



Town of Hilton Head Island

Town Council Meeting

**Tuesday, September 17, 2024, 3:00 PM
1 Town Center Court, Hilton Head Island, SC
Benjamin M. Racusin Council Chambers**

The meeting can be viewed on the [Town's YouTube Channel](#), the [Beaufort County Channel](#), and Spectrum Channel 1304.

- 1. Call to Order**
- 2. Pledge to the Flag**
- 3. Invocation – Reverend General Hay, First Historic African Baptist Church**
- 4. Adoption of the Agenda**
- 5. Approval of the Minutes**
 - a. Special Workshop Minutes of June 17, 2024
 - b. Special Workshop Minutes of June 20, 2024
 - c. Special Meeting Minutes of June 28, 2024
 - d. Regular Meeting Minutes of August 20, 2024
 - e. Special Meeting Minutes of August 29, 2024
- 6. Presentations and Recognitions**
 - a. Report of the Town Manager
- 7. Reports from Members of Town Council**
 - a. General Reports from Town Council
 - b. Report of the Lowcountry Area Transportation Study – Glenn Stanford
 - c. Report of the Lowcountry Council of Governments – Tammy Becker
 - d. Report of the Beaufort County Airports Board – David Ames

- e. Report of the Southern Lowcountry Regional Board – Glenn Stanford
- f. Report of the Island Recreation Association Board – Alex Brown
- g. Report of the Community Services and Public Safety Committee – Tammy Becker
- h. Report of the Public Planning Committee – David Ames
- i. Report of the Finance and Administrative Committee – Alex Brown

8. New Business

- a. An Ordinance of the Town of Hilton Head Island, South Carolina Amending Title 12, Chapter 3, of the Municipal Code Entitled: Motor Vehicles and Traffic Control, Parking, to Revise Regulations Related to Paid Parking and Other Matters Related Thereto, and to Provide for Severability and an Effective Date, First Reading – Josh Gruber, Deputy Town Manager
- b. Consideration of a Resolution Adopting a Beach Parking Fee Schedule - Josh Gruber, Deputy Town Manager
- c. Consideration of a Resolution to Accept the Final Report for the William Hilton Parkway Gateway Corridor Project Independent Study - Shawn Colin, Assistant Town Manager
- d. Consideration of a Resolution to Dissolve the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee - Shawn Colin, Assistant Town Manager

9. Public Comment - Non Agenda Items

10. Executive Session

- a. Discussion of Negotiations Incident to Proposed Contractual Arrangements and Discussions for the Proposed Sale or Purchase of Property (Pursuant to the South Carolina Freedom of Information Act Section 30-4-70 (a)(1)) related to:
 - 1. Bay Pines Road Area FEMA Grant Agreement
 - 2. Audubon Pond Road Area FEMA Grant Agreement
 - 3. Beach City Road Area
 - 4. Easement Request in the Marshland Road Area
 - 5. Easement Requests by the South Island Public Service District
 - a. Pope Avenue
 - b. William Hilton Parkway
 - c. Wexford Drive
 - 6. Hilton Head Island Land Trust Easements
 - a. William Hilton Parkway Area
 - b. Mathews Drive
 - c. Wild Horse Road Area
 - d. Leg O'Mutton Road Area
 - e. Gardner Drive Area

11. Action from Executive Session

12. Adjournment

FOIA Compliance: Public notification of this meeting has been published, posted, and distributed in compliance with the South Carolina Freedom of Information Act and the requirements of the Town of Hilton Head Island.

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 ("ADA"), the Town of Hilton Head Island will not discriminate against qualified individuals with disabilities on the basis of disability in its services, programs, or activities. Auditory accommodations are available. Any person requiring further accommodation should contact the Town of Hilton Head Island ADA Coordinator as soon as possible but no later than 48 hours before the scheduled event.

Municipal Association of South Carolina (MASC) Civility Pledge:

"I pledge to build a stronger and more prosperous community by advocating for civil engagement, respecting others and their viewpoints, and finding solutions for the betterment of my city or town."



Town of Hilton Head Island TOWN COUNCIL SPECIAL WORKSHOP Monday, June 17, 2024, 5:00 PM Minutes

Edits Provided by Council Member Patsy Brison

Call to Order

Mayor Perry called the workshop to order at 5:00 p.m.

Council Members present: Alan Perry, Mayor, David Ames, Ward 3, Mayor Pro-Tempore; Alex Brown, Ward 1; Patsy Brison, Ward 2; Tammy Becker, Ward 4; Steve Alfred, Ward 5; Glenn Stanford, Ward 6

Also present: Marc Orlando, Town Manager; Curtis Coltrane, Town Attorney; Kimberly Gammon, Town Clerk

Adoption of the Agenda

Mr. Ames moved to approve. Mr. Alfred seconded. Motion carried 6-0.

Report of Findings from Gateway Corridor Project Independent Study

Shawn Colin, Assistant Town Manager, Engineering and Capital Projects provided background information regarding the proposed project. He introduced the following: Jared Fralix, Assistant County Administrator; Thomas Boxley, Executive Director, Gullah Geechee Historic Neighborhoods CDDC; Brian Kinzelman, Senior Principal, MKSK; and representatives of Lochmueller Group.

Mr. Colin proceeded to his presentation.

This project began in 2017 as a need was identified by the South Carolina Department of Transportation (SCDOT) to improve the eastbound Mackay Creek Bridge that connects the mainland to the island (there are two bridges in each direction). The Town and County requested a more comprehensive approach to address this corridor rather than a series of projects and improvements over several years.

November, 2018 - Sales Tax Referendum was approved containing the following: » \$80 Million would go towards U.S. 278 Corridor Traffic Improvements including repairing and replacing the existing spans of the bridges to Hilton Head Island and the other improvements between Moss Creek Drive and Suire Pope Road. Since that time, Beaufort County as the project sponsor and SCDOT as the Project Manager have involved time and funding to conduct an evaluation of alternatives and prepared a draft Preferred Recommendation following the NEPA process. There has been public involvement, with many workshops,

well over 60 public meeting, and opportunities to provide comments.

April, 2021, the Town worked with technical consultants with expertise in engineering, planning, and design, starting in April 2021 to review the project and draft recommendations to improve the corridor alignment and design elements.

Town Council approved 26 recommendations on October 12, 2021, to be considered within the project to improve the corridor alignment and design elements.

In order to make certain that all reasonable alternatives have been evaluated before a final decision is made. Town Council approved a Memorandum of Agreement (MOA) with Beaufort County on October 4, 2022. The MOA outlined a critical path and steps to take to reach a point for municipal consent consideration.

Town Council created the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee in February, 2023. Appointments made on March 21, 2023.

Town Council approved Request for Proposals and Scope of Work for Independent Study in June, 2023

August, 2023 to October, 2023 Consultant, The Lochmueller Group, Inc. procured to conduct Independent Study.

October, 2023 CBB Transportation Engineers and Planners, contracted through Beaufort County, presented findings from its Independent Review of the Gateway Corridor.

October, 2023 to present Hilton Head Island Procured Independent Study in progress (10 public meetings of the Committee occurred between November 3, 2023, and June 12, 2024)

December, 2023 – June, 2024 the Lochmueller Group presenting findings and recommendations to the Committee in accordance with the Town Council approved Scope of Work.

The purpose of this project is to address structural deficiencies, identified by SCDOT in 2015 at the existing eastbound Mackay Creek bridge and reduce congestion within the project study area. The Mackay Creek bridge was built during the 1950s (opened in 1956) and is scheduled for replacement as part of SCDOT's bridge replacement program.

Cracks can be seen on the underpinnings of the mainland end of U.S. 278's Karl S. Bowers Bridge over Mackay Creek on Aug. 18, 2015. The span, built in 1956, has been listed among South Carolina's 25 most structurally deficient bridges.

Mr. Colin reviewed the full project extent and reference points.

In order to see the full presentation and preferred alternative video for the WHP Gateway Corridor project please go to the following link:

[William Hilton Parkway Corridor June 17, 2024 Town Council Workshop Presentation \(hiltonheadislandsc.gov\)](https://hiltonheadislandsc.gov/William_Hilton_Parkway_Corridor_June_17,_2024_Town_Council_Workshop_Presentation)

[HHI_Final_V5 on Vimeo](#)

Throughout the presentation, Council members held discussion, asked questions and

made comments regarding: clarification of the February 18 report – the Committee proposed a mitigation plan for Stoney and Town Council did not adopt it at that time; confirmation that the guiding principle to consider future transportation alternatives has been completed; inquiry as to notification and involvement process for Jenkins Island and Windmill Harbour regarding the current design; an opinion the proposed project is not aesthetically designed; question as to whether all guiding principles have been met; inquiry and confirmation photos regarding congestion were taken during a.m. workday peak traffic hours; confirmation the environmental assessment prepared by SCDOT was reviewed; inquiry as to a second bridge alternative; inquiry as to the County's position on a second bridge; clarification a second bridge alternative is not part of this specific project; comment that decisions are being made prior to determination being assessed; ~~clarification the new proposed bridge will be very close in proximity to the same distance as the existing bridge~~; clarification as to what trees will be impacted; inquiry as to better access to pickleball courts on Old Schoolhouse property; inquiry as to cost of improvements put forth from Hilton Head Island Town Council and confirmation of additional costs for Hilton Head Island as they are not included in the projected cost; confirmation SCDOT and the County did not agree to the costs for the additional items and overruns regarding requests and they will be incurred by local funding; concern over the process for Municipal Consent; concern over what recourse they have after giving Municipal Consent; confirmation that until there is a final design a line item cost estimate cannot be completed; discussion regarding width and medians on the existing bridge and proposed project; confirmation the medians will be concrete barriers; concern over minimal impact of time saved in commuting to the Island; suggestion transportation alternatives need to be discussed; lengthy discussion on the impact on the Stoney Community; and confirmation discussions have been ongoing with business and private property owners; concerns about failure of Lochmeuller to compete all tasks within their scope of services; confirmation that there would be a reduction in project costs when reducing the number of lanes on the bridge sections and through Stoney; expression of great alarm at the display of a slide showing potential "second bridge" locations which had not been seen by Town Council.

Public Comment

John Stewart addressed Council regarding his concern regarding noise pollution and spoke in opposition to the plan.

Linda Harrington addressed Council regarding her opposition to the plan by reading her statement noting they are risking destroying the habitat without proper studies.

Christopher Cliffe addressed Council regarding his opinion that there is no need for a bridge this size with a useless bike lane.

Chris Ruffner addressed Council stating a larger bridge will bring more people and suggested tax incentives and flexible work hours could possibly alleviate the traffic issues.

Frank Babel addressed Council stating the existing bridge is failing and businesses are failing because people cannot get here. If we can't get the bridge fixed, the Town will be

in trouble.

Skip Hogland addressed Council regarding allowing too much tourism and the effect it has on the Island. He stated the Town needs to stop promoting Hilton Head Island and the proposed corridor will not solve traffic problems.

Felice Lamarca address Council stating the more we build, the more people will come. She proposed looking at other solutions.

Gray Smith addressed Council in opposition to the plan noting he supports refurbishing the existing bridge.

John O'Toole addressed Council stating the need for empathy for people dealing with the bridge traffic and the need to address an aging infrastructure before a major catastrophe takes place.

David Johnson addressed Council stating the guiding principles need to be revisited.

Steve Robinson addressed Council stating the bridge is not safe and a new one needs built. His opinion is the lights are the issue with traffic.

Angie Hutchins addressed Council regarding the need to be creative due to the job shortage.

Deiderick Advocaat addressed Council stating the advisory committee has yet to make a final recommendation and encouraged Council not to dissolve the committee.

Lynn Greeley addressed Council regarding the crowdedness of Hilton Head Island and the traffic lights do not address the issue of traffic back-up.

Peter Kristian addressed Council and encouraged them to address the growth issue on the Island and implement a moratorium on development.

Richard Bisi addressed Council stating congestion is more than inadequate roads and bridges, but it is due to Island capacity. He suggested a moratorium on marketing the Island.

John Casey addressed Council stating the advisory committee has not yet made a recommendation to Council and suggestions the Town is being pressured by Beaufort County.

Yolanda Cohen McKinley addressed Council stating the negative impacts that will impact the Native Island Community. She expressed concern of their voices not being heard and the negative effects on the quality of life within the Stoney Community.

A woman that did not identify herself addressed Council stating the proposed bridge looks like a bridge built for Interstate 95 rather than as an entrance to Hilton Head Island.

Tom Reitz, Beaufort County Council member, addressed Council and advised them to hold off on Municipal Consent. He stated more answers were needed before a decision can be made.

Memorandum of Understanding with Beaufort County for the William Hilton Parkway

Gateway Corridor Project

Ms. Brison raised a question about how to proceed with this item on the agenda and asked that the Town Attorney address the questions. The Town Attorney provided options. ~~Due to the lateness of the hour, this item was not discussed.~~

Ms. Brison also expressed concern regarding the Town Council meeting scheduled for June 20 which included action items regarding William Hilton Parkway. Mayor Perry stated he would take the concerns under advisement to determine the next steps forward.

Adjournment

The meeting was adjourned at 10:49 p.m.

Approved:

Kimberly Gammon, Town Clerk

Alan R. Perry, Mayor

The recording of this Meeting can be found on the Town's website at www.hiltonheadislandsc.gov



Town of Hilton Head Island TOWN COUNCIL SPECIAL WORKSHOP Monday, June 20, 2024, 3:00 PM Minutes

Edits Provided by Council Member Patsy Brison

Call to Order

Mayor Perry called the workshop to order at 3:00 p.m.

Council Members present: Alan Perry, Mayor, David Ames, Ward 3, Mayor Pro-Tempore; Alex Brown, Ward 1; Patsy Brison, Ward 2; Tammy Becker, Ward 4; Steve Alfred, Ward 5; Glenn Stanford, Ward 6

Also present: Marc Orlando, Town Manager; Kimberly Gammon, Town Clerk

Absent – Curtis Coltrane, Town Attorney

Discussion of the William Hilton Parkway Corridor Project.

Ms. Becker moved to have a 15-minute public comment period before discussion begins. Mr. Ames seconded. Motion carried 7-0.

Richard Bisi addressed Council regarding his opinion that Council did not ask enough questions on Monday and questioned the assumption the additional lanes will reduce traffic congestion.

Ashleigh Phillips addressed Council questioning the aesthetics of the proposed bridge, concern over the character of the Island, voiced her objections to Municipal Consent; expressed concern for the Gullah Community, and her opinion the new bridge will not bring more employees to the Island.

Skip Hoagland addressed Council stating people moved here for Island life – not Myrtle Beach.

Doris Grant addressed Council stating the meeting times are inconvenient for the working people of the Island. She expressed concern and questioned closing the turning land to Squire Pope Road.

Steven Woodall addressed Council stating Council needs to remain in the conversation but doesn't need to approve Municipal Consent. He asked that Council vote no on the matter.

Mayor Perry asked that Shawn Colin address the question of closing the turn lane at Squire Pope Road. Mr. Colin stated there is no discussion of closures but there has been discussion of limiting peak hour left turns within the Stoney Community.

Mayor Perry made a statement regarding the items at hand. He stated that Council

cannot operate by inaction. He stated that over the past seven years there has been great community engagement for this project from the SCDOT, Beaufort County and the Town of Hilton Head Island. He noted it is a difficult decision for Town Council, but it is no reason for hatred. There is an issue of the philosophical question regarding the project and a lot of different answers. He reminded all there is a deadline and stated that after Monday's meeting, they reached out to Secretary Justin Powell to see if an extension could be granted. He proceeded to read a letter he received in return which is below:



Justin P. Powell
Secretary of Transportation
803-737-0874 | 803-737-2038 Fax

June 20, 2024

Mayor Alan Perry
Town of Hilton Head Island
1 Town Center Court
Hilton Head Island, SC 29928

Dear Mayor Perry:

I wanted to follow up on inquiries from the Town of Hilton Head Island as it pertains to the US-278 eastbound bridge over Mackay Creek and the South Carolina Department of Transportation's (SCDOT) plans for it.

The bridge was built by SCDOT in 1956 and was widened in 1984. SCDOT inspects all bridge structures in the state at a minimum of every two years. Due to the age and condition of the bridge, SCDOT inspects it annually. In the last inspection completed on January 12, 2024, the superstructure and substructure of the bridge were rated a four, or poor, on a nine point scale. While the bridge is not load posted and is safe to drive over, it is approaching the end of its design life.

Due to these factors, SCDOT placed the bridge on its statewide priority list. As Beaufort County developed its sales tax project to build a new six-lane bridge between the mainland and Hilton Head Island, SCDOT agreed to contribute \$74,500,000 toward Beaufort County's project. This was in lieu of pursuing a stand-alone project to rebuild the US-278 eastbound bridge over Mackay Creek. This contribution was based on the estimated cost for SCDOT to replace the US-278 eastbound bridge with a new two-lane structure.

The existing Mackay Creek bridge continues to age in a challenging environment with tides and saltwater. While not load posted today, future inspections may necessitate SCDOT putting a load posting on the bridge which could impact the movement of trucks, buses, and emergency vehicles onto Hilton Head Island.

Should the Town not provide municipal consent to the proposed US-278 bridge project in a timely manner, SCDOT will be prepared to use those funds allocated to the project and proceed with a project focused solely on the US-278 eastbound bridge. In initiating a project focused solely on that one structure, SCDOT would first evaluate if rehabilitation or replacement would yield the most cost-effective option and develop a project accordingly. It should be noted that in SC Code Section 57-5-820, SCDOT is not required to obtain municipal consent for construction work on structurally deficient bridges over the Intracoastal Waterway like the US-278 eastbound bridge over Mackay Creek.

I hope this addresses the questions from the Town of Hilton Head Island. Please do not hesitate to reach out to my office should you have any questions.

Sincerely,



Justin P. Powell
Secretary of Transportation

Post Office Box 191
955 Park Street, Room 309
Columbia, SC 29202-0191



www.scdot.org
An Equal Opportunity
Affirmative Action Employer
855-GO-SCDOT (855-467-2368)

Mayor Perry invited Senator Tom Davis to address Council and provide input from the State's perspective.

Senator Davis explained that the first thing that comes to mind is what does a timely manner mean. He offered his thoughts regarding what he thinks it means. He stated we've been operating under an environmental assessment period for three years, which terminates on June 28, and once that deadline passes it is his understanding that it's possible to obtain an extension of the environmental assessment but that would be up to the Corps of Engineers as to whether to extend it or go back to one of the more beginning processes. He summarized that he doesn't know what would happen if Municipal Consent is not given by June 28. Senator Davis expressed his opinion that Secretary Powell says in a timely manner, he means a decision one way or the other, yes or no affirmatively by that date. He added that from speaking with Secretary Powell that if Municipal Consent is not given that he feels like he has no choice but to go forward and allocate the \$74 million that SCDOT has set aside for that first span and begin the process of deciding whether you're going to rehabilitate it or replace it. He stated that one of the practical consequences of Municipal Consent either not being given by delaying the vote or a no affirmatively would be SCDOT going forward on that Plan B to repair that first span.

He added his thoughts that if the project doesn't go forward, or the project as presented doesn't go forward one question that arises is what happens to the \$80 million that was raised in the penny sales tax in 2018 for the purpose of this project. He reviewed three different scenarios that could take place: 1) the \$80 million raised is what's used first to conduct the repairs in lieu of the \$74 million; 2) if Municipal Consent is not granted it would be difficult to hold on to the \$120 million from the State Infrastructure Bank that was awarded to Beaufort County for the project and 3) the money would be reallocated during the next round of projects.

Senator Davis stated he has been focusing on two things throughout the process. 1) trying to hold in place the funding and cobble together enough money to make the project work; and 2) give the Town enough time so that it becomes a decision they feel comfortable with, which has been a good process.

Senator Davis stated that irrespective of the decision, whether to give Municipal Consent or not give Municipal Consent, he will stand behind the Town of Hilton Head Island and try to help accomplish what the Town wants to accomplish by working with the SCDOT, Federal Government and the General Assembly.

Council members made comments, asked questions and held discussion with Senator Davis regarding: an expression of appreciation from all Council members regarding Senator Davis' hard work that he's done on this project; explanation and pointed out that the penny sales tax was to repair or replace the bridge and the interpretation that nothing was mentioned regarding expansion; confirmation the funding would not go away automatically but the local delegation would have to put on a full court press to keep that \$120 million set aside for the project and it would be difficult to keep that \$120 million set aside for Hilton Head Island if they move into July without a deciding vote; confirmation

from the Senator that if Hilton Head Island would decide they need more time, he would make the best case he could in representing Hilton Head Island and it would be very difficult; confirmation there is approximately \$300 million dollars dedicated to the project and a gap of \$180 million dollars; an explanation of sources to cover the gap in funding which could possibly be: 1) go back to the State Infrastructure Bank and ask for more; 2) approach SCDOT for additional funding and 3) a scenario of Beaufort County obtaining bonding; confirmation that if conditions are required they need to be included in Municipal Consent with the SCDOT as well as the MOU with the County; and an expression of concerns over the Stoney area and plans to make it better.

Mayor Perry invited Mr. Orlando to provide comments and insight as to how we got to this point.

Mr. Orlando expressed appreciation to Senator Davis for his assistance during this process. He reviewed how we got to this point noting the Eastbound Mackey Creek Bridge showed structural damage during a SCDOT inspection in 2015, and then Hurricane Mathew hit in 2016. Following that Beaufort County initiated a Bridge and Corridor Improvement Project through a voter referendum sales tax referendum in 2018. Following the referendum, Hilton Head Island Town Council created a US 278 Corridor Committee in 2019 and a year later subsequently adopted Guiding Principles from the Committee to establish project expectations in 2020. Council adopted the Committee Report but did not endorse an associated proposed mitigation plan at that time. He added that since then, there have been several years of discussions and project assessments with Council, Community Members, affected Community members, and affected property owners, SCDOT and Beaufort County.

He noted the project sponsor is Beaufort County and is being designed by SCDOT and their selected design consultants. Many project alternatives have been presented to the Hilton Head Island Community by Beaufort County and SCDOT over time. He noted that this started well before his time began with the Town of Hilton Head Island as well as before the time of several seated Council members serving. In 2021, Council directed Mr. Orlando to establish a way to best represent Hilton Head Island as this project was being considered. In 2021, Beaufort County presented a project plan with significant impacts in the Stoney Neighborhood. It was a consensus of Council and Hilton Head Island Staff to object to the proposal. The goal was to see if the Town could affect the project positively and bring it back to Council to consider Municipal Consent.

Beaufort County and the Town entered into a mutual agreement in 2022, which included recommendations of Town Council and a commitment to work together to try and achieve those initiatives. The project was further refined, further assessed by several traffic engineers hired by SCDOT, Beaufort County and the Town of Hilton Head Island. The Town separately hired traffic and transportation engineers for input and the project was further enhanced.

Since Council's directive Mr. Orlando has met with SCDOT Secretary Christy Hall (now retired) and the newly appointed Secretary Justin Powell to explain the challenges and to explain the project challenges for Hilton Head Island. He made it clear that just because

these elements were included in the project it didn't mean that he would bring this back for a predetermined Municipal Consent. He suggested discussing the bridge, the corridor, the project and the program and all the variables that go into it and review impacts. He stated he believes staff has done their best to provide Council with as much consultant data and analysis from SCDOT, Beaufort County and from the Town traffic and transportation consultants. He closed by stating that Council's decision whether to support or oppose this major corridor and bridge to and from Hilton Head Island must consider many factors to ensure that the collective decision aligns with the Community's best interest. Mr. Orlando introduced Shawn Colin to conduct a presentation regarding the matter.

Mr. Colin proceeded with his presentation.

Section 57-5-830 of the South Carolina Code of Laws, which he stated was the basis for Municipal Consent and used the term "may" states that, ~~"[i]n every case of a proposed permanent improvement, construction, reconstruction, or alteration by the Department of any highway or highway facility within a municipality, the municipality may review and approve the plans before the work is started; except that a municipality may not have the right to review and approve plans to remove, replace, or improve a bridge and its approaches within its limits where such bridge and its approaches have been certified by the Department to be functionally obsolete or structurally deficient and if the bridge crosses the intracoastal waterway."~~

Mr. Colin reviewed the proposal for New Full Bridge Construction:

- While the Town has requested consideration for a 4-lane bridge, according to SCDOT, if a new bridge is built, it will be built as 3 lanes each way, plus inside and outside shoulders.
- 12-foot travel lanes.
- 1 10-foot outside shoulder and 1 6 foot inside shoulder in each direction.
- 1 span that replaces all 4 current bridges
- Provides uniform 75+ year lifespan for bridge
- Design Speed of 45mph
- Posted speed of 40 mph
- Current bridge widths - 80' and 100' as explained Monday.
- New Bridge is 121' wide which includes 14' to accommodate the pathway.
- New bridge would be 107' wide without the pathway
- Town Council recommendations and MOU requested the additional pathway.
- 1 12-foot shared-use pathway along the southern side of the bridge
- 2 bulb-out refuges, 20 feet wide by 50 feet long, located along the southern shared-use path at Mackay Creek and Skull Creek
- Shared-use pathway to connect to mainland pathway system at Buckingham Planation Road and to pathway system on Jenkins Island
- Construction methods will cause this bridge to shift south within current power line easement.
- Bridge height clearance to remain at 65 feet over Skull Creek
- Bridge height clearance over Pinckney Island minimum of 17.19 feet

- Bridge length is 1.376 miles of the 4.218-mile project
- Seismic and storm impact mitigation elements included in the overall structural design.
- Will meet highest seismic standards
- Designed to withstand Category 5 hurricane
- No at grade intersection on Pinckney Island

Mr. Colin next presented the proposal for the Jenkins Island Section:

- Design Speed of 45mph
- Posted speed of 40 mph
- Bridge landing located within existing right-of-way
- 3 12-foot travel lanes eastbound
- 3 12-foot travel lanes westbound
- All Jenkins Island Traffic consolidated at Windmill Harbour signalized intersection
- Jenkins Road access to William Hilton Parkway is removed
- Access to Hog Island, Mariners Cove, Blue Heron Point, Jenkins Island Cemetery, Hilton Head Harbor RV Resort and Hilton Head Harbor Marina will be from new frontage road on Jenkins Island
- No pedestrian crossings at Windmill Harbour intersection
- Windmill Harbour traffic signal upgraded with Adaptive Traffic Management System and included in Town system with 30 days of MOU
- Shared pathway on northern side of corridor ~~would be~~ located within Town-owned Property along new frontage road connecting to ~~the RV Park, the Marina, and the Jenkins Island Cemetery bridge to mainland and Town of Hilton Head Island pathway system~~
- Shared-use pathway on southern side would connect Windmill Harbour to connect to bridge, as well as connection via to under-bridge connection to the northern side shared-use pathway
- Access to Hog Island, Blue Heron Point, and Mariners Cove moved from southern side to northern side of corridor and maintain the existing connection under the bridge connection
- Landscaped medians with varying widths
- Exterior curbing installed to reduce right-of-way and handle drainage

Next, Mr. Colin described the proposal for the Stoney Neighborhood Section:

- Design Speed of 45mph
- Posted speed of 40 mph
- Within the current ROW for most of the corridor through Stoney neighborhood
- 2 x 11' lanes in each direction
- 1 x 12' lane in each direction
- Additional turn lanes
- Crosswalks at intersections
- 10' wide pathway
- Public open space
- Stormwater mitigation

- Landscaping
- Potential Relocation or Removal of 2 culturally sensitive structures
- Willie Young's Upholstery (formerly Patterson's Store) and the structure which formerly housed Island Psychic
- ~~Former Island Psychic~~
- Removal of curb cut at Memory Matters and William Hilton Parkway
- Total ROW impacts 2.78 acres
- Total ROW impacts on private property 0.89 acres (22 properties)

Overview of SCDOT US 278 Corridor Improvements Environmental Assessment

The National Environmental Policy Act (NEPA) requires federal agencies to consider the impacts their projects may have on the environment and to integrate the NEPA process with other environmental law compliance. In association with the Federal Highway Administration (FHWA) and Beaufort County, the SCDOT has developed an Environmental Assessment (EA) in accordance with NEPA. The EA includes a review of all proposed alternatives and evaluates potential impacts to the natural and human environment. This EA is the culmination of technical studies and reports, interagency coordination, and community outreach and feedback. The EA documents the purpose and need for the project; presents a discussion of the alternatives and the analysis of them; describes the affected environment, assessment of the environmental, transportation, social, and economic impacts; identifies potential community enhancements; 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 Table of Contents includes:**

- Chapters 1 & 2 (Includes Cover, Table of Contents, and Commitments, Introduction & Purpose and Need)
- Chapters 3(Alternatives Analysis)
- Chapters 4 (Existing Conditions and Environmental Consequences)
- Chapters 5 (Navigation)
- Chapters 6 (Agency Coordination and Public Involvement)
- Appendix A (Agency Coordination Plan)
- Appendix B Phase 1 Traffic Report, Traffic Report Appendices
- Appendix C (Traffic Technical Memorandums: Reversible Lane Analysis and Alternative Intersection Analyses)
- Appendix D (Community Impact Assessment, Visual Impact Assessment, Relocation Impact Study)
- Appendix E (Environmental Justice Analysis)
- Appendix F (Noise Analysis Report)
- Appendix G (Preliminary Jurisdictional Determination)
- Appendix H (Essential Fish Habitat Technical Memorandum)
- Appendix I (SCDOT Bridge Replacement Scoping Trip Risk Assessment Form, Floodplains Checklist, 2-D Hydraulic Analysis)
- Appendix J (Biological Evaluation)

- Appendix K (Marine Mammal Protection Act Technical Memorandum)
- Appendix L Part One, Part Two (Cultural Resources Survey and Section 106 Consultation)
- Appendix M (Traditional Cultural Property Report)
- Appendix N (Cultural Resources Memorandum of Agreement)
- Appendix O (Section 4(f) Coordination)
- Appendix P Part One, Part Two, Part Three (Hazardous Materials Phase I Environmental Site Assessment)
- Appendix Q (QUS Coast Guard Navigation Report)
- Appendix R Part One, Part Two, Part Three, Part Four Part Five (Public Information Meeting Plans and Summaries)
- Appendix S (Website)
- Appendix T (Newsletters)
- Appendix U Part One, Part Two (Community Meeting Plans and Summaries)
- Appendix V Part One, Part Two, Part Three, Part Four (Stakeholder Meeting Plans and Summaries)

US 278 Corridor Improvements Environmental Assessment Expires June 28, 2024

Mr. Colin then noted that the Town Council Approved Guiding Principles on February 18, 2020, as follows:

- Fix the transportation issues in the corridor in a way that improves the safety and quality of life for all residents, workers, and visitors to Hilton Head Island
 - Address transportation needs for natural disasters and resiliency of island access
 - Consider future transportation alternatives
- Improve the safety and quality of life for the residents of the neighborhoods and businesses directly impacted by the US 278 corridor
 - Stoney Community
 - Neighborhoods on Jenkins and Hog Islands (including but not limited to Windmill Harbor)
- Have gateway to and from Hilton Head Island that the region will be proud of:
 - Aesthetically pleasing and reflecting the Hilton Head Island/Lowcountry values
 - Safe and functional pathways for pedestrians and cyclists
 - Minimizes environmental impacts and enhances the national asset of Pinckney Island

Mr. Colin next stated that the Town Council Approved Recommendations on October 12, 2021 as follows:

Corridor Wide Recommendations

1. Reduce lane widths to 11' to calm traffic & reduce property impacts

2. Eliminate raised curbs in medians wherever possible, encourage existing vegetation and natural drainage in these areas
3. Vary median widths and meander roadway alignments where possible for traffic calming and aesthetics
4. Take advantage of Town-owned property for sake of Parkway improvements
5. Utilize ITS smart signal technology throughout
6. Reduce curb cuts & provide for alternative/safer property access throughout
7. Provide trails on both sides of Parkway where possible with sufficient separation from road and in lieu of sidewalks
8. Create a comprehensive system of safe, comfortable, and attractive shared use paths for cyclists and pedestrians
9. Open/encourage views to the water wherever possible, as a part of the Island's "signature"
10. Ensure integration of unique, Hilton Head-specific signage, landscape schemes, public art program, architectural vocabulary, iconic features, and accent lighting that distinguish this parkway from all others
11. Reduce design & posted speeds throughout the corridor
12. Evaluate the island-wide transportation system

Specific Recommendations

1. Encourage Moss Creek area improvements (commercial redevelopment, access/roadway improvements, trail connections)
2. Establish "Gateway Experience" threshold at west end of Mackay Creek bridges (landscape, island "icon", art, lighting)
3. Reduce bridge mass with two separate bridges and Shared-Use Path on south side of eastbound bridge
4. Reduce bridge lane width to 11', reduce shoulder width on left, only one breakdown lane on right.
5. Provide 14' minimum width non-motorized lane on the bridge with multiple viewing areas and protection/screening of vehicles
6. Attention to bridge design/details as viewed from afar and on-deck (parapet, railings, structural forms)
7. Consolidate Jenkins Island access to one signalized location at C. Heinrichs/Windmill Harbour Entrance
8. Provide traditional turn lanes and intuitive intersection configurations throughout Stoney
9. Eliminate confusing SCDOT U-turns
10. Eliminate left turns and traffic introduction onto Old Wild Horse
11. Create new park south of Parkway in Stoney to authentically showcase Gullah Geechee culture/heritage
12. Consider a new Visitors Center as a part of this park that intentionally showcases this heritage while introducing visitors to the Island's offerings
13. Create a Stoney-authored vision plan for the next generation of that neighborhood
14. Create and professionally staff a Development Corporation as a vehicle for Stoney Advancement

Next Mr. Colin outlined the Town of Hilton Head Island/Beaufort County Memorandum of Agreement which was approved on October 4, 2022:

1. The County and the Town agree to advance the Project in a cooperative manner for the entire duration of the Project.
2. The County and the Town mutually agree to work together in good faith to address the feasibility, and merits of recommendations approved by Town Council on October 12, 2021 (as set forth in Exhibit A) (the "Recommendations") and further agree that one bridge will be designed and constructed for the Project.
3. The County will procure an independent consultant (the "Independent Consultant"), (i.e. – one that does not have a previous or current contractual relationship with SCDOT, the County, or the Town) to perform an additional independent review of the project. This Independent Consultant will conduct an end-to-end simulation and study through and beyond the Project limits to include additional intersections materially consistent with the Scope of Work set forth in Exhibit A.
4. The County and the Town will establish a committee (the "Committee") to select the Independent Consultant through a competitive bid process. The following County representatives shall sit on the Committee: (a) the County Administrator or his designee (b) the Assistant County Administrator for Infrastructure: (c) and the County Transportation Program Manager Consultant. The following Town representatives shall sit on the Committee: (d) the Town Manager or his designee; (e) the Assistant Town Manager of Community Development; and (f) the Town Engineer.
5. All recommendations from the independent review for areas within the project boundary will be considered for inclusion in the project. The County and Town agree to pursue the "Finding of No Significant Impacts" (FONSI) from the Federal Highway Administration concurrent with the Independent Review. If any findings from the Independent Review affect environmental documents submitted for the FONSI, those recommendations will be considered, and the environmental documents will be updated and resubmitted as agreed upon by the County and the Town.
6. The County and the Town, as required as part of the NEPA process, will coordinate with SCDOT to perform a value engineering of the project to identify and eliminate unwanted costs, and improve function and quality as well as to optimize initial and long-term investment, ultimately seeking the best value for the lowest cost.
7. The County and the Town mutually agree to work together, along with SCDOT and Lowcountry Area Transportation Study, to design, implement and maintain a connected and synchronized signal system along the entire length of US 278 from I-95 to Sea Pines Circle. The synchronized system will include fiber connectivity, Adaptive Signal technologies and other tools to help maximize flow. The County and the Town mutually agree to work together to seek funds necessary to acquire and implement the proposed improvements.

8. Any signal improvements from the synchronization project which are not already installed within the corridor prior to the construction of the Project, will be incorporated as such.
9. This Agreement does not provide the Town's municipal consent. Such consent may be provided by the Town Council after the Independent Review has been evaluated by the Town and County and before the right-of-way acquisition phase of the Project begins. Municipal consent by the Town will not be unreasonably withheld.
10. The County and the Town agree that the Independent Review will be the last and final study needed for the Town to make a final decision related to the Project.

Mr. Colin next presented data on the "Traffic Management Assessment" which was prepared by Lochmeuller, the Town's engineering consultant. The data included travel times and performance levels at intersections.

Town Council – Project Considerations were listed by Mr. Colin as follows:

- Project Scope
- Rehabilitate eastbound Mackay Creek Bridge or build new, single 6-lane bridge?
- Shared-use pathway on south side of bridge?
- Meander roadway on Jenkins Island?
- Aesthetics on bridge and through corridor?
- Community Impacts and Improvements?
- Property Impacts and Improvements through Stoney Neighborhood?
- Quality of Life
- Traffic and Transportation
- Traffic Management Level of Service?
- Environmental Impacts?
- Cost, Funding, and Economic Impacts and Benefits?

Next Steps for Council Consideration

- ~~1. Town Council consideration of Beaufort County/SCDOT request for Municipal Consent~~
- ~~2. Path forward should Town Council not grant Municipal Consent to SCDOT~~
 - ~~a. Per SCDOT Secretary Powell – the existing Mackay Creek bridge continues to age in a challenging environment with tides and saltwater. While not load posted today, future inspections may necessitate SCDOT putting a load posting on the bridge which could impact the movement of trucks, buses, and emergency vehicles onto Hilton Head Island.~~
 - ~~b. SCDOT and Beaufort County to Address eastbound Mackay Creek Bridge~~
 - ~~c. State Infrastructure Bank Funding would be reallocated to other projects.~~
- ~~3. Path forward should Town Council grant Municipal Consent to SCDOT~~

- ~~a. Establish Town of Hilton Head Island/Beaufort County Memorandum of Agreement that includes the following project conditions:~~
 - ~~i. Design Elements~~
 - ~~ii. Neighborhood Improvements~~
 - ~~iii. Economic Sustainability~~
- ~~b. SCDOT Project Schedule Advances~~

The Mayor asked for comments from Town Council members. Ms. Brison raised a threshold issue that the Town staff had cited the wrong statute which requires Municipal Consent. She stated that it should be Section 57-5-820 of the South Carolina Code of Laws which provides for mandatory consent instead of Section 57-5-830. She cited the Municipal Consent documents previously required of the Town for the Cross Island Parkway and of the Town of Mount Pleasant for the bridge over the Wando River.

Council members then made comments, asked questions and held discussion regarding: ~~clarification of Section 57-5-820 and Section 57-5-830 of the South Carolina Code of Laws~~; confirmation that SCDOT said the bridge must be six lanes and their authority to do so; confirmation that the position of SCDOT that if it is a single span bridge it needs to be six lanes; confirmation that if the current project is rejected, Council will have to go back and redefine the project and get back in line to obtain funding, etc.; confirmation that if Municipal Consent is not granted to SCDOT and this project is not submitted as defined within the current purpose and need and a solution to this project would die and a new project would have to be defined by going through the full process again; confirmation that if the project doesn't move forward, SCDOT would work to determine which path was most effective and the best use of funds whether it's to rehabilitate or replace the Eastbound Mackey Bridge and it would be replacement with two lanes and if it's a rehab it would not include the seismic upgrades but a replacement would have seismic upgrades; a request to hold off until after the election; a request to ask Senator Davis to continue good work and obtain an extension on the Environmental Assessment along with funding; confirmation Mackey Creek Bridge replacement is eminent; speculation three lanes offers the opportunity of an HOV lane; expression of the need for a bike lane is necessary; acknowledgement we need to control who we are; acknowledgement Council needs to stay on the topic which is bridges; a suggestion to deal with issues we can control; acknowledgement the County is in charge of the projects; acknowledgement the interests of the Stoney Community are in the forefront; inquiry regarding methods to protect causeways due to possible storm surges and confirmation this will be addressed in future phases of design; inquiry into numbers used regarding correct width of existing bridge to the width of the proposed bridge; clarification on requirements for consent and adding conditions; acknowledgement of the need for conditions to be included in Municipal Consent and the MOU with the County and the need to make it public; request for visuals regarding measurement; request that the pedestrian portion of the proposal needs to be changed; proposal to include pedestrian crossing safety as a condition; concern over SCDOT purpose and need to increase capacity and reduce congestion.

~~Council Member Brison made lengthy remarks about her process in coming to her views regarding the project and her proposed conditions.~~

Ms. Brison asked technical questions about plans for the three causeways to address storm surges and the cost of that design and pointed to three options for Municipal Consent: 1) Yes; 2) Yes, with conditions; and 3) No.

Ms. Brison then made remarks about the process she used in leading to her decision and her proposed conditions. Her proposed conditions included:

(1) a Stoney Improvement Plan which consists of a reduction in the proposed number of lanes, pedestrian and bicyclist overpasses, landscaped medians, improved and safe access to all Gullah properties and businesses, and drainage improvements, with all costs included in the Project budget and secured by at least a \$10 million escrow for the Stoney Improvement Plan;

(2) a Pedestrian and Bicyclist Safety Plan which consist of safe refuges in median areas, separation of pathways from vehicular lanes, overpasses and intersection protections, with all costs included in the Project budget;

(3) Aesthetic & Design Elements which consists of landscaped medians, incorporation n of MKSK designs, reduction in the size of the bridge sections by eliminating one travel lane in each direction, bridge designs and corridor entrance elements completed in accordance with Hilton Head Island Design Review Guidelines and Town Council approval of bridge design and corridor entrance elements;

(4) Installation of Improved Traffic Management Systems which consists of incorporating the Windmill Harbour traffic signal into the Town's adaptive traffic signal system testing time of day limitations on left turn, closing left turn on Pinckney Island, and reducing the speed limit to 40 mph, all to be done immediately;

(5) Address storm surges on causeways; and

(6) address bottlenecked mergers with Cross-Island Parkway.

Council members continued to make comments, ask questions and hold discussion regarding: a suggestion that in conjunction with the project and improvements to the Stoney area there should be address the infrastructure and redevelopment needs along with funding which could possibly include a TIF District in a timely manner; use of Town property within the Stoney area to accomplish the goals suggested; the need for an overpass for crossing US278 in the Stoney Area; inquiry as to what a no vote would do to any enhancements included for Stoney; confirmation the funds could be reallocated; and confirmation that if the current project is able to advance securing the current gap in funding is needed to move forward.

Public Comment

Christopher Cliffe addressed Council regarding his opinion that the proposal doesn't solve traffic problems, and the project will destroy the cache of the Island.

