

Flooding

The SCDOT received approximately 49 comments related to flooding. Specific flooding concerns are outlined below and following responses address the comments received in public comment letters.

- **general flooding comments or impacts to the Sawmill Branch**

To demonstrate that the construction of the Proposed Project and alterations to Sawmill Branch are not injurious to the public interest and do not adversely affect the flood control function of the Sawmill Branch, rigorous hydrologic and hydraulic analyses that have been performed to evaluate the design and mitigation strategies for implementation with the construction of Berlin Myers Parkway Phase 3. The floodplain mitigation features incorporated into the overall project design are intended to maintain pre-project floodplain conditions and balance floodplain conveyance and storage.

These extensive analyses and design efforts have concluded in a Proposed Project that maintains the existing purpose of the Sawmill Branch; avoids unacceptable impacts to the public and the environment; and satisfies the requirements of USACE and FEMA.

An evaluation of Sawmill Branch's containment of a variety of storms demonstrated how effectively the project contains floodwaters and prevents damage for various periods. The branch's effectiveness in preventing flood damage for the 25-year storm and below is virtually unchanged across all of the evaluated reaches and in some cases improved by construction of the Proposed Project. Based on the information available, the project will not make flooding conditions any worse than currently exist.

The primary negative impact to the public interest relates to a potential increase in the risk of flood damage as a result of the Proposed Project. This risk has been evaluated within the project limits, upstream of the project, and downstream of the project.

Means of reducing and containing runoff included modifying the Sawmill Branch floodplain. Portions of uplands adjacent to the Branch will be excavated and lowered from their existing grade to add capacity within the floodplain. This additional area will provide storage for runoff and accommodate flow capacity for waters moving through the Branch and floodplain. The goal of the hydrology and hydraulic studies was to evaluate how the proposed changes affected water surface elevations up and downstream and whether those changes would result in impacts to surrounding properties.

In the areas where structures are located, the increase in water surface elevations is generally less than 0.1 feet (1.2 inches). The proposed project could cause slight increases in the 25-year water surface elevation upstream and downstream of the project area, however within the area of the proposed project this would occur in undeveloped areas or areas where no structures would be affected.

- **comments on changes to FEMA floodplains or flood insurance requirements:**

Sawmill Branch and the associated floodplain is also designated by FEMA as a Special Flood Hazard Area Zone AE. The impacts of the proposed project were also evaluated for compliance with all FEMA requirements associated with the National Flood Insurance Program.

The evaluation of the impacts of the Proposed Project relative to FEMA analysis methods and performance criteria demonstrates that the FEMA base flood elevations will not increase as the result of the project. The FEMA 100-year floodplain boundaries will be updated based on current topography. Therefore, no additional properties will be subjected to FEMA flood insurance requirements.

Within the Sawmill Branch FEMA floodplain, development criteria are enforced by the Town of Summerville, Dorchester County, and various state agencies within South Carolina. For further information on these studies, please see Section 408 Summary.

- **flooding in areas outside of the Project study area:**

FEMA floodplains and floodways within Summerville extend well beyond the study area for the Proposed Berlin Myers Parkway Phase 3 and localized flooding is experienced in these areas during significant storm events. However, areas outside of the immediate study area and/or not influenced by the proposed project were not assessed in the hydraulic and hydrological analyses.

While the project analysis does evaluate potential flooding impacts up and downstream of the immediate project construction area, the purpose the project does not allow or intend to redesign every crossing or input along the Branch nor reconstruct the entirety of the Sawmill Branch. The proposed project does not include any proposed construction on the east side of Sawmill Branch nor areas downstream of the construction project limits.

Within the Sawmill Branch FEMA floodplain, development criteria are enforced by the Town of Summerville, FEMA, the US Army Corps of Engineers, and Dorchester County Floodplain Manager.

- **storm waters being treated and held before they are discharged into Sawmill Branch:**

The project proposed to discharge roadway runoff into vegetative areas prior to discharge into the Sawmill Branch. The vegetative areas will provide storage and infiltration areas, and provide filtration for the stormwater prior to entering Sawmill Branch.

- **project is incorrectly linked to the need for flood control**

Because the proposed Berlin Myers Parkway Phase 3 is adjacent to and would require modifications to the Sawmill Branch, which is a USACE flood control project, it was necessary to demonstrate that the construction of the Proposed Project and the alterations to Sawmill Branch are not injurious to the public interest and do not adversely affect the flood control function of the Sawmill Branch.

Purpose and Need

The SCDOT received approximately 37 comments related to purpose and need. The following responses address various concerns received in public comment letters.

