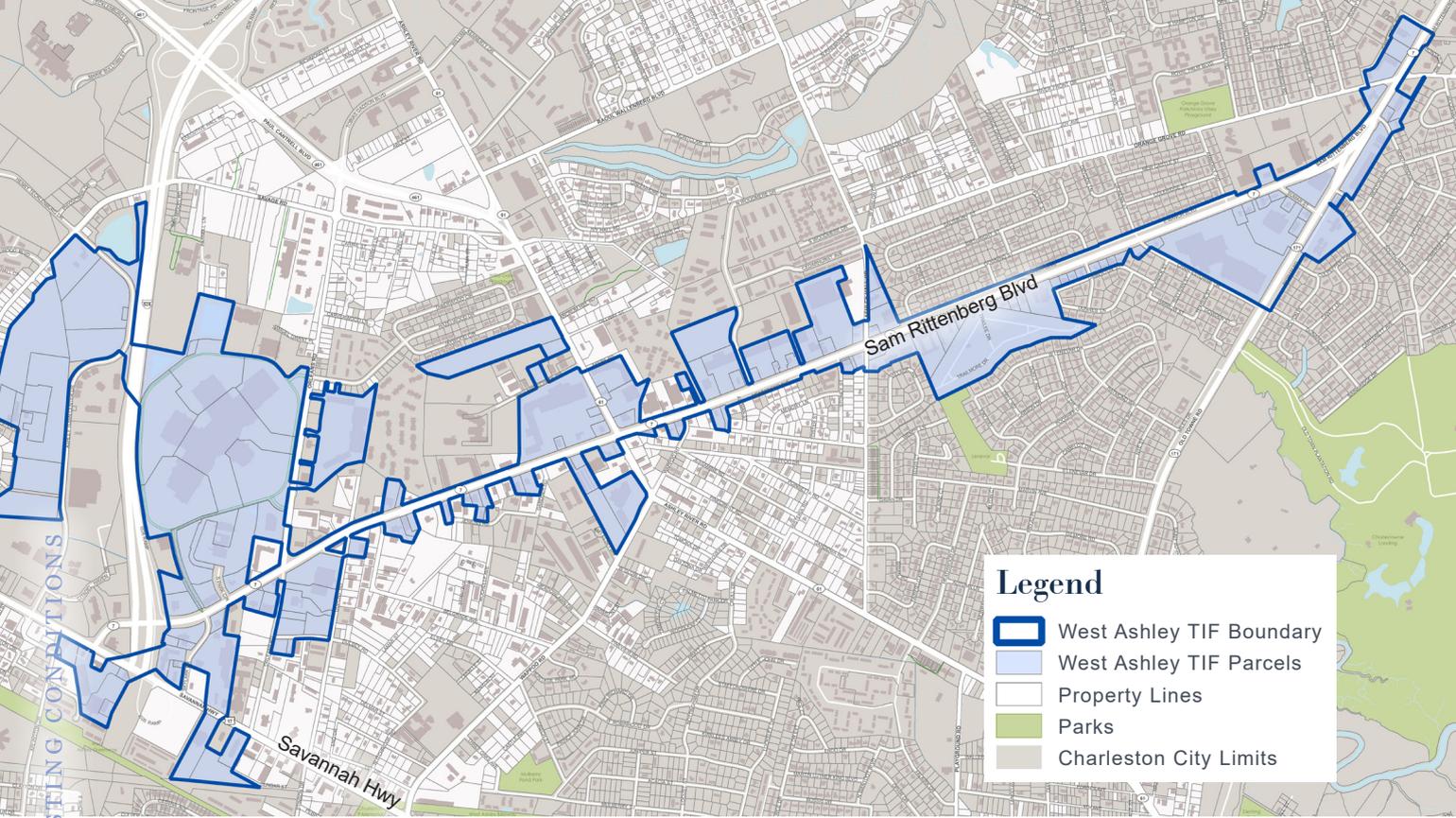
- streetscaping (landscaping, sidewalks, lighting, utility improvements, etc)
- public parks and open space
- civic buildings and recreational facilities
- transportation infrastructure
- pedestrian, bicycle and transit facilities

- street network improvements
- stormwater infrastructure
- parking structures
- assistance for affordable/ workforce housing

However, TIF districts work best where there are significant increments of new development that create new and higher property values and thus more tax increment revenue.

Going forward, it will be essential to remember that changing places from lower to higher intensity uses can, if done well, have very positive outcomes and create value for the very long term. As shown in “*The Value of Placemaking*” (Appendix C) – a recent study commissioned by the BCD Council of Governments and the Charleston Regional Development Alliance – not all places that experience new development generate equal increases in property values/valuation. Data from this study indicate that recently built places can generate significant increases in property values, if these places incorporate the best design features of the more historic parts of the Charleston region. These features include narrow streets, interconnected streets that are as easy for pedestrians and cyclists to navigate as car drivers, and ensuring that areas of future density incorporate design that matches the scale of the surrounding context.

This report’s Community Design and Land Use chapter describes locations within West Ashley that are potentially appropriate for higher-intensity future development. As indicated by the Lasting Value study, future development on these sites could enhance public revenues – and therefore the ability to provide public services – from increased property taxes. Although, achieving these outcomes requires that new development projects are designed well, respect the surrounding context, and are built in locations with the right infrastructure to support growth and accommodate multimodal transportation options beyond the automobile. When done right, development in locations already served by existing infrastructure could potentially be a “win” for West Ashley and Charleston as whole, leveraging investments in infrastructure that were completed long ago, while generating new revenues and introducing new economic activity from additional residents, workers, and businesses.



above: West Ashley Tax Increment Financing (TIF) District

COMMUNITY CONCERNS

West Ashley will lose its community character if there is too much new development that cannot accommodate small locally owned businesses.

Community members value the small locally owned businesses that have driven the revitalization of Avondale and extend along certain parts of Ashley River Road.

There are too many vacant and/or visually blighted commercial properties along the area's major arterial corridors:

Some of this blight was caused by the closing of several grocery stores in West Ashley that also anchored some of the area's older small shopping centers, especially in highly visible locations. The visual blight is being caused by the older shopping centers that may not be fully occupied, are poorly maintained, or just look outdated.

There are no small community scale retail and services in outer West Ashley:

Although outer West Ashley's population has grown considerably over the last several years, there are not enough retail services in the area. Therefore, outer West Ashley residents must drive along what can be extremely congested corridors to access a grocery or drug store, restaurants, and other basic services.

Future jobs and economic development should address the needs of existing and future residents at all skill levels:

A high share of West Ashley residents must currently commute to locations outside of the area because West Ashley's primary local base of retail, personal services, and health care jobs are not well-matched to the overall resident workforce's diverse mix of skill levels and occupations.

Sample of community responses from charrette feedback forms:

Of the many ideas you have heard or seen so far, which ones seem the most exciting to YOU?

"attracting more diverse and attractive employment options in West Ashley... new restaurants, businesses... more small businesses at shopping centers "boutiquey"... education, MUSC, COFC expand in West Ashley... more neighborhoods like Avondale (smaller biz as opposed to strip mall and big box)"

"attract businesses by creating versatile office options, tech start-up, tiny businesses, good office space.. tech / multi-use spaces... aquatics complex by Citadel Mall... tech, startups... increased economic development – revitalize land zones in critical areas with new businesses / retail / restaurants... basically, work to recreate "Avondale" in more areas"

"economic development, we can work where we live... encourage more local small businesses... incubators for small businesses"

"keep the flair of West Ashley ... try to get more employers spread out to cut commutes and congestion"

VISION | FOCUSED

To achieve the community vision for economic development in West Ashley, the following goals shall be pursued:

1. Attract a wider range of businesses to West Ashley so that more people who live in the community can also work in the community.
2. Allow and encourage transformation of Citadel Mall into a mixed-use “town center” for the entire community. Also encourage the redevelopment of other key nodes and focus areas such as those shown on the map *Opportunities for Future Change/Improvements* on page 2.22-2.23.
3. Cultivate a West Ashley where all kinds of small and local businesses, ranging from retail to tech start-ups, can thrive.
4. Offer a full range of recreational, cultural, and civic facilities to support both residents and workers.
5. Facilitate refreshing and refurbishing the existing shopping centers and commercial properties that have vacant spaces and/or have a blighted appearance, including introducing a new mix of uses such as office space and housing to create new neighborhood nodes.
6. Support more small-scale community shopping opportunities in outer West Ashley that look and feel more like Avondale in inner West Ashley.
7. Improve plan review and permitting processes and work with local and regional economic development groups to entice revitalization and attract new businesses and employment centers.