Chris Rates addressed Council expressing her concerns regarding transportation alternatives, the lack of bike paths when expecting people to bike from the mainland, the fact that the proposed project is not saving much travel time; and the need to protect the Stoney Community.

Chris Ruffner addressed Council stating additional lanes does not help reduce traffic congestion as well as speed limits do not assist either.

Mel Campbell addressed Council and stated he was a Native Islander and expressed his opinion that the bridge is needed and the changes that brought Stoney to where it is today were caused by design mistakes.

Ray Deal addressed Council noting the Chamber is a voice for all businesses on the Island. The workforce is top priority for all businesses. He urged Council to approve the project.

William Stewart addressed Council stated financial well and development needs to be addressed in the Stoney Community through partnership. He stated the need for safety to be addressed due to lost lives on US278 of which two of his brothers are included.

Steve Robinson addressed Council stating he couldn't believe that Council has to ask Staff as to what would happen if they voted no and if they knew what the purpose of the question was.

David Johnson addressed Council regarding that citizen comments have assisted in working through the project. Some residents are in favor of the project. He stated safety and traffic is a huge issue.

Frank Babel addressed Council stating Stoney needs revitalized and it is appositive thing to do so, and the traffic problems need fixed along with making the bridge structurally safe. He encouraged approving the project.

Eric Sommerville addressed Council and suggested the project move forward but to take the Stoney Area into consideration and not ruin it.

Peter Kristian addressed Council stating a need for six lanes for employees coming on the Island along with the need for bike lanes.

Cherry Norris addressed Council stating the Island is a special place and encouraged Council not to expand the bridge. Her concern is does a bigger bridge mean more development?

Dale Becker addressed Council stating Ky West has more visitors that Hilton Head Island and they do fine. The Gullah Geechee community needs to be honored and taken care of and we definitely do not need bike lanes on the bridge.

Angie Hutchinson addressed Council stating she likes clapping in meetings. She added that Beaufort County doesn't have a good track record. She stated the proposed bridge is wider than the Brooklyn and Manhattan Bridges.

Linda Harrington addressed Council inquiring as to the duties of the Town Attorney and asked why he wasn't in attendance at the meeting. She stated her opinion that the study for the proposed project is flawed.

Gray Smith addressed Council stating the Island shouldn't be asked to give up its power to others. Beaufort County is positional to take advantage of Hilton Head Island.

Carol Buxser addressed Council stating her opposition to the proposed bridge and the bike paths. She encouraged Council to celebrate the Gullah Geechee Community.

Mr. Stewart addressed Council stating he is a Stoney resident and does not trust the SCDOT. He spoke of drainage problems and too many tourists.

Lynn Greeley addressed Council stating the need is to beautify and not add a massive bridge and she feels there are too many tourists.

John O'Toole addressed Council saying he supports the bridge project noting that traffic is contributing to pollution. He stated he has confidence in Council and Staff.

Mayor Perry invited Shawn Colin to address a couple of the questions that were asked.

Mr. Colin said that the travel time savings if a new bridge is put in place would be eight minutes and 49 seconds eastbound and 10 minutes and 36 seconds westbound.

He stated the Mackey Bridge was built in 1956, and the other three bridges were built in the early 1980's.

Mr. Colin explained that the purpose and need for the project identified deems a four-lane bridge does not achieve the purpose of reducing congestions, therefore it is rejected by the project.

Mr. Colin informed Council the impervious surface information is on the project website.

Ms. Brison asked that the Town Attorney address the status of the conveyance of Town-owned land to SCDOT for the Project right-of-way. She requested that it not be conveyed until the Town has an agreement with SCDOT.

Council and staff discussed the next steps forward and the process that will take place.

Adjournment

The meeting was adjourned at 7:48 p.m.

Approved:

Kimberly Gammon, Town Clerk

Alan R. Perry, Mayor

The recording of this Meeting can be found on the Town's website at www.hiltonheadislandsc.gov



Town of Hilton Head Island TOWN COUNCIL MEETING Friday, June 28, 2024, 10:00 AM Minutes

Edits Provided by Council Member Patsy Brison

Call to Order

Mayor Perry called the workshop to order at 10:00 a.m.

Council Members present: Alan Perry, Mayor, David Ames, Ward 3, Mayor Pro-Tempore; Alex Brown, Ward 1; Patsy Brison, Ward 2; Tammy Becker, Ward 4; Steve Alfred, Ward 5; Glenn Stanford, Ward 6

Also present: Marc Orlando, Town Manager; Curtis Coltrane, Town Attorney; Kimberly Gammon, Town Clerk

Invocation – Reverend Steve Salvas, Grace Community Church

Reverend Salvas delivered the Invocation.

Adoption of the Agenda

Mr. Ames moved to approve. Mr. Alfred seconded. Motion carried 7-0.

Ms. Becker moved to postpone the vote on Items 5a. and b. Motion failed due to lack of a second.

Ms. Becker explained her reasoning for asking that the votes be postponed. She referenced a book written by Buzz Carota – *Evolution of a Town*. She stated she is trying to remind members of Council that this project, just like the project that is described in the book with regards to the Cross Island Parkway, has the same elements that the County is looking to do this project to enhance what they can take out of our community without consideration for our residents.

Mr. Stanford reiterated that the County is the sponsor of the project, not the Town. The purpose of the meeting is to enter into an agreement that puts the Town firmly at the table for all decision making.

Mayor Perry read a second letter he received from Secretary Powell. It is below:

June 27, 2024

Mayor Perry:

It is my understanding that the Town of Hilton Head Island intends to take up a Municipal Consent resolution for the US-278 project at a special meeting called on Friday, June 28. I wanted to provide some comments on behalf of the South Carolina Department of Transportation (SCDOT) related to the pending action.

As stated in my letter dated June 20, 2024, time is of the essence. The Environmental Assessment for this project will expire on June 28 absent action from the Town of Hilton Head Island. Moreover, I remained concerned that the existing US-278 eastbound bridge over Mackay Creek will continue to deteriorate absent a plan to move forward. Should Municipal Consent not be granted on June 28, I am prepared to instruct SCOOT staff to begin developing a plan to rehabilitate or replace the existing Mackay Creek bridge only. This could have ramifications to the South Carolina Transportation Infrastructure Bank's agreement to provide \$120,000,000 to Beaufort County for the project.

This project initiated out of a desire from Beaufort County to replace the bridges and improve traffic operations between Bluffton and Hilton Head Island. In lieu of a separate project for the Mackay Creek bridge only, SCOOT entered into an intergovernmental agreement with Beaufort County to serve as project manager of the US-278 bridge and improvement projects.

As is standard practice on any project of this scope and size, SCOOT has engaged with the public, Beaufort County, the Town of Hilton Head Island, and other interested stakeholders in substantial public involvement and studies related to the project. This has resulted in a modified recommended preferred alternative that generally conforms to the Lochmueller recommendation. On May 16, 2024, I sent a letter to Interim County Administrator John Robinson (attachment 1) indicating that the Department of Transportation is willing to proceed with the modified recommended alternative.

Per SC Code Section 57-5-810, SCOOT is required to obtain Municipal Consent when a project occurs within a municipality except for structurally deficient or functionally obsolete bridges that cross the Atlantic Intracoastal Waterway. For this project, SCOOT has determined that the project elements between the bridge approaches and the Cross Island Parkway necessitate Municipal Consent under state law. We are at a juncture where the Town of Hilton Head Island needs to approve or disapprove a resolution authorizing Municipal Consent.

I am in receipt of the draft Municipal Consent resolution. It is SCDOT's posture that it requires a clean Municipal Consent resolution consistent with its standard template (attachment 2) without further stipulations. Therefore, I request that if the Town of Hilton Head Island intends to approve Municipal Consent, it adopt a resolution consistent with our standard template with no additional stipulations being placed on SCOOT. I am amenable to deleting language related to utilities as requested by the Town as the Town does not own or operate a municipal utility.

I recognize that this project will make substantive changes to the crossing from Bluffton to Hilton Head Island, as well as the historic gateway onto the island. It is my intent that, if this project does proceed, SCOOT intends to deliver a quality project that meets all state and federal requirements and improves transportation on Hilton Head Island. To that end, I want to offer the attached comments to the proposed stipulations as a good faith effort that SCOOT intends to cooperatively pursue this project with Beaufort

County and the Town of Hilton Head Island.

SCOOT appreciates the continued partnership with the Town of Hilton Head Island and Beaufort County. We are prepared to deliver a quality project for the benefit of all parties involved.

Sincerely,



Justin P Powell

SCDOT

Secretary of Transportation

The attachments to the letter were not read.

Mayor Perry invited Senator Tom Davis to speak to the efforts he has put into this throughout the process.

Senator Davis explained his role in the process to date which includes facilitating funding for the project, making sure the Town has enough time, space and resources to come up with a decision. He stated that there is about \$300 million committed to the Project, with a delta of about \$60 million for the Projects. He stated that irrespective of SCDOT being the contractor and builder and irrespective of the County being the sponsor and project manager, he has always looked to the Town of Hilton Head and the Council as being representatives of the citizens as being the primary determinant of whether or not this project goes forward.

Senator Davis noted that if Council deems more time is necessary, he will do his best to have the Environmental Assessment extended. He noted that there have been **assessments** extensions granted in the past and some have not. He reiterated Secretary Powell's statement that, absent Municipal Consent, they will go forward with replacement of or repairs on the Mackey Creek Bridge.

Senator Davis reviewed the funding statistics noting that the State Infrastructure Bank has been pressured to take allocations and apply them to projects being built. He commented on comments from previous meetings from members of Council regarding a bilateral relationship with the Town and SCDOT as well as Beaufort County to assure needs are conveyed.

Senator Davis stated that if this project were to move forward, in terms of if consent is given, either with or without conditions, there would then be a process then he would engage in along with other members of the delegation to ensure that those conditions were discharged. He explained it would be to make appropriation advocations in the General Assembly, to work with the County for appropriation requests, work with the Town on a potential TIF District, to go to Washington, DC and talk with the Federal Delegation to come up with funding that is necessary and to make what Council envisions a reality. He said the process is going to take a couple years to move from where we are right now even if Consent is given. He stated the next step would then be for the SCDOT

to submit an application to the Feds for a finding of no significant impact would which take months and there may be processes associated with it that would involve action by this Council. Concluding that, the SCDOT would complete the engineering drawings which the Town will be involved in and that step could take several months.

He summarized that his point is there is a tremendous amount of work to be done even if consent is given, which is going to entail Council's continued involvement throughout the entire process.

He proceeded to review the funding obtained to date for the Gullah Community, which has been a top priority of his, and the process to obtain further funding and answered questions from Council regarding the process.

He concluded with stating the primary thing is getting a project Council feels is reflective of what the people of Hilton Head Island want.

Mr. Orlando stated that he, along with staff and the Town Attorney, have incorporated directives given to them within the proposed resolution and memorandum of understanding. He invited Shawn Colin to come forward and review all the changes and additions.

New Business

Consideration of a Resolution of the Town of Hilton Head Island Authorizing a Memorandum of Agreement with Beaufort County for the William Hilton Parkway Gateway Corridor Project

Mr. Colin conducted a thorough review of the documents and the changes that were applied. He noted there were no changes to the Resolution but there were changes and additions to Exhibit A of the Resolution which is the Memorandum of Agreement (MOA). He detailed each change and projected them on the screen for viewing.

Mayor Perry asked for public comment.

Eric Sommerville addressed Council regarding his concern that rather than having less lanes he would prefer a traffic jam on the bridge.

Lynn Greeley addressed Council stating she feels like she is in Washington, DC and expressed her views in opposition to the project.

Skip Hoagland addressed Council noting the traffic problem is not caused by the resident but by allowing too much tourism. He stated tourism needs to be balanced and spoke in opposition to the project.

Dee Anthony address Council voicing her concern for Stoney and all the residents on the north end of the Island. She stated her opinion that this will expand further north to all of the neighborhoods including Squire Pope, Gumtree, Spanish Wells, Marshland Road and many vulnerable neighborhoods.

Bill Fishburne addressed Council regarding his support for the project noting service workers need to have better access to Hilton Head Island.

Melinda Tunner addressed Council stating she has spoken with many residents of Ward 6 and most agree the bridges need replaced but do not want three travel lanes in each direction and most want two bridges as opposed to one structure.

Dale Becker addressed Council addressed travel time from Old Town Bluffton to Skull Town of Hilton Head Island Town Council

Meeting Minutes

6/28/2024

Creek noting driving time was 18 minutes, biking time was 46 minutes and walking was three hours. His point was a bike lane is not needed for the structure.

John Casey addressed Council stating the document is being produced in a rush and stated his opinion that Beaufort County will not take the Town's conditions into consideration. He encouraged Council to vote no to the resolutions.

Lynn Bullard addressed Council stating the project has been taken from its original purpose with its size and number of lanes.

Ashleigh Phillips addressed Council reminding them that however they vote constituents are watching.

Thoms C. Barnwell, Jr. addressed Council thanking all Town council, Beaufort County Council and staff. He stated the highway needs to be improved, safety needs to be considered and repairs should be completed. He encouraged them to focus on evacuations during hurricane season.

Morris Campbell addressed Council stating history is different from everyone's perspective. He stated the proposal makes sense in securing the Stoney Neighborhood and the residents. He encouraged Council to keep working on it. He stated he realizes the process will take give and take.

Rosmary Kimball addressed Council asking that Council not rush this process. She encouraged them to postpone the vote.

Linda Harrington addressed Council stating she felt a TIF District is not appropriate. She added that the Greater Island Council is a lobbying group and if any Council members are members of the group, they should recuse themselves from voting on these resolutions.

Christopher Cliffe addressed Council needs to invest time and effort into finding a solution to getting traffic coming onto the Island more directly to the Cross Island Parkway and then backing into a bridge design. He emphasized the need to improve safety in the Stoney Community.

Jack Alderman addressed Council stating he supports the plan and they involve the best solutions. He feels important criteria includes: quality of life, workforce; community values and economic vitality.

Diederick Advocaat addressed Council regarding the need to be a good neighbor. He stated he feels the WHP Advisory Committee has not finished its work and the need for better communication. He encouraged Council to not commit to two or three lanes but to wait to see what works best.

Joe Judge addressed Council suggesting the bridge should be repaired rather than expanding it.

Ira Polack signed up and was called on but was not present to speak.

Pamela Martin Ovens addressed Council stating the Safety Committee should review this project. She suggested just rebuilding the existing bridge as is and to address the problem with parking with the funds saved.

Chuck Lobaugh addressed Council thanking all for the compromise solution to access his building and business from US278 and Old Wild Horse Road.

Gerald DeVito addressed Council regarding the need for the improvements to deal with traffic congestion and safety issues.

John Stewart addressed Council encouraging them to make another way onto the Island.

William Stewart addressed Council stating he feels the plan was not properly prepared and was created by misinformed individuals.

John Smarszly addressed Council encouraging them to vote no on the resolutions.

Louise Cohen addressed Council noting her concerns regarding signage, and the black cemetery. She encouraged Council to replace the bridge but not to destroy things.

Steve Robinson addressed Council noting Council should not do what they think they should do but what their constituents want them to do.

Lee Lucier addressed Council regarding his support for the project stating it needs Hilton Head Island input and design.

A woman who did not identify herself spoke encouraging Council to move forward and listen to make the best decision they can.

John Score addressed Council in support of the project stating we need the people that travel to the Island.

Ken Campbell addressed Council voicing his support for the project and expressed his appreciation for all the hard work done by everyone and with the conditions and proposals going forward will ensure that it is done right.

Frank Babel addressed Council voicing his support for the project encouraging Council to not postpone the project but to move forward.

David White addressed Council and encouraged them to give Municipal Consent with conditions.

Carol Buxser addressed Council stating the need for the bridge, but the proposed bridge is not designed the appropriate scale and design for Hilton Head Island. She expressed her opinion the bridge should not be 6 lanes and there should not be a bike path.

Jerry Cutrer addressed Council and expressed his support for passing the Consent resolution and encouraged Council to vote in favor of it.

Cole Peterson addressed Council and expressed his appreciation concerning the attention given to protecting the Gullah Community. He spoke in support of the project and encouraged Council to vote in favor of Municipal consent.

Brian Harrington addressed Council stating that there are 11,000 or more people against the project. He encouraged Council to listen to their constituents and wait until all alternatives are in before a decision is made.

Mayor Perry stated there was a need to enter into Executive Session for the purpose of advice from legal counsel.

At 1:03 p.m. Mr. Ames moved to enter into Executive Session for the purpose stated by the Mayor. Mr. Alfred seconded. Motion carried 7-0.

At 2:23 p.m. Ms. Brison moved to end Executive Session and return to the meeting. Mr. Alfred seconded. Motion carried 7-0.

Mayor Perry asked if there was any action taken during Executive Session. Mr. Ames stated no actions were taken during Executive Session.

Mr. Ames moved to approve the resolution of the Town of Hilton Head Island authorizing a memorandum of Agreement with Beaufort County for the Hilton Head Island Parkway Gateway Corridor Project as presented with the edits provided today. Mr. Alfred seconded.

Ms. Brison referenced Item #4 under Sub-Section C which reads up to two pedestrian overpasses and intersection protections. She suggested it reads to read: Up to two pedestrian overpasses within the Stoney Historic Community and intersection protections throughout the corridor that will facilitate safe movement of pedestrians and bicyclists across the proposed roadway area.

Mr. Ames amended his motion to correspond with Ms. Brison's recommendation.

Mr. Colin was asked to address the inquiry regarding turn lanes on or off Wildhorse Road. Mr. Colin stated that the Wildhorse Road turn lanes remain as they are today. He added that intersection has advanced upgrades with addition right turn lane and a second left turn lane off of Spanish Wells Road. He added there was a provision in the document that speaks to further consideration of left turn restrictions during peak hours which will be assessed with SCDOT. In conclusion, he said there no restriction in the intersection design for left turns.

Ms. Becker read a statement from Richard Bisi at his request. Mr. Bisi wrote the decision they are about to make will have ramifications for decades to come and could change the character of our Island. He stated the Advisory Committee has not finished their job and urged Council to vote against Municipal Consent.

Ms. Becker made a motion to remove Item 4.c. – the installation of up to two pedestrian overpasses from the document being reviewed for Municipal Consent and MOA and that further work be done to find a solution to bringing that community together. Motion failed due to lack of a second.

Ms. Becker made a motion to remove Item 5.a. from the document. Motion failed due to lack of a second.

Ms. Becker moved to amend Item 6.d by striking "County Council" as part of the language. Ms. Brison seconded.

Mr. Stanford stated the entrance to the bridge is not within Town limits and should require County approval. Mr. Colin added that the entire project is within the County. Clarification was provided that the Design Review Board would only have authority to review the aesthetics as you come through the corridor. **After Town Council discussion, Mr. Ames called the question.**

Motion failed 5-2 (Alfred, Ames, Brown, Perry, Stanford opposed)

Ms. Becker had numerous questions and Mr. Colin addressed each one as she asked.

Mr. Ames moved to close discussion. Mr. Alfred seconded.

Mayor Perry called for the vote. **Amended motion carried 6-1 (Becker opposed).**

Consideration of a Resolution of the Town of Hilton Head Island Authorizing Municipal Consent with the South Carolina Department of Transportation for the

William Hilton Parkway Gateway Corridor Project

Mr. Colin clarified that the current resolution as written will include the amendments made in the earlier vote on the MOA **with Beaufort County**.

Mayor Perry invited Senator Davis to speak.

Senator Davis addressed Council stating Secretary Powell made a suggestion that Council deliver the consent and that Council take up the conditions in a separate resolution which would communicate the Town's expectations and provide a blueprint for the Delegation to try to accomplish the things that the Town deems important in connection with this project.

Curtis Coltrane addressed Council explaining explained that following the information delivered by Senator Davis regarding the statements from Secretary Powell, two things have been completed for Council's consideration. The first is a proposal for a resolution for Municipal Consent with no conditions attached to it. He explained this is the form of Municipal Consent the Secretary delivered to the Town with his correspondence. He clarified it is not the text that is on today's agenda, or that was included in the agenda packet. If Council should decide that it wished to do this a motion to amend this resolution would be needed in order to conform the document to what the SCDOT wishes to see. Secondly, following the advice of Senator Davis, a second resolution has been created that expresses the will of Council that includes all of the items that were in the resolution that is on today's agenda packet, as well as incorporating the Town's expectation that all of the things set out in Secretary Powell's correspondence to the mayor will be complied with and including that the Town expects the assistance of the County's Legislative Delegation to push through the design, construction, and funding of this project in a manner consistent with what the Town wishes. Since this is a new resolution, in order for Council to consider that today, there would need to be a motion and finding by the Town that some form of emergency or exigent circumstance exists and in this case you are facing a deadline of 5:00 p.m. and we have only recently received the advice from the Secretary on what the SCDOT says it requires. Council would then have to amend the agenda to consider adding the resolution which requires a 2/3 vote.

Mayor Perry asked for public comment.

Christopher Cliffe addressed Council sharing his opinion that rather than using the word will rather than shall within the resolution. He stated he was of the opinion the document was a poor contract. He questioned the timing of Secretary Powell's response.

John Casey addressed Council stating he feels Council is just giving clean consent and a wish list. He doubts Beaufort County will honor the wish list. He feels the conditions should be within the Consent.

Mr. Ames moved to amend the proposed resolution by deleting the text of the proposed resolution following the words Project ID Number P030450 in its entirety and replacing it with the following text:

WHEREAS, the South Carolina Department of Transportation (SCDOT) proposed to construct, reconstruct, alter, or improve the certain segments of the highway in the State Highway System referenced above which is located within the corporate limits of the Town of Hilton Head Island, South Carolina (hereinafter, the “Town”).

WHEREAS, the Town wishes to authorize the construction and improvements of the aforesaid highway in accordance with the plans to be prepared by or for SCDOT (the “Project Plans”).

NOW, THEREFORE, BE IT RESOLVED that, pursuant to S. C. Code Ann. § 57-5-820 (2018, as amended), the Town does hereby consent to the construction or improvements of the aforesaid highway within its corporate limits in accordance with the Project Plans, and further, the Town, having reviewed the plans for said construction, does hereby approve said plans as provided in S. C. Code 57-5-830.

BE IT FURTHER RESOLVED that the foregoing consent and approval shall be the sole approval necessary from the Town for SCDOT to complete the project under the Project Plans and constitutes a waiver of any and all other requirements with regard to construction within the Town’s limits. The foregoing waiver and consent shall also extend to the benefit of utility companies engaged in relocating utility lines on account of the Project. Further, the Town shall exempt all existing and new right-of-way and all other properties purchased in connection with right-of-way for the Highway from any general or special assessment against real property for municipal services.

BE IT FURTHER RESOLVED that the Town hereby signifies its intention to faithfully observe the provisions of Chapter 5, Title 56, Code of Laws of South Carolina, 1976, and all amendments thereto relating to the regulation of traffic on the Highway to be constructed, reconstructed, altered or improved as hereinabove identified and further agrees to refrain from placing or maintaining any traffic control devices upon any section of the Highway without having first obtained written approval of the South Carolina Department of Transportation as required by S. C. Code Ann. § 56-5-930 (1976, as amended), or enacting any traffic regulation ordinances inconsistent therewith.

Mr. Alfred seconded.

Ms. Becker moved to ask for an extension. Motion failed for lack of a second.

Ms. Brison objected to being forced with Municipal Consent without conditions she cited clear precedent with SCDOT accepting “conditional consent” for the Cross-Island Parkway and with other jurisdictions.

Council held discussion regarding the amendment and process. The Town Attorney clarified the items in question.

Mayor Perry called for a vote.

Motion passed 4-3 (Bown, Becker and Brison opposed).

Mr. Ames moved to approve the resolution authorizing Municipal Consent be given

to SCDOT, without conditions, as amended.

The Mayor called for public comment.

Christopher Cliffe stated that the Council should only approve Municipal Consent with conditions.

After discussion the motion passed 5-2 (Becker and Brison opposed).

Mr. Ames moved to amend the agenda to add a resolution regarding the sense of Town Council related to this project and expectations of the Town Council regarding the US278 Corridor, and that the Town is faced with an emergency exigent circumstance related to the deadline that is imposed on the Town for the decision on Municipal Consent and the information delivered today by the SCDOT regarding the form of Municipal Consent that is acceptable to the Department in addition to the emergent and exigent circumstance. The text in the proposed resolution is the same text that is in the proposed Municipal Consent Resolution that was attached to the agenda for today's meeting, meaning that nothing in the proposed resolution to be added to the agenda is new, rather it is a change of the methodology. Mr. Alfred seconded. Concluding discussion by the Council, the motion carried 6-1 (Becker opposed).

Consideration of a Resolution of the Town of Hilton Head Island Expressing the Sense of the Town Council Regarding Compliance with Elements of the U.S. Highway 278 Corridor Project.

Shawn Colin approached the dais and explained the resolution that was added to the agenda. Council further discussed the MOA with the County and the prepared resolution with the conditions in detail.

Mayor Perry asked for public comment.

Christopher Cliffe addressed Council noting Council's responsibilities are to the Town and Secretary Powell's responsibilities are to the SCDOT. He said with the Town signing off on the MOA with the County and the resolution for Municipal Consent with the SCDOT, there is no way of enforcing the conditions in this resolution.

The Council held further discussion on the proposed resolution. **Mr. Ames moved for Council to approve a resolution of the Town Council for the Town of Hilton Head Island, South Carolina, expressing the sense of the Town Council regarding the project to improve the US Highway 278 Corridor from the intersection of US Highway 278 and Moss Creek Drive to the Intersection of US Highway 278 and Spanish Wells Road and Wildhorse Road. Mr. Stanford seconded.**

After points of view by various Council members were given Mayor Perry called for a vote. **Motion carried 6-1 (Becker opposed).**

Public Comment - Non Agenda Items

None.

Adjournment

The meeting adjourned at 4:26 p.m.

Approved:

Kimberly Gammon, Town Clerk

Alan R. Perry, Mayor

The recording of this Meeting can be found on the Town's website at
www.hiltonheadislandsc.gov



Town of Hilton Head Island TOWN COUNCIL MEETING Tuesday, August 20, 2024, 3:00 PM Minutes

Call to Order

Mayor Perry called the meeting to order at 3:00 p.m.

Council Members present: Alan Perry, Mayor, David Ames, Ward 3, Mayor Pro-Tempore; Alex Brown, Ward 1; Patsy Brison, Ward 2; Tammy Becker, Ward 4; Steve Alfred, Ward 5; Glenn Stanford, Ward 6 (via Microsoft Teams)

Also present: Marc Orlando, Town Manager; Curtis Coltrane, Town Attorney; Kimberly Gammon, Town Clerk

Invocation – Rabbi Brad Bloom, Congregation Beth Yam

Rabbi Bloom delivered the invocation.

Adoption of the Agenda

Mr. Alfred moved to approve. Ms. Becker seconded. Motion carried 7-0.

Approval of the Minutes

Regular Meeting Minutes of June 18, 2024

Regular Meeting Minutes of July 23, 2024

Emergency Meeting Minutes of August 6, 2024

Mr. Ames moved to approve the above referenced minutes. Mr. Alfred seconded. Motion carried 7-0.

Report of the Town Manager

Mr. Orlando provided a synopsis and after-action report regarding the recent tropical storm Debby. He extended his appreciation to Town Council, the Community and Town staff for their efforts during the storm.

Mr. Orlando stated that beginning on August 2, staff initiated communication with private communities, golf courses, property management agencies to warn them of the potential risks associated with Debby and urged them to lower water surface elevations and lagoon systems to maximize storm water storage capacity and to clean all drainage system intakes. The Town inspected critical components of the Town's drainage infrastructure, including the four pump stations, major controls structures and primary channels and outfalls. Staff cleared the beach of items that would cause problems and stabilized Town facilities and parks.

Tropical storm Debbie began affecting Hilton Head on the evening of August 4 and the Town was warned that a total of 30 inches of rain was anticipated for our area. While the storm did not bring 30 inches of rain to us, Hilton Head Island received 10 inches of rainfall from Sunday to Wednesday and two feet of storm surge in and around the same time at high tide.

Palmetto Electric reported three outages which resulted in 5700 customers without service. They returned power quickly. Mr. Orlando referenced the mobile application MyHHI that is available to residents for reporting issues during these events. He stated there were close to 30 requests through the MyHHI applications which were addressed before the Emergency Operations Center closed. Through a request by the Gullah Geechee Historic Neighborhood Development Corporation, as well as Fire Rescue Staff several wellness checks were conducted. Staff responded to several reports of flooding across the Island and staff responded as quickly as possible to verify, assess, document and help with the situation. He referenced two of the areas affected by flooding which were Helmsman Way and Sea Olive Road in Point Comfort. Staff and a team from SCDOT were able to restore flow to the drainage structure on Helmsman Way and the Sea Olive Road blockage was cleared with assistance from the Department of Transportation Beaufort Maintenance Office.

Mr. Orlando reported that the pump stations (Lawton, Jarvis Creek and Wexford) pumped over four hundred and forty-one million gallons of water within 161 hours. He stated there were a total of seven damaged structures (5 residential and 2 commercial), mostly due to flooding issues.

Mr. Orlando stated that there are over 75 after-action items from staff which will be used for future preparation and response to these types of disasters. An example for future preparation is the need for sandbags to be dropped on Hilton Head Island. It was learned that Beaufort County did provide them to Bluffton and the northern part of the County but due to limited staff, they could not include Hilton Head Island. He stated that if we need sandbags in the future, a partnership will need to be formed with the County going forward. Staff coordinated with the County regarding ditch maintenance issues, and they are working on improvements. The Emergency Management Dashboard will be improved for staff, Council, and community access, along with a daily situation report which will be distributed to Council and shared with the community as a whole.

Mr. Orlando stated the need to assess options to position a Jet Vac truck to provide timely responses during future incidents. He expressed appreciation to the SCDOT for having a Jet Vac truck close by and to Beaufort County for mobilizing with the Town.

Mr. Orlando stated that Jarvis Creek, Lawton, Wexford pump stations and the Shipyard booster-pump station are key in the line of defense against flooding. He explained Jarvis Creek pumps water from 1000 acres into Jarvis Creek, Lawton Station protects 2000 acres by pumping to Lawton Creek and Wexford manages water flow into Broad Creek that services a 1500-acre watershed. He noted these pump stations are not just for immediate areas but for significant surrounding areas and are designed to operate during these extreme events demonstrating resilience and preparedness for our community.

Mr. Orlando expressed his appreciation to the leadership and staff for a job well done.

Hilton Head Island Destination Marketing Organization (DMO) Quarterly Report -
Angie Stone, Assistant Town Manager

Ms. Stone addressed Council stating that staff has worked closely with the Designated Marketing Organization (DMO) to ensure alignment of their efforts on the Town's behalf with the destination values Council has articulated. The report not only provides an insight into the activities the DMO is taking on the Town's behalf, but also gives Council an opportunity to ask questions of the DMO Leadership. She introduced Ariana Pernice, Vice President of the Visitors and Convention Bureau.

Ms. Pernice noted the report encompasses April, May and June of 2024. She informed Council that the New York Times highlighted Andrew Carmine's efforts surrounding mariculture and how he brings that forward through his efforts. The article touches on our ecotourism. She emphasized the importance of the article highlighting the destination which is Hilton Head Island. She noted the results of the article with an outreach of 366,783 in print circulation, and 143 million in UVPM/Digital audience.

In terms of paid media partnerships, the DMO is working closely with Kingdom Magazine. There was piece which was a three-page run that was in the magazine from April through July. The distribution was over 205,000 and the readership is over 780,00. More importantly the piece speaks to that high end consumer.

The Smithsonian is another paid media partnership which uncovers the surprising history of Hilton Head Island's 16th Century Capital. The native article drives awareness of Hilton Head Island and highlights partners in the arts, culture and history sectors, combined with a digital campaign. Full performance results will be finalized at the conclusion of the campaign which runs from May through August 2024 and published in the next report. She stated the piece has over one million impressions to date.

Ms. Pernice stated that during Covid and post Covid a focus was on the domestic traveler but since Covid international focus is an important piece to the conversation of travel and tourism. She referenced the international relationships regarding paid media one of which is Wallpaper Magazine – The Travel Issue. Wallpaper is an international publication focused on design and architecture, fashion, travel, art, and lifestyle. She noted a 1.7 million digital audience and over 100 thousand print distribution. Conde' Nast Traveler campaign with dates from October 2023- June 2024. She reviewed results of the media partnership which resulted in 21.5 million impressions, 1.9 million views of the video and 214,000 TikTok views that viewed the video in its entirety.

Ms. Pernice noted the importance of the Hilton Head Island Official Vacation Planner. The Vacation Planner brings our destination into the homes of our visitors, further instilling our core values and key attributes while serving as a planning tool for those looking to travel to Hilton Head Island. The distribution

consists of online requests, phone inquiries, Savannah Airport, Hilton Head Island Airport, South Carolina Welcome Centers, AAA offices nationwide, hotel partners and tradeshow and events. There is a total of 85,000 printed with a quarterly distribution of 13,050. She informed Council the Vacation Planner has been recognized for the best in the country which is very exciting.

Destination website and social media resulted in the following: The combination of website analytics and social media insights empowers data-driven decision-making, ensuring adaptability and responsiveness to digital out-marketing efforts. There was a total of 986 thousand visits/sessions, 789,000 users and 400,000 partner referrals. Top pages visited included the Homepage, Things to Do, Dining and Offers. Based on available data women made up the largest percentage of visitation, while users within the 55-64 age range visited the website most frequently.

The DMO has started capturing how many posts are made regarding Wellness, Recreation, Arts & Culture, Ecotourism and History. She reported the top three posts for the fourth quarter were regarding the Sea Turtles.

A review of the data regarding hotels, home and villa rentals the fourth quarter was down 8%, with ADR up 2% and Rev PAR was down 6%. She noted this is being monitored and they are working with hoteliers. They have made adjustments with content and are tracking, articulating and communicating with partners in the community regarding efforts the DMO can do to adjust as well as what they can do to help support the needs in the marketplace.

Members of Council asked questions, made comments and held discussion regarding: appreciation that the DMO is highlighting community values; inquiry as to the efforts regarding shoulder travel versus summer travel; confirmation that the DMO does not focus is on bringing visitors to the Island during the summer time frame but focus is on off-season and early spring time frame to ensure that brand awareness efforts are working; a request to see how the DMO is doing the focus of attracting visitors in those time frames; inquiry as to whether the decline in occupancy is industry wide; confirmation the decline is national; confirmation the statistics being presented are specifically for the 4th quarter report versus the 4th quarter report of the previous year; inquiry regarding pre-Covid comparisons; a request to separate input from residents and visitors; inquiry regarding social media posts regarding the community values; confirmation posts are a combination of both user generated and DMO assets; a suggestion to draw them evenly or focus on the ones that don't have as many posts; the need for itinerary focused suggestions for the five Community Values; the need for a return on investment regarding the Community Values; and an inquiry into the forecasts for future months and the need to have that information going forward on a regular basis.

General Reports from Town Council

Ms. Brison congratulated Fire Chief Joheida Fister for receiving the 2024

Presidential Award from APCO which is a 911 Communications Council.

Mayor Perry noted the following upcoming workshops:

September 16 – Priority Amendments of the LMO

September 24 – District Plans

October 8 – Major Thoroughfares Plan/Adaptive Signals

October 22 – Beach Renourishment Resiliency Update/Stormwater Utility Update

He noted Senator Davis was in attendance at tonight's meeting and thanked him for his presence.

Report of the Lowcountry Area Transportation Study – Glenn Stanford

Mr. Stanford reported that at a recent meeting there was a review of long-term plans. He stated they are seeking input on public transportation issued and encouraged all to go to the website and complete the survey. He stated that there was an emphasis on what is going on with the expansion and widening of I-95. He said there are plans to widen I-95 from the border up to Exit 8 which is the Hilton Head Island exit and it is projected to be completed in six years.

Report of the Lowcountry Council of Governments – Tammy Becker

No report.

Report of the Beaufort County Airports Board – David Ames

No report.

Report of the Southern Lowcountry Regional Board – Glenn Stanford

No report.

Report of the Island Recreation Association Board – Alex Brown

Mr. Brown reported the Board and staff members met for an Annual Planning Session with discussion regarding short- and long-term goals resulting in a change regarding working committees. He stated the Island Recreation Center website is now in English and Spanish.

Report of the Community Services and Public Safety Committee – Tammy Becker

Ms. Becker reported the Committee met on August 19 to discuss a parking fee implementation. After a presentation by Mr. Gruber, the Committee held discussion and heard public comments regarding the item and voted in favor of moving the recommendation forward to Town Council for review and consideration.

Report of the Public Planning Committee – David Ames

Mr. Ames reported the Committee met on July 22 and heard a report from the Lowcountry Regional Transportation Authority regarding the Palmetto Breeze Annual Service Plan. The report included updates regarding the trolley service, beach shuttle service and the future capital and systems improvements. Following the report the Committee voted to request the Town Manager investigate alternative strategies to address transportation challenges and opportunities for regional and Island services

with the goal of increasing ridership.

Report of the Finance and Administrative Committee – Alex Brown

No report.

Unfinished Business

Consideration of an Ordinance of the Town of Hilton Head Island, South Carolina Authorizing the Execution and Delivery of Easements to the Hilton Head Public Service District Encumbering Real Estate Owned by the Town of Hilton Head Island, South Carolina Under the Authority of S.C. Code Ann. Section 5-7-40 and Section 2- 7-20, Municipal Code of the Town of Hilton Head Island, South Carolina, and Providing for Severability and an Effective Date - Second and Final Reading - Josh Gruber, Deputy Town Manager

Mayor Perry noted this item was approved unanimously at the first reading held on July 23rd. He asked if members of Council felt the need for a presentation at this time. All were in agreement there was no need for a presentation.

Mr. Ames moved to approve. Mr. Alfred seconded.

There were no requests for public comment.

Motion carried 7-0.

New Business

Consideration of a Resolution Authorizing the Town Manager to Execute an Intergovernmental Agreement with Beaufort County for the William Hilton Parkway Safety and Pedestrian Improvements from Beach City Road to Dillon Road and along Palmetto Bay Road - Shawn Colin, Assistant Town Manager

Mr. Colin stated this is an execution step in a project Town Council has supported. He proceeded to conduct a presentation.

In January 2024, Town Staff and Beaufort County began discussions relating to potential funding available for projects on Hilton Head Island. Beaufort County advised that County Impact Fee funding was available for projects that improve safety or improve capacity on William Hilton Parkway and Palmetto Bay Road with the intent that they be completed by October 2024.

The two projects recommended by Staff are projects that meet the criteria and can be accomplished by the October 2024 deadline:

- William Hilton Parkway - Northridge Area Segment 3 Safety Improvements

This project will update crosswalk pavement markings and replace existing pedestrian crossing signs with a push button rectangular rapid flashing beacon (RRFB).

- William Hilton Parkway and Palmetto Bay Road Intersection Safety Improvements, Signage and Pavement Marking

This project will update pavement markings, street signs, and make safety

improvements to intersections. The IGA is in the amount of \$600,000 and was unanimously approved by Beaufort County Council on April 8, 2024.

On July 9, 2024, the Finance & Administrative Committee voted unanimously to recommend this Resolution to Town Council for approval.

Members of Council asked questions, made comments and held discussion regarding: appreciation to staff for moving the item forward; acknowledgment of appreciation to County Council for providing funding for this project; and confirmation that staff is trying to obtain approval for puck lighting in the crosswalks and a reduction in the posted speed limit to 35 mph.

Consideration of a Resolution to Support a Best Buddies Certified Inclusive Playground at Shelter Cove Community Park - Shawn Colin, Assistant Town Manager

In April 2024, the Town was approached by Miracle Recreation and Best Buddies regarding a collaborative partnership to bring inclusive playgrounds to communities across the United States, including Hilton Head Island.

Miracle Recreation, a playground manufacturer for nearly a century, and Best Buddies, a nonprofit dedicated to creating opportunities for friendship, employment, leadership development and inclusive living for people with intellectual and developmental disabilities (IDD), have announced an ambitious program to develop Best Buddies commercial playgrounds and Buddy Benches. Best Buddies-Miracle Recreation playgrounds will be designed to provide a new standard of best-in-class inclusive and accessible playground equipment for all ages and abilities.

Best Buddies + Miracle Recreation Inclusive Playgrounds are intentionally designed so children of all abilities and their caregivers can play, be challenged and have fun together. Their playgrounds go beyond wheelchair accessibility to include designs and features that support the needs kids with intellectual and developmental disabilities, so everyone has a truly inclusive, inviting and enjoyable playground experience.

Miracle Recreation and Best Buddies expect to have their Buddy Benches and first inclusive playgrounds installed in 2024.

Staff believes the recently approved Shelter Cove Community Park expansion provides the best opportunity to participate in this program. The Shelter Cove Community Park master plan includes a new, larger, inclusive playground in the park programming components. Staff received Parks and Recreation Commission input on the program and their recommendation for approval to Town Council.

Best Buddies is a nonprofit 501(c)(3) organization dedicated to establishing a global volunteer movement that creates opportunities for one-to-one friendships, integrated employment, leadership development and inclusive living for people with intellectual and developmental disabilities (IDD). Founded in 1989 by Anthony K. Shriver, Best Buddies is a vibrant organization that has grown from one original chapter to nearly 3,000 middle school, high school, and college chapters worldwide. Today, Best

Buddies' 11 formal programs - Elementary Schools, Middle Schools, High Schools, Colleges, Citizens, e-Buddies®, Jobs, Ambassadors, Promoters, Transitions and Inclusive Living - engage participants in each of the 50 United States and in 49 countries, positively impacting the lives of nearly one million people with and without disabilities around the world. In many cases, as a result of their involvement with Best Buddies, people with intellectual and developmental disabilities secure rewarding jobs, live on their own, become inspirational leaders, and make lifelong friendships. For more information, please visit www.bestbuddies.org.

In April 2022, Staff and their consultant team developed a project scope for the expansion of Shelter Cove Community Park, which has been open to the public since 2015. The scope of work identified opportunities for enhancements to park amenities including vehicular parking, playground expansion, and views to Broad Creek. The Master Plan for Shelter Cove Community Park includes the following improvements:

- Expansion of the existing park's Promenade,
- Pathway network through an existing forested area,
- Expanded passive open lawn spaces with public art,
- A larger, more inclusive playground, • Additional vehicular parking, and
- Iconic overlook structure with views of Broad Creek.

On April 18, 2023, Town Council voted unanimously to adopt the Master Plan for Shelter Cove Community Park

Town Council recently approved funding in the FY25 Capital Budget for the final design and permitting for the park.