Since 2006, population in the Summerville area has continued to grow and existing roads near the project area, including Bacons Bridge Road (SC 165) and Dorchester Road (SC 642), have been widened. Despite these improvements, updated traffic and collision data shows the project is still needed. For detailed information, see *2019 Traffic Analysis Technical Memorandum* in the attachments.

Environmental Impacts (including wetlands, wildlife, and habitat)

The SCDOT received approximately 38 comments related to environmental impacts. The following responses address various concerns received in public comment letters.

Total avoidance of wetland impacts could only be achieved through the no-build alternative, which is not feasible due to the increased traffic demands in and around the town of Summerville and would therefore not meet the purpose and need for the project. Measures were taken to minimize the impacts, including shifting of the alignment where possible to minimize wetland impacts, bridging of wetlands in several areas, inclusion of roadway design features such as minimization of grass median between travel lanes, use of a curb and gutter section to avoid wide shoulders, utilizing the maximum bank slope possible, and use of best management practices (BMPs) during construction that minimize wetland impacts. Fill impacts in wetlands were also minimized by changing the roadway side slopes from 4:1 to 2:1 and using guardrail, where practicable. In some areas, walls were added to the final design to further reduce fill in the adjacent wetlands. Since 2018, the floodplain bench design was revised to avoid impacts to approximately 3 acres of forested wetlands near Greenwave Boulevard and the proposed Sawmill Branch Walk/Bike Trail. The design also includes five additional floodplain mitigation bridges.

Previous environmental documentation and the Supplemental Threatened & Endangered Species Survey Report of Possible Floodway Mitigation Areas provides information on site conditions or environmental resources, such as wetlands and protected species that have been further evaluated since the EA and 2009 reevaluation.

In a letter dated May 5, 2016, USFWS stated that they agreed with the characterization of habitat quality for the species evaluated and the determination that the project is not likely to adversely affect federally listed species or designated critical habitat. Since May 2016, the floodplain analysis and mitigation design was refined and the spoil berm within the expanded study area would remain. No disturbance would occur within the study area that was added between 2015 and 2016.

Compensatory for the proposed impacts will be provided through the purchase of credits from the Pigeon Pond and Caton Creek Mitigation Banks. In addition, a permittee responsible mitigation plan is proposed for Lewisfield Plantation.

Noise

The SCDOT received approximately 30 comments related to noise. The following responses address various concerns received in public comment letters.

Noise receptors in the project area within 500 feet of the outside lane were identified through field reconnaissance and GIS parcel map information. A total of 170 individual noise receptors were identified in the project area. A total of 36 receivers would be impacted by the project:

- 14 impacted receivers are located along the Sawmill Branch Walk/Bike Trail (Activity Category C).
- 17 impacted receivers are single-family residences (Activity Category B). Most of the impacted residences are located south of the project on Thames Avenue and Nelson Court. Impacted residences are also located on Lucretia Lane and Elizabeth Street, and on Orangeburg Road.
- 4 apartment buildings (Activity Category B) at Summerville Villas, which is a HUD and environmental justice community.
- The tee box at the Summerville County Club (Activity Category C) is impacted.

The use of structural barriers (freestanding walls) was considered for impacted receivers in three locations:

1. Impacted receivers at Thames Avenue, Nelson Court, and Summerville Villa Apartments, which are located west of Luden Drive
2. Impacted receivers on Lucretia Lane
3. Sawmill Branch Walk/Bike Trail

Based on the results of the acoustic and engineering feasibility analysis, these abatement features are not feasible or reasonable, and are not proposed as part of this project. For detailed information, please see the *Noise Impact Technical Report for Proposed Berlin Myers Parkway – Phase 3* in the attachments.

Bicycle/Pedestrian Access

The SCDOT received approximately 27 comments related to bicycle/pedestrian access. The following responses address various concerns received in public comment letters.

FHWA, SCDOT, and the Town of Summerville have signed a Memorandum of Agreement (MOA) to mitigate for temporary and permanent impacts on the Sawmill Branch Walk/Bike Trail and Luden Drive parking area. Per the MOA, the Town of Summerville will ensure that permanent parking is provided in close proximity to the trail and within ½ mile radius of the existing Luden Drive parking area upon completion of the project. A copy of the MOA is included with these responses.

Once the project is completed, the trail between E. Carolina Avenue and Luden Drive will be reconstructed in essentially the same location, although at a lower elevation to accommodate the flood mitigation efforts. A new segment of trail will be created on the floodplain bench between Greenwave Boulevard and Luden Drive that connects to a sidewalk adjacent to the proposed roadway.