IMPLEMENTATION

The following implementation priorities and actions were identified by considering West Ashley’s competitive strengths and challenges regarding economic development, the specific community concerns related to economic development, and by considering available tools that directly address economic realities and community concerns to fulfill the community’s vision.

Implementation should integrate data collection and analysis in all future project studies and improvements. Types of data may include traditional data and/or more sophisticated analytics as available.

Community Engagement

The City and County should develop community engagement strategies to improve communication, education, and participation for residents around locally important economic development issues.

Permitting Process

Simplify and accelerate the permitting process for projects in West Ashley

While the permitting process itself is not part of the “community vision” for economic development in West Ashley, the pace, complexity, and uncertainty associated with gaining City approvals for development projects do create overall constraints on the ability to fulfill the vision. Not only was this issue frequently raised by West Ashley’s developers and property owners, but it also echoes throughout concerns raised the broader community: a challenging and uncertain development approvals process constrains the ability to attract reinvestment in properties, which in turn affects the ability to grow office space for jobs and businesses, transform dated commercial areas, and replace or transform vacant and blighted properties. Limitations on development activity also negatively impact the ability to raise public revenue and use infrastructure more efficiently, as described earlier in this chapter.

This implementation strategy focuses on ensuring planning efforts, land use regulations, and approvals processes are proactively simplified, clarified, and made internally consistent. The goal is to ensure that future development projects still meet strict community expectations – including those described in the Design and Land Use chapter of this document – while also ensuring a developer or property can clearly understand those expectations before pursuing a project.

Near-Term Steps (2 years – 5 years):

- *Review all land use and design regulations and permitting processes – including the Design Review Board Process – applicable to property development in West Ashley, and modify to ensure clear guidelines and expectations exist for development projects.* The City of Charleston and Charleston County should both undertake this review process, which could also result in a better alignment between their expectations and processes. The review should include examining and modifying the City of Charleston’s Design Review Board process to create guidelines and predictability for development applicants, in line with recently completed changes for the Board of Architectural Review. An audit of and improvements to the City’s Technical Review Committee process should also be completed. The review processes will require input from developers, brokers, and City staff with direct experience and understanding of existing challenges. Ultimately, the goal should be to provide clear expectations of both zoning and design, and to streamline the process by coordinating and minimizing the number of approvals required.
- *Establish a new incentivized redevelopment zone designation to encourage the revitalization of underutilized sites.* Create development standards that incentivize sustainable mixed use redevelopment, similar to the Upper Peninsula zoning district, and establish a finite review process.

Citadel Mall

Allow and encourage transformation of Citadel Mall into a mixed-use “town center” for the entire community

The Citadel Mall and surrounding area represents a tremendous opportunity for redevelopment into a true mixed-use district with higher density employment opportunities, a range of housing types, and more entertainment and recreational activities. Although any changes will be undertaken by private investors and owners, the following projects form a strategy that leverages the crucial role the City and other public agencies can play in this process by working with property owners, setting up the right policy/regulatory framework, and offering any available incentives as appropriate. Over the long term, the transformation of the Citadel Mall area could allow West Ashley to compete for high-skilled and young workers by offering a vibrant, mixed-use employment and housing district with convenient multimodal access.

Immediate Steps (first 2 years):

- *Ensure zoning and design regulations promote the town center vision.* As described in the Design and Land Use chapter of this document, this could include zoning that allows for vertical mixed-use development (i.e. mixing uses within a single building) and setting design standards for high quality green space, good connectivity to the surrounding community, and working with the various infrastructure and transportation providers (including CARTA) to ensure that this location can serve a 21st century economy.

Near-Term Steps (2 years – 5 years):

- *Determine whether to pursue construction of a facility that could support regional or national athletic tournaments in the area.* Such a facility could potentially serve the community as well, while also attracting a new mix of activity to the Citadel Mall area.

Longer-Term Steps (5 years – ongoing):

- *Direct proceeds of the West Ashley Redevelopment Project Area and TIF District to construct supportive public improvements within the Citadel Mall area as an incentive for private investment.* TIF proceeds could be used to construct necessary infrastructure that supports private development activity, and to potentially subsidize an affordable or work force housing development demonstration project that, through its built form and location of a residential use in the area, contributes to fulfilling the vision of the town center.

Range of Businesses

Attract a wider range of businesses to West Ashley so that more people who live in the community can also work in the community

Adoption and implementation of Plan West Ashley serves as a signal to businesses and developers that the area is ready for transformation and is a focus for investment in Charleston. Starting with this momentum, West Ashley should be repositioned within the region so that it is considered a viable office node and home of innovative businesses, in addition to continuing its role as a retail destination and medical hub.

The following implementation projects form a strategy focused on aligning the messages and efforts of numerous entities engaged in economic development and workforce development efforts. This should become a major undertaking within the City's newly formed Department of Economic Development, but will also require close coordination with many other partners such as Charleston County, Charleston Regional Development Alliance, Charleston Metro Chamber of Commerce, Charleston Area Regional Transportation Authority, the state Department of Commerce, and the commercial real estate brokerage and development community.

Elevating West Ashley to take a more significant role in the regional economy by supporting office based jobs should be viewed as having a long-term benefit for the entire region, rather than setting up West Ashley to compete with other office locations. West Ashley offers a unique opportunity to bring more jobs closer to a highly-skilled local work force in an area that is well-situated to foster a regional multi-modal transit strategy. Both of these attributes are attractive to businesses looking for locations that appeal to young, highly-skilled members of the work force.

Immediate Steps (first 2 years):

- *Develop specific goals for targeting industries and business activities for growth in West Ashley, and refine strategies for achieving these goals.* While Plan West Ashley is a first step in understanding West Ashley's competitive strengths and weaknesses for attracting regional economic activity – including West Ashley's potential strengths in attracting business activity related to regional industry sectors concentrated nearby, such as aerospace, information technology, and health care and life sciences – further study and outreach will be necessary to craft specific goals related to industry clusters and activities to be targeted for growth. Those goals will in turn drive customization of the following actions of this implementation strategy and determine the direction of future policy changes and studies.
- *Promote West Ashley's specific strengths through the region's economic development promotional materials and networks.* These strengths include: regional accessibility, proximity to the airport, lower costs than other competitive locations, easy access to other major job centers, and access to a large and educated workforce.

Near-Term Steps (2 years – 5 years):

- *Work across all City departments to create a clear and coordinated message regarding equitable economic development priorities and efforts in the West Ashley area.* This kind of coordination will be an essential first step towards re-envisioning the area's role both in the City and the region.
- *Adopt the mixed-use regulatory standards per this plan's Community Design and Land Use Chapter, with an emphasis on allowing office growth at key nodes and arterials, such as Citadel Mall, the intersection of Sam Rittenberg Boulevard at Old Towne Road, and the Ashley Bridge District.*
- *Facilitate better connections between economic development, workforce development, and K-12 education.* This will ensure that all West Ashley residents are equally prepared to benefit from the area's expanding employment base, but will require participation from a large cross-section of institutions. An example of such a program is the Youth Apprentice Program funded and administered by the Charleston Metro Chamber of Commerce. West Ashley High School is included in this program, in which students are paid apprentices at businesses – including Hendrick Automotive Group – while receiving a scholarship to attend Trident Technical College.

Longer-Term Steps (5 years – ongoing):

- *Map business assets and infrastructure in West Ashley to identify areas better positioned for private investment versus areas requiring upgrades.* Such assets could potentially include high speed gigabit internet service, commute access, freight access, easily developed or redeveloped sites, worker amenities, and proximity to an existing employment concentration.
- *Explore the introduction of a business license fee reduction as an incentive for investment in West Ashley.* The City should examine whether a business license fee reduction program for businesses new to West Ashley would successfully incentivize additional business growth in the area.

Small and Local Businesses

Cultivate a West Ashley where all kinds of small and local businesses, ranging from retail to tech start-ups, can thrive

Although the Citadel Mall area offers a prime opportunity to build more Class A office space that could serve both West Ashley and the region, there are many more small-scale opportunities throughout West Ashley to provide creative office space and affordable commercial space to a wide range of businesses. Such business include small tech companies, locally-owned retailers, and other kinds of businesses that could serve and support West Ashley's resident population, and/or serve other businesses in the area.

Immediate Steps (first 2 years):

- *Better integrate West Ashley within the efforts of the Charleston Digital Corridor initiative.* These efforts could include the opening of the business incubator, promotion of West Ashley's excellent assets for growing businesses, and hosting of more events targeted to West Ashley residents, workers, and businesses.
- *Prepare informational materials highlighting West Ashley's locational advantages for small businesses.* Such information could include an inventory of buildings and property that are available for reuse or redevelopment. This effort must be jointly coordinated between the City and County, since not all commercial property in the West Ashley area is currently within the City, and some important sites remain in unincorporated areas. This effort will likely require dedicated City staff time, but could potentially be incorporated into other citywide efforts.

