U.S. Department of Transportation
Federal Highway Administration

South Carolina

1835 Assembly Street, Suite 1270
Columbia, South Carolina 29201
803-765-5411
803-253-3989

March 15, 2023

In Reply Refer To:
HDA-SC

Mr. Chad Long
Director Environmental Services Office
South Carolina Department of Transportation (SCDOT)
955 Park Street, P.O. Box 191
Columbia, South Carolina 29202

Dear Mr. Long:

The Federal Highway Administration (FHWA) has reviewed the Environmental Assessment (EA) for the proposed I-526/Long Point Road Interchange (Federal Project Number P041314) project and finds that it adequately addresses the potential impacts of the proposal. The EA is approved and acceptable for public availability and comment. The complete document, including appendices, shall be made available for public review for a minimum of thirty (30) days before FHWA makes its final determination. The public availability shall be announced by a notice similar to a public hearing notice. Also, please provide Notice of Availability of the EA to the affected units of government, and to the State intergovernmental review contacts as specified in 23 CFR § 771.119(d). The FHWA requests that the EA and associated appendices be posted to the project website.

All project commitments documented in the EA are binding and the SCDOT will need to ensure that they are ultimately carried out. The public hearing may be scheduled fifteen (15) days after the document is made available for public review. Enclosed is a copy of the signed document. Please address any questions you may have concerning this project to Mr. J. Shane Belcher at 803-253-3187 or jeffrey.belcher@dot.gov.

Sincerely,

J. Shane Belcher

(for) Shundreka Givan
Acting Division Administrator

Enclosure

# ENVIRONMENTAL ASSESSMENT

526 EXIT 28
LONG POINT ROAD INTERCHANGE
LOWCOUNTRY CORRIDOR

Prepared for:

SCDOT

Prepared by:

CDM Smith

March 2023

I-526 LOWCOUNTRY CORRIDOR LONG POINT ROAD INTERCHANGE
Charleston County, South Carolina

# ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 USC 4332 (2)(c)
(and where applicable, 49 USC 303) by the

US Department of Transportation
Federal Highway Administration (FHWA)

and

South Carolina Department of Transportation (SCDOT)

3-14-23 Date of Approval — Chad Long for SCDOT

3/15/2023 Date of Approval — J. Shane Belcher for FHWA

SCDOT and FHWA propose improvements to the I-526 Lowcountry Corridor Long Point Road Interchange. The purpose of the project is to improve the operations of the Interstate 526 (I-526) mainline and its interchange at Long Point Road as well as reduce operational conflicts between port-related and local traffic. The need for the project is demonstrated by the growing automobile and truck traffic on I-526 and Long Point Road, the existing interchange deficiencies, and operational conflicts between cars and trucks on Long Point Road and I-526. The project need was identified during the I-526 Lowcountry Corridor (LCC) EAST Planning and Environmental Linkages (PEL) study that concluded in July 2022. The PEL determined improvements at the I-526/Long Point Road interchange could be made with independent utility prior to the planned widening of I-526. The PEL is included as Appendix V of the Environmental Assessment.

The following persons may be contacted for additional information concerning this document:

Mr. J. Shane Belcher
Lead Environmental Specialist
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, South Carolina 29201
(803) 253-3187

Mr. Tyler Clark, PE
Program Manager
South Carolina Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202-0191
(803) 737-4596

Comments on the Environmental Assessment are due by 5-17-23 and can be sent to:

Mr. Tyler Clark, PE
Program Manager
South Carolina Department of Transportation
Post Office Box 191
Columbia, South Carolina 29202-0191

Comments can also be submitted via the project website www.526LCCLongPoint.com or via email to info@526Lowcountry Corridor.com.

Date: 3/10/2023

NEPA ENVIRONMENTAL COMMITMENTS FORM

| Project ID | P041314 | County: | Charleston | District: | District 6 | Doc Type: | EA | Total # of Commitments: | 20 |
|---|---|---|---|---|---|---|---|---|---|

Project Name: I-526/Long Point Road Interchange Improvements Project

The Environmental Commitment **Contractor Responsible** measures listed below **are to be included in the contract and must be implemented**. It is the responsibility of the Program Manager to make sure the Environmental Commitment **South Carolina Department of Transportation (SCDOT) Responsible** measures are adhered to. If there are questions regarding the commitments listed, please contact:

**CONTACT NAME:** Tyler Clark, PE **PHONE:** (803) 737-4596

## ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

| **Community - Transportation and Traffic** | NEPA Doc Ref: | Chapter 4, Section 4.1 | Responsibility: | Contractor |
|---|---|---|---|---|

SCDOT and the contractor would coordinate with emergency service providers such as police, fire protection, and ambulance services prior to the start of construction to ensure access for emergency vehicles would be maintained.

A maintenance-of-traffic plan would be developed to outline measures to minimize construction impacts on transportation and traffic. To the extent possible, the plan would require access to existing residential and commercial areas be maintained and existing roads be kept open unless an alternate route can be provided.

☐ Special Provision

| **Environmental Justice** | NEPA Doc Ref: | Chapter 4, Section 4.2 | Responsibility: | SCDOT |
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During public involvement activities, including the public hearing, SCDOT will continue to engage the environmental justice communities and Limited English Proficiency (LEP) population to get their input and provide meaningful engagement and identify their needs as it pertains to this project.

☐ Special Provision

| **Relocations** | NEPA Doc Ref: | Chapter 4, Section 4.4 | Responsibility: | SCDOT |
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The SCDOT will acquire all new right-of-way and process any relocations in compliance with the Uniform Relocation Assistance and Real Property Acquisition policies Ace of 1970, as amended (42 U.S. C. 4601 et seq.). The purpose of these regulations is to ensure that owners of real property to be acquired for Federal and federally-assisted projects are treated fairly and consistently, to encourage and expedite acquisition by agreements with such owner, to minimize litigation and relieve congestion in the courts, and to promote public confidence in Federal and federally-assisted land acquisition programs. Relocation resources would be made available to all eligible displaced residents, including tenants, without discrimination, consistent with the requirements of the Civil Rights Act of 1964 and the Housing and Urban Development Act of 1974.

☐ Special Provision

| **Air Quality** | NEPA Doc Ref: | Chapter 4, Section 4.5 | Responsibility: | Contractor |
|---|---|---|---|---|

The contractor(s) will ensure particulate matter emissions will be minimized by using fugitive dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls, as appropriate. Construction-related Mobile Source Air Toxics (MSAT) emissions will be minimized by using low emission diesel fuel for non-road diesel construction equipment. Provisions will be included in project plans and specifications requiring contractors to make every reasonable effort to minimize construction air quality impacts through abatement measures such as limiting construction equipment idling and other emission limitation techniques, as appropriate.

The contractor(s) will ensure that all construction equipment is properly tuned and maintained. Idling time will be minimized to save fuel and reduce emissions. Water will be applied to control dust impacts off site. There will be no open burning of removed vegetation.

☐ Special Provision

| **Noise** | NEPA Doc Ref: | Chapter 4, Section 4.7 | Responsibility: | SCDOT |
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SCDOT will inform local planning officials of future, generalized noise levels expected to occur in the project vicinity after FHWA has made a final decision on the Environmental document.

☐ Special Provision

## ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

| **Noise** | NEPA Doc Ref: | Chapter 4, Section 4.7 | Responsibility: | SCDOT |
|---|---|---|---|---|

SCDOT will develop a public relations plan addressing notices to be sent to the public for updates or notifications regarding schedule, upcoming construction activities, and potential temporary impacts (e.g. noise, traffic shifts, etc.). This information will be used to prepare the drafting of public notices that may be used by SCDOT's communications office and other methods and means of notification as outlined in the public relations plan. Timeframes for notification and updates shall be included in the plan and may require approval from the RCE.

The Contractor shall follow SCDOT construction standard procedure as defined in SCDOT Construction Manual and Standards and Specifications.

A total of 4 noise barriers were determined to be feasible and reasonable and recommended as mitigation of traffic noise for the Recommended Preferred Alternative. A detailed description of the noise barrier locations and/or noise abatement measures are presented in the Noise Analysis Report (Appendix E)**.**

Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of four noise barriers. These preliminary indications of likely abatement measures are based upon preliminary design.

- **Noise Wall 1a/3/6/8** is located north of I-526 and west of Long Point Road between the Wando River bridge and Belle Hall Parkway. The barrier has an area of 798 square feet per benefitted receptor that reduces the noise level by an average of 8 dB(A) for 277 residences and 1 pool.
- **Noise Wall NW 2a/4** is located south of I-526 between the Wando River bridge and Ridge Road. The barrier has an area of 339 square feet per benefitted receptor that reduces the noise level by an average of 8 dB(A) for 197 residences and 1 pool.
- **Noise Wall 9** is located south of I-526 and east of Long Point Road between Lone Tree Drive and the bridge at Hobcaw Creek. The barrier has an area of 1,080 square feet per benefitted receptor that reduces the noise level by an average of 7 dB(A) for 81 residences.
- **Noise Wall 12** is located north of I-526 and east of Long Point Road between Long Point Road and the bridge at Hobcaw Creek. The barrier has an area of 313 square feet per benefitted receptor that reduces the noise level by an average of 10 dB(A) for 153 residences, 1 pool, and 1 picnic area.

If it subsequently develops during final design that these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project's design and the public involvement processes.

To minimize future traffic noise impacts on currently undeveloped lands of Type I projects, SCDOT shall inform local officials by providing a copy of the noise analysis within whose jurisdiction the highway project is located in, per 23 CFR 772.17.

☐ Special Provision

| **Water Quality** | NEPA Doc Ref: | Appendix K, Section 5.0 | Responsibility: | Contractor |
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The contractor will be required to minimize possible water quality impacts through implementation of best management practices (BMPs), reflecting policies contained in 23 CFR 650B and the Department's Supplemental Specification on Erosion Control Measures (latest edition) and Supplemental Technical Specifications on Seeding (latest edition). Other measures including seeding, silt fences, sediment basins, etc. as appropriate will be implemented during construction to minimize impacts to water quality.

☐ Special Provision

| **Water Quality** | NEPA Doc Ref: | Appendix K, Section 5.0 | Responsibility: | Contractor |
|---|---|---|---|---|

The project would be designed for sediment and erosion control per SCDHEC General Permit and State Erosion Control regulations, including the subsequent regulations.

☐ Special Provision

| **Stormwater** | NEPA Doc Ref: | Appendix K, Section 4.2 | Responsibility: | SCDOT/Contractor |
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Stormwater control measures, both during construction and post-construction, are required for SCDOT projects with land disturbance and/or constructed in the vicinity of 303(d), TMDL, ORW, tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit. The selected contractor would be required to minimize potential stormwater impacts through implementation of construction BMPs, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seed and Erosion Control Measures (latest edition).

☐ Special Provision

| **Wetlands** | NEPA Doc Ref: | Chapter 4, Section 4.9 | Responsibility: | SCDOT/Contractor |
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The clearing, grading, or placement of fill in wetlands will require authorization from USACE and SCDHEC. The limits of any clearing, grading, or fill in wetlands will be delineated and shown on approved permitted plans by USACE and SCDHEC. SCDOT and the contractor will comply with all applicable permits and permit conditions for the placement of fill in wetlands. Compensatory mitigation would be required to offset unavoidable losses of WOTUS per USACE requirements.

☐ Special Provision

## ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

| **Individual Permit** | NEPA Doc Ref: | Chapter 4, Section 4.10 | Responsibility: | SCDOT |
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Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers. SCDOT will provide the Army Corps with information regarding any proposed demolition activities during the Section 404 permitting process. The required mitigation for this project will be determined through consultation with the USACE and other resource agencies.

☐ Special Provision

| **Floodplains** | NEPA Doc Ref: | Chapter 4, Section 4.11 | Responsibility: | SCDOT/Contractor |
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The Engineer of Record will send a set of preliminary plans and request for floodplain management compliance to the local County Floodplain Administrator.

☐ Special Provision

| **Floodplains** | NEPA Doc Ref: | Chapter 4, Section 4.11 | Responsibility: | SCDOT |
|---|---|---|---|---|

Hydraulic and hydrologic studies would be completed by the contractor on the Recommended Preferred Alternative during the final design phase of the project. Bridge structures would be designed per FEMA standards. Detailed hydrology studies have not yet been conducted at this stage of project development; however, the project would be designed in an effort to meet "No-Rise" requirements. A No-Rise Certification would be required from FEMA to ensure that any proposed structure would result in less than 1-foot increase in flood elevations. Pursuant to the FEMA certification, the project would be designed to allow for no more than 1-foot increase in flood elevations. In the event a "No-Rise" condition cannot be achieved, coordination with FEMA will require the preparation of a Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR) package for the encroachment. This includes a detailed hydraulic analysis, determination of floodplain impacts, and preparation of the CLOMR. Following construction, impacts to the floodplain would be verified prior to the issuance of the LOMR.

☐ Special Provision

| **Threatened and Endangered Species – All species** | NEPA Doc Ref: | Chapter 4, Section 4.13; Appendix J | Responsibility: | Contractor |
|---|---|---|---|---|

- The contractor will develop a SWPPP and obtain an NPDES permit from SCDHEC before construction can commence.
- The contractor will adhere to all SCDOT construction and erosion and sediment control BMPs.
- The limits of any clearing, grading, or fill in wetlands will be delineated and shown on approved permitted plans by USACE, SCDHEC, and OCRM. The contractor will comply with all applicable permits and permit conditions for the placement of fill in wetlands.
- If existing permitted borrow sites are not available, the contractor will be required to follow SCDOT guidance in Engineering Directive Memorandum 30 (ED-30), Borrow Pit Location and Monitoring. The contractor will be responsible for addressing the potential effects to federally listed threatened and endangered species for any new borrow or disposal sites.
- The final design will meet the conditions of SCDOT's General MS4 permit and TMDL guidance in the SCDOT's Stormwater Quality Design Manual.
- SCDOT and contractor will be required to stay in compliance with all approved environmental conditions and any special conditions established in the required permit authorizations.

☐ Special Provision

| **Threatened and Endangered Species – Bat species** | NEPA Doc Ref: | Chapter 4, Section 4.13; Appendix J | Responsibility: | SCDOT |
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- Consultation with USFWS will be reinitiated when new rule and listing status becomes effective for the Northern long-eared bat (NLEB).
- Consultation with USFWS will be reinitiated when new rule and listing status becomes effective for the tricolored bat.

☐ Special Provision

| **Threatened and Endangered Species – Bat species** | NEPA Doc Ref: | Chapter 4, Section 4.13; Appendix J | Responsibility: | Contractor |
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- Temporary lighting during bridge construction and improvements would be directed away from suitable habitat during the active season of northern long-eared bat and other bat species.
- To the extent practicable, tree removal would not exceed what is required for project construction (alignments and temporary work areas).

☐ Special Provision

| **Migratory Bird Treaty Act** | NEPA Doc Ref: | Chapter 4, Section 4.14 | Responsibility: | Contractor |
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The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The SCDOT will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests.

The contractor shall notify the RCE at least four (4) weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using the structure. After this coordination, it will be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action.

The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division. The cost for any contractor provided deterrents will be provided at no additional cost to SCDOT.

☐ Special Provision

| **Essential Fish Habitat** | NEPA Doc Ref: | Chapter 4, Section 4.15/Appendix K, Section 4.1 | Responsibility: | SCDOT/Contractor |
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- Temporary silt/turbidity curtains will be installed prior to the commencement of in-water work, where practicable. The contractor will be required to utilize SCDOT BMPs for soil and erosion control during construction.
- For construction activities associated with the two bridges over the unnamed tributary to Rathall Creek, which may include the widening of shoulders and bridge structures, no temporary or permanent piles will be placed in the channel of the creek.
- The selected contractor will be required to minimize impacts of siltation and erosion through implementation of Best Management Practices (BMPs).
- SCDOT, FHWA, and the contractor will develop the mitigation plan in coordination with the appropriate resource agencies. A final mitigation plan will be developed for the 404/401 permit and will include consideration for impacts to EFH as part of that plan.

☐ Special Provision

| **Hazardous Materials** | NEPA Doc Ref: | Chapter 4, Section 4.17 | Responsibility: | SCDOT/Contractor |
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SCDOT will ensure that hazardous materials sites are avoided where practicable or sufficiently remediated so that the public would not be exposed to health risk. Contractors will follow SCDOT's Standard Specifications, which include provisions to protect the health and safety of persons in the proximity of construction and staging sites. Lead and asbestos testing would be conducted prior to construction to ensure that these materials are handled appropriately.

☐ Special Provision

| **Hazardous Materials** | NEPA Doc Ref: | Appendix L, Section 6.3 | Responsibility: | SCDOT |
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Any properties partially or wholly acquired for this project or where construction would occur may require further inspection and assessment. Prior to right-of-way acquisition or construction impacts by the project, additional field investigations may be necessary at the parcels of concern. During the hazardous materials evaluation, field observations in the parcels of concern was not possible due to access restrictions of privately owned property. Therefore, identifying the spatial locations of potential hazardous materials within a given parcel was not possible. Prior to conducting any Phase II investigations, further evaluations in the field should be conducted to locate potential hazardous materials on a parcel and then position Phase II investigatory sampling locations accordingly. A Phase II will be required on parcels within or with the potential to affect parcels within the project footprint, as identified in the Phase I report. Parcels of concern and recommended soil and groundwater sampling are presented in the Hazardous Materials/Waste Survey (Appendix L). These are preliminary sampling recommendations that may change in frequency and laboratory analysis based on future field investigations. Sampling should follow applicable SCDHEC environmental standard operating procedures.

☐ Special Provision

| **Hazardous Materials** | NEPA Doc Ref: | Chapter 4, Section 4.17 | Responsibility: | Contractor |
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If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated are encountered during construction, SCDHEC will be informed immediately. Hazardous materials will be tested and removed and/or treated in accordance with the EPA and SCDHEC requirements, if necessary. SCDHEC Hazardous Waste Treatment, Storage, and Disposal compliance staff can be contacted at 803-898-0290.

☐ Special Provision

## ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

| **Cultural Resources** | NEPA Doc Ref: | Chapter 4, Section 4.18 | Responsibility: | Contractor |
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During the construction phase of the project, the contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such remains are encountered, the Resident Construction Engineer will be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise.

If unanticipated cultural materials (for example, large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the resident construction engineer (RCE) will be immediately notified and all work near the discovered materials will cease until an evaluation can be made by the SCDOT archaeologist in consultation with South Carolina State Historic Preservation Office (SHPO) and Catawba Indian Nation Tribal Historic Preservation Office (CIN-THPO).

☐ Special Provision

| **Cultural Resources** | NEPA Doc Ref: | Chapter 4, Section 4.18 | Responsibility: | SCDOT/Contractor |
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The proposed changes will have an adverse effect on the archaeological site 38CH2683. SCDOT and the contractor will comply with the memorandum of agreement (MOA) for the site in coordination with the SHPO, the SCDOT, the FHWA, and all other relevant stakeholders. The MOA outlines a mitigation strategy for site 38CH2683, including archaeological data recovery investigations and public information components, taking into consideration the research design as well as the results for a 2022 College of Charleston archaeological investigation taking place at the time of the survey.

☐ Special Provision

| **Cultural Resources - MOA** | NEPA Doc Ref: | Appendix N | Responsibility: | SCDOT/Contractor |
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- SCDOT's archaeological consultant, or staff, will develop a treatment plan for data recovery investigations at Archaeological Site 38CH2683. The treatment plan will include a description of the project's research design and sampling strategy. The treatment plan will be submitted to the South Carolina SHPO for review and approval prior to any fieldwork. The South Carolina SHPO will make a reasonable effort to review the treatment plan(s) no later than thirty days after receipt. All archaeological and historical investigation will be carried out by professionals who meet Secretary of the Interior's qualifications.
- All plans and reports developed for the treatment of Archaeological Site 38CH2683 shall incorporate guidance from the Secretary of the Interior's "Standards and Guidelines for Archaeological Documentation" (48 FR 44734-37) and the President's Advisory Council on Historic Preservation publication, Treatment of Archaeological Properties (ACHP 1980). In addition, these materials will be consistent with South Carolina Standards and Guidelines for Archaeological Investigations (2013).
- At least one on-site (or virtual) meeting between the SCDOT, the FHWA, and the South Carolina SHPO will take place during field investigations in order to discuss any necessary revisions to the original scope of work. Any revisions made to the original scope of work will be attached to the approved treatment plan and this agreement.
- A draft technical report of data recovery investigations will be submitted to the South Carolina SHPO for review and approval within twelve (12) months from the last day of fieldwork. The draft technical report will be consistent with the standards outlined in South Carolina Standards and Guidelines for Archaeological Investigations (2013). The South Carolina SHPO reserves the right to submit the draft technical report to qualified professional archaeologists for the purpose of peer review.
- Within three (3) months of the draft report approval, SCDOT will provide one bound copy and one Portable Document Format (PDF) for the SHPO and two bound copies and one PDF copy of the final technical report for the South Carolina Institute of Archaeology and Anthropology (SCIAA). The PDF file will be developed according to the specifications and requirements of the SHPO. A separate digital abstract from the report (in Word or html format) will also be provided to the SHPO. The abstract file can be provided on the same CD as the PDF file.
- The SCDOT will ensure that all artifacts recovered during archaeological investigations are stabilized and processed for curation at the SCIAA. SCDOT will notify the SHPO when artifacts have been given over to SCIAA for curation.
- The SCDOT shall develop a public education component related to the data recovery investigations at Archaeological Site 38CH2683. The SCOOT shall submit a plan for the public education component to the South Carolina SHPO within six months of completing data recovery investigations at Archaeological Site 38CH2683. The SCDOT shall implement plan for developing public materials within two years of completing data recovery investigations at Archaeological Site 38CH2683.
- If unanticipated cultural materials ( e.g., large, intact artifacts or animal bones; large soils stains or patterns of soil stains; buried brick or stone structures; clusters of brick or stone) or human skeletal remains are discovered during construction activities, then the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials shall cease until an evaluation can be made by the SCDOT archaeologist in consultation with the South Carolina SHPO.

☐ Special Provision

| **Cultural Resources – MOA** | NEPA Doc Ref: | Appendix N | Responsibility: | SCDOT |
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Each year following the execution of this MOA until it expires or is terminated, the SCDOT shall provide all parties to this MOA a summary report detailing work carried out pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in FHWA's and SCDOT's efforts to carry out the terms of this MOA.

☐ Special Provision

# ACRONYMS

## A

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|---|---|
| AADT | Annual Average Daily Traffic |
| ACE | Agency Coordination Effort |
| ACHP | Advisory Council on Historic Preservation |
| ACS | American Community Survey |
| APE | Area of Potential Effect |
| ASTM | American Society for Testing and Materials |
| AVE | Area of Visual Effect |

## B

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|---|---|
| BCDCOG | Berkeley-Charleston-Dorchester Council of Governments |
| BE | Biological Evaluation |
| BG | Block Group |
| BGEPA | Bald and Golden Eagle Protection Act |
| BLS | Below Land Surface |
| BMP | Best Management Practice |
| BTEX | Benzene, toluene, ethylbenzene, and xylene |

## C

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|---|---|
| CAA | Clean Air Act |
| CD | Collector-distributor |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CESQG | Conditionally Exempt Small Quantity Generators |
| CHATS | Charleston Area Transportation Study |
| CFR | Code of Federal Regulations |
| CIA | Community Impact Assessment |
| CMP | Congestion Management Process |
| CofC | College of Charleston |
| CT | Census Tract |
| CWA | Clean Water Act |
| CZC | Coastal Zone Consistency |

## D

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|---|---|
| dB | Decibel |
| dB(A) | A-weighted Decibel Levels |
| DDI | Diverging Diamond Interchange |
| DO | Dissolved Oxygen |
| DPT | Direct Push Technology |

# E

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|---|---|
| E+C | Existing and Committed |
| EA | Environmental Assessment |
| ECHO | Enforcement and Compliance History Online |
| EDR | Environmental Database Report |
| EFH | Essential Fish Habitat |
| EFIS | Environmental Facility Information System |
| EJ | Environmental Justice |
| EMS | Emergency Medical Services |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |

# F

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|---|---|
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FID | Flame-ionization Detector |
| FINDS | Facility Index System |
| FPPA | Farmland Protection Policy Act |
| FW | Freshwater |

# G

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|---|---|
| GHG | Greenhouse Gas |
| GIS | Geographic Information Systems |
| GWCI | Groundwater Contamination Inventory |

# H

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| HAPC | Habitat Area of Particular Concern |
| HCS | Highway Capacity Software |
| HMS | Highly Migratory Species |
| HUC | Hydrologic Unit Code |

# I

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|---|---|
| I-526 | Interstate 526 |
| ICE | Infrastructure Carbon Estimator |
| ICIS | Integrated Compliance Information System |

# L

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|---|---|
| LCC | Lowcountry Corridor |
| LEP | Limited English Proficiency |
| LOI | Letter of Intent |
| LOS | Level of Service |
| LUST | Leaking Underground Storage Tank |

# M

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|---|---|
| MAFMC | Mid-Atlantic Fisheries Management Council |
| MBTA | Migratory Bird Treaty Act |
| MLS | Multiple Listing Service |
| MMPA | Marine Mammal Protection Act |
| MOA | Memorandum of Agreement |
| MOU | Memorandum of Understanding |
| MOVES | Motor Vehicle Emissions Simulator |
| MPO | Metropolitan Planning Organization |
| MS4 | Municipal Separate Storm Sewer Systems |
| MSAT | Mobile Source Air Toxics |

# N

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|---|---|
| NAC | Noise Abatement Criteria |
| NAAQS | National Ambient Air Quality Standards |
| NEPA | National Environmental Policy Act |
| NFA | No Further Action |
| NGO | Non-Governmental Organization |
| NHPA | National Historic Preservation Act |
| NLCD | National Land Cover Database |
| NLEB | Northern long-eared bat |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSA | Noise Study Area |
| NWI | National Wetland Inventory |

# O

| | |
|---|---|
| OCRM | Ocean and Coastal Resource Management |
| OSHA | Occupational Safety and Health Administration |

# P

| | |
|---|---|
| PAH | Polycyclic aromatic hydrocarbons |
| PEL | Planning and Environmental Linkages |
| PID | Photo-ionization Detector |
| PIM | Public Information Meeting |
| PIP | Public Involvement Plan |
| PRP | Potentially Responsible Parties |
| PSA | Project Study Area |

# Q

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|---|---|
| QAPP | Quality Assurance Program Plan |

# R

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|---|---|
| RCE | Resident Construction Engineer |
| RCR | Registry of Conditional Remedies |
| RCRA | Resource Conservation and Recovery Act |
| RCW | Red-cockaded woodpecker |
| REC | Recognized Environmental Concern |
| RGA | Recovered Government Archive |
| ROD | Record of Decision |
| ROW | Right-of-Way |

# S

| | |
|---|---|
| SAFMC | South Atlantic Fisheries Management Council |
| SC | South Carolina |
| SCDAH | South Carolina Department of Archives and History |
| SCDHEC | South Carolina Department of Health and Environmental Control |
| SCDNR | South Carolina Department of Natural Resources |
| SCDOT | South Carolina Department of Transportation |
| SCIAA | South Carolina Institute of Archaeology and Anthropology |
| SCPA | South Carolina Ports Authority |
| SEMS | Superfund Enterprise Management System |
| SFH | Shellfish Harvesting |
| SHPO | State Historic Preservation Office |
| SHWS | State Hazardous Waste Sites |
| SIP | State Implementation Plan |
| SMGA | Shellfish Management Growing Areas |
| SMU | Soil Management Unit |
| SPUI | Single Point Urban Interchange |
| STIP | Statewide Transportation Improvement Program |
| SWPPP | Stormwater Pollution Prevention Plan |

# T

| | |
|---|---|
| TDM | Travel Demand Model |
| TDM | Transportation Demand Management |
| THPO | Tribal Historic Preservation Office |
| TIP | Transportation Improvement Program |
| TMDL | Total Maximum Daily Load |
| TNM | Traffic Noise Model |
| TRIS | Toxic Chemical Release Inventory System |
| TRPH | Total recoverable petroleum hydrocarbons |
| TSCA | Toxic Substances Control Act |
| TSM | Transportation System Management |

# U

| | |
|---|---|
| U.S. | United States |
| USACE | United States Army Corps of Engineers |

| | |
|---|---|
| USC | United States Code |
| USDA | United States Department of Agriculture |
| USDOT | United States Department of Transportation |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UST | Underground Storage Tank |
| UT | Unnamed Tributary |

# V

| | |
|---|---|
| VCP | Voluntary Cleanup Program |
| VIA | Visual Impact Assessment |
| VMT | Vehicle Miles Traveled |
| VOC | Volatile Organic Compounds |

# W

| | |
|---|---|
| WNS | White-nose syndrome |
| WOTUS | Waters of the United States |
| WWT | Wando Welch Terminal |

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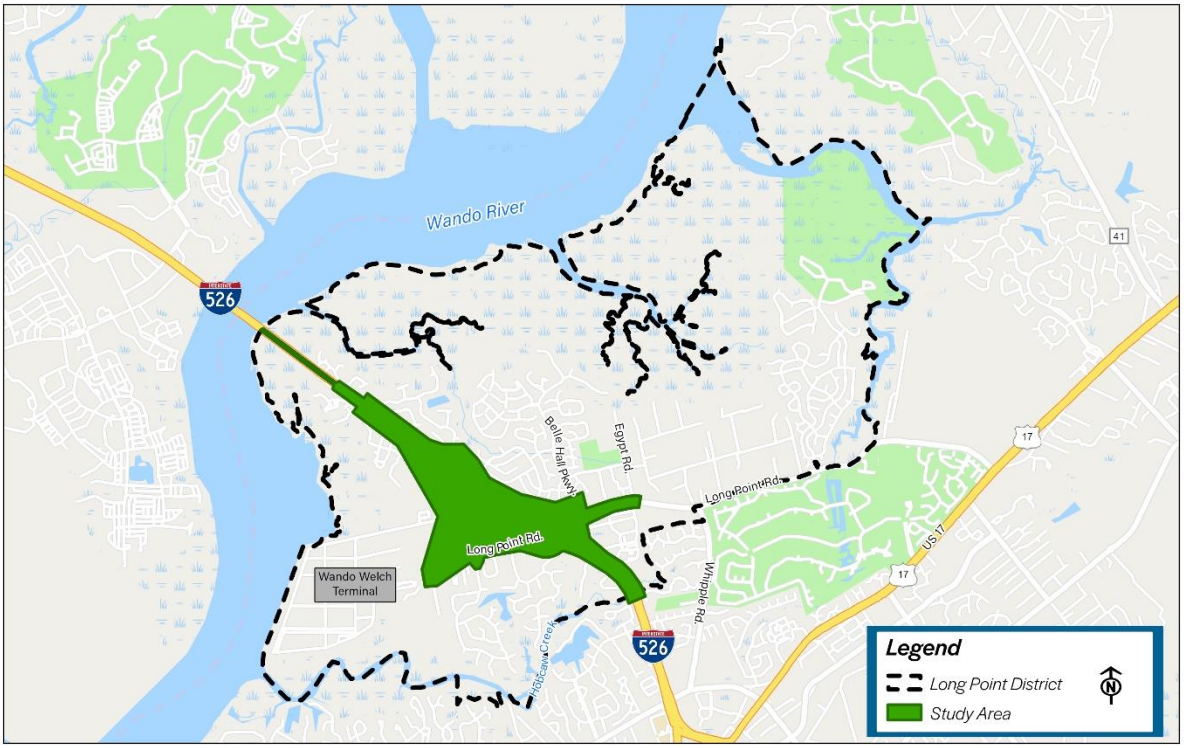
# APPENDICES

# 1.0 INTRODUCTION

The South Carolina Department of Transportation (SCDOT) and Federal Highway Administration (FHWA) are proposing improvements to the Interstate 526 (I-526) and Long Point Road interchange in the Town of Mount Pleasant, South Carolina. The study area extends along I-526 from the Wando River to Hobcaw Creek and along Long Point Road from the Wando Welch Terminal (WWT) to Egypt Road (**Figure 1.1**).