On July 11, 2024, the Parks & Recreation Commission voted unanimously (6-0) to recommend Town Council consider supporting the Best Buddies certified playground.

If this is approved by Town Council, Staff would work with our park design team and the Miracle Recreation representatives to design a playground that is Best Buddies certified and appropriate for Hilton Head Island.

Miracle Recreation equipment can be purchased from a cooperative purchasing program that allows the Town to purchase equipment from existing, competitively solicited contracts. Cooperative purchasing is "Procurement conducted by, or on behalf of, one or more Public Procurement Units" as defined by the American Bar Association Model Procurement Code for State and Local Governments. This form of competitive purchasing meets the Contracting/Procurement requirements established in Title 11 of the Town's Municipal Code.

Sue Churchich provided background regarding Best Buddies stating that Miracle and Best Buddies came together early in the year which resulted in producing a very Best Buddy specific playground. She noted this will create another identity for the Town of Hilton Head Island in attracting visitors to the Island.

Mr. Ames moved to approve. Ms. Brison seconded.

There were no requests for public comment.

Members of Council asked questions, made comments and held discussion regarding: consensus the choice of Shelter Cove Park for the location is a good one; an inquiry to define the partnership; confirmation the Town will fund the entire project; confirmation the Town will coordinate on the design and integration of the program elements within the park playground before executing the project; and confirmation this makes us an inclusive community.

Motion carried 7-0.

Public Comment - Non Agenda Items

Richard Bisi address Council stating he felt Council granting Municipal Consent to a deeply flawed project will go down in history. He expressed his dissatisfaction in Town Council's actions.

Melinda Tunner addressed Council stating granting Municipal Consent is just one step in a very long process and the building of the new bridge and roadways is estimated to be completed by the end of 2030. She encouraged all to focus on things that can be done to control traffic during the meantime.

Executive Session

Discussion of Negotiations Incident to Proposed Contractual Arrangements and Discussions for the Proposed Sale or Purchase of Property (Pursuant to the South Carolina Freedom of Information Act Section 30-4-70 (a)(1)) related to:

1. Pope Avenue Area
2. St. James Baptist Church Relocation
3. Marshland Road Area
4. South Forest Beach Drive Area
5. Easement Requests by the South Island Public Service District
 - a. Pope Avenue
 - b. William Hilton Parkway
 - c. Wexford Drive
6. Mitchelville Road Area
7. Beach City Road Area

Discussion of the Employment, Appointment, Compensation, Promotion, Demotion, Discipline, or Release of a Person Regulated by a Public Body (Pursuant to South Carolina Freedom of Information Act 30-4-70 (a)(1)) related to:

8. Discussion of the Annual Performance Review of the Town Attorney and Contractual Matters Related Hereto

At 4:33 p.m. Mr. Ames moved to enter into Executive Session for the purposes

stated by the Town Manager listed above. Mr. Alfred seconded. Motion carried 7-0.

At 6:36 p.m. Mr. Ames moved to end Executive Session and return to the meeting. Ms. Brison seconded. Motion carried 6-0. (Mr. Stanford was not in attendance at this time.)

Action from Executive Session

Mr. Ames moved that the Town Council authorize the Town Manager to execute and deliver a revocable license agreement by and between the Town of Hilton Head Island, South Carolina, and the Beach House Owner, LLC, granting the Town and its contractors a right of entry over the property of the Beach House Owner, LLC, for access to the Beaches of the Atlantic Ocean. Ms. Becker seconded. Motion carried 6-0.

Mr. Ames moved that the Town Council authorize the Mayor and Town Manager to execute and deliver the agreement by and between the Town of Hilton Head Island, South Carolina, and 69 Pope LLC, for the purchase and sale of 1.286 acres, more or less, on Pope Avenue, and to take such other and further actions as may be necessary to complete the transaction described in the agreement. Mr. Alfred seconded. Motion carried 6-0.

Mr. Ames moved to extend the contract with the Town of Hilton Head Island Town Attorney for an additional 12 months, under the same terms and conditions. Ms. Becker seconded. Motion carried 6-0.

Adjournment

Mr. Ames moved to adjourn. Ms. Becker seconded. Motion carried 6-0.

Approved:

Kimberly Gammon, Town Clerk

Alan R. Perry, Mayor

The recording of this Meeting can be found on the Town's website at www.hiltonheadislandsc.gov



**Town of Hilton Head Island
TOWN COUNCIL SPECIAL MEETING
Thursday, August 29, 2024, 11:00 AM
Minutes**

Call to Order

Mayor Perry called the meeting to order at 11:00 a.m.

Council Members present: Alan Perry, Mayor, David Ames, Ward 3, Mayor Pro-Tempore; Alex Brown, Ward 1; Tammy Becker, Ward 4 (via Microsoft Teams); Steve Alfred, Ward 5; Glenn Stanford, Ward 6

Council Member absent: Patsy Brison, Ward 2

Also present: Marc Orlando, Town Manager; Curtis Coltrane, Town Attorney; Kimberly Gammon, Town Clerk

Adoption of the Agenda

Mr. Ames moved to approve. Mr. Stanford seconded. Motion carried 6-0.

Public Comment - Non Agenda Items

None.

Executive Session

Discussion of Negotiations Incident to Proposed Contractual Arrangements for the Proposed Sale or Purchase of Property [Pursuant to the South Carolina Freedom of Information Act Section 30-4-70(a)(2)] related to:

1. Mitchellville Road Area

At 11:03 a.m. Mr. Ames moved to enter into Executive Session for the purposes stated by the Town Manager listed above. Alfred seconded. Motion carried 6-0.

At 11:48 Mr. Ames moved to end Executive Session and return to the meeting. Stanford seconded. Motion carried 6-0.

Action from Executive Session

None.

Adjournment

The meeting was adjourned at 11:49 a.m.

Approved:

Kimberly Gammon, Town Clerk

Alan R. Perry, Mayor

**The recording of this Meeting can be found on the Town's website
at www.hiltonheadislandsc.gov**



TOWN OF HILTON HEAD ISLAND

TOWN COUNCIL

TO: Town Council Members
FROM: Joshua Gruber, *Deputy Town Manager*
CC: Marc Orlando, *Town Manager*
DATE: September 17, 2024
SUBJECT: Consideration of An Ordinance of the Town of Hilton Head Island, South Carolina Amending Title 12, Chapter 3, of the Municipal Code Entitled: Motor Vehicles and Traffic Control, Parking, to Revise Regulations Related to Paid Parking and Other Matters Related Thereto, and to Provide for Severability and an Effective Date

RECOMMENDATION:

Staff recommends that the Town Council consider the recommendations of the Community Services and Public Safety Committee regarding the establishment of a paid Beach Parking Program and a corresponding Resolution setting forth parking rates and other ancillary matters. This evaluation should consider various public policy implications and strategic objectives related to beach parking, traffic management, and the corresponding revenues and expenses of operating a beach parking program.

ANALYSIS:

The Town has been exploring the establishment of a paid beach parking program since the adoption of a Beach Parking Master Plan by Town Council on November 4, 2020. Copies of this Master Plan and the corresponding tasks completed by Walker Consultants as a precursor to developing this Plan can be found on the Town's website at the following address: <https://hiltonheadislandsc.gov/parkingstudy/home.cfm>

Following the adoption of the Beach Parking Master Plan, the Town began implementing the Plan's recommendations. This included procuring the services of a professional parking management organization, PCI Municipal Services, who began managing the Town's beach parking in February 2023. Additional recommendations included updating the Town's Code relative to overall parking management, administration, and enforcement. The attached Ordinance has been prepared to accomplish this particular recommendation. This document was initially considered by the Community Services and Public Safety Committee and recommended for consideration by the Town Council on September 18, 2023. However, the decision was made to withhold further consideration of the Ordinance until the corresponding Resolution setting forth proposed parking rates and other relevant criteria could also be considered contemporaneously with Town Council's consideration of this Ordinance. In the interim, members of the Community Services and Public Safety Committee as well as members of Town Council have

requested revisions to better reflect the full complement of policy recommendations arising from the Committee and to revise other verbiage that is not of a substantive nature. As such, this document has been updated to incorporate those proposed revisions and should be considered by the Town Council in its revised state.

A. Core Objectives of Beach Parking Management Ordinance.

- Establish a general policy framework for beach parking that is intended to influence beach parking decisions, promote public safety, parking accessibility, and convenience of beachgoers while promoting the efficient use of parking resources.
- Remove antiquated language and allow for new parking technology solutions.
- Define paid beach parking areas but allow for the implementation of paid parking rates within any or all these beach parking areas as established by separate Resolution.
- Develop rules and regulations for administration of the beach parking program and corresponding enforcement measures to ensure compliance.

B. Beach Parking Management Ordinance Structure.

The Beach Parking Management Ordinance has been structured to offer clarity, ensuring that every stakeholder has a comprehensive understanding of its purpose and the expectations therein. A breakdown of the structure for this proposed Ordinance is as follows:

1. **Purpose and intent statement.** This section articulates the expressed goals and objectives of the ordinance, establishing a rationale behind its formulation.
2. **Definitions section.** Here, we provide clear interpretations of all terms and terminologies used within the ordinance, ensuring that there is no ambiguity for readers.
3. **Designation of paid parking areas.** This section identifies the areas where paid parking may be implemented, thus giving clarity on what Town-owned properties may or may not require payment to park.
4. **Fees, payment, and enforcement.** This section details information on the applicable parking fees, modes and methods of payment, and the mechanisms in place for enforcing the stipulated payment requirements.
5. **Exemptions.** This section lists the specific cases or individuals who might be exempted from adhering to certain rules or payments under this ordinance.

6. **Resident beach pass.** This section details the privileges and processes associated with obtaining a beach parking pass for residents of Hilton Head Island.
7. **Rules and regulations.** This section clearly spells out certain behavior that is prohibited in the paid parking areas (e.g., no parking outside of the hours of operation).
8. **Administrative penalties and fines.** This section outlines a graduated penalty schedule for violations of the ordinance.
9. **Appeals.** This section explains the three-tiered appeals process, first to PCI Municipal Services, then to the Town Attorney, and finally, to a court.

CONCLUSION:

The proposed Beach Parking Management Ordinance, previously reviewed and recommended for adoption by the Community Services and Public Safety Committee, has been updated to reflect the Committee's and Town Council member's input, including the elimination of resident beach parking pass fees and the exemption of Chaplin Beach Park from paid parking during youth recreation seasons.

The Town Council is requested to review the provisions outlined in the Beach Parking Management Ordinance and provide policy guidance regarding the adoption of the proposed language contained therein.

ATTACHMENTS:

1. Beach Parking Management Ordinance Draft
2. Beach Parking Resolution Draft

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

**AN ORDINANCE OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA
AMENDING TITLE 12, CHAPTER 3, OF THE MUNICIPAL CODE OF HILTON HEAD
ISLAND, ENTITLED: MOTOR VEHICLES AND TRAFFIC CONTROL, PARKING, TO
REVISE REGULATIONS RELATED TO PAID PARKING AND OTHER MATTERS
RELATED THERETO, AND TO PROVIDE FOR SEVERABILITY AND AN
EFFECTIVE DATE**

WHEREAS, the Town Council of the Town of Hilton Head Island has authority to establish paid parking within designated paid parking areas pursuant to Section 12-3-111, et seq. of the Municipal Code of Hilton Head Island; and

WHEREAS, to provide for a more comprehensive and effective paid parking program, the Town Council now desires to amend the Municipal Code for the Town of Hilton Head Island, South Carolina as further outlined herein; and

WHEREAS, through the enactment of this Ordinance, the Town Council desires to control demand and influence beach parking decisions, communicate timely information on beach parking availability and alternative parking options, provide paid parking areas that are safe/secure, provide a paid parking program that is convenient, user friendly, and provides superior customer service, and protects adjoining neighborhoods and businesses from paid parking/overflow impacts.

NOW, THEREFORE, BE IT, AND IT HEREBY IS, ORDAINED BY THE TOWN COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA:

Section 1. Amendment. Revisions to Sections 12-3-111 through 12-6-120 of the Municipal Code of the Town of Hilton Head Island relating to the establishment of paid parking areas, creation of a parking management program, and parking enforcement measures, are hereby adopted as outlined in Attachment 1 attached hereto and incorporated herein by reference. Newly added language is illustrated with double underline and deleted language is illustrated with ~~strikethrough~~.

Section 2. Severability. If any section, phrase, sentence or portion of this Ordinance is for any reason held invalid or unconstitutional by a court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

Section 3: Effective Date. This Ordinance shall take effect on January 1, 2025.

MOVED, APPROVED, AND ADOPTED THIS ____ DAY OF _____, 2024.

Alan R. Perry, Mayor

ATTEST:

Kimberely Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis Coltrane, Town Attorney

Introduced by Council Member: _____

ATTACHMENT 1

Chapter 3 - PARKING

Sec. 12-3-111. - Authority to establish ~~parking zones and install meters~~ paid parking areas.

The town council may establish by resolution, from time to time as traffic conditions require, zones to be known as ~~parking meter zones~~ paid parking areas upon such streets or properties of the town as are selected by the town council for the location of such ~~meters~~ designation; and, in such ~~parking meter zones~~ paid parking areas, the town manager shall cause ~~parking meters to be installed and parking meter spaces~~ appropriate signage and notification of paid parking equipment or other similar electronic paid parking capabilities to be designated as hereinafter provided.

Sec. 12-3-112. - Location and operation of ~~meters~~ paid parking areas.

~~Parking meters installed in the parking meter zones established by the provisions of this article shall be placed upon the curb immediately adjacent to the individual parking places hereinafter described. Each parking meter shall be placed or set in such a manner as to show or display by a signal that the parking space adjacent to such meter is or is not legally in use. Each parking meter shall be installed and set to display, upon the deposit of an official coin of the United States of America, which is at the time legal tender, a signal indicating legal parking for a designated time period. Each meter shall also be arranged so that, upon the expiration of the legal parking time, it will indicate by a mechanical operation and the dropping of the proper signal that the lawful parking has expired. The town manager shall be authorized to establish the parking fees.~~

The town manager shall take such actions as may be necessary and appropriate to implement the collection and corresponding enforcement of paid parking areas as designated by the town council. These actions shall include the posting of necessary signage, the installation of paid parking infrastructure, and the implementation of a comprehensive paid parking program either directly or through contracting with appropriate entities as may be required to effectuate the directives of the town council.

Sec. 12-3-114. ~~Depositing coins.~~

~~When any vehicle shall be parked in any space alongside of or next to which a parking meter is located in accordance with the provisions of this article, the operator of such vehicle shall, upon entering the parking space, immediately deposit or cause to be deposited a coin of the United States of America, which is, at the time, legal tender, in such parking meter and the parking space may then be lawfully occupied by such vehicle during the period indicated on the meter. If such vehicle shall remain parked in any such parking space beyond the parking time limit, the parking meter shall display a sign or signal showing illegal parking or expiration of time allotted, and in that event, such vehicle shall be considered as parked overtime. Overtime means beyond the period of legal parking time. The parking of a vehicle overtime in any such part of a street where any such meter is located shall be a violation of this article.~~

Sec. 12-3-117. - Defacing, injuring, etc.

It shall be unlawful for any person to deface, injure, tamper with, open or willfully break, destroy or impair the usefulness of any parking meter signage or devise installed under the provisions of this article.

Sec. 12-3-118. - Violations; parking enforcement personnel to report; notices; penalty.

- (a) It shall be the duty of the ~~enforcement officer of the town~~ town, the designated parking contractor of the Town, or the Beaufort County Sheriff to report:
1. The ~~number of each parking meter~~ identity of each paid parking area which indicates that the vehicle occupying the a designed parking space ~~adjacent to such parking meter within such paid parking area~~ is or has been parked in violation of any of the provisions of this ~~article~~ Chapter; and
 2. The state license number of such vehicle; and
 3. Any other facts, knowledge of which is necessary to a thorough understanding of the circumstances surrounding such violation.
- (b) Each such ~~parking enforcement officer~~ community code enforcement officer, designated town staff member, designated parking contractor, or member of the Beaufort County Sheriff's Office shall also attach to such vehicle a notice to the owner thereof that such vehicle has been parked in violation of a provision of this article stating ~~the bond set by the town for said violation~~ the administrative penalty associated with such violation. ~~Every person who violates or fails to comply with any of the provisions of this article shall be punished for each such violation as provided for in~~ section 1-5-10 of this Code.
- (c) In any ~~parking meter zone~~ paid parking area, every hour or fraction of an hour of overtime parking shall constitute a separate offense.

Sec. 12-3-121. -- Penalties for delinquent parking fines.

~~The following penalties are hereby established for delinquent parking fines:~~

- (a) ~~Delinquent after 10 days, add\$10.00~~
- (b) ~~After every 30 days add an additional10.00~~
- (c) ~~Maximum penalty40.00~~

ARTICLE 6 - Beach Parking Management

Sec. 12-6-110. - Purpose and Intent.

The purpose of this Article is to establish regulations for the management of paid parking areas for public beach access within the jurisdiction of the Town of Hilton Head Island. The intent of this Article is to promote the effective use of parking resources and ensure the public safety, accessibility, and convenience of beachgoers, while minimizing adverse effects on the neighboring environment.

Sec. 12-6-111. - Definitions.

Paid Parking Area. Any area designated by the town requiring payment to park therein.

Parking Contractor. The town or its designed vendor to manage the beach parking program.

Resident. For purposes of this Article, resident shall mean:

- (a) Any person who owns any single or multi-family residence in the municipal limits of the Town, irrespective of whether the person qualifies for the 4% special assessment ratio except:
 - 1. The owner of a property that is offered for leases of any term of more than 183 days in any calendar year is not deemed a “resident” eligible for a beach parking pass based on the ownership of that property.
- (b) Any person who is a tenant under a lease for a single or multi-family residence for a period of 183 days or more in any calendar year.
- (c) Any person who owns time-share interests totaling more than 183 days per year.

Sec. 12-6-112. – Designation of paid parking areas.

The following areas are designated as paid parking areas:

- (a) Alder Lane Beach Park
- (b) Chaplin Beach Park
- (c) Coligny Beach Park
- (d) Driessen Beach Park
- (e) Fish Haul Beach Park
- (f) Folly Field Beach Park
- (g) Islanders Beach Park

The Town Council shall determine the appropriate rates for the paid parking areas by resolution.

The town manager or designee shall install and maintain appropriate signs indicating the boundaries of the paid parking areas and the parking rates established therefore.

Sec. 12-6-113. – Fees, payment, and enforcement.

- (a) The parking fees for any paid parking area shall be established by a resolution of the town council.
- (b) Any person who parks a vehicle in a paid parking area must pay the appropriate fee as specified by the town or designated parking contractor.
- (c) Payment shall be made through the designated payment mechanism installed by the town of designated parking contractor or otherwise provided for electronically for the express purpose of paying for a designated parking space.
- (d) The town or designated parking contractor shall enforce the payment of parking fees and may issue administrative citations or take other appropriate measures to ensure compliance, including but not limited to vehicle immobilization and/or towing.

Sec. 12-6-114. - Exemptions.

- (a) The following vehicles shall be exempt from payment of parking fees:
 - 1. Vehicles of emergency responders while engaged in official duties;
 - 2. Vehicles of disabled persons displaying appropriate placards or license plates; and
 - 3. Vehicles of authorized Town employees engaged in official duties.
- (b) The town manager may establish additional exemptions during permitted special events.
- (c) Vehicles which have been registered pursuant to the Town's Resident Beach Parking Pass program shall be exempt from the payment of parking fees.

Sec. 12-6-115. – Resident beach pass.

- (a) The town shall issue resident beach parking passes to residents who can prove primary residency within the Town of Hilton Head Island as defined in Section 12-6-111. Resident beach parking passes will allow residents to park within the paid parking areas during the established hours of operation without paying the daily parking fees as designated by the town council.
- (b) Qualified residents of Hilton Head Island shall be entitled to receive a maximum of two beach parking passes per household. Beginning in calendar year 2025, the beach parking passes provided for in this section shall be issued without charge. However, the town council shall have the right to assess a fee for these passes in the future and shall be

authorized to set such fee by the adoption of a corresponding resolution setting forth this amount.

- (c) Residents who receive a beach parking pass are subject to the parking regulations of this Article.
- (d) The town may revoke or refuse to issue resident beach passes for individuals who violate this Article.

Sec. 12-6-116. – Defrauding, opening, impairing, or damaging paid parking devices.

It shall be unlawful for any person to defraud, open, impair, or damage a paid parking device or related equipment. Violations of this section shall be punishable as set forth in Section 1-5-10 of the Municipal Code of the Town of Hilton Head Island.

Sec. 12-6-117. – Rules and regulations.

- (a) The following rules and regulations are applicable in the paid parking area and shall be enforced by the designated parking contractor, community code enforcement officers or the Beaufort County Sheriff's Office:
 - 1. No parking outside of the hours of operation of the paid parking area;
 - 2. No parking in areas designated as no parking zones;
 - 3. No parking in areas marked for emergency vehicles;
 - 4. No parking in areas reserved for handicapped individuals unless a valid handicapped placard is visibly displayed; and
 - 5. No parking in any area within a designated paid parking area that is not specifically identified as a parking space.

Sec. 12-6-118. – Dates and Hours of operation, Chaplin Beach Park exception.

- (a) Paid parking areas shall be open for public use during the dates and hours designated by the town council, which shall be formalized through either through the adoption of an ordinance or corresponding paid parking area resolution setting forth such dates and/or hours.
- (b) The dates and hours of operation adopted by the town council and the corresponding paid parking requirements therein shall be posted on appropriate signs and may be adjusted from time to time as deemed necessary by subsequent action of the town council.
- (c) Paid parking requirements at the Chaplin Beach Park shall be suspended during any youth recreational sports programming season facilitated by the Island Recreation Association.

The Town will coordinate with the Island Recreation Association on the dates that this exemption will be in place and will cause appropriate signage to be installed notifying individuals when paid parking will be required at this location.

Sec. 12-6-119. – Penalties and fines.

- (a) Unless otherwise stated in this Article, any person who violates any provision of this Article shall be subject to fines and vehicle tow or immobilization. The fine schedule shall be on a graduated basis based on the number of violations issued within a 12-month period as follows:
 - 1. First violation: a written warning and/or a fine of \$50, reminder of parking regulations and notification of potential vehicle tow or immobilization for future violations.
 - 2. Second violation: a fine of \$100 and possible towing or immobilization of vehicle at owner's expense.
 - 3. Third and subsequent violations: a fine of \$250 and mandatory towing or immobilization of vehicle at owner's expense.
 - 4. Fourth and subsequent violations: a fine of \$500 and mandatory towing or immobilization of vehicle at owner's expense.
- (b) A \$25 late fee shall be applied to any original fine not paid within 30 days of being issued.
- (c) The town, parking contractor, or the Beaufort County Sheriff's Office may also immobilize, tow, or impound any vehicle parked in violation of this Chapter if, in its sole discretion, deems it necessary for public safety purposes.

Sec. 12-6-120. – Appeals of administrative citation.

- (a) Any person who receives an administrative citation related to paid parking may appeal the citation by submitting a written appeal to the designated parking contractor within 30 days of the citation.
- (b) The parking contractor shall review the appeal and issue a written decision within 30 days of receiving the appeal.
- (c) If the person appealing the citation disagrees with the decision of the parking contractor, he or she may appeal to the town attorney or his or her designee within 30 days of receiving the decision of the parking contractor. An appeal to the town attorney or his or her designee shall include statements of fact and conclusions of law to support the appeal.

- (d) The decision of the town attorney or his or her designee shall be final. Any subsequent appeals may be made to a court of competent jurisdiction within 30 days of receiving the town attorney's final decision.
- (e) This section does not apply to violations issued in accordance with Section 12-5-517 of this Article.

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA ESTABLISHING PARKING FEES IN ACCORDANCE WITH SECTIONS 12-6-111 THROUGH 12-6-120, OF THE MUNICIPAL CODE OF THE TOWN OF HILTON HEAD ISLAND

WHEREAS, the Town Council of the Town of Hilton Head Island has authority to establish parking fees within paid parking areas pursuant to Section 12-6-112 of the Municipal Code of the Town of Hilton Head Island; and

WHEREAS, the recommendations from the Town's Community Services and Public Safety Committee are reflected as alternative options for the Town Council to consider and are stated as such below; and

WHEREAS, after determining which option(s) the Town Council wishes to adopt, this Resolution will be amended to reflect these selections prior to its execution.

NOW, THEREFORE, BE IT, AND IT HEREBY IS, RESOLVED BY THE TOWN COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA, THAT:

Section 1: Parking Fees. The fee for parking within designated beach parking areas shall be

- A. \$3.00 per hour; or
- B. \$5.00 per hour.

Section 2: Daily Maximum Fee. Regardless of the hourly rate charged, any individual parking a vehicle shall be given the option to pay a maximum daily rate of

- A. \$15.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat rate of \$20.00 per day per vehicle on Saturdays and Sundays; or
- B. \$15.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat \$20.00 per day per vehicles on Saturdays and Sundays during the months of June, July, and August; or
- C. \$30.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat fee of \$25.00 per day per vehicle on Saturdays and Sundays.

Section 3: Resident Beach Parking Passes. Residents of the Town of Hilton Head Island as identified in Section 12-6-111 of the Town's Municipal Code shall be authorized to register two (2) vehicles per household free of charge upon the submission of appropriate documentation to the Town, or to the Town's parking management contractor,

demonstrating compliance the required residency qualifications. The registration of such vehicle will entitle such vehicle to park for free within any publicly available beach parking space that is not otherwise reserved for handicapped individuals (unless also displaying an approved handicapped placard) or are otherwise restricted by posted signage.

Section 4: Hours of Operations. The Town's Beach Parks designated in the Municipal Code of the Town of Hilton Head Island as consisting of Alder Lane Beach Park, Chaplin Beach Park, Coligny Beach Park, Driessen Beach Park, Fish Haul Beach Park, Folly Field Beach Park, and Islanders Beach Park shall be open from 6:00AM to 10:00PM daily unless otherwise modified or closed by action of the Town Council or Town Manager.

Section 5: Hours for Collection of Parking Fees. Paid parking will be collected within the Town's Beach Parks identified in Section 4 above from 7:00AM to 7:00PM daily during those periods specified in Section 6 below unless otherwise directed by the Town Council.

Section 6: Dates for Collection of Parking Fees. The collection of paid parking fees shall occur from May 1st until September 30th of each year unless otherwise modified or amended by the Town Council.

Section 7: Special Event Parking. The Town Manager, or their designee, is hereby authorized to approve the suspension of the paid parking requirements outlined herein to support any activity which has received a special event permit as set forth in Title 17, Chapter 12, of the Town of Hilton Head Island Municipal Code.

Section 8: Implementation and Collection. The Town Manager, or their designee, shall take all necessary steps to implement and collect the fees as provided for in this Resolution, consistent with the procedures and provisions of the Town's Municipal Code.

Section 9: Effective Date. This Resolution shall take effect on January 1, 2025.

MOVED, APPROVED, AND ADOPTED THIS ____ DAY OF _____, 2024.

Alan R. Perry, Mayor

ATTEST:

Kimberly Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis L. Coltrane, Town Attorney

Introduced by Council Member: _____



TOWN OF HILTON HEAD ISLAND

TOWN COUNCIL

TO: Town Council Members
FROM: Joshua Gruber, *Deputy Town Manager*
CC: Marc Orlando, *Town Manager*
DATE: September 17, 2024
SUBJECT: Consideration of a Resolution Adopting a Beach Parking Fee Schedule

RECOMMENDATION:

The Community Services and Public Safety Committee (the “Committee”) is recommending that the Town Council consider the adoption of a Resolution setting forth several policy matters related to the imposition of a paid beach parking program.

BACKGROUND:

At its August 19, 2024, meeting, the Committee performed a comprehensive review of a Resolution setting forth various aspects of a paid beach parking program. Those aspects included addressing resident beach parking passes, establishing a proposed beach parking rate inclusive of location, hours of operation and hours of collection, seasonal or year-round collection, and addressing concerns related to employee parking for business located in and around the Pope Avenues area.

At the conclusion of its April meeting, the Committee voted 3-1 to adopt the following recommendations:

- Elimination of the \$15.00 fee for resident beach parking passes.
- Maintain the cap of two resident beach parking passes per household.
- Require paid beach parking at all Town beach parking facilities.
- Suspend paid beach parking at Chaplin Beach Park during youth recreational sports programming.
- Require paid beach parking seasonally from March 1st to September 30th of each year.
- Establish uniform hours of operation for the Town’s beach parks from 6:00AM – 10:00PM daily and require paid beach parking be collected during the hours of 7:00AM – 7:00PM.
- The Committee chose to recommend several possible options in terms of setting a paid parking rate.
- The Committee recommended that employee parking concerns for businesses located in the Pope Avenue area be addressed through the establishment of a park and ride program utilizing either USCB, Crossings Park, or some other Town-

owned property not currently within the vicinity of the Coligny Beach Park. Additionally, a corresponding shuttle service will need to be contracted to meet the transportation needs of this recommended program.

To support these continued discussions with the Town Council, this Staff Report includes data provided to the Committee regarding the goals sought to be accomplished through this program, evaluation of current and future fiscal impacts for both program revenues and expenditures, market data regarding other communities who impose paid beach parking, and a comprehensive analysis on options to address employee parking concerns.

ANALYSIS:

1. Beach Parking Program Purpose.

In defining the program's purposes, staff prepared the following items based upon prior discussions with the public, the Committee, and members of Town Council. Those points include the following:

- Control Demand and Influence Beach Parking Decisions.
- Communicate Timely Information on Beach Parking Availability and Alternative Options.
- Provide Parking Areas that are Safe/Secure.
- Provide a Paid Parking Program that is Convenient, User Friendly, and Provides Superior Customer Service.
- Protect Adjoining Neighborhoods and Businesses from Paid Parking/Overflow Impacts.

2. Current and Future Fiscal Impacts.

In 2023, Town Council authorized a budget amendment to facilitate the hiring of PCI Municipal Services (PCI) to manage the Town's Beach Parking Program. This Fiscal Year 2024 Budget amendment included operational expenses of \$366,965 and a Capital budget of \$502,765, for a combined expenditure of \$869,730. A copy of this Ordinance has been enclosed as Attachment 1. For Fiscal Year 2025 budget, PCI has submitted a proposed operating budget of \$598,789 and a recurring Capital budget of \$25,000, for a total combined expenditure of \$623,789. A copy of that information is enclosed as Attachment 2.

In addition to the existing program expenses discussed above, the Committee is recommending that the current \$15.00 fee for Island Resident Beach Parking Passes be made free of charge. The adoption of this recommendation will add an additional \$105,000 in yearly expenses to the Beach Parking Management Program.

Therefore, in order to financially support these combined expenses, the Town Council should consider adopting an updated parking fee rate structure that will generate

sufficient revenues to cover these program costs.

3. Beach Parking Rate Data.

A survey was conducted of other similar jurisdictions to determine currently prevailing beach parking rates and whether they established a maximum daily charge. A summary of that data, effective as of August 1, 2024, is as follows:

Location	State	Hourly Rate	Daily Rate/Max	Weekend Rate	Notes:
Folly Beach	South Carolina	\$2.50	\$10.50 - \$15.00	n/a	One parking location has a maximum daily rate of \$15.00 with no hourly parking offered. All others are \$2.50 per hour up to a \$10.50 per day cap.
Charleston County	South Carolina	n/a	\$5.00 - \$15.00	\$20.00	Parking rates are per day and based on a seasonal schedule with out of season at \$5.00 per day, shoulder season at \$10.00 per day, and peak season at \$15.00 per day Mon.-Fri., and \$20.00 per day Sat. and Sun.
Edisto Beach	South Carolina	n/a	n/a	n/a	Parking is included with your admission fee. Admission is \$8.00 per adult, \$5.00 per senior, and \$4.00 per child aged 6-15.
Isle of Palms	South Carolina	\$2.00	\$10.00	\$15.00	Paid parking is charged from 8AM – 8PM, March 1– October 31. The daily rate is \$10.00 Monday–Friday and \$15.00 on weekends and

					holidays. After 4 PM, the hourly rate is \$2.00 per hour until 8PM. Residents and seasonal parking pass holders can park for free in these lots.
Myrtle Beach	South Carolina	\$2.00 - \$3.00	\$10.00 - \$15.00	n/a	The direct beach access areas have a rate of \$3.00 per hour and a maximum daily rate of \$15.00. The core business district has an hourly rate of \$2.00 per hour with no daily maximum.
Surfside Beach	South Carolina	\$0.50 - \$2.00	\$10.00	n/a	Some parking lots have no daily maximum.
Kiawah Island	South Carolina	n/a	\$5.00 - \$15.00	\$20.00	Parking rates are per day and based on a seasonal schedule with out of season at \$5.00 per day, shoulder season at \$10.00 per day, and peak season at \$15.00 per day Mon.-Fri., and \$20.00 per day Sat. and Sun.
Wrightsville Beach	North Carolina	\$5.00	\$25.00	n/a	Parking fees are enforced March to October.
Tybee Island	Georgia	\$4.00	n/a	n/a	Enforced 8AM - 8PM, 365 days a year.
Jekyll Island	Georgia	n/a	\$10.00	n/a	Flat rate vehicle entry fee onto the Island.
St. Augustine Beach	Florida	n/a	\$10.00	n/a	Discounts offered for disabled and

					active military members.
Gulf Shores Beach	Alabama	n/a	\$5.00 - \$15.00	n/a	Parking fees enforced March to November. Two lots offer a four-hour block for \$5.00 or \$15.00 for the entire day. All other lots are \$15.00 per day.

At the conclusion of its discussion, the Committee recommended that the Town Council consider several different parking rate options:

- A. \$3.00/hr with a maximum daily rate of \$15.00 from Monday – Friday, and a flat rate of \$20.00 per day on Saturdays and Sundays.
- B. \$3.00/hr with a maximum daily rate of \$15.00 from Monday – Friday and a flat rate of \$20.00 per day on Saturdays and Sundays during the months of June, July, and August.
- C. \$5.00/hr with a maximum daily rate of \$30.00 from Monday – Friday, and a flat fee of \$25.00 on Saturdays and Sundays.

4. Establishing a Daily Paid Parking Rate.

Based upon the recommendations from the Committee, staff has prepared a chart identifying financial projections for various paid parking rates ranging from \$3.00 per hour to \$7.00 per hour. Additionally, a separate chart showing the collection of these rates on a seasonal basis as recommended by the Committee is shown below in Chart B.

A. Year 1 Revenue Projections - \$3.00/\$5.00/\$7.00 Per Hour (Year-Round)

Public Space Available for Payment	Month	Days Per Month	Parking Utilization %	Average Parking Sessions	\$3/hr	\$5/hr	\$7/hr
1101	January	31	10%	2.0	\$20,479	\$34,131	\$47,783
	February	28	10%	2.0	\$18,497	\$30,828	\$43,159
	March	30	20%	2.0	\$39,636	\$66,060	\$92,484
	April	30	25%	3.0	\$74,318	\$123,863	\$173,408
	May	31	65%	3.5	\$232,944	\$388,240	\$543,536
	June	30	90%	3.5	\$312,134	\$520,223	\$728,312
	July	31	90%	3.5	\$322,538	\$537,563	\$752,589

	August	31	90%	3.5	\$322,538	\$537,563	\$752,589
	September	30	65%	3.5	\$225,430	\$375,716	\$526,003
	October	31	20%	2.0	\$40,957	\$68,262	\$95,567
	November	27	10%	2.0	\$17,836	\$29,727	\$41,618
	December	27	10%	2.0	\$17,836	\$29,727	\$41,618
Revenue Totals					\$1,645,142	\$2,741,903	\$3,838,664

B. Year 1 Revenue Projections - \$3.00/\$5.00/\$7.00 Per Hour (Seasonal)

Public Space Available for Payment	Month	Days Per Month	Parking Utilization %	Average Parking Sessions	\$3/hr	\$5/hr	\$7/hr
1101	March	30	20%	2.0	\$39,636	\$66,060	\$92,484
	April	30	25%	3.0	\$74,318	\$123,863	\$173,408
	May	31	65%	3.5	\$232,944	\$388,240	\$543,536
	June	30	90%	3.5	\$312,134	\$520,223	\$728,312
	July	31	90%	3.5	\$322,538	\$537,563	\$752,589
	August	31	90%	3.5	\$322,538	\$537,563	\$752,589
	September	30	65%	3.5	\$225,430	\$375,716	\$526,003
Revenue Totals					\$1,529,538	\$2,549,228	\$3,568,921

C. 10-Year Expense Calculations

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Labor*	\$376,155	\$391,201	\$406,849	\$423,123	\$440,048	\$457,650	\$475,956	\$494,994	\$514,794	\$535,385	\$4,516,154
Other Expenses	\$76,500	\$66,435	\$68,428	\$70,481	\$72,595	\$74,773	\$77,016	\$79,327	\$81,707	\$84,158	\$751,420
Total^	\$452,655	\$457,636	\$475,277	\$493,604	\$512,643	\$532,423	\$552,972	\$574,321	\$596,500	\$619,543	\$5,267,574

* Does not include benefit expenses of appx. 40% or \$150,000/year.

^ PCI FY2025 Contract = \$623,789

D. 10-Year Net Revenue Projections (\$3.00/hr – Seasonal Collection)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6*	Year 7	Year 8	Year 9	Year 10	Total
Gross Revenues	\$1,529,538	\$1,529,538	\$1,529,328	\$1,529,328	\$1,529,328	\$1,911,660	\$1,911,660	\$1,911,660	\$1,911,660	\$1,911,660	\$17,205,990
Less Expenses	\$452,655	\$457,636	\$475,277	\$493,604	\$512,643	\$532,423	\$552,972	\$574,321	\$596,500	\$619,543	\$5,267,574
Net Revenues	\$1,076,883	\$1,071,902	\$1,054,051	\$1,035,724	\$1,016,685	\$1,379,237	\$1,358,688	\$1,337,339	\$1,315,160	\$1,292,117	\$11,938,416

*25% Projected Increase

In addition to the projected revenues and expenses listed above, staff has identified current beach park related expenses that could be considered for financial support from beach parking revenues. This list includes, but is not limited to, any actions which support the Town's beach park environmental and sustainability initiatives, enhancements to multi-modal transportation, enhanced trash collection and recycling, energy efficiency projects, Americans with Disabilities Act (ADA) upgrades and accessibility, and expansion of beach related environmental partnerships. A spreadsheet identifying current General Fund or CIP beach park related expenses is shown below:

E. Table of Potential Surplus Revenue Uses

Expense Type	Description	Cost
Beach Management & Monitoring	Ongoing activities to manage the beach including Island wide beach survey and monitoring, endangered species monitoring, Beach Program Economic Sustainability Analysis, etc.	\$300,000
Beach Renourishment	Activities related to Beach Renourishment Project, including permitting, bidding, and construction. Construction of next cycle of renourishment anticipated to begin in April 2025. Pine Island, Fish Haul Creek, and Heel must be complete by August 2025 to achieve Fish & Wildlife Permit requirements. Renourishment of remaining island beaches in FY26. FEMA funds must be reimbursed by December 2025.	\$16,500,000
Beach Park Maintenance & Improvements	Maintenance and general improvements to 7 beach parks such as paving, landscaping, lighting, and site furnishings, etc. FY25 - Upgrades to Recycling, Trash, Wayfinding, Rules, Signage, Lighting	\$250,000
Islanders Beach Park Improvements	FY24 - Design of Islanders Park Renovation and construction of pedestrian pathway from Folly Field Road to restroom and playground in FY24. FY25 - Construction of Islanders Park Renovation pending coordination with Beach Renourishment staging area	\$3,750,000
Beach Wheelchair Storage	Permanent storage structure for increased beach wheelchairs stemming from Chamber Leadership Class project; 5 locations (\$19,800 each)	\$99,000
Beach Parks Janitorial	Janitorial	\$106,000

Beach Waste & Recycling	Waste	\$425,000
Beach Parking Shuttle	Shuttle	\$24,000
Land Acquisition	Land Acquisition	\$4,000,000
Total Costs		\$25,454,000

5. Employee Parking Considerations.

One of the concerns expressed by the Committee was the potential impacts to adjacent businesses in the Pope Avenue area. Specifically, local business owners have expressed a concern about the impact paid parking may have on their workforce. In response, Town staff initiated a survey of all businesses that are believed to be located within a radius of 300 feet (100 yards) of the Coligny Beach Parking lot based upon information contained in the Town's emergency addressing database. 146 separate businesses were identified as having active business licenses located within this identified boundary.

To support the Committee's discussion of this matter, staff surveyed other beachfront communities to identify how these jurisdictions have approached addressing this concern. The results of that survey are as follows:

Jurisdiction	Local Business/Employee Parking Provisions
Folly Beach	No
Charleston County	No
Edisto Beach State Park	No
Isle of Palms	No
Myrtle Beach	Yes, but is limited to specific geographic area, limited to type of parking space that can be occupied, costs \$50.00 per year.
Surfside Beach	Yes* Spaces in certain lots are designated for employee parking.
Kiawah Island	No
Wrightsville Beach	No* Contractor passes are available for \$10/day
Tybee Island	Yes, A discounted parking rate is offered for local businesses to purchase for their employees (\$200 per year)
Jekyll Island	No
St. Augustine, FL	No
Sarasota, FL	Yes, either a \$10/month or \$20/month pass is offered for employee parking depending upon location
Clearwater, FL	Yes, a \$40 monthly pass is offered but parking is limited to certain geographic areas
Gulf Shores, AL	Free parking for all City residents
Beaufort, SC	Yes, a discounted parking pass of \$35 per month

At the conclusion of its discussion, the Committee recommended that Town Council consider creating a remote park and ride program utilizing Town-owned property and a contracted transportation provider to facilitate employee parking for businesses located within the Pope Avenue area that may be affected by the imposition of paid beach parking. These program expenses would be in addition to those shown in the expense calculations provided above and would range from approximately \$60 - \$90 per hour depending upon the length of time and frequency that shuttle service will be provided.

6. Recreational Sports/Beach Parking Considerations.

In addition to the previously discussed recommendations, the Committee expressed support for exempting the collection of parking fees at Chaplin Beach Park while recreational sports programming is being facilitated at this location. This would essentially result in paid beach parking being collected at Chaplin Beach Park from Memorial Day until Labor Day and would otherwise remain free of charge at all other times due to current recreational sports league schedules. The Town will coordinate directly with the Island Recreation Association in this regard and will prepare appropriate signage to communicate this information if ultimately adopted.

