ROADWAY CONNECTIVITY

A common challenge in designing successful transportation systems is to improve connectivity and access while also preserving natural features and the unique character of the many towns and diverse cultures of the people. The CHATS planning area is no exception. Neighborhoods and smaller communities within the area may have many needs and priorities that are unique from one another. While recognizing these differences, it is important to not lose focus of the practical concept of overall connectivity. This concept is particularly relevant as it relates to people's desires to make safe and efficient trips not only by driving but also by walking, bicycling, or using public transportation.

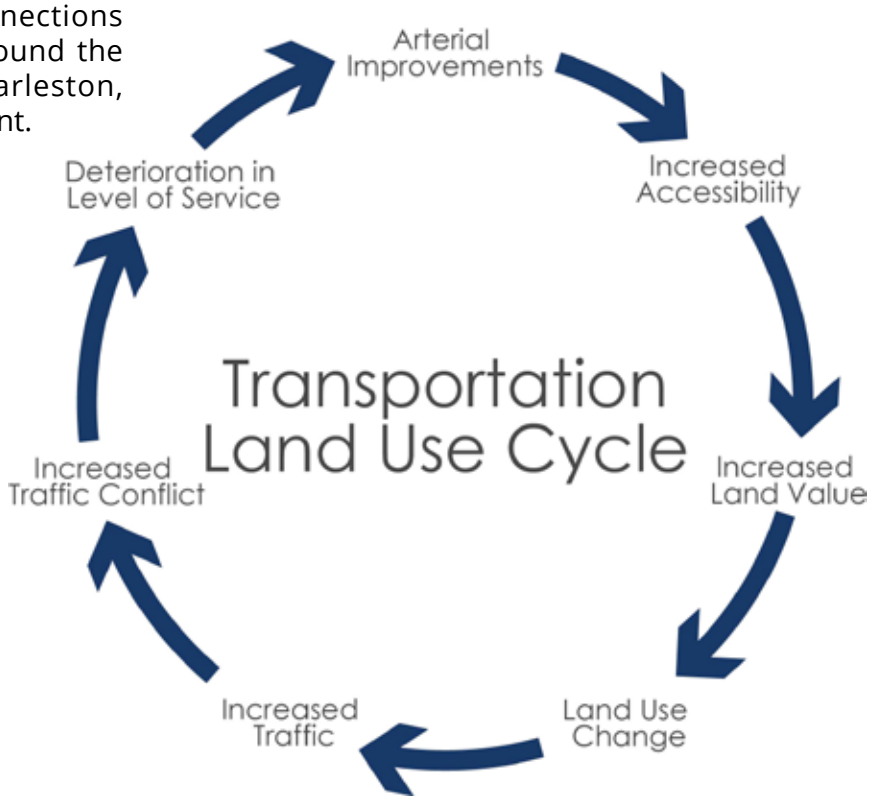
roadway connectivity

Development patterns were historically shaped by the transportation modes available at the time. Historic Charles Town developed around the Cooper, Stono, Ashley and Wando Rivers because of the opportunity for easy movement of goods and people with a robust port access. As the port grew with shipping and industry, a network of roadways and eventually rail lines developed gradually over time. Residential areas also grew outward from the Peninsula and coast which placed a greater emphasis on regional mobility.

The CHATS planning area is challenged with connectivity of the roadway system with its 370 miles of linear waterfront and 30% of its land mass being covered by wetlands or floodplains, creating limitations for supporting healthy connectivity. Due to the physical limitations, creating an interconnected network of streets and highways is often impossible in certain subsections of the planning area. The existing network is challenged in providing efficient travel options to destinations across the rivers and to overland connections between different economic centers around the region such as Charleston, North Charleston, Summerville, Daniel Island, and Mt Pleasant.

Every opportunity to construct, protect and enhance the street system must be a priority. The Roadway Element of the CHATS 2045 Long Range Transportation Plan documents the proposed roadway recommendations within the planning area.

As residential, commercial, and industrial growth occurs within the region and more vehicles take to the road, roadway improvements are needed to reduce traffic congestion and improve safety. These roadway improvements often enhance access, thus raising land values and attracting more development. The circular diagram below illustrates this continuing cycle of influence between land use and transportation.



Often neighborhoods and activity centers rely on a smaller number of transportation corridors to provide essential links. Enhanced connectivity and access management must be a priority to protect key mobility corridors.

Through a critical evaluation of public commentary and observation, it became evident that transportation issues within the CHATS planning area are divided between the problems within the region and those within each community. Within the communities, issues related to poor bicycle and pedestrian mobility and intersection safety treatments were most prevalent. However, at the regional level, concerns relative to lack of connectivity, poor access management and peak hour congestion were dominant. No one issue was more prevalent than the need to address regional peak hour congestion. In fact, the Texas Transportation Institute estimated in 2019 that commuters in the Charleston region lose 58 hours annually due to congestion, comparable to the national average of 54 lost hours.

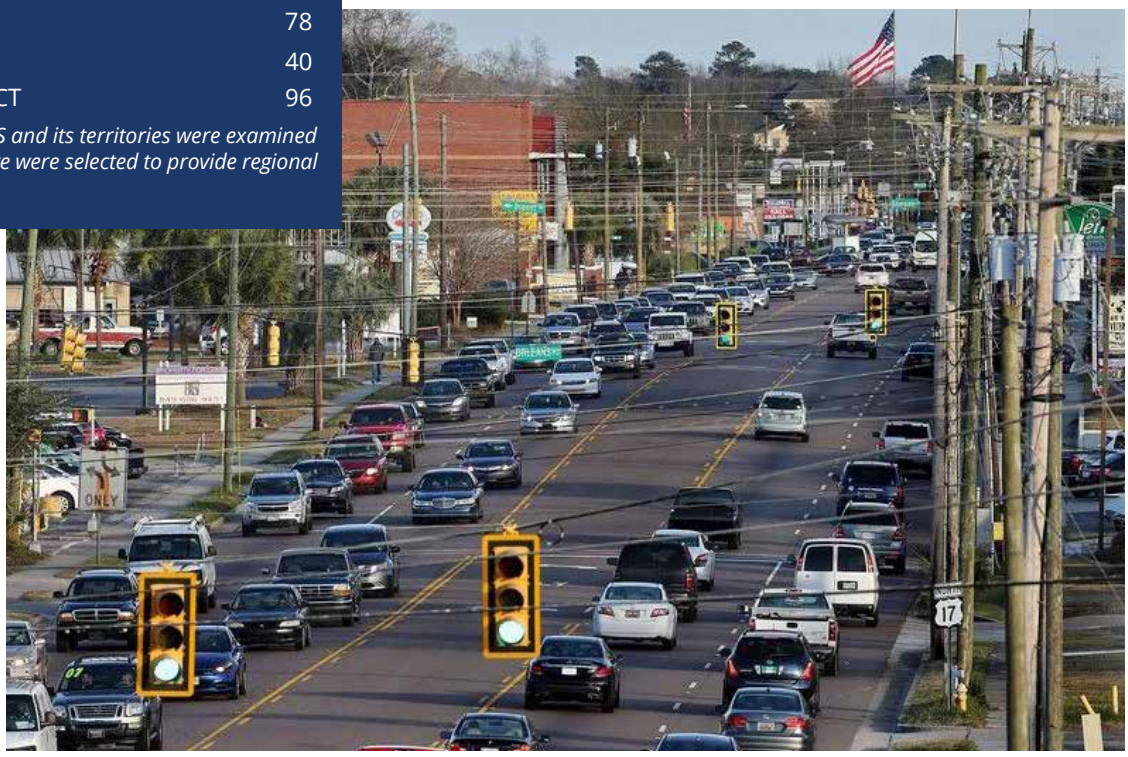
To address the most common concerns brought up by the public - traffic congestion and safety, as well as better connections for biking, walking, transit, and automobiles - several over-arching strategies or themes are proposed. These strategies work much better when they are implemented together: each tends to reinforce the other in a "virtuous circle" of improvements.

Average Yearly Delay in hours (2019)	54
Charleston-North Charleston, SC	58
Columbia, SC	44
Atlanta, GA	78
Raleigh, NC	40
New York-Newark, NY-NJ-CT	96

Note: 494 urban areas in the US and its territories were examined in this study, the cities listed here were selected to provide regional comparison.

Increase Capacity – *"Build the Road"*

Additional capacity, through the construction of more lanes and/or more roads, may seem like the obvious solution to congestion. In isolation, such as the case with limited-access freeways and Interstates, this approach may make the most sense (although it is often prohibitively costly to implement). However, in real-world communities, the advantages of bigger roads must be weighed against needs beyond short-term congestion relief, as increased capacity is quickly filled in any growing region. Trade-offs can include right-of-way/private property acquisitions, disruption due to construction, damage to streams, and impacts to appearance and aesthetics. While this last category is less tangible, its impact is felt keenly in communities that have lost, or given away, a sense of place, economic vitality, and historic character in exchange for temporary traffic relief. Improvements should also consider other road users. Freight improvements (on major truck routes) should consider intersection design and pavement depth and width. Where appropriate, complete streets should be created to accommodate all modes of travel including pedestrians, cyclists, and transit patrons.



Savannah Highway in West Ashley. Source: Post and Courier

Multi-modal Integration – "Complete the Street"

Within the past decade, there has been a national rise in interest for creating "complete streets" within existing roadway networks. A complete street, as defined by the National Complete Streets Coalition, enables all users inclusive of pedestrians, bicyclists, motorists and transit riders of all ages and abilities to safely move along and cross a street. Primarily, roadways with lower speeds and greater access points (local streets and collectors) provide opportunities for developing complete streets; however, all functional classifications are eligible for some combination of multi-modal users, even if only for motorists and regional transit (expressways and freeways). Promoting connectivity through street extensions, streetscaping, and multi-modal, safer intersection and street design will continue to improve on critical options to offer relief (and health) to more people in the CHATS planning area.

A bonus is that more people and businesses are favoring "walkable" communities - as are older populations. During the needs assessment and recommendations portion of this study, multi-modal options and opportunities for complete streets were explored and included within the CHATS planning area.

Manage Access – "Preserving Precious Road Capacity"

Regardless of how many new roads are built, the benefits don't last long if access to them isn't managed. Driveway spacing standards, left-turn controls (e.g., with medians), and cross-access requirements are key elements of an access management policy. Generally, no roadway should be constructed without strong access management controls in place. This practice can, if implemented consistently and fairly, preserve accessibility to existing businesses, accommodate traffic from future businesses, and grow fiscal revenues without incurring downstream costs for major roadway improvements.

An example of how an existing street (below) could be redesigned with access management, driveway consolidation, and pedestrian infrastructure (left).

Policy and Land Use Integration – "Controlling the Demand side of the Equation"

Ultimately, congestion compromises any roadway if more development and travelers are added to the network than it can handle. Land use and development should respond to known constraints and help pay for future improvements. This practice of balancing infrastructure capacity with the development types and quantities that create demand is called concurrency planning. Across many planning initiatives public feedback has requested measures along these lines, often citing the need to slow or halt development until the infrastructure can "catch up" with the existing or future needs.

Balance between economic development and traffic can be challenging, but is crucial to the vitality of a community. In fact, places with traffic congestion are often successful economically. Ghost towns in the midwest have no traffic, but not much else either. Land should be developed in a way that is reasonable in the context of other existing uses and roadway capacity. Local plans and ordinances should support development where appropriate, while ensuring new development contributes to infrastructure when needed. A well-planned community can be "development friendly" while respecting the needs of existing residents and businesses.

Creating a permanent dialogue with the public is the best way to continuously "plan-do-check-act" the roles, strategies, and effectiveness of land-transportation partnerships. Part of that dialogue should be understanding how to create transit- and walk-supportive densities through design: auxiliary units, rear alley-loading, and a variety of attached townhomes can accomplish this objective near the developing downtown core areas within the region.

Connectivity – "Collector Streets Connect People"

Street connectivity provides travelers, whether by car, bicycle or by foot, opportunities for trip-making through multiple route options. It provides better opportunities for emergency response vehicles as well as evacuation routing. However, street connectivity within most of the region is inadequate due to natural and man-made barriers and past development patterns. For this reason, it is important to seize any opportunity for a new street or greenway connection when one presents itself.

Some projects listed herein are already under development; others would be financed by either or both public and private sector sources. For example, smaller connector streets can occur concurrent with private development, where applicable. However, these connector streets are intentionally narrow (two lanes), curvaceous (to self-enforce slower speeds), and indirect (to accomplish movement of all types within an area) to reduce cut-through traffic volumes while promoting walking, biking, and low-speed automobile travel.

Examples of development: The Washington Beech Housing Development (above) is a Hope XI project in Boston features 206 affordable units and a half acre park. The Milwaukee Reed Street Yards development (left) is a recent example of an eco-industrial neighborhood that manages water more efficiently and integrates low impact development and stormwater BMPs.

Purpose

Provide relevant direction for improving freight transportation through project, program and policy recommendations

freight recommendations

The 2040 CHATS LRTP called for development of a comprehensive freight plan (or expanded LRTP chapter) as the number one priority for freight transportation in the region. The BCD Regional Freight Plan document prepared in 2021 provides a comprehensive listing of recommendations which can be categorized by a mix of project, policy and programmatic initiatives. In total there are 35 project recommendations, 21 policy recommendations, and 13 program recommendations.

Project Recommendations

Major freight project recommendations seek to improve the safety and performance of the freight network through a mix of approaches from infrastructure improvements such design upgrades to intersections and interchanges or urban design considerations to better accommodate freight, roadway realignments, implementation of corridor signal optimization to improve corridor mobility, safety improvements, technology solutions and future studies.

In total there are 35 projects falling under eight general categories:

Some near- and mid-term project recommendations include:

1. Development of corridor and/or sub-area land use studies for major freight corridors like Ashley Phosphate Rd, Dorchester Rd, Remount Rd, SC-165/Givhans Rd and sites such as the Ridgeville Industrial area, Clements Ferry Rd sub-area, Airport District sub-area, and Downtown Charleston sub-area

2. Develop or update design criteria or guidelines to include freight accommodations or considerations in site designs such as Park & Ride facilities, and complete streets implementation

3. Intersection or interchange improvements at Dorchester Rd and Cosgrove Ave, N. Rhett and Yeamans Hall Rd, and I-526 and Paul Cantrell Blvd

4. Corridor improvements along Ashley Phosphate Rd, Morrison Ave, and Sam Rittenburg Blvd

5. Smart Technology Corridor studies for I-26 and I-526

Policy and Programmatic Recommendations:
Policies and programs are not one-time infrastructure improvements like recommended projects or standalone studies, but rather address broader, systemic courses of action. **Major policy** recommendations identified through the planning process include items such as:

1. Adoption of Urban Design Criteria Policy for Roadways on the Freight Network

2. Retirement of Aging Heavy-Duty Vehicles and Rail Equipment

3. Inspection and Maintenance of Vehicles

4. Design Criteria Policy for all transportation improvements on the regional freight network

5. Staggering Shifts at Industrial Facilities and Promote Travel Demand Management Options for Employees

6. Integrating Truck Parking Requirements in Land Use Plans

7. Collaborating with Local Jurisdictions to Adopt Access Management Policies

8. Identify Vacant Properties or Underutilized Sites for Truck Parking

9. Assess Mode Shift Options

10. Close Highway Rail Crossings

11. Assess Areas for Quiet Zone Designations

12. Identify Trespassing Hot Spots

13. Conduct Assessment of Areas Disproportionately Impacted by Rail Operations

Major program recommendations identified through the planning process include items such as:

1. Ramp Metering Pilot Program (I-26 at Ashley Phosphate Road)

2. Urban Delivery Pilot Program

3. Education Outreach

4. Implement Incident Management Performance Measure

5. Additions to SCDOT Rural Safety Program

6. Explore facilitation of regional smart parking and/or scheduling program

7. Identify local process for review and improvement of at-grade rail crossings

8. Prepare Urban Truck Platooning Pilot Project

9. Partner with SCDOT and ACOG for statewide truck parking communications system

roadway projects

Committed roadway improvement projects are identified as any roadway project located within the CHATS planning area that is under construction, completely programmed or partially funded. The committed roadway projects provided in Table 4-1 were considered to establish the baseline Existing plus Committed (E+C) condition, which was used to evaluate the new vision projects identified through the LRTP update process. The committed projects listed below have not been evaluated or ranked in this current planning process, but are retained in the LRTP 2045 update for informational purposes.

Table 4-1: Current committed roadway improvement projects

Represents Mid-Block Capacity Enhancement and New Facility Projects Only

ID	Improvement	Roadway Name	Project Category	Potential Laneage	Delimits	Estimated Cost (1000s)	Funding Source(s)
BERKELEY COUNTY							
C-01	MIDBLOCK	Clements Ferry Road (Phase 2)	Capacity Enhancement	4-Lane Divided	Jack Primus Road to SC-41	$64,000	Fed, TST
C-03a		Henry Brown Boulevard	Capacity Enhancement	2-Lane Divided	Liberty Hall Road to Montague Plantation Road	$23,000	TST
C-03b		Montague Plantation Road	Capacity Enhancement	4-Lane Divided	Henry Brown Boulevard to US-52		
C-24*		N. Cedar Street Extension	New Roadway	2-Lane Undivided	W. 9th N. Street to Berkeley Circle	$6,423	Local, TST
C-04		Interstate-26	Capacity Enhancement	6-Lane Divided	Ridgeville Road (SC-27) to Jedburg Road	$320,000	Fed, State, TST
C-05a		US-176 / State Road (Phase 1)	Capacity Enhancement	4-Lane Divided	US-17A to Nexton Parkway	$53,000	TST
C-05b		US-176 / State Road (Phase 2)	Capacity Enhancement	4-Lane Divided	Nexton Parkway to Jedburg Road / Cooper Store Road	- NA -	TST
C-29		Cypress Gardens Road	Capacity Enhancement	2-Lane Divided	US-52 to Plantation Grove Boulevard	- NA -	- NA -
C-30		Old Mount Holly Road	Capacity Enhancement	4-Lane Divided	US-176 to US-52	- NA -	- NA -
I-01	INTERSECTION	Black Tom Road & Black Tom Road Extension	Intx Improvement	-	-	- NA -	TST
I-02		Cooper Store Road & Black Tom Road Extension	Intx Improvement	-	-	- NA -	TST
I-03		River Landing Drive & Seven Farms Drive	Intx Improvement	-	-	- NA -	TST
I-04		Royle Road & Farmington Road / Treeland Drive	Intx Improvement	-	-	- NA -	TST
I-05		Snake Road & NAD / Goose Creek Road	Intx Improvement	-	-	- NA -	TST
I-06		Tanner Ford Boulevard & Tanner Hall Boulevard	Intx Improvement	-	-	- NA -	TST
I-07		US-52 / Rembert C. Dennis Boulevard & Old Highway 52	Intx Improvement	-	-	- NA -	TST
I-08		US-52 & Old Highway 52 / Old Fort Road	Intx Improvement	-	-	- NA -	TST
I-09		US-52 & Stephanie Drive / Windsor Mill Road	Intx Improvement	-	-	- NA -	TST

Table 4-1: Current committed roadway improvement projects (cont.)

