

ENVIRONMENTAL RE-EVALUATION CONSULTATION

Note: The purpose of this worksheet is to assist sponsoring agencies in gathering and organizing materials for re-evaluations required under the National Environmental Policy Act (NEPA). It is designed to provide FTA with information needed to do a re-evaluation. In lieu of the worksheet, the sponsoring agency may submit the same information in a different format. Submission of the worksheet by itself does not meet NEPA requirements. FTA must concur in writing with its determination and/or the sponsoring agency's NEPA recommendation. Contact the FTA Region 4 Planner if you have any questions regarding this worksheet. We strongly encourage you to contact us to discuss your project changes before you fill out this worksheet.

<i>For Agency Use</i> <i>Date Received:</i>	
<i>Recommendation by Planner or Engineer:</i> <input type="checkbox"/> <i>Accept</i> <input type="checkbox"/> <i>Return for Revisions</i> <input type="checkbox"/> <i>Not Eligible</i>	<i>Reviewed By:</i> <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Regional Counsel:</i> <input type="checkbox"/> <i>Accept Recommendation</i> <input type="checkbox"/> <i>Return with Comments</i>	<i>Reviewed By:</i> <i>Date:</i>
<i>Comments:</i>	
<i>Concurrence by Approving Official:</i>	<i>Date:</i>

Please answer the following questions, fill out the impact chart and attach project area and site maps. Using a site map from the previously approved NEPA document, show project changes using a different color. Include additional site maps to help reviewer understand project changes.

PROJECT TITLE Lowcountry Rapid Transit (LCRT) Project

LIST CURRENT, APPROVED ENVIRONMENTAL DOCUMENTS (e.g. EIS/ROD, EA/FONSI, BA, RE-EVALUATION, etc.) If Re-evaluation, briefly describe.
Title: LCRT NEPA Documented Categorical Exclusion (DCE) Date: July 19, 2021 Type and Date of Last Federal Action: NEPA DCE, July 19, 2021

HAS THE MOST CURRENT AND OTHER PERTINENT APPROVED ENVIRONMENTAL DOCUMENTS BEEN <u>RE-READ</u> TO COMPARE PROPOSED PROJECT CHANGES? <input type="checkbox"/> NO (STOP! The most current approved environmental document MUST be re-read prior to completing a re-evaluation.) <input checked="" type="checkbox"/> YES NAME: Miles Spenrath and Jennifer Pearson DATE: August 2024

IS THE PROJECT CURRENTLY UNDER <input checked="" type="checkbox"/> DESIGN OR <input type="checkbox"/> CONSTRUCTION?

REASON FOR RE-EVALUATION

Since publication of the DCE, the Berkeley-Charleston-Dorchester Council of Government (BCDCOG) advanced design to 60 percent, which identified several proposed design changes including station relocations, intersection and other design improvements, and right-of-way (ROW) acquisition along the LCRT corridor.

DESCRIPTION OF PROJECT CHANGES OR NEW INFORMATION

Bus Rapid Transit (BRT) Station Relocations and Design changes

Four station relocations are proposed: Huger Street to Lee Street, Braswell Street to Hagood Street, Durant Street to Helm Avenue, and a slight northward shift of the Mall Drive Station. University & BUC Club Station has been redesigned.

Intersection and Other Design Changes:

Proposed changes include:

- Removal of previously proposed sidewalk between Courtenay Drive and Doughty Street Station
- Removal of previously proposed left-turn lane at King Street and Calhoun Street
- Rivers Avenue and Melnick Drive Improvements
- Rivers Avenue and Otranto Road BRT and Right Turn Lane Improvements
- University Boulevard and Fernwood Drive BRT and Right Turn Lane Improvements
- Other minor design changes to minimize right-of-way.

ROW Acquisition

Due to a directive from the Federal Highway Administration (FHWA) that will be reflected in South Carolina Department of Transportation (SCDOT) policy, SCDOT will no longer be allowed to request permission-only access from property owners. Therefore, the 60 percent design eliminates all permissions and instead provides for temporary construction easements (TCEs) and permanent ROW to provide needed area for construction.

See Attachment 1 for detailed descriptions and figures of each proposed design change.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECTS THIS PROJECT? If yes, please explain.

- NO
- YES

Due to a directive from the FHWA that will be reflected in SCDOT policy, SCDOT will no longer be allowed to request permission-only access from property owners. Therefore, the 60 percent design eliminates all permissions and instead provides for TCEs and permanent ROW to provide needed area for construction.

WILL THE NEW INFORMATION HAVE THE POTENTIAL TO CAUSE A CHANGE IN THE DETERMINATION OF IMPACTS FROM WHAT WAS DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT FOR ANY OF THE AREAS LISTED BELOW? For each impact category, please indicate whether there will be a change in impacts. For all categories with a change, continue to the table at the end of this worksheet and provide detailed descriptions of the impacts as initially disclosed, new impacts and a discussion of the changes. The change in impact may be beneficial or adverse.

Transportation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Land Use and Economics	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Acquisitions, Displacements, & Relocations	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Neighborhoods & Populations (Social)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Visual Resources & Aesthetics	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Air Quality	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Noise & Vibration	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Ecosystems (Vegetation & Wildlife)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Water Resources	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Energy & Natural Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Geology & Soils	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazardous Materials	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Public Services	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Utilities	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Historic, Cultural & Archaeological Resources	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Parklands & Recreation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Construction	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Secondary and Cumulative	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Will the changed conditions or new information result in revised documentation or determination under the following federal regulations?

Endangered Species Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Magnuson-Stevens Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Farmland Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 404-Clean Water Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Floodplain Management Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hazardous Materials	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 106 National Historic Preservation Act	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Uniform Relocation Act	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Section 4(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Section 6(f) Lands	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Wild & Scenic Rivers
Coastal Barriers
Coastal Zone
Sole Source Aquifer
National Scenic Byways
Other

Yes No
 Yes No
 Yes No
 Yes No
 Yes No
 Yes No

If you checked yes to any of these, describe how the changes impact compliance and any actions needed to ensure compliance of the new project: The additional ROW acquisitions will require compliance with the Uniform Relocation Act.

Will these changes or new information likely result in substantial public controversy?

Yes No

Comments:

COMMENTS:

CONCLUSIONS AND RECOMMENDATIONS: Based on the information that has been reviewed, it has been determined that the revised design would not significantly alter the conclusions reached in the DCE.

LIST OF ATTACHMENTS: Environmental Re-Evaluation at 60 Percent Design

SUBMITTED BY:

By signing this, I certify that to the best of my knowledge this document is complete and accurate.

Name	Date
Title	

Submit two paper copies of this form, attachments, and a transmittal letter recommending a NEPA finding to the address below. Or you may submit one electronic version to the appropriate FTA Region 4 Planner. When the document is approved, FTA may request additional copies.