Near-Term Steps (2 years – 5 years):

- *Pursue the creation of a business incubator targeted to tech start-ups and small businesses.* An incubator in West Ashley could potentially be targeted to the Citadel Mall area to contribute to the emergence of the town center concept, although other locations with low cost spaces and/or easy access to the region should also be opportunistically considered.
- *Create a small business assistance program targeted to West Ashley, based on existing resources.* Such a program could connect small businesses with existing resources and incentives, and promote the benefits of West Ashley locations. The City should partner with other organizations targeting small business development, such as its ongoing partnership with Lowcountry Local First. A City staff person or a non-profit partner could potentially serve as a partner for implementing a program that targets use of existing resources in West Ashley.

Range of Facilities

Offer a full range of recreational, cultural, and civic facilities to support both residents and workers

The projects below support an overall strategy of enhancing recreational, cultural, and civic facilities in West Ashley to provide desirable amenities and attract new residents and businesses, while also better-serving current residents and businesses. Access to these facilities, and the services they offer, will allow West Ashley – and its individual employment districts and neighborhoods – to better function as a self-contained community that can fulfill all resident and worker needs.

Immediate Steps (first 2 years):

- *Promote existing community activities and facilities, and work with community members to create new community activities.* Existing activities and facilities include the Farmers Market, events at the private Schoolhouse office facility, the bikeway, and other outdoor amenities that make West Ashley special.
- *Identify ways to link West Ashley to existing cultural events in Charleston.* Charleston already has several signature cultural events, but these are focused in the peninsula areas. There may be opportunities to hold events associated with, or that spin off from, these events, but held at West Ashley locations including Citadel Mall, the Farmer’s Market location, and the high school, which has a performing arts facility.

Near-Term Steps (2 years – 5 years):

- *Consider opportunities to locate City offices/facilities within the new “town center.* City facilities would act as an additional activity anchor and provide a stronger civic presence in West Ashley.
- *Coordinate services such as emergency response, garbage pick-up, drainage maintenance, street maintenance, lighting, etc* between City, County, St. Andrews PSD, and SCDOT to increase efficiency and decrease duplicity.

Longer-Term Steps (5 years – ongoing):

- *Target future capital improvement plans to include the creation of additional parks and facilities.* New parks and community facilities should be prioritized when developing Charleston’s future five-year Capital Improvement Plans.

Refresh Existing Shopping Centers

Facilitate refreshing and refurbishing the existing shopping centers and commercial properties that have vacant spaces and/or have a blighted appearance, including introducing a new mix of uses such as office space and housing

The following implementation projects support a strategy of encouraging reinvestment in commercial properties through a mix of financial incentives and expansion of allowable uses within a consistent framework of design expectations. The goals of this strategy are to ensure existing commercial centers are attractive and updated, while encouraging reuse and new development at commercial properties that may no longer be viable.

Immediate Steps (first 2 years):

- *As appropriate, allow flexible conversion or development of retail and other commercial properties into other uses.* As described in this chapter, some of West Ashley's older retail and commercial properties may be outdated or no longer needed for retail use. Where appropriate, as described in this plan, land use regulations should allow property owners to convert and develop their sites with alternative uses such as housing or different commercial space.

Near-Term Steps (2 years – 5 years):

- *Provide grants or tax abatements for façade rehabilitation and other visual site improvements.* Matching grants and/or tax abatements for façade rehabilitation, landscaping, and other relatively inexpensive visual site improvements will encourage property owners to reinvest in the appearance of properties. A first step in implementing this program will require identifying a funding source for grants, or an abatement method that would provide sufficient revenue to incentivize property owners to use the program. Business license fee abatement should be explored.
- *Align County and City design expectations for all unincorporated commercial areas within West Ashley.* West Ashley consists of a patchwork of incorporated and unincorporated properties, with different design standards and land use regulations applied to each. The County and City should undertake a concerted effort to align design expectations for commercial properties in unincorporated areas; the Wappoo Community Plan is an example of such collaboration.

Longer-Term Steps (5 years – ongoing):

- *Examine potential to establish additional TIF districts at mixed-use nodes and office growth locations identified in Plan West Ashley.* Based on the nodes and corridors identified in Plan West Ashley, the City should monitor and examine opportunities to establish additional TIF districts to fund supportive capital improvements and other assistance.

More Shopping like Avondale

Support more small-scale community shopping opportunities in outer West Ashley that look and feel more like Avondale in inner West Ashley

The following projects seek to address community desires for small-scale shopping options in outer West Ashley that are easily accessible and function as neighborhood gathering locations. The projects form a strategy of changing land use regulations to encourage the creation of such spaces, while also providing multimodal transportation options to provide residents choices for easily accessing these commercial amenities.

Immediate Steps (first 2 years):

- *Ensure zoning in outer West Ashley requires/ incentivizes location of community shopping centers or commercial buildings near new housing. Zoning should be updated to require – or at least allow – small commercial nodes located in close proximity to current and future housing, as appropriate based on this plan’s Community Design and Land Use chapter.*
- *Evaluate the feasibility of adding a parking structure to Avondale.*

Longer-Term Steps (5 years – ongoing):

- *Provide convenient pedestrian, bicycle, and automobile access between housing and shopping opportunities in outer West Ashley. Based on the principles of this plan’s Transportation and Community Design and Land Use chapters, residents of outer West Ashley should be provided convenient multimodal options for accessing shopping and community amenities.*

Attract New Industries and Jobs

Develop incentives and work with other local and regional agencies such as Charleston County Economic Development, Charleston Regional Development Alliance and the Charleston Metro Chamber of Commerce to attract new industries and jobs to West Ashley.

Near-Term Steps (2 years – 5 years):

- *Create and attract more Class A office product.* To attract One Region targeted sectors, it will be necessary to increase the Class A office product. The vast majority of white collar recruitment opportunities typically require substantial space (e.g. 25,000 sq. ft. or more).
- *Encourage the redevelopment of under-used land areas.* The undeveloped areas (parking lots, etc) potentially available on the Citadel Mall property for Class A office construction would benefit from the I-526 access and proximity to the airport, and could be appealing to any aerospace, automotive medical or IT entity or a back-office operation.
- *Work with property owners and help provide digital infrastructure needed to attract tech businesses.* Smaller IT projects, whether home-grown or recruited from elsewhere - could possibly be incorporated into converted retail space as occurred recently at Ashley Landing. This takes an open-minded shopping center owner with a fair amount of financial latitude with regard to the lease. A mixture of restaurants, coffee shops, and services nearby are examples of the right amenities that attract tech interest. This is also true in Avondale, and the revitalization of each of these shopping nodes creates similar amenities that may appeal to tech start-ups. In all of these areas, improvements for pedestrians and cyclists (such as crosswalks and traffic-calming measures) will be necessary for success. Tech companies may have more interest in West Ashley in the future as downtown Charleston tech becomes more saturated, and parking issues and rent continue to rise.
- *Utilize vacant shopping center space for back office projects such as call centers, which can have high employment.* These operations typically need a “plug and play” scenario where the telecommunications are already in place. Additionally landlords need to be open-minded and have a fair amount of financial latitude to attract these businesses. This again requires the open-mindedness and financial latitude described for smaller IT projects. Many times these vacant grocery store spaces are in play, unmotivated owners may be relatively content to let the space sit empty.
- *Work with local hospitals to explore the possibility new offices and medical facilities in West Ashley.* MUSC has blazed the trail with the recent announcement of their relocation of several functions to Citadel Mall. These workers now become part of the nucleus for other activities – with their demand for meals, services, etc. nearby. To the extent that they are also outgrowing their current locations, perhaps other medical facilities would also have this interest. Roper St. Francis, for example, recently consolidated their multiple back-office functions in Palmetto Commerce Park.

Support *Plan West Ashley*

Develop an integrated funding and financing strategy to facilitate the many improvements that support Plan West Ashley

Although the City already has a wide-range of options available to fund and finance many of the improvements identified in this plan, deploying these tools in a strategic manner will require an ongoing effort of identifying new sources, new opportunities for expanding funding and financing tools, and incorporating major projects in the City’s budgeting process and Capital Improvement Plan. This work would include evaluating in greater detail what funding/financing options might already be available, and where various actions need to be taken to open other opportunities.