ID	Improvement	Roadway Name	Project Category	Potential Laneage	Delimits	Estimated Cost (1000s)	Funding Source(s)
CHARLESTON COUNTY							
C-06a		All American Boulevard (Phase 1)	New Roadway	2-Lane Undivided	Laurel Park Trail to Life Park Church (George Browder Blvd.)	$5,365	Local
C-06b		All American Boulevard (Phase 2)	New Roadway	2-Lane Undivided	Life Park Church (George Browder Blvd.) to Park West Blvd.		
C-07		Airport Connector Road	New Roadway	4- Lane Divided	W. Montague Avenue to Michaux Parkway to Terminal	$144,000	Fed, State, Local
C-08		Billy Swails Boulevard (Phase 4B)	New Roadway	2-Lane Divided	Six Mile Road to Hamlin Road	$14,569	Fed, Local
C-09		Dorchester Road	Capacity Enhancement	6-Lane Divided	Michaux Parkway to County Line (Patriot Boulevard)	$71,000	TST
C-10		Glenn McConnell Parkway	Capacity Enhancement	6-Lane Divided	Bees Ferry Road to Rutherford Way	$25,000	TST
C-11		Interstate-26	Capacity Enhancement	8-/10-Lane Divided	Port Access Road Interchange to I-526 Interchange	- NA -	- NA -
C-12a		Interstate-526	Capacity Enhancement	6-/8-Lane Divided	Rivers Avenue to US-17 / Bowman Road	$4,000,000	Fed, State
C-12b		I-526 & Long Point Road Interchange	Redesign X'change	1-/2-Lane Ramps	-	$165,000	Fed, State
C-12c		I-526 - Wando W. Terminal Access Road Interchange	New X'change	1-/2-Lane Ramps	-	$200,000	Fed, State
C-12d		Wando W. Terminal Access Road	New Roadway	4- Lane Divided	I-526 to Long Point Road (Terminal Access)		
C-12e		Long Point Road	Realign Roadway	4- Lane Divided	Hidden Boulevard to Wando W. Terminal Access Road		
C-12f		Long Point Road	Removal	Not Applicable	Hidden Boulevard to Terminal Access		
C-13a	MIDBLOCK	Interstate-526	Capacity Enhancement	6-/8-Lane Divided	Paul Cantrell Boulevard to Virginia Avenue	$3,000,000	Fed, State
C-13b		I-26 & I-526 Interchange	Redesign X'change	(To Be Determined)	-		
C-13c		I-526 & Rivers Avenue Interchange	Redesign X'change	(To Be Determined)	-		
C-13d		I-526 & International Boulevard Interchange	Redesign X'change	(To Be Determined)	-		
C-13e		I-526 & Montague Avenue Interchange	Redesign X'change	(To Be Determined)	-		
C-13f		I-526 & Dorchester Road / Paramount Drive Interchange	Redesign X'change	(To Be Determined)	-		
C-13g		I-526 & Paul Cantrell Boulevard Interchange	Redesign X'change	(To Be Determined)	-		
C-14a		Main Road (Segment A)	Capacity Enhancement	4-Lane Divided	Bees Ferry Road to River Road	$195,000	TST
C-14b		Main Road (Segment A)	New X'change	1-Lane Ramps	US-17 and Main Road Intersection		
C-14c		Main Road (Segment B)	Capacity Enhancement	4-Lane Divided	River Road (North Loop) to Maybank Highway		
C-14d		Bohicket Road (Segment C)	Capacity Enhancement	4-Lane Divided	Maybank Highway to River Road (South Loop)		
C-15a		Mark Clark Extension (MCX)	New Roadway	4-Lane Divided	Savannah Highway/US-17 to Folly Road	$2,350,000	TST, SIB
C-15b		Mark Clark Extension & US-17 Interchange	New X'change	1-Lane Ramps	I-526 & US-17/Savannah Highway Interchange		
C-15c		Mark Clark Connector Road (North)	New Roadway	2-Lane Divided	Mark Clark Expressway Extension to River Road		
C-15d		Mark Clark Connector Road (South)	New Roadway	2-Lane Divided	Mark Clark Expressway Extension to River Road		
C-16		Maybank Highway North Pitchfork	New Roadway	2-Lane Divided	Maybank Highway to River Road		

Table 4-1: Current committed roadway improvement projects (cont.)

ID	Improvement	Roadway Name	Project Category	Potential Laneage	Delimits	Estimated Cost (1000s)	Funding Source(s)
C-17	MIDBLOCK	Northside Drive	Realign Roadway	4-Lane Divided	(Tie in to Spa Road; Realignment plan to be determined)	- NA -	- NA -
C-18		Palmetto Commerce Parkway (Phase 3)	New Roadway	4-Lane Divided	Ashley Phosphate Road to International Boulevard	$168,000	State, Local, TST
C-19a		SC-41	Capacity Enhancement	4-Lane Divided	Nautical Lane to Dunes West Boulevard	$185,000	TST, SIB
C-19b		SC-41	Capacity Enhancement	2-Lane Divided	Dunes West Boulevard to Bessemer Road		
C-19c		SC-41	Capacity Enhancement	4-Lane Divided	Bessemer Road to US-17		
C-19d		Laurel Hill Parkway	New Roadway	2-Lane Undivided	Park West Boulevard to SC-41		
C-19e		Dumont Drive Extension	New Roadway	2-Lane Undivided	Bessemer Road to Laurel Hill Parkway		
C-19f		Gregory Ferry Connector	New Roadway	2-Lane Divided	Winnowing Way to SC-41		
C-19g		Winnowing Way	Capacity Enhancement	3-/4-Lane Divided	SC-41 to Winnowing Way Extension		
C-19h		Winnowing Way Extension	New Roadway	3-Lane Divided	Winnowing Way to SC-41		
C-20a		Cosgrove Avenue Overpass	New Roadway	2-Lane Undivided	Spruill Avenue to McMillan Avenue	$52,533	State
C-20b		McMillan Avenue	Removal	Not Applicable	St. Johns Avenue to Cosgrove Avenue Overpass		
C-20c		St. Johns Avenue	Realign Roadway	2-Lane Undivided	-		
C-21a		US-78 / University Boulevard	Capacity Enhancement	6-Lane Divided	County Line (Ladson Road) to US-52 (Rivers Avenue)	- NA -	TST
C-22a		I-26 & PCP (Weber Drive) Interchange	New X'change	1-Lane Ramps	-	$52,000	TST, Local
C-22b		Weber Drive (PCP) Extension	New Roadway	2-Lane Divided	Ingleside Boulevard to I-26 Interchange		
DORCHESTER COUNTY							
C-23	MIDBLOCK	Berlin Myers Parkway Extension	New Roadway	4-Lane Divided	US-17A to Old Trolley Road	$137,000	SIB, Local
C-24*		N. Cedar Street Extension	New Roadway	2-Lane Undivided	W. 9th N. Street to Berkeley Circle	$6,423	Local, TST
C-25a		North Maple Street	Capacity Enhancement	2-lane Divided	W. Richardson Road to Old Dairy Road	$22,100	Local, TST
C-25b		Parsons Road	Realign Roadway	2-Lane Undivided	US-78 to Linning Road		
C-26		SC-27 / Ridgeville Road	Capacity Enhancement	4-Lane Divided	I-26 to US-78	$10,590	Local
C-27		Orangeburg Road	Capacity Enhancement	4-Lane Divided	Dorchester Road to Mallard Road	$180,403	TST
C-28a		US-78 (Phase 3A)	Capacity Enhancement	4-Lane Divided	Orangeburg Road to Richardson Avenue	$55,170	Federal, SIB
C-28b		US-78 (Phase 3B)	Capacity Enhancement	4-Lane Divided	Richardson Avenue to Berlin G. Myers Parkway	$45,550	SIB
C-31		US-17A / Boone Hill Road	Capacity Enhancement	4-Lane Divided	Greenwave Boulevard to Long Savannah Access Road	$177,118	TST
C-32		Central Avenue	Capacity Enhancement	4-Lane Divided	Orangeburg Road to Parsons Road	$30,485	TST
C-33a		Delemar Highway / SC-165	Capacity Enhancement	4-Lane Divided	Ashley Ridge H. School to Long Savannah Access Road	$90,746	TST
C-33b		Delemar Highway / SC-165	Capacity Enhancement	4-Lane Divided	Long Savannah Access Road to Clubhouse Road		
C-34		Dorchester Road	Capacity Enhancement	6-Lane Divided	Charleston County Line to Old Trolley Road	$119,327	TST
C-35		Mallard Road	Capacity Enhancement	4-Lane Divided	Orangeburg Road to US-78	- NA -	TST
C-36		Miles Jamison Road	Capacity Enhancement	2-Lane Divided	Old Trolley Road to Ladson Road	$72,130	TST
C-37		Parsons Road	Capacity Enhancement	2-/4-Lane Divided	W. Richardson Avenue to Central Avenue	$17,267	TST
C-38		Patriot Boulevard	Capacity Enhancement	4-Lane Divided	Palmetto Commerce Parkway to Club Course Drive	$29,916	TST
C-39		Wescott Boulevard	Capacity Enhancement	4-Lane Divided	Patriot Boulevard to Ballantine Drive	$9,507	TST
C-40		Wright Road	Capacity Enhancement	4-Lane Divided	Old Beech Hill Road to SC-61	$51,018	TST

Table 4-1: Current committed roadway improvement projects (cont.)

ID	Improvement	Roadway Name	Project Category	Potential Laneage	Delimits	Estimated Cost (1000s)	Funding Source(s)
I-10	INTERSECTION	Ladson Road & Wallace Ackerman Drive	Intx Improvement	-	-	$625	TST
I-11		US-17A / Main Street	Intx Improvement	-	US-78 to Carolina Avenue	$30,892	TST
I-12		US-15 (St. George)	Intx Improvement	-	Connelly Hayes Road to Cloverleaf Drive	$15,829	TST
I-13		US-78 (St. George)	Intx Improvement	-	Winding Wood Road to Academy Road	$12,827	TST
I-14		William Canady Road	Intx Improvement	-	-	$2,127	TST
I-15		Various Locations (TBD)	Intx Improvement	-	-	$50,000	- NA -

TST - Transportation Sales Tax; SIB - SC Transportation Infrastructure Bank; Intx - Intersection

** Project straddles county line*

Committed Transit Projects

The Lowcountry Rapid Transit (LCRT) project has identified funding from the most recently approved 2016 Charleston County half-cent transportation sales tax referendum. Revenue from this additional sales tax will fund various transportation related projects, including mass transit. In 2022 the LCRT project recieived approval from the FTA to enter into the New Starts Engineering phase of work of the FTA's Capital Investment Grants Program, and is thus indentified as the only committed transit project. Table 4-2 provides additional detail of the LCRT project including its estimated cost. The Public Transportation section of this plan provides more detailed information on the other candidate transit projects identified.

Table 4-2: Committed Transit Projects

Project	Project Type/Mode	Estimated Cost	Limits
Lowcountry Rapid Transit (LCRT) Project	High Capacity Rapid Transit (BRT)	$625,000,000	Bus Rapid Transit on US 78/US 52/Rivers Avenue Corridor

Candidate Roadway Projects

The following maps highlight the candidate ***roadway enhancement*** and ***corridor study*** identified for evaluation for the CHATS planning area. These recommendations encompass adding capacity to existing facilities, building new roadway facilities, and corridor studies. Approximately 70 miles of capacity enhancements to existing facilities, 66 miles of new roadway facilities, and 25 miles of additional improvements and studies are included in the list of projects developed. The associated table provides additional detail of each project including its estimated planning level construction cost.

Map 4-1: Roadway Capacity Enhancement and Corridor Study Projects

Table 4-3: Roadway Capacity Enhancement and Corridor Study Projects for Berkeley County

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-05	Clements Ferry Road	I-526 Interchange to St. Thomas Island Drive	4 (D)	$3,420
L-06	Old Highway 52 / Old Fort Road	US-52 to Cypress Gardens Road	4 (D)	$77,192
L-07	US-17A / North Main Street	I-26 Interchange to Berlin Myers Parkway (Eastbound Only)	4 (D) (EB)	$10,701
L-23	College Park Road Extension	College Park Road to Nexton Parkway	2 (U)	$26,640
L-24a	Frontage Road (Pseudonym)	Marymeade Drive to Frank Jones Road	2 (U)	$26,484
L-24b	Bell Wright Road Extension	Bell Wright Road to Frontage Road	2 (U)	$452
L-25	Henry Brown Boulevard Extension	Henry Brown Boulevard (Brick Park) to US-52	2 (U)	$29,634
L-26	Black Tom Road	US-176 to US-17A	4 (D)	$43,248
L-27	Cane Bay Boulevard	Day Break Boulevard to Black Tom Road	4 (D)	$11,405
L-28	College Park Road	Crowfield Boulevard to I-26 Interchange	6 (D)	$17,864
L-29a	Jedburg Road	Dorchester County Line to Business Park Road	4 (D)	$5,830
L-29b	Jedburg Road	Drop Off Drive to US-176	4 (D)	$37,312
L-30	Nexton Parkway	Nexton Elementary School to US-176	4 (D)	$20,897
L-31	North Rhett Avenue	I-526 Interchange to Yeamans Hall Road	6 (D)	$51,856
L-32	Red Bank Road	Deke Giles Boulevard to Bushy Park Road	4 (D)	$63,921
L-33	Remount Road	Yeamans Hall Road to Rivers Avenue	6 (D)	$10,359
L-34	St. Thomas Island Drive	Clements Ferry Road to Harvest Time Place	4 (D)	$3,762
L-35	Wildgame Road	Jedburg Road to Sheep Island Road	4 (D)	$26,948

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-2: Roadway Capacity Enhancement and Corridor Study Projects, Berkeley County

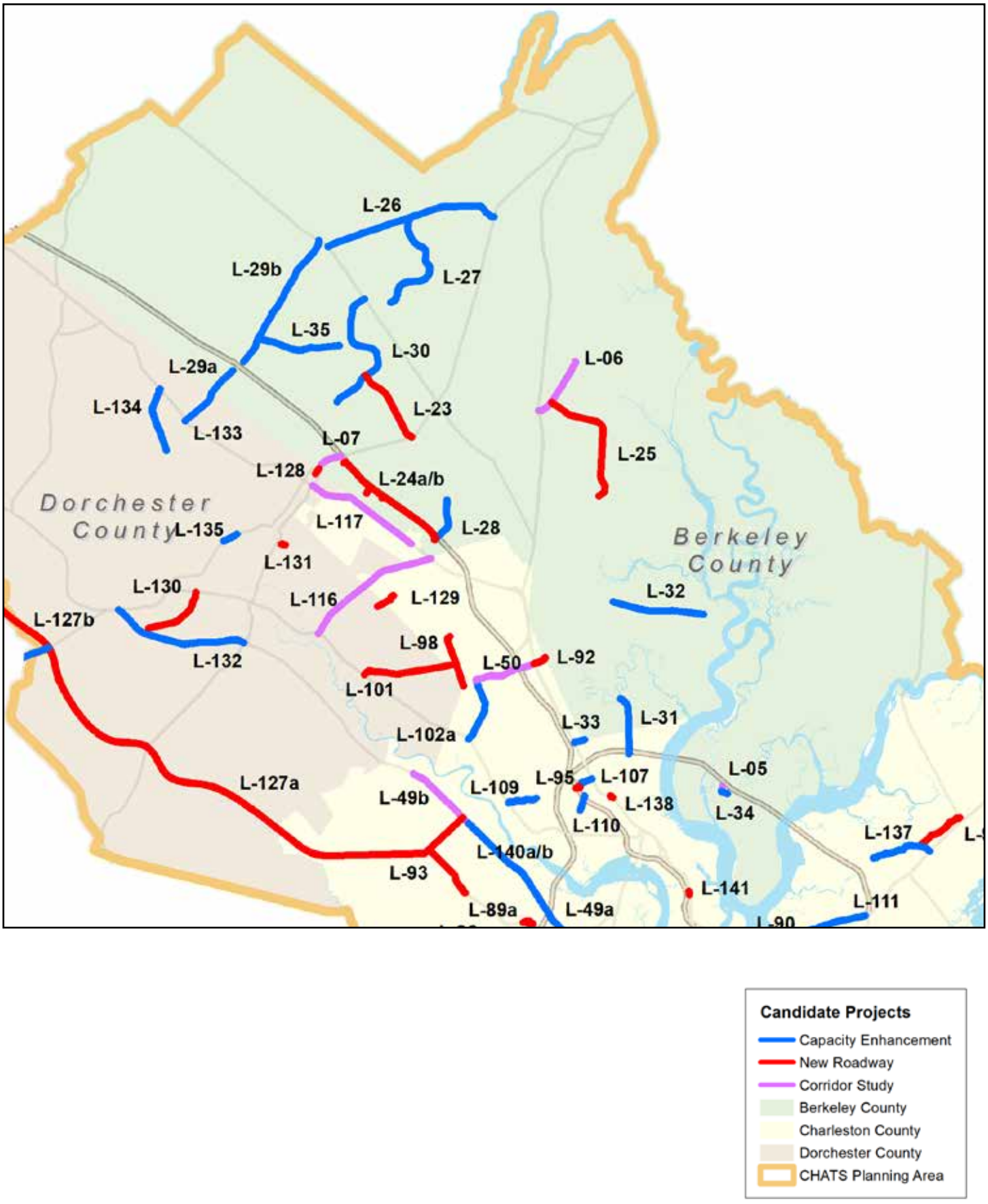
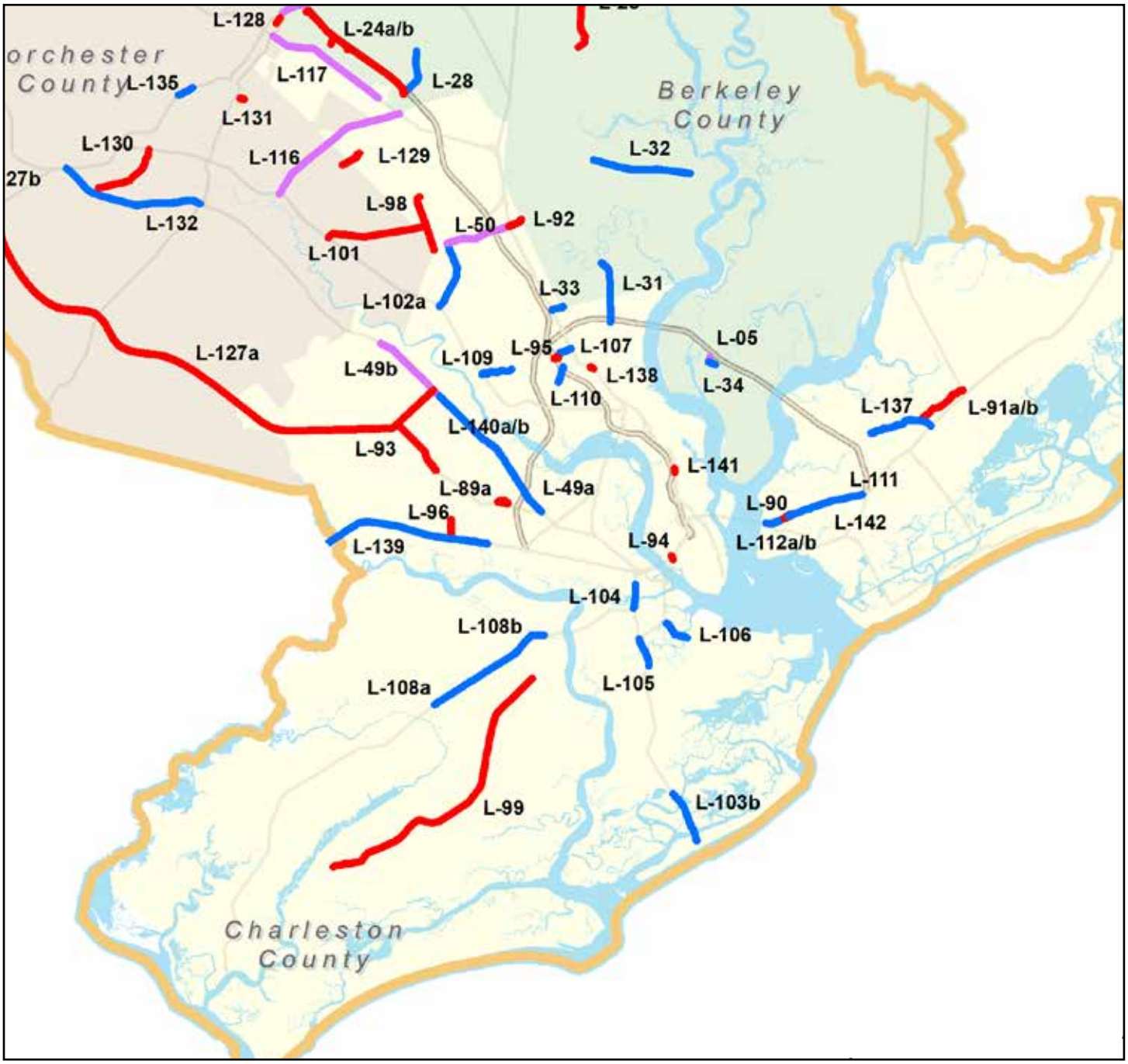