Federal Transit Administration, Region 4
 230 Peachtree Street, Suite 800
 Atlanta, GA 30303-1512

phone: (404) 865-5600
 fax: (404) 865-5605

Impact Category	Impacts as Initially Disclosed	New Impacts	Change in Impacts
<p>Transportation</p>	<p><u>Traffic Impacts</u> Temporary adverse impacts on traffic during construction. Long-term beneficial impacts because the BRT would provide an efficient, reliable alternative mode of transportation that would enhance regional mobility and shift some private vehicle use to public transit as congestion continues to grow.</p> <p><u>Bicycle and Pedestrian Impacts</u> Beneficial impacts on bicycle and pedestrian safety due to a proposed shared use path along the LCRT alignment.</p> <p><u>On-Street Parking Impacts</u> Parking impacts from the removal of parking spaces or use of flex-time parking at select areas would not result in significant impacts under NEPA due to adequate, convenient off-street parking availability for residential and commercial use. Access would be maintained as much as practical to businesses during times of limited access.</p> <p><u>Connectivity to Other Transportation Facilities and Modes</u></p>	<p><u>Traffic Impacts</u> The proposed station relocations, intersection improvements, and other design changes would result in slightly greater beneficial traffic impacts.</p> <p><u>Bicycle and Pedestrian Impacts</u> No new impacts are anticipated from those described in the DCE.</p> <p><u>On-Street Parking Impacts</u> No changes in impacts are anticipated from those described in the DCE.</p> <p><u>Connectivity to Other Transportation Facilities and Modes</u> No new impacts are anticipated from those described in the DCE.</p>	<p><u>Traffic Impacts</u> No changes in impacts during construction are anticipated from those described in the DCE. The proposed station relocations, intersection improvements, and other design changes would result in slightly greater beneficial traffic impacts from those described in the DCE.</p> <p><u>Bicycle and Pedestrian Impacts</u> No changes in impacts are anticipated from those described in the DCE.</p> <p><u>On-Street Parking Impacts</u> No changes in impacts are anticipated from those described in the DCE.</p> <p><u>Connectivity to Other Transportation Facilities and Modes</u> No changes in impacts are anticipated from those described in the DCE.</p>

	Connectivity using transfers would be available via the Shipwatch Square Transit Center, the North Charleston Intermodal Transportation Center located on Gaynor Avenue, and any future shared transit stops with the Charleston Area Regional Transit Authority (CARTA) (to be determined). The transportation center provides connectivity between CARTA and inter-city bus services, Amtrak intercity passenger trains, and for-hire transportation services.		
Land Use and Economics	No adverse impacts on existing land uses due to the presence of existing transit service and compatible land use along the corridor.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Acquisitions, Displacements, & Relocations	Estimated ROW needs of 5.72 acres would not result in significant impacts under NEPA as the project corridor is 21.4 miles in length. None of the property acquisitions would result in the displacement of any residences.	Estimated permanent ROW needs of 17.77 acres, including the OMF and Park and Ride, and TCE needs of 17.96 acres would not result in significant impacts under NEPA as the project corridor is 21.4 miles in length. All new permanent ROW acquisitions and TCEs are within the original project study area (PSA). None of the property acquisitions would result in the displacement of any residences.	The new design results in an increase of 12.05 acre of permanent ROW acquisition. The new design accounts for TCEs, totaling 17.96 acres.
Neighborhoods & Populations (Social)	Although the study area includes concentrations of minority and low-	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

	income populations greater than the City of Charleston, North Charleston, Goose Creek, Hanahan, and Ladson, the BRT would not result in disproportionately high and adverse impacts on minority and/or low-income populations. The alignment is constructed within existing ROW and would not create a barrier to any neighborhoods.		
Visual Resources & Aesthetics	No adverse impacts on visual resources and aesthetics because the BRT features (vehicles, station, and infrastructure) would be consistent with the transportation character of the corridor.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Air Quality	Beneficial impacts on regional air quality due to the reduction of vehicle miles traveled and proposed use of battery electric buses.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Noise & Vibration	Temporary adverse impacts to the ambient noise environment in the PSA during construction and no adverse impacts during operation. The project does not meet the three vibration screening criteria prescribed in FTA guidance, and therefore FTA considers vibration impacts unlikely. No further vibration assessment is necessary.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

<p>Ecosystems (Vegetation & Wildlife)</p>	<p>No candidate species or U.S. Fish and Wildlife-designated critical habitat for federally listed species exists within the PSA. Temporary adverse impacts to essential fish habitat could occur during construction for access. Temporary clearing within the estuarine emergent wetlands would result from the installation of erosion and sediment control measures. These short-term adverse impacts would be minimal and as design progresses, efforts would be made to avoid, minimize, and mitigate these impacts.</p>	<p>No new impacts are anticipated from those described in the DCE.</p>	<p>No changes in impacts are anticipated from those described in the DCE.</p>
<p>Water Resources</p>	<p>Permanent adverse impacts to 12 streams (six perennial, five intermittent, and one tidal) totaling 990 linear feet (LF) due to the extension of pipes and culverts to accommodate an increase or shift in ROW. Permanent adverse impacts to seven wetlands (six non-tidal and one tidal) totaling 1.15 acres due to fill or excavation. Temporary adverse impacts to 11 streams (seven perennial and four intermittent) totaling 215 LF and six non-tidal wetlands totaling 0.75 acre due to erosion and sediment control measures and construction access. Impacts to surface waters have been</p>	<p>Permanent adverse impacts to nine streams (four perennial and five intermittent) totaling 364 LF due to the extension of pipes and culverts to accommodate an increase or shift in ROW. Permanent adverse impacts to three non-tidal wetlands totaling 0.09 acre due to fill or excavation. No permanent adverse impacts to tidal streams or wetlands. Temporary adverse impacts to six streams (five perennial and one intermittent) totaling 122 LF and two non-tidal wetlands totaling 0.06 acre due to erosion and sediment control measures and construction access. Impacts to surface waters have</p>	<p>The new design results in the following changes in permanent adverse impacts, including the elimination of all tidal stream and wetland impacts:</p> <ul style="list-style-type: none"> • Three fewer streams impacted for a total reduction of 626 LF of permanent adverse stream impacts. • Four fewer wetlands impacted for a total reduction of 1.06 acres of permanent adverse wetland impacts. <p>The new design results in the following changes in temporary adverse impacts:</p> <ul style="list-style-type: none"> • Five fewer streams impacted for a total reduction of 93 LF of temporary adverse stream impacts.

	avoided and minimized to the greatest extent practicable.	been avoided and minimized to the greatest extent practicable.	<ul style="list-style-type: none"> Four fewer wetlands impacted for a total reduction of 0.69 acre of temporary adverse wetland impacts.
Energy & Natural Resources	Increased use of public transportation would result in decreased traffic congestion and vehicle idling, thereby increasing the transportation related energy efficiency within the project corridor for both public transportation and private vehicle use. Additionally, battery electric buses are inherently more energy efficient and produce fewer emissions than diesel buses.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Geology & Soils	The project is situated at and close to sea level and some soils within the study area could potentially be erodible and/or poorly drained, especially area that are hydric or have hydric inclusions or within the coastal critical areas. Soil corrective measures may be taken to stabilize roadway, roadway shoulders, and culvert crossings by augmenting existing soils with soils with stable properties. Soil erosion resulting from construction activities would be controlled using appropriate environmental protective measures, including best management practices (BMPs) to prevent soil erosion.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

Hazardous Materials	The PSA has 98 sites of concern (seven low risk sites, 86 medium risk sites, and five high-risk sites). Each of these sites has the potential to impact the project via the presence or potential presence of contaminants in soil and/or groundwater. Contractors would implement BMPs such as developing and implementing a soil management plan and stopping subsurface activities and contacting the BCDCOG if hazardous materials are encountered.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Public Services	No adverse impacts on public services.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Utilities	Temporary adverse impacts because utility relocations may be required; however, this work could be completed in tandem with other roadway restriping and paving work to minimize impacts on traffic flow during this time.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Historic, Cultural & Archaeological Resources	No adverse impacts on historic properties in the PSA. The project would not result in the acquisition of new ROW from historic properties. There are no Section 4(f) issues regarding historic properties.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.