In 2022, SCDOT completed a Planning and Environmental Linkages (PEL) study for I-526 Lowcountry Corridor (LCC) EAST, from Virginia Avenue in North Charleston to United States (U.S.) 17 in Mount Pleasant. The PEL study identified existing and projected transportation issues within the corridor through analysis as well as public and stakeholder engagement. The PEL study established a vision to guide future transportation decision-making in the corridor. After the issues were better understood, potential improvements were identified. The I-526 and Long Point Road interchange was identified as a project that could be completed independently from the planned I-526 widening. The proposed improvements to the Long Point Road interchange are included in the Charleston Area Transportation Study (CHATS) long-range transportation plan and Transportation Improvement Program (TIP) and in the SCDOT Statewide Transportation Improvement Program[1] (STIP). Additionally, the proposed improvements are consistent with the goals and strategies defined in the CHATS congestion management process (CMP).

Figure 1.1: Study Area




[1] https://www.scdot.org/inside/planning-stip.aspx

# 1.1 EXISTING FACILITIES

The existing I-526 and Long Point Road interchange is considered a partial cloverleaf with four diamond interchange ramps and two loops in the northeast and southwest quadrants. The interchange ramps are identified in **Figure 1.2** and are described in greater detail in Chapter 2.

I-526 is a facility that runs east to west through the Charleston Metropolitan area terminating at U.S. 17 in West Ashley and the Town of Mount Pleasant. In the study area, I-526 is a four-lane divided interstate facility. The mainline travel lanes are approximately 12 feet with 4-foot inside shoulders and 10-foot outside shoulders. As I-526 bridges over Long Point Road, the travel lanes have a width of approximately 12 feet with 12-foot inside shoulders and 9-12-foot outside shoulders.

Long Point Road is a four-lane undivided roadway that extends from the WWT to U.S. 17. The roadway is characterized as both a principal and minor arterial within the study area boundary. West of I-526, lanes on Long Point Road are approximately 15 feet wide and east of I-526, lanes are approximately 12 feet wide. The median of Long Point Road is comprised of a center turn lane or dedicated left turn lanes.

> SCDOT characterizes arterial highways by their "capacity to quickly move relatively large volumes of traffic, but are often impacted by their service to abutting properties." [1]

Figure 1.2: Existing I-526 and Long Point Road Interchange


[2] South Carolina Department of Transportation. 2021. "SCDOT Roadway Design Manual". Accessed November 7, 2022, https://dc.statelibrary.sc.gov/bitstream/handle/10827/36920/DOT_Roadway_Design_Manual_2021.pdf?sequence=1&isAllowed=y

# 1.2 Environmental Assessment

SCDOT, in association with FHWA, developed this environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA) requirements for federally funded projects. The EA includes a review of all proposed interchange alternatives and evaluates potential impacts to the natural and human environment.

This EA outlines agency coordination and public involvement; the purpose and need for the interchange project; an evaluation and analysis of the project alternatives; a description of the affected environment, assessment of the environmental, transportation, social, and economic impacts; and presents a Recommended Preferred Alternative. It also incorporates analysis and feedback from public and agency sources gathered during the various phases of the EA development.

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions pertaining to constructing highways and other publicly owned facilities, for example.

Using the NEPA process, agencies evaluate the environmental and related social and economic effects of their proposed actions. Agencies also provide opportunities for public review and comment on those evaluations.

# 1.3 Public and Agency Involvement

## 1.3.1 Public Involvement

A public involvement plan (PIP) (see Appendix P) was developed to detail the strategies and tools that are being used to provide the public and stakeholders with information about the project and provide opportunities to offer meaningful input on decisions that will affect the community. For more information about the public outreach activities, see Chapter 5. The PIP was developed to be consistent with public involvement requirements under NEPA, Title VI of the Civil Rights Act, Executive Order 12898 – Environmental Justice, and other federal regulations.

## 1.3.2 Agency Coordination

A letter of Intent (LOI) was distributed on July 26, 2022, by mail to the resource and regulatory agencies to notify them of the initiation of the project. Refer to Appendix O: Agency Coordination for the LOI and agency responses.

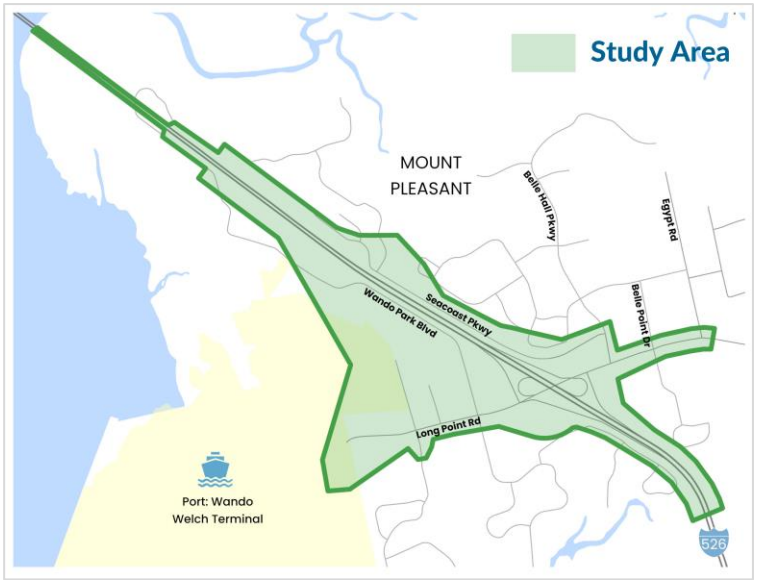
Agency meetings have taken place throughout the project to provide background information, review the project schedule, and discuss alternatives being considered. Meeting attendees included representatives from SCDOT, the project team, the Environmental Protection Agency, FHWA, National Oceanic and Atmospheric Administration Fisheries, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, the South Carolina Department of Health & Environmental Control; Ocean & Coast Resource Management, and the South Carolina Department of Natural Resources.

# 2.0 Purpose and Need

## 2.1 What is the Purpose of the Project?

The purpose of the project is to improve the operations of the Interstate 526 (I-526) mainline and its interchange at Long Point Road as well as reduce operational conflicts between port-related and local traffic within the study area. (**Figure 2.1**)

Figure 2.1: Study Area




## 2.2 Why is the Project Needed?

The I-526 and Long Point Road interchange provides access to homes, businesses, schools, parks, restaurants, commercial and industrial facilities along Long Point Road. The interchange provides access to South Carolina Ports Authority's (SCPA's) Wando Welch Terminal (WWT), which serves as a hub for the distribution of freight from the WWT throughout the southeast United States (U.S.). The need for the project is demonstrated by the existing interchange deficiencies, growing automobile and truck traffic on I-526 and Long Point Road, and population and economic growth. Each of these issues are discussed in more detail along with early public involvement efforts in the following sections of this chapter.

**Project Need**

- **Interchange deficiencies**
- **Traffic-related congestion on I-526 and within the interchange**
- **Population & economic growth**

### 2.2.1 Operational Deficiencies at the Interchange

Interchanges require a balance in design speed, configuration of ramps, and acceleration lengths to allow vehicles to efficiently and safely join the flow of mainline traffic. The current interchange and roadway configuration does not fully accommodate existing traffic volumes nor the estimated future (2050) traffic volumes. Deficiencies in the current interchange configuration contribute to congestion, inadequate mobility, and longer travel times.

The I-526 and Long Point Road interchange is considered a partial cloverleaf with four diamond interchange ramps and two loops in the northeast and southwest quadrants. The interchange ramps are identified in **Figure 2.2** and are described in **Table 2.1**. The deficiencies of the existing Long Point Road interchange include insufficient ramp lengths and storage capacity, tightly curved ramps, and insufficient length for weaving conditions.

Figure 2.2: Existing Long Point Road Interchange Deficiencies[1]

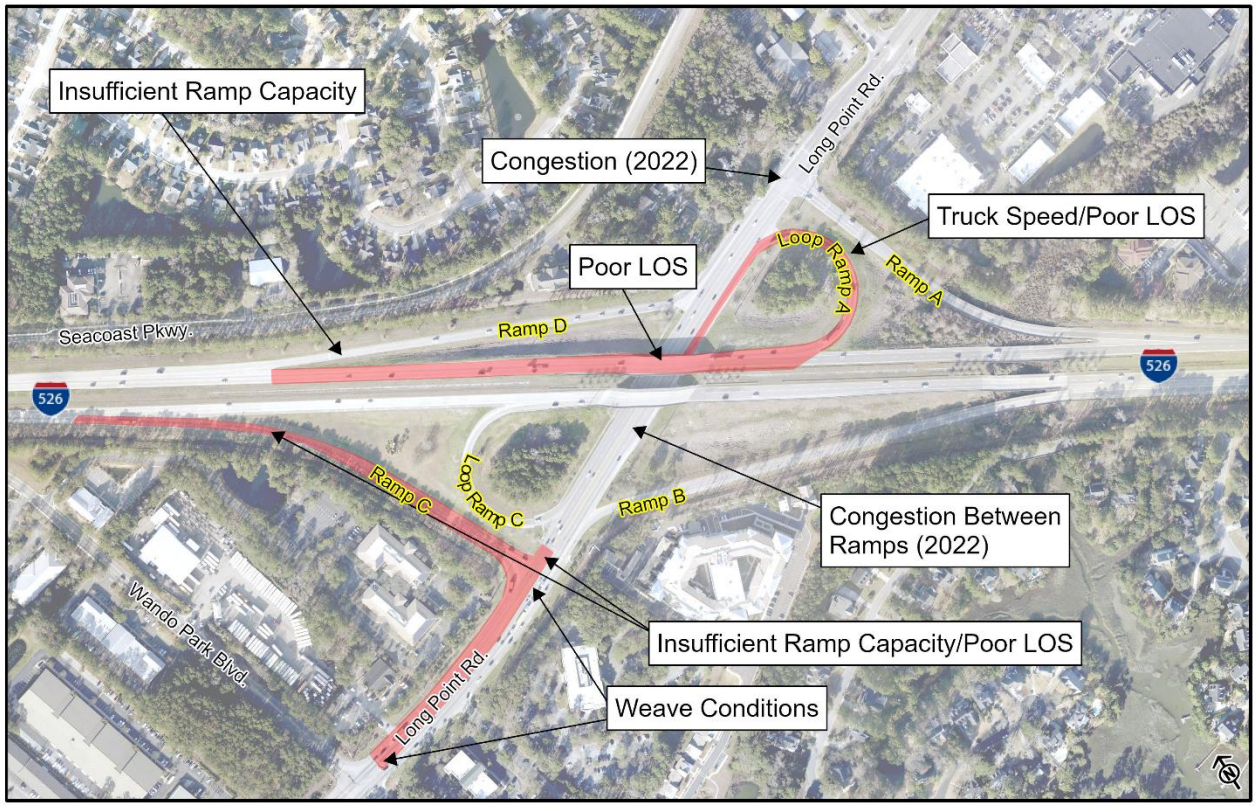



Table 2.1: Existing Long Point Road Interchange Ramp Deficiencies

| Interchange Ramps | Description | Issues |
|---|---|---|
| Ramp A | I-526 westbound exit ramp to Long Point Road | --- |
| Loop Ramp A | Long Point Road northbound ramp to I-526 West | Truck Speed<br>Poor Level of Service (LOS)<br>Tightly Curved Ramp |
| Ramp B | Long Point Road northbound ramp to I-526 East | --- |
| Ramp C | I-526 eastbound exit ramp to Long Point Road | Insufficient Ramp Capacity<br>Poor LOS |
| Loop Ramp C | Long Point Road southbound ramp to I-526 East | --- |
| Ramp D | Long Point Road southbound ramp to I-526 West | Insufficient Ramp Capacity |

[1] In **Figure 2.2**, LOS is the acronym for "Level of Service", which helps determine the capacity of roadways to meet travel demand.

## Insufficient Ramp Capacity and Lengths

The Long Point Road interchange has three ramps with inadequate lengths, which result in limited storage capacity for traffic exiting I-526 and poor acceleration for traffic merging on to I-526.

1. **Loop Ramp A** provides an acceleration lane at the end of the loop ramp, but currently, the acceleration lane is too short to allow vehicle traffic, especially truck traffic, to achieve the appropriate speed to merge efficiently onto the westbound travel lanes for the I-526 corridor. In addition, at Loop Ramp A, both the loop ramp and I-526 travel lanes are on an upgrade, increasing the required length of the acceleration lane, especially with high truck volumes.

Ramp speeds are determined to ensure that the speed differential a vehicle on a ramp must gain/reduce to enter or exit a highway is not too great. For loop ramps, the desirable minimum speed for the ramp is approximately 50 percent of the speed on the mainline highway, which ranges from 55 to 60 miles per hour along I-526.

2. **Ramp C** is considered a deceleration lane allowing for vehicles exiting the freeway to slow down enough to stop or enter a lower-speed roadway at the end of a ramp. Although this ramp provides sufficient length for deceleration, it does not offer enough storage to prevent traffic from backing up onto the mainline. Congested traffic operations at the traffic signal located at the intersection of the Ramp C terminus and Long Point Road exacerbate this storage issue.

3. **Ramp D** provides an acceleration lane for southbound traffic on Long Point Road to merge onto westbound I-526 travel lanes. Although this ramp provides sufficient length for acceleration, it does not offer enough storage to prevent southbound traffic from backing up onto Long Point Road.

## Tightly Curved Ramps

The radius of both loop ramps limits the travel speeds at which vehicles, particularly trucks, are able to attain before merging with flowing traffic onto I-526 westbound, resulting in low merging speeds that cause congestion at the interchange. At this interchange, the loop ramps provide for 25 mile-per-hour design speeds for vehicles, which is lower than the preferred design speed using modern standards. The desirable minimum speed for the ramp is approximately 50 percent of the speed on the mainline highway, which ranges from 55 to 60 miles per hour along I-526.

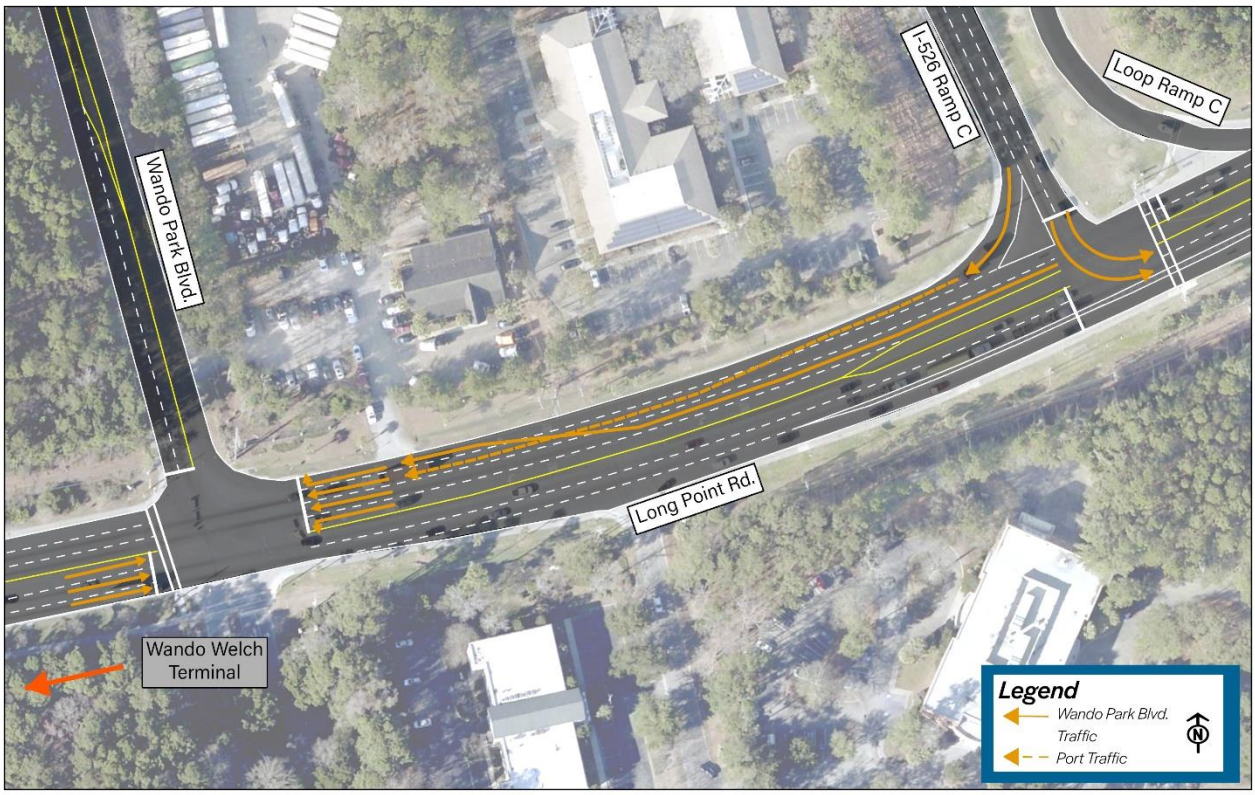
**Loop Ramp A** has the highest average daily percentage of truck traffic for the Long Point Road interchange. Because of the tightly curved geometry of Loop Ramp A, truck traffic leaving the WWT traveling westbound on the I-526 corridor must drive slowly to navigate the ramp. Trucks commonly lack the speed necessary to efficiently merge with traffic on the I-526 mainline, which forces merging at speeds lower than the mainline traffic, creating bottlenecks and potential safety issues.

## Arterial Weave Conditions

**Vehicle Weaving** – When a vehicle is required to change lanes to continue to the desired destination.

The I-526 eastbound off-ramp right-turn lane is free-flow on to Long Point Road southbound toward WWT. The 600-foot-long section of Long Point Road between the I-526 eastbound off-ramp and Wando Park Boulevard has three lanes for traffic traveling toward the WWT, with the outside lane becoming an exclusive right-turn lane onto Wando Park Boulevard. The departure side of the intersection has three receiving lanes on Long Point Road, with the outside lane extending approximately 400 feet before merging down to two travel lanes (**Figure 2.3**). This configuration causes port-bound truck traffic to execute a lane change into the second lane to proceed through the signalized intersection of Wando Park Boulevard to travel to the port gates. In this condition, a weave maneuver by a truck creates congestion, increases crash potential, and slows travel speeds for all motorists.

Figure 2.3: Weaving Movements between Wando Park Boulevard and I-526 Exit Ramp



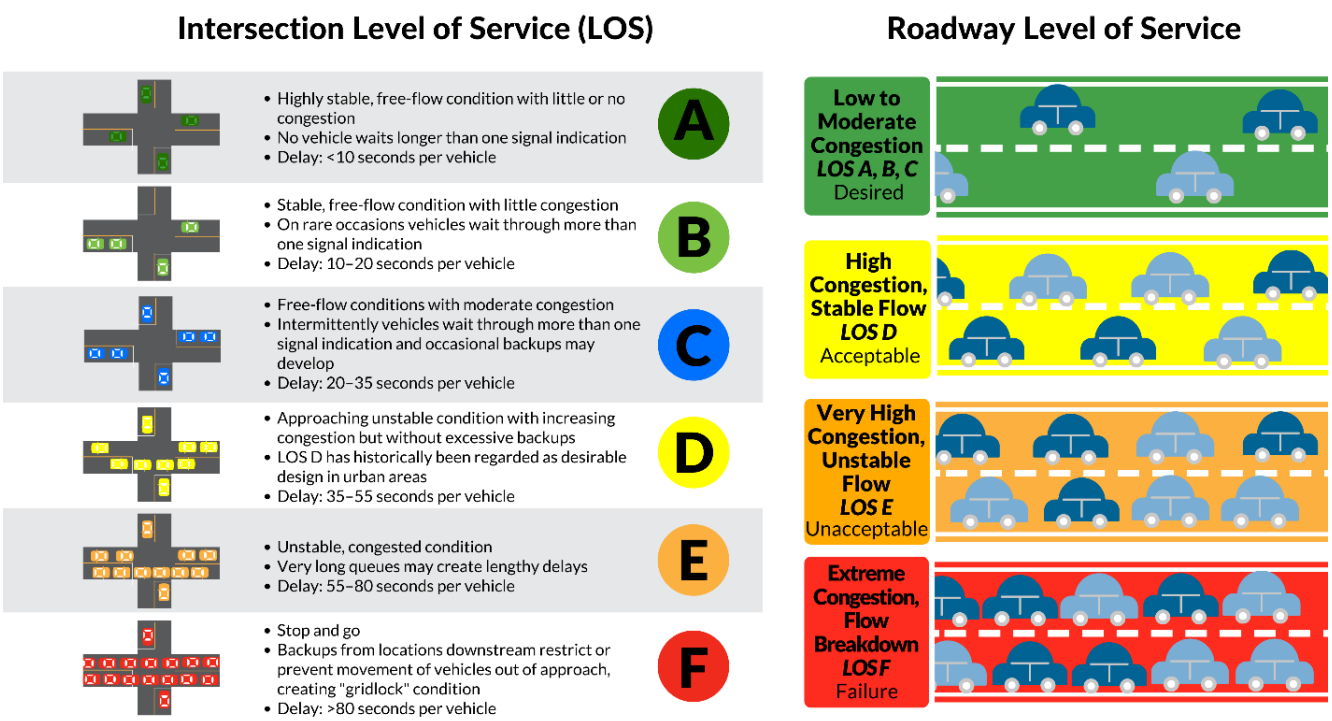

## 2.2.2 Traffic-Related Congestion on I-526 and within the Interchange

Traffic congestion occurs when travel demand exceeds the traffic-carrying capacity of a roadway. Congestion is most commonly expressed with a level of service (LOS) ranking. In general, LOS is ranked on an A to F scale with LOS A representing free-flow conditions and LOS F representing poor operations, high levels of congestion, and excessive delays. LOS is measured differently for freeways, traffic signals, and arterials, but the A through F meaning of LOS remains consistent (**Figure 2.4**).

### Existing Traffic Congestion in the Study Area

Analysis of the existing traffic volumes within the study area (see Appendix A) determined that the I-526 mainline currently operates under varying conditions, ranging from LOS A to LOS E, both east and west of Long Point Road. This suggests that the operations of the interchange currently affect the LOS of the mainline. The variability in LOS along the mainline is magnified because of the high volume of heavy trucks using the interchange to access the WWT.

Figure 2.4: Level of Service Definitions

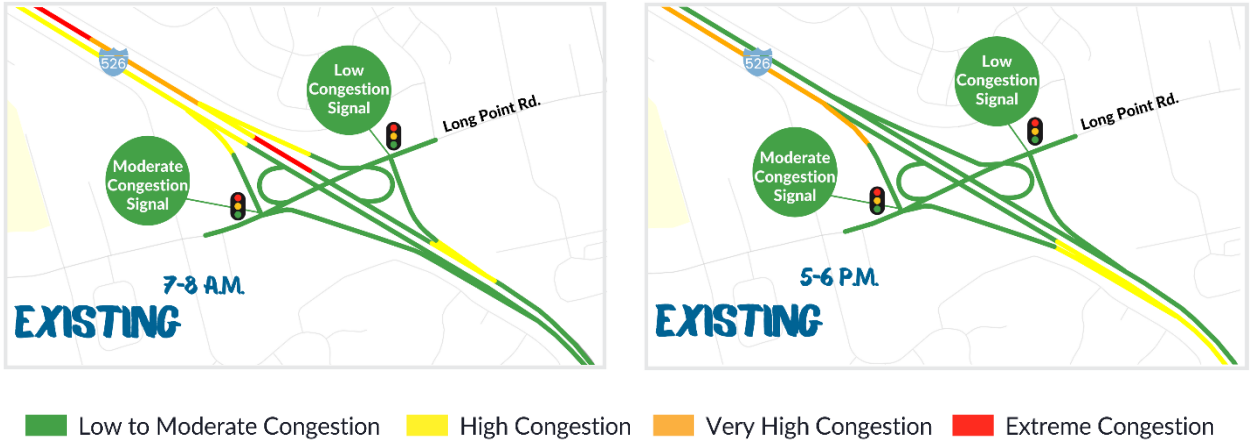



West of the interchange, eastbound lanes currently operate at a LOS D, and westbound lanes operate at a LOS F during the morning peak hour (7:00–8:00 a.m.), as shown in **Figure 2.5**. The failing LOS illustrated in the westbound direction during the morning peak corresponds to higher westbound truck traffic volumes, inadequate loop ramp, and acceleration ramp merge deficiencies.

**Peak Hour** – The highest volume of traffic on a roadway within a 1-hour period, typically morning and evening rush hour. This represents the worst traffic conditions on an average day.

Eastbound lanes approaching the interchange currently operate at a LOS E in the evening peak hour (5:00–6:00 p.m.), as shown in **Figure 2.5**. The more significant congestion levels observed in the eastbound direction during the evening peak are caused by the inefficient traffic signal operations and the inadequate ramp length of the eastbound exit ramp terminating at the Long Point Road intersection.

Figure 2.5: 2022 A.M. and P.M. Peak Hour Level of Service[2]



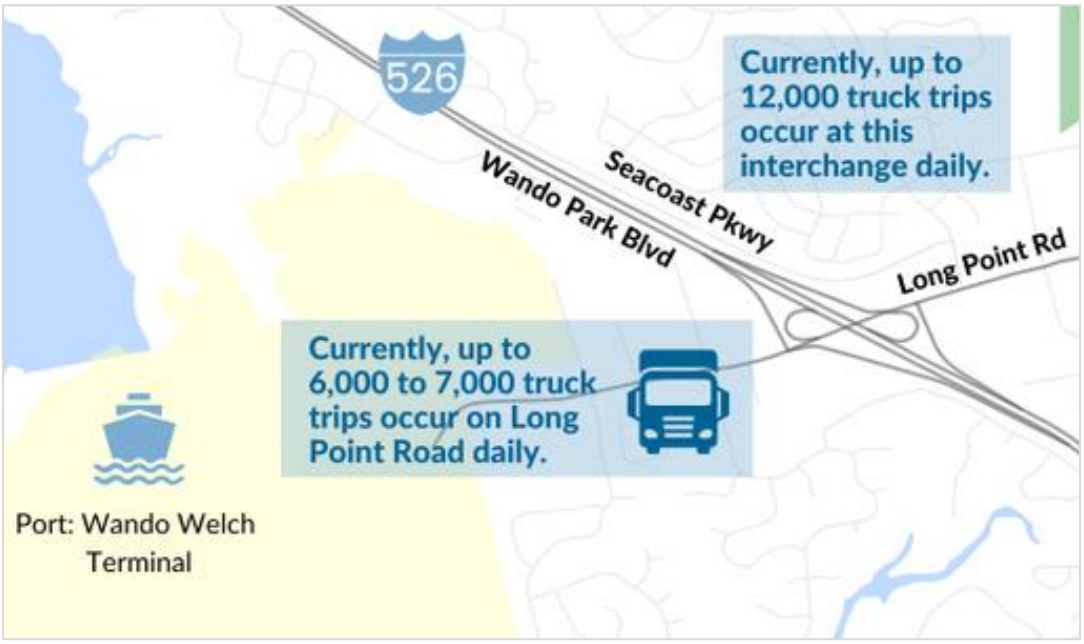

[2] Developed using SYNCHRO traffic model

## High Volumes of Truck Traffic

Annual Average Daily Traffic (AADT) is used to measure the traffic volumes on a roadway. The AADT on I-526 at the Wando River in 2022 is 75,200 vehicles, which consists of 65,700 automobiles (86 percent of AADT) and 10,500 trucks (14 percent of AADT).[3] The AADT on I-526 at Hungry Neck Boulevard in 2022 is 61,900 vehicles, which consists of 59,400 automobiles (96 percent AADT) and 2,500 trucks (4 percent AADT). The data demonstrates that a large number of trucks use the Long Point Road interchange, which contributes to the existing traffic congestion experienced by travelers.