Table 4-4: Roadway Capacity Enhancement and Corridor Study Projects for Charleston County

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-49a	SC-61 / Ashley River Road	Raoul Wallenberg Boulevard to Bees Ferry Road	4 (D)	$24,441
L-49b	SC-61 / Ashley River Road	Bees Ferry Road to Charleston County Line	4 (D)	$65,675
L-50	Ashley Phosphate Road	Cross County Road to Rivers Avenue	8/10 (D)	$17,380
L-91a	All-American Boulevard Extension (Phase 3)	Silent Harbor Court to Brickyard Parkway	2 (D)	$10,274
L-91b	All-American Boulevard Extension (Phase 3)	Brickyard Parkway to SC-41 Service Road	2 (U)	$4,950
L-92	Ashley Phosphate Road Extension	Rivers Avenue to Railroad Avenue Extension	6 (D)	$9,902
L-93	Glenn MCConnell Pkwy Extension (Phase 1)	Bees Ferry Road to Charleston County Line	4 (D)	$368,777
L-94	Hagood Avenue Extension	Spring Street to Cannon Street	3 (U)	$2,275
L-95	Mall Drive / Centre Pointe Drive Extension	Centre Pointe Drive to Mall Drive	4 (D)	$12,618
L-96	Memorial Drive Extension	Memorial Drive to US-17 / Savannah Highway	2 (U)	$4,886
L-97	Michaux Parkway Extension	Dorchester Road to Ashley River Road	4 (D)	$57,801
L-98	Sandlapper Parkway Extension	Palmetto Commerce Parkway to Ashley Phosphate Road	4 (D)	$32,460
L-99	Sea Island Parkway/Greenway	River Road to Betsy Kerrison Parkway	4 (D)	$127,157
L-100	West Bridge Connector Road	SC-61 to Long Savannah Access Road	2 (U)	$6,832
L-101	Windsor Hill Parkway	Sandlapper Parkway Extn. to Dorchester Road	4 (D)	$49,357
L-102a	Cross County Road	Dorchester Road to Hill Park Drive	4 (D)	$14,870
L-102b	Cross County Road	Hill Park Drive to Ashley Phosphate Road	4 (D)	$8,148
L-103a	Folly Beach Road	E. Indian Avenue to Little Oak Island Drive	4 (D)	$20,407
L-103b	Folly Beach Road	Little Oak Island Drive to Bowens Island Road	4 (D)	$34,328
L-104	Folly Road	Maybank Highway to Johnson Road (Northbound Only)	3 (D) (NB)	$17,512
L-105	Folly Road	SC-30 Off-Ramp to Highland Avenue	6 (D)	$12,293
L-106	Harbor View Road	Harbor View Circle to North Shore Drive	4 (D)	$110,000
L-107	Mall Drive	Lacross Road to Rivers Avenue	4 (D)	$72,000
L-108a	Maybank Highway	Bohicket Road to River Road	4 (D)	$126,000
L-108b	Maybank Highway	River Road to Stono River Bridge	4 (D)	$51,550
L-109	Michaux Parkway	International Boulevard to Dorchester Road	4 (D)	$9,592
L-110	Montague Avenue	International Boulevard to I-26 Interchange	6 (D)	$12,293
L-111	US-17	Northbound Mainline at Bowman Road Interchange	3 (D) (NB)	$47,850
L-112a	US-17 / Ravenel Bridge Northbound Off-Ramp	US-17 & Coleman Boulevard Split to Sessions Way	3-Lane Ramp (NB)	$4,640
L-112b	US-17 / Ravenel Bridge Southbound Approach	Magrath Darby Boulevard to Wingo Way On-Ramp	3 (D) (SB)	$3,730
L-137	Long Point Road	US-17 to Whipple Road	2 (U)	$126,000
L-138	Rivers Avenue Overpass	Durant Avenue to Aragon Street	4 (D)	$76,500
L-139	South US-17 / Savannah Highway	SC-162 to Dobbin Road	4 (D)	$327,500
L-140a	Ashley River Road	Bees Ferry Road to Paul Cantrell Boulevard	2 (U)	$144,000
L-140b	Ashley River Road	Bees Ferry Road to West Bridge Road	2 (U)	$56,000
L-141	Meeting Street Overpass	At Milford Street	4 (U)	$65,000
L-142	Johnnie Dodds Blvd / US-17	Houton Northcutt Boulevard to Bowman Road	4 (U)	$168,000

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-3: Roadway Capacity Enhancement and Corridor Study Projects, Charleston County



Candidate Projects

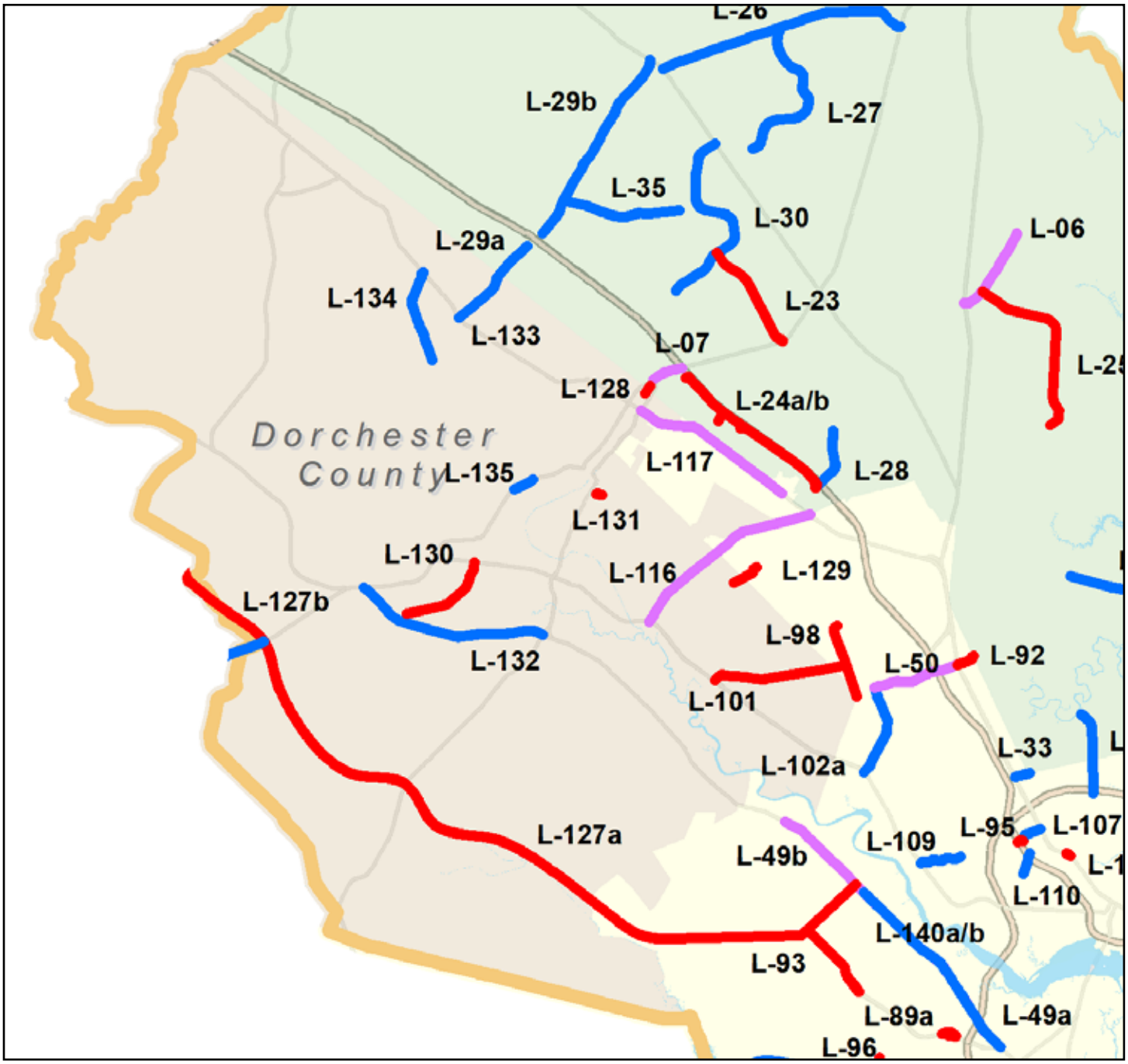
- Capacity Enhancement
- New Roadway
- Corridor Study
- Berkeley County
- Charleston County
- Dorchester County
- CHATS Planning Area

Table 4-5: Roadway Capacity Enhancement and Corridor Study Projects for Dorchester County

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-116	Ladson Road	US-78 to Dorchester Road	6 (D)	$64,413
L-117	US-78 / 5th Street	Berlin G. Myers Parkway to County Line (Benchmark Drive)	4 (D)	$74,549
L-127a	Glenn McConnell Pkwy Extension (Phase 1)	Charleston County Line to US-17A	4 (D)	$577,750
L-127b	Glenn McConnell Pkwy Extension (Phase 2)	US-17A to Old Beech Hill Road	4 (D)	$24,425
L-128	North Gum Street Extension	E. 9th North Street to Marymeade Drive	2 (U)	$1,242
L-129	Old Fort Drive Extension	Wallace Ackerman Drive to Palmetto Commerce Parkway	2 (D)	$4,257
L-130	Summers Corner Connector	Beech Hill Road to Dorchester Road	2 (U)	$26,655
L-131	Stallsville Loop	Bacons Bridge Road to Miles Jamison Road	2 (D)	$4,917
L-132	Beech Hill Road	US-17A to Delemar Highway	4 (D)	$65,948
L-133	Jedburg Road	US-78 to Berkeley County Line	4 (D)	$13,448
L-134	Orangeburg Road	Mallard Road to US-78	4 (D)	$19,543
L-135	US-17A / Boone Hill Road	Luden Drive to Greenwave Boulevard	2 (D)	$3,452
L-136	US-17A / Walterboro Road	Long Savannah Access Road to Sandpit Drive	4 (D)	$29,747

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-4: Roadway Capacity Enhancement and Corridor Study Projects, Dorchester County



Candidate Roadway Access Management & Intersection Improvement Projects

The following maps highlight the proposed roadway ***access management*** and ***intersection improvement*** candidate projects identifed for evaluation in the CHATS planning area. There are roughly 74 miles of recommended access management projects and 62 intersections. All roadway recommendations were thoroughly vetted through the CHATS Study Team and BCDCOG staff. Of these identified projects, certain corridor segments and intersections were selected by staff members from BCDCOG in consultation with jurisdictions for further study through conceptual designs, shown in the Hot Spots and Corridors section. Further study may be required on corridors and intersections that were not selected for conceptual designs.

Map 4-5: Access Management and Intersection Improvement Projects

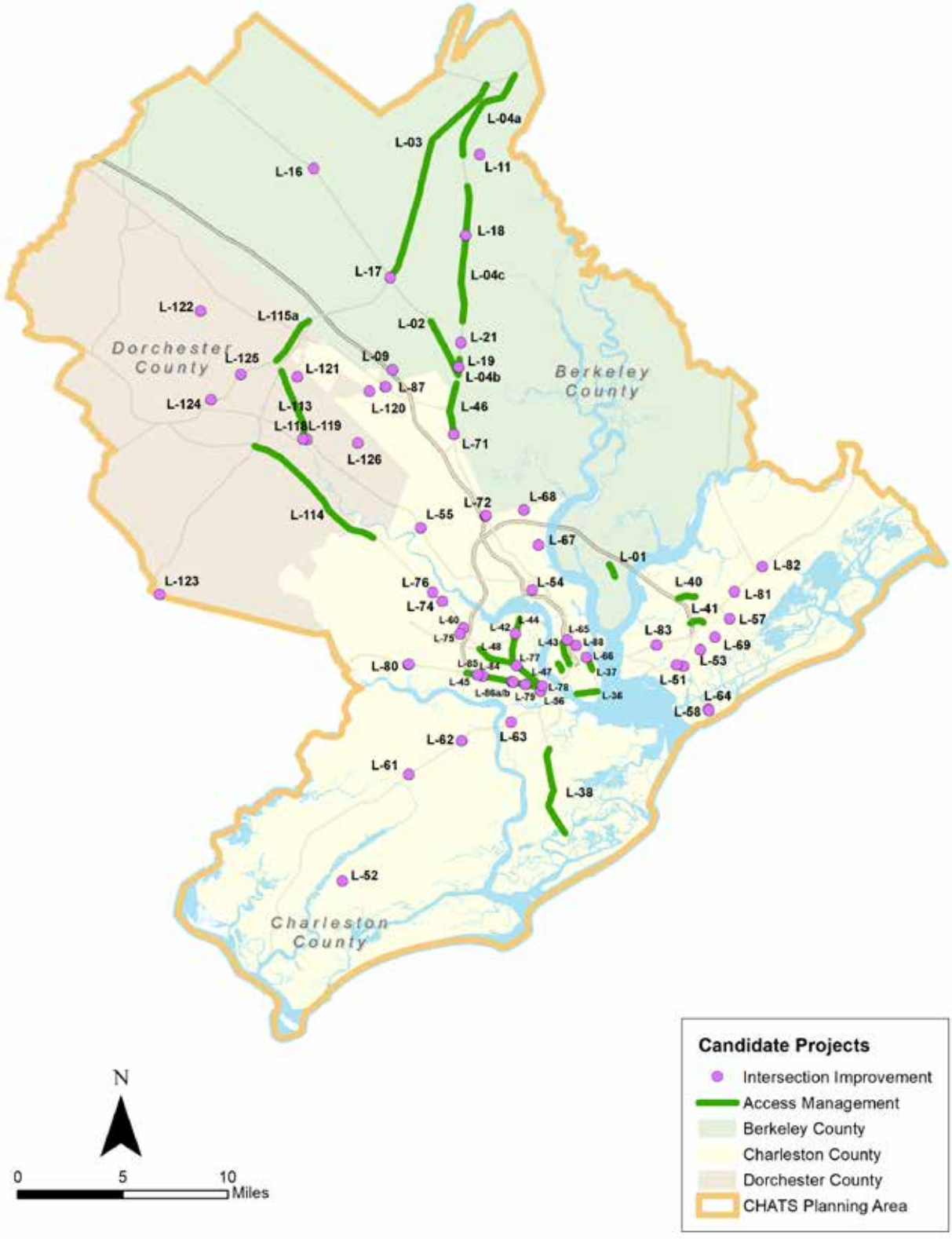


Table 4-6: Access Management and Intersection Improvement Projects for Berkeley County

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-01	Daniel Island Drive	Barfield Street to Fairchild Street	2 (D)	$1,229
L-02	US-176 / St. James Avenue	Old Mt. Holly Road to US-52 / N. Goose Creek Blvd.	4 (D)	$5,275
L-03	US-17A / Live Oak Road	US-176 / St. James Avenue to E. Main Street	4 (D)	$19,529
L-04a	US-52	N. Live Oak Drive to Gaillard Road	4 (D)	$9,106
L-04b	US-52	Central Avenue to Red Bank Road	6 (D)	$1,015
L-04c	US-52	Montague Plantation Road / Old Mt. Holly Road to Oakley Road	4 (D)	$11,891
L-09	College Park Road & Treeland Drive	-		$4,917
L-11	Old Highway 52 & Gaillard Road	-		$2,459
L-16	US-176 & Black Tom Road	-		$6,146
L-17	US-17A & US-176	-		$6,146
L-18	US-52 & Cypress Gardens Road	-		$1,229
L-19	US-52 & Liberty Hall Road	-		$2,459

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-6: Access Management and Intersection Improvement Projects, Berkeley County

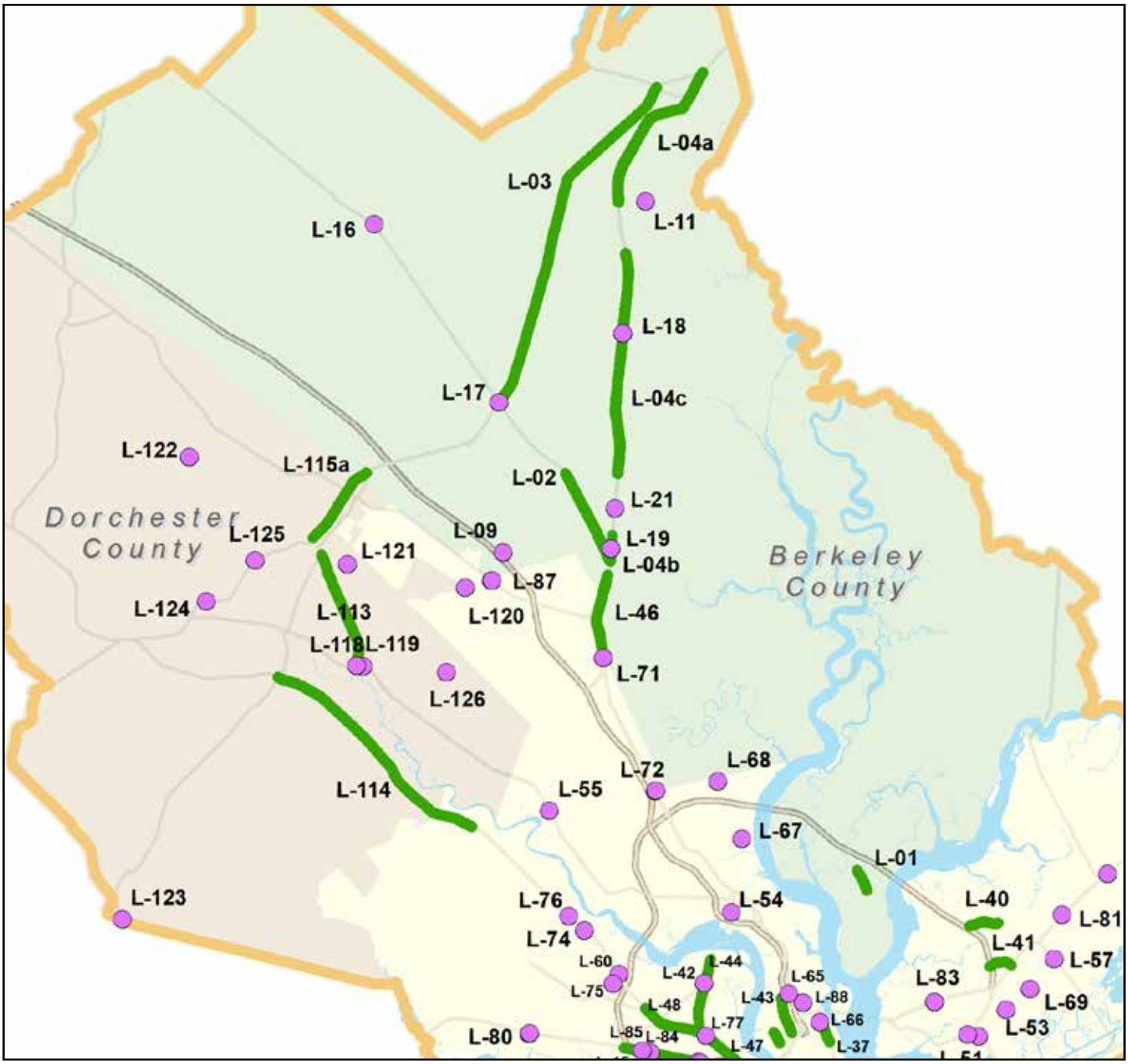


Table 4-7: Access Management and Intersection Improvement Projects for Charleston County