7. Policy Questions to be Addressed.

The Committee has recommended several matters of policy for the Town Council to consider as it weighs whether to implement paid beach parking. A summary of those policy questions includes the following:

1. Resident Parking Passes
 - a. Free for Residents?
 - b. Limit 2 per Household?
2. Establish Parking Rate
 - a. Hourly Rate?
 - b. Locations?
 - c. Year-Round or Seasonal?
 - d. Hours of Operation?
 - e. Hours of Parking Collection?
3. Employee Parking at Coligny Beach Park Area
 - a. Remote Lot/Shuttle Services?
 - b. Dedicated Spaces?
 - c. Monthly Passes?

CONCLUSION:

The draft Ordinance to facilitate a paid beach parking program has previously been considered by the Committee and is now before the Town Council. However, to make

sure that all issues associated with this program have been addressed at the time of the Ordinance's adoption, the Resolution setting forth the proposed beach parking rates and addressing other ancillary issues is recommended for contemporaneous consideration. This would allow for both a framework that is necessary to administer a beach parking program and the necessary rate structure to fully implement this program.

ATTACHMENTS:

1. FY2024 Budget Amendment Ordinance
2. FY2025 Proposed Parking Management Budget
3. Beach Parking Management Ordinance Draft
4. Beach Parking Resolution Draft

Town of Hilton Head Island

Parking Program Annual Operating Expense Budget FY23



Operating Expense		FY23
Labor	\$	151,425
Equipment	\$	13,250
Office Expense	\$	21,600
Uniforms	\$	3,500
Marketing	\$	10,000
License/Permits	\$	1,250
Supplies	\$	6,850
Vehicle Expense	\$	5,700
Software Licenses & Fees	\$	90,975
Professional Services Fees	\$	12,350
Management Fees / Insurance	\$	39,165
Signage	\$	10,900
Subtotal Operations	\$	366,965
Capital Expense	\$	502,765
Total Annual Expense	\$	869,730

Town of Hilton Head Island

Parking Program Capital Expense Budget



Item	Location	Quantity	Unit Cost	Total Cost
Parking Space Sensors	Multiple	153	\$ 305.00	\$ 46,665.00
Fixed LPR Cameras	Chaplin Park/Castnet Overflow	8	\$ 10,475.00	\$ 83,800.00
Fixed LPR Cameras	Coligny Beach Park	4	\$ 10,475.00	\$ 41,900.00
Fixed LPR Cameras	Driessen Beach Park	2	\$ 10,475.00	\$ 20,950.00
Fixed LPR Cameras	Fish Haul Park	2	\$ 10,475.00	\$ 20,950.00
Fixed LPR Cameras	Islanders Beach Park	2	\$ 10,475.00	\$ 20,950.00
Fixed LPR Cameras	Folly Field Beach Park	4	\$ 10,475.00	\$ 41,900.00
Automated Parking Gates	Folly Field Beach Park	6	\$ 10,550.00	\$ 63,300.00
Automated Parking Gates	Coligny Beach Park	4	\$ 10,550.00	\$ 42,200.00
Automated Parking Gates	Driessen Beach Park	1	\$ 10,550.00	\$ 10,550.00
Automated Parking Gates	Fish Haul Park	1	\$ 10,550.00	\$ 10,550.00
Automated Parking Gates	Islanders Beach Park	1	\$ 10,550.00	\$ 10,550.00
Program Vehicles	N/A	2	\$ 30,000.00	\$ 60,000.00
Mobile LPR	N/A	1	\$ 28,500.00	\$ 28,500.00
				\$ 502,765.00

Assumptions

Gate Expense	Concrete Island/Pad	\$ 1,675.00
<i>Exit Gate Only</i>	Electrical	\$ 3,500.00
	Install / Loop	\$ 1,250.00
	Gate Mechanism	\$ 3,750.00
	Gate Arm	\$ 375.00
		<u>\$ 10,550.00</u>
Fixed LPR Camera	Pole / Fixture	\$ 775.00
	Electrical	\$ 2,000.00
	Installation	\$ 795.00
	Camera	\$ 3,750.00
	Software License	\$ 3,155.00
		<u>\$ 10,475.00</u>

Town of Hilton Head Island

Parking Program Annual Operating Expense Budget FY23



Operating Expense										GRAND TOTAL	\$ 869,730
	November	December	January	February	March	April	May	June		FY Total	
Labor										\$ 151,425	
Manager	\$ 4,625	\$ 9,250	\$ 9,250	\$ 9,250	\$ 9,250	\$ 9,250	\$ 9,250	\$ 9,250	\$ 9,250	\$	69,375
Assistant Manager	\$ -	\$ -	\$ 4,725	\$ 4,725	\$ 4,725	\$ 4,725	\$ 4,725	\$ 4,725	\$ 4,725	\$	28,350
Enforcement	\$ -	\$ -	\$ -	\$ -	\$ 5,725	\$ 5,725	\$ 5,725	\$ 5,725	\$ 5,725	\$	22,900
Ambassador	\$ -	\$ -	\$ -	\$ -	\$ 2,500	\$ 7,500	\$ 10,400	\$ 10,400	\$ 10,400	\$	30,800
Equipment										\$ 13,250	
Citation Handhelds	\$ -	\$ -	\$ 5,250	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	5,250
Citation Printers	\$ -	\$ -	\$ 2,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	2,000
Equipment Repairs	\$ -	\$ -	\$ -	\$ -	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$	4,000
Flags & Flashlights	\$ -	\$ -	\$ 500	\$ 250	\$ -	\$ -	\$ -	\$ -	\$ -	\$	750
Cones & Barricades	\$ -	\$ -	\$ 1,000	\$ 250	\$ -	\$ -	\$ -	\$ -	\$ -	\$	1,250
Office Expense										\$ 21,600	
Rent	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$ 1,350	\$	10,800
Furniture	\$ -	\$ 4,500	\$ 1,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	6,000
Utilities	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200	\$	1,600
Telephone & Data	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$ 400	\$	3,200
Uniforms	\$ -	\$ -	\$ -	\$ -	\$ 2,500	\$ 500	\$ 250	\$ 250	\$ 250	\$ 3,500	
Marketing										\$ 10,000	
Website	\$ -	\$ 3,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	3,500
Information Flyers	\$ -	\$ 5,000	\$ -	\$ -	\$ 1,000	\$ -	\$ -	\$ -	\$ -	\$	6,000
Promotional	\$ -	\$ 500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	500
License/Permits	\$ -	\$ 500	\$ -	\$ 750	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,250	
Supplies										\$ 6,850	
Office Supplies	\$ -	\$ 1,500	\$ 500	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$	3,250
Citation Paper Rolls	\$ -	\$ -	\$ -	\$ 3,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$	3,600
Vehicle Expense										\$ 5,700	
Repairs & Maintenance	\$ -	\$ -	\$ -	\$ -	\$ 350	\$ 350	\$ 350	\$ 350	\$ 350	\$	1,400
Fuel	\$ -	\$ -	\$ -	\$ -	\$ 350	\$ 350	\$ 350	\$ 350	\$ 350	\$	1,400
Insurance	\$ -	\$ -	\$ -	\$ -	\$ 725	\$ 725	\$ 725	\$ 725	\$ 725	\$	2,900
Software Licenses & Fees										\$ 90,975	
VERGE	\$ -	\$ -	\$ -	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$	17,500
Spot Parking (Wayfinding App)	\$ -	\$ -	\$ -	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$	35,000
Park Loyalty (Citation Software)	\$ -	\$ -	\$ -	\$ -	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$ 1,800	\$	7,200
Park Lync (Permitting)	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$	2,400
LPR Licenses & Support	\$ -	\$ -	\$ -	\$ -	\$ 26,275	\$ -	\$ -	\$ -	\$ -	\$	26,275
Nwave Sensors	\$ -	\$ -	\$ -	\$ -	\$ 650	\$ 650	\$ 650	\$ 650	\$ 650	\$	2,600
Professional Services Fees										\$ 12,350	
Banking Fees	\$ -	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$ 250	\$	1,750
Credit Card Fees	\$ -	\$ 500	\$ 500	\$ 500	\$ 500	\$ 2,000	\$ 3,000	\$ 3,000	\$ 3,000	\$	10,000
Accounting & Legal	\$ -	\$ -	\$ -	\$ -	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$	600
Management Fees / Insurance										\$ 39,165	
Management Fee	\$ -	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$	21,000
General Liability Insurance	\$ -	\$ 2,595	\$ 2,595	\$ 2,595	\$ 2,595	\$ 2,595	\$ 2,595	\$ 2,595	\$ 2,595	\$	18,165
Signage	\$ -	\$ -	\$ -	\$ 5,000	\$ 5,000	\$ 500	\$ 200	\$ 200	\$ 200	\$ 10,900	
Capital Expense	\$ -	\$ -	\$ 200,000	\$ 150,000	\$ 152,765	\$ -	\$ -	\$ -	\$ -	\$ 502,765	
Monthly Total	\$ 6,875	\$ 33,345	\$ 233,320	\$ 221,170	\$ 227,110	\$ 47,070	\$ 50,420	\$ 50,420	\$ 50,420	\$ 869,730	



PCI Municipal Services Fiscal Year 2025 Budget

	FY25
Labor	
Salaries & Benefits	\$449,229.53
Total Labor Expenses	\$449,229.53
General Expense	
Licenses	\$2,778.92
Vehicle Expense	\$10,150.00
Equipment	\$2,500.00
Software Licenses & Fees	\$14,820.00
Supplies Lot	\$4,800.00
Tickets	\$0.00
Signs	\$6,000.00
Uniform	\$3,600.00
Dues & Subscriptions	\$0.00
Postage	\$200.00
Office Supplies	\$0.00
Marketing	\$0.00
Professional Service Fees	\$11,550.45
Office Expenses	\$23,740.00
Total General Expenses	\$80,139.37
Management	
Liability Insurance/Management Fee	\$69,420.00
Total Management Expenses	\$69,420.00
Total Operating Expenses	\$598,788.90
Capital Expense	
Capital/Technology Expenses	\$25,000.00
Total Budget	\$623,788.90

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA ESTABLISHING PARKING FEES IN ACCORDANCE WITH SECTIONS 12-6-111 THROUGH 12-6-120, OF THE MUNICIPAL CODE OF THE TOWN OF HILTON HEAD ISLAND

WHEREAS, the Town Council of the Town of Hilton Head Island has authority to establish parking fees within paid parking areas pursuant to Section 12-6-112 of the Municipal Code of the Town of Hilton Head Island; and

WHEREAS, the recommendations from the Town's Community Services and Public Safety Committee are reflected as alternative options for the Town Council to consider and are stated as such below; and

WHEREAS, after determining which option(s) the Town Council wishes to adopt, this Resolution will be amended to reflect these selections prior to its execution.

NOW, THEREFORE, BE IT, AND IT HEREBY IS, RESOLVED BY THE TOWN COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA, THAT:

Section 1: Parking Fees. The fee for parking within designated beach parking areas shall be

- A. \$3.00 per hour; or
- B. \$5.00 per hour.

Section 2: Daily Maximum Fee. Regardless of the hourly rate charged, any individual parking a vehicle shall be given the option to pay a maximum daily rate of

- A. \$15.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat rate of \$20.00 per day per vehicle on Saturdays and Sundays; or
- B. \$15.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat \$20.00 per day per vehicles on Saturdays and Sundays during the months of June, July, and August; or
- C. \$30.00 for all-day parking within any individually designated paid space on any single calendar day Monday – Friday, and a flat fee of \$25.00 per day per vehicle on Saturdays and Sundays.

Section 3: Resident Beach Parking Passes. Residents of the Town of Hilton Head Island as identified in Section 12-6-111 of the Town's Municipal Code shall be authorized to register two (2) vehicles per household free of charge upon the submission of appropriate documentation to the Town, or to the Town's parking management contractor,

demonstrating compliance the required residency qualifications. The registration of such vehicle will entitle such vehicle to park for free within any publicly available beach parking space that is not otherwise reserved for handicapped individuals (unless also displaying an approved handicapped placard) or are otherwise restricted by posted signage.

Section 4: Hours of Operations. The Town's Beach Parks designated in the Municipal Code of the Town of Hilton Head Island as consisting of Alder Lane Beach Park, Chaplin Beach Park, Coligny Beach Park, Driessen Beach Park, Fish Haul Beach Park, Folly Field Beach Park, and Islanders Beach Park shall be open from 6:00AM to 10:00PM daily unless otherwise modified or closed by action of the Town Council or Town Manager.

Section 5: Hours for Collection of Parking Fees. Paid parking will be collected within the Town's Beach Parks identified in Section 4 above from 7:00AM to 7:00PM daily during those periods specified in Section 6 below unless otherwise directed by the Town Council.

Section 6: Dates for Collection of Parking Fees. The collection of paid parking fees shall occur from May 1st until September 30th of each year unless otherwise modified or amended by the Town Council.

Section 7: Special Event Parking. The Town Manager, or their designee, is hereby authorized to approve the suspension of the paid parking requirements outlined herein to support any activity which has received a special event permit as set forth in Title 17, Chapter 12, of the Town of Hilton Head Island Municipal Code.

Section 8: Implementation and Collection. The Town Manager, or their designee, shall take all necessary steps to implement and collect the fees as provided for in this Resolution, consistent with the procedures and provisions of the Town's Municipal Code.

Section 9: Effective Date. This Resolution shall take effect on January 1, 2025.

MOVED, APPROVED, AND ADOPTED THIS ____ DAY OF _____, 2024.

Alan R. Perry, Mayor

ATTEST:

Kimberly Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis L. Coltrane, Town Attorney

Introduced by Council Member: _____

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

**AN ORDINANCE OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA
AMENDING TITLE 12, CHAPTER 3, OF THE MUNICIPAL CODE OF HILTON HEAD
ISLAND, ENTITLED: MOTOR VEHICLES AND TRAFFIC CONTROL, PARKING, TO
REVISE REGULATIONS RELATED TO PAID PARKING AND OTHER MATTERS
RELATED THERETO, AND TO PROVIDE FOR SEVERABILITY AND AN
EFFECTIVE DATE**

WHEREAS, the Town Council of the Town of Hilton Head Island has authority to establish paid parking within designated paid parking areas pursuant to Section 12-3-111, et seq. of the Municipal Code of Hilton Head Island; and

WHEREAS, to provide for a more comprehensive and effective paid parking program, the Town Council now desires to amend the Municipal Code for the Town of Hilton Head Island, South Carolina as further outlined herein; and

WHEREAS, through the enactment of this Ordinance, the Town Council desires to control demand and influence beach parking decisions, communicate timely information on beach parking availability and alternative parking options, provide paid parking areas that are safe/secure, provide a paid parking program that is convenient, user friendly, and provides superior customer service, and protects adjoining neighborhoods and businesses from paid parking/overflow impacts.

NOW, THEREFORE, BE IT, AND IT HEREBY IS, ORDAINED BY THE TOWN COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA:

Section 1. Amendment. Revisions to Sections 12-3-111 through 12-6-120 of the Municipal Code of the Town of Hilton Head Island relating to the establishment of paid parking areas, creation of a parking management program, and parking enforcement measures, are hereby adopted as outlined in Attachment 1 attached hereto and incorporated herein by reference. Newly added language is illustrated with double underline and deleted language is illustrated with ~~strikethrough~~.

Section 2. Severability. If any section, phrase, sentence or portion of this Ordinance is for any reason held invalid or unconstitutional by a court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions thereof.

Section 3: Effective Date. This Ordinance shall take effect on January 1, 2025.

MOVED, APPROVED, AND ADOPTED THIS ____ DAY OF _____, 2024.

Alan R. Perry, Mayor

ATTEST:

Kimberely Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis Coltrane, Town Attorney

Introduced by Council Member: _____

ATTACHMENT 1

Chapter 3 - PARKING

Sec. 12-3-111. - Authority to establish ~~parking zones and install meters~~ paid parking areas.

The town council may establish by resolution, from time to time as traffic conditions require, zones to be known as ~~parking meter zones~~ paid parking areas upon such streets or properties of the town as are selected by the town council for the location of such ~~meters~~ designation; and, in such ~~parking meter zones~~ paid parking areas, the town manager shall cause ~~parking meters to be installed and parking meter spaces~~ appropriate signage and notification of paid parking equipment or other similar electronic paid parking capabilities to be designated as hereinafter provided.

Sec. 12-3-112. - Location and operation of ~~meters~~ paid parking areas.

~~Parking meters installed in the parking meter zones established by the provisions of this article shall be placed upon the curb immediately adjacent to the individual parking places hereinafter described. Each parking meter shall be placed or set in such a manner as to show or display by a signal that the parking space adjacent to such meter is or is not legally in use. Each parking meter shall be installed and set to display, upon the deposit of an official coin of the United States of America, which is at the time legal tender, a signal indicating legal parking for a designated time period. Each meter shall also be arranged so that, upon the expiration of the legal parking time, it will indicate by a mechanical operation and the dropping of the proper signal that the lawful parking has expired. The town manager shall be authorized to establish the parking fees.~~

The town manager shall take such actions as may be necessary and appropriate to implement the collection and corresponding enforcement of paid parking areas as designated by the town council. These actions shall include the posting of necessary signage, the installation of paid parking infrastructure, and the implementation of a comprehensive paid parking program either directly or through contracting with appropriate entities as may be required to effectuate the directives of the town council.

Sec. 12-3-114. ~~Depositing coins.~~

~~When any vehicle shall be parked in any space alongside of or next to which a parking meter is located in accordance with the provisions of this article, the operator of such vehicle shall, upon entering the parking space, immediately deposit or cause to be deposited a coin of the United States of America, which is, at the time, legal tender, in such parking meter and the parking space may then be lawfully occupied by such vehicle during the period indicated on the meter. If such vehicle shall remain parked in any such parking space beyond the parking time limit, the parking meter shall display a sign or signal showing illegal parking or expiration of time allotted, and in that event, such vehicle shall be considered as parked overtime. Overtime means beyond the period of legal parking time. The parking of a vehicle overtime in any such part of a street where any such meter is located shall be a violation of this article.~~

Sec. 12-3-117. - Defacing, injuring, etc.

It shall be unlawful for any person to deface, injure, tamper with, open or willfully break, destroy or impair the usefulness of any parking meter signage or devise installed under the provisions of this article.

Sec. 12-3-118. - Violations; parking enforcement personnel to report; notices; penalty.

- (a) It shall be the duty of the ~~enforcement officer of the town~~ town, the designated parking contractor of the Town, or the Beaufort County Sheriff to report:
1. The ~~number of each parking meter~~ identity of each paid parking area which indicates that the vehicle occupying the a designed parking space adjacent to such parking meter within such paid parking area is or has been parked in violation of any of the provisions of this ~~article~~ Chapter; and
 2. The state license number of such vehicle; and
 3. Any other facts, knowledge of which is necessary to a thorough understanding of the circumstances surrounding such violation.
- (b) Each such ~~parking enforcement officer~~ community code enforcement officer, designated town staff member, designated parking contractor, or member of the Beaufort County Sheriff's Office shall also attach to such vehicle a notice to the owner thereof that such vehicle has been parked in violation of a provision of this article stating ~~the bond set by the town for said violation~~ the administrative penalty associated with such violation. ~~Every person who violates or fails to comply with any of the provisions of this article shall be punished for each such violation as provided for in~~ section 1-5-10 of this Code.
- (c) In any ~~parking meter zone~~ paid parking area, every hour or fraction of an hour of overtime parking shall constitute a separate offense.

Sec. 12-3-121. -- Penalties for delinquent parking fines.

~~The following penalties are hereby established for delinquent parking fines:~~

- (a) ~~Delinquent after 10 days, add\$10.00~~
- (b) ~~After every 30 days add an additional10.00~~
- (c) ~~Maximum penalty40.00~~

ARTICLE 6 - Beach Parking Management

Sec. 12-6-110. - Purpose and Intent.

The purpose of this Article is to establish regulations for the management of paid parking areas for public beach access within the jurisdiction of the Town of Hilton Head Island. The intent of this Article is to promote the effective use of parking resources and ensure the public safety, accessibility, and convenience of beachgoers, while minimizing adverse effects on the neighboring environment.

Sec. 12-6-111. - Definitions.

Paid Parking Area. Any area designated by the town requiring payment to park therein.

Parking Contractor. The town or its designed vendor to manage the beach parking program.

Resident. For purposes of this Article, resident shall mean:

- (a) Any person who owns any single or multi-family residence in the municipal limits of the Town, irrespective of whether the person qualifies for the 4% special assessment ratio except:
 - 1. The owner of a property that is offered for leases of any term of more than 183 days in any calendar year is not deemed a “resident” eligible for a beach parking pass based on the ownership of that property.
- (b) Any person who is a tenant under a lease for a single or multi-family residence for a period of 183 days or more in any calendar year.
- (c) Any person who owns time-share interests totaling more than 183 days per year.

Sec. 12-6-112. – Designation of paid parking areas.

The following areas are designated as paid parking areas:

- (a) Alder Lane Beach Park
- (b) Chaplin Beach Park
- (c) Coligny Beach Park
- (d) Driessen Beach Park
- (e) Fish Haul Beach Park
- (f) Folly Field Beach Park
- (g) Islanders Beach Park

The Town Council shall determine the appropriate rates for the paid parking areas by resolution.

The town manager or designee shall install and maintain appropriate signs indicating the boundaries of the paid parking areas and the parking rates established therefore.

Sec. 12-6-113. – Fees, payment, and enforcement.

- (a) The parking fees for any paid parking area shall be established by a resolution of the town council.
- (b) Any person who parks a vehicle in a paid parking area must pay the appropriate fee as specified by the town or designated parking contractor.
- (c) Payment shall be made through the designated payment mechanism installed by the town of designated parking contractor or otherwise provided for electronically for the express purpose of paying for a designated parking space.
- (d) The town or designated parking contractor shall enforce the payment of parking fees and may issue administrative citations or take other appropriate measures to ensure compliance, including but not limited to vehicle immobilization and/or towing.

Sec. 12-6-114. - Exemptions.

- (a) The following vehicles shall be exempt from payment of parking fees:
 - 1. Vehicles of emergency responders while engaged in official duties;
 - 2. Vehicles of disabled persons displaying appropriate placards or license plates; and
 - 3. Vehicles of authorized Town employees engaged in official duties.
- (b) The town manager may establish additional exemptions during permitted special events.
- (c) Vehicles which have been registered pursuant to the Town's Resident Beach Parking Pass program shall be exempt from the payment of parking fees.

Sec. 12-6-115. – Resident beach pass.

- (a) The town shall issue resident beach parking passes to residents who can prove primary residency within the Town of Hilton Head Island as defined in Section 12-6-111. Resident beach parking passes will allow residents to park within the paid parking areas during the established hours of operation without paying the daily parking fees as designated by the town council.
- (b) Qualified residents of Hilton Head Island shall be entitled to receive a maximum of two beach parking passes per household. Beginning in calendar year 2025, the beach parking passes provided for in this section shall be issued without charge. However, the town council shall have the right to assess a fee for these passes in the future and shall be

authorized to set such fee by the adoption of a corresponding resolution setting forth this amount.

- (c) Residents who receive a beach parking pass are subject to the parking regulations of this Article.
- (d) The town may revoke or refuse to issue resident beach passes for individuals who violate this Article.

Sec. 12-6-116. – Defrauding, opening, impairing, or damaging paid parking devices.

It shall be unlawful for any person to defraud, open, impair, or damage a paid parking device or related equipment. Violations of this section shall be punishable as set forth in Section 1-5-10 of the Municipal Code of the Town of Hilton Head Island.

Sec. 12-6-117. – Rules and regulations.

- (a) The following rules and regulations are applicable in the paid parking area and shall be enforced by the designated parking contractor, community code enforcement officers or the Beaufort County Sheriff's Office:
 - 1. No parking outside of the hours of operation of the paid parking area;
 - 2. No parking in areas designated as no parking zones;
 - 3. No parking in areas marked for emergency vehicles;
 - 4. No parking in areas reserved for handicapped individuals unless a valid handicapped placard is visibly displayed; and
 - 5. No parking in any area within a designated paid parking area that is not specifically identified as a parking space.

Sec. 12-6-118. – Dates and Hours of operation, Chaplin Beach Park exception.

- (a) Paid parking areas shall be open for public use during the dates and hours designated by the town council, which shall be formalized through either through the adoption of an ordinance or corresponding paid parking area resolution setting forth such dates and/or hours.
- (b) The dates and hours of operation adopted by the town council and the corresponding paid parking requirements therein shall be posted on appropriate signs and may be adjusted from time to time as deemed necessary by subsequent action of the town council.
- (c) Paid parking requirements at the Chaplin Beach Park shall be suspended during any youth recreational sports programming season facilitated by the Island Recreation Association.

The Town will coordinate with the Island Recreation Association on the dates that this exemption will be in place and will cause appropriate signage to be installed notifying individuals when paid parking will be required at this location.

Sec. 12-6-119. – Penalties and fines.

- (a) Unless otherwise stated in this Article, any person who violates any provision of this Article shall be subject to fines and vehicle tow or immobilization. The fine schedule shall be on a graduated basis based on the number of violations issued within a 12-month period as follows:
 - 1. First violation: a written warning and/or a fine of \$50, reminder of parking regulations and notification of potential vehicle tow or immobilization for future violations.
 - 2. Second violation: a fine of \$100 and possible towing or immobilization of vehicle at owner's expense.
 - 3. Third and subsequent violations: a fine of \$250 and mandatory towing or immobilization of vehicle at owner's expense.
 - 4. Fourth and subsequent violations: a fine of \$500 and mandatory towing or immobilization of vehicle at owner's expense.
- (b) A \$25 late fee shall be applied to any original fine not paid within 30 days of being issued.
- (c) The town, parking contractor, or the Beaufort County Sheriff's Office may also immobilize, tow, or impound any vehicle parked in violation of this Chapter if, in its sole discretion, deems it necessary for public safety purposes.

Sec. 12-6-120. – Appeals of administrative citation.

- (a) Any person who receives an administrative citation related to paid parking may appeal the citation by submitting a written appeal to the designated parking contractor within 30 days of the citation.
- (b) The parking contractor shall review the appeal and issue a written decision within 30 days of receiving the appeal.
- (c) If the person appealing the citation disagrees with the decision of the parking contractor, he or she may appeal to the town attorney or his or her designee within 30 days of receiving the decision of the parking contractor. An appeal to the town attorney or his or her designee shall include statements of fact and conclusions of law to support the appeal.

- (d) The decision of the town attorney or his or her designee shall be final. Any subsequent appeals may be made to a court of competent jurisdiction within 30 days of receiving the town attorney's final decision.
- (e) This section does not apply to violations issued in accordance with Section 12-5-517 of this Article.



TOWN OF HILTON HEAD ISLAND

Town Council

TO: Town Council
FROM: Shawn Colin, *Assistant Town Manager*
CC: Marc Orlando, ICMA-CM, *Town Manager*
DATE: September 17, 2024
SUBJECT: Consideration of a Resolution to Accept the Final Report for the William Hilton Parkway Gateway Corridor Project Independent Study

RECOMMENDATION:

Consideration of a Resolution to Accept the Final Report for the William Hilton Parkway Gateway Corridor Project Independent Study

BACKGROUND:

The Town desired to contract with a qualified firm to conduct an Independent Study of the William Hilton Parkway Gateway Corridor project, to have the selected firm review and verify that the assumptions, methodologies, alternatives and preferred design recommendations are technically accurate and serve the best interest of Hilton Head Island. The achieve this the following steps were completed:

February 2023 – Town Council created the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee (Committee)

March 2023 - Appointments made on March 21, 2023.

May 2023 – Committee approved draft Request for Qualifications and Scope of Work for Independent Study and forwarded to Town Council for consideration

June 2023 - Town Council approved final Request for Qualifications and Scope of Work for Independent Study (Attachment 1)

August to October 2023 – Consultant, The Lochmueller Group, Inc. procured to conduct Independent Study

Oct 2023 to June 2024 – The Lochmueller Group and Town staff consultant conducted 10 public meetings with the Committee as they worked through the agreed upon scope of contracted work. Findings for the Gateway Corridor, from Moss Creek to Gum Tree Road were presented to the committee on June 12, 2024 and Town Council on Jun 17, 2024.

August 2024 – The final draft report, which includes downstream impacts from the Gateway Corridor Project to Whooping Crane Way/Indigo Run Drive on the William Hilton Parkway Business Route, and to Sea Pines Circle on the Cross-island Parkway Route, was presented to the Advisory Committee on August 14, 2024. The committee voted 2-2 to accept the final draft report, with one member of the committee absent.

September 2024 – Town Council to consider a Resolution (Attachment 2) to accept the final report (Exhibit A) presented to Town Council. The presentation of the downstream impacts and recommendations for consideration from final report completes the Scope of Work deliverables for this project (Attachment 3).

ATTACHMENTS:

1. William Hilton Parkway Gateway Corridor Independent Study RFQ Scope of Work
2. Resolution to Accept the Final Report for the William Hilton Parkway Gateway Corridor Project Independent Study
 - a. Exhibit A Independent Study of the William Hilton Parkway Gateway Corridor Traffic Operations and Safety Report – dated August 9, 2024
3. Presentation by the Lochmueller Group – dated August 14, 2024

TOWN OF HILTON HEAD ISLAND**RFQ 2023-16****Independent Study of the William Hilton Parkway Gateway Corridor****I. GENERAL INFORMATION AND SUBMITTAL INSTRUCTIONS**

The Town of Hilton Head Island is soliciting responses from qualified engineering firms (“Offerors” or “Consultants”) with an ability to be licensed in South Carolina to provide Independent Study of the William Hilton Parkway Gateway Corridor for the Town in accordance with the scope of work and specifications provided herein. To be eligible for consideration, an Offeror cannot have current or previous affiliation with the Town of Hilton Head Island, Beaufort County, SC, or the South Carolina Department of Transportation (SCDOT).

Qualifications must be submitted by the Qualifications Submittal Deadline shown on the Transmittal Page. Qualifications will ONLY be accepted electronically via the Town’s Procurement Portal which can be accessed using the following link <https://hiltonheadislandsc.bonfirehub.com/portal>. If electronic submittal poses a hardship, please notify the Town Contact person identified on the Transmittal Page.

There will be a MANDATORY meeting held virtually on June 21, 2023 at 2:00PM (EST). Only vendors that attend this meeting shall be qualified to submit a proposal. Meeting information is below:

Mandatory Virtual Pre-Submittal Meeting Link and Information
June 21, 2023 at 2:00PM

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Meeting ID: 219 092 821 712

Passcode: q4h93B

[Download Teams](#) | [Join on the web](#)

Submittals will be publicly opened via virtual conference at the date and time indicated on the Transmittal Page. Only the names of Offerors will be provided at the opening. No other information will be shared at that time. To participate, please use the following meeting link and information.

Virtual Opening of Submittals Link and Information
8:30 am Eastern Time on July 11, 2023

Join Zoom Meeting

<https://us06web.zoom.us/j/85390157263?pwd=eFJpajVqUlhpZHZrdkV1aVNvUS9rZz09>

Meeting ID: 853 9015 7263

Passcode: 866529

One tap mobile

+19294362866,,85390157263#,,,,*866529# US (New York)

+13017158592,,85390157263#,,,,*866529# US (Washington DC)

Dial by your location

- +1 929 436 2866 US (New York)
- +1 301 715 8592 US (Washington DC)

Meeting ID: 853 9015 7263

Passcode: 866529

Find your local number: <https://us06web.zoom.us/j/kckCmsWNiz>

The Town reserves the right to accept or reject any or all submittals received as a result of this solicitation, to negotiate with all qualified Offerors, to award multiple contracts for all or part of the scope of work, or to cancel in part or in whole this solicitation, if in the best interests of the Town. The Town reserves the right to refuse any and all submittals and to waive any technicalities and formalities. The Town reserves the right to waive any requirement in this solicitation, including material requirements, if such material requirement is unmet by all Offerors, and, such a waiver is determined to be in the best interests of the Town.

Submittals must be signed by an official of Offeror authorized to bind Offeror. Electronic signature using secure signature software is acceptable. By submitting, Offeror agrees that its submittal shall be good and held open for a period of at least sixty (60) days from the Due Date.

4 | Page

The Town recognizes that small businesses enterprises as well as businesses enterprises owned and operated by women and/or minority persons (collectively “disadvantaged business”) have historically faced challenges resulting in less than full participation in the free enterprise system to a degree disproportionate to other businesses. Therefore, the Town is committed to ensuring that such disadvantaged business enterprises are afforded every opportunity to fully and fairly participate in the Town’s procurement process for goods and services. In the event of a tie after the scoring of responses involving a certified disadvantaged Offeror and a non-disadvantaged Offeror, the Town will award the contract to the certified disadvantaged Offeror. Tied responses involving two certified disadvantaged Offerors will be settled by a random selection method. It is the obligation of the disadvantaged Offeror to submit proof of current certification from a governmental entity in the United States at the time they submit their response in order for the certification to be considered by the Town in determining an award as described above. Tied responses involving two non-disadvantaged Offerors will be settled by a random selection method.

The Town is required under the South Carolina Freedom of Information Act, to upon request, make public and disclose all documents of, and documents incidental to, executed contractual arrangements. Therefore, Offerors, by submitting a response to this solicitation, are acknowledging that all materials submitted in their response may be subject to such disclosure, regardless of any labeling of materials as “confidential” or “proprietary” or other similar notations.

The Town of Hilton Head Island’s meetings on the Independent Study of the William Hilton Parkway Gateway Corridor with the Committee, the Town, the County and or the Offeror will be open to the public.

II. SCOPE OF WORK

1. The Town desires to contract with a qualified firm to conduct an Independent Study of the William Hilton Parkway Gateway Corridor project. It is the intent of the Town to have the selected firm review and verify that the assumptions, methodologies, alternatives and preferred design recommendations are technically accurate and serve the best interest of Hilton Head Island. The qualified firm is to take a fresh look at the project and test possible new alternative solutions over the project scope. The consultant is strongly encouraged to develop their own ideas and recommend their own alternatives.
2. Proposed plans will have to pass NEPA review. Thus, the consultant should have a familiarity with that process and its applicability to this project. It should be noted that, in addition to environmental impacts, Federal Highway Administration (FHWA) considers safety as a prime issue in its evaluation. Also, a demonstrated solution of the congestion problem over the project scope above is essential. Thus, plans that deal with these issues have a higher probability of success in the NEPA and community review.

3. The study is anticipated to take no longer than six months to complete. The specific scope, schedule and fee for the services necessary to develop the plan will be negotiated once the firm is selected. Anticipated services and tasks associated with the development of the plan may include, but are not limited to, the following:

Task 1: Project Initiation and Coordination:

- Initial meeting with Town of Hilton Head Island and Independent Consultant.
- Conduct Bi-weekly project status meetings with Town staff and the project advisory committee.
- Review meeting with representatives of Town of Hilton Head Island, SCDOT and the existing design consultants on prior work performed
- Monthly update meetings with Town Manager.
- Review and define the study area.
- Perform a site visit/field review.
- Review and understand bridge inspection data.
- Understand the Town of Hilton Head Island's and Community concern with the proposed concept and existing model.
- Study existing project reports including: the SCDOT Draft Environmental Assessment, Town Council recommendations supported by MKSK and HDR studies, and the Technical Working Group report dated 3/31/23 to FHWA/Council on Environmental Quality/SCDOT.

Task 2: Provide Modeling of Data and Recommended Design Concepts

- Review assumptions contained within the model – Daily, Hour, Land Use, and identify other input variables, including adaptive traffic signals and safety provisions.

The results of each alternative evaluated should include but not be limited by the following:

Throughput and Traffic Simulation

This includes factors such as end-end delay, level of service, and average speed. We wish to see these computed via event simulation from end-to-end in each direction (for each alternative) including modeling the coupling and interactions of all proposed traffic lights, merges, splits, and other possible constrictions, as opposed to summing them as acting individually. The simulation must operate on the smallest interval possible to provide meaningful results.

Costs

Since detailed engineering for the various Corridor options is not available at this point, the Consultant shall use broad-gauge cost estimates similar to those used by SCDOT. The Consultant shall solicit assistance from SCDOT, the County, and the Town in developing cost estimates for the various

options and identifying the split between covered and uncovered costs.

Safety, Environmental and Community Impacts

- Review data collection approach and study area.
- Review model outputs and subsequent recommendations for intersection operations and bridge concepts.
- Model Review and Concept Review Memo.
- Compile findings into a Summary Review Memo, identifying primary findings and recommendations for improvement.
- Review data collection from Adaptive Traffic Signals.

Task 3: Model and Operational Analysis Updates

- The model updates will be based on the version of the Lowcountry Area Transportation Study (LATS) model utilized to develop the project. Consultant to study and recommend a model alternative if warranted.
- Provide simulation and modeling of various data.
- Confirm that the base traffic demand model accurately takes into account trips generated by visitor traffic, workforce traffic, mass transit traffic, and traffic demand from redevelopment from existing island parcels.
- Update the model based on findings in Task 2 and coordination with the Town of Hilton Head.
- Expand the SCDOT project model and study area to include the following signalized intersections and merge points east of Spanish Wells Road:
 - William Hilton Parkway (US 278) merge with Cross Island Parkway.
 - William Hilton Parkway (US 278 Bus) at Gum Tree Road.
 - William Hilton Parkway (US 278 Bus) at Jarvis Park Road / Wilborn Road.
 - William Hilton Parkway (US 278 Bus) at Pembroke Drive/Museum Street.
 - William Hilton Parkway (US 278 Bus) at Indigo Run Drive/Whooping Crane Way.
 - Palmetto Bay Road (US 278) at Point Comfort Road/Arrow Road.
 - Palmetto Bay Road at Target Road.
 - Sea Pines Circle - William Hilton Parkway (US 278 Bus) at Palmetto Bay Road.
- Expand the model and study area to include the following signalized intersections and merge points west of Bluffton Parkway Flyover on US 278:
 - US 278 (Fording Island Road) at Buckingham Plantation Drive/Moss Creek Drive (on Mainland).
 - Bluffton Parkway at Buckingham Plantation Drive (on Mainland)
- Existing traffic counts for the study area intersections will be obtained from the Town of Hilton Head Island and SCDOT
Any additional counts not available from the Town of Hilton Head Island or SCDOT shall be collected by the consultant as deemed necessary and agreed to by the Town.

- The model shall include the most recent available traffic data that reflects the toll removal on the Cross Island Parkway.
- The model shall include the new adaptive traffic signal management system being deployed by the Town (Summer 2023).
- Generate model outputs for study area with agreed upon new assumptions and latest volumes and analyze operations using appropriate tools. A key deliverable of this project is a visual simulation of the models which can show the comparison of the options.
- Evaluate how Adaptive Traffic Signals could impact the traffic flow and average travel times along the corridor at peak times as well as other periods. The Town and County are expected to implement Adaptive Signals on the William Hilton Parkway/US 278 Corridor from I-95 to Sea Pines Circle. Answer questions related to potential for downstream impacts. •
- Evaluate opportunities to achieve desired operational efficiency by maintaining four lanes (two lanes in each direction) between the Windmill Harbor and Squire Pope Road intersections with William Hilton Parkway. These include system improvements that result from Intelligent Traffic Systems and other operational adjustments that may provide improved efficiency in the system.
- Evaluate impacts of alternatives, including those impacts to the Traditional Cultural Property defined in the Environmental Assessment, and commonly referred to as the Stoney Community. Develop strategic options for consideration to mitigate impacts.
- Evaluate the safety for bicycle and pedestrians within the original Project Study Area.
- Coordinate and refine recommendations with the Town of Hilton Head Island.
- Participate in meetings as directed by the Town of Hilton Head Island.

Task 4: Proposed Intersection Improvements and other important elements:

- Evaluate the safety for bicycle and pedestrians within the original Project Study Area including new signal proposed at Windmill Harbour.
- Evaluate vehicular safety of the Project and make cost-effective recommendations to reduce accidents and enhance safety for the motoring public including emergency response considerations.
- Identify potential modifications to the proposed intersection designs of the preferred alternative within the original Project Study Area from Moss Creek to Spanish Wells Road that deliver the same (or better) expected operational levels.
- Based on the findings of Task 3 for intersections outside of the original project study area, develop alternatives to improve operations in the future. Evaluation should include but not be limited to traffic conveyance and capacity improvements (LOS, delay, etc.) as well as anticipated project costs and known impacts or concerns with the alternatives

- Evaluate, quantify, and explain the Project's impacts on the Stoney Community.
- Develop a Summary of Findings and Recommendations for review by the Town of Hilton Head that can be utilized to secure future funding for the improvements beyond the Project Study Area.

Task 5: Final Report

- Compile model updates, operational analysis, and findings into a report for a review and discussion.
- Integrate safety objectives based on the results of data and analysis into findings and recommendations.
- The report shall contain a detailed quantitative, objective comparison of alternatives including pros and cons of each that assesses the conveyance and capacity efficacy, safety improvements, community and social impacts, environmental impacts, appearance/aesthetic impacts, and total costs. This comparison shall be summarized in a simple to understand, tabular format as agreed to by the Town.
- Finalize elements into draft and final reports, including executive summaries and recommendations.
- Presentation of study, with final findings and recommendations, to Town Council for endorsement/adoption.
- Submit final report electronically for endorsement/adoption by Town Council.
- All engineering work must be certified by a Professional Engineer licensed in South Carolina.

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA, TO ACCEPT THE FINAL REPORT FOR THE WILLIAM HILTON PARKWAY GATEWAY CORRIDOR PROJECT INDEPENDENT STUDY.

WHEREAS, The Town desired to contract with a qualified firm to conduct an Independent Study of the William Hilton Parkway Gateway Corridor project, to have the selected firm review and verify that the assumptions, methodologies, alternatives and preferred design recommendations are technically accurate and serve the best interest of Hilton Head Island.

WHEREAS, Town Council adopted a Resolution on February 21, 2023 to create the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee (Committee) with the following expectations:

WHEREAS, Town Council appointed 5 members and an alternate member to the Committee on March 21, 2023; and,

WHEREAS, the Committee reviewed and assessed the Town's request for qualifications, including recommending a scope of work for the RFQ on May 12, 2023 to be considered by Town Council; and,

WHEREAS, Town Council approved the RFQ and recommended scope of work on June 6, 2023; and,

WHEREAS, the Committee reviewed proposals and identified and interviewed preferred firms to be considered for contract award; and,

WHEREAS, the Committee selected The Lochmueller Group, Inc. as the preferred firm on August 28, 2023; and,

WHEREAS, the Committee met 12 times between October 2023 and August 2024 to work through the agreed upon scope of contracted work; and,

WHEREAS, Findings and recommendations for consideration for the Gateway Corridor, from Moss Creek to Gum Tree Road were presented to the Committee on June 12, 2024 and Town Council on June 17, 2024; and,

WHEREAS, the final draft report, which includes downstream impacts from the Gateway Corridor Project to Whooping Crane Way/Indigo Run Drive intersection on the William Hilton Parkway Business Route, and to Sea Pines Circle on the Cross-Island Parkway Route, was presented to the Committee on August 14, 2024. The Committee vote to accept the final draft failed on a vote of 2-2, with one member of the Committee absent; and,

WHEREAS, the final draft report has been forwarded to the Town Council without a recommendation by the Committee; and,

WHEREAS, the final William Hilton Parkway Gateway Corridor Independent Study was presented to Town Council on September 17, 2024.