Near-Term Steps (2 years – 5 years):

- *Complete a comprehensive review of the potential existing funding sources that could be best deployed for a variety of capital projects and services (including expanded transit service) in West Ashley.* Examples could include: district based financing assessment tools, tax increment financing, a general obligation bond, federal grants, state tax credits, tax abatements, expenditures of accommodations tax revenue, storm water fees, and a parking enterprise fund. Each of these sources has particular restrictions on use and are better or worse aligned with particular investments. For example, accommodations tax revenues can only be applied to capital projects and operating costs related to tourism. Therefore, these revenues – some of which are generated by hotels within West Ashley itself – are a potential funding source for events programming, promotion of West Ashley, and the streetscape and beautification recommendations in Plan West Ashley.
- *Investigate any funding/financing mechanisms not currently allowed by state law for which legislative changes might provide better opportunities for West Ashley.* The City has already begun to study this issue, but further investigation will likely be required as specific tools and constraints are identified. The City can leverage its membership in the South Carolina Municipal Association to assist with changes to state law and other policy challenges.



7 IMPLEMENTATION MATRIX

**RECOMMENDED ACTIONS:
POLICIES / STUDIES** 7.2

**RECOMMENDED ACTIONS:
PHYSICAL IMPROVEMENTS / PROJECTS** 7.18

IMPLEMENTATION MATRIX

Recommended Actions: Policies / Studies

	Plan Chapter	Description
1	COMM DESIGN & LAND USE	Formally adopt the Plan West Ashley vision
2	COMM DESIGN & LAND USE	Coordinate implementation activities with Charleston County, Regional and State planning bodies
3	COMM DESIGN & LAND USE	Develop a set of urban design principles for key sites and corridors. This should include the Plan Focus Areas (identified on page 2.22-2.23) and additional key nodes of Avondale and Sycamore/St. Andrews Blvd.
4	COMM DESIGN & LAND USE	Establish a joint City/County Design Review Board for key commercial corridors
5	COMM DESIGN & LAND USE	Establish a West Ashley Community Brand & Identity Committee: organize private clean up efforts (keep West Ashley beautiful)
6	COMM DESIGN & LAND USE	Pursue neighborhood preservation
7	ALL	The City and County should develop community engagement strategies to improve communication, education, and participation for residents around locally important community design & land use, transportation, green infrastructure & sustainability, housing, and economic development issues
8	TRANSPORTATION	Develop Design Guidelines for West Ashley Greenway + Bikeway
9	TRANSPORTATION	Prepare a feasibility study for potential federal grant projects, such as TIGER (Transportation Investment Generating Economic Recovery) grants
10	TRANSPORTATION	Evaluate access management strategies
11	GREEN INFRA & SUSTAINABILITY	Pursue mechanisms and funding to purchase property for the purpose of reversion to wetlands and addition of floodplain
12	GREEN INFRA & SUSTAINABILITY	Seek authorization from the General Assembly to allow local real estate transaction surcharge to seed open space acquisition
13	GREEN INFRA & SUSTAINABILITY	Strengthen tree protection and tree planting requirements for new development and redevelopment
14	GREEN INFRA & SUSTAINABILITY	Advocate for the Greenbelt program to borrow money against future revenues on the half penny sales tax in order to provide immediate funding
15	GREEN INFRA & SUSTAINABILITY	Raise community awareness of sensitive environmental concerns, green infrastructure, and open space preservation
16	GREEN INFRA & SUSTAINABILITY	Develop a West Ashley Recreational Needs Assessment
17	GREEN INFRA & SUSTAINABILITY	Develop a West Ashley Open Space, Parks, and Recreation Master Plan
18	HOUSING	Pursue passage of a citywide housing bond, and use resulting funds to expand subsidized income-restricted housing in West Ashley

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Immediate (first 2 years)	City of Charleston	NA	
	Immediate	City, Charleston County, BCDCOG, SCDOT, St Andrews PSD	NA	
	Immediate	City of Charleston	NA	
	Immediate	City, Charleston County	NA	
	Immediate	City of Charleston	\$	City of Charleston
	Immediate	City, Charleston County, advocacy groups, neighborhood org, community	NA	
	Immediate	City of Charleston, Charleston County	NA	
	Immediate	City, Charleston County Parks and Recreation, Charleston Parks Conservancy	\$	City of Charleston, Charleston County Parks and Recreation, Charleston Parks Conservancy, Private Sector
	Immediate	City, Charleston County, BCDCOG	\$\$	City of Charleston, Charleston County, SCDOT
	Immediate	City, Charleston County, SCDOT	\$\$	City of Charleston
	Immediate	City, Charleston County	\$	City, Charleston County, land trusts advocacy groups, Greenbelt Program, impact fees, sales tax
	Immediate	City, Charleston County	NA	
	Immediate	City, Charleston County	NA	
	Immediate	City, Charleston County, land trusts, advocacy groups, community	NA	
	Immediate	City, Charleston County, land trusts, advocacy groups, community	\$	City of Charleston
	Immediate	City, Charleston County, St Andrews Parks & Playgrounds	\$	City, Charleston County, St Andrews Parks & Playgrounds
	Immediate	City, Charleston County	\$\$	City, Charleston County
	Immediate	City of Charleston	\$	City of Charleston

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
19	HOUSING	With public input, elected officials should explore passage of an inclusionary housing enabling law at the state level
20 (a)	HOUSING	With public input, elected officials should explore changes to state enabling law and city ordinances to allow for incentivized affordable housing programs. Develop local voluntary incentive programs that encourage developments to incorporate affordable and workforce housing. Explore potential for incentives such as real estate tax abatement, density bonuses, height bonuses or other mechanisms that incentivize developers to voluntarily include levels of affordable housing.
20 (b)	HOUSING	Adjust zoning and land development regulations to further support development of affordable housing, including prioritizing and incentivizing affordable housing, streamlining and expediting the review and approval process for affordable housing, and enabling staff level approvals for affordable housing.
21	HOUSING	Pursue changes to state criteria that negatively impact the ability of income-restricted affordable housing developers to obtain adequate LIHTC funding allocations
22	HOUSING	Expand application of Mixed-Use Workforce Housing zoning districts, and pursue modifications to increase the program's effectiveness
23	HOUSING	Maintain and expand homeowner rehabilitation assistance programs and funding
24	HOUSING	Explore the potential to offer expedited review of income-restricted affordable or mixed-income housing development projects
25	HOUSING	Provide assistance to residents through the Center for Heirs Property Preservation, and pursue modifications to state heirs property laws that harm the ability of families to maintain control of properties
26	HOUSING	Explore the potential to offer expedited review of townhome and multifamily housing projects in locations where such housing is allowed by right, particularly targeted to infill locations that already have the infrastructure to support additional housing
27	HOUSING	Prioritize expansion of senior housing options for households of all incomes
28	HOUSING	Adjust zoning and land use regulations to allow and support development of "affordable by design" housing products
29	ECONOMIC DEVELOPMENT	Develop specific goals for targeting industries and business activities for growth in West Ashley, and refine strategies for achieving these goals.

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Immediate (first 2 years)	City of Charleston, Charleston County, BCDCOG, Chamber of Commerce, SC Community Loan Fund, advocacy groups	\$	City of Charleston, Charleston County, BCDCOG, Chamber of Commerce, SC Community Loan Fund, advocacy groups
	Immediate	City of Charleston, Charleston County, BCDCOG, Charleston Chamber of Commerce, SC Community Loan Fund, advocacy groups	\$	City of Charleston, Charleston County, BCDCOG, Charleston Chamber of Commerce, SC Community Loan Fund, advocacy groups
	Immediate	City of Charleston, Charleston County	N/A	
	Immediate	City of Charleston, Charleston County, BCDCOG, Chamber of Commerce, SC Community Loan Fund, advocacy groups	\$	City of Charleston, Charleston County, BCDCOG, Chamber of Commerce, SC Community Loan Fund, advocacy groups
	Immediate	City of Charleston	\$	City of Charleston
	Immediate	City of Charleston	\$\$+	City of Charleston, CDBG, HOME
	Immediate	City of Charleston, Charleston County	\$	City of Charleston, Charleston County, Chamber of Commerce, private developers
	Immediate	City, Charleston County, Center for Heirs Property Preservation, advocacy groups	\$	City of Charleston, Charleston County, Chamber of Commerce,
	Immediate	City of Charleston	\$	City of Charleston, private developers
	Immediate	City, Charleston County, Housing Authority, SC Community Loan Fund, Housing advocacy groups and non-profits, private developers	\$	City of Charleston, Charleston County
	Immediate	City, Charleston County	\$	City of Charleston, Charleston County
	Immediate	City of Charleston, Charleston County, Charleston Regional Development Alliance, BCDCOG, West Ashley James Island Business Association, Chamber of Commerce, Charleston County Economic Development	\$	City of Charleston, Charleston County, Charleston Regional Development Alliance, BCDCOG, West Ashley James Island Business Association, Chamber of Commerce