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-36	Broad Street	Lockwood Drive to East Bay Street	2 (U)	$2,176
L-37	East Bay Street	Chapel Street to Hasell Street	2 (U)	$2,622
L-38	Folly Road	Tides End Road to Brantley Drive	4 (D)	$8,436
L-39	Hagood Avenue	Moultrie Street to Fishburne Street	4 (D)	$1,171
L-40	Long Point Road	I-526 to Whipple Road	4 (D)	$1,786
L-41	Mathis Ferry Road	US-17 to I-526	2 (D)	$5,396
L-42	Old Towne Road	Sam Rittenburg Boulevard to Gunn Avenue	4 (D)	$3,503
L-43	Rutledge Avenue	Peachtree Street to Sumter Street	4 (D)	$1,786
L-44	Sam Rittenberg Boulevard	Old Towne Road to Northbridge Park	6 (D)	$1,948
L-45	US-17 / Savannah Highway	Wesley Drive to I-526	6 (D)	$6,440
L-46	US-52 / Rivers Avenue	Camelot Drive to Greenridge Road	8 (D)	$4,831
L-47	SC-61 / St. Andrews Boulevard	Wesley Drive to Old Towne Road	6 (D)	$19,866
L-48	SC-61 / Ashley River Road	St. Andrews Boulevard to Paul Cantrell Boulevard	4 (D)	$5,176
L-51	Ben Sawyer Boulevard & Rifle Range Road	-	-	$1,844
L-52	Betsy Kerrison Pkwy. / Bohicket Road & River Road	-	-	$2,459
L-53	Coleman Boulevard & Chuck Dawley Boulevard	-	-	$29,500
L-54	Cosgrove Avenue & Azalea Drive	-	-	$2,459
L-55	Dorchester Road & West Hill Boulevard	-	-	$2,459
L-56	Folly Road & Wesley Drive	-	-	$6,146
L-57	IOP Connector & Rifle Range Road	-	-	$2,459
L-58	Jasper Boulevard & Station 22-1/2 Street	-	-	$2,459
L-59	Jasper Boulevard & Station 23 Street	-	-	$2,459
L-60	Magwood Drive & Ashley Crossing Drive	-	-	$6,146
L-61	Maybank Highway & Main Road	-	-	$4,917
L-62	Maybank Highway & River Road	-	-	$2,459
L-63	Maybank Highway & Riverland Drive	-	-	$6,146
L-64	Middle Street & Station 22-1/2 Street	-	-	$2,459
L-65	Morrison Drive & Romney Street	-	-	$6,146
L-66	Morrison Drive & Grace Bridge Street	-	-	$1,229
L-67	Noisette Boulevard & Virgina Avenue	-	-	$3,688
L-68	Remount Road & Rhett Avenue	-	-	$4,917
L-69	Rifle Range Road & Bowman Road	-	-	$3,688
L-70	Rifle Range Road & Venning Road	-	-	$3,688
L-71	Rivers Avenue & Greenridge Road	-	-	$3,688
L-72	Rivers Avenue & Remount Road	-	-	$6,146
L-73	Sam Rittenberg & Old Towne Road	-	-	$4,917
L-74	SC-61 & Glendale Drive	-	-	$6,146
L-75	SC-61 & Magwood Drive	-	-	$1,844

Notes: D = Divided; U = Undivided; n/a = not applicable

Table 4-7: Access Management and Intersection Improvement Projects for Charleston County (cont.)

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-76	SC-61 & Shadowmoss Pkwy.	-	-	$1,844
L-77	St. Andrews Boulevard & 5th Avenue	-	-	$2,459
L-78	US-17 SB Off-Ramp / SC-61 & Woodward Road	-	-	$36,500
L-79	US-17 / Savannah Highway & Avondale Avenue	-	-	$3,688
L-80	US-17 / Savannah Highway & Carolina Bay Drive	-	-	$3,688
L-81	US-17 & Long Point Road	-	-	$3,688
L-82	US-17 & Porcher's Bluff Road	-	-	$4,917
L-83	US-17 & Shelmore Boulevard	-	-	$1,844
L-84	US-17 & Stinson Drive / Dupont Road	-	-	$1,844
L-85	US-17 / Savannah Highway & Wappoo Road	-	-	$1,844
L-86a	US-17 & Farmfield Avenue	-	-	$1,844
L-86b	US-17 & West Oak Forest Drive	-	-	$1,844
L-87	US-78 & Ladson Road / Ancrum Road	-	-	$4,917
L-88	US-78 / King Street & Mt Pleasant Street	-	-	$6,146
L-89a	Magwood Drive & Paul Cantrell Boulevard	-	1-/2-Lane Ramps	$194,000
L-90	US-17 & Houston Northcutt Boulevard Intersection	-	2-Lane Ramps	$64,583

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-7: Access Management and Intersection Improvement Projects, Charleston County

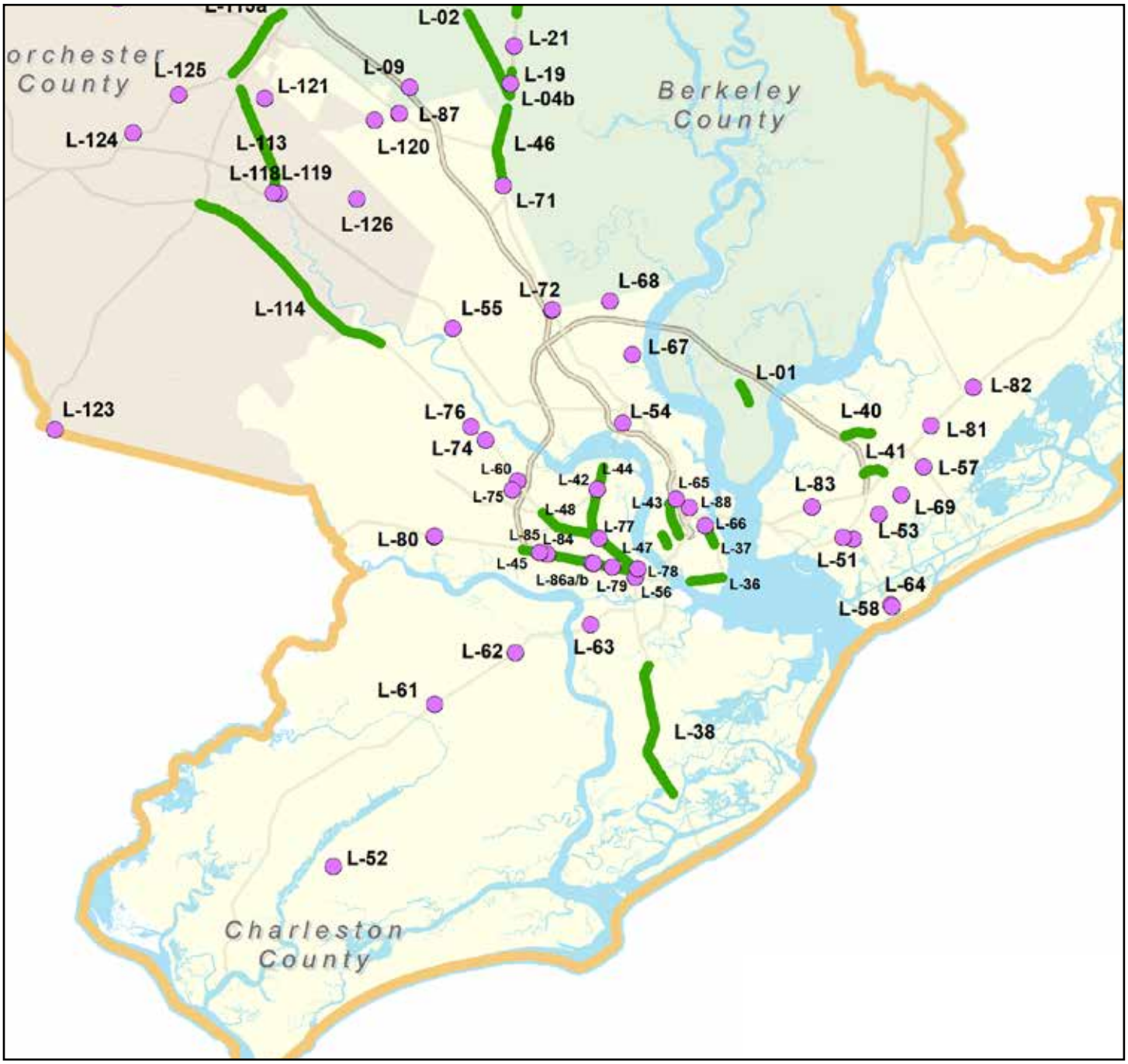
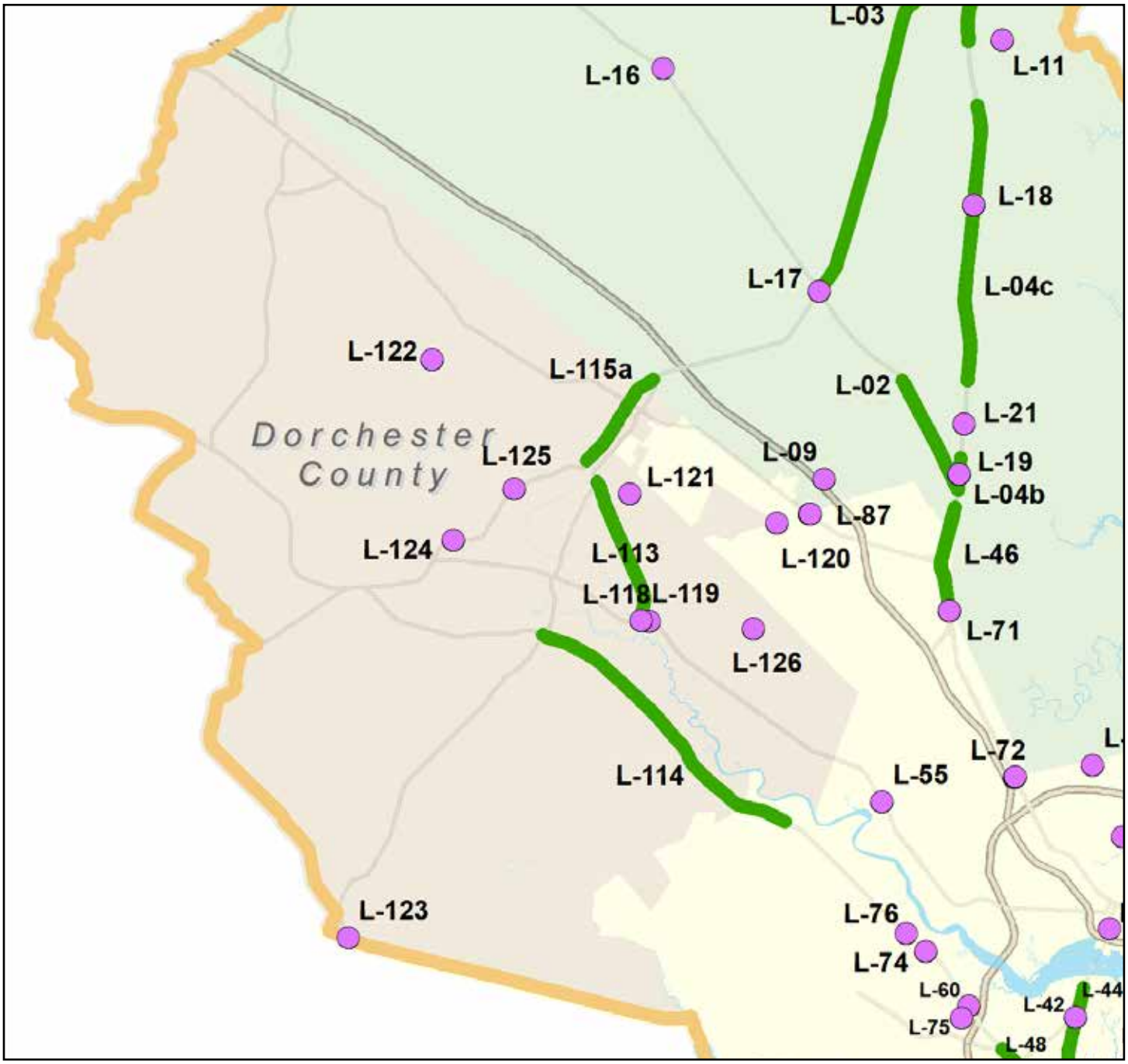


Table 4-8: Access Management and Intersection Improvement Projects for Dorchester County (cont.)

ID	Location	Delimits	Potential Lanege	Estimated Cost (1000s)
L-113	Old Trolley Road	Dorchester Road to Bacons Bridge Road	4 (D)	$6,422
L-114	SC-61	Charleston County Line to Bacons Bridge Road	4 (D)	$23,593
L-115a	US- 17A / North Main Street	Berlin Myers Parkway to US-78 / 5th Street	4 (D)	$1,490
L-115b	US-17A / South Main Street	US-78 / 5th Street to Carolina Avenue	2 (D)	$3,088
L-118	Dorchester Road & Ladson Road	-	-	$2,459
L-119	Dorchester Road & Old Trolley Road	-	-	$6,146
L-120	Ladson Road & Lincolnville Road	-	-	$2,459
L-121	Miles Jamison Road & Gahagan Road	-	-	$4,917
L-122	Orangeburg Road & E. Butternut Road / Mallard Road	-	-	$4,917
L-123	SC-165 & County Line Road	-	-	$4,917
L-124	US-17A & Central Avenue	-	-	$2,459
L-125	US-17A & Tupperway Drive	-	-	$6,146
L-126	Wescott Blvd. & Patriot Blvd.	-	-	$4,917

Notes: D = Divided; U = Undivided; n/a = not applicable

Map 4-8: Access Management and Intersection Improvement Projects, Dorchester County



Purpose

Showcase the types of roadways proposed in the LRTP

cross sections

Recommended Cross Sections

While examining how roadways spread and connect across a region, it is vital to consider how the roadway looks and feels from the perspective of the users. To understand how a roadway appears from the perspective of the users (pedestrians, cyclists, drivers, and transit riders), a cross section is often used to illustrate scale and design features. Cross sections illustrate information such as the number and width of travel lanes, parking lanes, sidewalks, and multiuse paths, and they can illustrate how much programmable space exists within existing and proposed right-of-ways or curb to curb. In looking at proposed laneage, generalized cross sections are used, while specified cross sections were created to illustrate conceptual designs found in the Hot Spots and Corridors section.

In determining the recommended cross sections for each road type, pedestrian and bicycle improvements were considered in addition to roadway strategies. The recommended cross sections are color-coded (in the associated table) to correspond directly to the proposed laneage indicated in the table, with red indicating the 8/10-lane sections and orange the 6-lane sections. For the 2- (blue), 3- (green), and 4-lane (yellow) sections, multiple cross sections are presented to indicate possible pedestrian and bicycle improvements that may accompany the roadway. Final design will determine the ultimate cross section of the roadway. The total right-of-way widths along with an example facility are shown with each cross section.

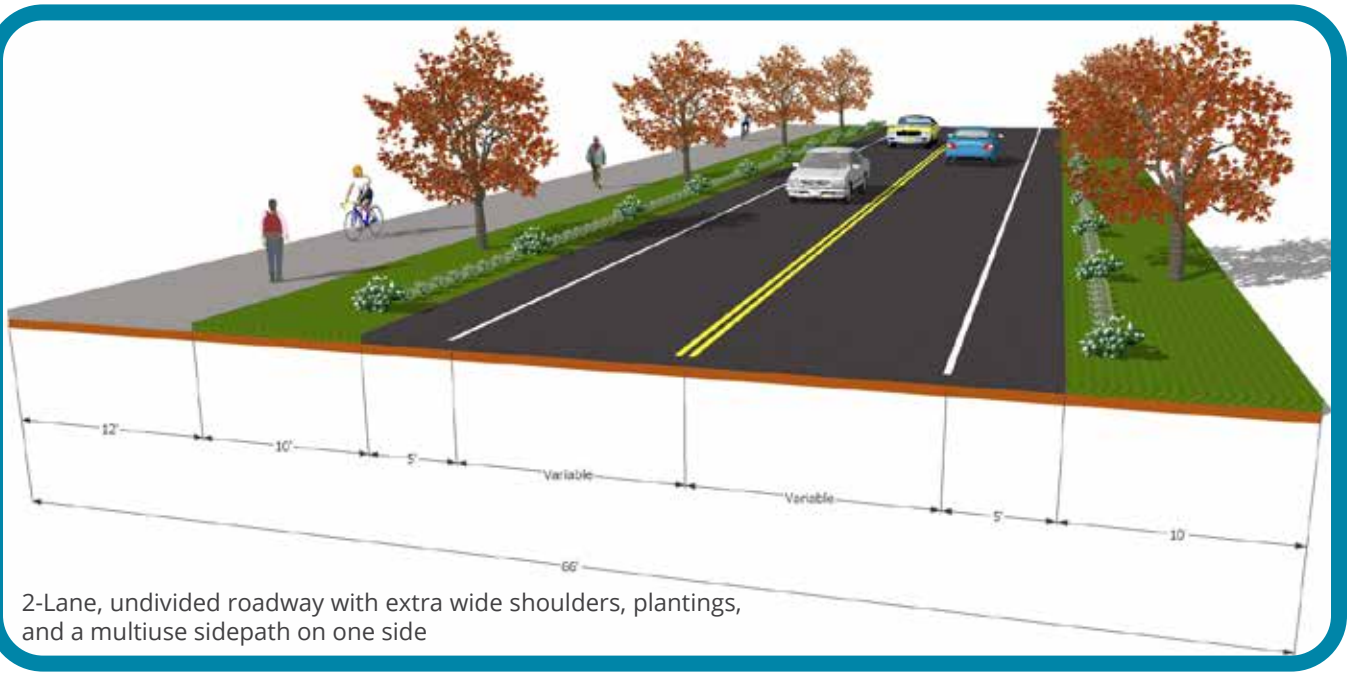
The potential laneage configurations identified for visionary projects was utilized for the purpose of estimating planning level costs and travel demand modeling performance. More detailed studies will be required through the project development process to confirm planning level assumptions.

2-Lane Cross Sections

2-Lane, undivided roadway with sharrow markings, parallel on-street parking, gutters, curbs, planted strip, and sidewalks on both sides, with a wider sidewalk in front of commercial storefronts

2-Lane, undivided roadway with bicycle lanes, curbs, gutters, and sidewalks on both sides

2-Lane Cross Sections (cont.)