Parklands & Recreation	FTA has determined that use of the Wannamaker County Park and Harmon Field resulted in a de minimis determination. A de minimis determination results when, after considering any measures to minimize harm, the impact would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Construction	Temporary adverse construction impacts would be minimized through appropriate mitigation as described in the DCE.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.
Secondary and Cumulative	No significant adverse cumulative impacts. Potential minor cumulative construction impacts with other planned projects in the area.	No new impacts are anticipated from those described in the DCE.	No changes in impacts are anticipated from those described in the DCE.



Attachment 1

NEPA Re-Evaluation at 60 Percent Design

Lowcountry Rapid Transit

August 21, 2024

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Acronyms and Abbreviations

BCDCOG	Berkeley-Charleston-Dorchester Council of Government
BRT	Bus rapid transit
DCE	Documented Categorical Exclusion
LCRT	Lowcountry Rapid Transit
PSA	Project study area
ROW	Right-of-way
SCDOT	South Carolina Department of Transportation
SUP	Shared Use Path
TCE	Temporary construction easement

Environmental Re-Evaluation at 60 Percent Design

Since publication of the Lowcountry Rapid Transit (LCRT) Documented Categorical Exclusion (DCE), the Berkeley-Charleston-Dorchester Council of Government (BCDCOG) advanced design to 60 percent, which identified several proposed design changes. These include four bus rapid transit (BRT) station relocations (Figure 1), intersection and other design improvements (Figure 2), and right-of-way (ROW) acquisition along the LCRT corridor.