Currently, up to 12,000 truck trips travel through the I-526 and Long Point Road interchange daily (combination of ramps and through volumes), and between 6,000 and 7,000 truck trips per day use Long Point Road daily (**Figure 2.6**).

Figure 2.6: Number of Truck Trips in 2022




A more detailed review of truck patterns compared vehicle classifications and truck percentages on the Long Point Road interchange ramps (**Figure 2.7** and **Table 2.2**) with a focus on the two ramps carrying the highest truck volumes. On both of these ramps, larger tractor trailer trucks make up more than 75 percent of trucks in the peak hours. High truck volumes are expected from approximately 7:00 a.m. until approximately 4:00 p.m., when WWT begins reducing operations for a 5:00 p.m. closure.

The ramp analysis shows that on the I-526 eastbound exit ramp onto Long Point Road, 28 percent of the vehicles are trucks (Location 1 in **Table 2.2**). Similarly, the loop ramp from Long Point Road to westbound I-526 (Location 2 in **Table 2.2**) shows a lower percentage of trucks (42 percent versus 64 percent). The lower percentage of trucks in the a.m. peak and the p.m. peak volume is due to WWT's operating hours, which reduce the number of incoming of trucks starting at 4:00 p.m., with closure of the gates at 5:00 p.m. Current and future p.m. peak truck percentages would increase if operating hours were extended past 5:00 p.m. at the WWT.

[3] Traffic information provided by CDM Smith's traffic engineers as part of the traffic reports for Long Point Road (see Appendix A).

Figure 2.7: Percent Truck Comparison on Ramps with Highest Truck Volumes for 2022

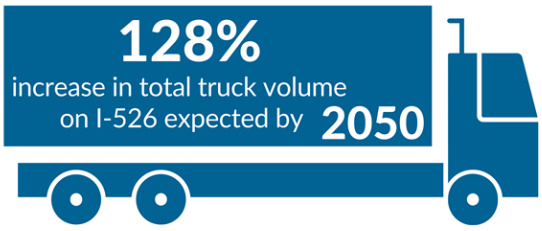

Table 2.2: Percent Truck Traffic 2022 – Location 1 and 2

| Vehicle Classification | Location 1 A.M. Peak: 7–8 A.M. | | Location 1 P.M. Peak: 5–6 P.M. | | Location 2 A.M. Peak: 7–8 A.M. | | Location 2 P.M. Peak: 5–6 P.M. | |
|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Cars | 689 | 72% | 1087 | 94.3% | 130 | 36% | 219 | 58% |
| Trucks | 263 | 28% | 66 | 5.7% | 228 | 64% | 160 | 42% |
| **TOTAL** | **952** | **100%** | **1153** | **100%** | **358** | **100%** | **379** | **100%** |

## Forecasted Traffic Congestion in the Study Area

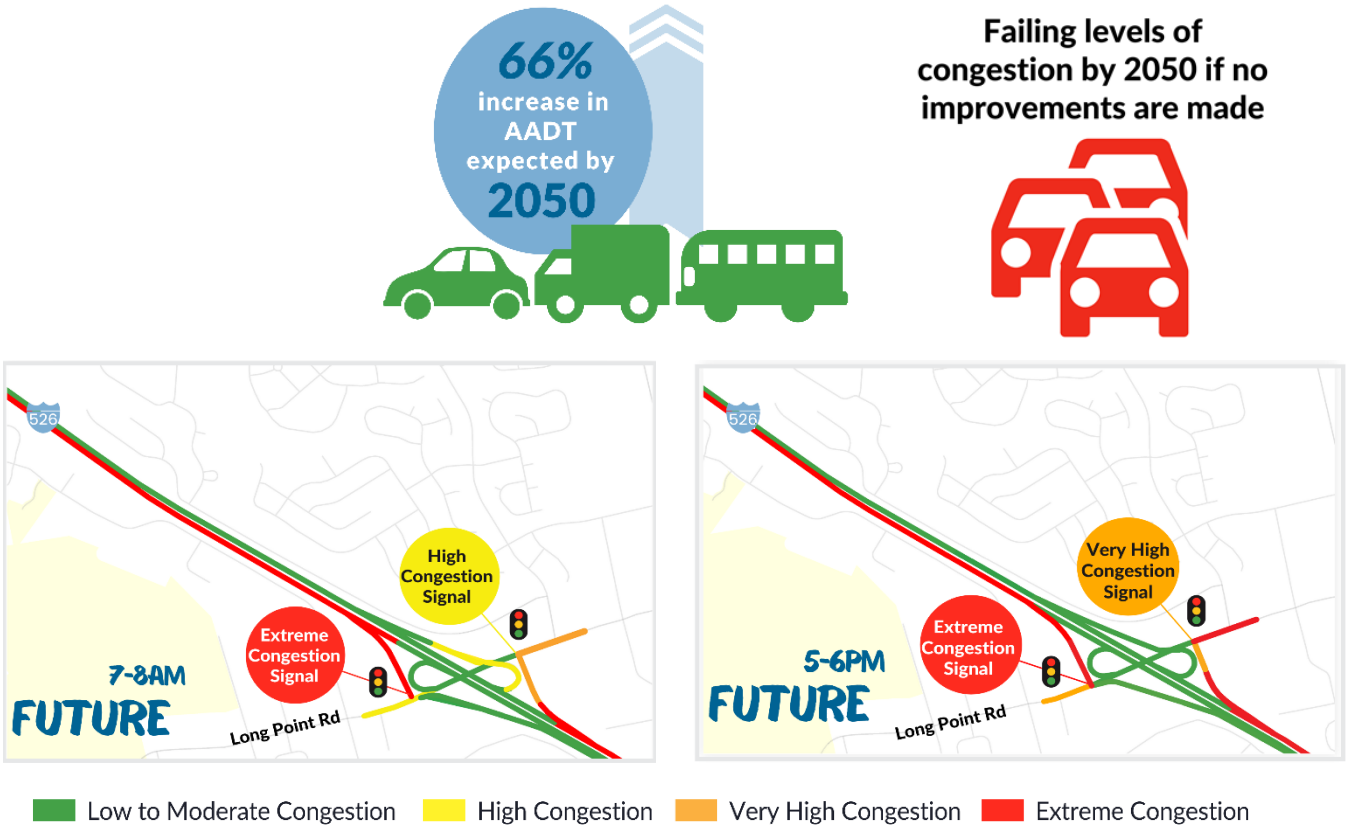
The No-Build represents traffic conditions if the I-526 and Long Point Road interchange improvements did not occur but includes the existing and committed transportation projects expected to be in place by the design year 2050 (for more information, see the Traffic Analysis Report/Interchange Access Request, Appendix A). Analysis of projected 2050 traffic conditions shows an expected increase in the total number of vehicles driving through the interchange, with a 66 percent increase in AADT and a 128 percent increase in total truck volume by 2050 (**Figure 2.8**). For more information see Appendix A

Figure 2.8: Annual Average Daily Traffic



Under the No-Build, traffic conditions would result in failing LOS due to congestion along both eastbound and westbound directions of I-526. The No-Build condition analysis reveals that the I-526 mainline would have unacceptable LOS during a.m. and p.m. peak traffic hours at the Long Point Road interchange (**Figure 2.9)**.

Figure 2.9: Future (2050) No-Build A.M. and P.M. Peak Hour Level of Service[4]




In the 2050 a.m. peak, the I- 526 mainline east and west of Long Point Road interchange would fail. A key reason for the poor operation is that the existing one-lane ramps have inadequate capacity at the exits resulting in poor operations at the interchange, causing backup onto the mainline. In addition, traffic congestion would extend into the off-peak periods. The 2050 No-Build p.m. peak would have a failing LOS in both directions approaching the Long Point Road interchange.

[4] Developed using VISSIM traffic model.

## 2.2.3 POPULATION AND ECONOMIC GROWTH

Using data from 2020 U.S. Census Bureau estimates, the Charleston region is growing three times faster than the national average, with 33 new people moving to the region each day (**Figure 2.10**).[5] The Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) forecasts a 77 percent increase in regional population between 2015–2050, while employment in the Charleston region is forecasted to increase by almost 51 percent by 2050.[6] **Table 2.3** and **Figure 2.11** show the projected increase in population forecasts developed from the 2019 Charleston Area Transportation Study (CHATS) Interim Travel Demand Model (TDM). Tourism in the Charleston region and container cargo volume through the Port of Charleston are also forecasted to increase.



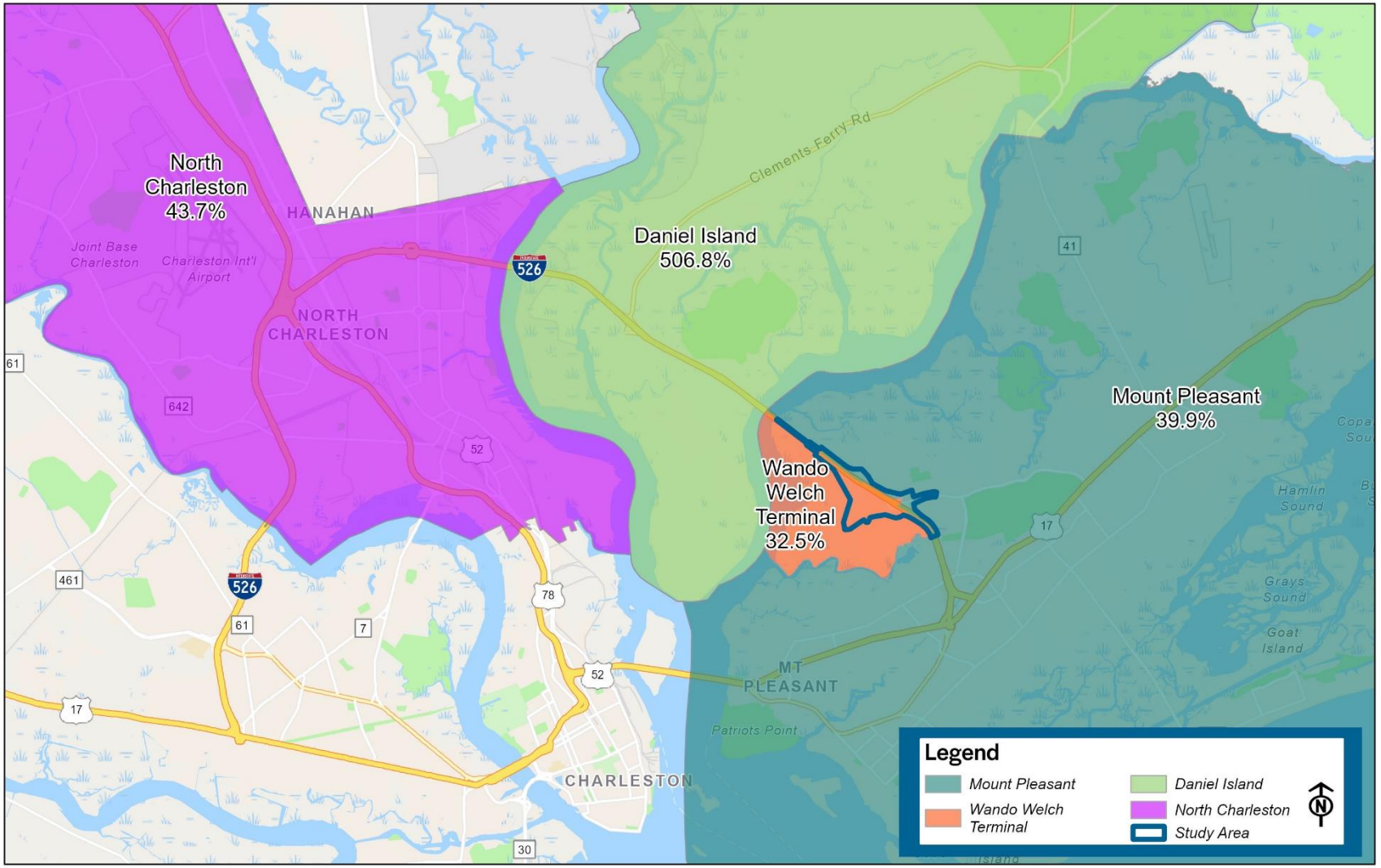
Table 2.3: CHATS Travel Demand Model Population Forecasts, 2015–2050

| District | Base Year 2015 | Forecast Year 2050 | Percent Change |
|---|---|---|---|
| North Charleston | 123,524 | 177,544 | 43.7% |
| Daniel Island | 13,965 | 84,751 | 506.8% |
| Wando Terminal | 2,492 | 3,303 | 32.5% |
| Mount Pleasant | 83,940 | 117,473 | 39.9% |

*Source: CHATS Interim TDM (2019)*

[5] https://www.crda.org/news/2021-exactly-how-many-people-move-into-the-charleston-region-each-day/ (Last accessed: April 11, 2022)
[6] BCDCOG Charleston Area Transportation Study (CHATS) Interim Regional Travel Demand Model (TDM), 2019

Figure 2.11: Population Forecasts

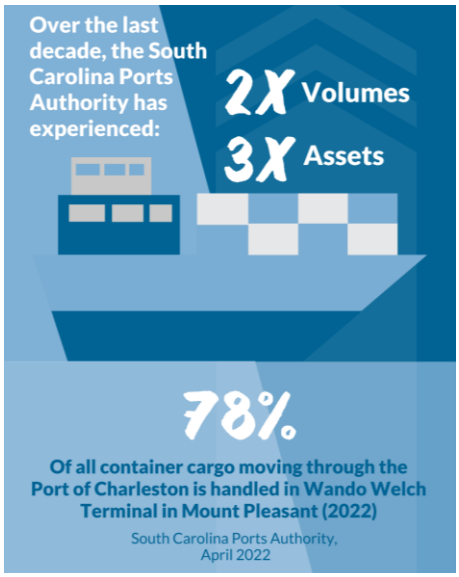


In 2017, the Town of Mount Pleasant conducted a Port District Economic Development Study as part of a comprehensive assessment for the area surrounding the WWT.[7] The study identified the section of Long Point Road and Wando Park Boulevard from the I-526 corridor to the WWT as a potential "economic ecosystem," having a broad range of complementary land uses that may include offices and businesses providing port-related services, restaurants, breweries, health and wellness facilities, daycares, and small retail businesses. **The Port District Economic Development Study also identified the need for improvements to the I-526 and Long Point Road interchange to reduce conflicts with trucks and other vehicles traveling eastbound and exiting onto Long Point Road.**

Additionally, the Town of Mount Pleasant Comprehensive Plan (2020) identifies the Long Point District as a community-commercial hub that supports a mixed use of residential, commercial, and light industrial land uses. The plan outlines opportunities for mixed-use redevelopment, refining zoning to support and recruit port-related industries and businesses, and creating connections in the business-industrial areas near the port. **Related to this project, the Town of Mount Pleasant Comprehensive Plan identifies a transportation goal (Goal R) to "move port-related traffic efficiently to minimize the impact to local roadways and communities."**

## Proximity of the Wando Welch Terminal to Long Point Road

The WWT is a major regional employer and a key driver in the local, regional, and state economy. The 400-acre facility is the largest container terminal in South Carolina and in 2019 became the SCPA's headquarters location. The WWT handles approximately 78 percent of the SCPA's annual container volumes (**Figure 2.12**).[8] The anticipated growth in cargo volumes processed at the WWT, combined with forecasted population and employment growth in the Charleston region, will result in increased truck and overall traffic volumes passing through the I-526 and Long Point Road interchange.




## 2.2.4 What are the Project Goals?

Although not part of the purpose and need, project goals assist in defining important objectives beyond the project's transportation needs. This project was a recommendation included in the I-526 Lowcountry Corridor EAST Planning and Environmental Linkages (PEL) study. The PEL study included project goals that were developed through agency and public involvement activities. Two main goals from the PEL study are applicable to the I-526 and Long Point Road Interchange Improvements project and were carried forward:

**Compatibility**: **Align with local land use plans and projects.** Improvements should align with local land use or transportation plans identified in BCDCOG existing and committed projects or the Town of Mount Pleasant Comprehensive Plan. Within the Long Point Road interchange area, these land use plans and projects include a combination of residential development, commercial and retail expansion, and freight-related operations in the Maritime District of the Town of Mount Pleasant and the WWT.

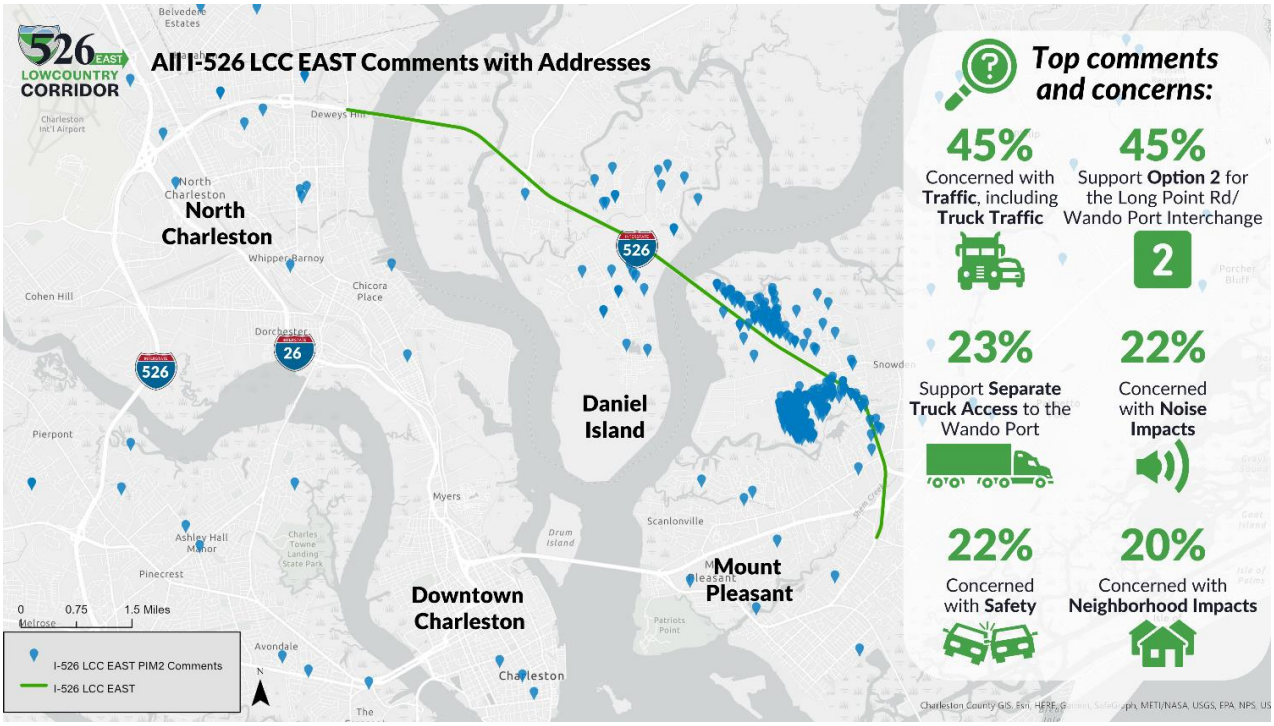
**Multimodal: Enhance movement through the corridor, including other modes such as carpool, transit, walk, or bike.** Improvements should be designed to be compliant with FHWA's and SCDOT's Complete Streets principles[9] and policy[10], respectively. In the study area, this considers connectivity and presence of appropriate accommodations for automobile, truck, bicycle, and pedestrian modes of transportation.

[7] https://experiencemountpleasant.com/live/port-district-economic-development/ (Last accessed: April 11, 2022)
[8] https://scspa.com/sc-ports-locations/wando-welch-terminal/ (Last accessed: April 11, 2022)
[9] https://highways.dot.gov/complete-streets/complete-streets-fhwa (Last accessed: April 15, 2022)
[10] http://info2.scdot.org/SCDOTPress/PublishingImages/DD%2028%20Complete%20Streets.pdf (Last accessed: January 23, 2023)

## 2.2.5 WHAT HAVE WE HEARD FROM THE PUBLIC?

The top comments and concerns expressed throughout the public engagement process for the PEL study were associated with noise, neighborhood impacts, and alternative truck and freight routes. During the public information meeting held for the PEL in October 2021, preliminary options for Long Point Road improvements were presented to the public. The top comments and concerns associated with these options were traffic, including truck traffic; support in providing new truck ramps for the WWT; and support in separating truck access to WWT (**Figure 2.13**).

Figure 2.13: Locations of Received Public Comments (Fall 2021)




On August 2, 2022, a public meeting was held for the for the I-526 and Long Point Road Interchange Improvements project. Input provided during this meeting and the associated public comment period was consistent with comments from the PEL study and included concerns about heavy truck traffic, safety, and weave conditions. The locations associated with public comments received during to the PEL study public meeting are shown in **Figure 2.13.**

# 2.3 FUNDING AVAILABILITY

The project will be financed using federal funds as documented in the Statewide Transportation Improvement Program (STIP).[11] The STIP currently details the estimated total project cost to be $150 million. The current project cost estimates range from $280-360 million. Due to changing market conditions and fluctuations in material costs, the project base cost is currently being re-evaluated. The SCDOT will work with the BCDCOG and CHATS to revise and update the Long Range Transportation Plan (LRTP)[12] and local Transportation Improvement Program (TIP)[13] to reflect the upcoming cost estimate changes. These changes will be reflected in an updated STIP amendment and will be addressed prior to the final NEPA decision. Right-of-way acquisition for this project is scheduled to begin in 2023 and construction is tentatively scheduled to begin in 2024. The proposed improvements to the Long Point Road interchange are consistent with the goals and strategies defined in the CHATS congestion management process (CMP).

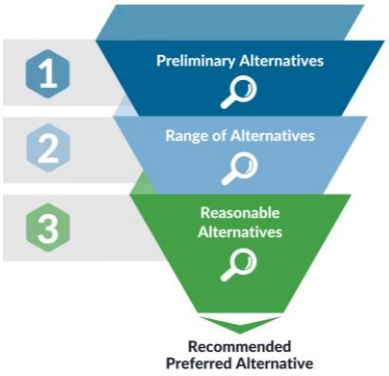
[11] http://206.74.144.42/ESTIP/downloads/Charleston.html?_=1671112670220 (Last accessed: December 15, 2022)
[12] https://bcdcog.com/transportation/planning/long-range-transportation-plan/ (Last accessed: December 15, 2022)
[13] https://bcdcog.com/wp-content/uploads/2023/01/2021-2027_TIP_Rev-22_V2.pdf (Last accessed: January 23, 2023)

# 3.0 Alternatives Analysis

The alternative analysis for the proposed interchange improvements consisted of a multi-step process (see Error! Not a valid bookmark self-reference.) to identify Reasonable Alternatives to be evaluated in this Environmental Assessment (EA), refer to Appendix U for further details. The project team, which included planners, scientists, and engineers, identified preliminary concepts for improvements to the interchange. The preliminary concepts were evaluated and synthesized to generate a range of alternatives. The range of alternatives were evaluated on their ability to meet the purpose and need of the project. Alternatives determined to meet the purpose and need are considered to be Reasonable Alternatives.

Reasonable Alternatives are further evaluated in this EA for potential effects on the social, economic, and natural environments and compared to the No-Build Alternative, which has been established as the baseline condition.

Figure 3.1: Alternative Analysis Process




## 3.1 What Part Did the PEL Play During the Alternatives Analysis?

In 2022, the South Carolina Department of Transportation (SCDOT) completed a Planning and Environment Linkages (PEL) Study for I-526 Lowcountry Corridor (LCC) EAST, from Virginia Avenue in North Charleston to U.S. 17 in the Town of Mount Pleasant (see Appendix V). The PEL study identified existing and projected transportation issues within the corridor through analysis and public and stakeholder engagement and explored and evaluated various alternatives to solve those issues. It was determined that the I-526 LCC EAST corridor requires additional travel lanes in each direction to accommodate the forecasted traffic demand for the corridor. The I-526 and Long Point Road interchange was identified as a necessary project for supporting the widening of I-526 and one that could be completed independently from the planned I-526 widening.

The PEL study identified four interchange concepts for the Long Point Road interchange. Three were brought forward for consideration as part of this EA. The PEL Option 3 (Shipping Lane Option) did not move forward as a stand-alone alternative because of its similarities to other alternatives and because it did not provide the basic traffic movements required to improve the interchange. Additionally, this option would require a new traffic signal along Long Point Road, creating an additional conflict between port related and local traffic.

Transportation system management/transportation demand management (TSM/TDM) and mass transit were also included as part of the PEL evaluation. It was determined through the PEL study that, on their own, TSM/TDM and mass transit were not viable alternative types for the I-526 corridor. This finding also holds true for the Long Point Road interchange project and as a result, TSM/TDM and mass transit were not further evaluated as part of this EA. Refer to Appendix V for more detailed information regarding the PEL study.

## 3.2 How Were Alternatives Identified and Developed?

Three preliminary alternatives from the PEL were brought forward for consideration. Three additional preliminary alternatives were developed by the project team. These alternatives include improvements to the existing Long Point Road interchange configuration, new interchange configurations, and/or a new interchange alternative.

The project team first reviewed previous planning studies completed by SCDOT, the Berkeley Charleston Dorchester Council of Governments (BCDCOG), the Charleston Area Transportation Study (CHATS) Metropolitan Planning Organization, and the Town of Mount Pleasant to develop preliminary concepts for improvements to the interchange. Based on the review completed by the project team, no previous studies completed by BCDCOG, CHATS, or the Town of Mount Pleasant included a reconfiguration of the existing interchange. Recommendations for additional turn lanes and adjustments to signal timings at the existing ramp terminals, as well as additional turning and storage lanes on Long Point Road within the existing interchange were proposed. The project team incorporated these concepts into proposed alternatives throughout the development of the range of alternatives.

**Table 3.1** lists the preliminary range of alternatives evaluated to improve the Long Point Road interchange.

Table 3.1: Preliminary Range of Alternatives Considered

| Universe of Alternatives | Description | Origin |
|---|---|---|
| No-Build | Includes improvements included in 2050 Existing and Committed (E+C) Network | 2050 E+C Network |
| Alternative 1 (PEL Option 1) | Improved Partial Cloverleaf Interchange | I-526 LCC EAST PEL |
| Alternative 2 (PEL Option 2) | New Truck Ramps to the Port and Improved Partial Cloverleaf Interchange | I-526 LCC EAST PEL |
| Alternative 3 (PEL Option 4) | Diverging Diamond Interchange (DDI) | I-526 LCC EAST PEL |
| Alternative 4 | Single Point Urban Interchange (SPUI) | Developed by Project Team |
| Alternative 5 | Flyover from Long Point Road | Developed by Project Team |
| Alternative 6 | New Truck Ramps to the Port and DDI | Developed by Project Team |

## 3.3 What Are the Range of Alternatives Being Considered?

The No-Build Alternative and six conceptual build alternatives moved forward as stand-alone alternatives for detailed analysis as part of this project. Three of the concepts from the PEL study moved forward as stand-alone alternatives, and the project team also identified three additional conceptual alternatives for evaluation.

## 3.4 How Were the Range of Alternatives Evaluated?

The range of alternatives were evaluated to determine whether or not they meet the purpose and need of the project. Traffic models, including Highway Capacity Software (HCS), Synchro (macrosimulation model), SimTraffic (microsimulation), and VISSIM (robust visualization and microsimulation) provided operational analysis to determine how each of the six build alternatives performed when compared to the No-Build Alternative. Detailed information on the data sets and traffic analysis models can be found in the Traffic Analysis Report/Interchange Access Request (Appendix A).

Each of the six build alternatives were evaluated using the following two questions:

1) Does the alternative improve traffic operations compared with the No-Build Alternative?
2) Does the alternative reduce operational conflicts between port-related and local traffic compared with the No-Build Alternative?

Only alternatives that could answer “yes” to both questions were considered to meet the purpose and need and were carried forward as a Reasonable Alternative.