NOW, THEREFORE, BE IT, AND HEREBY IT IS, RESOLVED BY THE TOWN COUNCIL,

- 1. The Town Council here by accepts the Final William Hilton Parkway Independent Study; and,**
- 2. Town Staff is authorized to utilize the Final William Hilton Parkway Independent Study to inform future planning and project considerations.**

MOVED, APPROVED, AND ACCEPTED BY THE COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND ON THIS _____ DAY OF _____, 2024.

THE TOWN OF HILTON HEAD ISLAND,
SOUTH CAROLINA

Alan Perry, Mayor

ATTEST:

Kimberly Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis L. Coltrane, Town Attorney

Introduced by Council Member: _____

AUGUST 9, 2024

Independent Study of William Hilton Parkway Gateway Corridor Traffic Operations and Safety Report

Town of Hilton Head Island, South Carolina

Prepared for:

Town of Hilton Head Island

1 Town Center Court

Hilton Head Island, South Carolina

843.341.4600

Prepared by:

Lochmueller Group

Huntington Tower, 201 W Springfield Avenue

Suite 1012

Champaign, Illinois 61820

217.673.7633



CONTENTS

List of Figures	iii
List of Tables	iv
Executive Summary.....	v
Existing and No-Build Conditions.....	v
Corridor Study Goals.....	v
Proposed Alternatives Selected for Analysis	vi
Introduction	1
Study Objective	1
Study Overview	3
Background	3
Data Collection and Field Inventory.....	3
Analysis Methodology.....	5
Existing Conditions.....	8
Existing Synchro Traffic Operational Analysis.....	8
Existing VISSIM Traffic Operational Analysis.....	9
Existing VISSIM Network Performance	9
2045 No-Build Conditions	10
2045 No-Build Synchro Traffic Operational Analysis	11
2045 No-Build VISSIM Traffic Operational Analysis.....	11
2045 No-Build VISSIM Network Performance	11
2045 Alternatives Analysis.....	13
Corridor Study Goals.....	14
Alternatives Considered.....	14
2045 Alternative 1: SCDOT Modified Recommended Preferred	22
2045 Alternative 2: Bowties at Squire Pope and Spanish Wells	23
2045 Alternative 3: Echelon / Center Turn Overpass	26
2045 Alternative 4: Elevated Bypass.....	30
Alternatives Comparison and Conclusions	32
Town Selected Alternative.....	38
Downstream Impacts of Town Selected Modified Alternative 1.....	39

Modified Alternative 1 Traffic Analysis.....	39
Additional Mitigation Solutions for Local Intersections	42
Options A and B VISSIM Traffic Operational Analysis	44
Options A and B VISSIM Travel Time Comparison	44
Options A and B Network Performance.....	46
Multimodal and Safety Recommendations for Local Intersections.....	47
Conclusions	50
2045 Alternatives Analysis	50
Downstream Impacts of Town Selected Alternative 1	53
Additional Mitigation Solutions for Local Intersections	53
Appendix	55
Appendix A: 2023 Existing Traffic Volumes	A-1
Appendix B: 2023 Existing Operating Conditions (Synchro)	B-1
Appendix C: 2023 Existing Operating Conditions (VISSIM).....	C-1
Appendix D: Traffic Forecasting Memorandum.....	D-1
Appendix E: 2045 No-Build Traffic Volumes	E-1
Appendix F: 2045 No-Build Traffic Operating Conditions (Synchro).....	F-1
Appendix G: 2045 No-Build Traffic Operating Conditions (VISSIM)	G-1
Appendix H: Four Lane Viability Review Technical Memorandum; Seismic Study Review; Cursory Review of Southern Bypass.....	H-1
Appendix I: 2045 Alternative 1 Traffic Volumes and Operating Conditions (Synchro).....	I-1
Appendix J: Technical Environmental Overview.....	J-1
Appendix K: 2045 Alternative 2 Traffic Volumes and Operating Conditions (Synchro)	K-1
Appendix L: 2045 Alternative 3 Traffic Volumes and Operating Conditions (Synchro).....	L-1
Appendix M: 2045 Alternative 4 Traffic Volumes and Operating Conditions (Synchro)	M-1
Appendix N: 2045 Modified Alternative 1 Operating Conditions (VISSIM)	N-1
Appendix O: 2045 Local Intersections Operating Conditions (VISSIM)	O-1

LIST OF FIGURES

Figure 1. Entire Project Study Area	2
Figure 2. Modified Original Project Study Area	2
Figure 3. Alternative 1: SCDOT Modified Recommended Preferred	15
Figure 4. Example Bowtie Intersection (Provided by Virginia DOT)	16
Figure 5. Example Echelon (Provided by Virginia DOT)	18
Figure 6. Example Center Turn Overpass (Provided by Virginia DOT)	18
Figure 7. Example of Elevated Bypass - 01.....	20
Figure 8. Example of Elevated Bypass - 02.....	20
Figure 9. Example of Elevated Bypass - 03.....	21
Figure 10. Example of Elevated Bypass - 04.....	21
Figure 11. Proposed Roundabout Configuration at Sea Pines Circle Under Option A.....	43

LIST OF TABLES

Table 1. Intersection Level of Service Criteria	6
Table 2. 2023 Existing VISSIM Calibration Travel Time Results	7
Table 3. 2023 Existing VISSIM Calibration Traffic Volumes Results	8
Table 4. Existing Corridor Speeds (VISSIM)	10
Table 5. Network Performance – Existing Conditions	10
Table 6. 2045 No-Build VISSIM Calibration Travel Time Results.....	12
Table 7. 2045 No-Build VISSIM Calibration Traffic Volumes Results	12
Table 8. Network Performance – 2045 No-Build Conditions.....	13
Table 9. Travel Time Comparison for Alternative 1	23
Table 10. Travel Time Comparison for Alternative 2	25
Table 11. Expected Change in Travel Time for Left-Turning Vehicles at Bowtie Intersections	25
Table 12. Travel Time Comparison for Alternative 3	28
Table 13. Travel Time Comparison for Alternative 4	31
Table 14. Traffic Operations Overview Matrix.....	33
Table 15. Bicycle and Pedestrian Overview Matrix.....	34
Table 16. Right-of-Way Overview Matrix	35
Table 17. Environmental Overview Matrix	36
Table 18. Overall Scoring Matrix.....	37
Table 19. 2045 Modified Alternative 1 VISSIM Travel Time Results.....	40
Table 20. Network Performance – 2045 Modified Alternative 1 Without Improvements to Downstream Intersections	41
Table 21. Comparison of Final Travel Times for Entire Study Area	46
Table 22. Network Performance for Entire Study Area	47

EXECUTIVE SUMMARY

The Town of Hilton Head Island, South Carolina commissioned an independent study of the William Hilton Parkway Gateway Corridor to assess the need for improvements along US 278 (William Hilton Parkway) from Moss Creek Drive to Indigo Run Drive, as well as along US 278 (Palmetto Bay Road) from Cross Island Parkway to Sea Pines Circle. This report summarizes Existing and future year No-Build traffic operations along the corridor to quantify mobility issues that exist today and that would be expected in the future, absent any upgrades to the roadway network.

Additionally, this report details the numerous corridor alternatives considered for implementation along William Hilton Parkway between Moss Creek Drive and Gum Tree Road. Proposed alternatives consisting of two at-grade solutions and two grade separated solutions were analyzed in further detail. The goal of the corridor alternatives analysis was to provide an objective, data-driven evaluation of the four alternatives. This evaluation was then used to assist with the selection of a single recommended alternative for the corridor between Moss Creek and Gum Tree Road.

EXISTING AND NO-BUILD CONDITIONS

CONGESTION AND CORRIDOR MOBILITY

- In 2045, out of a total of 105 **intersection approaches**, 19 and 24 intersection approaches experienced levels of service between E/F throughout the study corridor during the AM and PM peak hours, respectively.
- The existing vehicle speeds along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive average at approximately 19 miles per hour (mph) in the eastbound direction during the AM peak hour and approximately 17 mph in the westbound direction during the PM peak hour. This is well below the posted speed limits, indicating significant congestion along the corridor today.
- It was found that an over-saturation of the study area under the 2045 No-Build scenario resulted in vehicles not being able to enter the VISSIM simulation network. Therefore, some of the vehicles in the model were not processed through each intersection.
- The 2045 No-Build travel times along the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run are higher than existing conditions. It is expected that the travel time in the eastbound direction during the AM peak hour will increase from approximately 19.3 minutes to 26.3 minutes, an increase of 7 minutes (36%) when compared to existing conditions. During the PM peak hour, it is expected that the travel time in the westbound direction will increase from 20.9 minutes to 25.7 minutes, an increase of approximately 5 minutes (23%) when compared to existing conditions.

CORRIDOR STUDY GOALS

The following goals for improving the William Hilton Parkway Gateway Corridor were established by Town of Hilton Head representatives to guide the development of alternatives and form the basis for the alternatives analysis:

- Fix the transportation issues in the corridor in a way that improves the safety and quality of life for all residents, workers, and visitors to Hilton Head Island
 - a) Address transportation needs for natural disasters and resiliency of island access
 - b) Consider future transportation alternatives
- Improve the safety and quality of life for the residents of the neighborhoods and businesses directly impacted by the US 278 corridor
 - a) Stoney Community
 - b) Neighborhoods on Jenkins and Hog Islands (including but not limited to Windmill Harbor)
- Have a gateway to and from Hilton Head Island that the region will be proud of:
 - a) Aesthetically pleasing and reflecting the Hilton Head Island/Low Country values
 - b) Safe and functional pathways for pedestrians and cyclists
 - c) Minimizes environmental impacts and enhances the national asset of Pinckney Island

PROPOSED ALTERNATIVES SELECTED FOR ANALYSIS

Four proposed corridor alternatives were developed to help mitigate congestion along William Hilton Parkway between Moss Creek Drive and Gum Tree Road.

ALTERNATIVE 1: SCDOT MODIFIED RECOMMENDED PREFERRED

- Alternative 1 considers the SCDOT Modified Recommended Preferred alternative with adaptive signals in place and improvements at Gum Tree Road.
- The improvements at Gum Tree Road include keeping the intersection at-grade, completely reconfiguring the intersection to improve its efficiency, and providing dual left-turn lanes for the westbound, northbound, and southbound approaches.

ALTERNATIVE 2: BOWTIES

- Alternative 2 considers bowties at Squire Pope Road and Spanish Wells Road with adaptive signals in place and aforementioned improvements at Gum Tree Rd.
- A bowtie intersection removes left-turns from the intersection and requires vehicles to navigate through roundabouts along the side-street to return to the signal and continue in their intended direction of travel.

ALTERNATIVE 3: ECHELON / CENTER TURN OVERPASS

- Alternative 3 considers either an echelon or a center turn overpass at either Squire Pope Road or Spanish Wells Rd. Echelons or Center Turn Overpasses at both Squire Pope Road and Spanish Wells Road were not considered because there is not enough distance between intersections for both to be independently grade-separated.
- Alternative 3 also considers the aforementioned improvements at Gum Tree Road.

- An echelon is a grade-separate intersection where one approach on both roadways is elevated. For example, the northbound and eastbound approaches would be elevated and the southbound and westbound approaches would remain at-grade to create two intersections. Both intersections would be signalized and all pedestrian and bicycle movements would remain at-grade.
- A center turn overpass is also a grade-separated intersection which raises only the left-turn movements from the main intersection using ramps to create two intersections. Both intersections would be signalized and all pedestrian and bicycle movements would remain at-grade.

ALTERNATIVE 4: ELEVATED BYPASS

- Alternative 4 considers an elevated bypass which would begin west of Squire Pope Road and end east of Gum Tree Road. The elevated bypass takes the four internal lanes, two in each direction, and elevates them over the study intersections. This would allow free-flow movement for the eastbound and westbound thru traffic from just east of the Jenkins Island causeway to just west of Wilborn Road. One lane in each direction along William Hilton Parkway would remain at grade along with a separate eastbound right-turn lane at Squire Pope Road and left-turn lanes at Squire Pope Road and Spanish Wells Road. This allows for full access to be maintained at Squire Pope Road and Spanish Wells Road. Full access could also be provided at Old Wild Horse Rd, which is currently a right-in/right-out intersection, in this scenario.
- The elevated bypass would directly connect to the Cross Island Parkway and allow thru vehicles to bypass Gum Tree Road. In the eastbound direction, the two eastbound lanes would expand to provide one lane to the Cross Island Pkwy, one lane to William Hilton Parkway at-grade for access to Gum Tree Road, and two lanes will continue along the elevated bypass and connect to the at-grade section just east of Gum Tree Road, allowing thru vehicles to also bypass Gum Tree Road.

The goal of the alternatives analysis was to provide an objective, data-driven evaluation of the four corridor alternatives. Therefore, various matrices were compiled with respect to traffic operations, bicycle and pedestrian accommodations, right-of-way (ROW) requirements, and environmental factors to inform an overall scoring matrix. Each of the matrices includes scores for various categories. A score of 1 is the highest ranking, whereas a score of 4 is the lowest ranking. The ranking for each category were tallied to reach a total aggregate score per alternative.

Alternative 1 ranked first with a total score of 20. Alternative 4 ranked second with a total score of 21. Alternative 2 ranked third with a total score of 24, and Alternative 3 ranked last with a total score of 28.

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
Traffic Operations (Throughput and Traffic Simulations)	4	3	3	1
ROW Impact	2	4	4	1
Environmental Impact	1	3	4	2
Safety	4	3	3	1
Bike/Pedestrian Impact	4	3	1	2
Community and Social Impact	1	3	4	2
Aesthetic	2	1	3	4
Preliminary Probable Opinion of Cost	1	2	3	4
Construction Duration	1	2	3	4
TOTAL	20	24	28	21
RANK	1	3	4	2

Per the direction of the Town of Hilton Head Island, Lochmueller Group was directed to pursue corridor Alternative 1: South Carolina Department of Transportation (SCDOT) Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at the intersection of William Hilton Parkway at Squire Pope Road.

With the recommended improvements under Alternative 1: SCDOT Modified Recommended Preferred in place, this report further provides an evaluation on the impacts to the intersections downstream (i.e., east of Gum Tree Road to Indigo Run, and south of Cross Island Parkway to Sea Pines Circle). Two additional options for mitigation are provided herein for the Town of Hilton Head Island's consideration to help ease congestion along the local intersections between Gum Tree Road and Indigo Run Drive, as well as along the Cross Island Parkway towards Sea Pines Circle.

INTRODUCTION

The Town of Hilton Head Island, South Carolina commissioned an independent review of the William Hilton Parkway Gateway Corridor to assess congestion related issues along US 278 (William Hilton Parkway) from Moss Creek Drive to Indigo Run Drive, as well as along US 278 (Palmetto Bay Road) from Cross Island Parkway to Sea Pines Circle. This report summarizes Existing and future year No-Build traffic operations along the William Hilton Parkway corridor to quantify mobility issues that exist today and that would be expected in the future, absent any upgrades to the corridor.

Additionally, this report details the numerous alternatives considered for implementation along William Hilton Parkway between Moss Creek Drive and Gum Tree Road. Proposed alternatives consisting of two at-grade solutions and two grade separated solutions were then analyzed to help alleviate congestion along the corridor. The goal of the corridor alternatives analysis was to provide an objective, data-driven evaluation of the four alternatives.

After review of the four corridor alternatives, the Town of Hilton Head Island directed Lochmueller Group to pursue further evaluation of Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at William Hilton Parkway at Squire Pope Rd. This report details the final projected operating conditions for the selected alternative and addresses the potential downstream impacts to the intersections along William Hilton Parkway between Gum Tree Road and Indigo Run Drive, as well as along Cross Island Parkway to Sea Pines Circle assuming no additional improvements are in place. Lastly, two additional mitigation solutions were developed to address congestion issues at the local intersections between Gum Tree Road and Indigo Run Drive, as well as along Cross Island Parkway to Sea Pines Circle.

STUDY OBJECTIVE

The objective of this study was to provide an independent review and end-to-end analysis of the William Hilton Parkway Gateway Corridor. This study assessed congestion related issues along the corridor between Moss Creek Drive and Indigo Run Drive, as well as along the Cross Island Parkway to Sea Pines Circle. The intention of this study was to evaluate several corridor alternatives to help address the existing and future projected congestion in order to provide the Town of Hilton Head Island with a data driven analysis.

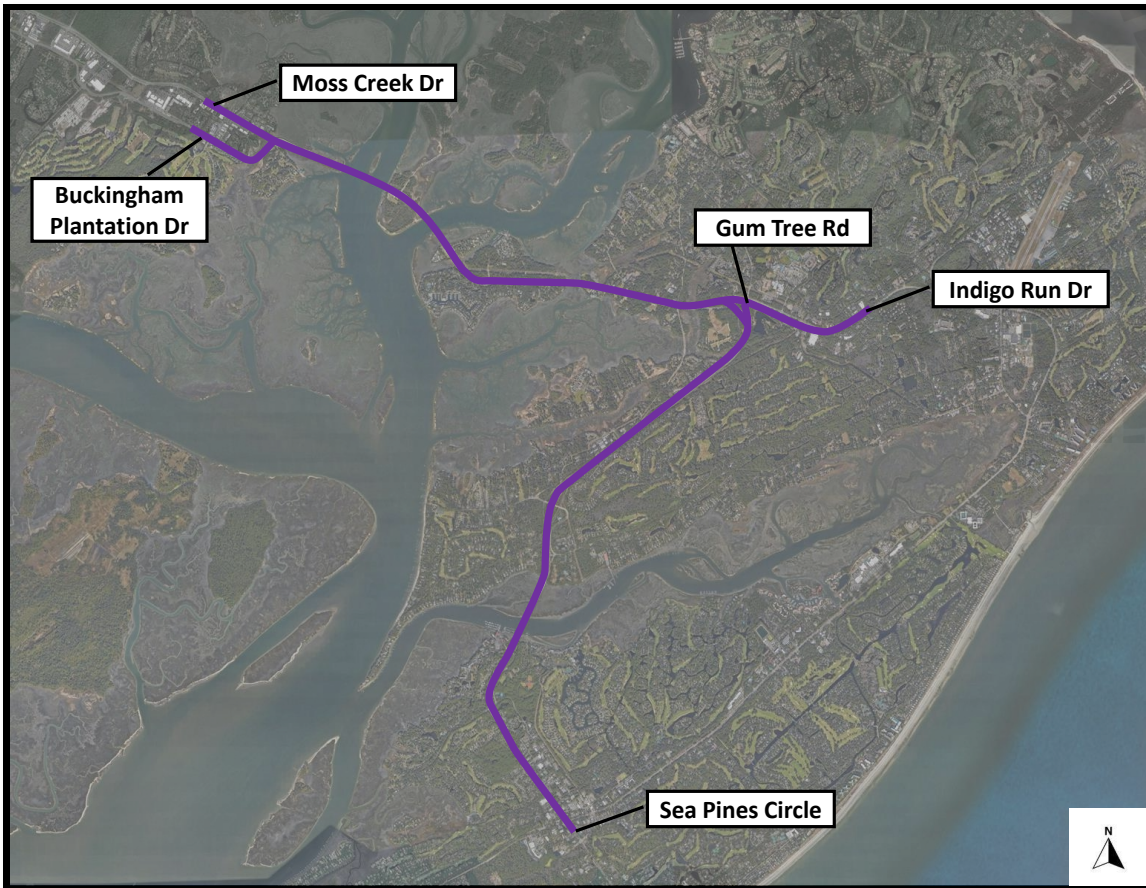


Figure 1. Entire Project Study Area

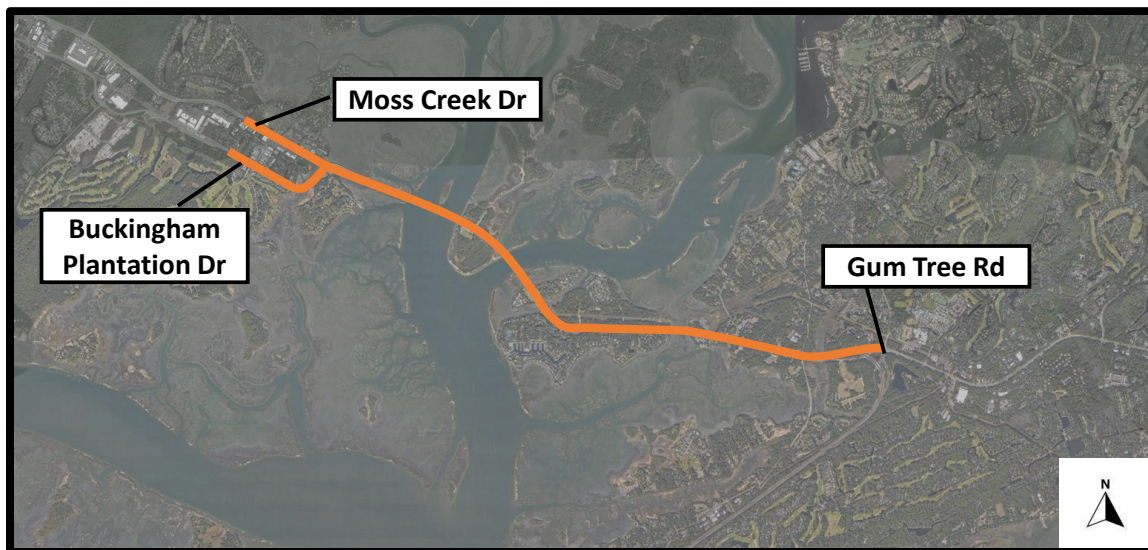


Figure 2. Modified Original Project Study Area

STUDY OVERVIEW

William Hilton Parkway (US 278) is currently classified as a principal arterial oriented in the east-west direction within the study area, providing connectivity to Hilton Head Island. This study was completed in several phases. The first phase evaluated the 2023 Existing conditions and 2045 No-Build conditions for the entire project area, which includes William Hilton Parkway from Moss Creek Drive to Indigo Run Drive, as well as Palmetto Bay Road from Cross Island Parkway to Sea Pines Circle, as shown in **Figure 1**.

The second phase evaluated four alternatives to help reduce congestion along the William Hilton Parkway corridor between Moss Creek Drive and Gum Tree Road. This is referred to as the Modified Original Project Study Area and is shown in **Figure 2**. Of those four corridor alternatives, one was selected for further evaluation to assess the impacts throughout the Entire Project Study Area.

The third and final phase evaluated the impacts of the selected corridor alternative from the second phase of analysis, and further recommendations were made to help improve the overall operations of the Entire Project Study Area (**Figure 1**).

BACKGROUND

DATA COLLECTION AND FIELD INVENTORY

TRAFFIC DATA

Traffic volumes were collected by others at the following intersections on March 22, 2023, and provided to Lochmueller Group for use in this analysis:

- Buckingham Plantation Dr and Bluffton Pkwy
- Buckingham Plantation Dr and US 278
- Moss Creek Dr and US 278
- WB Bluffton Pkwy Ramp and WB US 278
- EB Bluffton Pkwy Ramp and EB US 278
- Fording Island Rd Extension and US 278
- Pinckney Wildlife Refuge and US 278
- Blue Heron Point Rd and US 278
- Crosstree Dr and US 278
- Jenkins Rd and US 278
- Squire Pope Rd and US 278
- Spanish Wells Rd and US 278
- Cross Island Pkwy Diverge and EB US 278
- Cross Island Pkwy Merge and WB US 278
- Gum Tree Rd and Cross Island Pkwy Off and On Ramps
- Gum Tree Rd and Business US 278
- Jarvis Park Rd and Business US 278
- Pembroke Dr and Business US 278
- Indigo Run Dr and Business US 278
- Marshland Rd and Spanish Wells Rd
- Marshland Rd and SB Cross Island Pkwy Ramps
- Marshland Rd and NB Cross Island Pkwy Ramps
- Arrow Rd and US 278
- Target Rd and US 278
- Sea Pines Circle and US 278

This study evaluated conditions during the morning and evening peak periods of a typical weekday, as these periods represent the most critical times of day for traffic operations within the study area for commuter peaks. If traffic can be accommodated during these peak periods, it stands to reason that adequate capacity would be available throughout the remainder of the day.

Traffic data utilized for this study is based on a combination of historical traffic counts obtained from SCDOT supplemented with new counts performed in March 2023. From the data, the weekday peak hours of traffic for the entire project study area were determined to occur between 7:00 AM and 8:00 AM in the morning and from 4:30 PM to 5:30 PM during the afternoon.

Corridor studies often reference the 30th highest day for traffic volumes to ensure that the volumes used in the analysis reflect peak conditions, while not over- or under-estimating the traffic volumes. Therefore, it was necessary to ensure that the counts collected accurately reflect the 30th highest day. Historical traffic data was obtained from SCDOT from the most recent 365 days. Given that the study focuses on commuter peak hours, the hourly data from 6:00 AM – 6:00 PM was referenced. After reviewing the traffic volumes throughout the year, it was determined that March 30, 2023 was the 30th highest day out of the year for traffic volumes. The counts collected on March 22, 2023 were grown by the percent difference between the two dates to bring them up to the estimated traffic volumes on March 30, 2023 (30th highest day). The resulting 2023 traffic volumes used in this study are provided in **Appendix A**.

FIELD INVENTORY

A detailed inventory of field conditions was performed to capture both physical and operational characteristics of the study area network. The physical inventory emphasized static features of the roadway and included items such as posted speed limits, number of travel lanes, lane designations at intersections, adaptive signal operations, and traffic signal phasing (e.g., protected turn arrows versus permissive turning movements).

This detailed inventory of field conditions, as well as traffic observations focused on traffic flows during the peak periods, was performed over the course of two weekdays in December 2023. Locations of congestion and traffic backups were identified and monitored to determine sources of constrained flows. Prevailing queue lengths at intersections were inventoried. Traffic signal operations were monitored to determine the quality of traffic progression along the William Hilton Parkway corridor and to identify the operations of the recently installed (late Fall 2023) adaptive signal system. Travel time runs and average speeds were conducted during the AM and PM peak periods along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive, as well as from William Hilton Parkway at Moss Creek Drive to Cross Island Parkway at Sea Pines Circle, as detailed in the model calibration section of this document.

ANALYSIS METHODOLOGY

TRAFFIC

A preliminary analysis was completed using Synchro 11 traffic modeling software, which is based upon the methodologies outlined in the “Highway Capacity Manual” (HCM) published by the Transportation Research Board. Intersection performance or traffic operations are quantified by six Levels of Service (LOS), which range from LOS A (“Free Flow”) to LOS F (“Fully Saturated”). LOS D is considered acceptable for peak period conditions in urban and suburban areas. However, at side-street stop-controlled intersections, LOS E or even F is common occurrence for peak period conditions as it is typical for delays to be longer for vehicles along the side-street as they wait to find acceptable gaps in the traffic to turn into the traffic stream. **Table 1** shows the LOS criteria for signalized and unsignalized intersections.

Levels of service for intersections are determined based on the average delay experienced by motorists. Signalized intersections reflect higher delay tolerances as compared to unsignalized and roundabout locations because motorists are accustomed to and accepting of longer delays at signals. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and then aggregated for each approach and the intersection as a whole. For intersections with partial (side-street) stop control, the delay is calculated for the minor movements only (side-street approaches and major road left-turns) since thru traffic on the major road is not required to stop.

Table 1. Intersection Level of Service Criteria

Level of Service	Control Delay per Vehicle (sec/veh)	
	Signalized	Unsignalized
A	≤ 10	0 - 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

Source: HCM 6th Edition

In addition to Synchro, VISSIM software was also used, which is a microsimulation tool that accurately replicates individual vehicles and their interactions within complex traffic streams, such as interchanges, freeways, and expressway corridors with signalized intersections. A robust amount of data and field observations were conducted, as previously described, to calibrate the VISSIM models to closely replicate field conditions.

MODEL CALIBRATION

The VISSIM traffic simulation model calibration process began with the development of a base model, which aims to replicate Existing conditions. As previously noted, a robust data collection effort was required to support this effort, including roadway geometry, turning speeds, traffic signal timings, etc. The first step in base model development involved coding the roadway geometry (number of lanes, lane configurations, link lengths, etc.) with links and connectors using a recent aerial as a template.

Once the network backbone was established, free-flow speed distributions were created. Reduced speed zones were also established for turning movements and locations in the network where the roadway geometry physically limits speeds below the free-flow speed or posted speed limits. The next steps addressed traffic control. The adaptive traffic signal timings obtained from Q-Free were input into the simulation, with detectors coded where applicable. Stop-controlled movements received stop signs coded into the network. Locations where yielding or traffic control priority needed to be established (such as a right-turn-on-red) were coded with conflict areas or priority rules. Conflict areas are most commonly used unless further refinement of the gap times or yielding characteristics was necessary, in which case priority rules were deployed.

Traffic volumes were then represented in the VISSIM model as an origin-destination matrix estimated from turning movement counts. The matrix specifies the model's traffic patterns and the routes vehicles take to traverse the model network. Traffic entering the model network was coded using vehicle inputs. Vehicle inputs specify volumes and vehicle type compositions, which were grouped into passenger vehicles, trucks, light-goods, and buses. The origin-destination matrix was routed statically with routes traversing the entire network for optimum accuracy rather than simply intersection by intersection.

Since VISSIM starts with zero vehicles in the network, a warm-up period is needed to initiate the model with traffic prior to capturing data. The warm-up period is known as the seeding period and its length and volume characteristics were adjusted as part of the calibration process. Given the scale of the network, a 60-minute seeding period was used to establish background traffic before recording results.

Given the inherent stochastic nature of simulation (imposed by random seeds), multiple simulation runs using different seed numbers were required for each scenario and the reported model results were averaged across runs. Ten simulation runs were completed, which is typically sufficient to obtain an appropriate level of confidence in the results.

The model calibration process finished with a detailed review of model parameters and thorough consideration of adjustments to improve the model's ability to replicate field conditions. The final calibration process compared data output from the model, such as travel times and flow rates, to field measurements of the same attributes.

As part of the calibration criteria, it was determined that the travel times reported in the VISSIM model should be within 10% of the travel times recorded in the field. The travel times calculated in the VISSIM model were inflated by 15% to account for higher volumes in March (when traffic counts were collected) versus in December (when the travel times were collected). The travel time results are provided in **Table 2**. As shown, all the travel times reported by the Existing conditions VISSIM model were within 10% of the observed travel times recorded during field observations. Therefore, all travel time targets were satisfied.

Table 2. 2023 Existing VISSIM Calibration Travel Time Results

Corridor		Observed Travel Time (secs) [min]		Simulated Travel Time (secs) [min]		% Difference	
		AM	PM	AM	PM	AM	PM
William Hilton Pkwy between Moss Creek and Indigo Run	EB	1108 [18.5 min]	672 [11.2 min]	1157 [19.3 min]	619 [10.3 min]	4.42%	-7.91%
	WB	605 [10.1 min]	1202 [20 min]	572 [9.5 min]	1252 [20.9 min]	-5.50%	4.17%
William Hilton Pkwy from Moss Creek to Sea Pine Circle via Cross Island Pkwy	SB	1378 [23 min]	821 [13.7 min]	1356 [22.6 min]	857 [14.3 min]	-1.58%	4.37%
	NB	800 [13.3 min]	1516 [25.3 min]	826 [13.8 min]	1520 [25.3 min]	3.20%	0.25%

In addition to travel time calculations, traffic volumes were also used to help calibrate the VISSIM model. Similar to the travel times, it was determined that the traffic volumes reported in the VISSIM model should be within 10% of the 2023 existing traffic volumes provided in **Appendix A**. The traffic volume results are provided in **Table 3**. As shown, all the traffic volumes reported by the existing conditions VISSIM model were within 10% of the calculated 2023 existing corridor traffic volumes. Therefore, all traffic volume targets were satisfied.

Table 3. 2023 Existing VISSIM Calibration Traffic Volumes Results

Location	Observed Traffic Volumes (vehicles)		Simulated Traffic Volumes (vehicles)		% Difference	
	AM	PM	AM	PM	AM	PM
William Hilton Pkwy west of Squire Pope EB	2774	2237	2970	2240	7.07%	0.13%
William Hilton Pkwy west of Squire Pope WB	1639	3030	1650	2898	0.67%	-4.36%
William Hilton Pkwy east of Spanish Wells EB	2729	1991	2929	1955	7.33%	-1.81%
William Hilton Pkwy east of Spanish Wells WB	1408	2623	1423	2614	1.07%	-0.34%
Cross Island Pkwy north of Marshland Rd NB	975	1422	964	1371	-1.13%	-3.59%
Cross Island Pkwy north of Marshland Rd SB	1416	1190	1486	1167	4.94%	-1.93%

EXISTING CONDITIONS

EXISTING SYNCHRO TRAFFIC OPERATIONAL ANALYSIS

A preliminary analysis was completed using Synchro 11 traffic modeling software, which is based upon the methodologies outlined in the “Highway Capacity Manual” (HCM) published by the Transportation Research Board.

Operating conditions at the study intersections were evaluated using Synchro 11 and are summarized in **Appendix B**. The measures of effectiveness reported include LOS, delay, queue, and volume-to-capacity ratio (v/c). The delay is reported in seconds per vehicle. The queue is reported in feet as the 95th percentile queue, which represents a value that is only expected to be exceeded once or twice during a peak hour. The v/c ratio compares vehicle demand to the capacity of an associated lane group. A v/c ratio of 1.0 represents a road segment that is at full capacity. A v/c ratio that exceeds 1.0 represents a road segment that is oversaturated or has more vehicular demand than the provided roadway geometry can theoretically support.

It was found that the eastbound traffic experiences significant congestion during the AM peak period, whereas westbound traffic experiences significant congestion during the PM peak period. This is consistent with the commuter traffic patterns in the Town of Hilton Head.

While several intersections experience long delays and queue lengths during the AM peak hour, the PM peak hour appears to have overall worse operating conditions. Long delays occur along side-streets at unsignalized intersections throughout the entire study area. Additionally, a rolling queue begins at Wilborn Road and continues in the westbound lanes of William Hilton Parkway over the bridge during the PM peak hour. The westbound queue length reaches up to approximately 2,500 ft (101 cars) at Squire Pope during the PM peak hour. It is evident that the study area currently experiences congestion during both the AM and PM peak periods.

EXISTING VISSIM TRAFFIC OPERATIONAL ANALYSIS

A VISSIM traffic model was also completed to further evaluate conditions during the morning and afternoon peak hours, and provides performance measures as outputs. The LOS criteria for signalized and unsignalized intersections are the same as **Table 1**. The measures of effectiveness (MOE) reported include levels of service, delay, average queue length, and maximum observed queue length. The delay is reported in seconds per vehicle and the queue is reported in feet.

The 2023 Existing operating conditions based on the VISSIM model are summarized in **Appendix C**. The traffic operations largely agree with those shown in **Appendix B** from the Synchro analysis. The PM peak hour appears to have overall worse operating conditions than the AM peak period. The long delays presented in the Synchro analysis along side-streets at unsignalized intersections throughout the entire study area were confirmed in the VISSIM analysis. The study area experiences significant congestion during both the existing AM and PM peak periods.

EXISTING VISSIM NETWORK PERFORMANCE

The existing average recorded speeds along William Hilton Parkway between Moss Creek Drive and Indigo Run range from approximately 19 miles per hour (mph) in the AM peak hour to 35 mph during the PM peak hour for the eastbound direction, as shown in **Table 4**. The posted speed limit along the corridor ranges between 45-55 mph. Therefore, it is evident that the existing average recorded speeds are well below the posted speed limit, which is an indication that there is significant congestion along the corridor. The westbound direction experiences average speeds of approximately 38 mph during the AM peak hour and 17 mph during the PM peak hour. This indicates significant congestion in the westbound direction during the PM peak hour, as is evidenced by the commuter peaks.

Between Moss Creek Drive and Sea Pines Circle via the Cross Island Parkway in the southbound direction, the average recorded speed is approximately 27 mph during the AM peak hour and the average recorded speed is 42 mph during the PM peak hour. In the opposite direction, the average recorded speed is approximately 44 mph during the AM peak hour and 24 mph in the PM peak hour. Similar to the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run, this corridor also experiences congestion in relation to the commuter peaks.

Table 5 further breaks down overall network performance for the existing peak period conditions. As shown, throughout the entire project area, vehicles are required to stop on average between 6 to 10 times when traveling along the corridor.

Table 4. Existing Corridor Speeds (VISSIM)

Routes	Average Speed (mph)	
	AM Peak Hour	PM Peak Hour
Moss Creek Drive to Indigo Run Drive – Eastbound	18.9	35.2
Indigo Run Drive to Moss Creek Drive – Westbound	38.0	17.4
Moss Creek Drive to Sea Pines Circle – Southbound	26.6	42.1
Sea Pines Circle to Moss Creek Drive – Northbound	43.9	23.8

Table 5. Network Performance – Existing Conditions

Peak Hour	Average Number of Stops per Vehicle	Average Speed (mph)	Total Vehicles (vph)
Existing AM	6.5	25	10,497
Existing PM	9.9	22	12,393

2045 NO-BUILD CONDITIONS

2045 was selected as the project’s design year for purposes of evaluating traffic operations conditions into the future. The 2045 No-Build conditions analysis is intended to reflect future conditions within the study area while accounting for an increase in “background” traffic. No modifications were made to the lane configurations. The 2045 No-Build scenario does include the effects of the adaptive signal system implemented in the Fall of 2023, as well as the inclusion of Windmill Harbour into the adaptive signal system.

In order to evaluate traffic conditions through the year 2045, it was necessary to forecast the anticipated growth within the study area based on an increase in “background” traffic resulting from increasing population and commercial and employment growth in The Town of Hilton Head.

An annual background growth rate of 0.56% was determined after careful consideration of the Lowcountry Area Transportation Study (LATS) Travel Demand Model (TDM), census data, Beaufort County historic growth trends, historic traffic growth on the US 278 bridge, sale and restaurant tax revenue, public parking revenue, and short term rental data. A memorandum detailing the methodology behind the 0.56% growth rate is provided in **Appendix D**. The 2023 Existing traffic volumes were grown annually by 0.56% to 2045 in order to produce the 2045 No-Build traffic volumes which are provided in **Appendix E**.

2045 NO-BUILD SYNCHRO TRAFFIC OPERATIONAL ANALYSIS

The 2045 No-Build operating conditions at the study intersections were preliminarily evaluated using Synchro 11 and are summarized in **Appendix F**. The previously failing conditions and congestion experienced in the 2023 Existing conditions are expected to be exacerbated by 2045 with the forecasted background traffic growth. Significant congestion is expected throughout the study area. Therefore, it can be concluded that the study intersections cannot accommodate the forecasted traffic growth in their existing state.

2045 NO-BUILD VISSIM TRAFFIC OPERATIONAL ANALYSIS

The 2045 No-Build operating conditions at the study intersections were further evaluated using VISSIM and are summarized in **Appendix G**. The operating conditions largely agree with those shown in the 2045 No-Build Synchro operating conditions (**Appendix F**) and validate the travel time and volume conclusions above. Significant congestion is expected throughout the study area through the year 2045. The congestion that currently exists throughout the study area is expected to be exacerbated by 2045 with the forecasted growth.

2045 NO-BUILD VISSIM NETWORK PERFORMANCE

The VISSIM differences in reported travel time calculations and traffic volumes between the 2023 Existing conditions and 2045 No-Build conditions were evaluated and shown in **Table 6** and **Table 7**, respectively.

It is expected that the travel time in the eastbound direction along Hilton Parkway between Moss Creek Drive and Indigo Run Drive during the AM peak hour will increase from approximately 19.3 minutes to 26.3 minutes, an increase of 7 minutes (36%) when compared to existing conditions. During the PM peak hour along Hilton Parkway between Moss Creek Drive and Indigo Run Drive, it is expected that the travel time in the westbound direction will increase from 20.9 minutes to 25.7 minutes, an increase of approximately 5 minutes (23%) when compared to existing conditions.

It is expected that the travel time in the southbound direction along Hilton Parkway at Moss Creek to Cross Island Parkway at Sea Pines Circle during the AM peak hour will increase from approximately 22.6 minutes to 30.1 minutes, an increase of 7.5 minutes (46%) when compared to existing conditions. During the PM peak hour along Hilton Parkway at Moss Creek to Cross Island Parkway at Sea Pines Circle, it is expected that the travel time in the northbound direction will increase from 25.3 minutes to 41.1 minutes, an increase of approximately 16 minutes (62%) when compared to existing conditions.

Multiple locations have negative percent differences for traffic volume results where the 2045 No-Build simulated volumes are less than the 2023 Existing simulated volumes. This is due to over-saturation of the study area in the model, and results in vehicles not being able to enter the simulation network to process through each intersection. Therefore, it is evident that the study area is expected to experience significant congestion through the year 2045.