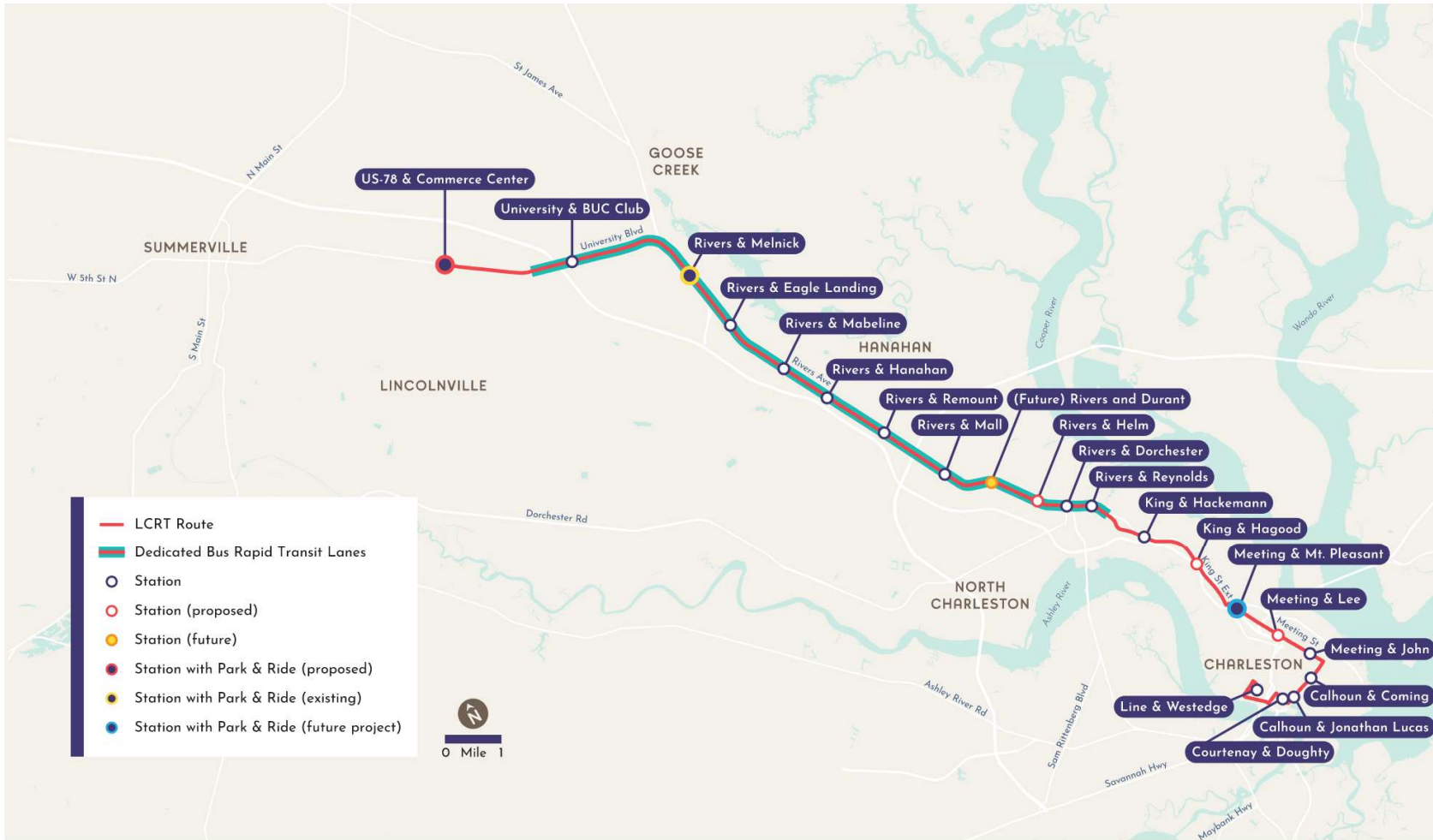


Figure 1. BRT Stations

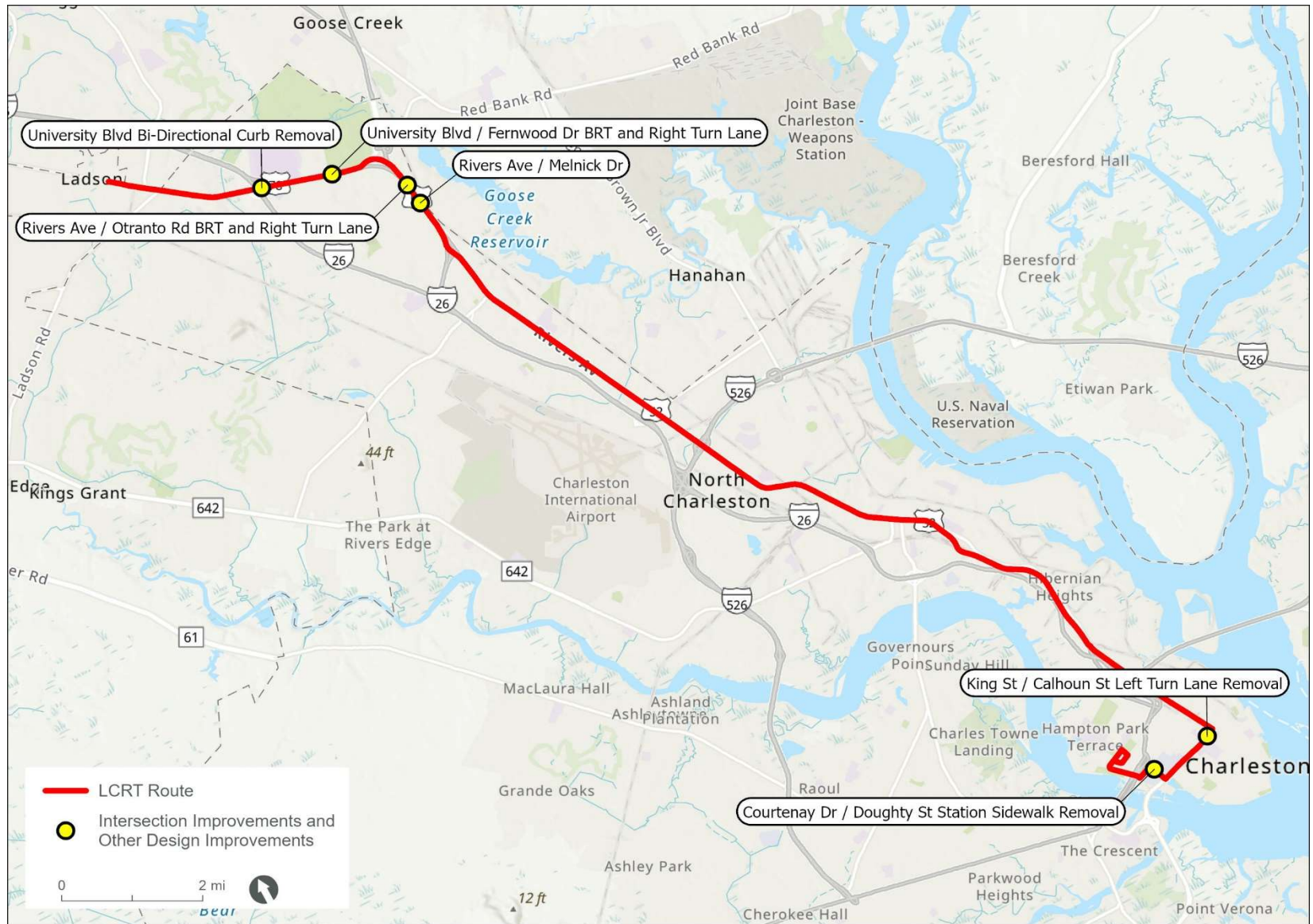


Figure 2. Intersection and Other Design Improvement Locations

1. BRT Station Relocations

Four station relocations are proposed: Huger Street to Lee Street, Braswell Street to Hagood Street, Durant Street to Helm Avenue, and a slight northward shift of the Mall Drive Station. These station relocations would result in slightly greater beneficial traffic impacts from those described in the DCE. These station relocations are each summarized below. It should be noted that the stations have also been renamed in alignment with the project branding and communications. Figure 1 illustrates the station names that are anticipated to be used going forward.

1.1 Huger Street to Lee Street

The originally proposed location for this station was at the intersection of Meeting Street and Huger Street/Sheppard Street. The proposed new station location would be located along the eastern edge of an apartment complex parking lot south of the intersection of Meeting Street and Lee Street/Walnut Street, on the west side of Meeting Street (Figure 3). This station is proposed to be relocated south due to constructability and cost concerns at the originally proposed location. This relocation would result in a reduction of 172 linear feet of permanent adverse impacts to New Market Creek, a tidal stream. This relocation would also result in three fewer wetlands impacted for a total reduction of one acre of permanent and 0.55 acre of temporary adverse wetland impacts. A small amount of new permanent ROW would be needed to construct the station. The revised design is within the original project study area (PSA), and there would be no other significant changes in impacts from those described in the DCE at this location.

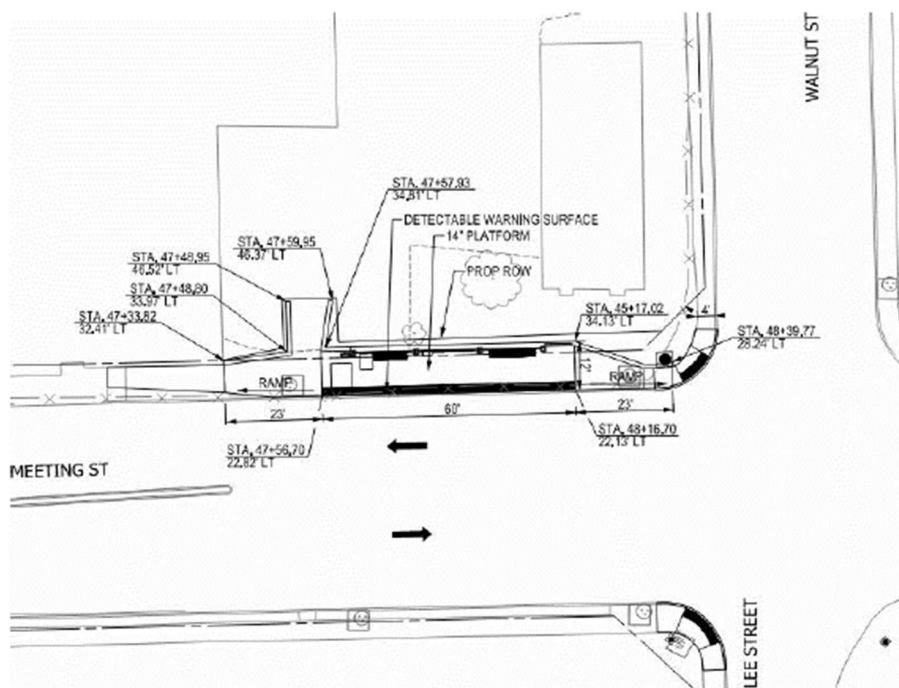


Figure 3. Proposed Meeting & Lee Station

1.2 Braswell Street to Hagood Street

The originally proposed location for this station was at the intersection of King Street Extension and Braswell Street. The proposed new station location would be located partially within a grassy area in existing ROW north of the intersection of King Street Extension and Hagood Street, on the west side of King Street Extension (Figure 4). This station is proposed to be relocated north to accommodate existing Charleston Area Regional Transit Authority ridership and the adjacent Magnolia Development project's proposed permit modifications at Braswell Street. The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