To meet the operational improvements part of the project purpose, an alternative had to meet both of the following criteria:

- Reduce ramp queuing as measured by traffic modeling/simulation software
- Result in a better level of service (LOS) at the signalized ramp terminals compared with the No-Build Alternative

To demonstrate a reduction in operational conflicts between port-related and local traffic, an alternative was required to demonstrate a reduction in the amount of truck traffic or conflicts compared with the No-Build Alternative. The measures for determining improvements over the No-Build Alternative included:

- Reduced truck traffic on Long Point Road
- Reduced truck traffic on ramps to I-526 westbound at Long Point Road
- Reduced number of key conflict points between port-related and local traffic

## 3.5 No-Build Alternative

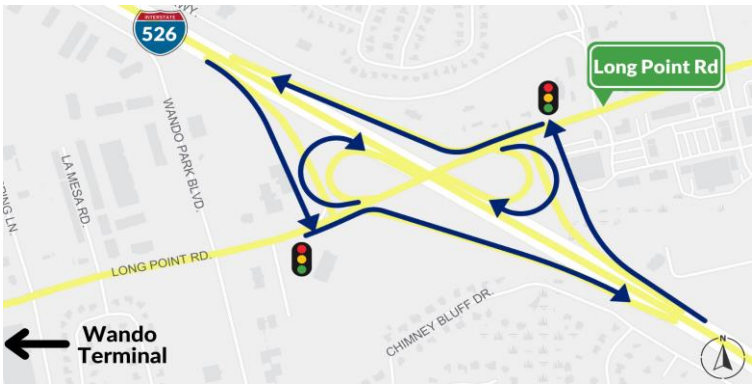
The No-Build Alternative provides a baseline for comparing potential benefits of the improvements while also examining the impacts between alternatives. Analysis of the No-Build Alternative considered the existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the proposed project is not constructed. The future conditions include the existing and committed (E+C) transportation projects expected to be in place for the design year 2050. The Traffic Analysis Report/Interchange Access Request (Appendix A) provides more information on the No-Build Alternative.

The No-Build Alternative does not meet the purpose and need of the project because it would not improve traffic operations, nor would it reduce conflicts between port-related traffic and local traffic. However, the No-Build Alternative will be carried forward in the evaluation of alternatives as a baseline comparison for environmental impacts.

## 3.6 Alternative 1: Partial Cloverleaf Interchange

Alternative 1 is an improved partial cloverleaf interchange. This larger version of the existing interchange would address concerns by constructing larger loop ramps to allow for increased speeds to improve merging onto I-526 for all vehicle types and will accommodate the planned widening of I-526. The eastbound off-ramp would also benefit from improvements, including three left turns onto Long Point Road.

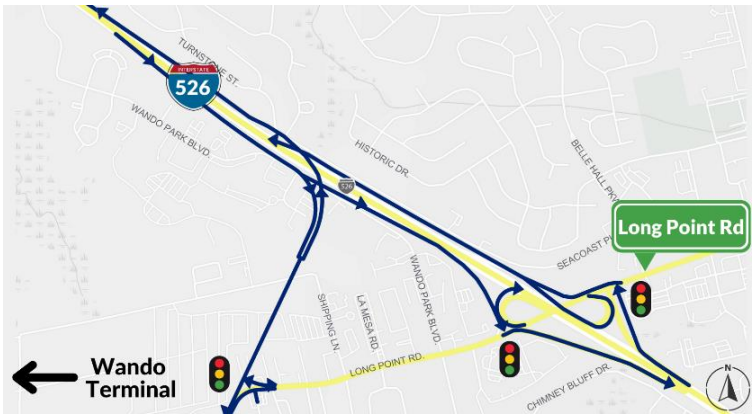
Alternative 1 was not considered a reasonable alternative because it failed to meet the purpose and need of the project.




Alternative 1

- Unacceptable ramp queuing onto I-526
- Unacceptable LOS for ramp termini signal operations
- Fails to reduce percentage of trucks on Long Point Road
- No reduction in trucks on I-526 westbound loop ramp
- No change in key conflict points

# 3.7 ALTERNATIVE 2: NEW TRUCK RAMPS TO THE PORT AND IMPROVED PARTIAL CLOVERLEAF INTERCHANGE




Alternative 2

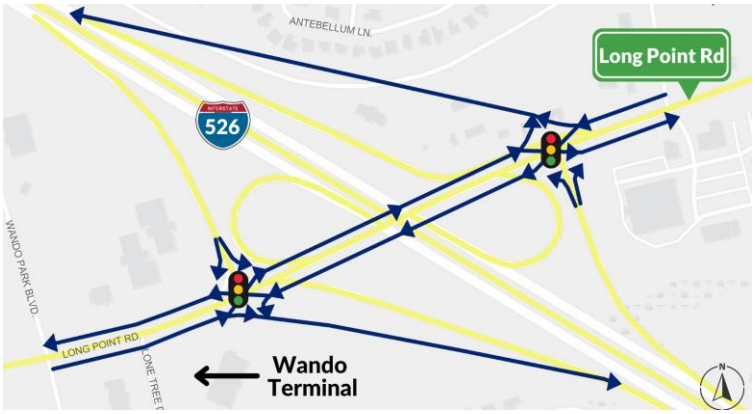
Alternative 2 would provide new access to Long Point Road for port-related traffic along with an improved partial cloverleaf interchange. Collector-distributor (CD) roads would be used to help separate port-related and local traffic. This alternative also requires a realignment of a segment of Wando Park Boulevard to accommodate the proposed truck ramps and CD roads. Alternative 2 provides improvements with better geometric design, additional capacity, and the incorporation of truck ramps allowing port-related truck traffic to be connected directly to the WWT.

- Reduction for ramp queuing onto I-526
- Acceptable LOS for ramp termini signal operations and for Long Point Road
- Reduction in percentage of trucks on Long Point Road
- Reduction in trucks on I-526 westbound loop ramp
- Decrease in key conflict points

In reviewing the effectiveness and operational performance measures, Alternative 2 improves traffic operations compared with the No-Build.

Alternative 2 meets all elements of the purpose and need, so it was determined to be a reasonable alternative.

# 3.8 ALTERNATIVE 3: DIVERGING DIAMOND INTERCHANGE (DDI)




Alternative 3

Alternative 3 would replace the existing interchange with a diverging diamond interchange (DDI). A DDI would remove left turns across oncoming lanes of traffic at each of the intersections within the interchange by shifting through movements onto the left-hand side of the road.

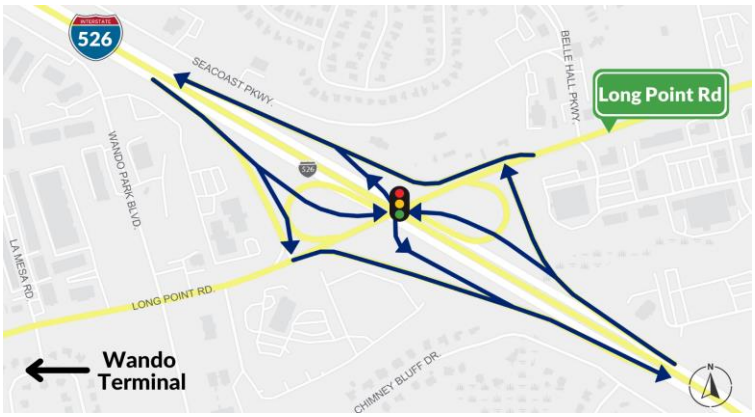
In reviewing the effectiveness and operational performance measures, Alternative 3 marginally improves some traffic operations, but does not meet the overall purpose and need related to traffic operations.

- Unacceptable ramp queuing onto I-526
- Unacceptable LOS for ramp termini signal operations
- Fails to reduce percentage of trucks on Long Point Road
- Increase in key conflict points

Alternative 3 does not meet the purpose and need for the project, so it is not considered a reasonable alternative.

# 3.9 ALTERNATIVE 4: SINGLE POINT URBAN INTERCHANGE (SPUI)

Alternative 4 would replace the existing interchange with a single-point urban interchange (SPUI). The SPUI would create a single signalized intersection underneath I-526. This allows the elimination of the two existing signals.




Alternative 4

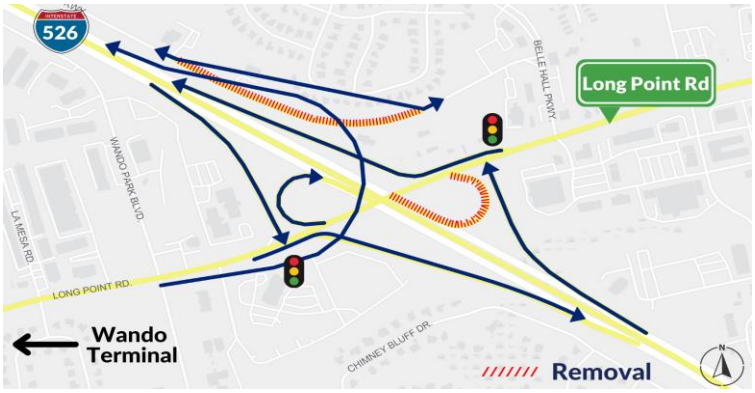
In reviewing the effectiveness and operational performance measures, Alternative 4 results in unacceptable traffic queuing that spills onto the I-526 mainline. This unacceptable performance was verified by traffic modeling/simulation software analysis. Therefore, Alternative 4 was not advanced into the second round of traffic analysis because queuing onto I-526 is not acceptable. No further analysis was completed on Alternative 4 because it does not improve traffic operations compared with the No-Build Alternative.

- Unacceptable ramp queuing onto I-526
- Unacceptable operations at ramp signals

Alternative 4 does not meet the purpose and need for the project, so it is not considered a reasonable alternative.

# 3.10 ALTERNATIVE 5: FLYOVER FROM LONG POINT ROAD

Alternative 5 would replace the existing loop ramp to westbound I-526 with a flyover ramp. The flyover allows removal of one loop, and it requires some realignment of ramps and changes to the local road connections, including a segment of Seacoast Parkway.




Alternative 5

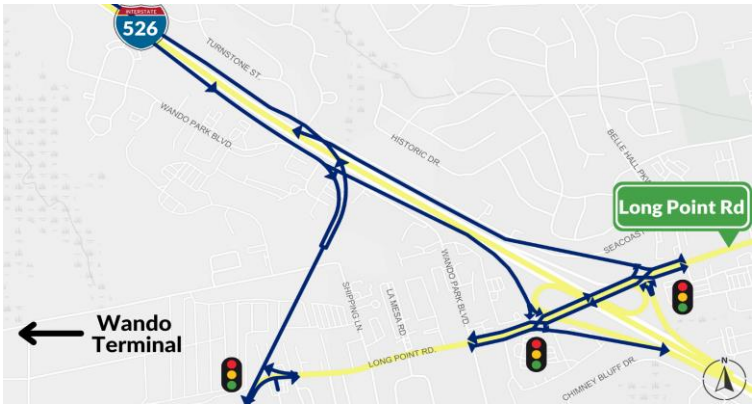
The traffic analysis showed that queuing onto the I-526 mainline was almost double that of the No-Build Alternative. Because the traffic modeling/simulation software analysis identified the ramp queuing as unacceptable and queuing was doubled, this alternative was not advanced into the second round of traffic analysis. No further analysis was completed on Alternative 5 because it does not improve traffic operations compared with the No-Build Alternative.

- Unacceptable ramp queuing onto I-526

Alternative 5 does not meet the purpose and need for the project, so it is not considered a reasonable alternative.

# 3.11 ALTERNATIVE 6: NEW TRUCK RAMPS TO THE PORT AND DIVERGING DIAMOND INTERCHANGE (DDI)

Alternative 6 would provide new access to Long Point Road for port-related traffic and change the interchange type to a DDI. An eastbound CD road was assumed to be used to help separate port-related and local traffic. This alternative also requires a realignment of a segment of Wando Park Boulevard to accommodate the proposed truck ramps and CD roads.




Alternative 6

- Undesirable reduction for ramp queuing onto CD Road
- Unacceptable LOS for ramp termini signal operations
- Reduction in percentage of trucks on Long Point Road
- Reduction in trucks on I-526 westbound loop ramp
- Decrease in key conflict points

Alternative 6 combines the DDI configuration at Long Point Road with the ramps and port access road, similar to Alternative 2. Overall, this alternative effectively met many of the operational needs of the project, particularly on I-526 and Long Point Road. The reduction in traffic volumes through the DDI (due to the shift of port-related traffic to the new ramps) improved operations of the DDI interchange compared to the Alternative 3 DDI. Nevertheless, the traffic modeling/simulation software analysis showed the DDI was unstable, resulting in queues in multiple runs focused on the northbound direction.

Alternative 6 reduces both the number of conflict points between cars and port-related trucks as well as reduces truck percentages on I-526 and Long Point Road. Alternative 6 successfully meets the second element of the purpose and need but it fails to improve the traffic operations of the interchange compared with the No-Build Alternative.

Alternative 6 does not meet the purpose and need for the project, so it is not considered a reasonable alternative.

# 3.12 What Alternatives Are Considered Reasonable?

During the screening of the range of alternatives, one alternative, Alternative 2, met the purpose and need for the project. Therefore, Alternative 2 will be carried forward as the only Reasonable Alternative for further evaluation, see **Table 3.2**.

Table 3.2: Identified Reasonable Alternatives

| Conceptual Alternatives | Description | Improves Traffic Operation | Reduces Conflicts Between Port-Related and Local Traffic | Meets Purpose and Need | Considered Reasonable |
|---|---|---|---|---|---|
| Alternative 1 | Improved Partial Cloverleaf Interchange | No | No | No | No |
| Alternative 2 | New Port Access Ramps and Improved Partial Cloverleaf Interchange | Yes | Yes | Yes | Yes |
| Alternative 3 | DDI | No | No | No | No |
| Alternative 4 | SPUI | No | No | No | No |
| Alternative 5 | Flyover from Long Point Road | No | No | No | No |
| Alternative 6 | New Port Access Ramps and DDI | No | Yes | No | No |

## 3.12.1 What refinements have been made to the Reasonable Alternative?

The design team further refined Alternative 2 to accommodate input provided by agency coordination and comments received during the public involvement process. The design changes include:

- shifting the new truck ramps to the east to avoid and minimize potential impacts to residential properties,
- optimizing interchange merge and diverge operations,
- minimizing potential impacts to a cultural and historic resource,
- maintaining the left turn from Long Point Road onto Belle Hall Parkway,
- incorporating a 10-foot multiuse path along the east side of Long Point Road from Wando Park Boulevard to Belle Point Drive to enhance bicycle and pedestrian connectivity, and
- adding a cul-de-sac at the end of Shipping Lane near the back gate of the Wando Terminal.

The project team evaluated the traffic operations associated with the left turn movement from Long Point Road onto Belle Hall Parkway. Public comments received after the PIM reflected a strong desire to maintain the left-turn movement at this location. The project team performed additional traffic analysis to determine that the left-turn movement from Long Point Road onto Belle Hall Parkway can be maintained.

For more details on refinements to Alternative 2 please refer to the Traffic Analysis Report/Interchange Access Request (Appendix A) and the Alternatives Analysis Technical Memorandum (Appendix T).

# 3.13 What is the Recommended Preferred Alternative?

SCDOT and FWHA has identified Alternative 2 as the Preferred Alternative, see **Figure 3.2**. Although the No-Build Alternative does not meet the purpose and need of the project, it was carried forward in the evaluation of alternatives as a baseline comparison for environmental impacts, see Chapter 4. Based on the evaluation of the Reasonable Alternative (Alternative 2) for potential effects on the social, economic, and natural environments and compared to the No-Build Alternative, it was determined that Alternative 2 provides improvements for traffic operations and would reduce conflicts between port-related traffic and local traffic. Alternative 2 was identified as

the only alternative to meet the purpose and need of the project. **Table 3.3** outlines the potential environmental impacts resulting from the No-Build Alternative and Alternative 2.

Alternative 2 provides improvements with a better geometric design, additional capacity, and the incorporation of truck ramps allowing port-related truck traffic to be connected directly to the WWT. CD roads would further separate port-related and local traffic on I-526 and Long Point Road. This concept provides a new facility that would allow large trucks destined to, and coming from, the WWT with a more direct connection to I-526 and the ability to avoid the automobile traffic on Long Point Road. This alternative is also compatible with the planned widening of I-526. Therefore, Alternative 2 has been identified as the Recommended Preferred Alternative.

Table 3.3: Potential Environmental Impacts

| Resource | Description | No-Build | Alternative 2 |
|---|---|---|---|
| Meets Purpose and Need | Improves Traffic Operation | No | Yes |
| | Reduces Conflicts Between Port-Related and Local Traffic | No | Yes |
| Meets Projects Goals | Yes/No | No | Yes |
| Right-of-Way Required | Acreage | 0 | 34 |
| Right-of-Way Impacts | Parcels (Number of Tracts) | 0 | 147 |
| | Total Potential Relocations | 0 | 54* |
| | Number of Residential | 0 | 0 |
| | Number of Businesses | 0 | 51** |
| | Number of Churches | 0 | 1 |
| Cultural Resources | Number of Sites Eligible/Potentially Eligible for Listing on National Register of Historic Places | 0 | 1 |
| Hazardous Waste Sites | Number of Sites | 0 | 13 |
| Total Wetland Impacts | Acres | 0 | 14.1 acres |
| Freshwater | Acres | 0 | 9.4 acres |
| Critical Area | Acres | 0 | 3.1 acres |
| Ponds | Acres | 0 | 1.6 acres |
| Essential Fish Habitat | Acres | 0 | 2.79 acres |
| Threatened and Endangered Species | Yes/No | 0 | Yes |
| Preliminary Cost Estimate | US Dollars (2022) | 0 | $280-360 million |

**Total relocations include 2 outbuildings*

***Includes the cell tower (estimated as 5 businesses)*

Figure 3.2: Recommended Preferred Alternative Rendering


*The content of this display is conceptual only and not to be used for any type of construction, maintenance, or acquisition of right-of-way. As of February 2023.*

# 4.0 Existing Conditions and Environmental Impacts

This Chapter describes the existing conditions of applicable environmental resources within the study area and identifies the environmental impacts that would occur as a result of the No-Build Alternative or construction of the Preferred Alternative (Alternative 2). A comprehensive analysis occurred for all environmental resources, in accordance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508).

**Table 4.1** references the section for each resource evaluated as part of this Environmental Assessment (EA) and summarizes the findings of resources with minimal to no impact from the Preferred Alternative (Alternative 2). Resources with minimal to no impact from the Preferred Alternative (Alternative 2) are not discussed further in this EA. Technical memoranda are provided in the Appendices of this EA.

Table 4.1: Resources Considered for this Environmental Assessment

| Resource | Summary of Findings/Section Reference |
|---|---|
| Land Use | The proposed project was reviewed against existing land uses and planning documents including the Charleston County Comprehensive Plan (2017),[1] the Town of Mount Pleasant Comprehensive Plan (2020),[2] and the Town of Mount Pleasant's Comprehensive Plan and Port District Economic Development Plan (2017).[3] The proposed project would result in minimal changes to existing land uses by converting existing commercial, undeveloped, institutional, and residential land uses to transportation right-of-way. The proposed project would be consistent with current zoning regulations and would be consistent with the needs identified in the Town of Mount Pleasant Comprehensive Plan. |
| Farmlands | Farmlands were reviewed in accordance with the Farmland Protection Policy Act of 1981. The proposed project is located within an urban area as defined by the U.S. Census Bureau.[4] Therefore, there would be no impact of protected farmlands. |
| Socioeconomics and Communities | See Section 4.1 |
| Environmental Justice | See Section 4.2 |
| Visual Resources | See Section 4.3 |
| Relocations | See Section 4.4 |
| Air Quality | See Section 4.5 |
| Climate Change | See Section 4.6 |
| Noise | See Section 4.7 |
| Water Quality | See Section 4.8 |
| Wetlands | See Section 4.9 |
| Environmental Permits | See Section 4.10 |
| Wild and Scenic Rivers | Wild and scenic rivers were reviewed in accordance with the Wild and Scenic Rivers Act of 1968. There are no wild and scenic rivers located within the study area. Therefore, there would be no impact on wild and scenic rivers as a result of the proposed project. |
| Floodplains | See Section 4.11 |
| Natural Habitat and Wildlife | See Section 4.12 |
| Threatened and Endangered Species | See Section 4.13 |

| Resource | Summary of Findings/Section Reference |
|---|---|
| Migratory Birds | See Section 4.14 |
| Bald Eagle | See Section 4.15 |
| Marine Mammals | See Section4.16 |
| Essential Fish Habitat | See Section 4.17 |
| Hazardous Waste and Underground Storage Tanks | See Section 4.18 |
| Cultural Resources | See Section 4.19 |
| Section 4(f) and Section 6(f) Resources | Publicly owned parks, recreation areas, wildlife, and waterfowl refuges, as well as significant historic sites, are protected under Section 4(f) of the U.S. Department of Transportation (USDOT) Act. Section 6(f) resources are places such as public parks, trails, courts, and other recreational areas that were purchased in part through grants from the Land and Water Conservation Fund (LWCF) Act of 1965. The properties are protected by the LWCF from conversion to non-public recreational uses. There are no Section 4(f) or Section 6(f) resources located within the study area; therefore, there would be no impact to Section 4(f) or Section 6(f) resources from the proposed project. |

*SOURCES:*
[1] *https://www.charlestoncounty.org/departments/zoning-planning/comp-plan.php*
[2] *https://acrobat.adobe.com/link/track?uri=urn%3Aaaid%3Ascds%3AUS%3Ae5c09399-e9c7-44f0-8689-649907e2a60d#pageNum=127 (p.5-32)*
[3] *https://experiencemountpleasant.com/wp-content/uploads/2017/11/Economic-Development-Port_2017-09-29-1.pdf*
[4] *https://www2.census.gov/geo/maps/dc10map/UAUC_RefMap/ua/ua15508_charleston--north_charleston_sc/DC10UA15508.pdf*

# 4.1 SOCIOECONOMICS AND COMMUNITIES

## 4.1.1 WHAT ARE THE EXISTING SOCIOECONOMIC AND COMMUNITY CONDITIONS OF THE STUDY AREA?

Demographic and economic conditions were examined using the 2015- 2020 American Community Survey (ACS) 5-year data from the U.S. Census Bureau. Census tract (CT) block group boundaries were used to identify special populations and provide insight into the demographics of residents. **Figure 4.1** shows the six block groups identified in the study area. For more details on socioeconomic and community conditions and impacts from the project, see Appendix B: Community Impact Assessment.

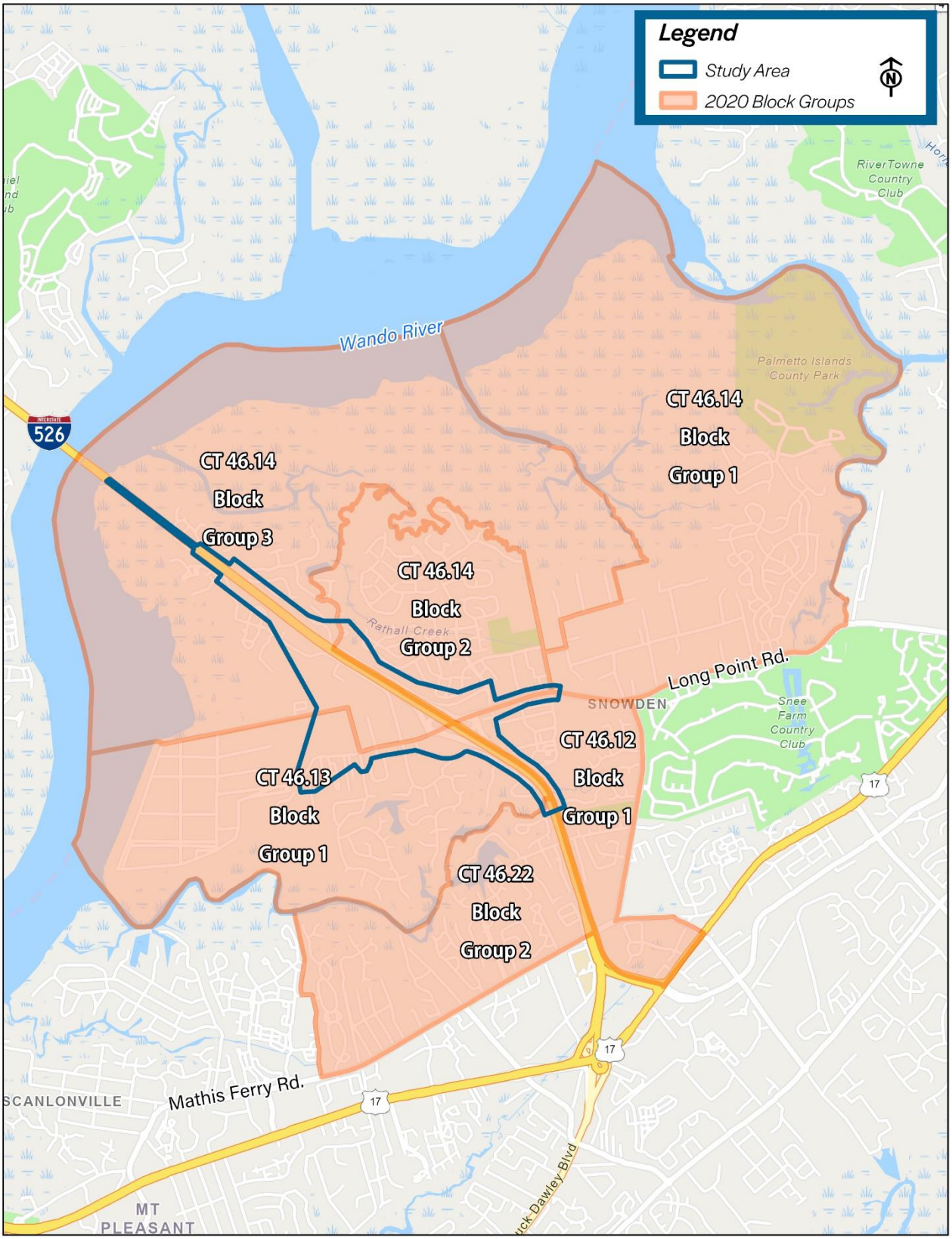
### Population and Household Characteristics

The population of Charleston County was 407,543 residents in 2020, establishing the county as the third most populous in the state. Charleston County experienced a growth rate of approximately 16.5 percent between 2010 and 2020. Population growth is projected to continue through 2035, to approximately 508,730 people.[1] The greatest population growth has occurred in the City of Charleston and adjacent cities and towns (including the Town of Mount Pleasant).

Population, race, household age, elderly population, LEP proficiency, and vehicle access data for the study area and county are summarized in **Table 4.2**.

[1] South Carolina Department of Revenue and Fiscal Affairs – Health and Demographics Section's population projections

Figure 4.1: U.S. Census Data Block Groups




*Notes:* ***Census Tract (CT)***

Table 4.2: Demographics for Charleston County and the Study Area

| Demographics | Study Area | Charleston County |
|---|---|---|
| Total Population | 14,749 | 407,543 |
| Percent White | 87.9% | 64.7% |
| Percent Minority | 12.1% | 35.3% |
| Percent Hispanic | 1.8% | 5.2% |
| Percent African American | 6.5% | 26.3% |
| Median Household Age | 40 | 38 |
| Elderly Population (Over 65 years of Age) | 14.2% | 16.4% |
| Limited English Proficiency (LEP) Population | 0.1% | 1.7% |
| No Vehicles Available | 1.6% | 6.5% |

*Source: U.S. Census Bureau, ACS 5-year data 2020 U.S. Census*

Homeownership, home value, and rent data for the study area and county are compared in **Table 4.3**.

Table 4.3: Housing Characteristics

| Housing | Study Area | Charleston County |
|---|---|---|
| Homeowners | 75.8% | 62.2% |
| Median Home Value | $443,000 | $334,000 |
| Median Gross Rent | $2,016 | $1,228 |

*Source: U.S. Census Bureau, ACS 5-year data 2020 U.S.*

## Employment and Income

The labor force in Charleston County is comprised of 207,897 employees. The top categories of employment by industry for Charleston County are educational/health/social services (22.7 percent), professional, scientific, and management, and administrative (15.2 percent) and healthcare and social assistance (13.7 percent). These categories differ from the top industries for the state which includes educational/health/social services (22.1 percent), manufacturing (13.4 percent), and healthcare and social assistance (13.0 percent). Employment in manufacturing comprises approximately 6.6 percent of the labor force in Charleston County, compared to 13.4 percent for the state.

Household income, unemployment, and family poverty data for the study area and county are shown in **Table 4.4**.

Table 4.4: Charleston County Economic Factors

| | Study Area | Charleston County |
|---|---|---|
| Median Household Income | $135,682 | $67,182 |
| Unemployment | 0.6% | 2.3% |
| Families Below Poverty Level | 2.5% | 7.7% |

## 4.1.2 WHAT WOULD BE THE IMPACTS FROM THE PROPOSED PROJECT ON SOCIOECONOMIC AND COMMUNITY CONDITIONS?

**The No-Build Alternative** would not result in impacts such as increased noise, alter visual resources in the study area, or require relocations. The No-Build Alternative would not alter traffic patterns by constructing a more direct route for truck traffic from I-526 to the WWT; truck traffic would remain on local roadways.

**The Preferred Alternative (Alternative 2)** would alter visual quality in localized areas (see Section 4.3). Relocations would be required (see Section 4.4). Traffic patterns would be altered on Long Point Road and direct routing would be provided between the WWT and I-526, thus removing trucks from local roadways. Altered traffic patterns

would not limit access to community facilities (e.g., hospitals, community centers, parks) and services. A 10-foot multiuse path along the east side of Long Point Road from Wando Park Boulevard to Belle Point Drive to enhance bicycle and pedestrian connectivity.

Economically, a direct connection to WWT from I-526 would increase the attractiveness of the study area for port-related businesses, by better meeting the transportation needs of business prospects in the areas by WWT. This would support the goals identified in the Town of Mount Pleasant's Comprehensive Plan and Port District Economic Development Plan (2017).[2] The relocation of port-related businesses to the study area could in turn increase the number and types of jobs.