Table 6. 2045 No-Build VISSIM Calibration Travel Time Results

Corridor		Existing Simulated Travel Time (secs) [min]		2045 No-Build Simulated Travel Time (secs) [min]		% Difference	
		AM	PM	AM	PM	AM	PM
William Hilton Pkwy between Moss Creek and Indigo Run	EB	1157 [19.3 min]	619 [10.3 min]	1579 [26.3 min]	642 [10.7 min]	36.47%	3.72%
	WB	572 [9.5 min]	1252 [20.9 min]	584 [9.7 min]	1544 [25.7 min]	2.10%	23.32%
William Hilton Pkwy from Moss Creek to Sea Pine Circle via Cross Island Pkwy	SB	1356 [22.6 min]	857 [14.3 min]	1984 [30.1 min]	873 [14.6 min]	46.31%	1.87%
	NB	826 [13.8 min]	1520 [25.3 min]	823 [13.7 min]	2465 [41.1 min]	-0.36%	62.17%

Table 7. 2045 No-Build VISSIM Calibration Traffic Volumes Results

Location	Existing Simulated Volume Results (vehicles)		2045 No-Build Simulated Volume Results (vehicles)		% Difference	
	AM	PM	AM	PM	AM	PM
William Hilton Pkwy west of Squire Pope EB	2970	2240	2783	2524	-6.30%	12.68%
William Hilton Pkwy west of Squire Pope WB	1650	2898	1843	2754	11.70%	-4.97%
William Hilton Pkwy east of Spanish Wells EB	2929	1955	2748	2198	-6.18%	12.43%
William Hilton Pkwy east of Spanish Wells WB	1423	2614	1570	2413	10.33%	-7.69%
Cross Island Pkwy north of Marshland Rd NB	964	1371	1065	919	10.48%	-32.97%
Cross Island Pkwy north of Marshland Rd SB	1486	1167	1440	1299	-3.10%	11.31%

Table 8 summarizes overall network performance for the 2045 No-Build scenario as compared to the Existing conditions through the entire study area. During the PM peak hour, vehicles stops will increase throughout the study area. Vehicles will be required to stop on average 10 to 15 times. Additionally, the average vehicle speeds during the PM peak hour will degrade to an average of 16 mph. These metrics are indicative of stop and go conditions and peak hour congestion. This is below the already congested existing average off-peak speed for the corridor which is 25 mph and 22 mph for AM and PM peak hours, respectively.

Due to congestion during the 2045 No-Build condition, approximately 10% of total network vehicles were unable to enter the model network, and therefore are not captured in the network performance results shown in Table 8.

Table 8. Network Performance – 2045 No-Build Conditions

Scenario	Average Number of Stops per Vehicle	Average Speed (mph)	Total Vehicles (vph)
Existing AM	6.5	25	10,497
Existing PM	9.9	22	12,393
2045 No-Build AM	9.9	21	11,143
2045 No-Build PM	15.4	16	12,393

2045 ALTERNATIVES ANALYSIS

In addition to the simulation modeling of the study area, Lochmueller evaluated several strategies in order to determine the viability of maintaining four lanes along William Hilton Parkway between Windmill Harbour and Squire Pope Road. The strategies included:

- Implementation of a second bridge
- Modifications to the existing mass transit system
- Implementation of a new ferry system
- Implementation of a facility usage fee

Ultimately, it was determined that it would be highly unlikely that modifications to the existing transit system, the implementation of a new ferry system, or the implementation of a facility usage fee would reduce traffic volumes enough to maintain the existing four-lane section. Furthermore, it was determined that a six-lane section of William Hilton Parkway onto Hilton Head Island would be needed independently of a second bridge. Additional preliminary evaluations pertaining to the financial feasibility of structurally rehabilitating and/or seismically retrofitting the existing Mackay Creek and Skull Creek bridges in lieu of building a new six-lane structure were completed. A cursory, high-level evaluation of a potential southern bypass was also completed. Additional information regarding the above stated topics are provided in **Appendix H**.

As evidenced by the Existing and No-Build conditions, some of the existing traditional signalized intersections will no longer be able to process the volume of vehicles within the William Hilton Parkway corridor study area by the year 2045. Therefore, innovative concepts to improve the capacity of the corridor were considered. Both at-grade and grade separated innovative intersections were evaluated to improve safety, reduce delay, and increase efficiency.

CORRIDOR STUDY GOALS

The following goals for improving the William Hilton Parkway corridor were established by The Town of Hilton Head Island to guide the development of alternatives and form the basis of the alternatives analysis:

- Fix the transportation issues in the corridor in a way that improves the safety and quality of life for all residents, workers, and visitors to Hilton Head Island
 - a) Address transportation needs for natural disasters and resiliency of island access
 - b) Consider future transportation alternatives
- Improve the safety and quality of life for the residents of the neighborhoods and businesses directly impacted by the US 278 corridor
 - a) Stoney Community
 - b) Neighborhoods on Jenkins and Hog Islands (including but not limited to Windmill Harbor)
- Have a gateway to and from Hilton Head Island that the region will be proud of:
 - a) Aesthetically pleasing and reflecting the Hilton Head Island/Low County values
 - b) Safe and functional pathways for pedestrians and cyclists
 - c) Minimizes environmental impacts and enhances the national asset of Pinckney Island

ALTERNATIVES CONSIDERED

With the guiding principles in mind, the following four corridor alternatives were recommended for further study:

- Alternative 1: SCDOT Modified Recommended Preferred
- Alternative 2: Bowties at Squire Pope and Spanish Wells
- Alternative 3: Echelon / Center Turn Overpass
 - Grade-Separated Intersection at either Squire Pope or Spanish Wells, but not both
- Alternative 4: Elevated Bypass

As agreed upon with the Town of Hilton Head, the alternative analysis was completed for the Modified Original Project Study Area shown in **Figure 2**.

ALTERNATIVE 1: SCDOT MODIFIED RECOMMENDED PREFERRED

Alternative 1 considers the SCDOT Modified Recommended Preferred alternative with adaptive signals in place and improvements at Gum Tree Road. The improvements at Gum Tree Road include keeping the intersection at-grade, completely reconfiguring the intersection to improve its efficiency, and providing dual left-turn lanes for the westbound, northbound, and southbound approaches. **Figure 3** shows the improvements recommended as part of Alternative 1, as provided by SCDOT. It should be noted that the improvements at Gum Tree Road are not reflected in **Figure 3**, which was provided by SCDOT.

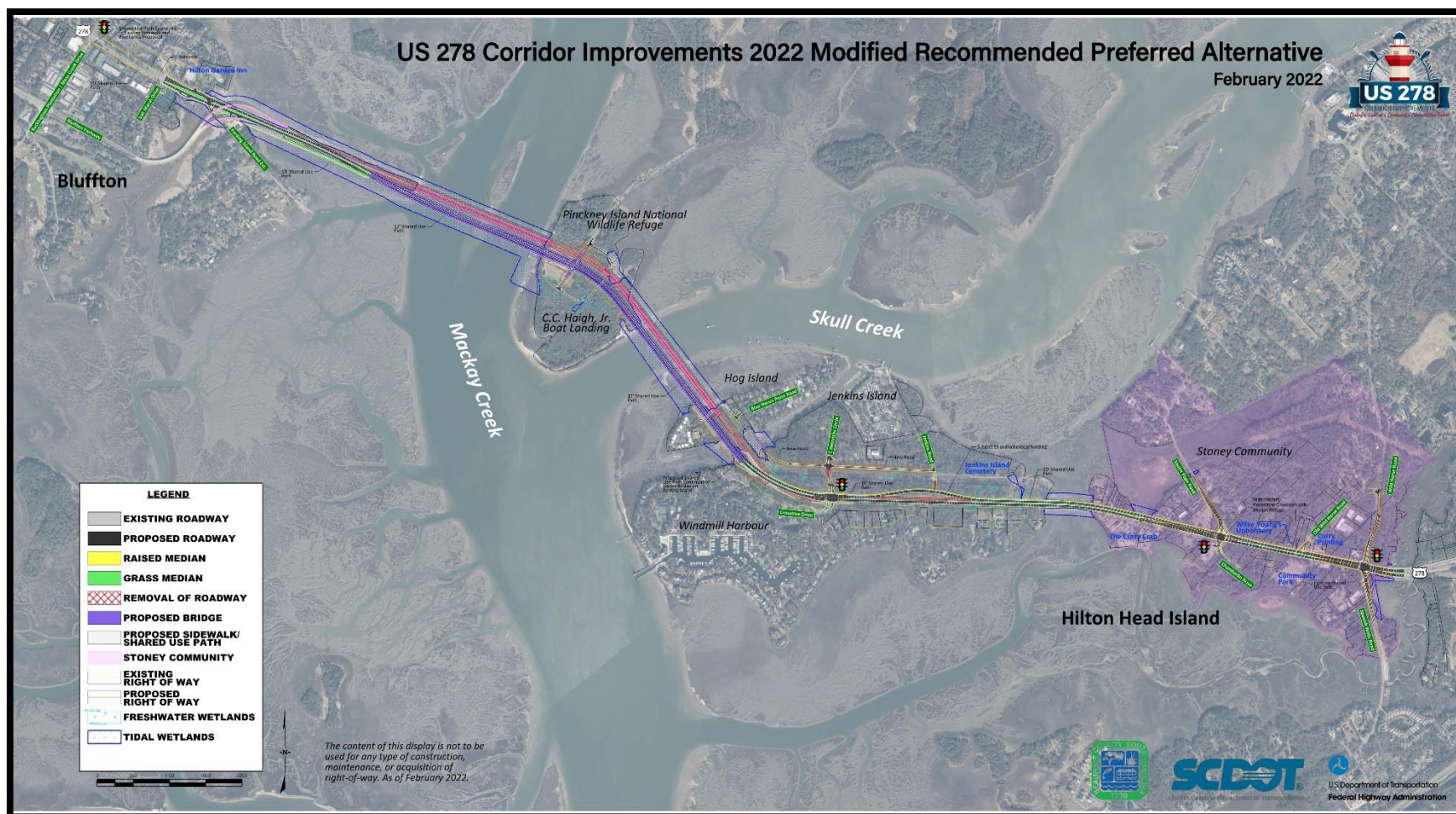


Figure 3. Alternative 1: SCDOT Modified Recommended Preferred

ALTERNATIVE 2: BOWTIES AT SQUIRE POPE AND SPANISH WELLS

Alternative 2 considers bowties at Squire Pope Road and Spanish Wells Road with adaptive signals in place and improvements at Gum Tree Road. The improvements at Gum Tree Road are the same as what was included in Alternative 1, which keeps the intersections at-grade, reconfigures the intersection to improve its efficiency, and provides dual left-turn lanes for the westbound, northbound, and southbound approaches.

A bowtie intersection removes left-turns from the intersection and requires vehicles to navigate through roundabouts along the side-street to return to the signal and continue in the intended direction of travel. **Figure 4** shows an example of a bowtie intersection. Note that this is only an example and not a schematic drawing of William Hilton Parkway.



Figure 4. Example Bowtie Intersection (Provided by Virginia DOT)

Bowtie intersections provide several benefits. They improve safety as fewer conflicting vehicle and pedestrian movements are allowed. Bowtie intersections have 12 fewer conflict points when compared to traditional intersections, which have 32 conflict points. Bowtie intersections also encourage lower vehicle speeds through the roundabouts. The size of main intersections can be reduced as left-turn lanes are removed. Lastly, bowtie intersections increase the efficiency of the signalized intersections as more of the signal time can go to the main thru movements, improving traffic operations.

However, bowtie intersections require a change in decision making for drivers as all left-turn movements would be required to navigate the adjacent roundabouts along Squire Pope Road and Spanish Wells Road. Bowtie intersections also may increase the amount of travel time for left-turning vehicles and may require additional ROW for the roundabouts.

ALTERNATIVE 3: ECHELON / CENTER TURN OVERPASS

Alternative 3 considers either an echelon or a center turn overpass at either Squire Pope Road or Spanish Wells Road. Echelons or center turn overpasses at both Squire Pope Road and Spanish Wells Road were not considered because there is not enough distance between the two intersections for both to be independently grade-separated.

Alternative 3 includes the adaptive signals in place as well as the previously detailed improvements at Gum Tree Road. The improvements at Gum Tree Road are the same as what was included in Alternative 1, which keeps the intersections at-grade, reconfigures the intersection to improve its efficiency, and provides dual left-turn lanes for the westbound, northbound, and southbound approaches.

An echelon is a grade-separated intersection where one approach on both roadways is elevated. For example, the northbound and eastbound approaches would be elevated and the southbound and westbound approaches would remain at-grade to create two intersections. Both intersections would be signalized and all pedestrian and bicycle movements would remain at-grade. **Figure 5** shows an example of an echelon. Note that this is only an example and not a schematic drawing of William Hilton Parkway.

An echelon improves safety as fewer conflicting vehicle and pedestrian movements are allowed. Echelon intersections have 10 fewer conflict points when compared to traditional intersections (32 conflict points). They do not require a change in decision making for drivers as all movements would remain at Squire Pope Road and Spanish Wells Road. Echelons increase the efficiency of the signalized intersections as more of the signal time can go to the main thru movements, improving traffic operations. While each approach would likely need the same lane configurations as shown in Alternative 1, only two approaches would conflict.

However, echelons do require grade separation of intersections and large intersections would likely remain as all movements (left-turn, thru, and right-turn) are still allowed.

A center turn overpass is also a grade-separated intersection which raises only the left-turn movements from the main intersection using ramps to create two intersections. Both intersections would be signalized and all pedestrian and bicycle movements would remain at-grade. **Figure 6** shows an example of a center turn overpass. Note that this is only an example and not a schematic drawing of William Hilton Parkway.

A center turn overpass improves safety as fewer conflicting vehicle and pedestrian movements are allowed. Center turn overpass intersections have 8 fewer conflict points when compared to traditional intersections (32 conflict points). They increase the efficiency of the signalized intersections as more of the signal time can go to the main thru movements, improving traffic operations.

However, similar to echelons, center turn overpasses require grade separation and large intersections would likely remain as all movements (left-turn, thru, and right-turn) are still allowed.



Figure 5. Example Echelon (Provided by Virginia DOT)



Figure 6. Example Center Turn Overpass (Provided by Virginia DOT)

ALTERNATIVE 4: ELEVATED BYPASS

Alternative 4 considers an elevated bypass which would begin west of Squire Pope Road and end east of Gum Tree Road. The elevated bypass would take the four internal lanes, two in each direction, and elevate them over the study intersections. This would allow free-flow movement for the eastbound and westbound thru traffic from just east of the Jenkins Island causeway to just west of Wilborn Road. One lane in each direction along William Hilton Parkway would remain at grade along with a separate eastbound right-turn lane at Squire Pope Road and left-turn lanes at Squire Pope Road and Spanish Wells Road. This allows for full access to be maintained at Squire Pope Road and Spanish Wells Rd. Full access could also be provided at Old Wild Horse Road, which is currently a right-in/right-out intersection today.

The elevated bypass would directly connect to the Cross Island Parkway. In the eastbound direction, the two eastbound lanes would expand to provide one lane to the Cross Island Pkwy, one lane to William Hilton Parkway at-grade for access to Gum Tree Road, and two lanes will continue along the elevated bypass and connect to the at-grade section just east of Gum Tree Road, allowing thru vehicles to also bypass Gum Tree Road. In the westbound direction, two lanes would be provided along William Hilton Parkway just east of Gum Tree Road. These lanes would be reduced to one lane prior to the merge with the westbound Cross Island Parkway ramp. The westbound Cross Island Parkway ramp and the single elevated westbound bypass ramp would then merge into a two-lane elevated section.

Alternative 4 also assumes the adaptive signal system would remain in operation. However, the improvements needed at Gum Tree Road in Alternatives 1, 2, and 3 would no longer be needed. In fact, the Gum Tree Road intersection would be able to be reduced in size, as most of the eastbound and westbound thru traffic would remain on the bypass rather than navigating thru the at-grade intersection. Similarly, the at-grade intersections at Squire Pope Road and Spanish Wells Road would also be able to be reduced in size. An elevated bypass would improve safety, as fewer thru vehicles would remain at grade, thereby reducing the conflicts between vehicles and pedestrians. In addition, the efficiency of the at-grade signalized intersections would be increased despite the reduction in the size of the intersection. Lastly, Alternative 4 provides the most capacity for traffic growth along the corridor.

However, this alternative would be the most expensive and would result in the largest construction impact. Alternative 4 also requires grade separation and a change in decision making, as drivers looking to continue traveling eastbound or westbound would need to enter the bypass, rather than go thru the local intersections of Squire Pope Road, Old Wildhorse Road, and Spanish Wells Road as they do today. Full access would still be provided at-grade. **Figure 7** through **Figure 10** provide an example schematic of the elevated bypass.



Figure 7. Example of Elevated Bypass - 01



Figure 8. Example of Elevated Bypass - 02



Figure 9. Example of Elevated Bypass - 03



Figure 10. Example of Elevated Bypass - 04

2045 ALTERNATIVE 1: SCDOT MODIFIED RECOMMENDED PREFERRED

2045 ALTERNATIVE 1 TRAFFIC VOLUMES

The traffic volumes used for the 2045 Alternative 1 analysis were largely similar to the 2045 No-Build traffic volumes. However, some intersections were combined in this alternative, requiring traffic diversions. The 2045 Alternative 1 traffic volumes are provided in **Appendix I**.

2045 ALTERNATIVE 1 TRAFFIC OPERATIONAL ANALYSIS

As agreed upon with the Town of Hilton Head, a preliminary traffic analysis was completed using Synchro 11. The 2045 Alternative 1 operating conditions were evaluated using the same methodology applied to the 2023 Existing and 2045 No-Build conditions. The operating conditions for the 2045 Alternative 1 scenario are shown in **Appendix I**.

Overall the study intersections are expected to operate acceptably under Alternative 1. Each signalized intersection is expected to operate with a LOS D or better overall. However, side-street and unsignalized approaches may still experience long delays. This is to be expected given the heavy volumes experienced along the mainline of William Hilton Parkway and the inability of side-street traffic to find gaps in the mainline traffic to complete their movement.

In addition to the Synchro operating conditions, preliminary travel time calculations were performed in Synchro along the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run Drive. Synchro was used for the purposes of evaluating alternatives at a high level, as its results provide a reasonable comparison useful for preferred alternative selection. Final travel time results for the chosen preferred alternative were conducted in VISSIM.

Table 9 shows the changes in travel time for the 2045 Alternative 1 scenario when compared to the 2045 No-Build scenario travel time results gathered from Synchro. As shown, Alternative 1 is expected to improve the travel time along eastbound William Hilton Parkway by approximately 16% during the AM peak period and westbound William Hilton Parkway by approximately 34% during the PM peak period.

It should be noted that westbound William Hilton Parkway during the AM peak period and eastbound William Hilton Parkway during the PM peak period are not expected to experience significant congestion in the 2045 No-Build scenario, as traffic patterns in the study area largely follow commuter travel patterns. Therefore, the increase in travel time shown is not expected to significantly impact the operating conditions of the study area.

Table 9. Travel Time Comparison for Alternative 1

Scenario		Difference in Travel Time (seconds) when Compared to 2045 No-Build		% Difference	
		AM	PM	AM	PM
2045 Alternative 1: SCDOT Modified Recommended Preferred	EB	-109 [-1.8 min]	+18 [<1 min]	-16.1%	2.7%
	WB	+43 [<1 min]	-276 [-4.6 min]	6.3%	-34.2%

2045 ALTERNATIVE 1 RIGHT-OF-WAY IMPACTS

The proposed modifications to the SCDOT Preferred Alternative in this alternative involve reconfiguring the Gum Tree Road intersection to provide dual left-turn lanes for the westbound, northbound, and southbound approaches. These improvements will require a strip of additional ROW of approximately 0.2 acre on Town owned land, in the northeast quadrant to accommodate the additional southbound left turn lane. The lane additions on the westbound and northbound approaches can be accommodated within existing ROW. It should be noted that the ROW estimates refer to permanent ROW needed for the completed improvements only, and do not consider temporary ROW needed for construction or staging.

2045 ALTERNATIVE 1 ENVIRONMENTAL ANALYSIS

As noted above, Alternative 1 would require 0.2 acre of additional ROW. The additional ROW impacts are located within the Squire Pope neighborhood. The additional ROW to be acquired is owned by the Town of Hilton Head. The SCDOT Environmental Assessment (EA) determined that this area is an environmental justice community. One hazardous material site, Shell Food Mart Station 101 (165 William Hilton Pkwy), is located near the corridor. No impacts to the site are anticipated as a result of Alternative 1. The SCDOT recommended preferred alternative was determined to have a “may affect-not likely to adversely affect” finding for threatened and endangered species. Alternative 1 is not anticipated to alter this finding. Coordination with the USFWS and the NOAA National Marine Fisheries Service (NMFS) will need to occur to affirm this finding. Alternative 1 would not result in additional impacts to National Wetland Inventory (NWI) wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 1. No additional impacts to cultural resources or Section 4(f) properties would occur as a result of Alternative 1.

Please refer to the Technical Environmental Overview in **Appendix J** for additional details.

2045 ALTERNATIVE 2: BOWTIES AT SQUIRE POPE AND SPANISH WELLS

2045 ALTERNATIVE 2 TRAFFIC VOLUMES

The traffic volumes used for the 2045 Alternative 2 analysis were largely similar to the 2045 No-Build traffic volumes. However, given that the left-turns along William Hilton Parkway were removed at Squire Pope Road and Spanish Wells Road, some traffic diversions were necessary. The 2045 Alternative 2 traffic volumes are provided in **Appendix K**.

It should be noted that Lochmueller agrees with the improvements proposed along William Hilton Parkway between Moss Creek Drive and Crosstree Drive in Alternative 1. These improvements include the following:

- Widen William Hilton Parkway from four lanes to six lanes from Salt Marsh Drive through Spanish Wells Drive
- Reconfigure the intersection of William Hilton Parkway and Wildlife Refuge Driveway to eliminate left-turns and provide right-in/right-out access only
- Consolidate Jenkins Island access to one signalized location at Crosstree Drive

Therefore, those improvements were included in Alternative 2. As such, the traffic volumes at those intersections would be the same between Alternative 2 and Alternative 1.

2045 ALTERNATIVE 2 TRAFFIC OPERATIONAL ANALYSIS

As agreed upon with the Town of Hilton Head, the preliminary traffic analysis was completed using Synchro 11. The 2045 Alternative 2 operating conditions were evaluated using the same methodology applied to the 2023 Existing and 2045 No-Build conditions. The operating conditions for the 2045 Alternative 2 scenario are shown in **Appendix K**.

The bowties at Squire Pope and Spanish Wells are expected to improve operations throughout the study area. Overall, the study intersections are expected to operate acceptably under Alternative 2. Each signalized intersection is expected to operate with a LOS D or better overall. However, side-street and unsignalized approaches may still experience long delays. Similar to Alternative 1, this is to be expected given the heavy volumes experienced along the mainline of William Hilton Parkway and the inability of side-street traffic to find gaps in the mainline traffic to complete their movement.

In addition to the Synchro operating conditions, preliminary travel time calculations were performed in Synchro along the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run Drive. Synchro was used for the purposes of evaluating alternatives at a high level, as its results provide a reasonable comparison useful for preferred alternative selection. Final travel time results for the chosen preferred alternative were conducted in VISSIM.

Table 10 shows the changes in travel time for the 2045 Alternative 2 scenario when compared to the 2045 No-Build scenario travel time results gathered from Synchro. As shown, Alternative 2 is expected to improve the travel time along eastbound William Hilton Parkway by approximately 15% during the AM peak period and westbound William Hilton Parkway by approximately 36% during the PM peak period.

Table 10. Travel Time Comparison for Alternative 2

Scenario		Difference in Travel Time (seconds) when Compared to 2045 No-Build		% Difference	
		AM	PM	AM	PM
2045 Alternative 2: Bowties at Squire Pope and Spanish Wells	EB	-104 [-1.7 min]	-39 [<1 min]	-15.3%	-6.6%
	WB	+9 [<1 min]	-290 [-4.8 min]	1.4%	-36.4%

As previously noted, bowtie intersections may increase the total travel time for left-turning vehicles as they must alter their course to navigate through a roundabout and return to the main intersection to complete their movement. Therefore, the expected change in travel time was calculated in Synchro to better determine the additional time for the re-routed left-turn movements. The changes in travel time are shown in **Table 11**. As shown, it could take an additional two minutes for a vehicle making a northbound left-turn at Squire Pope Road to navigate through the bowtie intersection. However, several left-turning movements, such as the eastbound left-turn at Spanish Wells Rd, are expected to experience a decrease in travel time as compared to the 2045 No-Build scenario, due to the long delay those movements are expected to face absent any changes to the intersection.

Table 11. Expected Change in Travel Time for Left-Turning Vehicles at Bowtie Intersections

Intersection		Difference in Travel Time (seconds) for Left-Turning Vehicles	
		AM	PM
Squire Pope Road	EB Left-Turn	+63 [1.1 min]	+42 [<1 min]
	WB Left-turn	+82 [1.4 min]	+81 [1.4 min]
	NB Left-Turn	+101 [1.7 min]	+120 [2 min]
	SB Left-Turn	+44 [<1 min]	+4 [<1 min]
Spanish Wells Road	EB Left-Turn	-10 [<1 min]	-26 [<1 min]
	WB Left-turn	-13 [<1 min]	-7 [<1 min]
	NB Left-Turn	+89 [1.5 min]	-42 [<1 min]
	SB Left-Turn	+43 [<1 min]	+61 [1 min]

2045 ALTERNATIVE 2 RIGHT-OF-WAY IMPACTS

The proposed Bowtie configurations of Alternative 2 will require the 0.2 acre of additional ROW at Gum Tree Road, as well as additional ROW along the crossroads to accommodate the construction of the roundabouts. It should be noted that the ROW estimates refer to permanent ROW needed for the completed improvements only, and do not consider temporary ROW needed for construction or staging.

At the Squire Pope Road intersection, the north roundabout would be located along Squire Pope Road at Old Stony Lane, requiring approximately 0.2 acres of additional ROW from privately owned land. The

south roundabout would be located at the end of Chamberlin Road and would require approximately 0.4 acre of additional ROW from Town owned land.

At the Spanish Wells Road intersection, the north roundabout would be located along Wild Horse Road at Old Wild Horse Road, requiring approximately 0.2 acre of additional ROW from Town owned land. The south roundabout would be located south of Humane Way and would require approximately 0.1 acre of additional ROW from Town owned land.

This alternative could potentially reduce the ROW required for the widening of William Hilton Parkway by 0.5 acre or more due to the elimination of the left turn lanes at the intersections.

2045 ALTERNATIVE 2 ENVIRONMENTAL ANALYSIS

As noted above, Alternative 2 would require 1.10 acres of additional ROW. The Town of Hilton Head owns 0.9 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood was outside of the SCDOT EA investigation area, but is also a Gullah Geechee community. The Gullah Geechee people are the only African-American population in the United States that have maintained a separate language and a distinct culture. Therefore, the Squire Pope neighborhood is likely an environmental justice community. The SCDOT recommended alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. Alternative 2 is not anticipated to alter this finding. Coordination with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NOAA-NMFS) would need to occur to affirm this finding. Alternative 2 would require additional impacts to the Stoney Traditional Cultural Property (TCP). The SCDOT identified the Stoney community as a TCP and as a resource eligible for inclusion in the National Register of Historic Places (NRHP). As a NRHP-eligible resource, it is also considered a Section 4(f) property. Alternative 2 would not result in additional impacts to hazardous materials sites, NWI wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 2.

Please refer to the Technical Environmental Overview in **Appendix J** for additional details.

2045 ALTERNATIVE 3: ECHELON / CENTER TURN OVERPASS

2045 ALTERNATIVE 3 TRAFFIC VOLUMES

The traffic volumes used for the 2045 Alternative 3 analysis were largely similar to the 2045 No-Build traffic volumes. The traffic volumes for the intersections impacted by Alternative 3 are provided in **Appendix L**.

It should be noted that Lochmueller agrees with the improvements proposed along William Hilton Parkway between Moss Creek Drive and Crosstree Drive in Alternative 1, as detailed below:

- Widen William Hilton Parkway from four lanes to six lanes from Salt Marsh Drive through Spanish Wells Drive
- Reconfigure the intersection of William Hilton Parkway and Wildlife Refuge Driveway to eliminate left-turns and provide right-in/right-out access only
- Consolidate Jenkins Island access to one signalized location at Crosstree Drive

Therefore, those improvements were included in Alternative 3. As such, the traffic volumes at those intersections would be the same between Alternative 3 and Alternative 1.

2045 ALTERNATIVE 3 TRAFFIC OPERATIONAL ANALYSIS

As agreed upon with the Town of Hilton Head, the preliminary traffic analysis was completed using Synchro 11. The 2045 Alternative 3 operating conditions were evaluated using the same methodology applied to the 2023 Existing and 2045 No-Build conditions. The operating conditions for the 2045 Alternative 3 scenario are shown in **Appendix L**.

Overall the study intersections are expected to operate acceptably under Alternative 3. Each signalized intersection is expected to operate with a LOS D or better overall for either configuration. Similar to the previous scenarios, side-street and unsignalized approaches may still experience long delays. The long queues and delays that are expected under the 2045 No-Build Scenario would be expected to be improved overall.

It should be noted that while operating conditions overall would be expected to improve when compared to the 2045 No-Build conditions, some movements would be expected to experience failing levels of service. When considering an echelon at Squire Pope Road, the southbound approach at Squire Pope Road is expected to fail. This is caused by a reduction in green time for the heavy southbound right-turns. Additionally, when considering a center turn overpass at Squire Pope Road, the northbound approach at Spanish Wells Road is expected to experience failing operating conditions. This is due to the limited amount of green time allowed for this movement under this scenario. However, overall each option in Alternative 3 is an improvement when compared to the 2045 No-Build scenario.

In addition to the Synchro operating conditions, preliminary travel time calculations were performed in Synchro along the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run Drive. Synchro was used for the purposes of evaluating alternatives at a high level, as its results provide a reasonable comparison useful for preferred alternative selection. Final travel time results for the chosen preferred alternative were conducted in VISSIM.

Table 12 shows the changes in travel time for the 2045 Alternative 3 scenario when compared to the 2045 No-Build scenario travel time results gathered from Synchro. As shown, between the four options provided in Alternative 3, the travel time calculations indicate that the travel time along eastbound William Hilton Parkway would improve between approximately 18-32% during the AM peak period and westbound William Hilton Parkway would improve between approximately 41-60% during the PM peak period.

Table 12. Travel Time Comparison for Alternative 3

Scenario		Difference in Travel Time (seconds) when Compared to 2045 No-Build		% Difference	
		AM	PM	AM	PM
2045 Alternative 3: Echelon at Squire Pope	EB	-191 [-3.2 min]	-68 [-1.1 min]	-32.1%	-12.1%
	WB	-79 [-1.3 min]	-407 [-6.8 min]	-13.9%	-60.0%
2045 Alternative 3: Echelon at Spanish Wells	EB	-140 [-2.3 min]	-11 [<1 min]	-21.6%	-1.8%
	WB	-15 [<1 min]	-331 [-5.5 min]	-2.3%	-44.0%
2045 Alternative 3: Center Turn Overpass at Squire Pope	EB	-122 [-2 min]	+23 [<1 min]	-18.4%	3.5%
	WB	-21 [<1 min]	-319 [-5.3 min]	-3.3%	-41.6%
2045 Alternative 3: Center Turn Overpass at Spanish Wells	EB	-134 [-2.2 min]	-17 [<1 min]	-20.6%	-2.9%
	WB	-16 [<1 min]	-339 [-5.7 min]	-2.5%	-45.4%

2045 ALTERNATIVE 3 RIGHT-OF-WAY IMPACTS

The proposed Echelon or Center Turn Overpass configurations of Alternative 3 would still require the 0.2 acres of additional ROW at Gum Tree Road, as well as additional ROW along William Hilton Parkway for turn lanes and additional ROW along the crossroads to accommodate the construction of the turn arounds and/or roundabouts to maintain full access to parcels near the intersections. It should be noted that the ROW estimates refer to permanent ROW needed for the completed improvements only, and do not consider temporary ROW needed for construction or staging.

At the Squire Pope Road intersection, the north roundabout would be located along Squire Pope Road at Old Stony Lane, requiring approximately 0.2 acres of additional ROW from privately owned land. The south roundabout would be located at the end of Chamberlin Road and would require approximately 0.4 acres of additional ROW from Town owned land. Widening of Chamberlin Road would require approximately 0.05 acres of additional ROW from private land and 0.05 acres of ROW from Town owned land. Widening along the north side of William Hilton Parkway will require approximately 0.1 acres of additional ROW from Town owned land.

At the Spanish Wells Road intersection, the north roundabout would be located along Wild Horse Road at Old Wild Horse Road, requiring approximately 0.2 acres of additional ROW from Town owned land. The south turn around would require approximately 0.35 acres of additional ROW from private land. Widening along the south side of William Hilton Parkway would require approximately 0.3 acres of additional ROW from Town owned land and approximately 0.05 acres of additional ROW from private land.

2045 ALTERNATIVE 3 ENVIRONMENTAL ANALYSIS

The environmental impacts for Alternative 3 were evaluated for an echelon at the Squire Pope Road intersection and an echelon at the Spanish Wells Road/Wild Horse Road intersection. A center turn overpass would result in more impacts than an echelon at either intersection. Therefore, a center turn overpass was dismissed from further consideration.

An echelon at the Squire Pope intersection would require the 1.0 acre of additional ROW. The Town of Hilton Head owns 0.75 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood is a Gullah Geechee community and is likely an environmental justice community. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. An echelon at the Squire Pope intersection is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding. An echelon at Squire Pope Road would result in additional impacts to the Stoney TCP, a cultural resource and Section 4(f) property. The addition of a grade separated intersection at Squire Pope Road also has the potential to create visual barriers within the Stoney TCP. It would not result in additional impacts to hazardous materials sites, NWI wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 3.

An echelon at the Spanish Wells Road/ Wild Horse Road intersection would require 1.1 acres of additional ROW. The Town of Hilton Head owns 0.7 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood is a Gullah Geechee neighborhood and likely an environmental justice community. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. An echelon at the Spanish Wells Road intersection is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding. An echelon at Spanish Wells Road would result in 0.29 acre of additional impacts to floodplains. It would result in additional impacts to the Stoney TCP, a cultural resource and Section 4(f) property. It would also result in 0.03 acre of additional impacts to the public park at 152 William Hilton Pkwy, a Section 4(f) property. The addition of a grade separated intersection at Spanish Wells Road / Wild Horse Road also has the potential to create visual barriers within the Stoney TCP. An echelon at Spanish Wells Road would not result in additional impacts to hazardous materials sites, NWI wetlands, streams, or essential fish habitat types. No relocations would occur as a result of Alternative 3.

Please refer to the Technical Environmental Overview in **Appendix J** for additional details.

2045 ALTERNATIVE 4: ELEVATED BYPASS

2045 ALTERNATIVE 4 TRAFFIC VOLUMES

The traffic volumes used for the 2045 Alternative 4 analysis were largely similar to the 2045 No-Build traffic volumes. The traffic volumes for the intersections impacted by Alternative 4 are provided in **Appendix M**.

It should be noted that Lochmueller agrees with the improvements proposed along William Hilton Parkway between Moss Creek Drive and Crosstree Drive in Alternative 1, as detailed below:

- Widen William Hilton Parkway from four lanes to six lanes from Salt Marsh Drive through Spanish Wells Drive
- Reconfigure the intersection of William Hilton Parkway and Wildlife Refuge Driveway to eliminate left-turns and provide right-in/right-out access only
- Consolidate Jenkins Island access to one signalized location at Crosstree Drive

Therefore, those improvements were included in Alternative 4. As such, the traffic volumes at those intersections would be the same between Alternative 4 and Alternative 1.

2045 ALTERNATIVE 4 TRAFFIC OPERATIONAL ANALYSIS

As agreed upon with the Town of Hilton Head, the preliminary traffic analysis was completed using Synchro 11. The 2045 Alternative 4 operating conditions were evaluated using the same methodology applied to the 2023 Existing and 2045 No-Build conditions. The operating conditions for the 2045 Alternative 4 scenario are shown in **Appendix M**.

As shown, the intersections at Squire Pope Road, Spanish Wells Road, and Gum Tree Road would be expected to operate at an overall LOS C or better. Overall, the study intersections are expected to operate acceptably under Alternative 4. The signalized intersections throughout the corridor are expected to operate with a LOS C or better overall. Similar to the previous scenarios, side-street and unsignalized approaches throughout the corridor may still experience long delays. It should be noted that the results provided are for the at-grade intersections only, and the operating conditions for the elevated bypass traffic are not provided in Synchro.

In addition to the Synchro operating conditions, preliminary travel time calculations were performed in Synchro along the William Hilton Parkway corridor between Moss Creek Drive and Indigo Run Drive. Synchro was used for the purposes of evaluating alternatives at a high level, as its results provide a reasonable comparison useful for preferred alternative selection. Final travel time results for the chosen preferred alternative were conducted in VISSIM.

Table 13 shows the changes in travel time for the 2045 Alternative 4 scenario when compared to the 2045 No-Build scenario travel time results gathered from Synchro. As shown, Alternative 4 is expected to improve the travel time along the remaining at grade eastbound William Hilton Parkway by approximately 19% during the AM peak period and at grade westbound William Hilton Parkway by approximately 44% during the PM peak period. It should be noted that the travel times reflect

operations of at-grade intersections only. VISSIM software will allow for modeling of the bypass itself and will therefore yield greater reductions in travel times than those shown in the table.

Table 13. Travel Time Comparison for Alternative 4

Scenario		Difference in Travel Time (seconds) when Compared to 2045 No-Build		% Difference	
		AM	PM	AM	PM
2045 Alternative 4: Elevated Bypass	EB	-126 [-2.1 min]	27 [<1 min]	-19.1%	4.1%
	WB	+4 [<1 min]	-330 [-5.5 min]	0.5%	-43.7%

2045 ALTERNATIVE 4 RIGHT-OF-WAY IMPACTS

Based upon available GIS and parcel map data made available to Lochmueller during the completion of the corridor alternatives analysis process, it appears the proposed Elevated Bypass Alternative could be contained within the proposed ROW footprint of the SCDOT Preferred alternative and, unlike the other alternatives, would not require adding turn lanes to the Gum Tree Road intersection and the additional strip of ROW required by those improvements, resulting in no additional ROW being required for this alternative. It should be noted that the ROW estimates refer to permanent ROW needed for the completed improvements only, and do not consider temporary ROW needed for construction or staging.

2045 ALTERNATIVE 4 ENVIRONMENTAL ANALYSIS

Alternative 4 would impact an additional 0.03 acre of National Wetland Inventory (NWI) wetlands and an additional 0.03 acre of essential fish habitats. Approximately 65 linear feet of Jarvis Creek would be impacted. Alternative 4 would require no additional ROW. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. Alternative 4 is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding.

The Honey Horn Plantation is a collection of historic farm buildings and landscape and would be considered a Section 4(f) resource. It is also home to the Coastal Discovery Museum, which educates the public on the region’s cultural and natural history. Alternative 4 intersects the current boundary of Honey Horn plantation according to the South Carolina Department of Archives and History website. This is unlikely to be considered a Section 4(f) use as the proposed improvements associated with this alternative would occur entirely within existing transportation ROW. Therefore, there is likely no conversion of the resource from a non-transportation use to a transportation one. The current boundary of the site extends into the existing footprint of U.S. 278. However, this part of the site has likely been disturbed by previous construction. Further investigation and coordination with the applicable agencies would be needed to determine the exact cultural and Section 4(f) impacts to this site. No additional relocations would be required. The addition of an elevated bypass lane on a combination of fill or structure also has the potential to create visual barriers within the Stoney TCP. However, this alternative would not result in additional encroachment on the Stoney TCP and, as such, is not quantified as a direct

impact. No additional impacts to hazardous materials sites, neighborhoods, or environmental justice communities are anticipated. No impacts to floodplains are anticipated. Please refer to the Technical Environmental Overview in **Appendix J** for additional details.

ALTERNATIVES COMPARISON AND CONCLUSIONS

The goal of the alternatives analysis is to provide an objective, data-driven evaluation of the four corridor alternatives, with respect to US 278/William Hilton Parkway between Moss Creek Drive and Gum Tree Road. Therefore, various matrices were compiled with respect to traffic operations, bicycle and pedestrian accommodations, ROW requirements, and environmental factors to inform an overall scoring matrix. Each of the matrices includes scores for various categories. A score of 1 is the highest ranking, whereas a score of 4 is the lowest ranking. The ranking for each category were tallied to reach a total aggregate score per alternative.

As shown in **Table 18**, Alternative 1 ranked first with a total score of 20. Alternative 4 ranked second with a total score of 21. Alternative 2 ranked third with a total score of 24, and Alternative 3 ranked last with a total score of 28.

The matrix for traffic operations is presented in **Table 14**.

Table 14. Traffic Operations Overview Matrix

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
Travel Time along US 278	4	4	2	1
Overall Intersection Operations	4	3	3	1
Side-Street Operations	4 Movements with a LOS F at a signalized intersection: Squire Pope: Northbound approach (PM)	2 No movements have a LOS F at a signalized intersection. However, some movements are expected to have a LOS E at signalized intersections between Squire Pope and Gum Tree.	4 Movements with a LOS F at a signalized intersection: <u>Echelon at Squire Pope:</u> Squire Pope: Southbound approach (PM) <u>Center Turn Overpass at Squire Pope:</u> Spanish Wells: Northbound Approach (PM)	1 All movements are expected to have a LOS D or better at signalized intersections between Squire Pope and Gum Tree.
TOTAL	12	9	9	3
RANK	4	3	3	1

The matrix for bicycle and pedestrian impact is presented in **Table 15**.

Table 15. Bicycle and Pedestrian Overview Matrix

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
Pedestrian Crossing Distance	Longest pedestrian crossing distances.	Reduced pedestrian crossing distances and exposure to motor vehicle traffic.	Reduced pedestrian crossing distances and exposure to motor vehicle traffic.	Reduced pedestrian crossing distances and exposure to motor vehicle traffic.
Potential for Refuge Islands	No refuge islands on north-south crossings.	Potential for median refuge island on east and west crosswalk legs at Squire Pope	Refuge islands between directional traffic allow pedestrians to more comfortably navigate the complex intersection.	Refuge islands between directional traffic allow pedestrians to more comfortably navigate the complex intersection; HOWEVER, multiple refuge islands per leg and long end- to-end crossing distances increase intersection complexity and the likelihood of pedestrians needing two or more stages to complete a north-south crossing.
Conflict Points	Multiple turning movements and potential conflict points along each leg.	Fewer ped/vehicle conflict points and vehicle turning movements.	Fewer ped/vehicle conflict points and vehicle turning movements.	Fewer ped/vehicle conflict points and vehicle turning movements.

The matrix for ROW impact is presented in **Table 16**.

Table 16. Right-of-Way Overview Matrix

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
Estimated Additional Right-of-Way Acres – Public <u>Estimated Additional Right-of-Way Acres – Private</u> Approx. TOTAL Additional Right-of-Way Acres	0.2 ac <u>0.0 ac</u> 0.2 ac	0.9 ac <u>0.2 ac</u> 1.1 ac	0.7 ac <u>0.4 ac</u> 1.1 ac	0 ac
Right-of-Way Score	2	4	4	1
Estimated Preliminary Probable Opinion of Cost	\$426	\$430M	\$440M to \$450M	\$545M to \$575M
Cost Score	1	2	3	4
Estimated Construction Duration	36 months	38 months	42 months	48 months
Construction Duration Score	1	2	3	4
TOTAL	4	8	10	9
RANK	1	2	4	3

The matrix for environmental impacts is presented in **Table 17**.