2-Lane, undivided roadway with extra wide shoulders, plantings, and a multiuse sidepath on one side

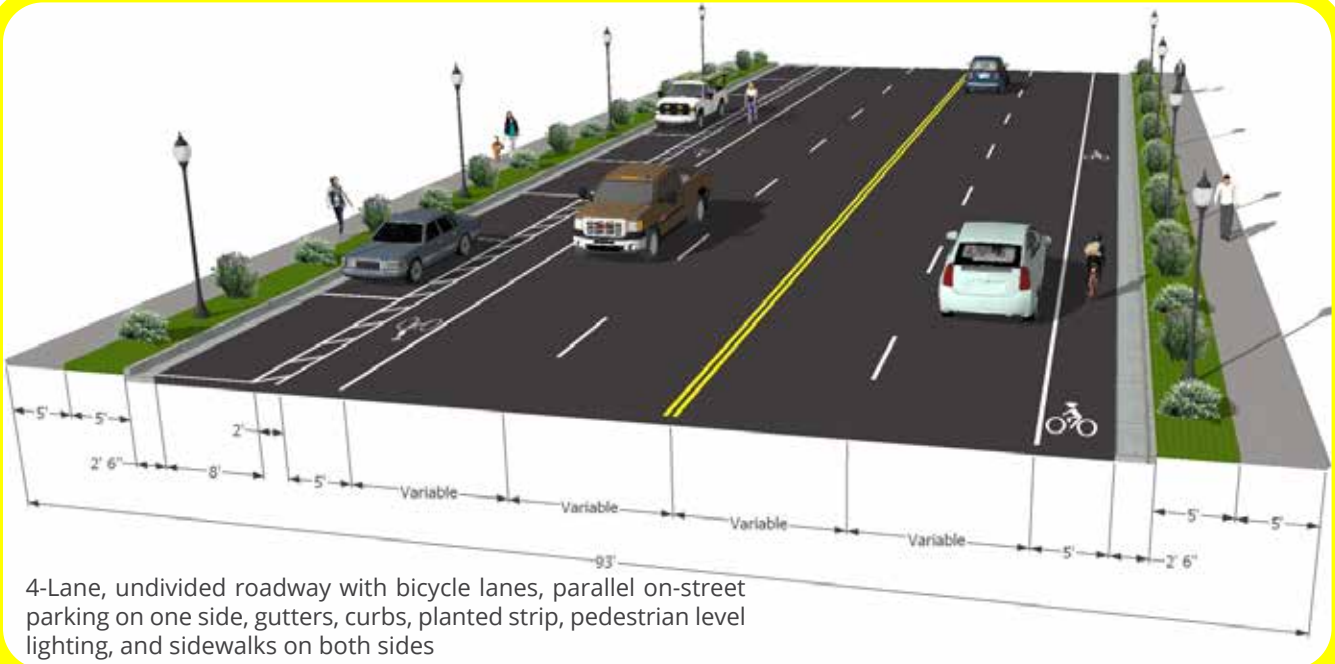
2-Lane, undivided roadway with wide shoulders, drainage ditches, and plantings on both sides

3-Lane Cross Sections

3-Lane, undivided roadway with gutters, curbs, planted strip, and pedestrian level lighting on both sides, and a sidewalk and a multiuse sidepath on opposite sides

3-Lane, undivided roadway with a center turning lane, buffered bicycle lanes, curbs, gutters, planted strips, , pedestrian level lighting and sidewalks on both sides

4-Lane Cross Sections



4-Lane, undivided roadway with bicycle lanes, parallel on-street parking on one side, gutters, curbs, planted strip, pedestrian level lighting, and sidewalks on both sides

4-Lane, divided roadway with planted median, street lamps, drainage ditches, and plantings on both sides and a multiuse sidepath on one side.

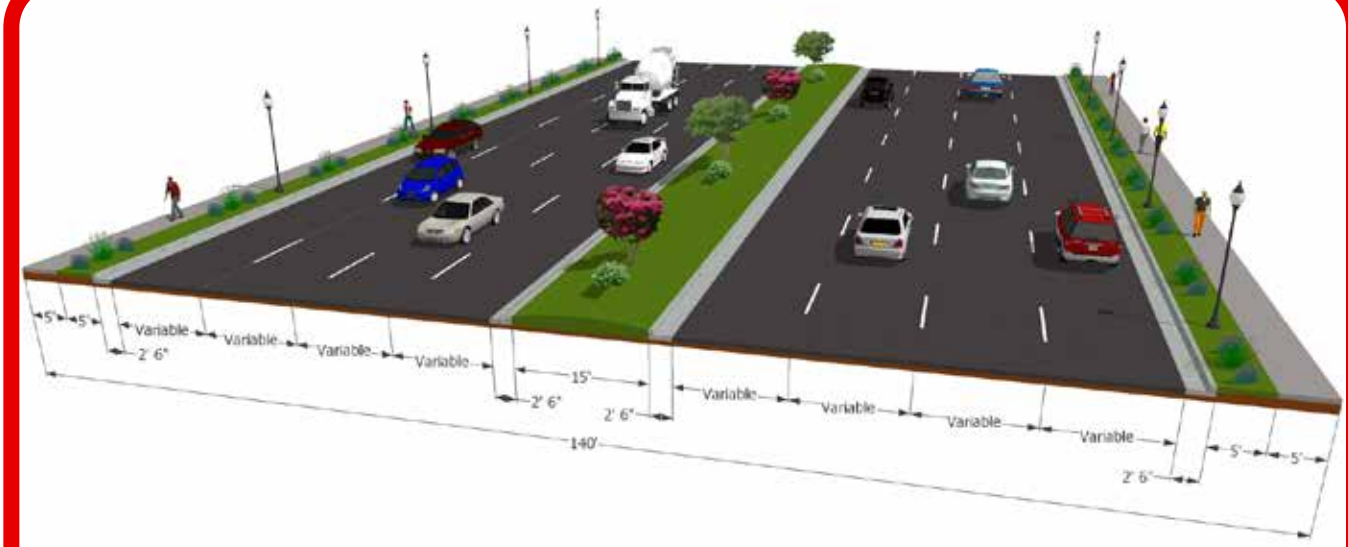
4-Lane Cross Sections (cont.)

4-Lane, divided roadway with planted median islands to break up turning lane, gutters, curbs, planted strip on both sides and pedestrian level lighting and sidewalk on one side

6-Lane Cross Section

6-Lane, divided roadway with a planted median, curbs, gutters, planted strips, pedestrian level lighting and sidewalks on both sides

8- and 10-Lane Cross Sections



8- or 10-Lane, divided roadway with a planted median, curbs, gutters, planted strips, pedestrian level lighting and sidewalks on both sides

Purpose

Provide examples of how design can promote safety and walkability in various locations around the CHATS planning area.

hot spots & corridors

Concept Designs

It is apparent that large, costly highway projects are becoming less frequent and more controversial every day. Our gas tax dollars are not able to fund projects of significant magnitude. However recently, smaller, more cost-effective projects have been successfully implemented through smaller funding sources like Spot Safety and Hazard Elimination programs. The purpose of this section is to provide a higher level of detail for specific high priority projects through the development of Hot Spot and Corridor Concept Designs (20% design detail). The intent of the Hot Spot projects is to highlight specific projects within the planning area that were selected by the Study Team and BCDCOG staff as "High Priority."

In turn, the information contained in the concept designs could be used by local champions to lobby for future funding and ultimately, full implementation. In today's environment and with SCDOT's prioritization process, small type projects are less likely to compete at the level of major mobility carrier type projects. This innovative program leverages alternative funding sources to administer and implement smaller type projects.

US 17 Alternate & Myers Road

Problem Statement: Opportunity to upgrade intersection to include bicycle and pedestrian amenities and beautification improvements. Surrounding area is primed for development. Current design is very car-centric and there is no shading available.

Design Considerations:

- Limit curb and gutter displacement
- Focus on intersection treatments
- Minimize pedestrian crossing distance

Recommendations:

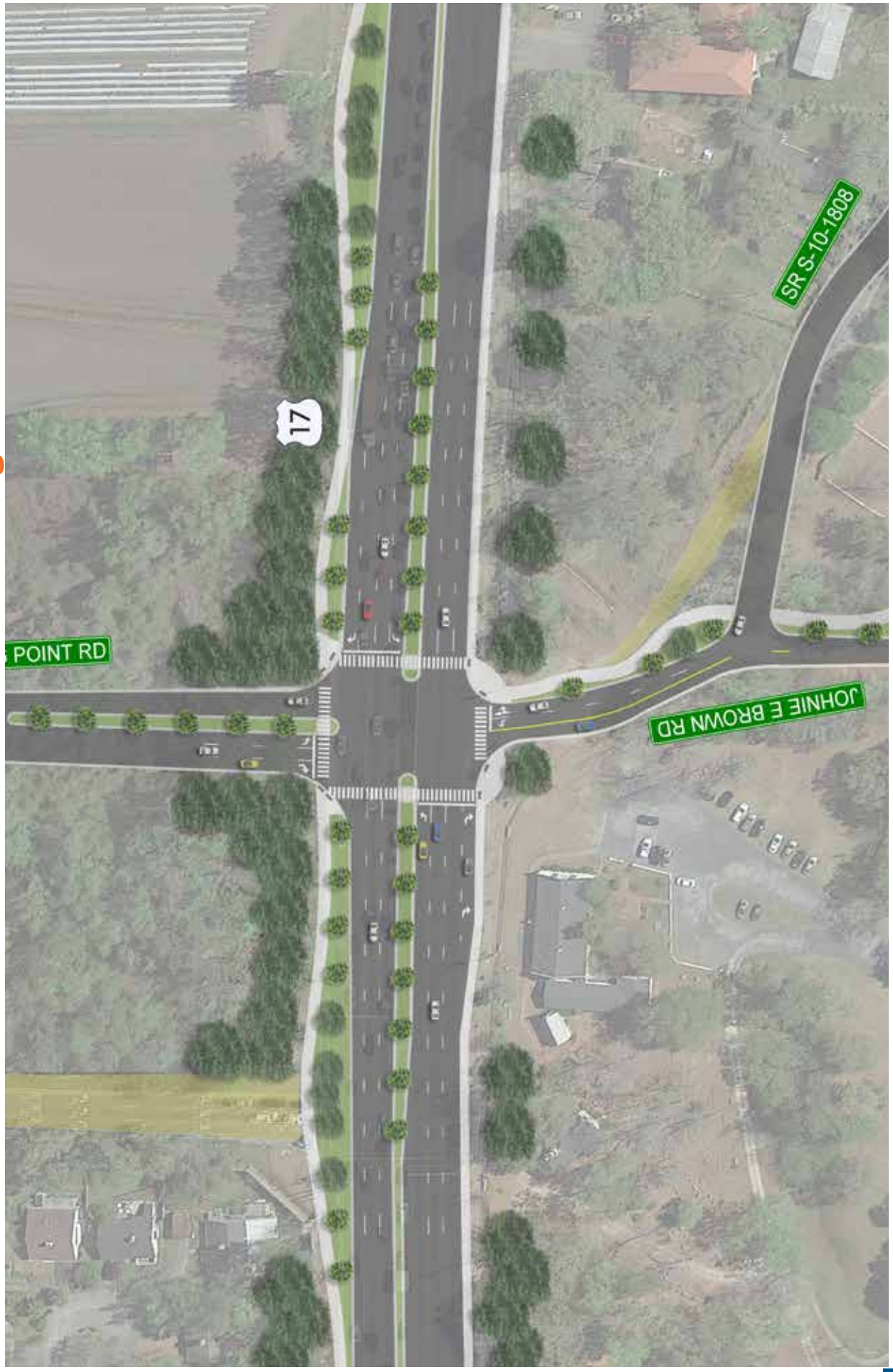
- Extend curbing in the northeast quadrant of the Main and Old Summerville Road to provide shorter pedestrian crossing distance and room for shade trees
- Plant medians for pedestrian refuge

US 17 Alternate & Myers Road

Long Point Road & US 17 North

Problem Statement:	Long Point Road does not line up with SR S-10-1808 or Johnie E Brown Road, creating an offset intersection which leads to traffic operational issues. Opportunity to realign this intersection with Johnie E Brown Road and improve connectivity for all users.
Design Considerations:	■ US Highway 17 is designed for vehicles in this area, however, it becomes a multi-modal corridor as it transitions into town ■ This area is primed for development ■ Free-flow right turn lanes and overall laneage at intersection make it difficult for pedestrians and bicyclists
Recommendations:	■ Realign Long Point Road to create an attractive gateway into town ■ Remove free-flow right turn, install high visibility crosswalks, planted medians, and pedestrian refuges ■ Construct meandering sidepath lined with street trees

Long Point Road & US 17 North



Main Road, Bohicket Road & Maybank Highway

Johns Island

Problem Statement: This intersection represents the crossroads of two major arterials. The roadways meet at a sharp angle, leading to sight line problems when turning. Combined with multiple commercial driveways, this intersection is problematic for vehicular traffic and unsafe for pedestrians and cyclists.

Design Considerations:

- Need to address the sharp angle and fast moving right turns
- Access management should be a consideration to limit driver confusion and contact between pedestrians and car travel

Recommendations:

- Install high visibility crosswalks as well as right turn "pork chops" at intersections to create a safer environment for pedestrian and limit turn radii
- Consolidate multiple drivesways to commercial retial businesses
- Install median islands along Maybank to calm traffic and provide pedestrian refuge
- Construct adequate and ADA compliant sidewalks

Main Road, Bohicket Road & Maybank Highway

Sol Legare Road, Terns Nest Road & Folly Road

James Island

Problem Statement: The design of this offset intersection may be confusing to travelers as it's difficult to interpret who has the right of way. With surrounding neighborhoods and a grocery store in proximity, pedestrian and bicycle access and safety has become an issue.

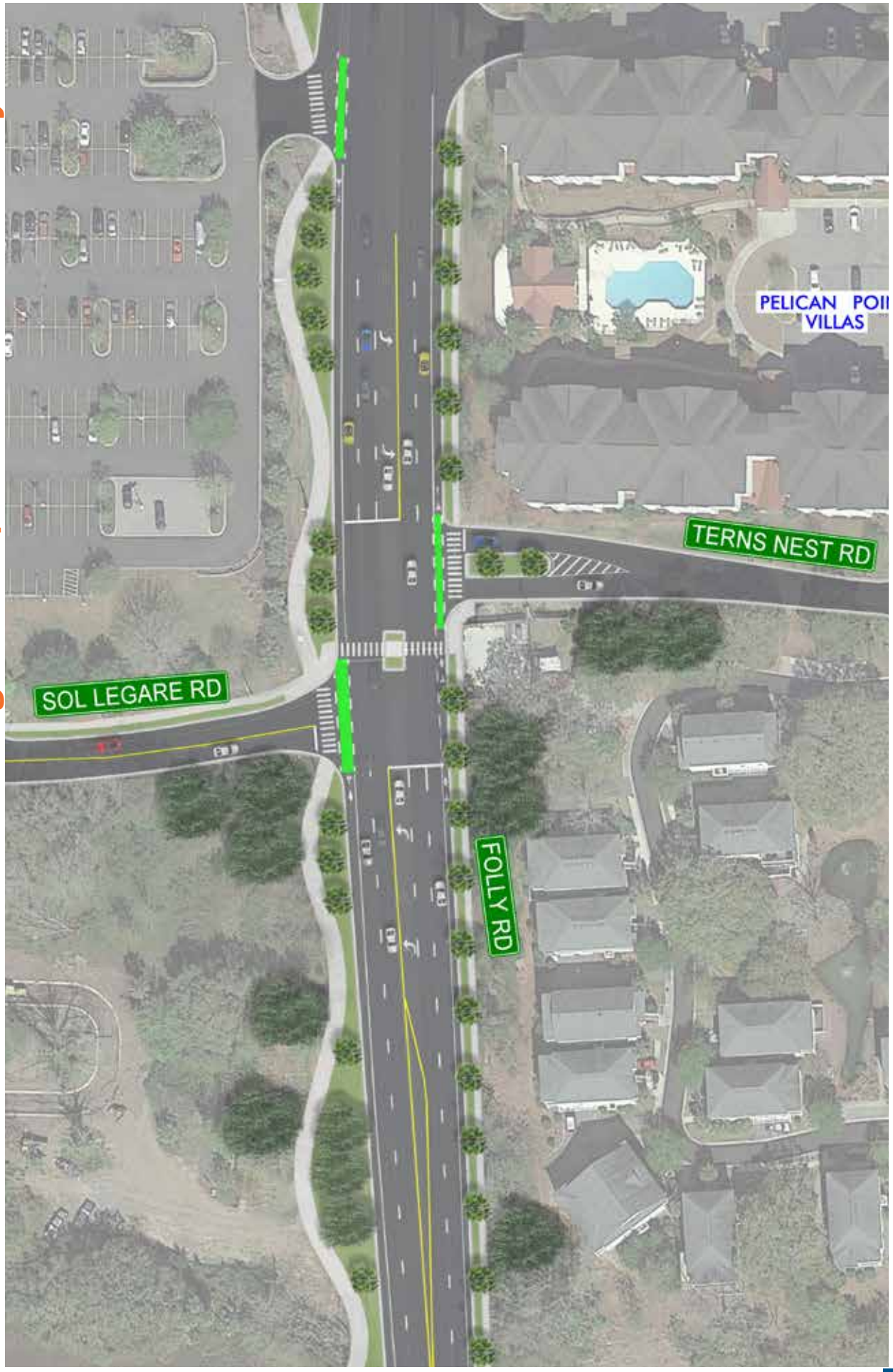
Design Considerations:

- Existing bike lanes along Folly Road must be maintained and considered in final design
- Very little traffic is crossing Sol Legare to/from Terns Nest
- Not all bicyclists, including tourists, feel safe on the bike lanes

Recommendations:

- Install high visibility crosswalk with pedestrian refuge between offset approaches to intersection
- Construct meandering sidepath and street trees on west side

Sol Legare Road, Terns Nest Road & Folly Road



Ancrum Road, Ladson Road & US 78

Ladson

Problem Statement: This area of US Highway 78 experiences heavy traffic and congestion during peak hours. Roadway segment challenged with large skewed intersections, intersections in close proximity to each other, poor access management and limited connectivity.

Design Considerations:

- Clean up access points with driveway consolidation and controlling left turns
- Look for opportunities to decrease pedestrian crossing distance

Recommendations:

- Construct planted median to guide left turns
- Remove free few right turn and install high visibility crosswalks
- Realign entrance to Bi-Lo to provide adequate separation from intersection

Ancrum Road, Ladson Road & US 78

Remount Road & Rhett Ave

North Charleston

Problem Statement: This busy intersection is surrounded by commercial and light industrial activity. Current design caters to vehicular movements only, creating a dangerous environment for bicyclists and pedestrians.

Design Considerations:

- With adjacent park, intersection should be redesigned to cater to multi-modal activity
- Lots of roundabout access points and dangerous free-flow movements

Recommendations:

- Implement driveway consolidation and plantable medians
- Replace free-flow right turns with bulbouts and high visibility crosswalks
- Construct cross access between complimentary uses

Remount Road & Rhett Ave

Cosgrove Avenue, Azalea Drive & Interstate 26

North Charleston

Problem Statement: This section of Cosgrove Avenue is very busy during peak hour travel. Specifically, the Interstate 26 westbound off ramp creates spill back and weaving problems as traffic approaches the Cosgrove Avenue and Azalea Drive intersection.