The addition of direct access and exit ramps between I-526 and the WWT would provide additional roadway capacity to meet truck traffic travel demand, thereby increasing the attractiveness of the WWT for freight and logistics carriers. This, in turn, will help support the growth and expansion of freight and logistics businesses within the study area, thereby supporting the SCPA.

## 4.2 Environmental Justice Analysis

All federal agencies must comply with Title VI of the 1964 Civil Rights Act and Executive Order (EO) 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Under Title VI and related statutes, each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, disability, or religion. EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by the President on February 11, 1994, directs Federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

Pursuant to the EO, FHWA issued Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The Secretary of Transportation, along with heads of other federal agencies, signed a Memorandum of Understanding (MOU) on environmental justice and EO 12898 confirming the continued importance of identifying and addressing these considerations in agency programs, policies, and activities as required by EO 12898.

As part of this MOU, each agency agreed to review and update their environmental justice strategy as appropriate. The updated strategy relies upon existing authorities for achieving environmental justice as described by the EO 12898, such as the NEPA, Title VI, and related statutes, as well as the commitments and focus areas in the MOU.

FHWA issued Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, on June 14, 2012. On December 16, 2011, FHWA issued a memorandum titled "Guidance on Environmental Justice and NEPA." The memorandum describes the process involved in addressing environmental justice during NEPA review, including documentation requirements. DOT 5610.2C updates the environmental justice procedures for the USDOT in response to the MOU signed by heads of Federal agencies on August 4, 2011, DOT's revised Environmental Justice Strategy, updated on November 15, 2016, and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994. This guidance helps FHWA staff and NEPA practitioners ensure compliance with environmental justice requirements.

FHWA administers its governing statutes to identify and avoid discrimination and disproportionately high and adverse effects on minority populations and/or low-income populations by:

[2] https://experiencemountpleasant.com/wp-content/uploads/2017/11/Economic-Development-Port_2017-09-29-1.pdf

1. Identifying and evaluating environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities.
2. Proposing measures to avoid, minimize, and/or mitigate disproportionately high and adverse environmental and public health effects and interrelated social and economic effects and provide offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by FHWA programs, policies, and activities, where permitted by law and consistent with EO 12898.
3. Consider alternatives to proposed programs, policies, and activities where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts, where permitted by law and consistent with EO 12898.
4. Providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts and soliciting input from affected minority populations and/or low-income populations in considering alternatives during the planning and development of alternatives and decisions.

FHWA defines minority as a person who is:

- Black (having origins in any of the black racial groups of Africa);
- Hispanic or Latino (of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
- Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent);
- American Indian and Alaskan Native (having origins in any of the original people of North America, South America (including Central America), and who maintain cultural identification through tribal affiliation or community recognition); or
- Native Hawaiian and other Pacific Islander (having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

FHWA defines low income as: a person whose median household income is at or below the U.S. Department of Health And Human Services poverty guidelines ($30,000 for a family of four)*.

**As of January 19, 2023*

## 4.2.1 What groups are included in the Environmental Justice analysis?

U.S. Census Bureau's ACS 2015-2020 5-year estimates were collected for each block group within the study area including: total population, total minority population, families living below the poverty level, and household English proficiency. The percentage of persons classified as minority, percentage of families below the poverty level, and households with limited English proficiency (LEP) were calculated within each block group and compared to the study area, state, and Charleston County. If a block group's percent of minority or low-income population is higher than that of the percent in the study area, the block group is considered an environmental justice block group.

## 4.2.2 What existing environmental justice conditions occur in the study area?

Six block groups are located within the study area, four of which have been identified as environmental justice block groups, see **Figure 4.2**. Minority populations are present in all six block groups within the study area, see **Table 4.5**. The study area has a minority population of 12.1 percent which is lower than the state (36.6 percent) and county (35.3 percent). There are two block groups with higher minority populations than the study area that have been identified as environmental justice block groups. The percent of minority population in these two block groups are 18.4 and 20.7 percent. However, these percentages are lower than the statewide and county averages. The two largest minority populations within the study area are African American and Hispanic or Latino.

Within the study area, 2.5 percent of families are living below the poverty level, see **Table 4.5**. Poverty rates in the study area block groups range from zero to 13.5 percent. Two of the six block groups have a higher poverty rate than the study area and have been identified as an environmental justice block groups, see **Figure 4.2**.

One block group within the study area has an LEP population and has been identified as an environmental justice block group, with the primary language being Spanish.

Table 4.5: Environmental Justice Demographic Indicators

| Geography | Minority Population | Families Below Poverty Level (Poverty Rate) | Limited English Proficiency Population | EJ (Yes/No) |
|---|---|---|---|---|
| Census Tract 46.12, Block Group 1 | 4.6% | 13.5% | 0.0% | Yes |
| Census Tract 46.13, Block Group 1 | 9.0% | 0.2% | 0.0% | No |
| Census Tract 46.14, Block Group 1 | 20.7% | 0.0% | 0.6% | Yes |
| Census Tract 46.14, Block Group 2 | 7.0% | 0.0% | 0.0% | No |
| Census Tract 46.14, Block Group 3 | 4.0% | 2.9% | 0.0% | Yes |
| Census Tract 46.22, Block Group 2 | 18.4% | 2.3% | 0.0% | Yes |
| Study Area | 12.1% | 2.5% | 0.1% | -- |
| Charleston County | 35.3% | 7.7% | 1.7% | -- |
| South Carolina | 36.6% | 10.5% | 1.4% | -- |

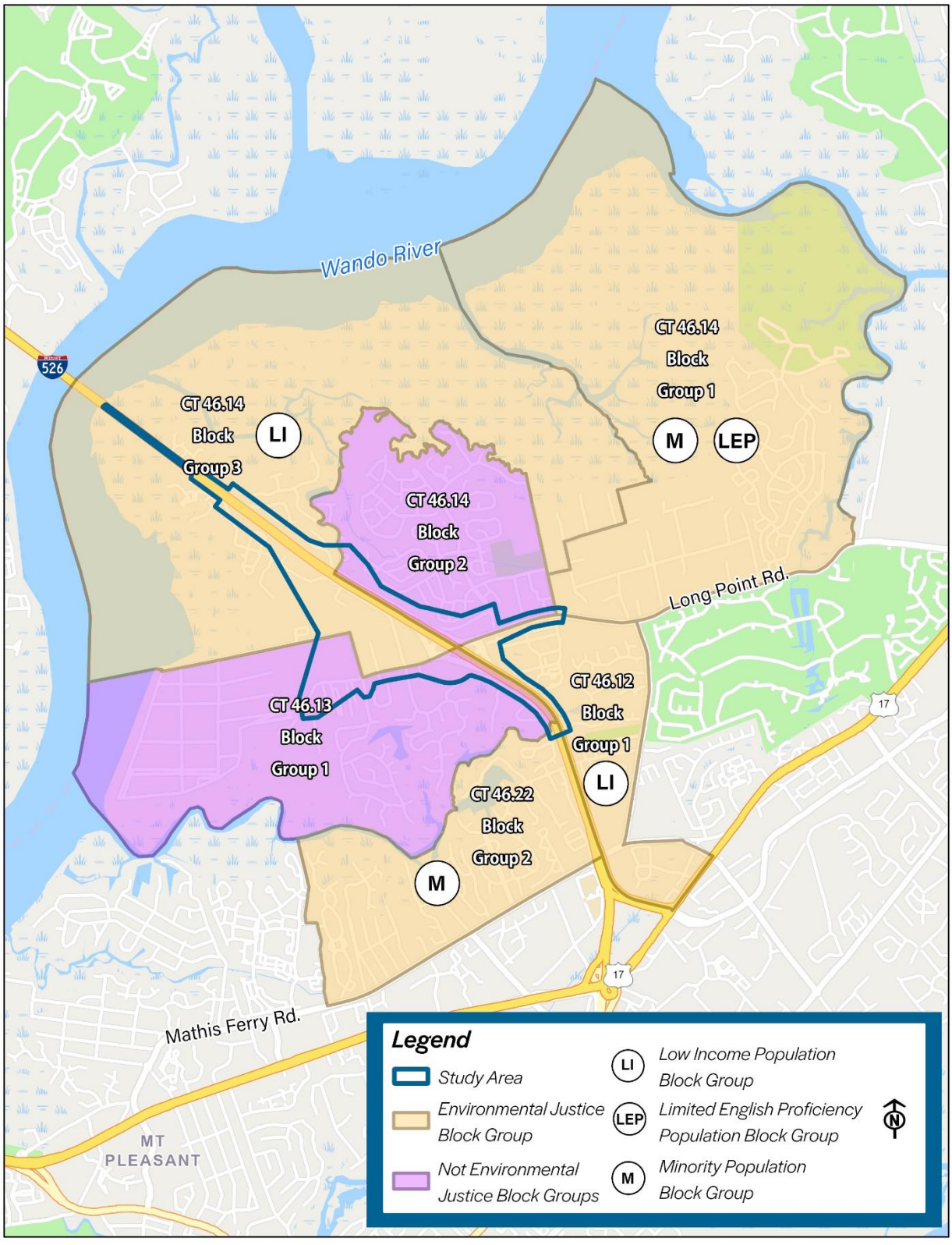
*Source: U.S. Census Bureau, ACS 5-year data 2020 U.S. Census*

## 4.2.3 How did the study team engage environmental justice populations during the project development process?

Environmental justice policies stress early and ongoing public outreach as a vital component of the environmental justice process. Public outreach has occurred throughout the project development process and is detailed in Chapter 5. Multiple methods of public outreach were used to increase the likelihood of environmental justice populations participation. Advertisements were used to publicize the project and the PIM, including Town of Mount Pleasant digital display boards, postcards, and newspaper ads. All public involvement materials were available in Spanish and an ad was place in the Spanish paper La Informador. In addition, a representative from the Snowden Gullah-Geechee Community was included in the project's stakeholder group. Chapter 5 discusses the public outreach efforts in more detail.

Environmental justice populations, and other community members will have further chances to comment on the project through a public hearing and associated public comment period for this EA.

Figure 4.2: Environmental Justice Block Groups in the Study Area



### 4.2.4 WHAT WOULD BE THE IMPACTS FROM THE PROPOSED PROJECT ON ENVIRONMENTAL JUSTICE POPULATIONS?

**The No-Build Alternative** would have minimal adverse effects on environmental justice populations as no construction activity would occur. Traffic patterns would not be altered and direct connections for truck traffic from WWT to I-526 would not be provided. No improvements to existing sidewalks or creation of new bicycle and pedestrian connections would occur. Therefore, trucks would remain on local roadways; existing congestion would be on-going throughout the study area along with associated air quality impact, see Section 4.5.

**The Preferred Alternative (Alternative 2)** impacts or is adjacent to six block groups, four of which have been identified as environmental justice block groups. The business relocations required by the Preferred Alternative (Alternative 2) are located within an environmental justice block group. While the impacted businesses are part of the Town of Mount Pleasant's economic base, none of the businesses being relocated are anticipated to provide community dependent services (i.e., rely on being located within the community to function or conversely, the community is dependent upon the business for example a corner market or health care facility). The businesses in this area are not dependent on foot-traffic source access or sales, and no residential relocations would occur. Therefore, it is not expected that relocations would impact environmental justice populations. No minority or low-income populations have been identified that would be adversely impacted by the proposed project, as determined above. Therefore, in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A, no further EJ analysis is required.

Benefits from the project, including more direct routing for truck traffic and associated air quality improvements (see Section 4.5) would affect all populations in proximity to the project, including environmental justice populations. A 10-foot multiuse path is proposed along the east side of Long Point Road from Wando Park Boulevard to Belle Point Drive to enhance bicycle and pedestrian connectivity.

## 4.3 VISUAL RESOURCES

FHWA published guidelines for analyzing visual impacts of Highway Projects in January 2015.[3] The guidelines begin with a scoping process to highlight visual resource issues and determine the appropriate level of study for compliance with NEPA. A Visual Impact Assessment (VIA) Memorandum was deemed the appropriate level of analysis for this project, see Appendix C.

### 4.3.1 WHAT IS THE EXISTING VISUAL CHARACTER OF THE STUDY AREA?

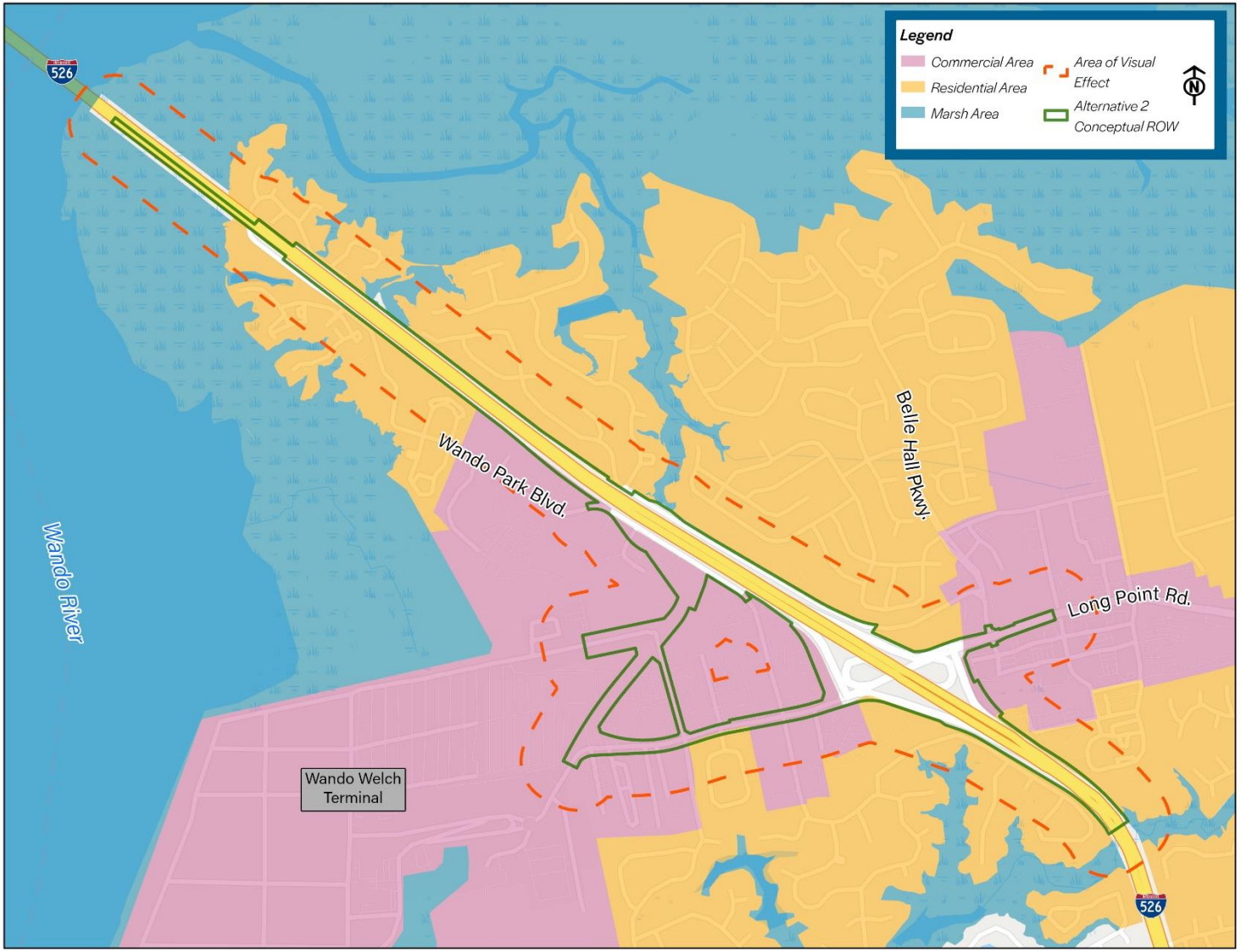
The area of visual effect (AVE) is the area in which views of the project would be visible as influenced by the presence or absence of intervening topography, vegetation, and structures, see **Figure 4.3**. The AVE is a developed area with large industrial (e.g., WWT) and commercial buildings, interspersed with residential areas enclosed by dense (tree canopy of 50 feet or greater) tree cover. Adjacent to the Wando River and Hobcaw Creek, estuarine and marine wetland areas are present.

The western extent of the project traverses along I-526 with a residential area to the north, buffered by tree cover, and commercial areas with pockets of residences to the south. In this area, the project would include at-grade improvements to I-526 and two new truck ramps providing alternate access for port-related traffic. The eastbound ramp would be constructed at grade and the westbound ramp would cross above I-526 before tying in at grade. Noise walls are proposed adjacent to residential areas. The design, size, and location of noise walls is still to be determined (see Section 4.7).

Continuing east, the project encompasses the intersection with Long Point Road. Residential areas are present to the southeast and northwest, commercial areas are present to the northeast, and industrial areas are present to the southwest. Existing trees visually buffer residences, commercial buildings, and industrial facilities from views of I-526 and Long Point Road. The project would include at-grade improvements to the existing partial cloverleaf interchange, improvements to I-526 extending east across Hobcaw Creek, and at grade improvements to Long Point Road extending from the partial cloverleaf interchange north to Bell Point Drive. Noise walls are proposed adjacent to residential areas. The design, size, and location of noise walls is still to be determined. For more information, see Section 4.7.

[3] https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx

Figure 4.3: Area of Visual Effect and Visual Character Areas



## 4.3.2 WHAT WOULD BE THE IMPACT FROM THE PROPOSED PROJECT ON VISUAL RESOURCES?

**The No-Build Alternative** would not impact visual resources in the study area because improvements to the I-526 and Long Point Road interchange would not occur.

**The Preferred Alternative (Alternative 2)** would predominantly be compatible with the existing developed character of the AVE which consists of commercial buildings, industrial facilities, and large-scale transportation infrastructure. The Preferred Alternative (Alternative 2) would be similar in size, scale, color, and texture to existing roadways. Most improvements would be at existing grade, avoiding impacts to views outside of actively using I-526 or Long Point Road. The Preferred Alternative (Alternative 2) would predominantly be built within existing right-of-way. Although vegetation would be removed from within the right-of-way, the majority of the heavy vegetation is located outside of the right-of-way and would not be impacted. Most residences, commercial buildings, and industrial facilities would be buffered from the Preferred Alternative (Alternative 2) by existing tree cover. No roadway lighting is expected as part of the proposed project, minimizing viewer sensitivity to the proposed project during non-daylight hours. Travelers on I-526, Long Point Road, Wando Park Boulevard, and Seacoast Parkway would be able to see changes while using these roadways. However, views would be of short duration and travelers would routinely use these roadways, minimizing the attention paid and focus on visual changes. Viewers within the AVE would predominantly be insensitive to changes. Visual impacts from the Preferred Alternative (Alternative 2) would predominantly be neutral.

Localized adverse impacts would occur for residents directly adjacent to the proposed westbound entrance ramp overpass onto I-526 (i.e., southeast portion of Tidal Walk and Grassy Creek neighborhoods, southwest portion of the Belle Hall Plantation). The Preferred Alternative (Alternative 2) would not be buffered from view by tree cover and skyline views would be obstructed, see **Figure 4.4**. Headlights from traffic using the overpass would be a new source of lighting; however, traffic volumes are not expected to increase and more direct routing for truck traffic as a result of the Preferred Alternative (Alternative 2) could reduce the overall impact of headlights in the study area.

Figure 4.4. Existing View (left) and Proposed View (right) at Intersection of Seacoast Parkway and Shoals Drive (Entrance to Tidal Walk and Grassy Creek neighborhoods)

## 4.3.3 HOW WOULD IMPACTS TO VIEWS BE MINIMIZED OR MITIGATED?

Mitigation includes feasible measures taken to avoid, minimize, and offset visual impacts associated with the proposed project. Public comment received by nearby residences indicated concern about impacts to views from the proposed project. To mitigate these potential impacts the design was modified to shift the proposed ramps approximately 1,000 feet to the east. This realignment provides the greatest distance between residences and the proposed overpass. Noise walls are being evaluated for residential areas adjacent to the roadway improvements and would serve as a buffer from views of the road. Although the design, size, and location of noise walls is still to be determined, it is feasible to construct the barriers using various material types to complement the surrounding

character of the area. No roadway lighting is expected as part of the proposed project, minimizing viewer sensitivity to the proposed project during non-daylight hours.

# 4.4 RELOCATIONS

Relocations occur when a project directly affects a home or business, requiring purchase of the property. The Uniform Relocation and Real Property Acquisition Policies Act of 1970 (Uniform Act)[4] requires that just compensation be paid to the owner of private property taken for public use without discrimination. The appraisal of fair market value is the basis of determining just compensation to be offered the owner for the property to be acquired. Assistance will be provided to those being relocated as a result of the project in accordance with the Uniform Act.

## 4.4.1 WOULD THE PROPOSED PROJECT REQUIRE RELOCATIONS?

**The No-Build Alternative** would not require any relocations because improvements to the I-526 and Long Point Road interchange would not occur.

**The Preferred Alternative (Alternative 2)** is surrounded by residences, business parks, retail stores, industrial facilities, and the WWT. The Preferred Alternative (Alternative 2) would not require any residential relocations; however, would require the relocation of ten buildings, including six multi-tenant commercial buildings, four single-tenant commercial buildings, and a cell phone tower with four tenants (five relocations), resulting in 52 business relocations. Approximately 30 business and one church (the Christ Church Presbyterian) are estimated to occupy the 52 business relocations. **Table 4.6** provides additional detail.

Table 4.6: Relocations

| Address | Buildings | Total Units | Occupied Units | Businesses | Tenure[1] | Relocations |
|---|---|---|---|---|---|---|
| 449 Long Point Road | 2 | 1 | 1 | • Universal Intermodal Services Inc. | Owner-occupied | 1 |
| 482 Wando Park Boulevard | 1 | 1 | 1 | • eGroup | Renter-occupied | 2 |
| 478 Wando Park Boulevard | 1 | 2 | 2 | • CH Powell Company<br>• Tandem Global Logistics | Owner- and Renter-occupied | 2 |
| 503 Wando Park Boulevard | 1 | 6 | 3 | • Prudential<br>• Walker Allen Trial Attorneys<br>• Sourcenet Medical Billing Associates | Renter-occupied | 7 |
| 474 Wando Park Boulevard | 1 | 14 | 12 | • Unified Terminal Services<br>• James Doran Company/Humanities Foundation[2]<br>• Star LLC<br>• Long Point Counseling LLC<br>• Cooper Law Firm LLC<br>• THS Construction Inc.<br>• Premiere Automation LLC<br>• Hussey Gay Bell<br>• Golfbreaks by PGA Tour<br>• WSB Retail Partners<br>• Guaranteed Rate | Renter-occupied | 15 |

[4] As amended (P.L. 91-646, as amended by 100-17; 49 CFR 24.205 A–F])

| Address | Buildings | Total Units | Occupied Units | Businesses | Tenure[1] | Relocations |
|---|---|---|---|---|---|---|
| 455 Long Point Road | 1 | 2 | 2 | • Palmetto Environmental Services<br>• Tapio School of Dance-Gymnastics | Renter-occupied | 3 |
| 443 Long Point Road | 1 | 8 | 7 | • Old Towne Heating & Air<br>• SBA Inc.<br>• 5 Stars Roofing<br>• Carolina Builders & Reconstruction<br>• Graphically Speaking Inc.<br>• Palmetto State Steel Co.<br>• East Cooper Custom Motorcycles | Renter-occupied | 9 |
| 486 Wando Park Boulevard | 1 | 1 | 1 | • Christ Church Presbyterian | Renter-occupied | 2 |
| Cell Phone Tower NE of Shipping Lane | 1 | 4 | 4 | • Unknown tenants | Owner- and Renter-occupied | 5 |
| 462 Wando Park Boulevard | 1 | 5[3] | 2 | • Lloyd's Soccer<br>• Bioscript Infusion Services | Renter-occupied | 6 |

*1 Undetermined were quantified as renter-occupied/2 Occupies two units/3 Fieldwork indicated that the building appeared fully occupied between the two occupied tenants but the building could potentially house 5 units.*

Additionally, the Preferred Alternative (Alternative 2) would relocate two outbuildings (three relocations). Therefore, a total of 54 relocations have been identified for the Preferred Alternative (Alternative 2). Five WWT port buildings would be impacted but are not presently considered relocations. Coordination is occurring with WWT to determine if these structures would be relocated, see Appendix D: Relocations Report for additional details.

The 54 relocations that the Preferred Alternative (Alternative 2) may require are within one block group, which has been identified as an environmental justice block group, see Section 4.2. While the impacted businesses are part of the Town of Mount Pleasant's economic base, none of businesses being relocated are anticipated to provide community dependent services (i.e., rely on being located within the community to function or conversely, the community is dependent upon the business for example a corner market or health care facility). The businesses in this area are not dependent on foot-traffic source access or sales.

Replacement property is available in the Town of Mount Pleasant but is limited. Replacement property is more widely available within the county, see Appendix D. The acquisition and relocation program will be conducted in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and all relocation resources will be made available to displacees without discrimination.

# 4.5 Air Quality

The Clean Air Act (CAA) requires adoption of air quality standards, quality control regions, and state implementation plans. The federal government established National Ambient Air Quality Standards (NAAQS) to protect public health, safety, and welfare from known or anticipated effects of pollutants.[5] Roadway vehicles can contribute to four of six of the NAAQS pollutants: ozone, carbon monoxide, particulate matter, and nitrogen dioxide. Transportation conformity with the NAAQS ensures federally funded or approved transportation plans, programs, and projects conform to air quality objectives established in State Implementation Plans (SIP). The South Carolina Department of Health and Environmental Control (SCDHEC) Bureau of Air Quality is responsible for regulating and ensuring compliance with the CAA in South Carolina.

[5] The pollutants include sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead

Both Charleston and Berkeley County are considered in NAAQS attainment areas. Although Charleston County has no mandated requirements to develop air quality plans, the county has developed an early action plan in partnership with the SCDHEC Bureau of Air Quality to proactively ensure compliance with the ozone NAAQS.

Controlling air toxics emissions became a national priority with the passage of the CAA amendments in 1990, whereby Congress mandated the Environmental Protection Agency (EPA) to regulate 188 air toxics, also known as hazardous air pollutants. EPA has assessed this list in its latest rule on the Control of Hazardous Air Pollutants from Mobile Sources and identified a group of 93 compounds emitted from mobile sources that are listed in the EPA Integrated Risk Information System. The EPA refers to these compounds as Mobile Source Air Toxics (MSAT). In addition, the EPA identified nine compounds with significant contributions from mobile sources that are among the national- and regional-scale cancer risk drivers from the EPA 2011 National Air Toxics Assessment.[6] While the FHWA considers these the priority MSAT, the list is subject to change and may be adjusted to consider future EPA rules. These air pollutants are also emitted from roadway vehicles and are evaluated for potential effects during roadway projects.

## 4.5.1 How would the project affect air quality?

**The No-Build Alternative** would result in regional increases to vehicle miles traveled (VMT) in the study area. The No-Build Alternative would result in traffic congestion and idling of vehicles, which could result in an increase in air pollutants. MSAT emissions would be expected to decrease as compared to the existing conditions because of improvements in engine efficiency and emission standards included in the EPA's national control programs. However, improvements over existing conditions could be partially offset with the additional congestion that would occur if no improvements are made.

**The Preferred Alternative (Alternative 2)** is projected to have lower VMT within the study area compared to the No-Build Alternative due to more direct routing of vehicles. VMT for the No-Build Alternative and the Preferred Alternative (Alternative 2) are presented in **Table 4.7**. In addition, MSAT emissions would be expected to decrease as compared to the existing conditions because of improvements in engine efficiency and emission standards, included in the EPA's national control programs.

Table 4.7: Change in Study Area VMT from the Preferred Alternative (Alternative 2)

| Study Area | No-Build | Recommended Preferred Alternative |
|---|---|---|
| VMT | 114,574,595 | 112,515,630 |
| VMT Change vs No-Build | -- | (1.8%) |

While the Preferred Alternative (Alternative 2) improves traffic operations on I-526 near the Long Point Road interchange, traffic may be in closer proximity to nearby homes, schools, and businesses. Due to this, ambient concentrations of MSAT could differ from the No-Build Alternative in localized areas. However, the projected difference in overall VMT and the correlated MSAT concentrations would be minimal between the Preferred Alternative (Alternative 2) and the No-Build Alternative. For additional Air Quality details, see the Air Quality Technical Memorandum (Appendix S).

Air quality impacts under the Preferred Alternative (Alternative 2) would be similar to those of the No-Build Alternative because no substantial shift to average vehicle speeds or total VMT in the study area would occur. Moreover, MSAT and criteria air pollutant levels, which are already in attainment of the NAAQS, would be expected to be substantially lower under the Preferred Alternative (Alternative 2). This is in part due to engine efficiency and in part due to improved traffic flow and level of service. The construction of the Preferred Alternative (Alternative 2) would not be expected to result in adverse effects to air quality.

[6] These compounds include acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter.

# 4.6 CLIMATE CHANGE

NEPA was established to ensure that federal actions use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony. The CEQ is assigned as the entity responsible for overseeing NEPA implementation. On January 9, 2023, the CEQ issued *NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, establishing a common approach for Federal agencies for consideration of the effects of GHG emissions and climate change relative to a proposed action.[7] This interim GHG guidance builds upon and updates the CEQ's *2016 Final Guidance for Federal Departments and Agencies on the Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Review*, highlighting best practices for analysis grounded in science and agency experience. The CEQ guidance calls for the quantification and disclosure of a proposed action's projected direct and indirect GHG emissions to a degree commensurate with the quantity of projected emissions attributable to the project, a comparison of those emissions to those of the No-Action alternative, quantification of those emissions in the context of the best available applicable social cost of GHG (SC-GHG) estimates, consideration of environmental justice implications of climate change associated with the proposed action or its alternatives as applicable, and integration of relevant climate-related mitigation and resiliency measures.