Hydrologic modeling was used to assess the impacts of lowering the trail elevation on the floodplain bench. Approximately 1,350 linear feet of the trail between Luden Drive and E. Carolina Avenue currently flood during a 5-year storm, and approximately 2,015 linear feet of trail currently flood during a 10-year storm. After construction of the proposed project, approximately 990 linear feet of the trail would flood during a 5-year storm event. The flooded segment is located where the proposed trail goes under the new Luden Drive bridge; during a 5-year storm, trail users can use a proposed alternate segment of trail that goes up to Luden Drive and cross the roadway at grade. During the 5-year storm, approximately 0.5 to 2 feet of water would be adjacent to the trail, but would recede in less than 24 hours. During a 10-year storm, approximately 2,250 linear feet of trail would be inaccessible because of flooding, with most of this impact occurring near Luden Drive. Approximately 1 to 2 feet of water would be adjacent to the trail, but would recede in about 24 hours.

A noise analysis was conducted along portions of the Branch Trail. The use of structural barriers (freestanding walls) was considered for impacted receivers. Based on the results of the acoustic and engineering feasibility analysis, which includes location, size, costs, and benefits, these abatement features were deemed not feasible or reasonable, and will not be proposed as part of this project. More details about the noise analysis can be found in the included *Noise Impact Technical Report*.

Funding/Project Cost

The SCDOT received approximately 1 comment related to funding/project cost. The following responses address various concerns received in public comment letters.

The Berkeley Charleston Dorchester Council of Government (BCDCOG) is responsible for the planning for the region's Transportation Improvement Program (TIP), a list of specific local projects for which federal funds are anticipated, and for prioritizing those projects. The Berlin Myers Parkway Phase 3 is funded through a combination of local programs, State Infrastructure Bank and CHATS Guideshare System Upgrade programs. The System Upgrade Program is made available to MPO and COG priority projects that include road widenings, intersection improvements and new road construction. Current funding includes \$44,862,000 for construction in fiscal year 2018 and \$29,000,000 for construction in fiscal year 2019.

Property Impacts / Right of Way

The SCDOT received approximately 25 comments related to property impacts. The following responses address various concerns received in public comment letters.

SCDOT will be responsible for the acquisition all right of way for the project. Specific questions about individual parcels or the right of way process should be directed to SCDOT's Program Manager, Joy Riley at 803-737-1346.

Maintenance/Changes to Sawmill Branch

The SCDOT received approximately 14 comments related to maintenance/changes to Sawmill Branch. The following responses address various concerns received in public comment letters.

A floodplain mitigation plan has been developed for Sawmill Branch as part of this project. Additional details for these mitigation activities are included in Section 408 Summary. The Town would also ensure that permanent parking is provided in close proximity to the trail and within ½ mile radius of the existing Luden Drive parking area upon completion of the project.

SCDOT has revised the proposed design for a portion of the floodplain bench along the Sawmill Branch Walk/Bike Trail in order to maintain the existing forested wetland. These trees would serve as a buffer between the roadway and the trail. On other portions of the project, vegetation would be cleared to construct the proposed roadway and floodplain bench along Sawmill Branch. After construction, the area between the parkway and trail would be allowed to naturally re-vegetate and would serve as a buffer between the roadway and the trail.

Public Hearings/Meetings

The SCDOT received approximately 11 comments related to public hearings/meetings.

SCDOT proposes to hold a public meeting in the first quarter of 2020. It is anticipated the USACE will participate in the meeting.

Historic Areas

The SCDOT received approximately 4 comments related to historic areas. The following responses address various concerns received in public comment letters.

The project is located in proximity to the Summerville Historic District, and through coordination with SCDOT, SHPO concurred that the project would have no adverse impacts on the district. However, SCDOT, FHWA, and SHPO entered into a Memorandum of Understanding (MOU) (included in the 2006 EA) to allow consultation to ensure that the design of the proposed interchange bridge at E. Carolina Avenue would not create a negative visual impact on the Summerville Historic District. SHPO and other interested parties were allowed to review the design

of the bridge and lighting and offer comments on this design prior to any construction. The SHPO concurrence letter indicating this design review is attached.

Alternative Designs

The SCDOT received approximately 26 comments related to alternatives in roadway or intersection designs. The following responses address various concerns received in public comment letters.

A range of alternatives have been considered for the project throughout the development of the project, including a no-build alternative, various roadway alignments, and intersection and interchanges designs. The alternatives considered are documented in the 2006 EA Alternatives Analysis.

Form Letter

The SCDOT received approximately 18 comments via a form letter from the Newington Plantation neighborhood. The form letter expressed concerns about flooding, noise, the needs for the project, wetland impacts, bicycle and pedestrian facilities, and funding. Responses to these concerns are captured in headings above.