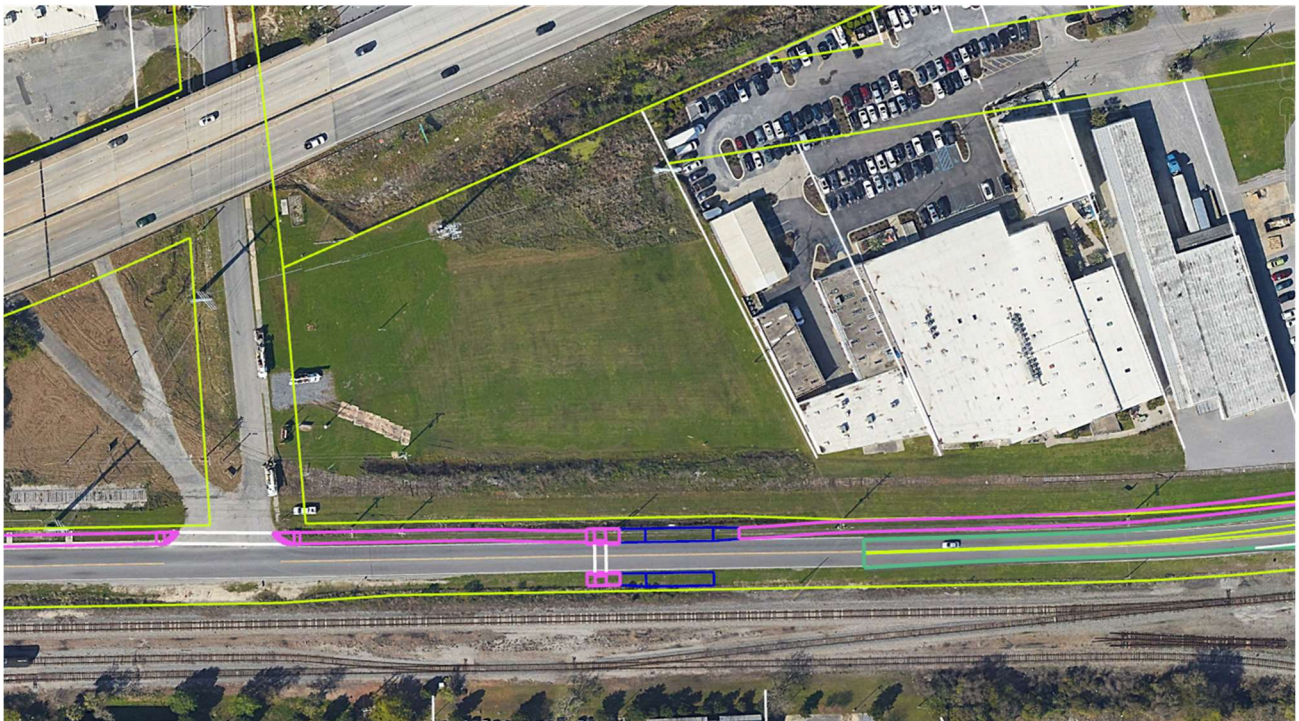


Figure 4. Proposed King & Hagood Station

1.3 Durant Street to Helm Avenue

The originally proposed location for this station was at the intersection of Rivers Avenue and Durant Street. The proposed new station location would be located north of the intersection of Rivers Avenue and Helm Avenue, in the center/median of Rivers Avenue (Figure 5). This station is proposed to be relocated south to the Helm Avenue intersection to avoid impacts at the intersection, avoid safety issues related to walls at the station, and minimize coordination with the proposed future bridge project to bridge the railroad crossing here. This relocation also allows for two bus lanes here as opposed to the one bi-directional lane and single-sided two-direction station proposed in the original 30 percent design. The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

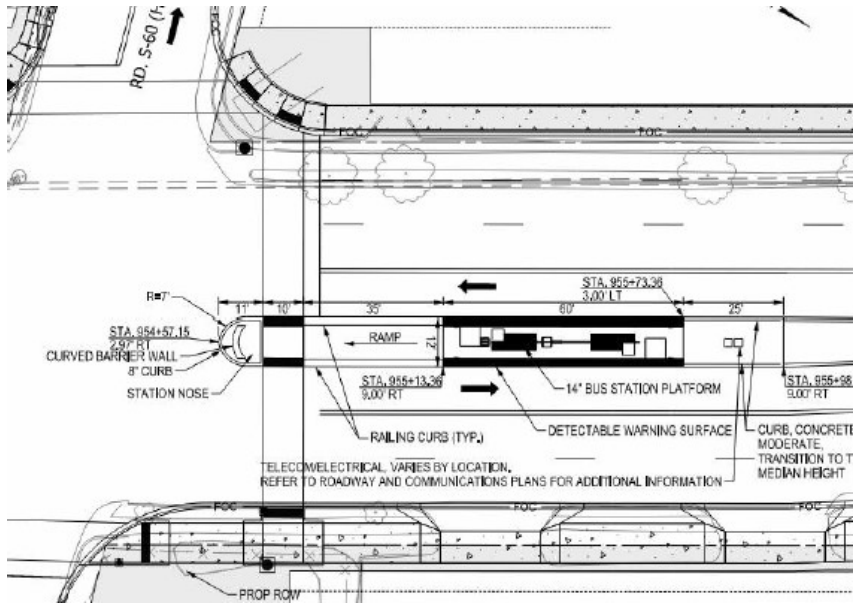


Figure 5. Proposed Rivers & Helm

1.4 Mall Drive Station

The originally proposed location for this station was at the intersection of Rivers Avenue and Mall Drive. The proposed new station location would be located slightly north of the originally proposed location, in the center/median of Rivers Avenue (Figure 6). This station is proposed to be relocated slightly north to avoid impacts at the intersection and to avoid safety issues related to walls at the station. The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

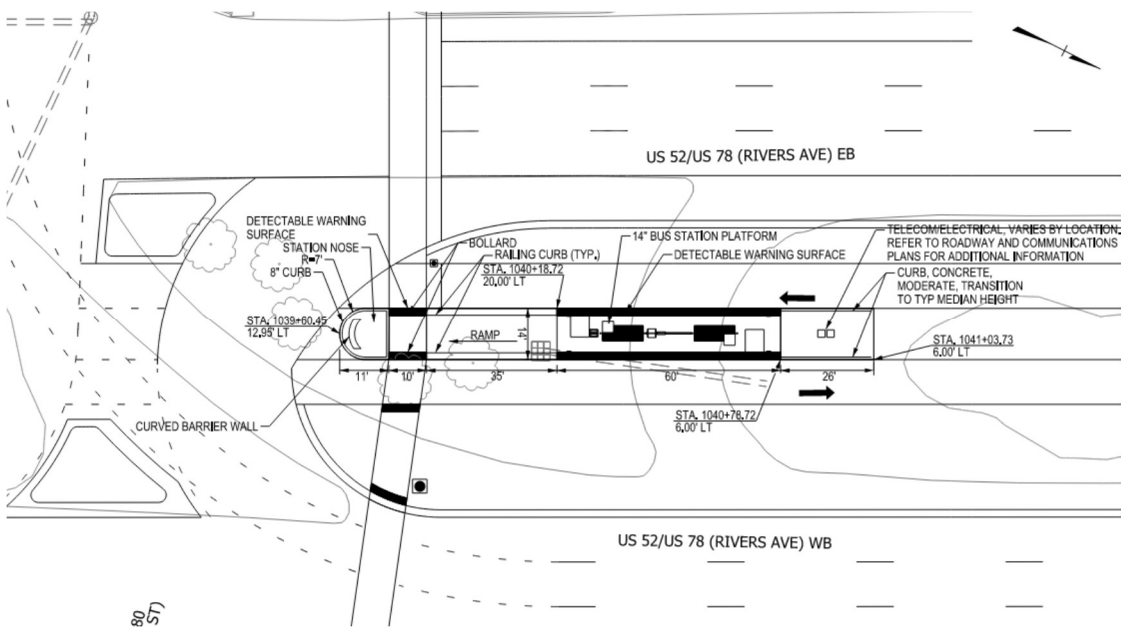


Figure 6. Mall Drive Station at Rivers Avenue and Mall Drive

1.5 University & BUC Club Station

The location of the station has not changed however, the design for this station has been revised from an end-to-end narrow station to provide a standard back-to-back station. The proposed new design was achieved by widening the median from 10 feet to 12 feet in the center/median of Rivers Avenue (Figure 7). This station design is proposed to be changed to provide a safer, standard shelter. The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