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
30	ECONOMIC DEVELOPMENT	Promote West Ashley's specific strengths through the region's economic development promotional materials and networks
31	ECONOMIC DEVELOPMENT	Ensure zoning and design regulations promote the town center vision for Citadel Mall
32	ECONOMIC DEVELOPMENT	Better integrate West Ashley within the efforts of the Charleston Digital Corridor initiative
33	ECONOMIC DEVELOPMENT	Prepare informational materials highlighting West Ashley's locational advantages for small businesses
34	ECONOMIC DEVELOPMENT	Promote existing community activities and facilities, and work with community members to create new community activities
35	ECONOMIC DEVELOPMENT	Identify ways to link West Ashley to existing cultural events in Charleston
36	ECONOMIC DEVELOPMENT	As appropriate, allow flexible conversion or redevelopment of retail and other commercial properties to other uses
37	ECONOMIC DEVELOPMENT	Ensure zoning in outer West Ashley requires/incentivizes location of community shopping centers or commercial buildings near new housing
38	ECONOMIC DEVELOPMENT	Evaluate the feasibility of adding a parking structure to Avondale.
39	COMM DESIGN & LAND USE	Draft and adopt mixed-use regulatory standards and incentives to replace and modernize existing zoning, to guide new development on commercial corridors, entryways, and other focused priority progress areas
40	COMM DESIGN & LAND USE	West Ashley Community Brand & Identity Committee: work to improve West Ashley's image and community perception, celebrate history and culture
41	COMM DESIGN & LAND USE	West Ashley Community Brand & Identity Committee: implement entry signage, lighting, beautification efforts
42	COMM DESIGN & LAND USE	Improve/beautify West Ashley gateways with appropriate signage and landscaping
43	TRANSPORTATION	Gather commuter data / analysis – regional and local

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Immediate (first 2 years)	City, Charleston County, Charleston Regional Development Alliance, BCDCOG, West Ashley James Island Business Association, Chamber of Commerce, Charleston County Economic Development, Charleston Area Convention and Visitors Bureau	\$	City of Charleston, Charleston County, Charleston Regional Development Alliance, BCDCOG, West Ashley James Island Business Association, Chamber of Commerce, Charleston County Economic Development, Charleston Area Convention and Visitors Bureau
	Immediate	City, Charleston County	\$	City of Charleston, Charleston County
	Immediate	City, Charleston Digital Corridor, and other stakeholders as appropriate	\$	City, private business partners, Charleston Digital Corridor funders
	Immediate	City, West Ashley James Island Business Association, Chamber of Commerce, Lowcountry Local First, Avondale Point Business District, advocacy groups	\$	City of Charleston
	Immediate	City, community partners, neighborhood groups, Charleston County, St Andrews PSD, local event partners	\$	City of Charleston, community partners, neighborhood groups, Charleston County, St Andrews PSD
	Immediate	City, local event partners	\$	City of Charleston, community partners, event partners, neighborhood groups
	Immediate	City, Charleston County	\$	City of Charleston, Charleston County
	Immediate	City, Charleston County	\$	City of Charleston, Charleston County
	Immediate	City of Charleston	\$	City of Charleston
	Near-Term (2 – 5 years)	City of Charleston	\$\$	City of Charleston
	Near-Term	City, CVB, Chamber of Commerce, community members, Charleston County, St Andrews PSD	\$	City, Chamber of Commerce, the Convention and Visitors Bureau, and other regional agencies
	Near-Term	City of Charleston	\$	City, Chamber of Commerce, the Convention and Visitors Bureau, and other regional agencies
	Near-Term	City of Charleston	\$\$	City of Charleston
	Near-Term	City, Charleston County, BCDCOG	\$	City, Charleston County, BCDCOG

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
44	TRANSPORTATION	Complete a Regional Transit Feasibility Study and Regional Transit Framework Plan.
45	TRANSPORTATION	Evaluate potential for dedicated transit, carpool, and bus and/or bike lanes
46	TRANSPORTATION	Develop and adopt land use and zoning code modifications that allow for mixed-use/intensification of land uses along critical transit streets/corridors
47	TRANSPORTATION	Develop and adopt design guidelines for livable developments
48	TRANSPORTATION	Develop and adopt parking regulations
49	TRANSPORTATION	Develop and adopt a Vision Zero policy
50	GREEN INFRA & SUSTAINABILITY	Pursue mechanisms for transfer of development rights (TDR)
51	GREEN INFRA & SUSTAINABILITY	Pursue mechanisms for purchase of development rights (PDR)
52	GREEN INFRA & SUSTAINABILITY	Increase budget for inspection, operation, and maintenance of drainage infrastructure
53	GREEN INFRA & SUSTAINABILITY	Pursue green infrastructure maintenance workforce training programs
54	GREEN INFRA & SUSTAINABILITY	Strengthen local wetlands regulations & jurisdiction
55	GREEN INFRA & SUSTAINABILITY	Prohibit the fill of any wetlands or disturbance of any upland area within a fixed distance of a designated wetland area.
56	GREEN INFRA & SUSTAINABILITY	Prohibit the discharge of stormwater to areas inside of a 100-foot protective buffer.
57	GREEN INFRA & SUSTAINABILITY	Promulgate restoration requirements for properties where the protective buffer is already disturbed.
58	GREEN INFRA & SUSTAINABILITY	Implement flexible wetland protection measures for redevelopment opportunities that can create a “net improvement.”
59	GREEN INFRA & SUSTAINABILITY	Include green infrastructure requirements/ guidelines reflecting the Master Plan vision for West Ashley in the updated City stormwater management standards
60	GREEN INFRA & SUSTAINABILITY	Increase the requirements for matching pre-development and post-development discharge rates to the 100-year storm frequency
61	GREEN INFRA & SUSTAINABILITY	Increase the design storm frequency for pipes, culverts, and other features in areas where doing so would alleviate flood pressure.
62	GREEN INFRA & SUSTAINABILITY	Incorporate requirements for retention of small storm volumes where this would be beneficial for mitigating downstream flooding or in areas identified for protection in this plan

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Near-Term (2 – 5 years)	BCDCOG, CARTA	\$\$	CARTA, BCDCOG,
	Near-Term	City, Charleston County, SCDOT, BCDCOG, CARTA	\$\$	City, Charleston County, SCDOT, BCDCOG, CARTA
	Near-Term	BCDCOG, CARTA, City, Charleston County, SCDOT	\$	CARTA, City, Charleston County, Private developers
	Near-Term	BCDCOG, CARTA, City, Charleston County	\$	City, Charleston County
	Near-Term	CARTA, City, Charleston County, SCDOT	\$	City, Charleston County
	Near-Term	BCDCOG, CARTA, City of Charleston, SCDOT	\$	City of Charleston
	Near-Term	City, Charleston County	\$	City, Charleston County Greenbelt Program, land trusts, development community
	Near-Term	City, Charleston County	\$	City, Charleston County Greenbelt Program, land trusts, development community
	Near-Term	City, Charleston County, SCDOT	\$\$\$	City, Charleston County, SCDOT
	Near-Term	City, Charleston County	\$\$	City, Charleston County, green economy bond
	Near-Term	City, Charleston County, ACOE, OCRM	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County, ACOE, OCRM	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
63	GREEN INFRA & SUSTAINABILITY	Include requirements for downstream analyses in flood prone areas
64	GREEN INFRA & SUSTAINABILITY	Increase freeboard requirement for residential and non-residential development from one foot to two feet
65	GREEN INFRA & SUSTAINABILITY	Provide a more detailed description of the type of analyses and measures that will be required to determine there will be no increase in impacts from a development proposal
66	GREEN INFRA & SUSTAINABILITY	Apply select standards from areas of special flood hazard to the 100-year flood plain
67	GREEN INFRA & SUSTAINABILITY	Explore ways to assist coordination efforts from federal programs such as FEMA and SBA to assist homeowners within flood plain impacted by recurring flooding.
68	HOUSING	Explore adoption of pre-approved housing designs/plans – compatible with the existing character of targeted areas – to reduce development costs and time
69	HOUSING	Ensure housing is well-served by multimodal transportation options that allow residents to reduce their travel costs
70	HOUSING	Target use of affordable housing in-lieu fees collected in West Ashley to support development and retention of income-restricted affordable housing in West Ashley
71	HOUSING	Inventory all land currently owned by a public agency, determine if any properties could be used for housing in the future, and prioritize these sites for subsidized income-restricted housing development.
72	HOUSING	Study potential adoption of additional tools deployed by other communities to address affordable housing needs.
73	HOUSING	Reach out to and work with individual neighborhood councils to provide resident outreach and education to better understand and address concerns, and to explore ways to accommodate newer housing types
74	HOUSING	Align zoning, design review, and land use control regulations and processes to ensure new housing development can proceed while also respecting the character and design of existing neighborhoods, including possible adoption of some version of a form-based code
75	HOUSING	Explore other tools for supporting housing affordability in West Ashley as noted on page 5.21
76	HOUSING	Identify and preserve historic community assets and character in West Ashley
77	HOUSING	Promote “green” energy-efficient homes that are less costly to maintain and operate
78	HOUSING	Based on the Community Design and Land Use recommendations, revise zoning to allow/encourage a diverse set of housing product types in appropriate locations