Design Considerations:

- Inconsistent lane configuration through intersection
- Lane weaving problems from off ramp to left turn lanes going northbound on Azalea Drive
- Dangerous environment for bicyclists and pedestrians

Recommendations:

- Construct access-control medians to limit dangerous movements
- Replace free-flow ramp movement with stop controlled intersection to provide additional stacking
- Redesignate intersection laneage to include two left turn lanes on eastbound Cosgrove Avenue
- Install sidewalks and high visibility crosswalk with pedestrian countdown signals

Cosgrove Avenue, Azalea Drive & Interstate 26

River Road, Bohicket Road, Betsy Kerrison Parkway & Proposed Sea Island Parkway

Johns Island

Problem Statement: The Sea Island Parkway is planned as a multi-modal arterial to provide congestion relief to Bohicket Road. The vision for this facility is a street-scaped 4-lane divded roadway with planted medians. It's connection to Bohicket is the focus of this concept.

Design Considerations:

- Redesign must avoid development and property takings
- River Road will require realignment
- Inclusion of bicycle and pedestrian accommodations

Recommendations:

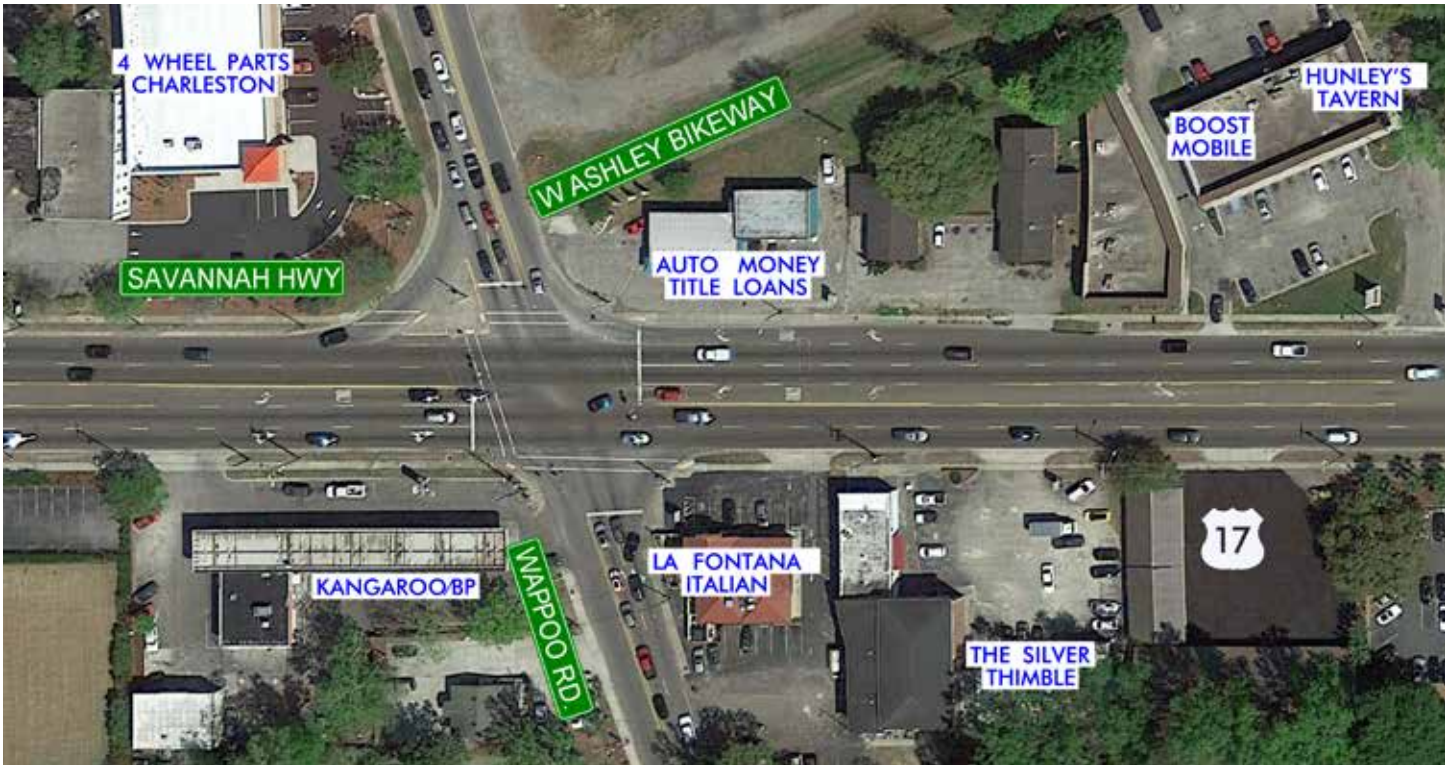
- Align the proposed Sea Island Parkway into the existing Betsy Kerrison Parkway, a road of similar width and typology
- Redirect Bohicket Road and River Road to intersect with the parkways at right angles
- Connect these roads at a signalized intersection
- Construct a meandering sidepath
- Include high visibility crosswalks

River Road, Bohicket Road, Betsy Kerrison Parkway & Proposed Sea Island Parkway

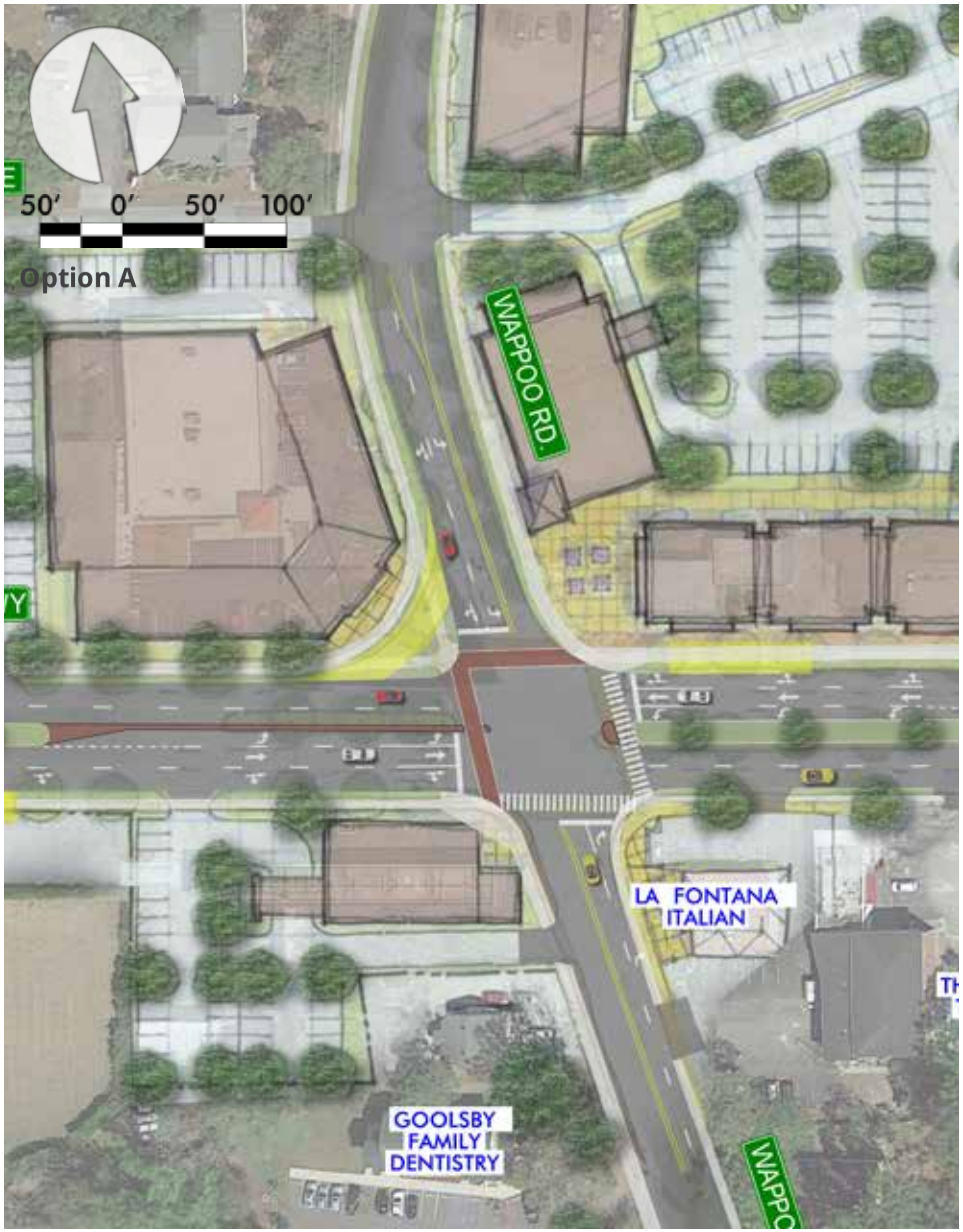
Savannah Highway & Wappoo Road

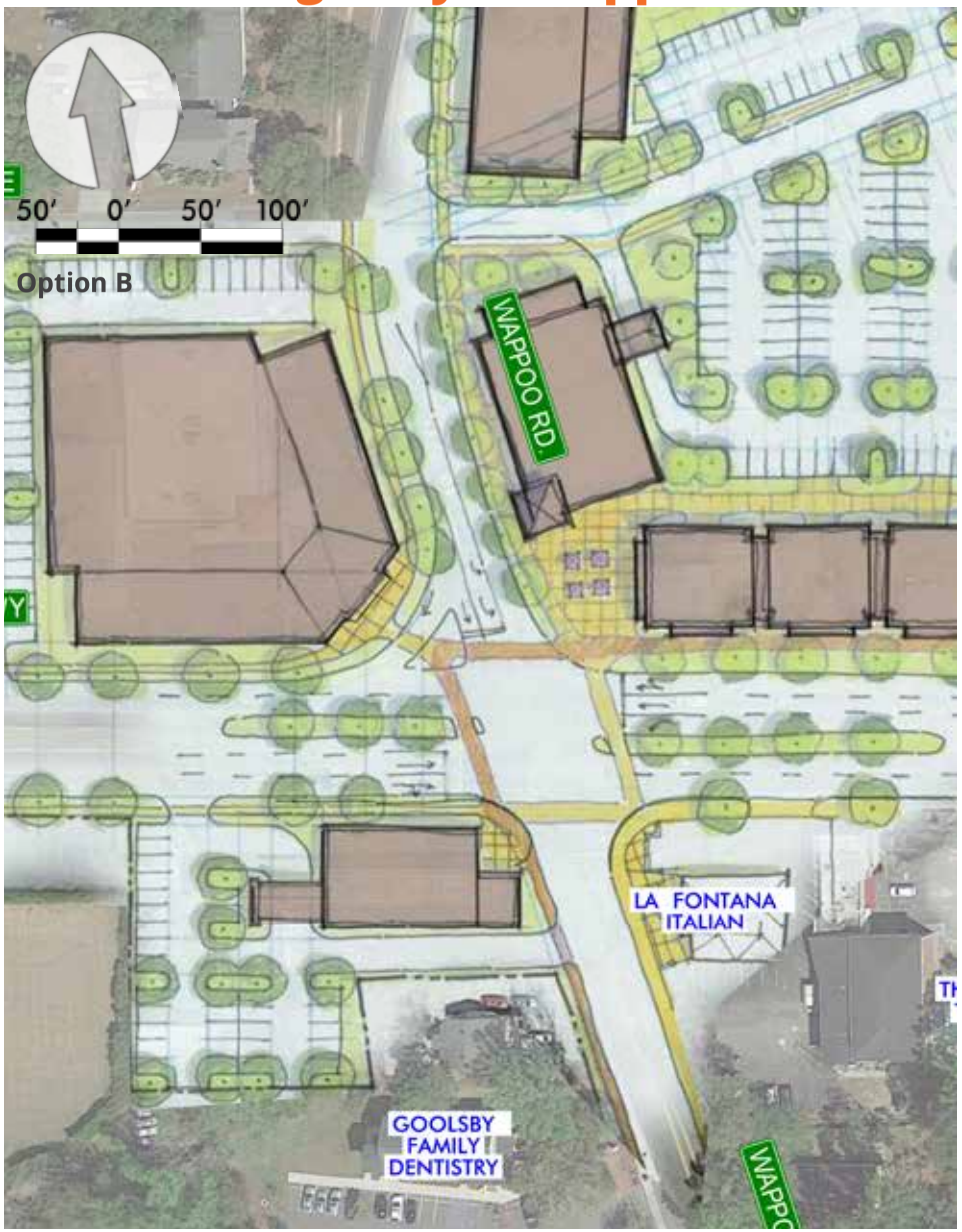
West Ashley

Problem Statement:	High volume intersection with traffic coming from both directions leading in and out of downtown and residential neighborhoods. Intersection marks the end of the West Ashley Bikeway and lacks safe and visible pedestrian and bike facilities. Problematic free-flow right turn traffic from Southbound Wappoo headed west.
Design Considerations:	■ Immediate area is prime for redevelopment ■ Free-flow right is extremely dangerous to pedestrians ■ Sight angles are adequate ■ The DuPont/Wappoo Community Plan recommendations for this intersection
Recommendations:	■ Brick paver or stamped crosswalks ■ High-visibility crosswalks and pedestrian countdowns ■ Remove free-flow right turn while leaving the corner wide enough to accommodate right turn movements of a tractor trailer (Option A) ■ Improve access management and driveway consolidation



Savannah Highway & Wappoo Road

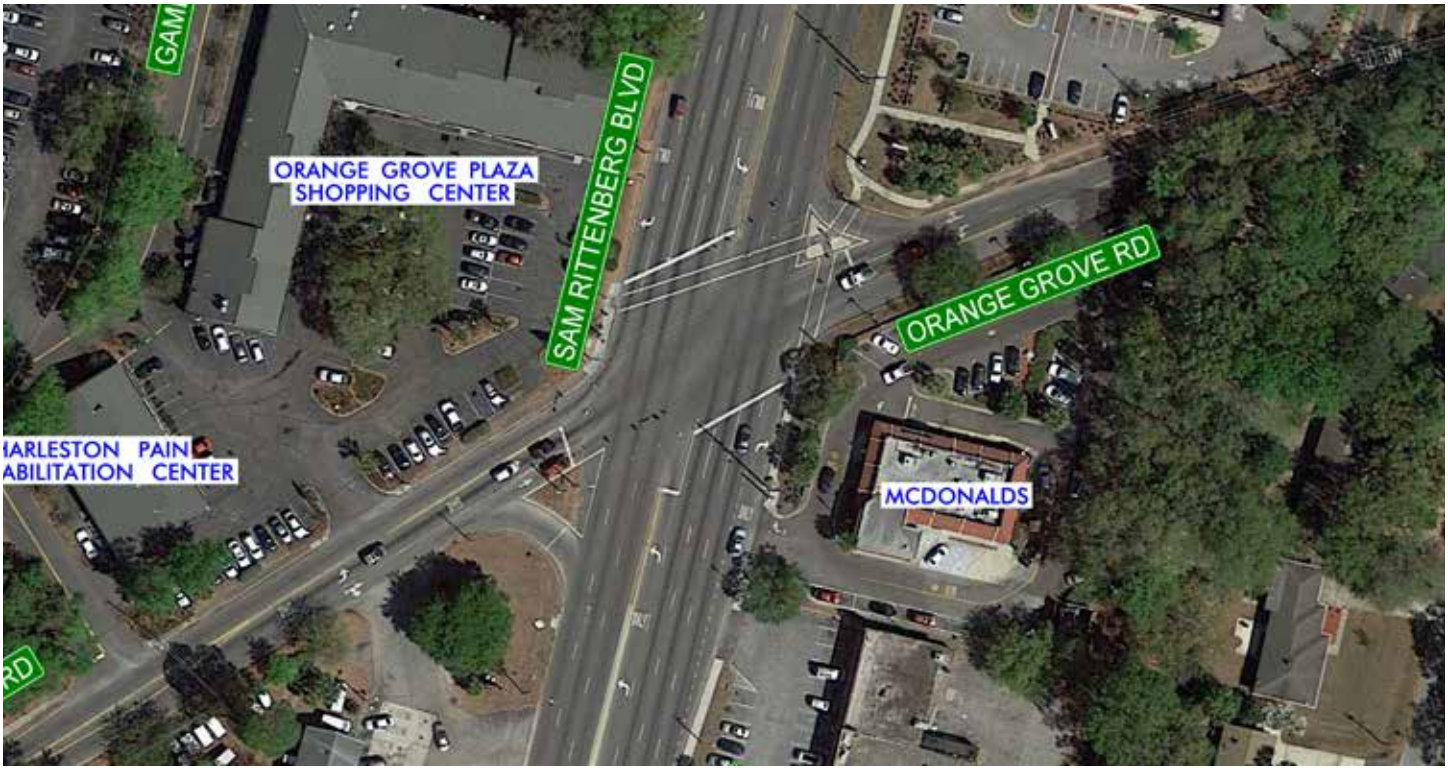




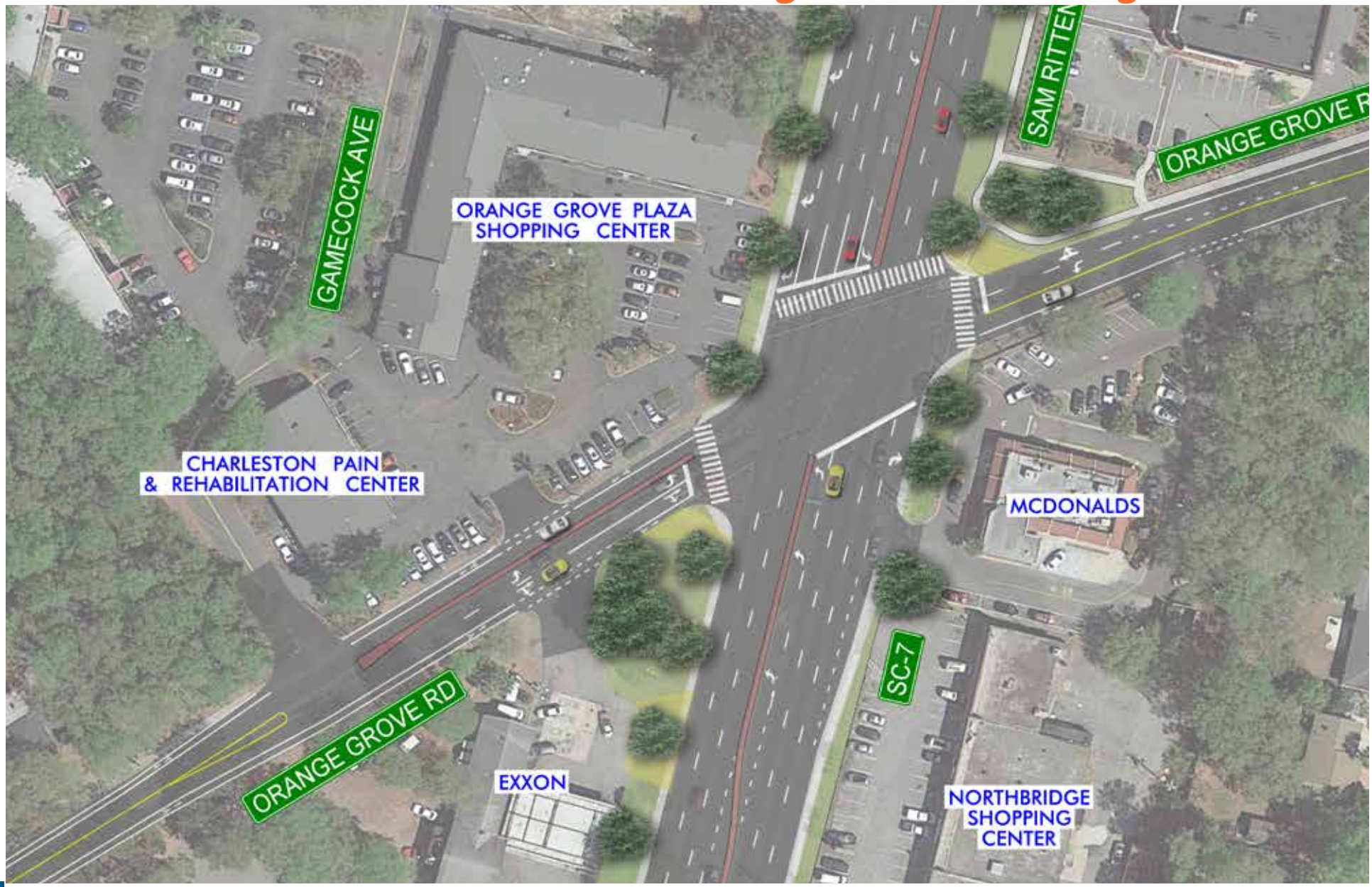
Sam Rittenberg Boulevard & Orange Grove Road