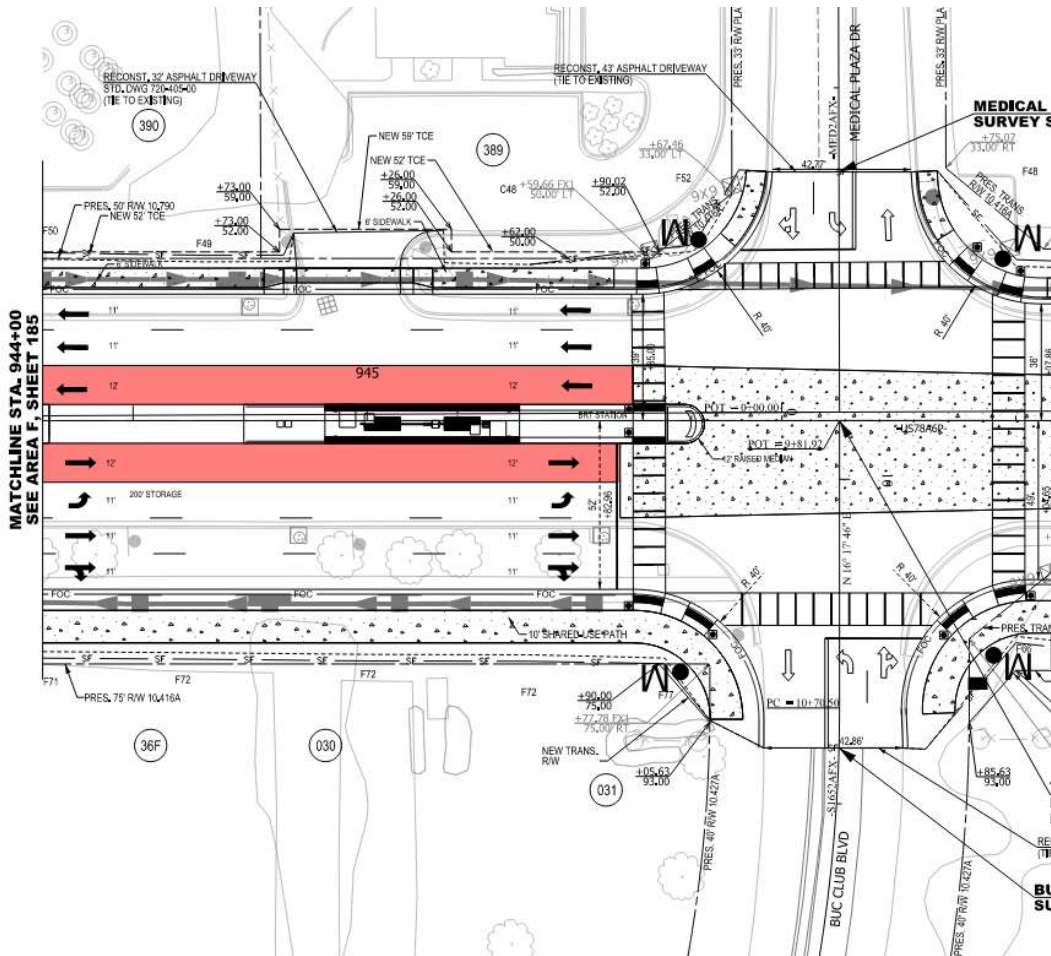


Figure 7. Proposed University & BUC Club Station

2. Intersection and Other Design Improvements

There are several proposed intersection improvements and other design improvements throughout the project corridor that would result in slightly greater beneficial traffic impacts from those described in the DCE. These are each summarized below.

1.6 Courtenay Drive/Doughty Street Station Sidewalk Removal

This proposed improvement along the south side of Courtenay Drive would remove the sidewalk behind the station to avoid utility conflicts (Figure 8). The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

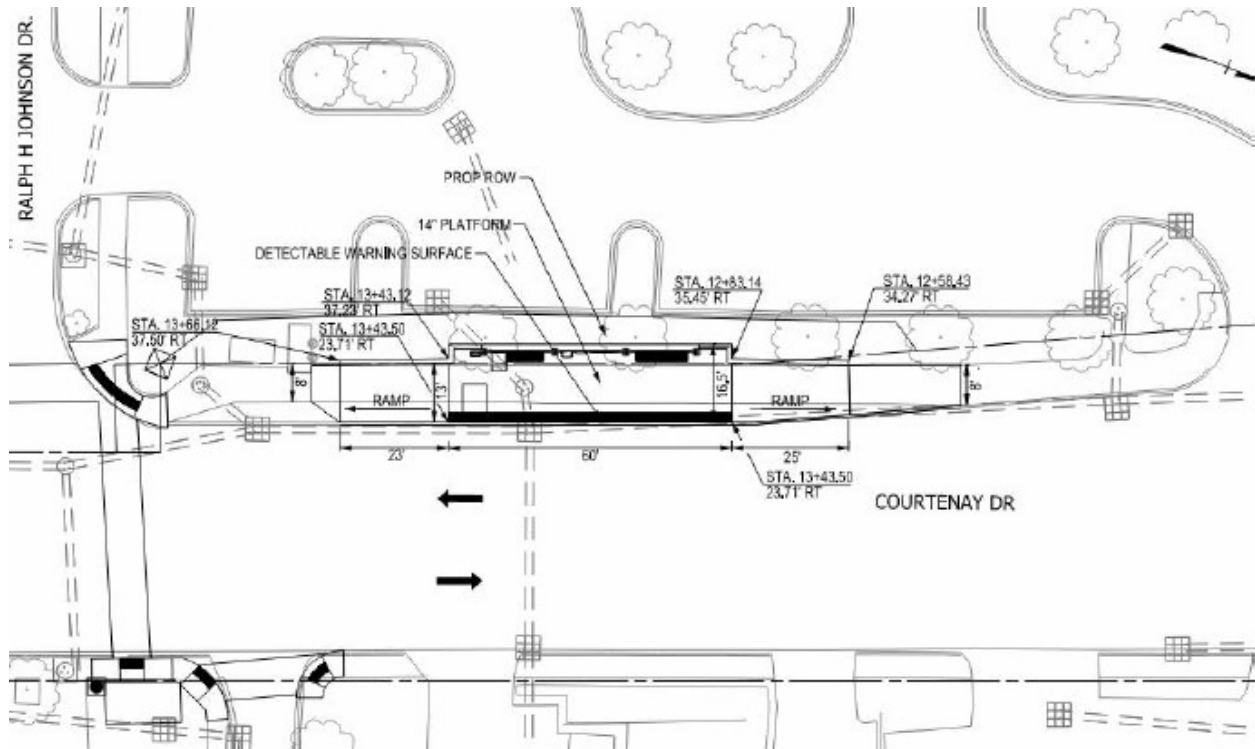


Figure 8. Courtenay & Doughty Station Sidewalk Removal

1.7 King Street and Calhoun Street Left Turn Lane Removal

This proposed improvement would result in the removal of the left turn lane from Calhoun Street (eastbound) to King Street (northbound) and the removal of on-street parking along Calhoun Street to the east and west of the intersection (Figure 9). The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