The BCDCOG, in partnership with the SCDHEC, has developed a voluntary early action plan to proactively address air quality issues in the region before they become an issue. While the plan was not developed specifically for the control of GHG emissions, many of the actions included in the plan result in reductions to local and regional GHG emissions.

## 4.6.1 HOW WOULD THE PROJECT AFFECT CLIMATE CHANGE?

FHWA guidelines require that GHG emission impacts of the project either be evaluated by means of reference to a program-level assessment, incorporating a statewide, metropolitan planning area, corridor, or sub-area projects improvements, or by means of a project-level assessment. This GHG assessment was completed at the project level.

Vehicle traffic in the study area is anticipated to grow between the existing conditions and project design year (2050). For this analysis, direct exhaust from vehicle operations within the study area roadways, fuel cycle-related emissions, and construction/maintenance emissions were estimated. Emissions were analyzed for the No-Build Alternative and for the Preferred Alternative (Alternative 2). Operations and fuel cycle emissions were estimated based on project specific VMT traffic data and default Motor Vehicle Emission Simulator national database emission rates for the Charleston County area.

Construction emissions were estimated using the FHWA Infrastructure Carbon Estimator (ICE) tool and project-specific details. The ICE tool emission estimates include GHG emissions from energy demand, materials usage, construction equipment operation, and maintenance activities at the project life-cycle level. A project lifetime of 60 years was assumed for this analysis.

The overall annual study area GHG emissions would be comparable between the No-Build Alternative and the Preferred Alternative (Alternative 2). Due to the relatively minor changes to VMT and average roadway speeds which would occur between the No-Build Alternative and the Preferred Alternative (Alternative 2), the difference in GHG emissions would be commensurately minor. For additional details, see the Greenhouse Gas Technical Memorandum (Appendix S).

# 4.7 NOISE

According to Title 23 CFR, Part 772 (23 CFR § 772), "Procedures for Abatement of Highway Traffic Noise and Construction Noise," and the SCDOT Traffic Noise Abatement Policy, a noise analysis is required for proposed

[7] CEQ. *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*. January 2023. https://www.federalregister.gov/d/2023-00158.

federal-aid highway projects on new location, that will physically alter an existing highway, or increase the number of through-travel lanes.[8]

## 4.7.1 WHAT IS TRAFFIC NOISE AND HOW IS IT MEASURED?

Noise is defined as unwanted or excessive sounds. It is an undesirable by-product of our modern way of life. Highway traffic noise sources include tire pavement interaction, as well as the engines and exhaust systems of vehicles. The impacts from noise are defined by the amount of interference the sound levels have with everyday human activity. Sound levels are measured in units called decibels (dB). Adjustment for the high- and low-pitched sounds an average person can hear is called "A-weighted levels," or dB(A), which is used to assess and measure highway traffic noise. Noise is further described by its average level over time. Receptors are considered impacted if the predicted design year noise levels approach, exceed the Noise Abatement Criteria (NAC) as seen in **Table 4.8** or if the design year noise level substantially exceeds the existing noise level (15 dB(A)). Per FHWA and SCDOT traffic noise policy, "approaching" the NAC is defined as being within one dB(A) of the NAC.

Table 4.8: Noise abatement criteria for land use activities in the study area

| Activity Criteria | Leq(h) | Evaluation Location | Activity Description |
|---|---|---|---|
| A | 57 | Exterior | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose |
| B3 | 67 | Exterior | Residential |
| C3 | 67 | Exterior | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, daycare centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings |
| D | 52 | Interior | Auditoriums, daycare centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios |
| E3 | 72 | Exterior | Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F |
| F | – | – | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing |
| G | – | – | Undeveloped lands that are not permitted |

## 4.7.2 WHAT ARE THE EXISTING NOISE CONDITIONS IN THE STUDY AREA?

A noise analysis was completed using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5) to establish the base year 2022, predicted No-Build Alternative (2050), and the Preferred Alternative (Alternative 2) for the year 2050.

Noise-sensitive sites (residences, churches, schools, recreational areas) within 500 feet of the proposed alternative were analyzed for noise impacts. A total of 1,140 receptors were analyzed in the models. All sites along the proposed segments are categorized as either Activity Category B, C, D, or E, according to the FHWA NAC and SCDOT policy. None of the sites along the proposed segments met the criteria for either Activity Category A, F, or G. The FHWA Noise Abatement Criteria is shown in **Table 4.8**

Based on TNM 2.5, noise levels currently approach or exceed the NAC at 376 receptors, with 366 representing NAC B and 10 representing NAC C. Existing noise levels ranged from 49 to 77 dB(A).

[8] As stated by 23 CFR § 772, the physical alteration of an existing highway is where there is either: (i) Substantial Horizontal Alteration: a project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or, (ii) Substantial Vertical Alteration: a project that removes shielding therefore exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor

## 4.7.3 How would the project affect noise?

**The No-Build Alternative** would not make improvements to the Long Point Road interchange. Noise levels are projected to be between 49 and 77 dB(A) by 2050. The No-Build Alternative would approach or exceed the NAC at 396 receptors, with 386 representing NAC B and 10 representing NAC C.

**During the construction of the Preferred Alternative (Alternative 2)** there would be temporary and localized construction noise impacts. However, considering the relatively short-term nature of construction noise and the likely limitation of construction to daytime hours, these impacts are not expected to be substantial. Discrete construction noise abatement measures, including equipment-quieting devices, should be considered through all phases of construction. The contractor would be required to comply with applicable local noise ordinances and Occupational Safety and Health Administration (OSHA) regulations concerning noise attenuation devices on construction equipment.

The Preferred Alternative (Alternative 2) would result in permanent noise impacts associated with the modification of an existing facility. Impacts would vary depending on the proximity to the project. For the future 2050 design year, noise levels exceeded the FHWA NAC of 67 dB(A) for Category B and C at 456 receptors with 446 representing NAC B and 10 representing NAC C. The results from the TNM showed that noise levels for the 446 impacted receptors ranged from 50 dB(A) to 78 dB(A). **Table 4.9** is a summary of the noise impacts.

Table 4.9: Noise Impact Summary

| Scenario | Approximate # of Impacted Receptors Approaching or Exceeding the NAC[1,2] | | | | | Substantial Noise Level Increase[3] | Impacts Caused by Both Criteria[4] | Total Impacts per 23 CFR 772[5] |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | | | |
| Existing | | 376 | 10 | | | | | 376 |
| No-Build | | 386 | 10 | | | | | 396 |
| Preferred Alternative (Alternative 2) | | 446 | 10 | | | | | 456 |

1. *This table represents the number of build-condition traffic noise impacts as predicted for the build-condition alternatives and no-build alternative presently under consideration. Refer to Appendix E for a detailed analysis of traffic noise impacts at each noise sensitive receptor location.*
2. *Predicted traffic noise level impact due to approaching or exceeding NAC.*
3. *Predicted "substantial increase" traffic noise level impact.*
4. *Predicted traffic noise level impact due to exceeding NAC and "substantial increase" in build-condition noise levels.*
5. *The total number of predicted impacts is not duplicated if receptors are predicted to be impacted by more than one criterion.*

## 4.7.4 Mitigation

Per 23 CFR 772.13(c) and the SCDOT *Traffic Noise Abatement Policy*, noise abatement measures must be considered to reduce or eliminate noise levels to impacted receivers.[9] The following abatement options were considered:

- Traffic management measures
- Alteration of horizontal and vertical alignments
- Acquisition of property rights for construction of noise barriers
- Acquisition of property rights to create a buffer zone
- Noise insulation of public use or nonprofit institutional structures
- Construction of noise barriers

Methods used to reduce noise levels must be cost-effective and practicable to build. Methods cannot be used if they are determined to be unsafe to construct or if the methods are too costly when compared to the benefits.

Prior to the recommendation of noise abatement measures, the feasibility and reasonableness of the abatement measures must be determined per Section 6.1 and 6.2 of the *South Carolina Department of Transportation Traffic Noise Abatement Policy.* Feasibility of noise abatement measures is based on acoustic feasibility, where a noise reduction of at least 5 dB(A) must be achieved for three or more receptors. The noise abatement measure must

[9] South Carolina Department of Transportation. 2019. SCDOT *Traffic Noise Abatement Policy*. https://www.scdot.org/business/pdf/EnvToolShed/TrafficNoise/SCDOT_Traffic_Noise_Policy_Rev_10Oct2019.pdf

have engineering feasibility where factors that include topography, safety, drainage, utilities, maintenance, access, and height of the noise abatement measure would not limit the ability to achieve noise reduction goals.

SCDOT's Noise Policy includes three mandatory reasonable factors that must be met for a noise abatement measure to be considered reasonable. The three factors are:

- Noise abatement must reduce the noise level by at least 7 dB(A) for one receptor.
- The square footage of the noise barrier must fall below 1,500 square feet per benefitted receptor.
- Construction of a noise barrier is not reasonable if most (more than 50 percent) residents and property owners of the benefitted receptors vote that they do not desire noise abatement.

A total of four noise barrier locations were identified. A detailed description of noise barriers and noise abatement measures under for the Preferred Alternative (Alternative 2) is presented in Appendix E: Noise Analysis Report. All four noise barriers were determined to be feasible and reasonable for the Preferred Alternative (Alternative 2).

Table 4.10: Barrier Feasible/Reasonable Summary

| Noise Wall Analysis/NSA | Noise Analysis Summary[1] | | | Abatement Analysis Summary | | | |
|---|---|---|---|---|---|---|---|
| | Impacts | Benefits | | Length[3] (ft) | Area ($ft^2$) | Area per Benefit/Allowable Area per Benefit ($ft^2$) | Recommended for Construction |
| | | Total Number of Benefits | Number of Benefits ≥7 dB(A) | | | | |
| NW 1a/3/6/8 | 105 | 278 | 169 | 9,094 | 221,769 | 798/1,500 | Yes[2] |
| NW 2a/4 | 180 | 198 | 121 | 2,820 | 67,146 | 339/1,500 | Yes[2] |
| NW 9 | 32 | 81 | 54 | 3,620 | 87,461 | 1,080/1,500 | Yes[2] |
| NW 12 | 74 | 155 | 128 | 2,040 | 48,481 | 313/1,500 | Yes[2] |

*1. Noise abatement was considered for all predicted traffic noise impacts.*
*2. This abatement measure meets the SCDOT Policy feasibility and reasonableness criteria. A final decision on noise wall construction will be made after a constructability review, completion of the project final design, and the public involvement process.*
*3. Length and area shown are for ground mounted barriers only. I-526 will be widened in the future and placing noise barriers on structures will be evaluated at that time.*

Table 4.11: Impact Types

| Impact Type | Preferred Alternative (Alternative 2) |
|---|---|
| Residential | 446 |
| Parks/Community Pools | 10 |
| Total Impacts | 456 |

## 4.7.5 STATEMENT OF LIKELIHOOD

Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of four noise barriers. These preliminary indications of likely abatement measures are based upon preliminary design.

- **Noise Wall 1a/3/6/8** is located north of I-526 and west of Long Point Road between the Wando River bridge and Belle Hall Parkway. The barrier has an area of 798 square feet per benefitted receptor that reduces the noise level by an average of 8 dB(A) for 277 residences and 1 pool.
- **Noise Wall NW 2a/4** is located south of I-526 between the Wando River bridge and Ridge Road. The barrier has an area of 339 square feet per benefitted receptor that reduces the noise level by an average of 8 dB(A) for 197 residences and 1 pool.
- **Noise Wall 9** is located south of I-526 and east of Long Point Road between Lone Tree Drive and the bridge at Hobcaw Creek. The barrier has an area of 1,080 square feet per benefitted receptor that reduces the noise level by an average of 7 dB(A) for 81 residences.

- **Noise Wall 12** is located north of I-526 and east of Long Point Road between Long Point Road and the bridge at Hobcaw Creek. The barrier has an area of 313 square feet per benefitted receptor that reduces the noise level by an average of 10 dB(A) for 153 residences, 1 pool, and 1 picnic area.

If it subsequently develops during final design that these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project's design and the public involvement processes. The location of the four noise barriers can be found in Figures 1 through 6 of Appendix E.

# 4.8 WATER QUALITY

The Clean Water Act (CWA) of 1972 regulates the discharge of pollutants into water. The EPA has delegated the responsibility of monitoring and regulating water quality in South Carolina to SCDHEC. SCDHEC conducts water quality assessments and protection on a watershed basis. SCDHEC has assigned a classification to each state water based on the desired uses of each waterbody, not on natural or existing water quality. Classifications protect waters for recreation, ecological resources, fish and aquatic life survival and propagation, and industrial and agricultural uses.

Water quality standards are an effective tool available to states to protect the overall health of wetlands resources and the valuable functions they provide including shoreline stabilization, nonpoint source runoff filtration, wildlife habitat, and erosion control, which directly benefit adjacent and downstream waters.

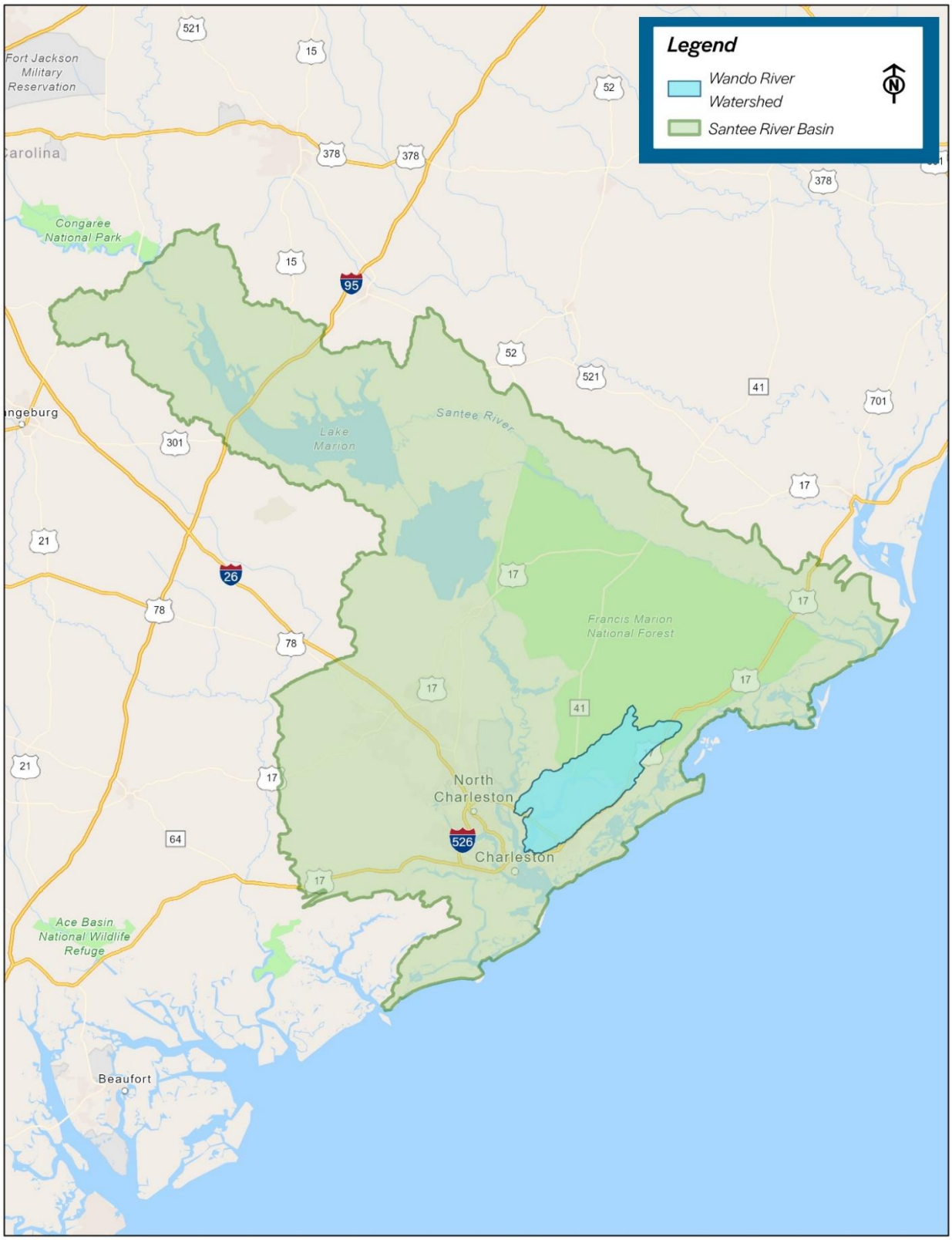
## 4.8.1 WHAT SURFACE WATERS ARE LOCATED IN THE STUDY AREA?

Surface waters located within or adjacent to the study area include an unnamed tributary (UT) to Rathall Creek, UT to Hobcaw Creek, Hobcaw Creek, and the Wando River.

According to the SCDHEC Watershed Atlas, the project is located within the Santee River Basin which encompasses 1,923,528 acres across the Upper and Lower Coastal Plain of South Carolina. The Santee River Basin is subdivided into 16 watersheds, or 10-digit hydrologic unit codes (HUC).

The project is specifically located in the Wando River watershed (10-digit HUC 03050201-04), see **Figure 4.5**. The Wando River watershed is located in Berkeley and Charleston Counties and consists primarily of the Wando River and its tributaries (i.e., Rathall Creek, Hobcaw Creek).

Figure 4.5: Watershed Boundaries



### 4.8.2 WHAT IS THE EXISTING WATER QUALITY WITHIN THE STUDY AREA?

SCDHEC develops a priority list of waterbodies that do not currently meet state water quality standards pursuant to Section 303(d) of the CWA and 40 CFR § 130.7. It is commonly referred to as the 303(d) List of Impaired Waters. According to the SCDHEC SC Watershed Atlas, there are no 303(d) listed waters found within the study area.

According to the SCDHEC Watershed Atlas, one permanent water quality monitoring station (MD-264) is in the Wando River near the northern terminus, but outside of, the study area and five random sampling stations west of the study area in Hobcaw Creek and the Wando River. The entire study area is designated for municipal separate storm sewer systems (MS4) and Total Maximum Daily Load (TMDL) watersheds.

SCDHEC also designates suitable shellfish harvesting waters (SFH) and determines water quality classifications and standards for the state. Hobcaw Creek, the UT to Hobcaw Creek, and the UT to Rathall Creek are classified by SCDHEC as SFH. The impoundment adjacent to the UT to Hobcaw Creek located under I-526 is designated as freshwater.

For more information on water quality refer to the Natural Resources Technical Memorandum (Appendix F).

### 4.8.3 HOW WOULD THE PROJECT AFFECT WATER QUALITY?

**The No-Build Alternative** would not result in impacts to water quality as no construction activity would occur in or near waters.

**The Preferred Alternative (Alternative 2)** is not expected to adversely affect surface waters or water quality. No bridges over SCDHEC listed surface waters will be replaced but there will be minor work at the ends of the bridge structures over the UT to Rathall Creek, the UT to Hobcaw Creek, and Hobcaw Creek. The westbound ramp bridge over freshwater wetlands in the southeast quadrant of the interchange will be replaced. Impacts associated with construction site preparation would be temporary in nature. The contractor will be required to utilize approved best management practices (BMPs) for erosion prevention and sediment control during construction to minimize potential impacts to water quality.

The contractor will develop a stormwater pollution prevention plan (SWPPP) and obtain a National Pollutant Discharge Elimination System (NPDES) permit from SCDHEC and SCDHEC Ocean & Coastal Resource Management (OCRM) before construction can commence. The contractor will be required to properly install the required erosion, turbidity, and sediment control devices around the perimeter of the construction site and staging areas prior to all other construction activities.

## 4.9 WETLANDS AND WATERS OF THE U.S.

Waters of the U.S. (WOTUS) are subject to federal jurisdiction and protected by Section 404 of the CWA (33 United States Code ([USC] 1344). On December 30, 2022, US Environmental Protection Agency (EPA) and US Army Corps of Engineers (USACE) announced the final "Revised Definition of 'Waters of the United States"' rule, which was subsequently published in the Federal Register on January 18, 2023 (88 FR 3004). The rule revises the definition WOTUS in 33 CFR 328.2 and 40 CFR 120.2 and is proposed to become effective on March 20, 2023. This revision is not expected to change the delineated boundaries of WOTUS identified in the Preliminary Jurisdictional Determination obtained for the project (see Appendix G).

Wetland habitats are defined as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.[10] Wetlands generally include swamps, marshes, bogs, and similar areas. The USACE, the agency responsible for protecting WOTUS, utilizes specific hydraulic, soil, and vegetation criteria in defining the boundary of wetlands within their jurisdiction.

Tidal wetlands and waters are also considered WOTUS and are regulated by USACE under Section 10 of the Rivers and Harbors Act of 1899, which permits certain activities within navigable waters, including those subject to the ebb and flow of the tide. Tidal wetlands and waters are regulated as "Critical Area" by SCDHEC-OCRM.

[10] https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf

## 4.9.1 WHAT WETLANDS ARE LOCATED WITHIN THE STUDY AREA?

The study team performed wetland and stream delineations in July 2022 using the methods outlined by the USACE Atlantic and Gulf Coastal Plain Regional Supplement to determine jurisdictional boundaries. A Preliminary Jurisdictional Determination request (SAC-2022-01082) was approved by the USACE Charleston District on October 12, 2022, see Appendix G. A Critical Area plat was submitted to SCDHEC-OCRM on December 14, 2022 and approved on January 30, 2023.

Freshwater and tidally influenced wetlands are present in the study area, see **Table 4.12** and **Figure 4.6**. Freshwater wetlands include forested and emergent wetlands. Freshwater ponds that serve as stormwater retention basins are also present throughout the study area. Tidally influenced wetlands and waters (critical areas) include saltmarshes, tidal creeks, and the Wando River.

A parcel owned by the SCPA contains approximately 9.87 acres of freshwater wetlands protected by a restrictive covenant. These wetlands are protected as a compensatory mitigation site.

Table 4.12: Jurisdictional Wetlands in the Study Area

| Habitat Type | Area (acres) | Length (Linear Feet) |
|---|---|---|
| Tidal Wetlands/Critical Area | 19.7 | N/A |
| Non-Tidal Wetlands (Freshwater) | 15.3 | N/A |
| Non-Wetland Water (Ponds) | 10.7 | N/A |
| Non-Wetland Water (Streams) | 0.004 | 51.4 |

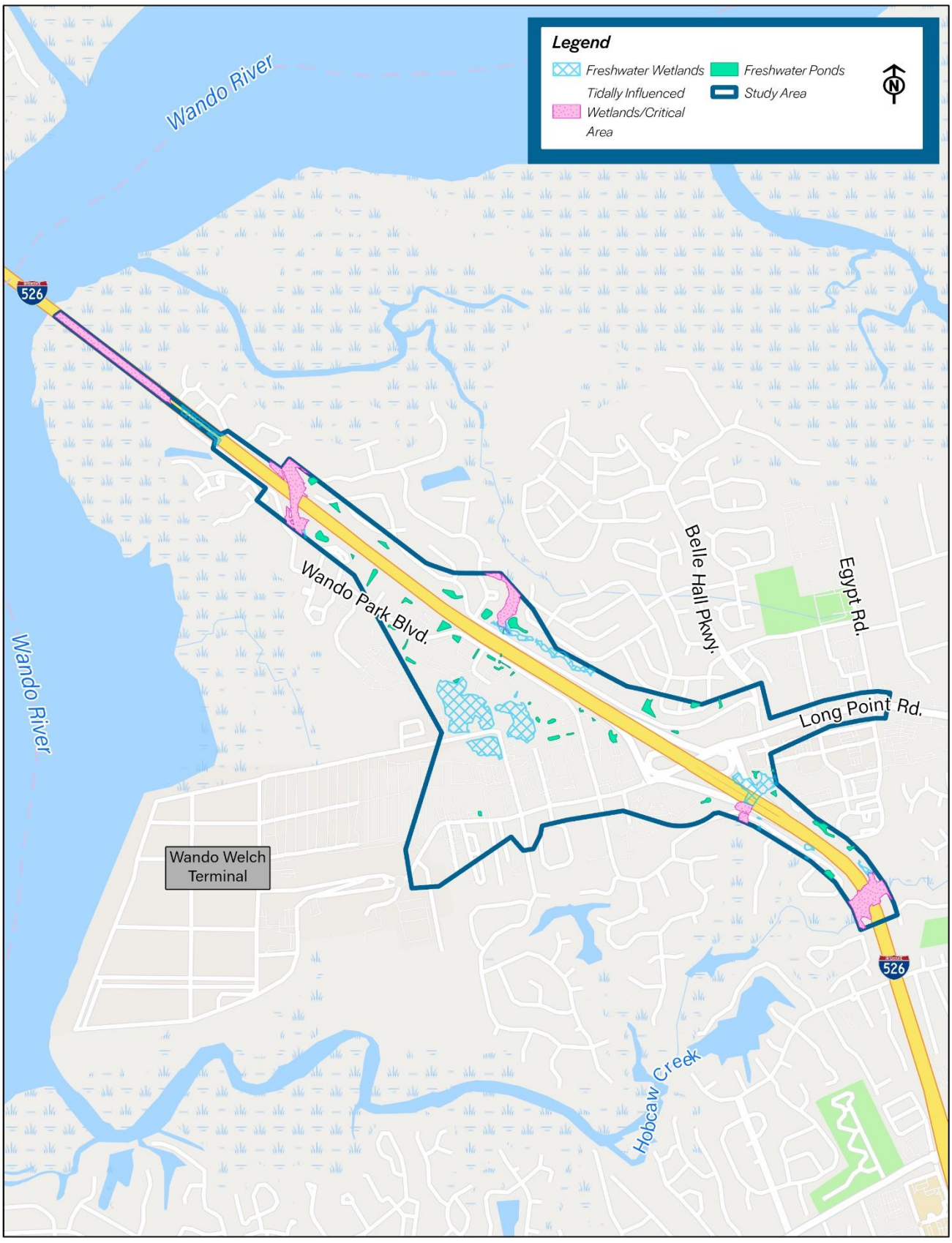
## 4.9.2 HOW WOULD THE PROJECT AFFECT WETLANDS AND WATERS OF THE U.S.?

**The No-Build Alternative** would not result in impacts to wetlands and WOTUS because no improvements would be made to the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** construction footprint, considering a 50-foot buffer near water resources, would result in unavoidable impacts to approximately 9.4 acres of freshwater wetlands, 1.6 acres of freshwater ponds, and 3.1 acres of critical areas. Impacts would result from the placement of fill material, clearing, construction access, and the staging of materials and equipment.

Impacts to the wetlands protected by the restrictive covenant would require coordination with SCPA and authorization from the USACE through the permitting phase of the project.

Figure 4.6: Wetland Habitat Types




*Source: Study Team Natural Resources Field Survey Preliminary Jurisdictional Determination (2022).*

### 4.9.3 How would impacts to wetlands be avoided, minimized, or mitigated?

The grading or placement of fill in wetlands will require authorization from USACE and SCDHEC. The limits of any clearing, grading, or fill in wetlands will be delineated and shown on approved permitted plans by USACE and SCDHEC. SCDOT and the contractor will comply with all applicable permits and permit conditions for the placement of fill in wetlands.

#### *Avoidance*

There are no practicable alternatives to avoid impacts to wetlands. Therefore, the project would include all practicable measures to minimize harm to wetlands that may result from construction.

#### *Minimization*

The project would be constructed through Design Build procurement, which encourages the contractors to avoid and minimize wetlands impacts to reduce project costs. The project would utilize, to the extent practicable, uplands and existing fill materials to minimize the discharge of fill in wetlands throughout the project. Implementing erosion control measures (i.e., seeding of slopes, silt fences, sediment basins as appropriate) would also minimize impacts to adjacent wetlands. BMPs will be required to avoid or minimize the migration of sediment or hazardous materials from the construction site into adjacent wetlands for the duration of the project.

#### *Mitigation*

Compensatory mitigation would be required to offset unavoidable impacts to wetlands per USACE and SCDHEC requirements. Mitigation for impacts to wetlands would be finalized during the permitting process. Coordination with the appropriate federal and state agencies would be completed to identify and provide appropriate mitigation for anticipated impacts. It is anticipated that mitigation would be provided through the purchase of mitigation bank credits from an approved mitigation bank(s).

## 4.10 Environmental Permits

### 4.10.1 What federal environmental permits would be required?

**Section 404 Permit -** Section 404 of the CWA regulates the discharge of dredged or fill material into WOTUS (33 USC 1344) and authorizes USACE to issue permits for projects with impacts to WOTUS.[11] It is anticipated the project would require an Individual Section 404 permit authorization from the USACE. The Section 404 permit application package would be completed and submitted to the Regulatory Division of the USACE Charleston District concurrent with the Section 401 Water Quality Certification, issued by SCDHEC Bureau of Water, and the Coastal Zone Consistency (CZC) Determination, issued by SCDHEC OCRM.

**Section 10 Permit -** Section 10 of the Rivers and Harbors Act of 1899 (33 CFR Part 322) requires authorization from the USACE for the construction of any structure in or over any navigable water of the U.S. The tidally influenced wetlands and tidal creeks within the study area are considered navigable waters and will therefore require authorization under Section 10 of the Rivers and Harbors Act. The Section 10 permit will be authorized by the USACE as a joint permitting decision along with the Section 404 permit.