West Ashley

Problem Statement:	Orange Grove Road has free-flow turns on both approaches to the intersection, making it extremely dangerous for pedestrians to cross. The gas station on the southwest corner has three driveway entries, two very close to the free-flow right turn. Sharp angle of the intersection creates sight line problems, particularly when combined with the free-flow right turns.
Design Considerations:	■ Sam Rittenberg is a wide, heavily traveled road surrounded by neighborhoods and bordered by retail and office ■ Pedestrians and cyclist should be able to safely cross and travel through this intersection
Recommendations:	■ Close the free-flow turns and shorten the length of roadway for pedestrians to cross ■ Design corners to accommodate right turn movements of tractor trailers ■ Add bike lane striping to Orange Grove on both sides of intersection ■ Add paved median to Orange Grove and close excess driveway for gas station ■ Potentially add painted bike lanes through intersections



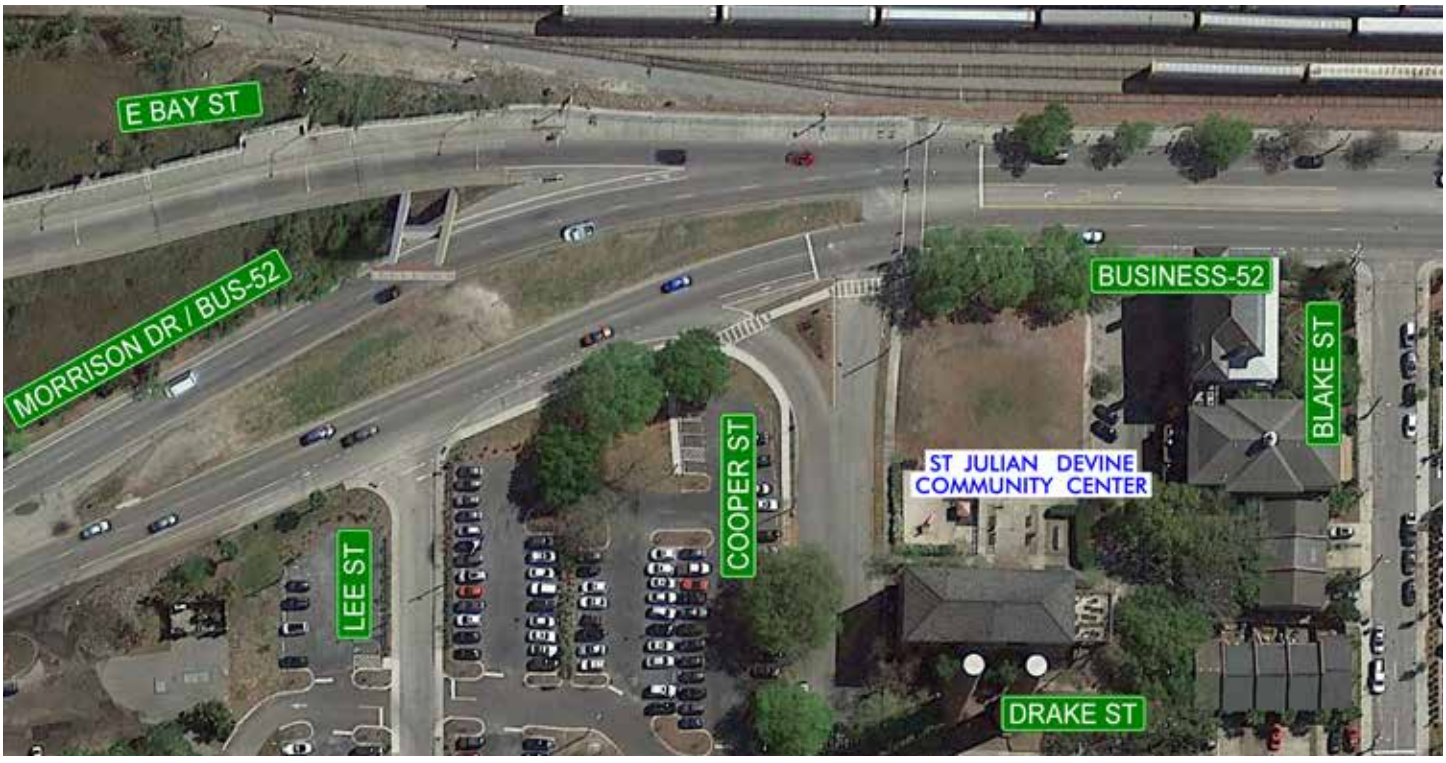
Sam Rittenberg Boulevard & Orange Grove Road



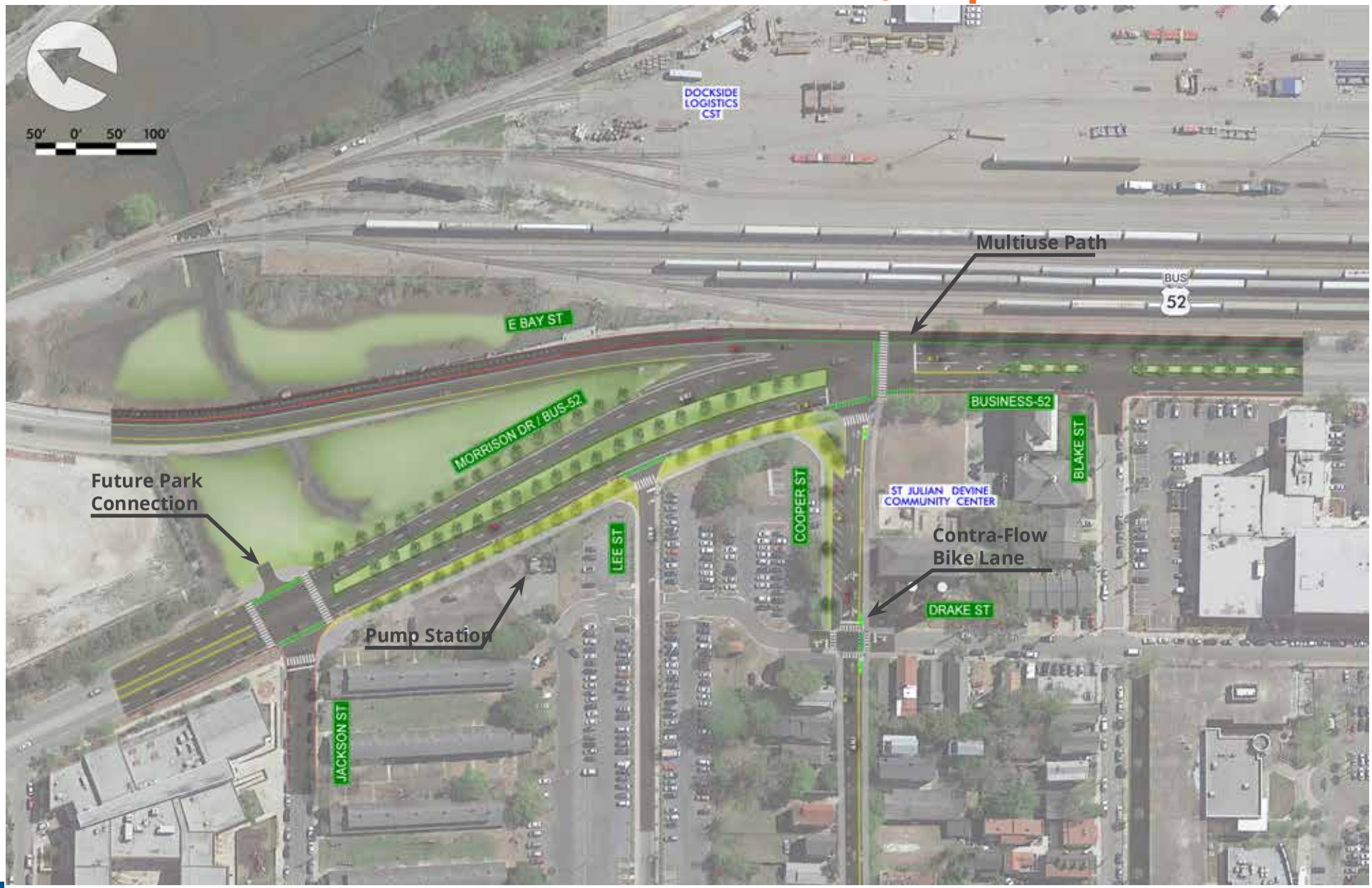
Morrison Drive, Cooper Street & Lee Street

The Peninsula

Problem Statement:	Vital intersection for entering and exiting the Lower Peninsula. East Bay Street becomes the on-ramp to the Ravenel Bridge. A 10 ft multiuse path borders East Bay. Adjacent blocks are used primarily for parking and exit/entry of side streets make traffic flow and pedestrian crossing hazardous.
Design Considerations:	■ Major bike/ped amenity is inaccessible -- one crossing ■ Vital pump station at the north corner of Lee Street at Morrison ■ Immediate area is prime for redevelopment and park space ■ Site borders the Cooper River Bridge Project ■ Needs traffic calming ■ Better drainage to prevent flooding in the roadway ■ The Cooper Street Bike Plan and Cooper River Bridge Redevelopment
Recommendations:	■ Raise Morrison Drive to higher elevation to address stormwater issues ■ High-visibility crosswalks for pedestrians and cyclists ■ Remove turning lane on southbound Morrison to improve bicycle safety and provide drainage space ■ Add sharrow markings and buffered contra-flow bike lane on Cooper Street, removing parallel parking on onside ■ Replace parking with angle-in parking



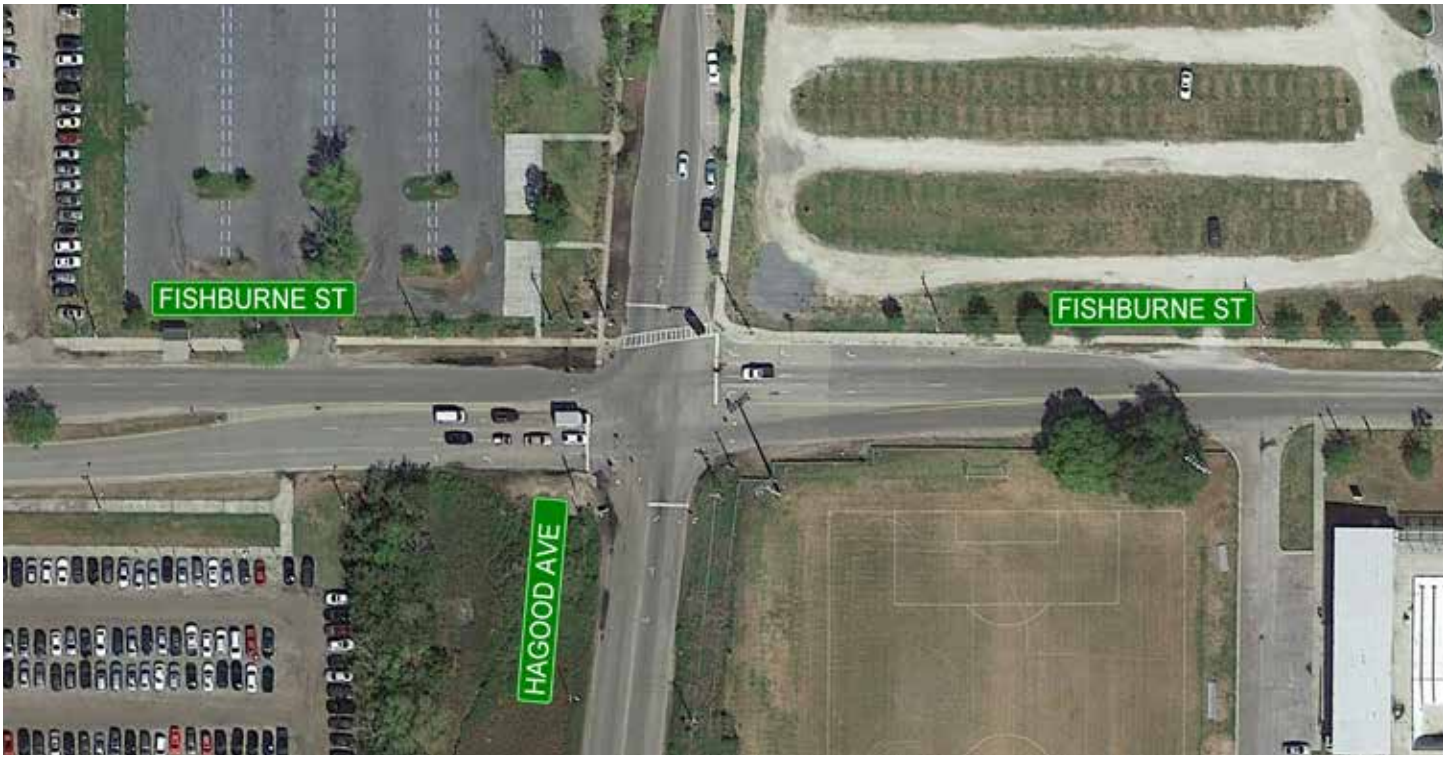
Morrison Drive, Cooper Street & Lee Street