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Near-Term (2 – 5 years)	City, Charleston County	\$	City, Charleston County
	Near-Term	City of Charleston	NA	City of Charleston
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City	NA	City of Charleston
	Near-Term	City of Charleston	\$	City of Charleston
	Near-Term	City, BCDCOG, CARTA, SCDOT, Charleston County	\$	City of Charleston, BCDCOG, CARTA, SCDOT, Charleston County
	Near-Term	City of Charleston	\$\$\$	City of Charleston, private developers
	Near-Term	City, Charleston County, City of Charleston Housing Authority, Charleston County Housing Authority	\$\$	City of Charleston, Charleston County, City of Charleston Housing Authority, Charleston County Housing Authority
	Near-Term	City, Charleston County, SC Community Loan Fund, advocacy groups, Chamber of Commerce, private developers	\$	City of Charleston
	Near-Term	City, neighborhood groups, community members, Charleston County, St Andrews PSD	\$	City of Charleston
	Near-Term	City of Charleston	\$	City of Charleston
	Near-Term	City, Charleston County, local institutions/employers	\$\$	City, Charleston County
	Near-Term	City, Charleston County, advocacy groups, neighborhood org, community	\$	City of Charleston, Charleston County
	Near-Term	City, Charleston County	\$	City of Charleston, Charleston County
	Near-Term	City, Charleston County	\$	City of Charleston, Charleston County

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
79	HOUSING	Provide and ensure access to effective, low cost transportation options, including public transit and safe, comfortable walking and biking infrastructure
80	HOUSING	Fund and implement infrastructure to address flooding issues in Church Creek and Tiger Swamp areas to support existing housing enable housing growth
81	HOUSING	Explore creation of a “Staying-Put Initiative” when new developments occur within vulnerable communities to assist in finding ways for long-term residents to remain as property values and taxes increase.
82	ECONOMIC DEVELOPMENT	Review all land use and design regulations and permitting processes applicable to property development in West Ashley, and modify to ensure clarity, consistency, and certainty while meeting community standards
83	ECONOMIC DEVELOPMENT	Establish a new incentivized redevelopment zone designation to encourage the revitalization of underutilized sites.
84	ECONOMIC DEVELOPMENT	Work across all City departments to create a clear and coordinated message regarding equitable economic development priorities and efforts in the West Ashley area
85	ECONOMIC DEVELOPMENT	Facilitate better connections between economic development, workforce development, and K-12 education
86	ECONOMIC DEVELOPMENT	Determine whether to pursue construction of a facility that could support regional or national athletic tournaments in the area
87	ECONOMIC DEVELOPMENT	Pursue the creation of a business incubator targeted to tech start-ups and small businesses
88	ECONOMIC DEVELOPMENT	Create a small business assistance program targeted to West Ashley, based on existing resources
89	ECONOMIC DEVELOPMENT	Consider opportunities to locate City offices/facilities within the new “town center”
90	ECONOMIC DEVELOPMENT	Coordinate services such as emergency response, garbage pick-up, drainage maintenance, street maintenance, lighting, etc between City, County, St Andrews PSD, and SCDOT to increase efficiency and decrease duplicity.
91	ECONOMIC DEVELOPMENT	Provide grants or tax abatements for façade rehabilitation and other visual site improvements
92	ECONOMIC DEVELOPMENT	Align County and City design expectations for all unincorporated commercial areas within West Ashley
93	ECONOMIC DEVELOPMENT	Create and attract more Class A office product.

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Near-Term (2 – 5 years)	City, BCDCOG, CARTA, SCDOT, Charleston County	\$	City of Charleston, BCDCOG, CARTA, SCDOT, Charleston County
	Near-Term	City, Charleston County	\$\$\$\$	City, Charleston County
	Near-Term	City, Private Developers	\$\$	City, Private Developers
	Near-Term	City, Charleston County	\$\$	City of Charleston, Charleston County
	Near-Term	City, Charleston County	\$	City, Charleston County
	Near-Term	City of Charleston	\$	City of Charleston
	Near-Term	City, Charleston County, Charleston Regional Development Alliance, BCDCOG, community and technical colleges, Charleston County School District, private schools	\$	City of Charleston, Charleston County, Charleston Regional Development Alliance, BCDCOG, community and technical colleges, Charleston County School District, private schools
	Near-Term	City, Charleston County Economic Development, State PRT, private developers, St Andrews Parks & Playgrounds, area colleges	\$	City, Charleston County Economic Development, State PRT, private developers, St Andrews Parks & Playgrounds, area colleges
	Near-Term	City, Charleston Digital Corridor, Lowcountry Local First, Harbor Accelerator, other technology incubators	\$\$	City of Charleston, private business partners, Charleston Digital Corridor funders
	Near-Term	City, Charleston County, Lowcountry Local First	\$\$\$	City of Charleston, Charleston County
	Near-Term	City of Charleston	\$	City of Charleston
	Near-Term	City, Charleston County, St Andrews PSD, and SCDOT	\$	City, Charleston County, St Andrews PSD, and SCDOT
	Near-Term	City, Charleston County	\$\$\$	City of Charleston, Charleston County
	Near-Term	City, Charleston County	\$	City of Charleston, Charleston County
	Near-Term	City, Charleston County Economic Development, Charleston Regional Development Alliance, Chamber of Commerce	\$	City, Charleston County Economic Development, Charleston Regional Development Alliance, Chamber of Commerce

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
94	ECONOMIC DEVELOPMENT	Encourage the redevelopment of under-used land areas.
95	ECONOMIC DEVELOPMENT	Work with property owners and help provide digital infrastructure needed to attract tech businesses.
96	ECONOMIC DEVELOPMENT	Utilize vacant shopping center space for back office projects such as call centers, which can have high employment.
97	ECONOMIC DEVELOPMENT	Work with local hospitals to explore the possibility new offices and medical facilities in West Ashley.
98	ECONOMIC DEVELOPMENT	Complete a comprehensive review of the potential existing funding sources that could be best deployed for a variety of capital projects and services (including expanded transit service) in West Ashley
99	ECONOMIC DEVELOPMENT	Investigate any funding/financing mechanisms not currently allowed by state law for which legislative changes might provide better opportunities for West Ashley
100	COMM DESIGN & LAND USE	Evaluate implementation progress at regular intervals
101	TRANSPORTATION	Complete a District-wide Traffic Management Study
102	TRANSPORTATION	Complete a District-wide School Accessibility + Circulation Study
103	GREEN INFRA & SUSTAINABILITY	Incorporate resiliency, sea level rise considerations, and adaptive design strategies into long-range infrastructure/transportation planning and policy
104	GREEN INFRA & SUSTAINABILITY	Investigate incentive programs offering tax abatements for open space preservation
105	GREEN INFRA & SUSTAINABILITY	Set a specific goal for open space preservation of remaining developable land
106	GREEN INFRA & SUSTAINABILITY	Identify and protect existing cultural and landscape assets for preservation
107	GREEN INFRA & SUSTAINABILITY	Create new neighborhood parks in underserved areas - to be determined by the Open Space, Parks, and Recreation Master Plan
108	GREEN INFRA & SUSTAINABILITY	Support evolution and implementation of the West Ashley Greenway Master Plan
109	GREEN INFRA & SUSTAINABILITY	Enhance connections between the West Ashley Greenway, Bikeway, and adjacent neighborhoods - including the Peninsula and Johns Island