### 4.10.2 What state environmental permits would be required?

**Section 401 Water Quality Certification -** Section 401 of the CWA requires any request for a federal permit involving activities which impact WOTUS (Section 404 permit) to also acquire a Water Quality Certification. This certification involves a review of the project and analysis of its potential effects on water quality. In South Carolina, SCDHEC is responsible for granting, denying, or waiving Section 401 Water Quality Certifications. The project

[11] The USACE may only issue a permit for the least environmentally damaging practicable alternative. The Section 404(b)1 guidelines, which give criteria used to evaluate activities regulated under Section 404 of the CWA, dictates fill material cannot be permitted in wetlands or WOTUS if a practicable alternative (considering cost, existing technology, and logistics of an alternative) would have less adverse impact on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences. The USACE considers many factors when evaluating environmental consequences, including an evaluation of the probable impacts on the 20 public interest factors listed in 33 CFR 320.4.

requires a Section 404 Individual permit; therefore, a Section 401 Water Quality Certification is required before the USACE will act on the Section 404 Permit.

**Critical Area Permit** – The project is in a coastal county and is expected to involve impacts to critical areas. SCDHEC OCRM has permitting authority over critical areas and a permit must be received before any alterations occur.

**Coastal Zone Consistency Determination –** SCDHEC OCRM is required to review all state and federal permit applications for activities within the eight-county coastal zone for consistency with the South Carolina Coastal Zone Management Plan and grant a CZC. A CZC ensures the activity protects the quality of the coastal environment and promotes the economic and social improvement of the coastal zone.

**NPDES Construction General Permit** - Section 402 of the CWA formed NPDES, which regulates pollutant discharges, including stormwater, into WOTUS. SCDHEC is responsible for managing the NPDES program to ensure stormwater runoff during construction would not have an adverse effect on water quality. NPDES permits require the project be designed to protect WOTUS, that erosion control BMPs be implemented, and that a SWPPP be prepared for construction activities exceeding one acre of ground disturbance.

# 4.11 FLOODPLAINS

A floodplain is a low, relatively flat area of land adjacent to a stream, river, lake, or ocean which experiences flooding during storm events. Floodplains provide important functions in the natural environment including habitat for wildlife and storage for floodwaters. The Federal Emergency Management Agency (FEMA) categorizes and maps floodplains into zones across the U.S. based on the frequency or the chance of flood occurrence each year.

EO 11988, Floodplain Management, requires that efforts be made by federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. Floodplains are also regulated by state and local authorities. Encroachments into the floodplain are discouraged since this removes floodwater storage capacity. If impacts cannot be avoided, measures must be implemented to minimize impacts and restore the floodplain to the extent possible. Federal regulations will allow development in the 100-year floodplain or the floodway if hydrologic and hydraulic analysis demonstrate that the development would meet the requirements set forth by FEMA.

## 4.11.1 WHAT FLOODPLAINS ARE PRESENT WITHIN THE STUDY AREA?

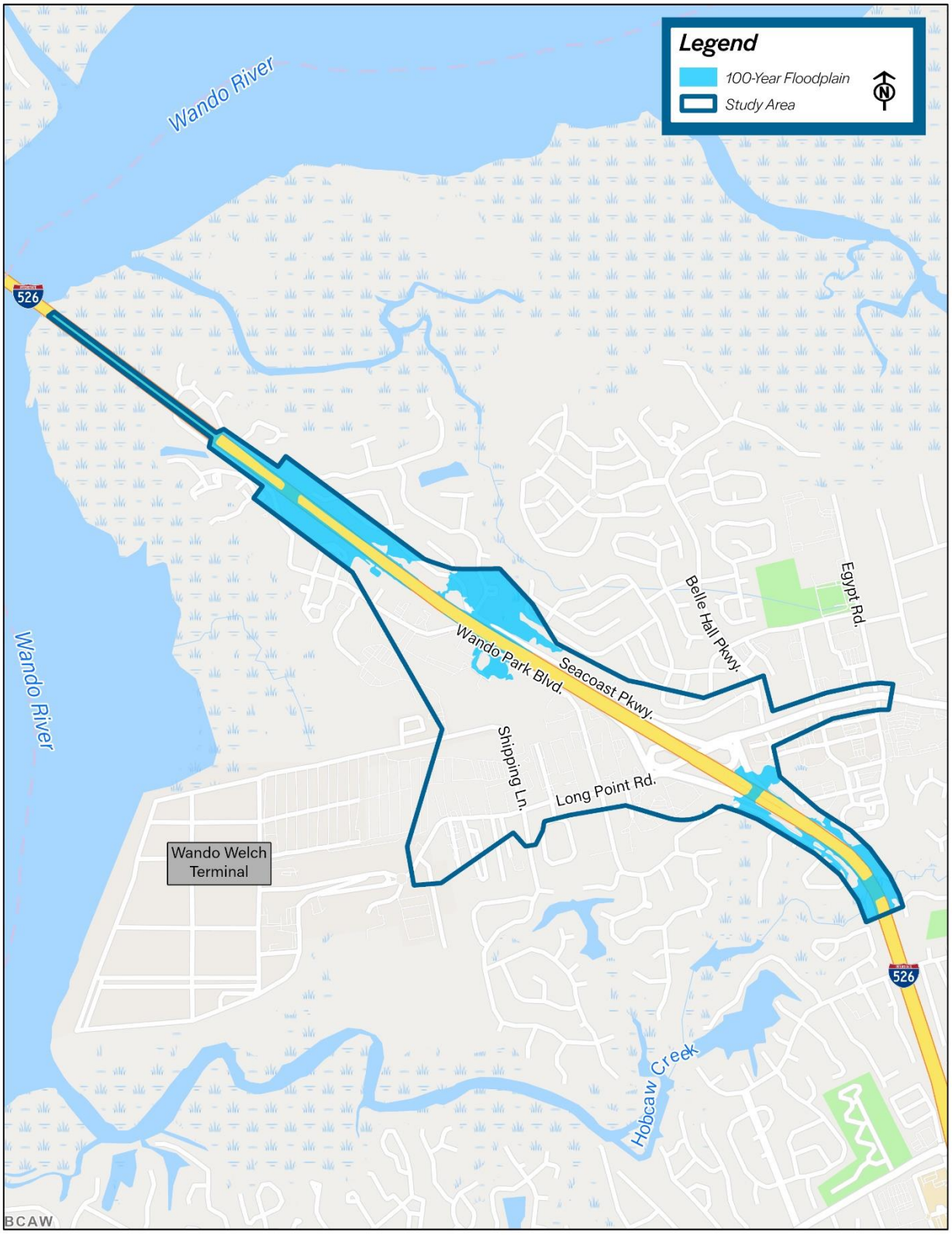
The study area encompasses 27.85 acres of floodplains, see **Figure 4.7**. Floodplains within the study area are within FEMA flood zone AE, a high-risk 100-year floodplain (one percent chance of flood during any given year).

## 4.11.2 HOW WILL THE PROPOSED PROJECT AFFECT FLOODPLAINS?

**The No-Build Alternative** would not impact floodplains because no construction activity would occur within or near floodplains.

**The Preferred Alternative (Alternative 2)** would involve construction within the 100-year floodplain. The existing alignment of I-526 and Long Point Road would be used to the greatest extent practicable to avoid and minimize fill placement within the floodplain. Any modifications to floodplains would require detailed hydraulic analyses, coordination with Charleston County Floodplain Administrator, and a FEMA No-Rise Certification obtained. No changes to flood elevations are anticipated based on the current level of design. Additional detail is available in Appendix R: Floodplains.

Figure 4.7: Floodplains within Study Area



# 4.12 Natural Habitat and Wildlife

## 4.12.1 What natural habitats and wildlife exist within the study area?

The study area is comprised of commercial development, residential communities, roadways, and natural habitats. The natural habitats within the study area include forested uplands, forested freshwater wetlands, emergent freshwater wetlands, tidal saltmarsh, and tidal creeks. These natural habitats support various wildlife species that are typical for the coastal region of South Carolina. Common species that may be present in the study area include Northern cardinals, mockingbirds, great blue herons, great egrets, racoons, gray squirrels, opossums, and white-tailed deer.

## 4.12.2 How would the project affect natural habitats and wildlife?

**The No-Build Alternative** would not impact natural habitats and wildlife as no improvements to the I-526 and Long Point Road interchange would occur.

Fragmentation and loss of wildlife habitat is an unavoidable consequence of roadway construction and urban development. **The Preferred Alternative (Alternative 2)** would result in some additional habitat fragmentation; however, natural habitats in the study area have already been fragmented by urban development. The Preferred Alternative (Alternative 2) is not expected to result in adverse impacts to terrestrial or aquatic wildlife. Most wildlife species present in the study area are highly mobile and would likely move out of the construction area to avoid direct impacts. Additionally, local species are accustomed to human disturbances from the existing roadway and are expected to move back into the study area upon project completion. Therefore, impacts to habitats would be localized and impacts to wildlife species are anticipated to be temporary.

# 4.13 Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Association - National Marine Fisheries Service (NOAA Fisheries) are responsible for the enforcement of federal wildlife laws, the protection of threatened and endangered species, and should be consulted in accordance with the Threatened and Endangered Species Act of 1973.

## 4.13.1 What federal and state protected species may occur within the study area?

The Charleston County list of federally protected species, updated March 29, 2022, was obtained from the USFWS Charleston Field Office website[12] and a South Carolina Department of Natural Resources (SCDNR) Natural Heritage Viewer report was used to evaluate potential project effects on listed species. Threatened and endangered species that are known to occur in Charleston County are presented in **Table 4.13**. For descriptions of protected species, please refer to the Biological Evaluation (Appendix J).

Table 4.13: Charleston County Federally Listed Species

| Common Name | Federal Protection Status | Scientific Name | Effect Determination |
|---|---|---|---|
| **Amphibian Species** | | | |
| Frosted flatwoods salamander | Threatened: Critical Habitat | *Ambystoma cingulatum* | No effect |
| **Bird Species** | | | |
| American wood stork | Threatened | *Mycteria americana* | Not Likely to Adversely Affect |
| Eastern black rail | Threatened | *Laterallus jamaicensis jamaicensis* | Not Likely to Adversely Affect |
| Piping plover | Threatened | *Charadrius melodus* | Not Likely to Adversely Affect |

[12] USFWS. 2022. South Carolina List of At-Risk, Candidate, Endangered, and Threatened Species by County. Charleston, SC. https://www.fws.gov/sites/default/files/documents/20210831_SC_Species-List-bycounty_0.pdf. Accessed: March 16, 2022.

| Common Name | Federal Protection Status | Scientific Name | Effect Determination |
|---|---|---|---|
| Red-cockaded woodpecker | Threatened | *Picoides borealis* | No effect |
| Red knot | Threatened | *Calidris canutus rufa* | Not Likely to Adversely Affect |
| **Insect Species** | | | |
| Monarch butterfly | Candidate | *Danaus plexippus* | |
| **Mammal Species** | | | |
| Northern long-eared bat* | Threatened | *Myotis septentrionalis* | Not Likely to Adversely Affect |
| Tri-colored bat** | Proposed Endangered | *Perimyotis subflavus* | |
| West Indian manatee*** | Threatened | *Trichechus manatus* | No effect |
| **Plant Species** | | | |
| American chaffseed | Endangered | *Schwalbea americana* | No effect |
| Canby's dropwort | Endangered | *Oxypolis canbyi* | No effect |
| Pondberry | Endangered | *Lindera melissifolia* | No effect |
| Seabeach amaranth | Threatened | *Amaranthus pumilus* | No effect |
| **Reptile Species** | | | |
| Green sea turtle**** | Threatened: Critical Habitat | *Chelonia mydas* | No effect |

** To be listed as endangered with a proposed effective date of March 31, 2023*
*** Proposed for listing as endangered by USFWS on September 14, 2022; effective date to be determined*
**** Also regulated under the Marine Mammal Protection Act*
***** Species under the joint jurisdiction of USFWS and NOAA Fisheries*

## 4.13.2 How would the project affect Threatened and Endangered Species?

**The No-Build Alternative** would not impact threatened and endangered species because no improvements would be made to the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** was determined to **not likely to adversely affect** the American wood stork, eastern black rail, piping plover, red knot, and northern long-eared bat. The Preferred Alternative (Alternative 2) would have **no effect** on the frosted flatwoods salamander, red-cockaded woodpecker, West Indian manatee, American chaffseed, Canby's dropwort, pondberry, seabeach amaranth, or green sea turtles. Concurrence from the USFWS on this determination was received on September 21, 2022 (see Appendix J and/or Appendix O).

Currently the northern long-eared bat is listed as threatened. However, on November 30, 2022, the USFWS published a final rule in the Federal Register (87 FR 73488) to reclassify the species as endangered. The USFWS proposes this change to become effective on March 31, 2023[13]. Therefore, it is being treated as endangered for the purposes of this evaluation. Until the new rule and listing status becomes effective, the northern long-eared bat remains protected as a threatened species with a 4(d) rule in place under the ESA. Consultation with USFWS will be reinitiated when the new rule and listing status becomes effective.

On September 13, 2022, the USFWS proposed to list the tri-colored bat as endangered.[14] A determination of effects is not required for tri-colored bat until the listing designation goes into effect. SCDOT will reinitiate consultation with USFWS once the listing designation goes into effect.

Adherence to all necessary permits and use of BMPs would avoid and minimize potential effects to federally protected species. For species that may be affected, these measures are intended to prevent the potential for adverse effects. In addition, temporary lighting during bridge construction and improvements would be directed away from suitable bat habitat during the active season of northern long-eared bat and other bat species and to the extent practicable, tree removal would not exceed what is required for project construction (within project right of way). A list of impact minimization commitments is provided in the Environmental Commitments and Appendix J: Biological Evaluation.

[13] https://www.fws.gov/press-release/2023-01/effective-date-reclassify-northern-long-eared-bat-endangered-extended#:~:text=The%20U.S.%20Fish%20and%20Wildlife,%2C%20to%20March%2031%2C%202023. Accessed January 31, 2023.
[14] https://www.fws.gov/press-release/2022-09/proposal-list-tricolored-bat-endangered. Accessed January 31, 2023.

# 4.14 Migratory Birds

Migratory birds listed in 50 CFR 10.13 of the Migratory Bird Treaty Act (MBTA) of 1918 makes it illegal to "take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations".

## 4.14.1 What migratory birds exist within the study area?

The USFWS migratory bird list contains 1,093 species.[15] All the bird species listed as endangered, threatened, or at-risk-species in Charleston County by USFWS are also protected by the MBTA. SCDNR lists an additional 69 species of migratory birds for Charleston County.[16] The list includes wading birds, shore birds, and forest dwelling birds. No migratory birds were observed nesting on the existing bridge structures within the study area during field visits conducted between the summer of 2018 and the summer of 2022. In addition to the bridges, the forested uplands and wetlands throughout the study area provide habitat for migratory birds.

## 4.14.2 How would the proposed project affect migratory birds?

**The No-Build Alternative** would not result in impacts to migratory birds because no improvements would be made to the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** is not expected to impact migratory birds. SCDOT will comply with the MBTA in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests. The contractor shall notify the Resident Construction Engineer (RCE) at least four weeks prior to construction/demolition/maintenance of bridges and box culverts. If a nest is observed after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the Environmental Services Officer Compliance Division.

# 4.15 Bald Eagle

The bald eagle is no longer protected under the ESA, but the species is afforded federal protection through the Bald and Golden Eagle Protection Act (BGEPA) of 1940, as well as the MBTA. The BGEPA, 16 USC 668-668c, prohibits the "take" of bald eagles including their parts, nests, or eggs by anyone, without a permit issued by the Secretary of the Interior. For a description of bald eagle please refer to Appendix J: Biological Evaluation.

## 4.15.1 What Bald Eagles are located within the study area?

Suitable bald eagle foraging habitat was not observed in the study area. Suitable nest trees are present, but no nests were observed during field visits conducted from August 2018 through September 2019, and the summer of 2022. According to the SCDNR Natural Heritage Trust database, the closest eagle nest is approximately 1.5 miles north of the study area, along the Wando River.

## 4.15.2 How would the project affect bald eagles?

**The No-Build Alternative** would not impact bald eagles because no improvements would be made to the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** is not expected to impact bald eagles because no foraging habitat is present in the study area and no nests were observed during field visits.

[15] https://www.fws.gov/media/list-birds-protected-migratory-bird-treaty-act-2020
[16] SCDNR. 2022. SC Natural Heritage Species Reviewer. https://schtportal.dnr.sc.gov/portal/apps/sites/#/natural-heritage-program. Accessed February 17, 2022.

# 4.16 Marine Mammals

The Marine Mammal Protection Act (MMPA) of 1972 prohibits, the "take" of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. Jurisdiction for MMPA is shared by USFWS and NOAA Fisheries. Marine mammals are mammals that rely on the ocean to survive. They include, but are not limited to, whales, dolphins, porpoises, manatees, and dugongs.

## 4.16.1 What Marine Mammals are located within the study area?

Two marine mammals, the common bottlenose dolphin and West Indian manatee may occur within the Wando River located adjacent to the study area. The Wando River is suitable habitat year-round for bottlenose dolphin and is also summer habitat for the West Indian manatee. According to the SCDNR Natural Heritage Species Reviewer, the closest known occurrence of West Indian manatee in the Wando River is approximately one mile southwest of the study area.

## 4.16.2 How would the project affect marine mammals?

**The No-Build Alternative** would not impact marine mammals because no work in water would occur.

**The Preferred Alternative (Alternative 2)** would not impact marine mammals because no work is being proposed in the Wando River. The shallow tidal creeks in the study area where work may occur are not suitable habitat for the dolphin or manatee.

# 4.17 Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976, as amended in 1996, requires that NOAA-Fisheries work with federal and state agencies, regional fishery management councils, and the fishing community to protect, conserve, and enhance essential fish habitat (EFH). As defined by the Magnuson-Stevens Act, EFH is waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC 1802, 50 CFR § 600.10). Locations and types of EFH that have a greater need for conservation and management are referred to as Habitat Areas of Particular Concern (HAPC). HAPC are considered high priority areas for conservation, management, or research because they are rare, sensitive, stressed by development, or important to overall ecosystem function.

## 4.17.1 What Essential Fish Habitat is located within the study area?

EFH was approximated using wetland delineations to determine the estuarine boundary and the most recent publicly available aerial imagery to determine habitat types. EFH in the study area include estuarine emergent wetland, estuarine tidal creek, intertidal non-vegetated flat, palustrine emergent wetland, unconsolidated bottom, and oysters. Oyster reef is the only EFH HAPC in the study area. One oyster reef is located along Hobcaw Creek, approximately 90 feet west of the I-526 bridge over Hobcaw Creek. Additional information is provided in Appendix K: Essential Fish Habitat Assessment.

## 4.17.2 How would the project affect essential fish habitat?

**The No-Build Alternative** would not impact EFH because no improvements would be made to the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** may impact approximately 2.79 acres of EFH, see **Table 4.14**. An EFH Assessment (Appendix K) was submitted to NOAA Fisheries for review and comment on October 21, 2022. Concurrence with the findings of the initial EFH Assessment was received from NOAA Fisheries on February 2, 2023.

Table 4.14: Essential Fish Habitat Impacts

| EFH Type | EFH within Study Area | Impacts of the Preferred Alternative (Alternative 2) |
|---|---|---|
| Estuarine emergent wetland | 16.6 acres | 2.08 acres |
| Estuarine tidal creek | 1.23 acres | 0 acres |
| Intertidal non-vegetated flat | 1 acre | 0 acres |
| Palustrine emergent wetland | 0.71 acre | 0.71 acre |
| Unconsolidated bottom | 0.24 acre | 0 acres |
| Oysters | <0.01 acre | 0 acres |
| **Total** | **19.78 acres** | **2.79 acres[1]** |

*[1] This calculation is based on the best currently available data and conservative approaches to generally accepted construction techniques.*

## 4.17.3 What would be done to avoid and minimize impacts to Essential Fish Habitat?

The contractor will be required to honor/implement SCDOT standard environmental commitments and BMPs, in addition to those project-specific commitments developed through agency coordination and the permitting process. The final project design will incorporate the conditions of SCDOT's General MS4 permit and TMDL watershed guidance contained in the Stormwater Quality Design Manual (see Section 4.10). The contractor will develop an SWPPP and obtain an NPDES permit from SCDHEC before construction can begin. Temporary silt/turbidity curtains will be installed prior to the commencement of in-water work, where practicable. The contractor will be required to utilize SCDOT BMPs for soil and erosion control during construction.

# 4.18 Hazardous Waste and Underground Storage Tanks

Hazardous waste sites contain waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from many sources, ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids gases, and sludges.[17] EPA, states, territories, and tribes work in partnership with industry to protect the environment and human health from potential releases.[18]

## 4.18.1 What are the existing hazardous materials sites in the study area?

Hazardous materials were inventoried and analyzed for the study area. Thirteen listings were identified within or adjacent to the study area that have the potential to contain hazardous waste. Based on site reconnaissance and database review, no sites of high concern were identified, seven sites were determined to be sites of moderate concern and six sites were determined to be sites of low concern.

During historical aerial review of the study area, three additional parcels were identified as having the potential to contain hazardous materials. For additional information, refer to the Appendix L: Hazardous Materials Technical Memorandum.

## 4.18.2 How would the project affect hazardous materials sites?

**The No-Build Alternative** would not result in impacts to hazardous materials because no construction activity would occur to improve the I-526 and Long Point Road interchange.

**The Preferred Alternative (Alternative 2)** is located adjacent to, or partially on, four out of the seven sites of moderate concern and the three parcels identified as having the potential to contain hazardous materials:

[17] https://www.epa.gov/hw/learn-basics-hazardous-waste
[18]https://www.epa.gov/ust#:~:text=Approximately%20542%2C000%20underground%20storage%20tanks,nearly%20half%20of%20all%20Americans.

- Wando Trucking (510 Wando Lane)
- Bridge Terminal Transport (472 Long Point Road)
- Wando Fuel and Truck Service (454 Shipping Lane)
- Lyerlys Cleaners (620 Long Point Road)
- Wando Properties LLC (Parcel ID 5560000294)
- Long Point Holdings (Parcel ID 5370000010)
- South Carolina State Ports Authority (Parcel ID 5370000041)

The Preferred Alternative (Alternative 2) would not impact the six sites of low concern. The presence and or extent of hazardous contamination in soil or groundwater has not been determined by regulatory agencies or private entities at this time. Any properties partially or wholly acquired for this project where ground disturbance would occur may require further inspection and assessment or be further evaluated through a Phase II Environmental Site Assessment.

# 4.19 CULTURAL RESOURCES

This project has been conducted in accordance with the National Historic Preservation Act of 1966 (NHPA), as amended (54 USC § 300101 et seq.), and NEPA, as amended, to consider the effects of the project on historic properties. As part of this process, SCDOT consulted with the State Historic Preservation Officer (SHPO), federally recognized American Indian tribes, and other parties with an interest in the undertaking.

Cultural resources are properties and places that illustrate aspects of prehistory or history or have long-standing cultural associations with established communities and/or social groups. Cultural resources can include archaeological sites, structures such as bridges, buildings, and groups of any of these resources, among others. Historic properties are cultural resources listed or eligible for listing in the National Register of Historic Places (NRHP). To be eligible for listing in the NRHP, resources must typically be at least 50 years of age, possess historic integrity, and embody at least one of four criteria, per 36 CFR § 60.[19]

## 4.19.1 WHAT CULTURAL RESOURCES AND HISTORIC PROPERTIES ARE IN THE STUDY AREA AND HOW WOULD THEY BE AFFECTED BY THE PROJECT?

A cultural resources assessment was conducted in accordance with Section 106 of the NHPA (36 CFR § 800) in May 2022 and included conducting background research, performing an archaeological, architectural survey, laboratory analyses, and a NRHP assessment. The archaeological survey identified two newly identified archaeological sites as well as 15 previously recorded archaeological sites within the area of potential effect.[20] Archaeological sites are listed in **Table 4.15**. Additional information is available in Appendix M.

One site (38CH2683) is recommended eligible for the NRHP.[21] A memoranda of agreement (MOA) was developed for 38CH2683 in coordination with FHWA, SCDOT, and SHPO. The MOA was developed in 2022 to address adverse impacts for 38CH2683 and is available in Appendix N: Cultural Resources Memorandum of Agreement.

Table 4.15: Archeological Sites in APE

| Site | Component | NHRP Eligibility |
|---|---|---|
| 38CH0315 | unknown Post-Contact | Not eligible or recommended not eligible |
| 38CH0316 | unknown Pre-Contact | Not eligible or recommended not eligible |
| 38CH0329 | Middle Woodland | Not eligible or recommended not eligible |
| 38CH0330 | unknown Post-Contact | Not eligible or recommended not eligible |

[19] (1) Association with events that have made a significant contribution to the broad patterns of our history; (2) Association with the lives of persons significant in our past; (3) Embodiment of the distinctive characteristics of a type, period, or method of construction; representative of the work of a master; possessing high artistic values; or representative of a significant and distinguishable entity whose components may lack individual distinction; or (4) Cultural resources that have yielded, or may be likely to yield, information important to prehistory or history.
[20] The archeological area of potential effect considered the 185.36-hectares (458.02-acre) project footprint.
[21] Data recovery investigations at 38CH2647 mitigated the adverse effects of residential development and the site has been destroyed. Fourteen of the previously recorded archaeological sites and one new archaeological site (38CH2682) are either not eligible or recommended not eligible for the NRHP. Therefore, these 16 sites require no further management.

| Site | Component | NHRP Eligibility |
|---|---|---|
| 38CH0331 | unknown Post-Contact | Not eligible or recommended not eligible |
| 38CH0332 | unknown Post-Contact | Not eligible or recommended not eligible |
| 38CH0334 | unknown Post-Contact | Not eligible or recommended not eligible |
| 38CH0353 | 19th century | Not eligible or recommended not eligible |
| 38CH0414 | 18th-19th century | Not eligible or recommended not eligible |
| 38CH0415 | Late Archaic, Early/Middle Woodland | Not eligible or recommended not eligible |
| 38CH0417 | 19th century | Not eligible or recommended not eligible |
| 38CH0422 | unknown Pre-Contact, 19th century | Not eligible or recommended not eligible |
| 38CH1236 | 20th century | Not eligible or recommended not eligible |
| 38CH1647 | Late Woodland, Mississippian, 19th-20th century | Not eligible or recommended not eligible |
| 38CH1672 | 19th-20th century | Not eligible or recommended not eligible |
| 38CH2682 | Middle/Late Woodland | Not eligible or recommended not eligible |
| 38CH2683 | Middle/Late Woodland | Eligible |

The architectural survey conducted in May 2022, following SCDAH (2018) standards identified four new aboveground resources in the architectural area of potential effect,[22] including three buildings and one road. Previous investigations identified one historic district and two individual resources. **Table 4.16** lists the identified architectural resources and their NHRP eligibility.

SHPO Site No.7802 has been moved to the Snowden Community Center outside the architectural area of potential effect and the study area; therefore, would not be impacted by the project. The project would not include design changes to the Egypt Road intersection with Long Point Road. The Snowden historic district boundary lies outside the current project footprint, north and east of the Egypt Road and Long Point Road intersection. Therefore, the project would have no direct effect on the Snowden historic district. The Preferred Alternative (Alternative 2) will not alter any of the characteristics that qualify the resource for inclusion in the NRHP, nor will it compromise the integrity of the property or diminish its architectural or historic significance. Therefore, the Preferred Alternative (Alternative 2) would have no adverse effect on architectural resources.

Table 4.16: State Historic Preservation Office (SHPO) Sites in APE

| SHPO Site | NRHP Eligibility |
|---|---|
| 2046 | Not eligible for the NRHP |
| 2046.1 | Recommended as not eligible for the NRHP |
| 7802 | Eligible for the NRHP as a contributing element of the Snowden historic district |
| 7818 | Recommended as not eligible for the NRHP |
| 8532 | Recommended as not eligible for the NRHP |
| 8553.01 (Egypt Road) | Egypt Road was identified as a contributing element of the Snowden Infrastructure Network[1] |
| Snowden Historic District | Eligible for the NRHP under Criterion A[2] |

*[1] The Snowden community is connecting via common infrastructure including driveways, roads, and ditches, which together are identified as the Snowden Infrastructure Network (SHPO Site No. 8553).*

*[2] The Snowden HD is eligible for the NRHP under Criterion A for its association with freedmen's settlements and Lowcountry Gullah culture (Reed et al. 2016:123).*

## 4.19.2 WHAT COORDINATION WITH AGENCIES, CONSULTING PARTIES, AND NATIVE AMERICAN TRIBES HAS OCCURRED?

SCDOT and FHWA have coordinated with SHPO and the Advisory Council on Historic Preservation on potential impacts to cultural resources. In addition, SCDOT has coordinated with the Muscogee Nation, Eastern Shawnee, and Catawba Nation.

- A Cultural Resources Survey was submitted to the **State Historic Preservation Office** in September 2022 for review and comment to determine any significant effects to any cultural and historical sites or properties within the project area. Concurrence with the findings was received from the State Historic Preservation Office on November 10, 2022.

[22] For the architectural are of potential effect, a 91-meter (300-foot) buffer was added to the project footprint, which encompasses approximately 396.59 hectares (979.98 acres).