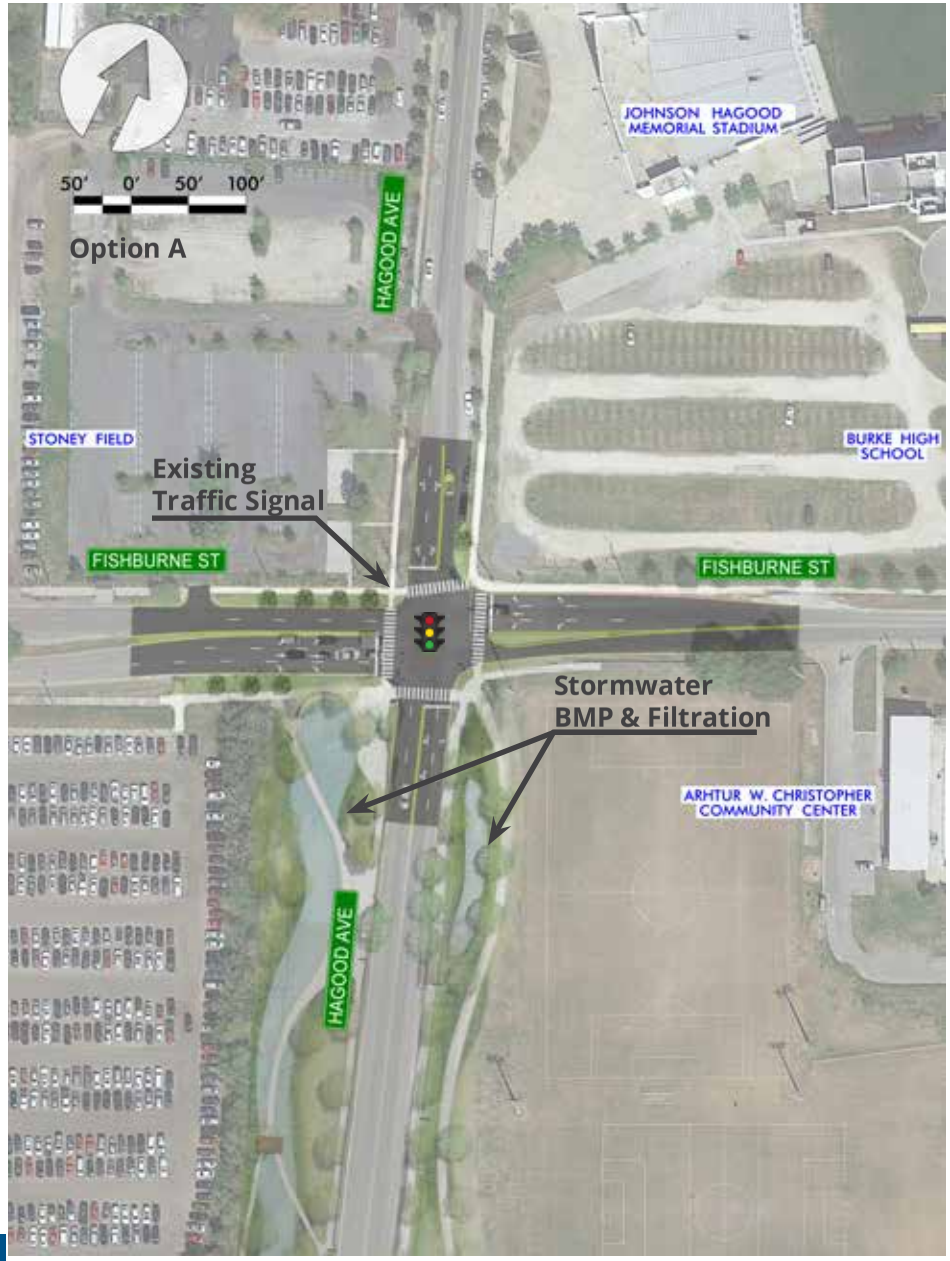
Fishburne Street & Hagood Avenue

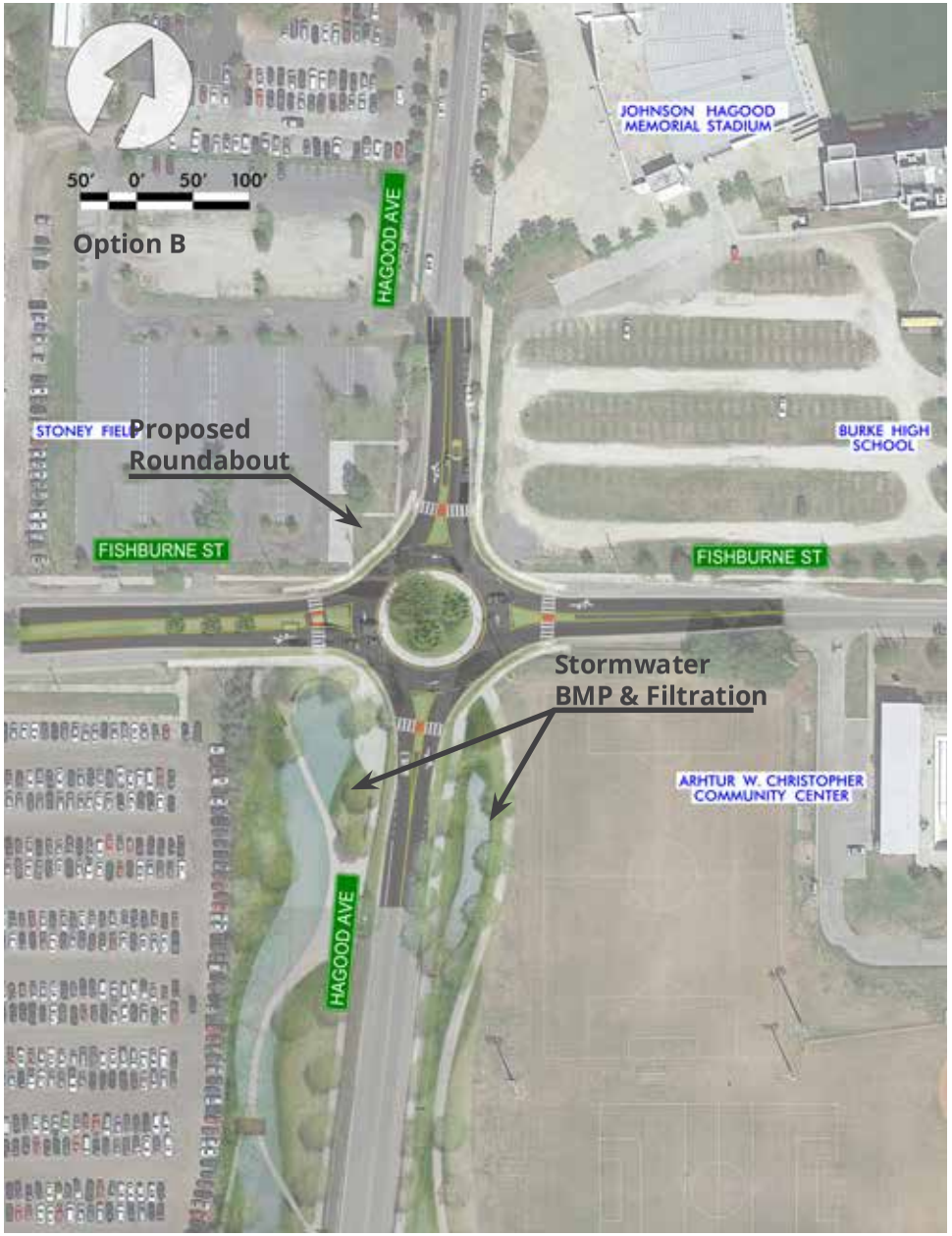
The Peninsula

Problem Statement:	North of this intersection is the Citadel. Directly adjacent are older and low-income neighborhoods, parking lots, and areas prime for redevelopment. Area floods often with water left standing in the road for days after heavy rains. Pedestrian traffic here is often families, children, and students walking to school and community center
Design Considerations:	■ The City's Urban Design Center has released proposed stormwater drainage solutions for this area ■ Area is flanked with schools, a community center, the Citadel, and the Riverdogs Ballpark ■ Creating better connectivity to the WestEdge project
Recommendations:	■ High-visibility crosswalks ■ Potential new roundabout ■ Utilizing the Hagood Green Street plan ■ Planted medians



Fishburne Street & Hagood Avenue





Folly Road, Wesley Drive & West Ashley Greenway

West Ashley

Problem Statement: The West Ashley Greenway crosses Folly Road at a problematic intersection. Wesley Drive and Folly Road merge together at a sharp angle before reaching the South Windermere Center. The only place for pedestrians to safely cross is at the Windermere intersection.

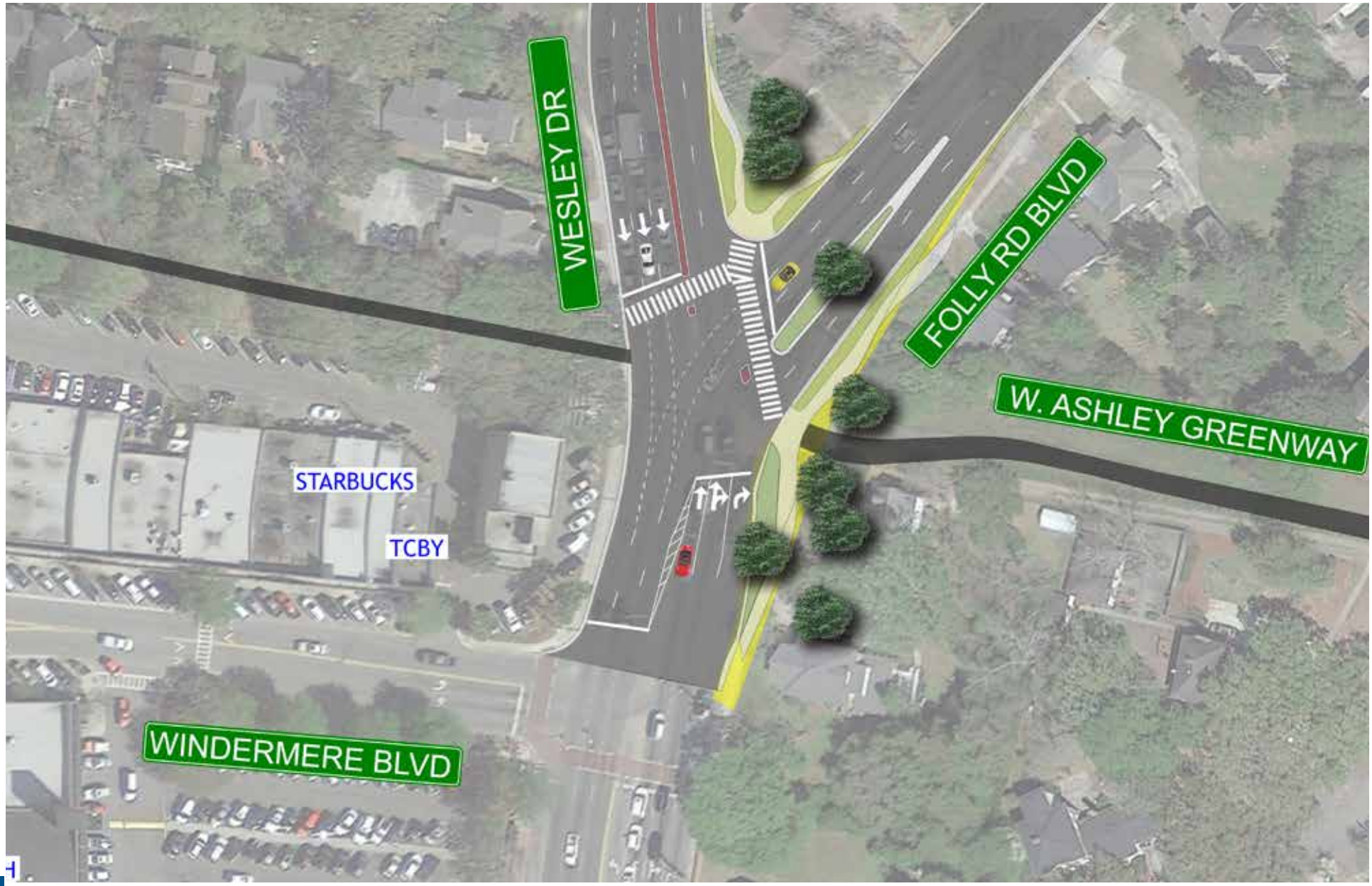
Design Considerations:

- The Greenway is a popular amenity with cyclists and pedestrians
- This intersection interrupts the greenway more so than at other crossings
- Neighborhood is very walkable with sidewalks and retail available
- Safer crossings are needed

Recommendations:

- Closing the free-flow right turn lane on Southbound Folly Road as well as along Northbound Folly Road
- High-visibility crosswalks with pedestrian countdowns closer to the Greenway

Folly Road, Wesley Drive & West Ashley Greenway



Maybank Highway & Riverland Drive

James Island

Problem Statement: Maybank Highway is the connecting thread between Johns Island, James Island, and West Ashley. Maybank and Riverland Drive meet in a large golf course and provide a direct connection to residential neighborhoods. Residents in this area have no safe way to travel as pedestrians or cyclists.

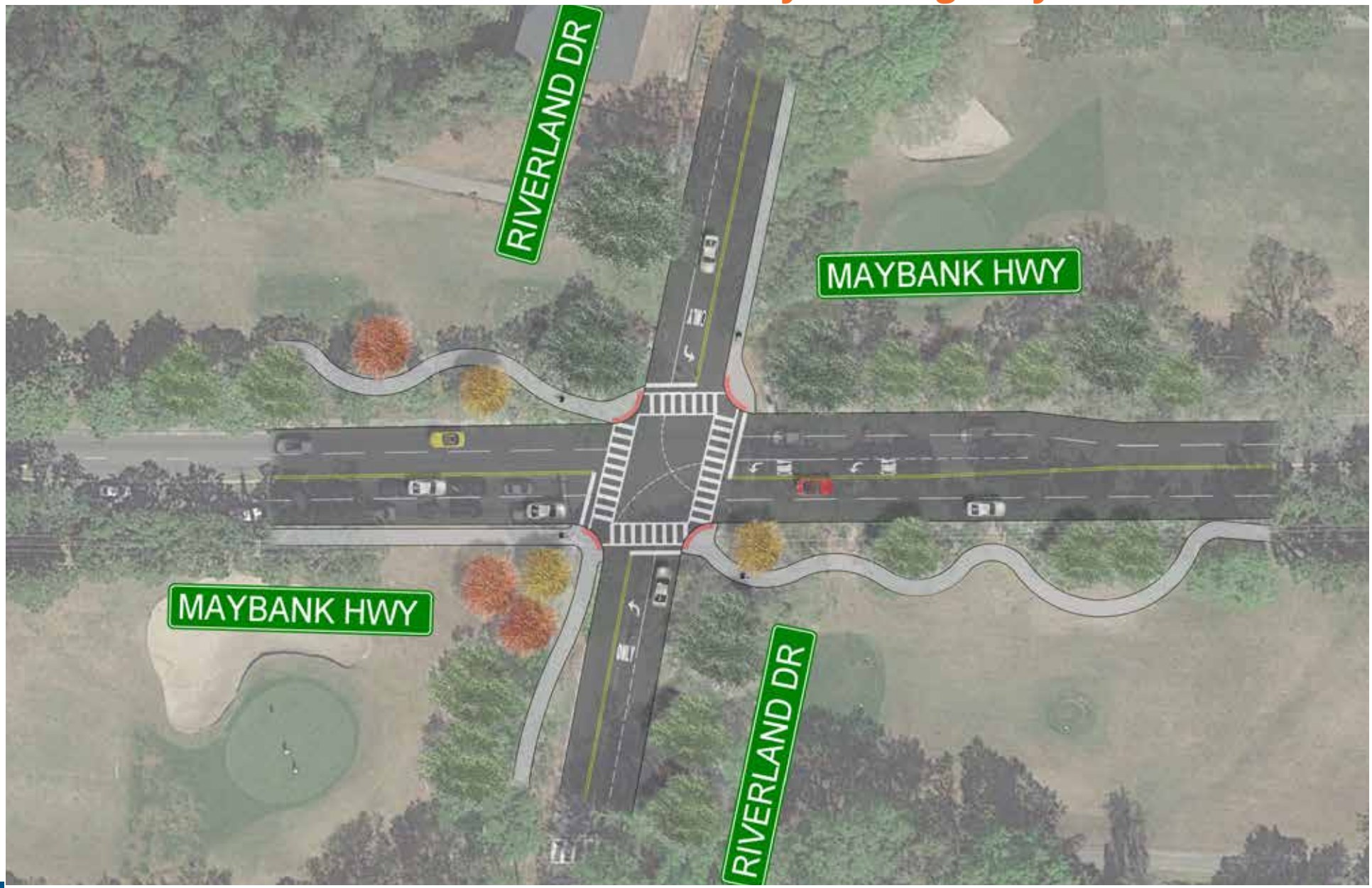
Design Considerations:

- Providing pedestrian amenities to promote active transportation
- Creating gateways into adjacent neighborhoods
- Significant and healthy trees along Maybank Highway
- Stormwater drainage at the intersection

Recommendations:

- Assumes 10’/11’ lane widths.
- Left turn lane on westbound approach requires 150’ - 200’ length of widening to the north side of Maybank Hwy approximately 6’-7’ of additional width
- Context sensitive widening to avoid impacts to mature trees, avoiding the need for additional ROW High-visibility crosswalks with pedestrian countdowns
- Adding a meandering multiuse path behind the treeline and sidewalks to connect the neighborhoods
- Improved pedestrian level lighting

Maybank Highway & Riverland Drive



St. Andrews Blvd, Old Towne Road & Ashley River Road

West Ashley

Problem Statement:	Ashley River and Old Towne merge into St. Andrews Boulevard, weaving together 8 lanes of traffic into 5 lanes with painted bike lanes on either side. This intersection is designed as an at-grade freeway which caters to vehicles and high speeds. Bike lanes disappear at the intersection. Three streets intersect at this intersection, creating a dangerous place for cars, pedestrians, and cyclists attempting to cross or travel through this intersection.
Design Considerations:	■ This intersection and St. Andrews Boulevard are superimposed onto and disrupts the original street network of this area ■ Bike lanes disappear forcing cyclist to either ride the sidewalk or share the densely traveled road
Recommendations:	■ Consolidate the intersection to meet at a right angle, Options A and B show different configurations of the same idea ■ High-visibility crosswalks with pedestrian countdowns at new intersection ■ Add multiuse path to the west side of St Andrews/Old Towne to move bikes off the street at the intersection ■ Use planted medians and access management to guide left turns

St. Andrews Blvd, Old Towne Road & Ashley River Road

Calhoun Street & East Bay Street

The Peninsula

Problem Statement:	A key intersection and corridor in the historic district of downtown Charleston for vehicular and bicycle/pedestrian traffic. Connects into major biking corridor that leads to and crosses the Ravenel Bridge. Sidewalks connections are inconsistent in this area and amenities need to be equally accessible for tourists and nearby lower income residents who commute through this area every day.
Design Considerations:	■ Two major biking corridors intersect here, with bike share stations located in each direction ■ Many destination points nearby that require access to parking or alternative transportation accommodations
Recommendations:	■ High visibility crosswalks with dedicated, painted bike lane crossings ■ Realign Washington Street, fixing offset for increased visibility and creating a new plaza ■ Two lane cycle track on Calhoun and Rails-to-Trials multiuse path on Washington

Calhoun Street & East Bay Street

Dorchester Road / SC Highway 642

Problem Statement:	Dorchester Road serves many functions to the various adjacent communities: community route, shopping destination, and regional arterial. Future BRT service is planned for this major regional facility. Reproposing the wide median will be an important design feature as well as safe bicycle and pedestrian access.
Design Considerations:	■ Intersection treatments for bike and pedestrian access will be critical ■ Surburban style development pattern will need to transition into a more dense, walkable environment ■ Access Management
Recommendations:	■ Re purpose median to accommodate dedicated Bus Rapid Transit Lanes (north-south) ■ Potential BRT station siting at Ashley Phosphate intersection ■ Construct 12’ meandering sidepath along Dorchester Road ■ Redesign intersections with high visibility crosswalks, pedestrian signal countdowns, pedestrian refuge islands, street trees, and pedestrian level lighting

Proposed


GOLDS GYM
OCEAN CITY
SHELL
CVS
ASHLEY PHOSPHATE RD
DORCHESTER RD
LEISURE DEPOT
MCDONALDS
WALGREENS
PARK FOREST PKWY
DORCHESTER RD


DOLLAR TREE
ASHLEY PHOSPHATE RD
GOLDS GYM
SHELL
OCEAN CITY
CVS
DORCHESTER RD
LEISURE DEPOT
MCDONALDS
WALGREENS
PARK FOREST PKWY
LINCOLN PATRIOT BLVD
DORCHESTER RD

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Goose Creek Road / US Highway 52

Problem Statement:	US 52 (through Goose Creek Road) is primed for greenfield development. Currently a 4-Lane divided facility with no amenities for bicycle and pedestrian travel. The corridor also suffers from limited connectivity and complimentary uses.
Design Considerations:	■ Plan for 2-Lane collector street connectivity, supposed by future development and redevelopment ■ Establish spacing standards for intersecting streets, signals, cross access and driveway curb cuts
Recommendations:	■ Redesign signalized intersections to include crosswalks, lighting, and pedestrian refuges ■ Eliminate free-flow right turn lanes ■ Install 10’ meandering sidepath with streets trees along entire corridor


100' 0' 100' 200'

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US Highway 78 / 5th Street

From Main Street / US 17 Alternate to Von Ohsen Road / Royle Road **Length: 2.5 miles**

Problem Statement:	US Highway 78 is a multilane facility that connects residential neighborhoods to commercial and institutional development. The corridor continues to have problems with crashes and congestion. Poor access management and a plethora of driveways plague this important corridor.
Design Considerations:	■ Improve walkability and bike-ability along corridor ■ Beautification treatments will benefit corridor appearance and speed control ■ Improve connectivity through cross-access and back-door access between complimentary uses
Recommendations:	■ Install high visibility crosswalks, pedestrian countdown signals, pedestrian level lighting at intersections of Main Street and Berlin Myers ■ Plant street trees along entire corridor ■ Construct “Pocket Median” at select locations along corridors


BANK OF AMERICA
CHECKERS
5TH ST
ALEX'S
SHELL


50' 0' 50' 100'
ALT
BANK OF AMERICA
CHECKERS
5TH ST
ALEX'S
SHELL
N MAIN ST
DORCHESTER COUNTY TREASURER
SUMMERVILLE


GRANDVIEW DR
SEACOAST CHURCH SUMMERVILLE
5TH ST
CAPTAIN D'S
N GUM ST
BERLIN G MYERS PKWY
GRANDVIEW DR
SEACOAST CHURCH SUMMERVILLE
5TH ST
CAPTAIN D'S
HERITAGE SQUARE SHOPPING CENTER

Rutledge Avenue

Rutledge Avenue

Option B

Option A

Rutledge Avenue

Pictured: Grove St to Moultrie St

Problem Statement:	Along this stretch, the road switches from 1-way to 2-way. Surrounding neighborhood residents prefer the street to return to it's original neighborhood feel. Speeding here has been an issue which is particular dangerous so close to several schools and parks. The area features many small blocks, but few lights and fewer crosswalks.
Design Considerations:	■ Residents and students need safe crossing to schools and parks ■ Needs traffic calming ■ Cut through traffic needs to be deterred
Recommendations:	■ Signalize key intersections like Moultrie Street and add 4-way stop signs at Cleveland Street ■ Add curb bump outs and painted curbs to define on-street parking and shorten crossing distance ■ Add high-visibility cross walks at Maverick and Francis streets ■ Optional: close Cleveland Street at the park and create a pedestrian street park entrance

Maybank Highway

Johns Island/From River Road to Southwick Drive **Length: 1.8 miles**
Pictured: Sailfish Rd to Towne St

Problem Statement: Congestion is a major concern as more residential and commercial growth comes to the islands. The main highway through needs to grow to meet the new demand. The community has been advocating for the protection of the mature tree canopy as well as increased multi-modal connectivity.

Design Considerations:

- Roadway must be widened to meet increased travel demand
- Residences, businesses, and neighborhoods must retain driveway access
- Connectivity along and around the corridor needs to be improved

Recommendations:

- Roadway must be widened to meet increased travel demand
- Residences, businesses, and neighborhoods must retain driveway access
- Connectivity along and around the corridor needs to be improved

Maybank Highway

Maybank Highway

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