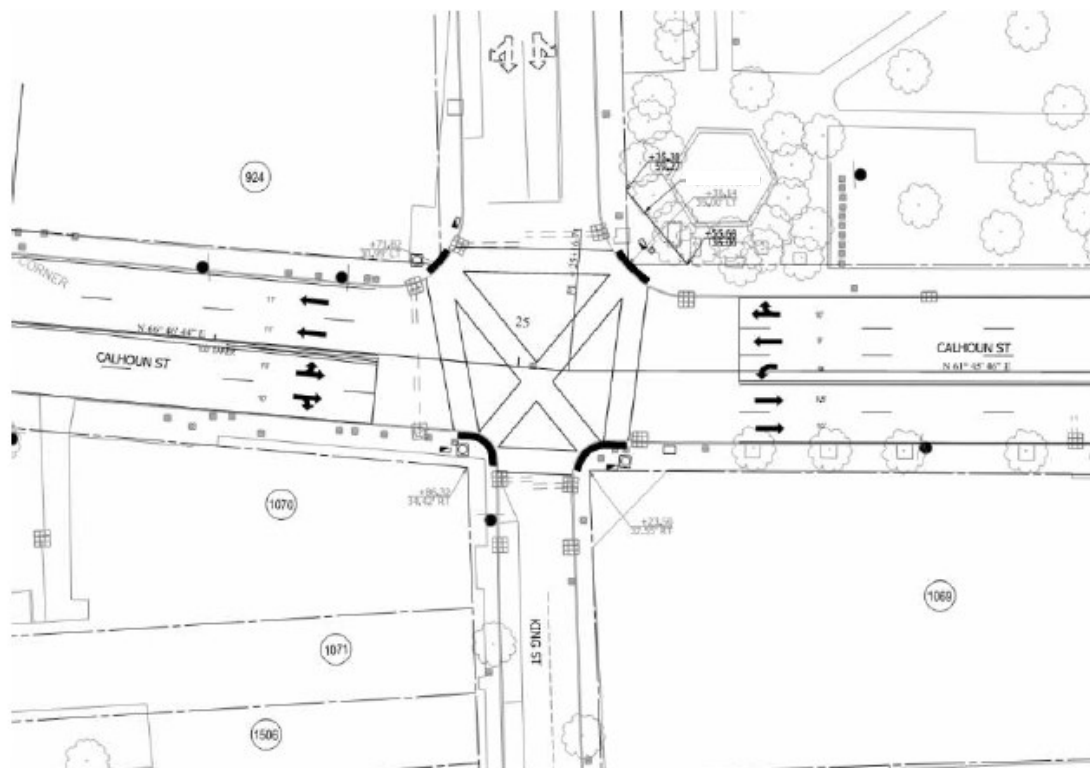


Figure 9. King Street and Calhoun Street Left Turn Lane Removal

1.8 Rivers Avenue and Melnick Drive

This proposed improvement would provide better gas station driveway access and provide a new angled crosswalk across Rivers Avenue (westbound) (Figure 10). Through consultation with the gas station owner and the South Carolina Department of Transportation (SCDOT), it was determined that the option that maintained left turns with U-turns and provided a slightly angled pedestrian cross walk was the preferred alternative for the intersection. The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

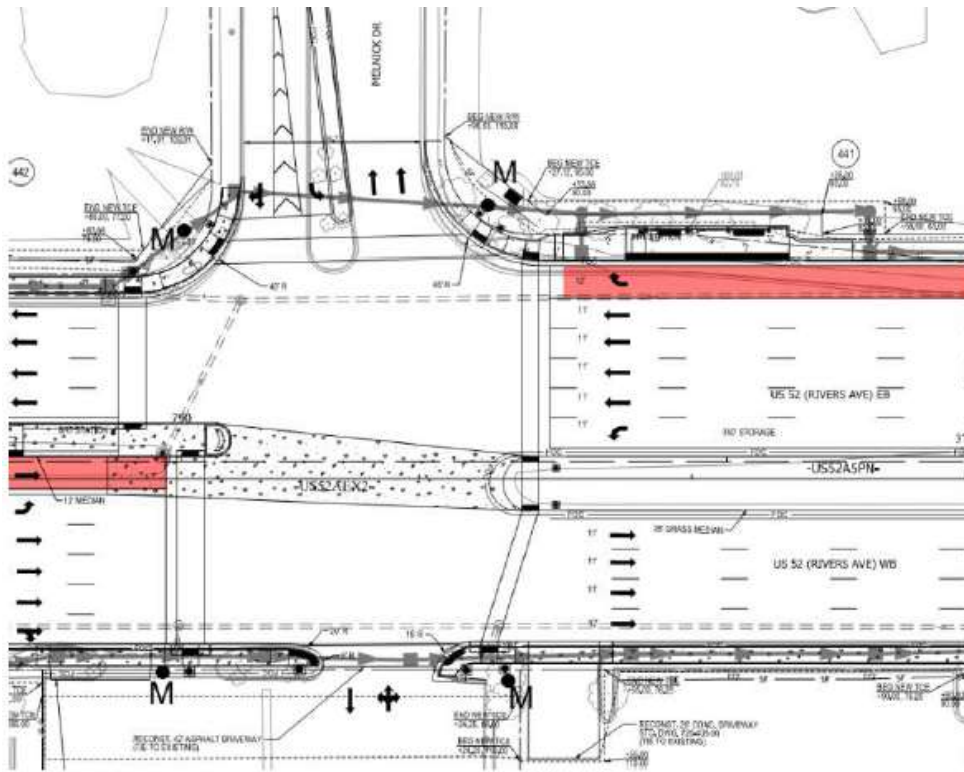


Figure 10. Rivers Avenue and Melnick Drive Improvements

1.9 Rivers Avenue and Otranto Road BRT and Right Turn Lane

This proposed improvement located along Rivers Avenue (westbound) at Otranto Road would include the flipping of the bus lane and the right turn lane to reduce conflicts (Figure 11). The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

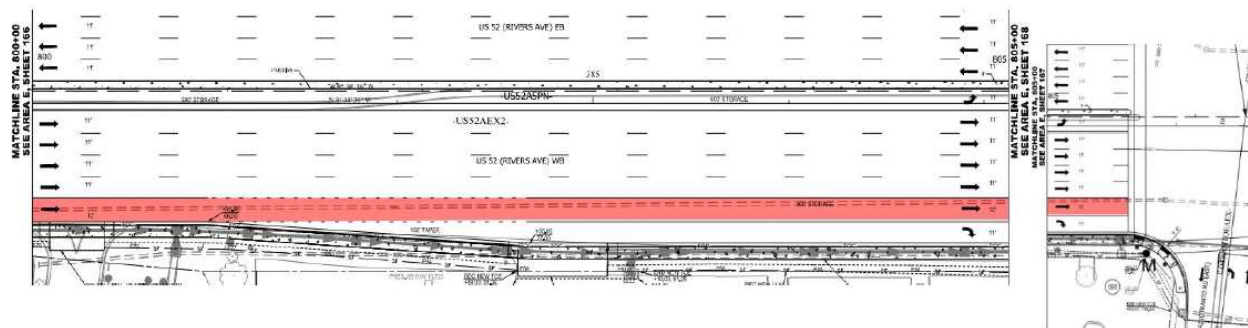


Figure 7. Rivers Avenue and Otranto Road BRT and Right Turn Lane Improvements

1.10 University Boulevard and Fernwood Drive BRT and Right Turn Lane

This proposed improvement located along University Boulevard (eastbound and westbound) at Fernwood Drive would include the flipping of the bus lane and right turn lane to reduce conflicts (Figure 12). The revised design is within the original PSA, and there would be no significant change in impacts from those described in the DCE at this location.