- A Cultural Resources Survey was submitted to the **Tribal Historic Preservation Office of the Catawba Tribe** in September 2022 for review and comment to determine significant effects to cultural and historical sites or properties within the project area. Concurrence with the findings was received on November 14, 2022.
- A Cultural Resources Survey was submitted to the **Eastern Shawnee Cultural Preservation Department** in September 2022 for review and comment to determine any significant effects to any cultural and historical sites or properties within the project area. Concurrence with the findings was received from the Eastern Shawnee Cultural Preservation Department on November 21, 2022.
- FHWA developed a MOA with the **Advisory Council on Historic Preservation** for adverse impacts to cultural resources associated with the construction of the Preferred Alternative (Alternative 2). Consultation was completed on January 5, 2023. See Appendix N: Cultural Resources MOA for correspondence.
- SCDOT coordinated with the **African American Settlement Community Historic Commission** and the **Snowden Community Civic Association** regarding the cultural resources reports and findings and development of the MOA. Requests for input were submitted by email on October 20, 2022. SCDOT received no objections to the findings or the MOA. Coordination was completed when the MOA was signed on January 5, 2023.

# 4.20 INDIRECT AND CUMULATIVE

An essential element of NEPA decision-making for transportation projects is the consideration and analysis of the potential environmental impacts or effects including indirect effects and cumulative impacts.[23]

## 4.20.1 EVALUATION FOR INDIRECT IMPACTS

According to the CEQ definition, indirect impacts are caused by the action or project and occur later or farther away (off-site) but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

The CEQ definitions and a review of the literature suggest three broad categories of indirect effects:

- Alteration of the behavior and functioning of the affected environment caused by project encroachment (physical, chemical, biological) on the environment;
- Project-influenced development effects (i.e., the land use effect); and
- Effects related to project-influenced development effects (i.e., effects of the change in land use on the human and natural environment).

Indirect impacts were evaluated based on the National Cooperative Highway Research Program (NCHRP) report: A Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects. This manual is designed to provide step-by-step guidance on indirect effects analysis to practitioners in agencies responsible for the evaluation of environmental impacts of transportation projects.[24]

## 4.20.2 EVALUATION FOR CUMULATIVE IMPACTS

CEQ regulations define cumulative impacts as impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts

[23] Federal Highway Administration. Environmental Review Toolkit. Accessed November 11, 2022, https://www.environment.fhwa.dot.gov/nepa/trans_decisionmaking.aspx.

[24] The manual provides a 8-step process for analyzing indirect impacts: Step 1 – Scoping; Step 2 – Directions and Goals of the Study Area; Step 3 – Inventory of Notable Features; Step 4 – Impact Causing Activities; Step 5 – Identify Potential Indirect Impacts; Step 6 – Analyze Potential Indirect Impacts; Step 7 – Evaluate Analysis Results; Step 8 – Assess Consequences and Develop Mitigation

were analyzed in general accordance with the CEQ guidance document Considering Cumulative Effects Under the National Environmental Policy Act, dated January 1997.

Other past, ongoing, or future actions that may impact the resources of concern may contribute to cumulative impacts within the study area and must be identified. Based on discussions with Charleston County, the Town of Mount Pleasant, and SCDOT, a list of completed and existing plus committed roadway projects within the refined study area was developed.

Completed roadway projects include:

- Clements Ferry Road Phase 1, from Jack Primus Road (S-119) to I-526, multiuse path
- Park West Boulevard, 4-lane divided

Existing plus committed projects include:

- Billy Swails Boulevard Phase 4B
- I-526 from near Rivers Avenue (Exit 18) to near U.S. 17 (Exit 30)
- Shem Creek Bike Lanes
- I-526 over Wando River Bridge Preservation - Tendon Impregnation
- Connector Bike/Pedestrian Pavement Marking Study
- Intersection Improvement at South Carolina 703 (Coleman Blvd.)
- Type II Mast Arm Installation for South Carolina 703 at I-526
- South Carolina 41 (U.S. 17 to Wando River Bridge)
- St. Thomas Island Drive/Clements Ferry Road/ Daniel Island Pedestrian Connector Phase I
- 2022 Interstate Preservation Program
- I-526 Long Point/Wando Port Interchange Improvement
- 2022 Non-FA Secondary Pavement Improvement Program

## 4.20.3 Determined Indirect and Cumulative Impact

This section summarizes the determined indirect and cumulative impacts from the assessment. Resources with no foreseeable indirect or cumulative effects are not discussed.

### *Land Use*

Over time, cumulative changes in land use can occur due to development. The Town of Mount Pleasant and Charleston County continue to strategically develop comprehensive planning documents with regulatory boundaries, including zoning and economic development plans for the port district. Impacts to land use would be moderated by local, state, and federal regulations. Control of the conversion of land to other uses resides with the Town of Mount Pleasant and Charleston County through local planning and zoning.

### *Noise*

Noise mitigation has been determined reasonable and feasible for neighborhoods directly adjacent to I-526. The proposed barriers would provide relief from indirect noise impacts. Additionally, noise levels on the existing roadway network may be reduced, as the project would provide a more direct route for traffic to and from the WWT. Growth rates were considered during the traffic analysis performed for the project. Because this is directly linked to the number of vehicles that would be anticipated for design year 2050, no additional indirect or cumulative effects have been identified.

### *Water Quality and Wetlands*

Potential indirect and cumulative impacts to water quality and wetlands could result from the conversion of forested and undeveloped land along Wando Park Boulevard, Shipping Lane, and adjacent to the WWT from future planned development in the area. The undeveloped land, including portions of wetlands, could be replaced with impervious surface which may increase stormwater runoff and associated pollutant loading in nearby water bodies.

# 5.0 Agency Coordination and Public Involvement

This Chapter describes the details of the agency coordination and public involvement activities for the I-526 and Long Point Road Interchange Improvements project. Coordination occurred between appropriate local, state, and federal agencies as well as the general public and stakeholders. Agency Coordination regarding the project consisted of Agency Coordination Effort (ACE) meetings, a Letter of Intent (LOI) sent to the appropriate entities, and other meetings and correspondence with agencies, as needed. Public involvement regarding the project consisted of engagement during the initial Planning and Environmental Linkages (PEL) study, a public involvement meeting (PIM) and a public hearing. Stakeholder engagement included meetings with stakeholders at key project milestones as well as one-on-one meetings with stakeholders to discuss their specific interests. For additional information see Appendix P: Public Involvement Plan.

## 5.1 Public Outreach Area

Changes to a transportation network can be far-reaching, impacting mobility and travel patterns throughout a region. A reasonable boundary is needed to provide guidance for focused public involvement and outreach efforts. The public outreach area was developed by creating a 1,000-foot buffer around the study area. All neighborhoods within the Town of Mount Pleasant that intersected the 1,000-foot buffer were included in the public outreach area, see **Figure 5.1**. Recognizing this project affects the region as a whole, some outreach efforts included broader, regional reach, such as newspaper listings, and social media.

Figure 5.1: Public Outreach Area Boundary

# 5.2 AGENCY COORDINATION

## 5.2.1 LETTER OF INTENT

The LOI was distributed to notify resource and regulatory agencies (as well as local businesses and groups) of the initiation of the project. The LOI was distributed on July 26, 2022, by mail. A list of the recipients of the LOI is presented in **Table 5.1**. Refer to Appendix O: Agency Coordination for the LOI and agency responses.

Table 5.1: Letter of Intent Recipients

| Recipients of Letter of Intent | |
|---|---|
| United States (U.S.) Army Corps of Engineers (USACE) | National Parks Service |
| Federal Highway Administration (FHWA) | Nordstrom Rack |
| Absolutely Charleston | Norfolk Southern |
| Amalie Oil Company | North Charleston Coliseum |
| Bell South | One Region |
| Berkeley County | Palmetto Railways |
| Berkeley County School District | Parks Auto Parts |
| Berkeley Charleston Dorchester Council of Governments | Ports America |
| BidLAN | Ralston Health Group |
| Boeing | South Carolina House of Representatives |
| Charleston Area Regional Transit Authority | South Carolina State Senate |
| Charleston Battery | Singletary Photography |
| Charleston Metro Chamber of Commerce | Site Centers |
| Charleston County | South Carolina Department of Health and Environmental Control (SCDHEC) |
| Charleston County Parks and Recreation | South Carolina Department of Natural Resources |
| Charleston Regional Development Alliance | South Carolina Department of Transportation |
| Charleston Tennis LLC | South Carolina Ports Authority |
| Charlotte International Airport | South Carolina Trucking Association |
| City of Hanahan | South Carolina Wildlife Federation |
| City of North Charleston | South Carolina Power Team |
| Coastal Conservation League | St. Francis Healthcare |
| Coastal Cyclists | Tanger Outlets |
| Code Lynx | State Historic Preservation Office (SHPO) |
| Daniel Island Property Owners Association | Tenet Healthcare |
| U.S. Environmental Protection Agency (EPA) | Town of Mount Pleasant |
| Explore Charleston | U.S. Air Force |
| Federal Aviation Administration | U.S. Coast Guard |
| Gerald Tires | U.S. Department of Transportation |
| H & J Trucking | U.S. Fish and Wildlife Service (USFWS) |
| Hunter Transport | U.S. Navy |
| Medical University of South Carolina | Walmart |
| National Oceanic and Atmospheric Administration (NOAA) Fisheries | WestRock |

## 5.2.2 AGENCY MEETINGS

Agency meetings have taken place throughout the project. ACE meetings have been used to provide background information, review the project schedule, and discuss alternatives being considered. ACE meeting attendees included representatives from SCDOT, project team, EPA, FHWA, NOAA Fisheries, USFWS, USACE, SCDHEC- OCRM, and SCDNR. ACE meeting summaries, materials and detailed correspondence with agencies can be found in Appendix O: Agency Coordination**.**

- **ACE Meeting 1** was held on May 12, 2022 and included a review of the PEL study and its connection to this project. Attendees were provided an overview of the study area, public comment summary from the PEL study outreach efforts, conceptual alternative designs, project purpose, and the project schedule.
- **ACE Meeting 2** was held on August 11, 2022, to discuss the status of the project, identify public concerns, and review conceptual design alternatives (see Chapter 3).
- **ACE Meeting 3** is proposed to be held before the public hearing.

In addition to ACE meetings, more detailed agency meetings were held as appropriate:

- A meeting was held with **NOAA Fisheries** virtually via Microsoft Teams on August 15, 2022, with representatives from SCDOT, NOAA Fisheries, and the project team. The meeting included an overview of ACE meeting materials, the essential fish habitat (EHF) assessment, as well as a review of resources in the study area and any potential impacts.

## 5.2.3 AGENCY CORRESPONDENCE AND CONCURRENCE

This section documents correspondence with agencies to achieve regulatory compliance with federal regulations. Additional detail can be found in Appendix O: Agency Coordination.

- A Cultural Resources Survey was submitted to the **SHPO** in September 2022 for review and comment to determine effects to any cultural and historical sites or properties within the study area. Concurrence was received from SHPO on November 10, 2022.
- Coordination with the **Advisory Council on Historic Preservation** for adverse impacts to cultural resources was submitted on November 16, 2022. No response was received, and the coordination was completed on January 5, 2023.
- A Cultural Resources Survey was submitted to the **Tribal Historic Preservation Office (THPO) of the Catawba Tribe** in September 2022 for review and comment to determine significant effects to cultural and historical sites or properties within the study area. Concurrence was received from the Catawba THPO on November 14, 2022.
- A Cultural Resources Survey was submitted to the **Eastern Shawnee Cultural Preservation Department** in September 2022 for review and comment to determine any significant effects to any cultural and historical sites or properties within the study area. Concurrence was received from the Eastern Shawnee Cultural Preservation Department on November 21, 2022.
- SCDOT coordinated with **NOAA Fisheries** to determine impacts to EFH and compliance with the Magnuson-Stevens Fishery Conservation and Management Act of 1976. An EFH assessment was submitted to NOAA Fisheries for review and comment on October 21, 2022. Concurrence with the EFH assessment was received from NOAA Fisheries on February 2, 2023.
- SCDOT coordinated with **USFWS** to determine impacts to federal protected species in accordance with the Threatened and Endangered Species Act of 1973. A Biological Evaluation was submitted to USFWS in August 2022 to document relevant species, habitats, possible construction activities, and effects determinations for applicable species. Concurrence was received from USFWS on September 21, 2022.
- SCDOT coordinated with **USACE** to obtain a Preliminary Jurisdictional Determination which delineates the boundaries of wetlands and other WOTUS in the study area. The Jurisdictional Determination (SAC-2022-01082) was obtained on October 12, 2022.
- SCDOT submitted a Critical Area plat for review to **SCDHEC-OCRM** on December 14, 2022 and received the approved and signed plat from OCRM on January 30, 2023.

# 5.3 PUBLIC INVOLVEMENT

The public involvement for the project began during the PEL study and has continued throughout the development of this EA. The project team used various methods to advertise and notify the public of opportunities for early and continued engagement. Notification methods included social media accounts (using the project's Facebook and Twitter accounts), email, postcards, press releases, MetroQuest survey, earned media, advertisements in local newspapers, digital and print newsletters, recorded messages on the project hotline, digital signage throughout the Town of Mount Pleasant's public facilities, and information distribution at the I-526 Lowcountry Corridor Community (LCC) Office in North Charleston. Stakeholders were also encouraged to inform their respective organizations and constituencies of the ways to engage.

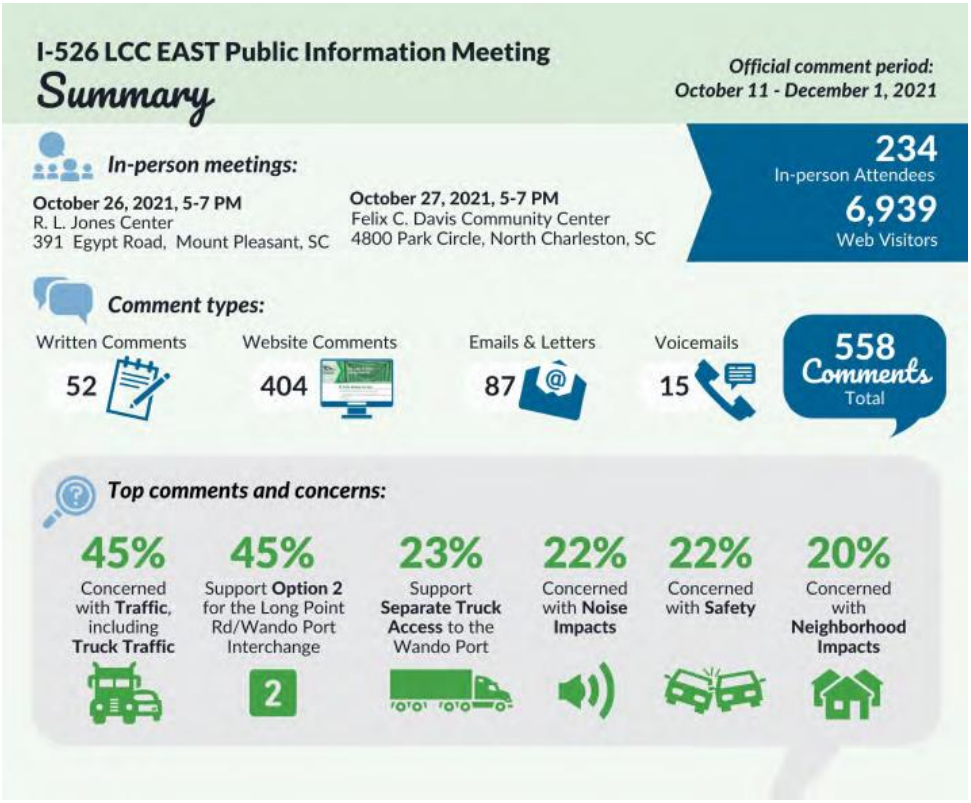
## 5.3.1 PEL STUDY OUTREACH

As part of the PEL study, the public was able to review project documents and provide meaningful input on potential improvements for the I-526 and Long Point Road interchange through two PEL PIMs and associated public comment periods for the PEL study.

Two identical in-person meetings were held on October 26, 2021, and October 27, 2021, in the Town of Mount Pleasant and North Charleston, respectively. All meeting materials were available in English and Spanish and made available online for the duration of the comment period from October 11, 2021, through December 1, 2021.

There were multiple methods for people to submit comments: by comment form at one of the PIMs, on the project website, by email, by traditional mail to SCDOT's headquarters, or by leaving a voicemail on the I-526 LCC hotline. A summary of input received during the PEL study PIMs is presented in **Figure 5.2**.

Figure 5.2: PEL Study Public Information Meeting Round 2 Comment Summary



## 5.3.2 ENVIRONMENTAL ASSESSMENT OUTREACH

With the initiation of the I-526 and Long Point Road Interchange Improvements project, a PIP was developed, detailing the tools and strategies that would be used to present members of the public with key information about the project and opportunities to provide input, see Appendix P: Public Involvement Plan. An interested parties list was used to track individuals who has expressed interest in the PEL or this project. The interested parties list will be continually updated as the project progresses, see Appendix P: Public Involvement Plan. Notification methods are detailed in Table 5.2 and in Appendix Q: Public Outreach Materials.

Table 5.2: Public Outreach Methods for I-526 and Long Point Road Interchange Improvements Project

| Item | Details |
|---|---|
| **Website** | A project website, www.526LCCLongPoint.com, was used to disseminate project information, provide a schedule of events and studies, and solicit public input |
| **Survey** | A MetroQuest survey collected public input during the PIM (date range this was open) |
| **Newsletters** | Volume 1 - provided an introduction to the project and details about the PIM (July 2022) |
| | Volume 2 – described what had been heard during the PIM and how that feedback was used (October 2022) |
| | Volume 3 – will provide a project update and an introduction to the public hearing and recommended preferred alternative (anticipated spring 2023) |
| | Volume 4 – will describe what was heard at the public hearing and how the feedback will be used (anticipated spring/summer 2023) |
| **Emails**[1] | July 26, 2022: An email announcing the PIM (online and in-person) was sent to 2,448 recipients and 289 stakeholders |
| | August 1, 2022: An email reminding interested parties about the in-person PIM was sent to 2,441 recipients. |
| | August 31, 2022: An email reminding interested parties about the end of the PIM comment period (September 1, 2022) was sent to 2,554 recipients. |
| | October 31, 2022: An email with the PIM summary and frequently asked questions was sent to 2,600 interested parties. |
| **Postcards/ Flyers/Signs** | Project team mailed postcards to approximately 5,550 addresses within outreach area |
| | The Town of Mount Pleasant shared a version of the PIM flyer on digital signage throughout the Town's facilities |
| | Four road signs were posted along I-526 and Long Point Road within the public outreach area, advertising PIM details |
| | Campaign signs were placed around the study area directing people to the in-person PIM on August 2, 2022 |
| **Earned Media** | A press release was distributed to local and regional media outlets with the launch of the online PIM on July 26, 2022 |
| | A media event was hosted on July 26, 2022, at the I-526 LCC Community Office. Media outlets in attendance included: ABC News 4, Live 5 News, News 2, The Post and Courier |
| **Newspaper Advertisements** | The Post and Courier on July 18, 2022 - Traditional legal public notice in English with accommodations language provided in Spanish |
| | El Informador on August 17, 2022 - "How to Engage" flyer advertised in Spanish |
| | The Moultrie News on July 27, 2022 - "How to Engage" flyer advertised in English |
| **Social Media** | Paid social media advertisements created using project's Facebook account. Organic posts made on project's Facebook and Twitter accounts to encourage participation, along with a Facebook event |
| **Hotline** | The public could engage and ask questions of the project team by calling or texting the project hotline (843.258.1135); PIM notice was announced on hotline voicemail |

[1] *Emails were sent from the project email address: info@526LowcountryCorridor.com*

## *Public Information Meeting*

In addition to the two PIMs held during the PEL study, a PIM for the EA was held on August 2, 2022, at the R.L. Jones Center in the Town of Mount Pleasant, with a corresponding comment period from July 26 through September 2, 2022. During this same time period, the PIM materials were made available through a variety of methods, including on the project website,[1] in-person at the PIM, at the I-526 LCC Community office, and by mail upon request. All materials were available in English and Spanish, and a translator was available at the in-person PIM. The public could provide input by attending the in-person meeting, completing a comment form or the survey on the project website, or through email. Additionally, the public could engage and ask questions of the project team by calling or texting the project hotline. Information at the PIM included the following:

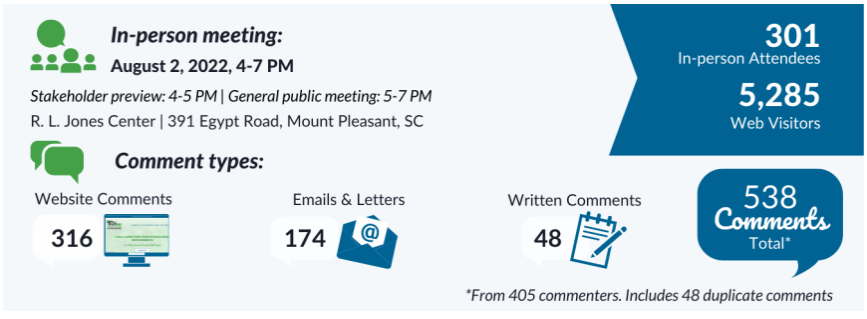
- moving from the PEL to NEPA process,
- draft purpose and need of the project,
- anticipated traffic growth,
- screening process,
- range of alternatives,
- noise evaluation process,
- vegetative maintenance, and
- typical right-of-way process.

Comments received during the PIM included concerns with traffic, safety, potential removal of the left turn onto Belle Hall Parkway, noise, truck traffic, and neighborhood impacts, see **Figure 5.3**.

A total of 301 people attended in person and the project website had 5,285 visitors. A total of 538 comments were received including through the project website, email, letters, and written comments made during the meeting, see **Figure 5.4**.[2] SCDOT provided a response for all comments received in the form of a letter and a frequently asked questions (FAQ) document. Copies of the comments and responses are included in Appendix Q. As a result of the input received from the public, the project team refined Alternative 2 further to accommodate the input received through both the agency coordination and the public comment period.

Figure 5.3: PIM Comments and Concerns


Figure 5.4: Public Information Meeting Summary




## *MetroQuest Survey*

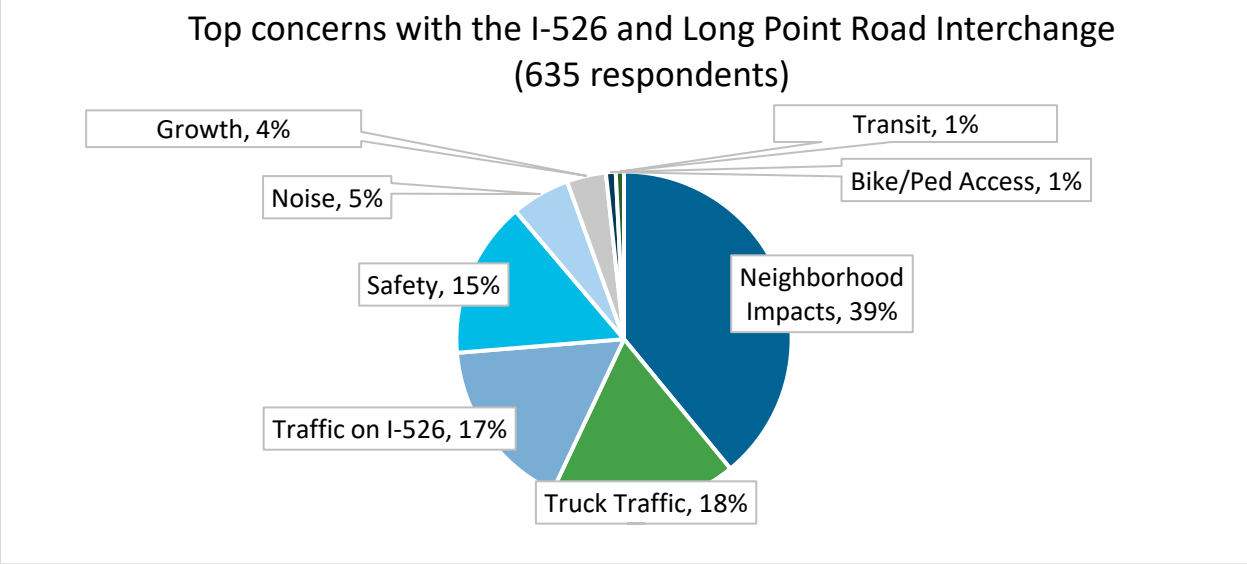
As part of the PIM outreach, an online MetroQuest survey was used to collect public input on the project from July 26 through September 9, 2022. The survey was available in both English and Spanish and was completed by 745 people.

The MetroQuest survey began by providing an overview of the project, then invited participants to voice their concerns and priorities for the project using a variety of different question formats. Demographic information was requested from respondents and was optional to complete. The majority of respondents' top concerns expressed

[1] www.526lcclongpoint.com/public-meeting-2022
[2] From 405 commenters; included 48 duplicate comments

through the survey included neighborhood impacts, truck and general traffic, and safety along the I-526 and Long Point Road Interchange, see **Figure 5.5**.

Figure 5.5: MetroQuest Survey: Concerns with the I-526 and Long Point Road Interchange




### 5.3.3 Public Hearing

A public hearing will be conducted to present the findings of the EA, including the identification of a Recommended Preferred Alternative. Public notices will be prepared for newspapers to advertise the hearing and postcards will be distributed throughout the study area. Newspaper advertisements and postcards will include the meeting date, time, location, and purpose. Public hearing materials will be prepared in English and Spanish, and a Spanish translator will be available at the meeting. Public hearing materials will include a meeting handout and displays showing the potential impacts of the project and the Recommended Preferred Alternative. The public hearing will consist of an in-person open-house meeting followed by a formal presentation and verbal comment session.

Comments will be accepted online, in-person, by email, and by mail. After the end of the public comment period, each person who provided a written comment will receive a response.

## 5.4 Stakeholder Outreach

Organizations and individuals that may be impacted or benefit from the project were identified and invited to participate in the project's stakeholder group. Stakeholders provide information, ideas, and concerns to the project team and share project updates with their constituencies.[3] Letters were mailed to all businesses identified within the public outreach area to ask for their participation. As new stakeholders were identified, they were added to the list. For additional details, see Appendix P: Public Involvement Plan.

Two stakeholder meetings have been held to date to inform stakeholders about the project and provide opportunities for meaningful input; an additional three meetings will be held at key points in the project. **Table 5.3** provides additional detail on previous and planned stakeholder meetings.

[3] The stakeholder group was developed using the I-526 Lowcountry Corridor group as a base and updated to better suit the more localized study area for this project, adding additional businesses and neighborhood representatives from within the public outreach area.

Table 5.3: Stakeholder Meetings Overview

| Date of Meeting | Topic | Number of Attendees |
|---|---|---|
| June 14, 2022 | Introduction to the project including a preview of materials that would be provided during the first PIM (see Section 3). Stakeholders were encouraged to let their communities know about the meeting and were invited to attend the public information meeting an hour before the meeting officially began so they could have more one-on-one time with the project team | 14 |
| November 29, 2022 | Provided an updated on what was heard during the PIM and provided an explanation of how the feedback was used | 39 |
| Winter/Spring 2023 | Project update; introduction to the public hearing and review of the Recommended Preferred Alternative | TBD |
| Spring/Summer 2023 | Provide an update on what was heard at the public hearing and describe how the feedback will be used | TBD |
| Summer/Fall 2023 | Updates to the Recommended Preferred Alternative and finalization of the EA | TBD |

### *Meetings with South Carolina Ports Authority*

A meeting was held on September 26, 2022, between the project team and the South Carolina Ports Authority, the owner and operator of the Wando Welch Terminal (WWT). The meeting presented the proposed design for Alternative 2. The South Carolina Ports Authority indicated that the anticipated impacts to the WWT property, including impacts to parking areas, were acceptable and was in favor of Alternative 2.

### *Meetings with the Town of Mount Pleasant*

Two meetings were conducted with elected officials from the Town of Mount Pleasant. The first meeting occurred with the Town of Mount Pleasant transportation staff on July 19, 2022, the second meeting occurred with the Town of Mount Pleasant Committee on September 6, 2022. These meetings provided an opportunity for elected officials to provide feedback on the project and provide guidance to SCDOT and the project team on opportunities to engage their communities in a meaningful way.

## 5.5 Speakers Bureau

In addition to the public and stakeholder meetings, community speaking engagements provided opportunities to share project updates with area community groups. A total of 14 presentations were given to various community groups, as outlined in **Table 5.4**.

Table 5.4: Community Speaking Engagements

| Date | Organization |
|---|---|
| January 1, 2022 | Harbour Club Business Breakfast Series |
| March 15, 2022 | Charleston Top Producers Luncheon |
| April 22, 2022 | Society of Women Engineers – Women in Industry Event |
| May 2, 2022 | ACEC PA Leadership Conference |
| May 12, 2022 | Customs Broker & Freight Carriers Association |
| June 10, 2022 | South Carolina Engineering Conference & Trade Show |
| July 8, 2022 | Friends of the Wando |
| August 1, 2022 | Lowcountry Forever Show |
| August 17, 2022 | Town of Mount Pleasant Rotary Club |
| August 22, 2022 | American Subcontractors Association |
| September 13, 2022 | Charleston Women in Trade |
| October 6, 2022 | Charleston Trident Association of Realtors |
| November 17, 2022 | Charleston Motor Carriers |
| November 17, 2022 | Leadership Charleston Chamber of Commerce |