Table 17. Environmental Overview Matrix

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
NWI Wetlands	1	1	1	4
Streams	1	1	1	4
Floodplains	1	1	4	1
Essential Fish Habitat	1	1	1	4
Threatened & Endangered Species	1	1	1	1
Hazardous Material Sites	1	1	1	1
Relocations	1	1	1	1
Right-of-Way	2	4	4	1
Neighborhoods	2	4	4	1
Environmental Justice	2	4	4	1
Cultural Resources	1	4	4	4
Section 4(f) Resources	1	3	4	1
Total	15	26	30	24
Rank	1	3	4	2

Table 18. Overall Scoring Matrix

Resource/Category	Alternative 1 (Mod. SCDOT Recommended Preferred)	Alternative 2 (Bowties at Squire Pope and Spanish Wells)	Alternative 3 (Echelon / Center Turn Overpass)	Alternative 4 (Elevated Bypass)
Traffic Operations (Throughput and Traffic Simulations)	4	3	3	1
ROW Impact	2	4	4	1
Environmental Impact	1	3	4	2
Safety	4	3	3	1
Bike/Pedestrian Impact	4	3	1	2
Community and Social Impact	1	3	4	2
Aesthetic	2	1	3	4
Preliminary Probable Opinion of Cost	1	2	3	4
Construction Duration	1	2	3	4
TOTAL	20	24	28	21
RANK	1	3	4	2

TOWN SELECTED ALTERNATIVE

Based upon the preceding alternatives analysis, Lochmueller was directed by the Town of Hilton Head Island to pursue Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at the intersection of William Hilton Parkway at Squire Pope Road through to the final phase of this analysis.

TOWN SELECTED ALTERNATIVE MULTIMODAL RECOMMENDATIONS

The roadway improvements recommended under Modified Alternative 1 were further evaluated with respect to improving the multimodal experience and safety within the study area. As previously stated, Alternative 1 considers the SCDOT Modified Recommended Preferred alternative with adaptive signals in place and improvements at Gum Tree Road. However, unlike the original SCDOT Modified Recommended Preferred Alternative, a single eastbound left-turn lane and a single southbound right-turn lane at the intersection of William Hilton Parkway at Squire Pope Road will be provided. The SCDOT Modified Recommended Preferred Alternative will also provide a separated shared use path (SUP) for bicycles. Due to the heavy traffic volumes, on street facilities are not being considered. Therefore, the multimodal recommendations mainly focus on how to accommodate pedestrians. The following improvements along William Hilton Parkway between Moss Creek Drive and Gum Tree Road are recommended as part of the Modified Alternative 1:

- William Hilton Parkway & Pinckney Island Refuge
 - If pedestrians are going to be encouraged to cross the south leg of the intersection immediately adjacent to William Hilton Parkway, a high visibility marked crosswalk should be incorporated, and if possible, the proposed channelized island should be expanded/extended to provide a refuge area. Alternatively, the pedestrians could be directed to cross the south leg at a location further away from William Hilton Parkway, with appropriate signage and pavement markings to accommodate.
- William Hilton Parkway & Crosstree Drive (Windmill Harbour)
 - This signalized intersection should be incorporated into the adaptive signal system as soon possible to ensure optimal traffic signal progression along William Hilton Parkway.
- William Hilton Parkway & Squire Pope Road
 - Provide high visibility crosswalks.
 - If continuous sidewalk facilities are not planned to be installed along the south side of William Hilton Parkway west of Squire Pope Road, consider eliminating the William Hilton Parkway pedestrian crossing on the west leg to instead encourage pedestrians to cross William Hilton Parkway at the east leg only.
 - Consider moving the north crosswalk slightly northward, so as to provide greater distance between pedestrians within the crosswalk and the adjacent westbound travel lanes along William Hilton Parkway.
 - During final design efforts, seek to increase extents of raised center medians along William Hilton Parkway to provide pedestrian refuge, if possible, given ROW and other geometric factors that must be considered.

- During final design efforts, seek to tighten curb radii to shorten pedestrian crossing distances on all approaches.
- William Hilton Parkway & Spanish Wells Road
 - Provide high visibility crosswalks.
 - Consider moving the north crosswalk slightly northward, so as to provide greater distance between pedestrians within the crosswalk and the adjacent westbound travel lanes along William Hilton Parkway.
 - During final design efforts, seek to increase extents of western raised center median along William Hilton Parkway to provide pedestrian refuge for west leg crossing, if possible, given ROW and other geometric factors that must be considered.
 - During final design efforts, seek to tighten curb radii to shorten pedestrian crossing distances across north and west leg of the intersection.

DOWNSTREAM IMPACTS OF TOWN SELECTED MODIFIED ALTERNATIVE 1

As a next step, Lochmueller evaluated the impacts Modified Alternative 1 would have on the entire project study area (**Figure 1**) and determined what, if any, improvements should be made to accommodate the 2045 forecasted traffic at the intersections downstream (i.e., east of Gum Tree Road to Indigo Run Drive, and south of Cross Island Parkway to Sea Pines Circle).

MODIFIED ALTERNATIVE 1 TRAFFIC ANALYSIS

The travel time calculations and traffic volumes between the 2045 No-Build conditions and the 2045 Modified Alternative 1 conditions were evaluated using VISSIM. It should be noted that this analysis was conducted assuming only the improvements under the Modified Alternative 1 were in place to better understand how the entire study area would operate if no geometric roadway improvements were implemented east of Gum Tree Road to Indigo Run Drive, or along Cross Island Parkway to Sea Pines Circle.

As shown in **Table 19**, under the 2045 No-Build scenario, it is expected that it would take approximately 26.3 minutes to travel eastbound along Hilton Parkway between Moss Creek Drive and Indigo Run Drive during the AM peak hour. It is expected that the travel time will be reduced to approximately 10.5 minutes (60%) under the Modified Alternative 1. Under the 2045 No-Build scenario, it is expected that it would take approximately 25.7 minutes to travel westbound along Hilton Parkway between Moss Creek Drive and Indigo Run Drive during the PM peak hour. It is expected that the travel time will be reduced to approximately 10.3 minutes (60%) under the Modified Alternative 1.

Table 19. 2045 Modified Alternative 1 VISSIM Travel Time Results

Corridor		2045 No-Build Simulated Travel Time (secs) [min]		2045 Modified Alternative 1 Without Improvements to Downstream Intersections Simulated Travel Time (secs) [min]		% Difference	
		AM	PM	AM	PM	AM	PM
William Hilton Pkwy between Moss Creek and Indigo Run	EB	1579 [26.3 min]	642 [10.7 min]	628 [10.5 min]	631 [10.5 min]	-60.23%	-1.71%
	WB	584 [9.7 min]	1544 [25.7 min]	597 [10 min]	616 [10.3 min]	2.23%	-60.10%
William Hilton Pkwy from Moss Creek to Sea Pine Circle via Cross Island Pkwy	SB	1984 [30.1 min]	873 [14.6 min]	1387 [23.1 min]	874 [14.6 min]	-30.09%	0.11%
	NB	823 [13.7 min]	2465 [41.1 min]	848 [14.1 min]	904 [15.1 min]	3.04%	-63.33%

In addition, with the improvements in place, the approximately 10% of total network vehicles that were unable to enter the model network during the 2045 No-Build scenario are able to be accommodated under this scenario.

Table 20 summarizes overall network performance for the 2045 Modified Alternative scenario assuming no improvements to intersections east of Gum Tree Road or along Cross Island Parkway as compared to the 2045 No-Build scenario. During the PM peak hour, vehicles stops will decrease when compared to the 2045 No-Build scenario throughout the study area. Vehicles will be required to stop on average 6 times during both peak periods. Additionally, the average vehicle speeds during the PM peak hour will improve to an average of 28 and 30 mph, during the AM and PM peak hours, respectively.

In addition, with the improvements in place, the approximately 10% of total network vehicles that were unable to enter the model network during the 2045 No-Build scenario are able to be accommodated under this scenario.

Table 20. Network Performance – 2045 Modified Alternative 1 Without Improvements to Downstream Intersections

Peak Hour	Average Number of Stops per Vehicle	Average Speed (mph)	Total Vehicles (vph)
2045 No-Build AM	9.9	21	11,143
2045 No-Build PM	15.4	16	12,393
2045 Modified Alternative 1: AM Peak Hour	6.3	28	11,355
2045 Modified Alternative 1: PM Peak hour	6.7	29.8	13,531

The 2045 Modified Alternative 1 operating conditions at the study intersections were evaluated using VISSIM and are provided in **Appendix N**. As shown, with the improvements proposed under the Modified Alternative 1, the study intersections are largely expected to operate acceptably in the year 2045, with some exceptions. The eastbound and westbound thru movements along William Hilton Parkway are expected to operate with an overall LOS D or better between Moss Creek Drive and Gum Tree Road. While some of the side-street approaches at unsignalized intersections are still expected to experience failing conditions, the operations overall are significantly improved from the 2045 No-Build scenario as vehicles can better complete their turning movement due to the reduction in congestion along the eastbound and westbound mainline.

The intersections east of Gum Tree Road are largely expected to operate favorably in 2045 with no improvements in place. However, long eastbound queues extending from Pembroke Drive through Gum Tree Road are expected during the AM peak hour. Similarly, the westbound queue at Jarvis Park Road/Wilborn Road is expected to extend back to Pembroke Drive during the PM peak hour. Furthermore, the mainline is expected to be over capacity in the year 2045. However, overall, the intersections are expected to operate acceptably with an overall LOS D or better during both peak periods. Even though the mainline functions over capacity in 2045 (which is evidenced by the resulting queue lengths), the adaptive signal system is expected to perform well enough to still provide overall LOS D or better during both peak periods.

As shown, the northbound approach at Jarvis Park Road/Wilborn Road is expected to have a failing LOS during the PM peak hour. It should be noted that this approach has minimal traffic volumes and the maximum queue expected is only approximately 200 ft. The eastbound left-turn movement at Indigo Run Drive is also expected to fail during the PM peak hour. The maximum queue length is expected to be approximately 335 ft, which would be contained within the existing turn lane.

Along Palmetto Bay Rd, the roundabout at Sea Pines is expected to fail during both AM and PM peak hours. The failing conditions result in long queue lengths. The southbound queue is expected to extend past the study intersection at Target Road and towards Point Comfort Road during the AM peak hour. This results in failing movements for the westbound left-turns out of the unsignalized intersections along Palmetto Bay Road as vehicles are unable to find a gap in the traffic to complete their turning movement. During the PM peak hour, nearly every approach of Sea Pines Circle is expected to fail in

2045 with no improvements in place as the roundabout is unable to accommodate the expected traffic volumes.

Overall, with the improvements proposed under the Modified Alternative 1, the downstream study intersections are largely expected to operate acceptably in the year 2045. However, the eastbound and westbound approaches between Wilborn Road and Pembroke Drive are expected to experience long queues and be over capacity in the year 2045, and the existing roundabout at Palmetto Bay Road and Sea Pines Circle is expected to fail during both the AM and PM peak hours. As a result of the failing roundabout, the southbound queue lengths are expected to extend beyond nearby intersections.

Therefore, it was necessary to evaluate potential improvements to the local intersections downstream of Gum Tree Road and Cross Island Parkway to help mitigate the expected long queues and delays.

ADDITIONAL MITIGATION SOLUTIONS FOR LOCAL INTERSECTIONS

As previously stated, some of the local downstream intersections would be expected to experience long queues and delays. As such, two options were developed to help mitigate the local intersections east of Gum Tree Road to Indigo Run Drive, and south of Cross Island Parkway to Sea Pines Circle.

Option A minimizes the physical impacts along the corridor, with suggested improvements for only one intersection along William Hilton Parkway. Physical improvements are also recommended at Sea Pines Circle in order to accommodate the expected increase in traffic over time. Option A considers keeping Sea Pines Circle as a roundabout intersection, but expanding the lanes to increase capacity.

Option B considers a more significant approach to help mitigate the expected queue lengths along William Hilton Parkway between Gum Tree Road and Pembroke Drive. Option B also provides a separate solution for Sea Pines Circle via signaling the intersection.

The improvements recommended under the two options to help mitigate the local intersections east of Gum Tree Road and along Cross Island Parkway are detailed below:

- Local Intersection Option A:
 - William Hilton Parkway & Pembroke Drive
 - Reconfigure the northbound approach to provide dual northbound left-turn lanes, one thru lane, and one right-turn lane.
 - In addition to the roadway widening, this will require relocation of the shared use path on the east side, adjustments to signal equipment and additional ROW on the south leg.
 - Estimated preliminary probable opinion of cost, including ROW of \$750,000 and a construction duration estimated at 4 months.
 - Palmetto Bay Road & William Hilton Parkway (Sea Pines Circle)
 - Provide a two-lane roundabout.
 - Each approach should have a right-turn bypass, with the exception of the west leg, as shown in **Figure 11**.
 - This will require pavement widening to the inside of the traffic circle and on each of the four legs of the intersection to accommodate the additional lane.

- Estimated preliminary probable opinion of cost of \$2,000,000 and a construction duration estimated at 8 months.

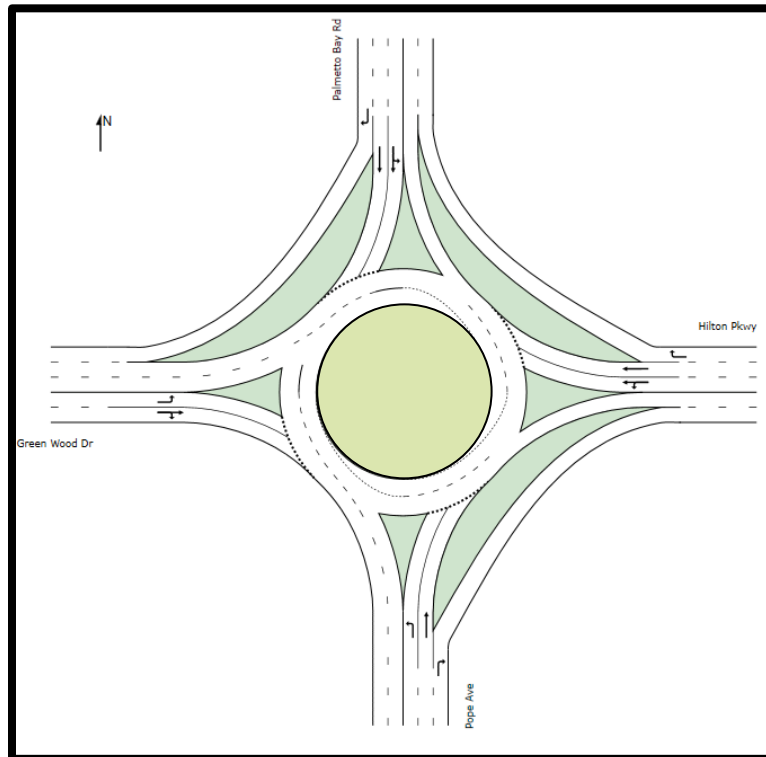


Figure 11. Proposed Roundabout Configuration at Sea Pines Circle Under Option A

- Local Intersection Option B:
 - Extend the 6-lane section from Gum Tree Road past Pembroke Drive. The 6-lane section can taper back to a 4-lane section at Central Avenue.
 - In addition to the roadway widening, this will require adjustments to the shared use path on the north side of the road, new traffic signals at Wilborn and Pembroke, temporary construction easements and possibly new ROW.
 - Estimated preliminary probable opinion of cost of \$3,000,000 and a construction duration estimated at 6 months.
 - William Hilton Parkway & Wilborn Road
 - Provide dual southbound right-turn lanes.
 - In addition to the roadway widening, this will require adjustments to the shared use path on the east side of the road, temporary construction easements and possibly new ROW.
 - Estimated preliminary probable opinion of cost of \$1,000,000 and a construction duration estimated at 4 months.
 - Palmetto Bay Road & William Hilton Parkway (Sea Pines Circle)
 - Signalize the intersection rather than the existing roundabout.
 - Provide a left-turn lane, two thru lanes, and a right-turn lane for every approach except the EB approach, which will have dual LT lanes.

- In addition to the roadway widening on each leg of the intersection to accommodate the addition of turn lane, this will require adjustments to the shared use path on the east side of the south leg, new traffic signals, temporary construction easements and new ROW on the north and west legs.
- Estimated preliminary probable opinion of cost of \$6,000,000 and a construction duration estimated at 12 months.

It should be noted that the improvements recommended at Sea Pines Circle could be implemented independently of the improvements along William Hilton Parkway.

OPTIONS A AND B VISSIM TRAFFIC OPERATIONAL ANALYSIS

The operating conditions for all of the study intersections under Options A and B are provided in **Appendix O**. Overall, the study intersections are largely expected to operate acceptably in the year 2045 under both Options.

Under Option A, the previous operating conditions along William Hilton Parkway west of Gum Tree Road would be maintained. The intersections downstream of Gum Tree Road are largely expected to operate acceptably in 2045 with the improvements under Option A in place. The reconfiguration of the northbound approach at the intersection of William Hilton Parkway and Pembroke Drive is expected to help reduce the eastbound and westbound queue lengths as more of the cycle length can go towards the mainline. However, even with adaptive signals and the reconfiguration of the northbound approach, long eastbound and westbound queues would still be expected under this scenario. That being said, the queue lengths are not expected to impact the nearby intersections with the improvements in place and are well served, as evidenced by the expected overall LOS D's at each signalized intersection.

Along Palmetto Bay Road, the two-lane roundabout with bypass lanes for all legs except for the east leg at Sea Pines is expected to operate favorably during both AM and PM peak hours. The roundabout is expected to operate with an overall LOS B or better during both peak periods. The previously failing approaches would be mitigated and the queue lengths would be minimized.

Under Option B, the intersections downstream of Gum Tree Road are expected to operate favorably in 2045. The long eastbound and westbound queues between Pembroke Drive and Gum Tree Road would be minimized. The roadways would have adequate capacity to accommodate traffic through 2045.

Option B removes the roundabout at Sea Pines Circle and replaces it with a signalized intersection. It was found that a signalized intersection would also operate acceptably through the year 2045 at Sea Pines. The overall LOS would be a C during both the AM and PM peak hours and the queue lengths would not be expected to impact nearby intersections.

OPTIONS A AND B VISSIM TRAVEL TIME COMPARISON

A comparison of the calculated travel times between the 2045 No-Build conditions and the 2045 Modified Alternative 1 without any improvements to the downstream intersections as well as with the recommended improvements under both Option A and Option B were evaluated using VISSIM. These travel times represent the final travel time calculations for the study area and are presented in **Table 21**.

Under Option A, the travel times are expected to improve along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive by approximately 17.2 minutes (65%) during the AM peak hour in the eastbound direction and by approximately 15.7 minutes (61%) during the PM peak hour in the westbound direction. The travel times along William Hilton Parkway at Moss Creek to the Cross Island Parkway at Sea Pines Circle are expected to improve by approximately 19.2 minutes (58%) during the AM peak hour in the southbound direction and by approximately 27 minutes (66%) during the PM peak hour in the northbound direction.

Under Option B, the travel times are expected to improve along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive by approximately 17.4 minutes (65%) during the AM peak hour in the eastbound direction and by approximately 16.5 minutes (64%) during the PM peak hour in the westbound direction. The travel times along William Hilton Parkway at Moss Creek to the Cross Island Parkway at Sea Pines Circle are expected to improve by approximately 19.4 minutes (59%) during the AM peak hour in the southbound direction and by approximately 27 minutes (66%) during the PM peak hour in the northbound direction.

As shown in **Table 21**, the travel times along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive are relatively comparable between the three scenarios. The 2045 Modified Alternative 1 without improvements to downstream intersections is already expected to operate under largely free-flowing conditions. While the recommended improvements under Options A and B help to reduce long queues, they do not largely impact the travel times.

However, the travel times along William Hilton Parkway between Moss Creek Drive to the Cross Island Parkway at Sea Pines Circle are expected to vastly improve under Options A and B.

Table 21. Comparison of Final Travel Times for Entire Study Area

Corridor		William Hilton Pkwy Between Moss Creek and Indigo Run		% Difference to 2045 No-Build		William Hilton Pkwy from Moss Creek to Sea Pine Circle via Cross Island Pkwy		% Difference to 2045 No-Build	
		EB	WB	EB	WB	SB	NB	SB	NB
2045 No-Build Simulated Travel Time (secs) [min]	AM	1579 [26.3]	584 [9.7]	-	-	1984 [33.1]	823 [13.7]	-	-
	PM	642 [10.7]	1544 [25.7]	-	-	873 [14.6]	2465 [41.1]	-	-
2045 Modified Alternative 1 Without Improvements to Downstream Intersections Simulated Travel Time (secs) [min]	AM	628 [10.5]	597 [10]	60.23%	2.23%	1387 [23.1]	848 [14.1]	30.09%	3.04%
	PM	631 [10.5]	616 [10.3]	-1.71%	60.10%	874 [14.6]	904 [15.1]	0.11%	63.33%
2045 Modified Alternative 1 Option A Simulated Travel Time (secs) [min]	AM	548 [9.1]	556 [9.3]	65.31%	-4.85%	833 [13.9]	814 [13.6]	58.01%	-1.04%
	PM	589 [9.8]	600 [10]	-8.21%	61.12%	856 [14.3]	845 [14.1]	-1.93%	65.72%
2045 Modified Alternative 1 Option B Simulated Travel Time (secs) [min]	AM	534 [8.9]	547 [9.1]	66.18%	-6.34%	820 [13.7]	816 [13.6]	58.67%	-0.86%
	PM	571 [9.5]	552 [9.2]	11.06%	64.25%	840 [14]	848 [14.1]	-3.78%	65.60%

OPTIONS A AND B NETWORK PERFORMANCE

Table 22 summarizes overall network performance for the 2045 Modified Alternative 1 with the improvements to the local intersections under Option A and Option B as compared to the 2045 No-Build conditions. As shown, the network performance is expected to drastically improve under both options.

During the AM peak hour, vehicles stops will decrease throughout the study area. Vehicles will be required to stop on average 1.6 times under both Options A and B. Additionally, the average vehicle speeds during the AM peak hour will increase to an average of 38 to 37 mph for Option A and B, respectively.

During the PM peak hour, vehicles will be required to stop on average 2.1 to 1.9 times under Options A and B, respectively, both of which are significantly lower than the 2045 No-Build scenario. Additionally, the average vehicle speeds during the PM peak hour will increase to an average of 36 mph.

Table 22. Network Performance for Entire Study Area

Scenario	Average Number of Stops per Vehicle	Average Speed (mph)	Total Vehicles (vph)
2045 No-Build AM	9.9	21	11,143
2045 No-Build PM	15.4	16	12,393
2045 Modified Alternative 1: No Improvements to Local Intersections AM	6.3	28	11,355
2045 Modified Alternative 1: No Improvements to Local Intersections PM	6.7	29.8	13,531
2045 Modified Alternative 1: Option A AM	1.6	38	11,697
2045 Modified Alternative 1: Option A PM	2.1	36	14,060
2045 Modified Alternative 1: Option B AM	1.6	37	11,693
2045 Modified Alternative 1: Option B PM	1.9	36	14,064

MULTIMODAL AND SAFETY RECOMMENDATIONS FOR LOCAL INTERSECTIONS

In order to help improve the multimodal experience and improve safety along the local intersections east of Gum Tree Road and along Cross Island Parkway, the following additional improvements for the local intersections are recommended:

- William Hilton Parkway & Wilborn Road
 - Realign north crosswalk to ensure pedestrian path is routed through the existing raised channelized islands to provide pedestrian refuge areas within the northwest and northeast quadrants of the intersection. Remove existing crosswalk related pavement markings and wooden stop signs associated with the north crosswalk. Ensure pedestrian signal actuation is provided across southbound left-turn and thru lanes; however, pedestrian signal actuation across the southbound and westbound right-turn lanes would not be necessary.
 - Realign east crosswalk further to the east toward the existing raised channelized island to provide pedestrian refuge area. Remove portions of the existing channelized pavement marking between the westbound thru and left-turn lanes, and implement a raised median to provide pedestrian refuge, similar to what is currently in place for the westbound approach at Pembroke Drive.
 - Ensure Accessible Pedestrian Signal (APS) infrastructure is installed for all signalized pedestrian crossings, and located in compliance with current Public ROW Accessibility Guidelines (PROWAG) requirements. This may require modifications to existing curb

- ramps and/or sidewalk segments at the intersection, if the existing pedestrian path surfaces that are not PROWAG compliant.
 - Ensure pedestrian clearance interval signal timing data complies with MUTCD requirements.
 - Ensure vegetation is maintained within each quadrant to ensure optimal intersection sight distance for side-street motorists entering William Hilton Parkway, as well as that the presence of pedestrians are clearly visible to northbound/southbound/westbound right-turning vehicles.
- William Hilton Parkway & Pembroke Drive
 - Improve pedestrian path crossing landing area on the north side of the intersection to provide more refuge for waiting pedestrians
 - Ensure APS infrastructure is installed for all signalized pedestrian crossings, and located in compliance with current PROWAG requirements. This may require modifications to existing curb ramps and/or sidewalk segments at the intersection, if the existing pedestrian path surfaces that are not PROWAG compliant.
 - Ensure pedestrian clearance interval signal timing data complies with MUTCD requirements.
- William Hilton Parkway & Central Avenue
 - Currently, pedestrians must cross in front of the uncontrolled eastbound left-turn. Therefore, it is recommended that the west leg pedestrian crossing be improved to provide for shorter crossing distances/fewer lane crossings at once.
- Palmetto Bay Road & Arrow Road
 - Ensure an ADA compliant detectable warning is installed in the northwest quadrant's curb ramp.
 - Ensure APS infrastructure is installed for all signalized pedestrian crossings, and located in compliance with current PROWAG requirements. This may require modifications to existing curb ramps and/or sidewalk segments at the intersection, if the existing pedestrian path surfaces that are not PROWAG compliant.
 - Ensure pedestrian clearance interval signal timing data complies with MUTCD requirements.
- Palmetto Bay Road & Target Road
 - Ensure APS infrastructure is installed for all signalized pedestrian crossings, and located in compliance with current PROWAG requirements. This may require modifications to existing curb ramps and/or sidewalk segments at the intersection, if the existing pedestrian path surfaces that are not PROWAG compliant.
 - Ensure pedestrian clearance interval signal timing data complies with MUTCD requirements.
- Palmetto Bay Road & William Hilton Parkway (Sea Pines Circle)
 - Incorporate pedestrian facilities and crossings for each approach where feasible.

Additionally, from a safety perspective, congested corridors often lead to an increase in crashes because of stop-and-go conditions. By alleviating the congestion along William Hilton Parkway, it is expected that the total number of crashes along the corridor would decrease. It should also be noted that access points throughout the study area were not restricted to a point where emergency vehicles would be significantly impacted or be required to alter their response routes.

CONCLUSIONS

The Town of Hilton Head Island, South Carolina commissioned an independent study of the William Hilton Parkway Gateway Corridor to assess the need for improvements along US 278 (William Hilton Parkway) from Moss Creek Drive to Indigo Run Drive, as well as along US 278 (Palmetto Bay Road) from Cross Island Parkway to Sea Pines Circle. This report summarized Existing and future year No-Build traffic operations and safety along the corridor to quantify mobility issues that exist today and that would be expected in the future, absent any upgrades to the roadway network.

This report also detailed the numerous corridor alternatives considered for implementation along William Hilton Parkway between Moss Creek Drive and Gum Tree Road. Four proposed corridor alternatives consisting of two at-grade solution and two grade separated solutions were analyzed. The goal of the alternatives analysis was to provide an objective, data-driven evaluation of the four alternatives. This evaluation was then used to assist with the selection of a single recommended alternative for the corridor.

Per the direction of the Town of Hilton Head Island, Lochmueller Group was directed to pursue corridor Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at the intersection of William Hilton Parkway at Squire Pope Road.

With the recommended improvements under Alternative 1: SCDOT Modified Recommended Preferred in place, this report further evaluated the impacts to the intersections downstream (i.e., east of Gum Tree Road to Indigo Run, and south of Cross Island Parkway to Sea Pines Circle). Two additional options for mitigation were then provided for The Town of Hilton Head Island's consideration to help ease congestion at the local intersections between Gum Tree Road and Indigo Run Drive, as well as along the Cross Island Parkway towards Sea Pines Circle.

The following conclusions were reached:

2045 ALTERNATIVES ANALYSIS

CONGESTION AND CORRIDOR MOBILITY

- Under Alternative 1, the northbound approach of Squire Pope Road during the PM peak hour is expected to operate with a LOS F. All other approaches at signalized intersections between Squire Pope Road and Gum Tree Road are expected to operate with a LOS E or better.
- Under Alternative 2, there are no movements between Squire Pope Road and Gum Tree Road that are expected to operate with a LOS F at a signalized intersection; however, some movements between Squire Pope Road and Gum Tree Road are expected to have a LOS E.
- Under Alternative 3, if an echelon at Squire Pope is pursued, then the southbound approach at Squire Pope Road during the PM peak hour would be expected to have a LOS F. If a center turn overpass at Squire Pope is pursued, then the northbound approach at Spanish Wells would be expected to operate with a LOS F. All other approaches at

signalized intersections between Squire Pope Road and Gum Tree Road are expected to operate with a LOS E or better.

- Under Alternative 4, all movements at signalized intersections are expected to operate at a LOS D or better between Squire Pope Road and Gum Tree Road.
- All four proposed alternatives show significant improvements to corridor-wide metrics as compared to the 2045 No-Build condition.
- While all four proposed alternatives are expected to result in improved travel times along William Hilton Parkway between Moss Creek Drive and Gum Tree Road when compared to the 2045 No-Build, Alternative 4 is expected to have the lowest, and therefore best, travel times. Alternative 3 is expected to have the second best travel times, and the travel times between Alternative 1 and 2 are expected to be comparable.

SAFETY AND MULTIMODAL CONSIDERATIONS

- Alternative 1 results in the longest pedestrian crossing distances at the study intersections. The amount of ROW needed in Alternative 1 may limit the ability to add median refuge islands. In addition, each intersection would have multiple turning movements and potential conflict points along each leg.
- Alternative 2 results in a reduced pedestrian crossing distance at the study intersections which reduces pedestrians' exposure to vehicular traffic. Alternative 2 also allows the potential for median refuge islands. Bowtie intersections have fewer pedestrian and vehicle conflict points than a traditional intersection.
- Alternative 3 results in a reduced pedestrian crossing distance at the study intersections which reduces pedestrians' exposure to vehicular traffic. Alternative 3 also allows the potential for median refuge islands to help pedestrians navigate the more complex intersections. Both echelons and center turn overpass intersections have fewer pedestrian and vehicle conflict points than a traditional intersection.
- Alternative 4 also results in a reduced pedestrian crossing distance at the study intersections which reduces pedestrians' exposure to vehicular traffic. With an elevated bypass, refuge islands can be provided between directional traffic flow. However, it should be noted that multiple refuge islands per leg may result in a more complex intersection. The elevated bypass would be expected to have fewer pedestrian and vehicle conflict points when compared to Alternative 1 given the smaller intersections. Alternative 4 would also divert a majority of thru traffic onto the elevated by-pass, thereby greatly reducing the number of vehicles that pedestrians and bicyclists must contend with while crossing/navigating William Hilton Parkway.

RIGHT-OF-WAY (ROW)/PRELIMINARY PROBABLE OPINION OF COST

- From a ROW perspective, each of the four proposed alternatives were compared to Alternative 1 (SCDOT Modified Recommended Preferred). The proposed alternatives were not compared to existing conditions for ROW purposes. ROW estimates refer to permanent

ROW needed for the completed improvements only, and do not consider temporary ROW needed for construction or staging.

- Alternative 1:
 - When compared to the original SCDOT Modified Recommended Preferred, Alternative 1 is expected to require an additional 0.2 acres of ROW to allow for the improvements at Gum Tree Road.
 - Alternative 1 has an estimated preliminary probable opinion of cost of \$426 million dollars and a construction duration estimated at 36 months.
- Alternative 2:
 - When compared to the original SCDOT Modified Recommended Preferred, Alternative 2 is expected to require an additional 1.1 acres of ROW to allow for the improvements at Gum Tree Road as well as for the bowtie intersections.
 - Alternative 2 has an estimated preliminary probable opinion of cost of \$430 million dollars and a construction duration estimated at 38 months.
- Alternative 3:
 - When compared to the original SCDOT Modified Recommended Preferred, Alternative 3 is expected to require an additional 1.1 acres of ROW to allow for the improvements at Gum Tree Road as well as for the echelon / center turn overpass intersections.
 - Alternative 3 has an estimated preliminary probable opinion of cost between \$440-\$450 million dollars and a construction duration estimated at 42 months.
- Alternative 4:
 - When compared to the original SCDOT Modified Recommended Preferred, Alternative 4 is not expected to require any additional ROW.
 - Alternative 4 has an estimated preliminary probable opinion of cost between \$545-\$575 million dollars and a construction duration estimated at 48 months.

ENVIRONMENTAL

- Similar to the ROW, each of the four proposed corridor alternatives were compared to Alternative 1 (SCDOT Modified Recommended Preferred) for the environmental assessment.
- Several categories were evaluated with respect to the environmental impact such as streams, floodplains, relocations, neighborhoods, environmental justice, cultural resources, and Section 4(f) resources.
- Alternative 1 is expected to have the least environmental impact when compared to the original SCDOT Modified Recommended Preferred alternative, followed by Alternative 4, Alternative 2, then Alternative 3, respectively.

TOWN SELECTED ALTERNATIVE

After evaluating the four proposed corridor alternatives, Lochmueller was directed by the Town of Hilton Head Island to pursue corridor Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at the intersection of William Hilton Parkway at Squire Pope Road through to the final phase of analysis.

DOWNSTREAM IMPACTS OF TOWN SELECTED ALTERNATIVE 1

An analysis was conducted assuming only the improvements under the Modified Alternative 1 were in place, to better understand how the entire study area would operate if no geometric roadway improvements were implemented east of Gum Tree Road or along Cross Island Parkway.

Even with no improvements in place east of Gum Tree Road or along Cross Island Parkway, travel times would significantly improve as compared to the 2045 No-Build scenario. The intersections would be expected to operate acceptably overall. However, long queues were noted between Wilborn Road and Pembroke Drive. Additionally, the existing roundabout at Palmetto Bay Road and Sea Pines Circle is expected to fail during both the AM and PM peak hours. As a result of the failing roundabout, the southbound queue lengths are expected to extend beyond nearby intersections.

ADDITIONAL MITIGATION SOLUTIONS FOR LOCAL INTERSECTIONS

To help mitigate the long queue lengths and operational failures at Sea Pines Circle, two options with potential improvements to the local intersections downstream of Gum Tree Road and Cross Island Parkway were developed for the Town of Hilton Head Island's consideration:

- Option A was developed to help address congestion between Wilborn Road and Pembroke Drive while minimizing the physical impacts along the corridor by reconfiguring the northbound approach at the intersection of William Hilton Parkway and Pembroke Drive. Under Option A, the existing roundabout at Sea Pines Circle was expanded to a two-lane roundabout with right-turn bypass lanes for each approach except for the east leg.
- Option B considered a more significant approach to help mitigate the expected queue lengths between Wilborn Road and Pembroke Drive by extending the six-lane section through Central Avenue. Under Option B, the existing roundabout at Sea Pines Circle was reconfigured into a signalized intersection.
- The 2045 Modified Alternative 1 without improvements to downstream intersections is already expected to operate under largely free-flowing conditions. While the recommended improvements under Options A and B help to reduce long queues, they do not largely improve the travel times. However, the travel times along William Hilton Parkway between Moss Creek Drive to the Cross Island Parkway at Sea Pines Circle are expected to vastly improve under Options A and B.

SAFETY AND MULTIMODAL CONSIDERATIONS

- The SCDOT Modified Recommended Preferred Alternative will provide a separated SUP for bicycles. Due to the heavy traffic volumes, on street facilities are not being considered. Therefore, the recommendations made mainly focus on how to best accommodate pedestrians. In order to help improve safety as well as the multimodal experience, it is recommended that pedestrian refuge islands be provided wherever possible. Some specific locations include the east and west legs of William Hilton Parkway at Squire Pope Road; the west leg of William Hilton Parkway at Spanish Wells Road; and the east leg of William Hilton Parkway at Wilborn Road.
- If continuous sidewalk facilities are not planned to be installed along the south side of William Hilton Parkway west of Squire Pope Road, consider eliminating the William Hilton Parkway pedestrian crossing on the west leg at Squire Pope Road to instead encourage pedestrians to cross William Hilton Parkway at the east leg only.
- During final design efforts for the intersections of William Hilton Parkway at Squire Pope Road and Spanish Wells Road, provide high visibility crosswalks, and also seek to tighten curb radii to shorten pedestrian crossing distances across applicable legs of the intersections.
- It is recommended that the north crosswalk at William Hilton Parkway and Wilborn Road be relocated further north away from traffic, and that the right-turn channelized islands be reconfigured to provide a pedestrian refuge. It is also recommended that the east crosswalk be relocated further east toward the existing raised channelized island in the northeast quadrant to provide a pedestrian refuge.
- Ensure Accessible Pedestrian Signal (APS) infrastructure is installed for all signalized pedestrian crossings, and located in compliance with current Public ROW Accessibility Guidelines (PROWAG) requirements. This may require modifications to existing curb ramps and/or sidewalk segments at the intersection, if the existing pedestrian path surfaces that are not PROWAG compliant.
- Ensure pedestrian clearance interval signal timing data complies with MUTCD requirements for all signalized pedestrian crossings.
- Congested corridors often lead to an increase in crashes because of stop-and-go conditions. By alleviating the congestion along William Hilton Parkway, it is expected that the total number of crashes along the corridor would decrease.
- It should also be noted that access points throughout the study area were not restricted to a point where emergency vehicles would be significantly impacted or required to alter their response routes.