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Near-Term (2 – 5 years)	City, Charleston County Economic Development, Chamber of Commerce	\$	City, Charleston County Economic Development, Chamber of Commerce
	Near-Term	City, Charleston Regional Development Alliance, Chamber of Commerce	\$	City, Charleston Regional Development Alliance, Chamber of Commerce
	Near-Term	City, Charleston County Economic Development	\$	City, Charleston County Economic Development
	Near-Term	City, Charleston County Economic Development, local hospitals	\$	City, Charleston County Economic Development, local hospitals
	Near-Term	City of Charleston	\$	City of Charleston
	Near-Term	City of Charleston	\$	City of Charleston
	Longer-Term (5 yrs–ongoing)	City of Charleston	NA	
	Longer-Term	City, Charleston County, BCDCOG	\$\$	City of Charleston, Charleston County
	Longer-Term	City, Charleston County, BCDCOG, Charleston County School District	\$\$	City of Charleston, BCDCOG, Charleston County School District
	Longer-Term	City, Charleston County, BCDCOG, SCDOT	\$	City, BCDCOG, SCDOT, FEMA
	Longer-Term	City, Charleston County	\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD
	Longer-Term	City, Charleston County Greenbelt Advisory Board	\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD
	Longer-Term	City, Charleston County, Charleston Parks Conservancy	\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD
	Longer-Term	City, Charleston County, Charleston Parks Conservancy, St Andrews Parks & Playgrounds	\$\$\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD
	Longer-Term	City, Charleston County, Charleston Parks Conservancy	\$\$\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD
	Longer-Term	City, Charleston County	\$\$\$\$	City, Charleston County, Charleston Parks Conservancy, private developers, community members, St Andrews PSD

Recommended Actions: Policies / Studies (continued)

	Plan Chapter	Description
110	HOUSING	Enhance capacity to grow income-restricted subsidized affordable housing by increasing public land purchases and pursuing development/land banking via the Community Land Trust and collaboration with third-party non-profit affordable housing developers
111	HOUSING	Complete detailed assessments of key issues, affordability needs, unique demographic and physical characteristics and appropriate housing options of individual neighborhoods
112	HOUSING	Target development and retention of mixed-income and affordable housing to locations in close proximity to community amenities and transportation
113	HOUSING	Implement land use and transportation recommendations of this report to ensure all neighborhoods enjoy equitable access to parks and public/private amenities and services
114	ECONOMIC DEVELOPMENT	Map business assets and infrastructure in West Ashley to identify areas better positioned for private investment versus areas requiring upgrades.
115	ECONOMIC DEVELOPMENT	Explore the introduction of a business license fee reduction as an incentive for investment in West Ashley
116	ECONOMIC DEVELOPMENT	Direct proceeds of the West Ashley Redevelopment Project Area and TIF District to construct supportive public improvements within the Citadel Mall area
117	ECONOMIC DEVELOPMENT	Target future capital improvement programs to the creation of additional parks and facilities
118	ECONOMIC DEVELOPMENT	Examine potential to establish additional TIF districts at mixed-use nodes and office growth locations identified in Plan West Ashley

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Longer-Term (5 yrs–ongoing)	City of Charleston, Charleston County, Charleston affordable housing community land trust	\$\$\$	City of Charleston, Charleston County, Charleston community land trust, affordable housing developers, outside private funders
	Longer-Term	City, Charleston County	\$\$	City of Charleston, Charleston County
	Longer-Term	City of Charleston, Charleston County	\$	City of Charleston, Charleston County
	Longer-Term	City of Charleston, Charleston County	\$	City of Charleston, Charleston County, Charleston County Parks and Recreation, Charleston Parks Conservancy
	Longer-Term	City, Charleston Regional Development Alliance (CRDA), Chas County Economic Dev., Chamber of Commerce	\$	City, CRDA, Charleston County Economic Development, Chamber of Commerce
	Longer-Term	City of Charleston	\$	City of Charleston
	Longer-Term	City of Charleston	\$\$\$\$	City of Charleston, private developers, grants
	Longer-Term	City of Charleston, Charleston County	\$\$\$\$	City of Charleston, Charleston County
	Longer-Term	City of Charleston	\$\$	City of Charleston, future TIF districts

Recommended Actions: Physical Improvements / Projects

	Plan Chapter	Description
119	TRANSPORTATION	Install bus stop improvements: benches, signage, shelters
120	TRANSPORTATION	Implement St. Andrews Blvd. shuttle circulator service
121	TRANSPORTATION	Conduct a data driven feasibility study to determine the viability of a private water taxi service to connect West Ashley to the Charleston peninsula. If warranted, initiate an RFP process for the water taxi provider.
122	TRANSPORTATION	Provide enhanced high visibility pedestrian and bicycle crossings on St. Andrews Blvd for the West Ashley Bikeway
123	TRANSPORTATION	Provide enhanced high visibility pedestrian and bicycle crossings on Folly Road for the West Ashley Greenway
124	TRANSPORTATION	Install crosswalks where they are missing at all signalized intersections
125	TRANSPORTATION	Evaluate the need for mid-block pedestrian crossings
126	TRANSPORTATION	Reduce speed limits and provide traffic calming on streets with a demonstrated safety problems. (Prioritize Savannah Highway, Sam Rittenberg Blvd, Old Towne, and St Andrews Blvd.)
127	TRANSPORTATION	Optimize traffic signal timing, update on annual or biannual intervals
128	GREEN INFRA & SUSTAINABILITY	Integrate neighborhood scale flood control with traditional stormwater management improvements as well as Lowcountry appropriate green infrastructure practices and undergrounding of utilities into upcoming infrastructure investments
129	GREEN INFRA & SUSTAINABILITY	Include green infrastructure and local neighborhood drainage improvements as part of the Fire Station and Memorial design
130	GREEN INFRA & SUSTAINABILITY	Perform a storm drainage system inventory (including condition assessment) and maintenance schedule with cooperation between the City, County and SCDOT. Cross train City staff to recognize and report blocked drains or other drainage issues requiring maintenance
131	GREEN INFRA & SUSTAINABILITY	Plant trees
132	COMM DESIGN & LAND USE	Enhance and beautify West Ashley gateways with appropriate signage and landscaping. Gateway entries are along Savannah Hwy, Ashley River Rd, Sam Rittenberg Blvd, Old Towne Rd, St. Andrews Blvd, and Folly Rd Blvd.
133	TRANSPORTATION	Support the installation of sidewalks and/or shared use paths throughout West Ashley along streets where sidewalks currently do not exist
134	TRANSPORTATION	Implement Charleston County 1/2 cent sales tax transportation projects

Acronyms: CIP=Capital Improvement Program
 CTC - Charleston County Transportation C funds
 TAP=Transportation Alternatives Program
 TST - transportation 1/2 cent sales tax allocation

\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Immediate (first 2 years)	CARTA, City of Charleston, private developers	\$	City of Charleston, CARTA, private sector, community partners, grants
	Immediate	CARTA, City of Charleston, private developers	\$\$	City of Charleston, CARTA, private developers
	Immediate	City, Charleston County, local marinas	\$\$	City, CARTA, major employers on peninsula, grants, private sector
	Immediate	City, Charleston County, SCDOT	\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants
	Immediate	City, Charleston County, SCDOT	\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants
	Immediate	City, Charleston County, SCDOT, community, advocacy groups	\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants
	Immediate	City, Charleston County, SCDOT	\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants
	Immediate	City, Charleston County, SCDOT	\$	City, Charleston County, SCDOT
	Immediate	City, Charleston County, SCDOT	\$	City, Charleston County, SCDOT
	Immediate	City, Charleston County	\$\$	City, Charleston County
	Immediate	City of Charleston	\$\$	City of Charleston
	Immediate	City, Charleston County, SCDOT, St Andrews PSD	\$	City, Charleston County, SCDOT
	Immediate	City, Charleston County, private developers, community, neighborhood org	\$\$	City, sales tax, County Tree Fund, grants, grand tree mitigation fund, street tree fund, private developers, community partners, advocacy groups, neighborhood org, St Andrews PSD
	Near-Term (2 – 5 years)	City, TIF, community partnerships, street tree fund	\$\$+	City, TIF, community partnerships, street tree fund
	Near-Term	City, Charleston County, SCDOT	\$\$+	City, Charleston County, SCDOT, grants
	Near-Term	City, Charleston County, SCDOT	\$\$+	Sales tax

Recommended Actions: Physical Improvements / Projects (continued)