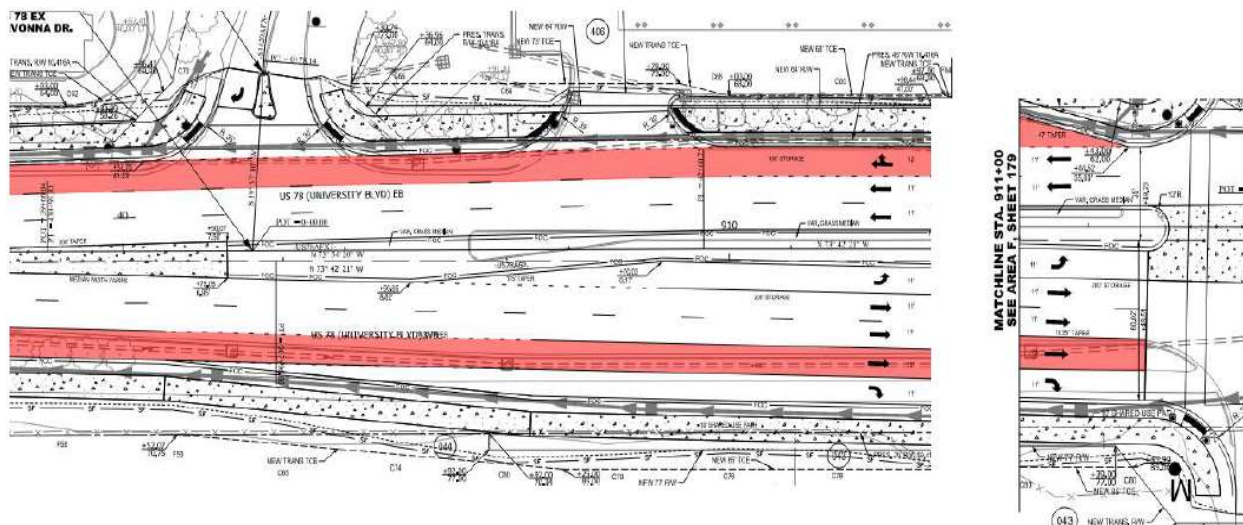


Figure 8. University Boulevard and Fernwood Drive BRT and Right Turn Lane Improvements

1.11 Other Minor Design Changes to Minimize Right-of-Way

In order to minimize right-of-way acquisition and impacts along the project corridor, additional minor changes have been made to the 60% design. These proposed changes will not change functionality or safety of the project. These design changes all fall within the original PSA, and there would be no significant change in impacts from those described in the DCE.

Table 1. Additional Minor Design Changes

Location	Description of Design Change
King Street	Removal of proposed shared use path (SUP) along King St. Improve existing sidewalk by filling in sidewalk gaps; utilize proposed SCDOT bike lane accommodations along Meeting St.
Durant Rail Bridge	Reduce road widening on bridge; narrow median and widen on east side for SUP.
Durant Rail Crossing	Install northbound bus lane only; maintain existing sidewalk and keep grade crossing as-is.
Pedestrian Bridge at Hackemann Rd.	Revise alignment of pedestrian bridge to perpendicular across railroad tracks on north side of Hackemann Rd.

Location	Description of Design Change
Hackemann Rd. turn lanes	Eliminate proposed southbound turn lanes at Hackemann Rd and Discher St to avoid widening/reconstruction.
Old University	Remove proposed SUP between Antler Dr. and Otranto Rd. Maintain existing bike facilities along Antler Dr.

3. Right-of-Way Acquisition

The 30 percent design assumed permissions on numerous properties throughout the project corridor. However, due to a directive from the Federal Highway Administration that will be reflected in SCDOT policy, SCDOT will no longer be allowed to request permission-only access from property owners. Therefore, the 60 percent design eliminates all permissions and instead provides for temporary construction easements (TCEs) and permanent ROW to provide needed area for construction. Also, Federal Transit Administration funding on this project requires limiting the amount of permanent ROW acquisitions. In curb and gutter areas, permanent ROW would be provided to the nearest even foot increment at a minimum of 0.5 foot beyond the sidewalk or shared use path, with TCEs being provided to incorporate the limits of construction, silt fence, and any needed area for construction activities. In non-curb and gutter areas, permanent ROW would be acquired to the nearest even foot increment behind the construction limit with TCEs provided to incorporate silt fence and any temporary construction activities. While the 60 percent design attempts to keep consistent ROW as much as possible, the ROW is more "saw-toothed" than would normally be provided on an SCDOT project, ROW offsets are not to even five-foot stations as would normally be provided, and several hard construction activities such as driveway constructions are being proposed as TCEs versus permanent ROW.

During development of the DCE, environmental impacts were estimated based on 15 and 30 percent design plans for the proposed project. Based on that information, Table 2 compares the data contained in the DCE with updated estimated ROW acquisition data collected from the 60 percent design plans. The revised design results in a reduction of permanent ROW acquisition. The reduction of permanent ROW acquisition and introduction of TCEs would not result in a significant change in impacts from those described in the DCE. No relocations would occur.

Table 2. Comparison of 15, 30, and 60 Percent Design Estimated Right-of-Way Acquisition

Design Phase	Permanent ROW		TCE ¹		Total	
	Parcels	Acres	Parcels	Acres	Parcels	Acres
15 Percent	133	5.72	0	0.00	133	5.72
30 Percent	344	18.55	0	0.00	344	18.55
60 Percent	220	17.77	535	17.96	565	35.73

¹ The 15 and 30 percent designs did not account for TCEs.

Table 3 includes a comparison of land use type of ROW from the DCE and current acreages for the 60 percent design.

Table 3. Comparison of 30 and 60 Percent Design Land Use Types

Type of Property	Number of Parcels in 15% plans	Estimated 15% Right of Way Totals (sq. feet)	Number of Parcels in 60% plans	Estimated 60% Right of Way Totals (sq. feet)
Agriculture/Forestry	1	4,582	0	-
Commercial/Retail	71	121,077	136	123,900.00
Industrial/Manufacturing	3	3,988	0	-
Institutional	5	32,517	9	272,730.00
Multifamily	3	930	2	2,124.00
Office	16	35,118	14	18,585.00
Single-family	2	1,271	3	1,097.00
Utilities	1	231	0	-
Vacant/Undeveloped	28	41,715	47	47,744.00
Other	3	7,542	4	88,996.00
OMF Facility and Access Road	-	-	1	219,192.00
TOTAL	133	248,971 sq. feet or 5.72 total acres	220	774,061 sq. feet or 17.77 total acres

Table 4 compares the water resources impacts contained in the DCE with updated estimated impacts collected from the 60 percent design plans. The revised design results in a reduction of both permanent and temporary adverse impacts to streams and wetlands, including the elimination of all tidal stream and wetland impacts.

Table 4. Comparison of 30 and 60 Percent Design Water Resources Impacts

Impact Category	Units	30 Percent Design		60 Percent Design		
		Permanent	Temporary	Permanent	Temporary	
Stream Impacts	Perennial	Linear Feet	301	145	81	115
	Intermittent		517	70	283	7
	Tidal		172	0	0	0
	Total		990	215	364	122
Wetland Impacts	Non-tidal	Acres	0.31	0.75	0.09	0.06
	Tidal		0.84	0	0	0
	Total		1.15	0.75	0.09	0.06

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