	Plan Chapter	Description
135	TRANSPORTATION	Pedestrian/Bike Crossing: West Ashley Greenway at Ashley River (Bridge - Adjacent, cantilevered, or standalone)
136	TRANSPORTATION	Sam Rittenberg Blvd at Old Towne Road Intersection Improvements
137	TRANSPORTATION	Reduce headways on CARTA routes
138	TRANSPORTATION	Install Shared Use Paths on major roadways (including US 17, Sam Rittenberg, Old Towne, St Andrews Blvd, Ashley River Rd, Glenn McConnell Pkwy, and Bees Ferry Rd)
139	TRANSPORTATION	Connect West Ashley Greenway to West Ashley Bikeway at Wappoo Rd
140	TRANSPORTATION	Citadel Mall Transit Improvements/Mobility Hub
141	TRANSPORTATION	West Ashley Circle Transit Improvements/Mobility Hub
142	TRANSPORTATION	Implement express bus service to Boeing/Airport/Leeds Avenue
143	TRANSPORTATION	Implement a pedestrian/bike scale destination based wayfinding system
144	TRANSPORTATION	Implement Access Management strategies/close excess curb cuts and install landscape medians
145	TRANSPORTATION	Install adaptive controls for real-time adjustments to traffic signal timing
146	TRANSPORTATION	Reconfigure intersection of 5th Avenue at St Andrews Blvd
147	TRANSPORTATION	Provide Canal Walk Pedestrian/Bike Crossover of Tiger Swamp
148	GREEN INFRA & SUSTAINABILITY	Implement flood control and drainage improvements with traditional stormwater management techniques coupled with green infrastructure practices
149	GREEN INFRA & SUSTAINABILITY	Partner with the Citadel Mall to construct pilot Green Infrastructure improvements
150	GREEN INFRA & SUSTAINABILITY	Incorporate “Water Smart Park” concepts into the next park construction or retrofit as a pilot
151	GREEN INFRA & SUSTAINABILITY	Increase wetland preservation/restoration and floodplain management as part of West Ashley Circle development
152	GREEN INFRA & SUSTAINABILITY	Implement the findings of the Church Creek and Du/Wap Drainage Studies
153	GREEN INFRA & SUSTAINABILITY	Implement a green infrastructure retrofit into an existing West Ashley street

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\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

	Time frame	Responsible Party	Cost (approx)	Potential Funding Source
	Near-Term (2 – 5 years)	City, Charleston County, SCDOT	\$\$+	City, Charleston County, TST, CTC, TAP, SCDOT, grants, TIGER grant, advocacy groups
	Near-Term	City, Charleston County, SCDOT	\$\$\$	Sales tax, TAP, CIP, private developers, West Ashley TIF
	Near-Term	CARTA	\$\$	CARTA
	Near-Term	City, Charleston County, SCDOT	\$\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants, TIF, CIP, sales tax, private developers
	Near-Term	City of Charleston, private developers	\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants
	Near-Term	CARTA, City of Charleston, private developers	\$\$	CARTA, City of Charleston, private developers, TIF, grants, partnerships with major employers
	Near-Term	CARTA, City of Charleston, private developers	\$\$	CARTA, City of Charleston, private developers, TIF, grants, partnerships with major employers
	Near-Term	CARTA, City of Charleston, private developers	\$\$	CARTA, City of Charleston, private developers, TIF, grants, partnerships with major employers
	Near-Term	City, Charleston County	\$\$	City, Charleston County, TST, CTC, TAP, BCDCOG, grants
	Near-Term	City, Charleston County, SCDOT	\$\$	City of Charleston, Charleston County, SCDOT, private developers
	Near-Term	City, Charleston County, SCDOT	\$\$	Charleston County, SCDOT
	Near-Term	City, Charleston County, SCDOT	\$\$	City, Charleston County, TST, CTC, TAP, BCDCOG, grants
	Near-Term	City, Charleston County, private developers	\$\$	City, Charleston County, grants, private developers
	Near-Term	City, Charleston County, SCDOT, private developers	\$\$\$+	City, Charleston County, private developers
	Near-Term	City, private developers	\$\$	City, private developers, TIF, grants, CTC, TST, drainage funds
	Near-Term	City, private developers, advocacy non-profits	\$\$	City, private developers, sales tax
	Near-Term	City, Charleston County, private developers, land trusts	\$\$\$	City, Charleston County, BCDCOG, private developers, sales tax, land trusts
	Near-Term	City, Charleston County, SCDOT, community	\$\$\$	City, Charleston County, SCDOT, community, private developers
	Near-Term	City of Charleston	\$\$\$	City, sales tax

Recommended Actions: Physical Improvements / Projects (continued)

	Plan Chapter	Description
154	GREEN INFRA & SUSTAINABILITY	Plant more trees
155	COMM DESIGN & LAND USE	Add streetscaping (landscaping, appropriately scaled lighting, sidewalks, curb and gutter, mast arms, etc.) along key commercial corridors such as Savannah Hwy, Sam Rittenberg Blvd, Folly Rd, Old Towne Rd, St. Andrews Blvd, Ashley River Rd.
156	TRANSPORTATION	I-526 Completion
157	TRANSPORTATION	Glenn McConnell Parkway Extension
158	TRANSPORTATION	Glenn McConnell Parkway Widening + Shared Use Path
159	TRANSPORTATION	Intersection improvements at Sam Rittenberg Boulevard/Ashley River Road, Savannah Highway/Carolina Bay Drive, and Ashley River Road/St. Andrews Boulevard and Old Towne Road to resolve vehicle operational and safety issues while enhancing the ability of the intersections to accommodate pedestrians and cyclists
160	TRANSPORTATION	Support the installation of sidewalks and/or shared use paths throughout West Ashley along streets where sidewalks currently do not exist
161	GREEN INFRA & SUSTAINABILITY	Partner with the Citadel Mall to construct pilot depaving, wetlands enhancement, and floodplain improvements
162	GREEN INFRA & SUSTAINABILITY	Fund undergrounding of overhead utilities as part of redevelopment and streetscape improvements
163	GREEN INFRA & SUSTAINABILITY	Build a "Water Smart Park" with green infrastructure as part of Circle neighborhood development
164	GREEN INFRA & SUSTAINABILITY	Pursue the "Tiger Swamp Canal Walk" as part of neighborhood scale Citadel Mall, Sam Rittenberg, and I-526 extension transportation planning and drainage infrastructure improvements
165	GREEN INFRA & SUSTAINABILITY	Plant more trees
166	ECONOMIC DEVELOPMENT	Provide convenient pedestrian, bicycle, and automobile access between housing and shopping opportunities in outer West Ashley

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\$ Under \$200,000
 \$\$ \$200,000-\$999,999
 \$\$\$ \$1,000,000-\$4,999,999
 \$\$\$\$ \$5,000,000-\$9,999,999
 \$\$\$\$\$ \$10,000,000 and over

Time frame	Responsible Party	Cost (approx)	Potential Funding Source
Near-Term (2 – 5 years)	City, BCDCOG, private developers	\$\$	City, sales tax, BCDCOG, County Tree Fund, grants, grand tree mitigation fund, street tree fund, private developers, community partners, advocacy groups, neighborhood org, St Andrews PSD
Longer-Term (5 yrs–ongoing)	City, Charleston County, SCDOT	\$\$\$+	SCDOT, Charleston County, sales tax
Longer-Term	City, Charleston County, SCDOT, State Infrastructure Bank	\$\$\$\$S	SCDOT, Charleston County, sales tax, State Infrastructure Bank
Longer-Term	City, Charleston County, private developers	SSSS	SCDOT, Charleston County, sales tax
Longer-Term	City, Charleston County, SCDOT	SSSS	SCDOT, Charleston County, sales tax
Longer-Term	City, Charleston County, SCDOT	\$\$\$\$+	City, Charleston County, SCDOT, TST, CTC, TAP, sales tax, grants, TIF
Longer-Term	City, Charleston County, SCDOT	\$\$+	City, Charleston County, SCDOT, grants
Longer-Term	City, private developers, advocacy non-profits	\$\$\$	City, private developers, TIF, grants
Longer-Term	City, SCE&G	\$\$\$	City, private developers, SCE&G, sales tax, TIF, Business Improvement District, development fund (in-lieu of), community partners, other utility providers
Longer-Term	City, Charleston County, private developers	\$\$\$	City, private developers, sales tax
Longer-Term	City, Charleston County, SCDOT	\$\$\$\$	BCDCOG, City, SCDOT, private developers, TIF, grants
Longer-Term	City, Charleston County, BCDCOG, private developers	\$\$	City, Sales Tax, BCDCOG, County Tree Fund
Longer-Term	City, Charleston County	\$\$\$\$	City, Charleston County, TST, CTC, TAP, SCDOT, grants, grand tree mitigation fund, street tree fund, private developers, community partners, advocacy groups, neighborhood org, St Andrews PSD