APPENDIX

Appendix A. 2023 Existing Traffic Volumes

Appendix B. 2023 Existing Operating Conditions (Synchro)

Appendix C. 2023 Existing Operating Conditions (VISSIM)

Appendix D. Traffic Forecasting Memorandum

Appendix E. 2045 No-Build Traffic Volumes

Appendix F. 2045 No-Build Traffic Operating Conditions (Synchro)

Appendix G. 2045 No-Build Traffic Operating Conditions (VISSIM)

Appendix H. Four Lane Viability Review Technical Memorandum; Seismic Study Review; cursory Review of Southern Bypass

Appendix I. 2045 Alternative 1 Traffic Volumes and Operating Conditions (Synchro)

Appendix J. Technical Environmental Overview

Appendix K. 2045 Alternative 2 Traffic Volumes and Operating Conditions (Synchro)

Appendix L. 2045 Alternative 3 Traffic Volumes and Operating Conditions (Synchro)

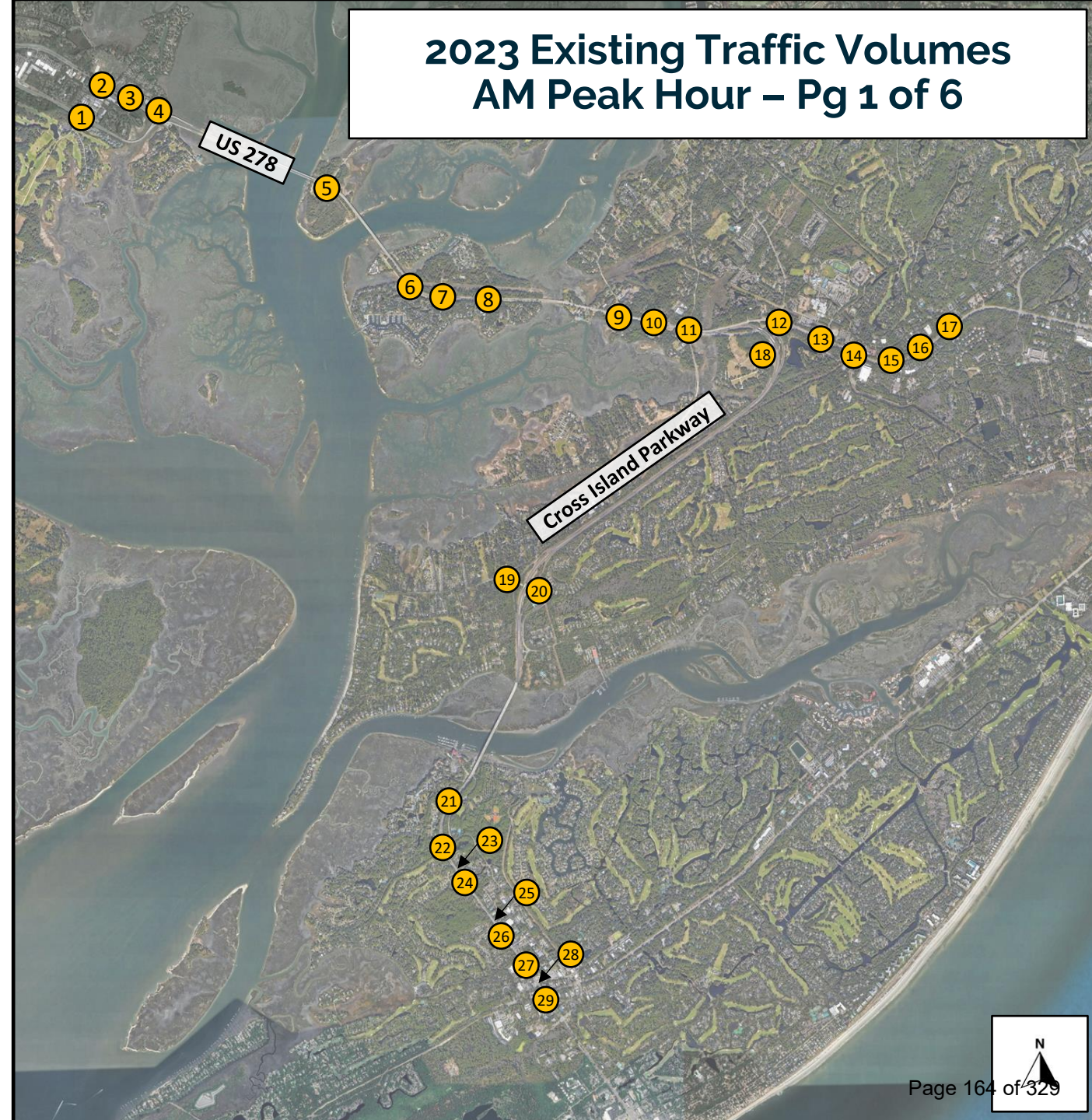
Appendix M. 2045 Alternative 4 Traffic Volumes and Operating Conditions (Synchro)

Appendix N. 2045 Modified Alternative 1 Operating Conditions (VISSIM)

Appendix O. 2045 Local Intersections Operating Conditions (VISSIM)

APPENDIX A: 2023 EXISTING TRAFFIC VOLUMES

2023 Existing Traffic Volumes AM Peak Hour – Pg 1 of 6



9 212 0 45 Squire Pope Rd	43 1425 2
US 278 156 2620 2	2 0 5

10 76 Old Wild Horse Rd	20 1394
US 278 2670	

11 12 70 127	56 1281 71
US 278 43 2481 146 Spanish Wells Rd	121 43 121

12 92 179 212	189 775 193
US 278 154 1527 6 Gum Tree Rd	8 144 290

5 0 0 0	0 1624 0
US 278 2 2763 4 Wildlife Refuge	0 0 2

6 1622 0	
US 278 2762 3 Blue Heron Point Rd	2 10

7 1	3 1607 30
US 278 2740 32 Crosstree Dr	14 0 40

8 6 4 Jenkins Rd	5 1634
US 278 6 2774	

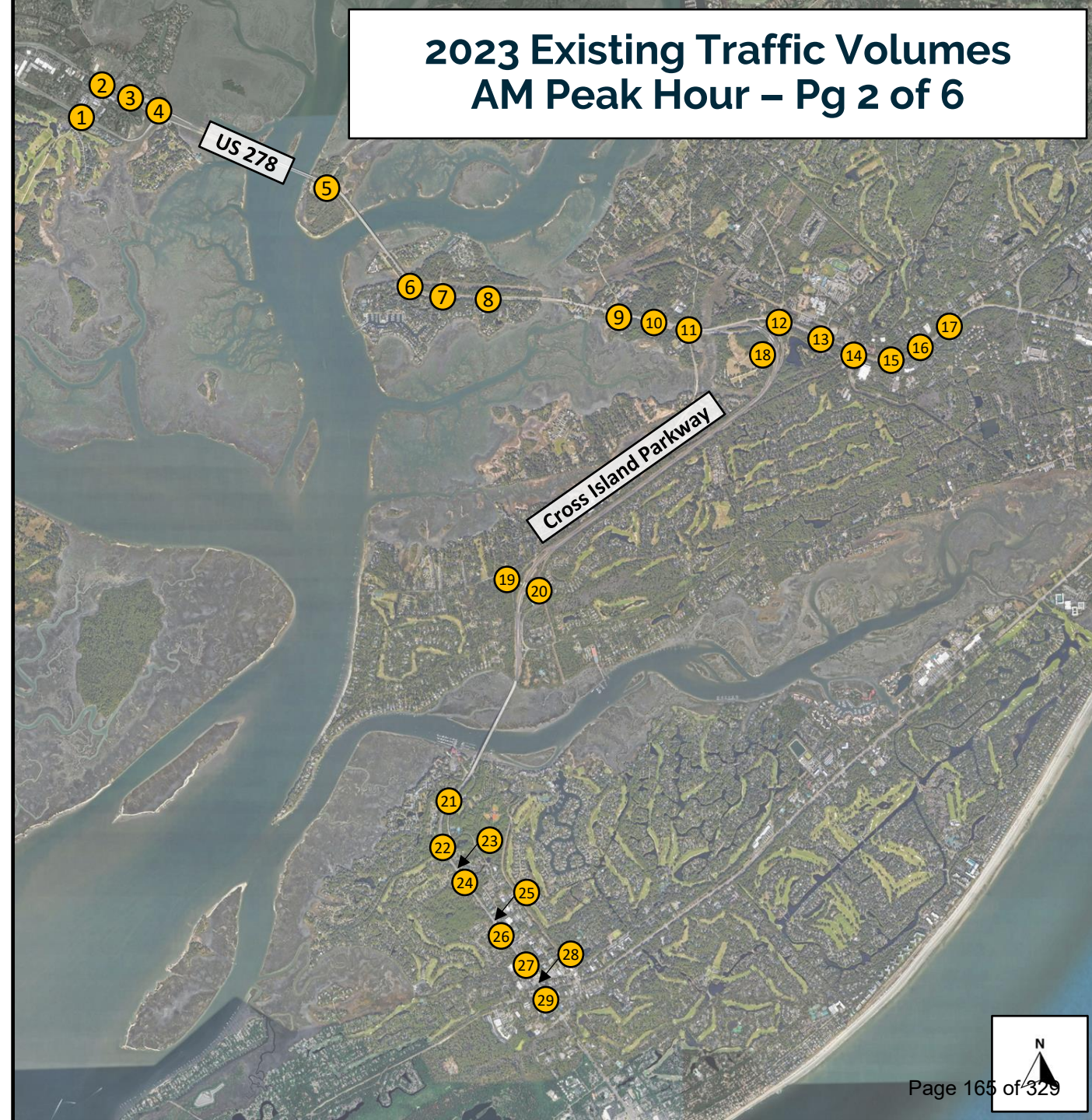
1 74 2 4	16 436 6
Bluffton Pkwy 232 879 25 Buckingham Plantation Dr	27 11 28

2 68 25 42	23 1119 20
US 278 62 1590 35 Buckingham Plantation Dr	29 60 170

3 78 0 8	86 1084 6
US 278 8 1792 2 Salt Marsh Dr	0 0 45

4 1162 4	
US 278 1843 2 Fording Island Rd Ext	14 15

2023 Existing Traffic Volumes AM Peak Hour – Pg 2 of 6



21 US 278 0 1714	Bay Pines Rd 0 5	Palmetto Bay Rd 5 899
--------------------------------------	------------------------	-----------------------------

22 Arrow Rd 53 1443	Palmetto Bay Rd 114 15 138	Palmetto Bay Rd 118 11 38 44 672 34
---	-------------------------------------	---

23 Genesta St 1603 16	Palmetto Bay Rd 745 5	Palmetto Bay Rd 5 5
---	-----------------------------	---------------------------

24 Palmetto Bay Rd 1583 25	Palmetto Bay Rd 745 0	Palmetto Business Park Rd 5 5
--	-----------------------------	-------------------------------------

17 US 278 111 68	Indigo Run Dr 80 51 33	Indigo Run Dr 166 862 33
--------------------------------------	---------------------------------	-----------------------------------

18 Honey Horn Rd 6 374	Cross Island Pkwy SB 2 0	Cross Island Pkwy SB 140 115
--	--------------------------------	------------------------------------

19 Marshland Rd 36 0 23	Marshland Rd 225 242	Marshland Rd 79 184
--	----------------------------	---------------------------

20 Marshland Rd 126 122	Cross Island Pkwy NB 71 58	Cross Island Pkwy NB 1012
---	----------------------------------	------------------------------

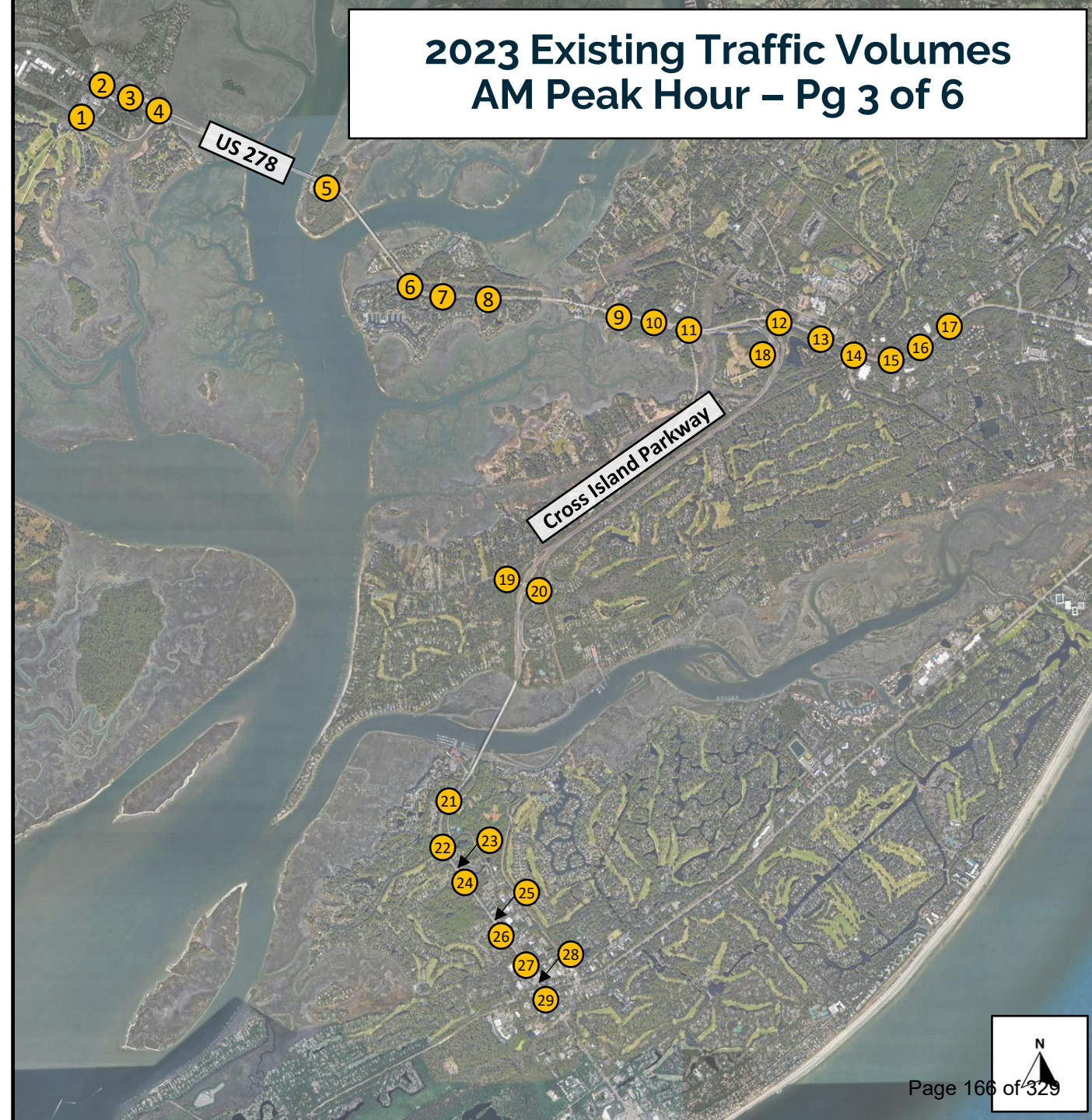
13 US 278 181 27	Jarvis Park Rd 23 45 0	Jarvis Park Rd 302 953 2
--------------------------------------	---------------------------------	-----------------------------------

14 US 278 45 12	Pembroke Dr 259 21 37	Pembroke Dr 31 953 33
-------------------------------------	--------------------------------	--------------------------------

15 US 278 20 5	Central Ave 5 5	Central Ave 20 997 5
------------------------------------	-----------------------	-------------------------------

16 US 278 10 1589	Hatton Pl 41 1012	Hatton Pl 1012
---------------------------------------	-------------------------	-------------------

2023 Existing Traffic Volumes AM Peak Hour – Pg 3 of 6



25	1548 ← 40 → Palmetto Bay Rd	5 ↶ 5 ↷ Bow Cir
	740 → 20 →	

29	465 ← 688 ← 158 ←	160 ↶ 252 ↶ 183 ↶
	263 ↶ 132 ↶ 50 ↶	36 ↶ 376 ↶ 177 ↶

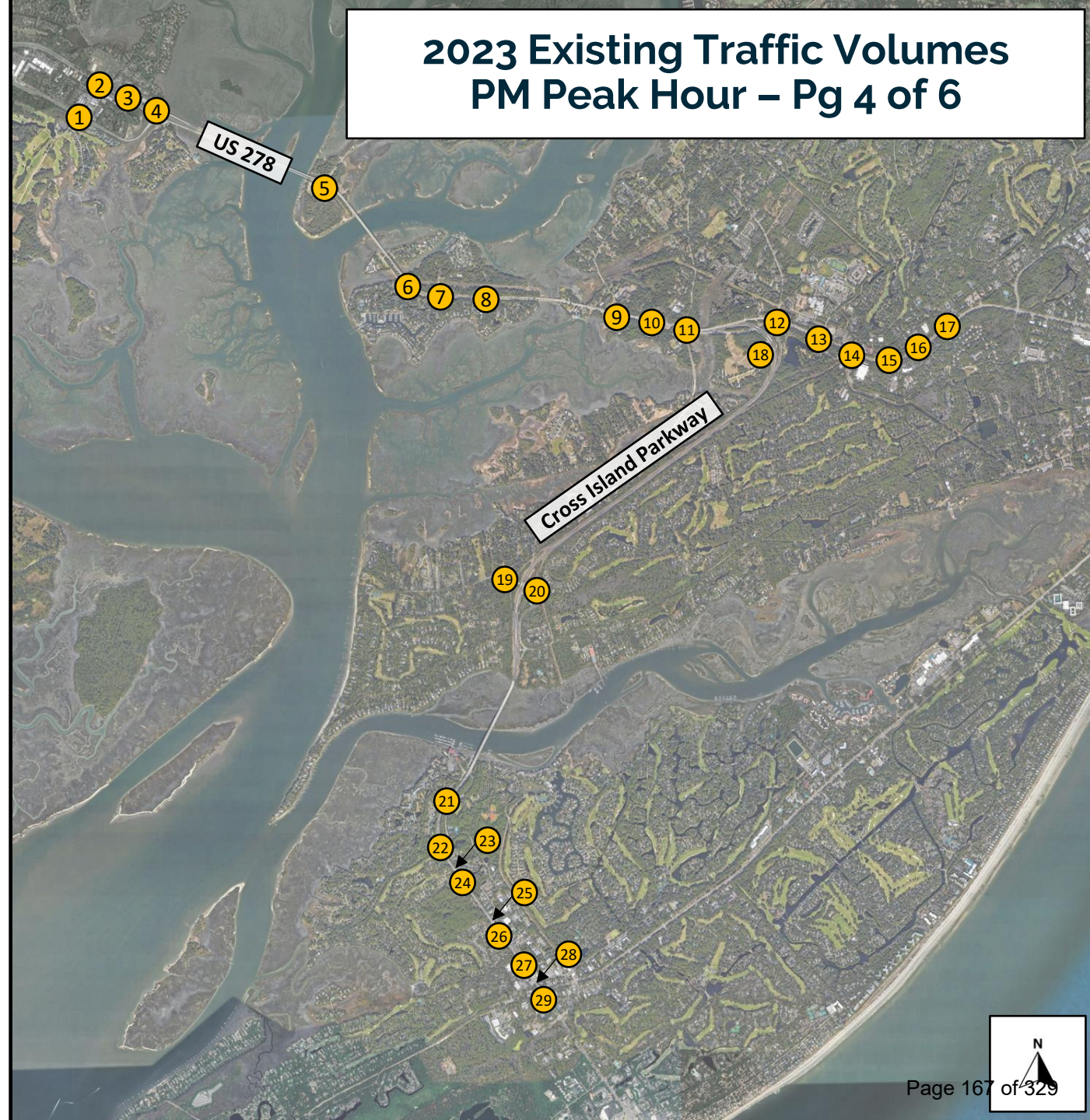
26	1503 ← 50 →	5 ↶ 10 ↷
	755 → 23 →	

27	87 ← 1279 ← 147 ←	53 ↶ 34 ↶ 97 ↶
	46 ↶ 17 ↶ 46 ↶	55 ↶ 679 ↶ 25 ↶

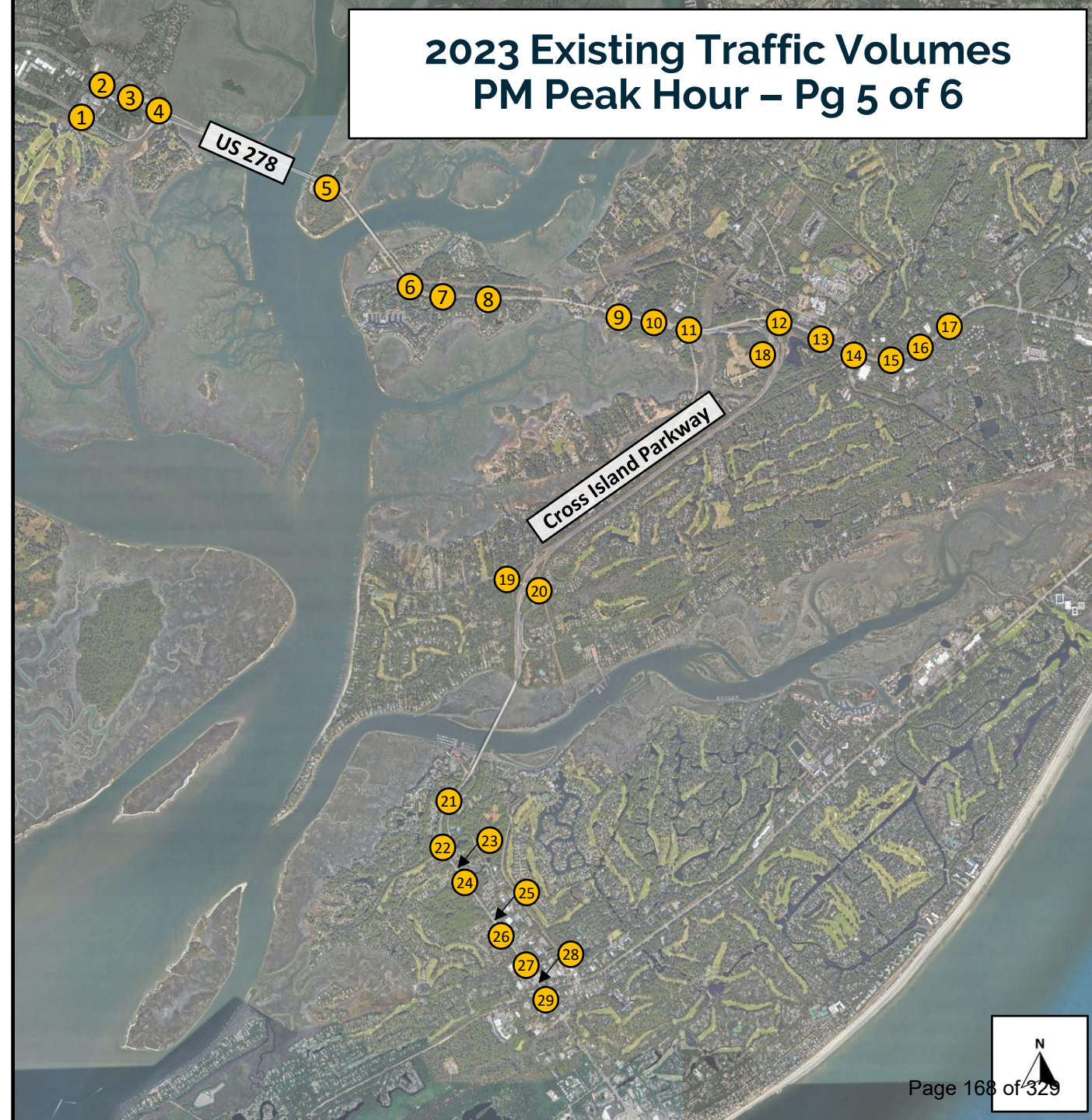
28	1306 ← 116 →	10 ↶ 5 ↷
	749 → 50 →	

2023 Existing Traffic Volumes PM Peak Hour – Pg 4 of 6

1 Bluffton Pkwy 88 654 22 Buckingham Plantation Dr 24 12 26	5 US 278 4 2211 4 Wildlife Refuge 2 0 6	9 US 278 222 1992 29 Squire Pope Rd 2 25 2
2 US 278 94 1441 56 Buckingham Plantation Dr 50 40 20	6 US 278 2213 8 Blue Heron Point Rd 4 12	10 US 278 2035 Old Wild Horse Rd 64 2736
3 US 278 24 1496 8 Salt Marsh Dr 0 0 40	7 US 278 2195 30 Crosstree Dr 32 0 52	11 US 278 51 1869 115 Spanish Wells Rd 259 47 60
4 US 278 1517 24 Fording Island Rd Ext 20 20	8 US 278 10 2237 Jenkins Rd 10 3020	12 US 278 125 1065 23 Gum Tree Rd 224 207 277

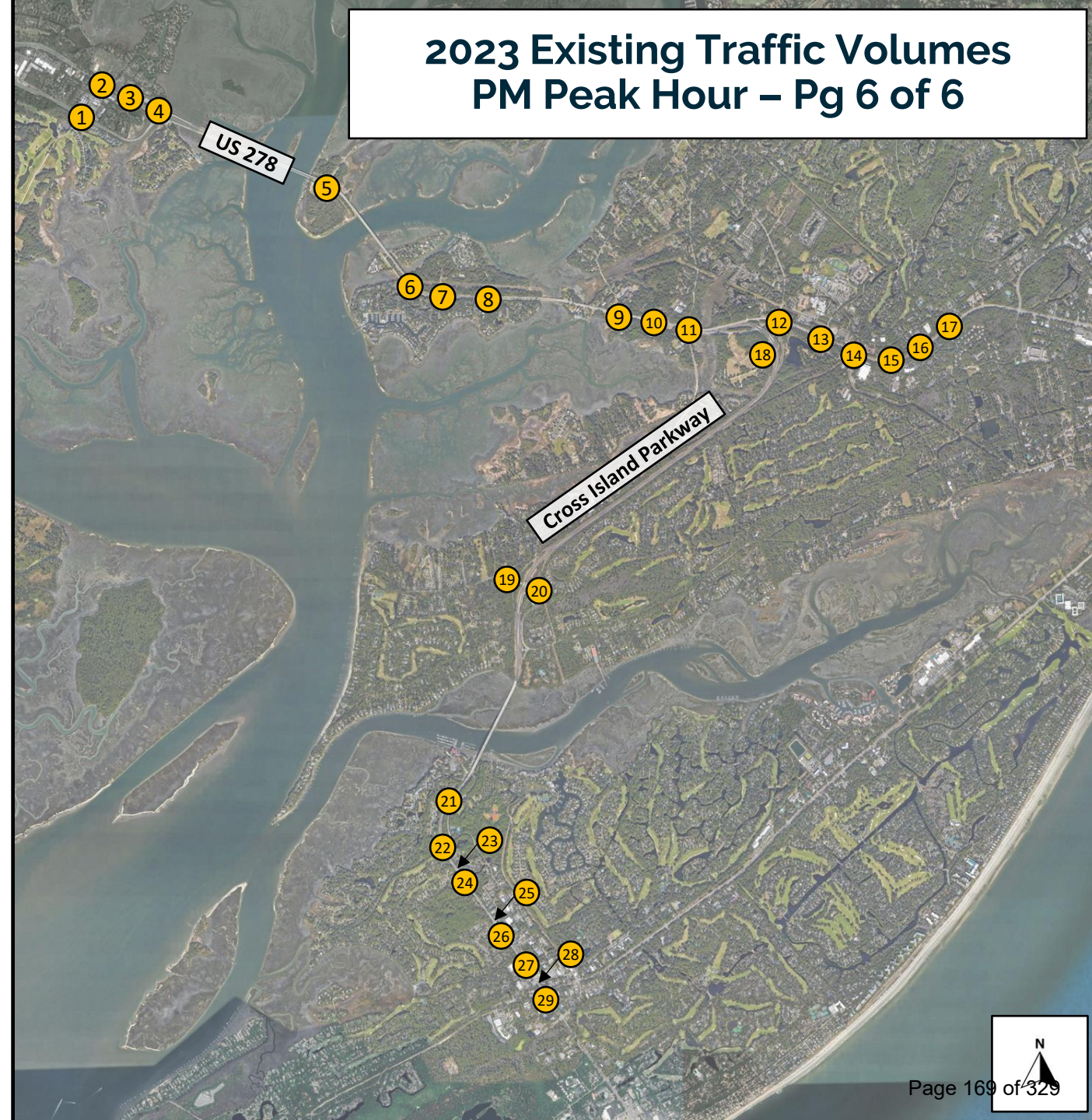


2023 Existing Traffic Volumes PM Peak Hour – Pg 5 of 6



13 US 278 113 1422 49	Jarvis Park Rd 56 8 10
17 US 278 164 1152 47	Indigo Run Dr 64 115 49
21 Bay Pines Rd 10 10	Palmetto Bay Rd 20 1721
14 US 278 57 1258 203	Pembroke Dr 316 35 37
18 Honey Horn Rd 40 15	Cross Island Pkwy SB 8 397
22 Arrow Rd 67 29 93	Palmetto Bay Rd 120 1346 76
15 US 278 5 1299 5	Central Ave 10 21 1515 5
19 Marshland Rd 130 135	Cross Island Pkwy SB 78 2 61 420 137
23 Genesta St 1537 4	Palmetto Bay Rd 1188 5 5 5
16 Hatton Pl 10 1531	US 278 1304 5 10 1531
20 Marshland Rd 48 143	Cross Island Pkwy NB 48 143 37 305
24 Palmetto Bay Rd 1531 5	Palmetto Business Park Rd 1188 5 5 5

2023 Existing Traffic Volumes PM Peak Hour – Pg 6 of 6



25 1183 10 Palmetto Bay Rd	10 10 Bow Cir
1526 10	

29 484 667 105 Greenwood Dr	383 347 120
358 177 181 Palmetto Bay Rd	55 618 355

26	← 1183 ← 10 Palmetto Bay Rd	↶ 10 ↷ 10 Archer Rd	
	→ 1526 → 10		

27	← 53 ← 1083 ← 57 Target Rd	↶ 111 ↷ 44 ↶ 78	
	↶ 172 ↷ 44 ↶ 76 Palmetto Bay Rd	↶ 111 ↷ 1253 ↶ 46	

28	← 1227 ← 10 Palmetto Bay Rd	↶ 61 ↷ 29 Dunnagans Alley	
	→ 1349 → 10		

APPENDIX B: 2023 EXISTING OPERATING CONDITIONS (SYNCHRO)

Table B-1. 2023 Existing Operating Conditions (Synchro)

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (10.4)	B (15.2)
Eastbound Approach	A (7.1) [196] <0.37>	A (9.1) [166] <0.29>
Westbound Approach	B (12.4) [146] <0.21>	B (17.5) [346] <0.46>
Northbound Approach	D (41.9) [63] <0.14>	C (34.2) [48] <0.15>
Southbound Approach	B (18.4) [55] <0.25>	C (23.4) [m89] <0.30>
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (19.2)	C (29.6)
Eastbound Approach	B (15.0) [413] <0.56>	B (19.5) [391] <0.64>
Westbound Approach	B (14.6) [291] <0.36>	C (26.8) [710] <0.71>
Northbound Approach	D (45.5) [126] <0.67>	E (75.9) [103] <0.56>
Southbound Approach	E (59.4) [107] <0.57>	F (81.3) [174] <0.91>
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (16.5) [<25] <0.03>	E (43.4) [<25] <0.22>
Westbound Left Turn	D (33.5) [<25] <0.05>	D (26.6) [<25] <0.15>
Northbound Approach	D (26.5) [<25] <0.23>	C (21.7) [<25] <0.23>
Southbound Approach	D (30.8) [45] <0.41>	F (165.4) [150] <0.99>
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	C (18.0) [<25] <0.02>	B (14.8) [<25] <0.04>
Northbound Approach	F (242.4) [75] <0.81>	F (\$744.7) [168] <1.97>
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (15.4) [<25] <0.01>	E (45.1) [<25] <0.05>
Westbound Left Turn	No volumes observed	C (22.7) [<25] <0.01>
Northbound Approach	E (38.1) [<25] <0.02>	F (\$2538.4) [68] <2.99>
Southbound Approach	No volumes observed	F (50.4) [<25] <0.17>
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	No volumes observed	C (23.8) [<25] <0.01>
Northbound Approach	F (\$794.0) [58] <1.19>	F (\$2033.9) [118] <3.51>

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	B (15.5)	E (59.1)
Eastbound Approach	C (21.2) [#1701] <0.97>	B (10.3) [697] <0.82>
Westbound Approach	A (5.2) [291] <0.62>	F (93.2) [#2084] <1.16>
Northbound Approach	D (38.0) [65] <0.42>	E (68.0) [105] <0.72>
Southbound Approach	0 (0.0) [<25] <0.01>	0 (0.0) [<25] <0.00>
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (15.6) [<25] <0.02>	F (56.9) [<25] <0.13>
Southbound Approach	F (\$469.6) [45] <0.73>	F (\$7285.9) [158] <12.12>
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (12.5)	F (101.4)
Eastbound Approach	A (6.3) [530] <0.66>	B (14.4) [#387] <0.93>
Westbound Approach	A (9.4) [264] <0.55>	F (140.5) [m#2353] <1.26>
Northbound Approach	C (24.0) [<25] <0.03>	E (79.9) [70] <0.22>
Southbound Approach	F (97.3) [#319] <1.01>	F (296.1) [#709] <1.61>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	C (21.5) [28] <0.28>	F (53.5) [<25] <0.13>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (30.1)	D (36.0)
Eastbound Approach	C (26.2) [1224] <0.85>	B (16.7) [383] <0.62>
Westbound Approach	B (18.2) [274] <0.66>	C (25.2) [631] <0.80>
Northbound Approach	E (61.8) [223] <0.62>	F (214.3) [#667] <1.46>
Southbound Approach	F (117.7) [#284] <1.00>	E (65.7) [187] <0.36>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	E (59.1)	E (66.1)
Eastbound Approach	E (64.3) [#1177] <0.98>	E (65.7) [763] <0.90>
Westbound Approach	C (33.6) [#411] <0.93>	D (54.5) [602] <1.00>
Northbound Approach	E (72.0) [#312] <0.89>	E (61.5) [351] <0.86>
Southbound Approach	F (90.7) [#418] <0.90>	F (115.5) [#517] <1.07>

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (21.5)	B (16.5)
Eastbound Approach	B (16.6) [m516] <0.71>	B (15.8) [m405] <0.76>
Westbound Approach	B (11.3) [316] <0.49>	A (9.7) [#1297] <0.87>
Northbound Approach	F (99.7) [143] <0.61>	F (108.7) [146] <0.76>
Southbound Approach	E (60.7) [262] <0.77>	C (26.9) [102] <0.60>
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	B (19.7)	C (31.2)
Eastbound Approach	B (11.2) [560] <0.73>	C (21.9) [704] <0.60>
Westbound Approach	A (9.0) [155] <0.44>	C (22.9) [508] <0.82>
Northbound Approach	F (101.1) [#317] <0.86>	F (89.3) [324] <0.84>
Southbound Approach	D (39.8) [78] <0.39>	D (49.2) [95] <0.60>
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (10.7) [<25] <0.01>	B (14.9) [<25] <0.01>
Westbound Left Turn	C (16.0) [<25] <0.02>	B (12.3) [<25] <0.01>
Northbound Right Turn	C (18.3) [<25] <0.02>	B (14.5) [<25] <0.03>
Southbound Right Turn	B (12.8) [<25] <0.05>	C (17.1) [<25] <0.02>
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	C (17.6) [<25] <0.04>	C (16.1) [<25] <0.17>
Southbound Right Turn	B (12.7) [<25] <0.02>	C (17.5) [<25] <0.04>
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	C (31.1)	D (42.1)
Eastbound Approach	C (27.3) [693] <0.65>	C (30.9) [634] <0.71>
Westbound Approach	B (16.2) [343] <0.41>	C (31.3) [891] <0.75>
Northbound Approach	E (70.1) [112] <0.48>	E (68.9) [205] <0.68>
Southbound Approach	E (70.3) [#188] <0.78>	F (96.0) [#247] <0.98>
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	B (11.0) [<25] <0.00>	B (12.8) [<25] <0.16>
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (8.9) [<25] <0.12>	A (8.4) [<25] <0.14>
Southbound Left Turn	C (17.2) [<25] <0.08>	D (33.6) [35] <0.35>
Southbound Right Turn	A (9.2) [<25] <0.04>	B (12.9) [<25] <0.16>

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (8.2) [<25] <0.11>	A (8.4) [<25] <0.05>
Northbound Left Turn	B (14.5) [<25] <0.17>	C (23.0) [100] <0.61>
Northbound Right Turn	A (9.2) [<25] <0.07>	B (10.2) [<25] <0.20>
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	F (209.4) [30] <0.40>
Eastbound Right Turn	C (18.7) [<25] <0.02>	B (14.9) [<25] <0.03>
Northbound Left Turn	C (16.4) [<25] <0.02>	B (13.0) [<25] <0.05>
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (13.8)	C (21.1)
Eastbound Approach	D (43.3) [175] <0.70>	C (30.2) [101] <0.38>
Westbound Approach	C (28.0) [74] <0.44>	D (46.9) [249] <0.88>
Northbound Approach	A (5.4) [75] <0.30>	B (17.8) [756] <0.66>
Southbound Approach	B (11.5) [535] <0.61>	B (15.4) [432] <0.65>
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	D (32.5) [<25] <0.08>	F (80.7) [<25] <0.19>
Southbound Left Turn	A (9.6) [<25] <0.02>	B (14.6) [<25] <0.01>
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	D (33.8) [<25] <0.08>	F (61.2) [<25] <0.20>
Southbound Left Turn	A (9.6) [<25] <0.03>	B (14.6) [<25] <0.01>
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	C (23.7) [<25] <0.03>	E (41.3) [<25] <0.10>
Westbound Right Turn	B (11.1) [<25] <0.01>	C (16.7) [<25] <0.03>
Southbound Left Turn	A (9.8) [<25] <0.05>	B (14.6) [<25] <0.03>
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	C (24.7) [<25] <0.06>	E (41.3) [<25] <0.10>
Westbound Right Turn	B (11.2) [<25] <0.01>	C (16.7) [<25] <0.03>
Southbound Left Turn	A (9.9) [<25] <0.07>	B (14.6) [<25] <0.03>
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	B (10.6)	B (18.6)
Eastbound Approach	D (39.4) [82] <0.32>	E (59.5) [247] <0.80>
Westbound Approach	E (56.6) [154] <0.68>	C (33.7) [119] <0.49>
Northbound Approach	A (8.7) [199] <0.31>	B (15.3) [530] <0.59>
Southbound Approach	A (3.9) [102] <0.58>	A (8.7) [155] <0.53>

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
28: Palmetto Bay Rd & Dunnagans Aly (un-signalized)		
Westbound Left Turn	D (26.5) [<25] <0.03>	E (40.3) [<25] <0.24>
Westbound Right Turn	B (11.4) [<25] <0.02>	C (17.1) [<25] <0.18>
Southbound Left Turn	B (10.6) [<25] <0.16>	B (13.0) [<25] <0.02>
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	D (25.8)	C (24.4)
Eastbound Approach	D (34.2) [200] <0.81>	E (45.6) [300] <0.92>
Westbound Approach	C (16.4) [125] <0.64>	E (36.6) [225] <0.85>
Northbound Approach	B (12.1) [75] <0.54>	D (32.4) [275] <0.88>
Southbound Approach	F (59.4) [500] <1.03>	E (39.2) [375] <0.94>

– 95th Percentile volume exceeds capacity

\$ – Delay more than 300 seconds

m – Upstream metering is in effect

APPENDIX C: 2023 EXISTING OPERATING CONDITIONS (VISSIM)

Table C-1. 2023 Existing Traffic Operations (VISSIM)

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (12.2)	B (11.4)
Eastbound Approach	B (12.5) [43] {324}	B (11.7) [<25] {178}
Westbound Approach	A (8.3) [<25] {171}	A (9.3) [<25] {234}
Northbound Approach	D (38.1) [<25] {73}	C (32.2) [<25] {65}
Southbound Approach	A (9.0) [<25] {68}	B (12.6) [<25] {84}
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	D (47.2)	B (19.5)
Eastbound Approach	E (70.7) [807] {1620}	B (15.6) [65] {522}
Westbound Approach	B (14.4) [35] {353}	B (19.1) [100] {633}
Northbound Approach	D (35.9) [37] {263}	D (53.6) [<25] {104}
Southbound Approach	D (42.4) [<25] {92}	C (33.6) [29] {161}
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	E (35.3) [720] {1302}	C (19.7) [<25] {47}
Westbound Left Turn	F (414.9) [37] {107}	B (11.2) [<25] {41}
Northbound Approach	B (10.1) [<25] {61}	A (7.3) [<25] {55}
Southbound Approach	C (19.7) [<25] {76}	A (8.0) [<25] {73}
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	E (40.7) [46] {102}	C (16.8) [<25] {28}
Northbound Approach	F (591.0) [120] {186}	C (17.5) [<25] {41}
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (21.4) [691] {1658}	D (33.1) [<25] {<25}
Westbound Left Turn	No volumes observed	C (20.9) [<25] {<25}
Northbound Approach	F (270.5) [<25] {38}	C (20.8) [<25] {46}
Southbound Approach	No volumes observed	C (18.2) [<25] {39}
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	No volumes observed	D (27.7) [<25] {<25}
Northbound Approach	F (1,270.4) [123] {228}	C (23.8) [<25] {60}
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	B (10.4)	A (8.2)
Eastbound Approach	A (8.4) [335] {1093}	A (5.4) [62] {890}
Westbound Approach	B (10.7) [53] {655}	A (7.5) [292] {1626}
Northbound Approach	E (67.8) [30] {164}	E (79.0) [52] {214}
Southbound Approach	B (17.3) [<25] {<25}	A (0.0) [<25] {<25}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (8.2) [<25] {<25}	F (98.0) [<25] {54}
Southbound Approach	F (51.8) [<25] {44}	F (109.4) [<25] {92}
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (39.2)	E (67.3)
Eastbound Approach	E (56.8) [451] {1334}	B (19.3) [283] {1132}
Westbound Approach	A (7.0) [39] {618}	F (104.8) [874] {1383}
Northbound Approach	C (31.9) [<25] {38}	E (78.6) [<25] {76}
Southbound Approach	C (21.7) [<25] {147}	F (91.6) [220] {638}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (1.3) [<25] {<25}	A (6.4) [<25] {25}
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (29.8)	F (240.4)
Eastbound Approach	C (26.6) [270] {1027}	B (17.1) [103] {622}
Westbound Approach	C (21.9) [87] {471}	F (415.7) [892] {989}
Northbound Approach	E (57.1) [85] {321}	F (395.1) [1241] {1288}
Southbound Approach	F (89.0) [103] {319}	E (63.9) [58] {242}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (40.7)	E (66.4)
Eastbound Approach	D (40.6) [765] {1592}	D (49.9) [203] {779}
Westbound Approach	C (30.3) [136] {357}	E (75.2) [961] {1610}
Northbound Approach	C (29.0) [75] {291}	D (45.2) [175] {338}
Southbound Approach	E (77.2) [182] {579}	F (93.4) [234] {779}
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (39.2)	E (67.3)
Eastbound Approach	E (56.8) [451] {1334}	B (19.3) [283] {1132}
Westbound Approach	A (7.0) [39] {618}	F (104.8) [874] {1383}
Northbound Approach	C (31.9) [<25] {38}	E (78.6) [<25] {76}
Southbound Approach	C (21.7) [<25] {147}	F (91.6) [220] {638}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (1.3) [<25] {<25}	A (6.4) [<25] {25}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (29.8)	F (240.4)
Eastbound Approach	C (26.6) [270] {1027}	B (17.1) [103] {622}
Westbound Approach	C (21.9) [87] {471}	F (415.7) [892] {989}
Northbound Approach	E (57.1) [85] {321}	F (395.1) [1241] {1288}
Southbound Approach	F (89.0) [103] {319}	E (63.9) [58] {242}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (40.7)	E (66.4)
Eastbound Approach	D (40.6) [765] {1592}	D (49.9) [203] {779}
Westbound Approach	C (30.3) [136] {357}	E (75.2) [961] {1610}
Northbound Approach	C (29.0) [75] {291}	D (45.2) [175] {338}
Southbound Approach	E (77.2) [182] {579}	F (93.4) [234] {779}
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (21.8)	C (25.8)
Eastbound Approach	B (17.1) [178] {929}	B (13.8) [67] {754}
Westbound Approach	B (17.9) [73] {543}	C (34.2) [668] {1285}
Northbound Approach	F (81.1) [45] {168}	E (77.4) [43] {186}
Southbound Approach	D (45.4) [72] {233}	C (21.7) [28] {120}
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	B (18.7)	C (33.7)
Eastbound Approach	B (12.6) [134] {991}	B (14.3) [76] {754}
Westbound Approach	B (12.7) [39] {443}	D (42.4) [645] {1261}
Northbound Approach	E (72.0) [84] {274}	E (69.4) [93] {310}
Southbound Approach	D (37.3) [<25] {91}	D (42.2) [<25] {115}
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (8.5) [<25] {<25}	F (55.9) [<25] {50}
Westbound Left Turn	C (16.5) [<25] {<25}	A (9.7) [<25] {<25}
Northbound Right Turn	C (21.6) [<25] {27}	B (12.4) [<25] {32}
Southbound Right Turn	B (11.3) [<25] {41}	F (165.1) [<25] {65}
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	B (11.5) [<25] {25}	A (7.7) [<25] {61}
Southbound Right Turn	B (10.6) [<25] {46}	F (93.1) [<25] {72}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	C (23.3)	D (44.1)
Eastbound Approach	B (18.9) [115] {848}	C (30.6) [116] {772}
Westbound Approach	B (15.3) [40] {333}	D (44.8) [592] {1536}
Northbound Approach	D (54.0) [29] {103}	E (58.6) [46] {190}
Southbound Approach	D (49.7) [52] {187}	E (73.4) [83] {324}
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	A (9.1) [<25] {45}	B (10.9) [<25] {61}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (3.7) [<25] {63}	A (2.1) [<25] {60}
Southbound Left Turn	A (8.8) [<25] {47}	B (10.6) [<25] {77}
Southbound Right Turn	A (6.1) [<25] {80}	A (7.9) [<25] {110}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (1.3) [<25] {36}	A (1.4) [<25] {<25}
Northbound Left Turn	B (10.8) [<25] {69}	C (21.3) [31] {193}
Northbound Right Turn	A (6.0) [<25] {94}	A (7.0) [46] {218}
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	E (40.7) [<25] {33}
Eastbound Right Turn	B (14.3) [<25] {25}	B (12.5) [<25] {31}
Northbound Left Turn	A (9.0) [<25] {<25}	A (7.1) [<25] {34}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (13.2)	B (16.9)
Eastbound Approach	C (33.3) [52] {191}	C (32.0) [37] {175}
Westbound Approach	B (18.8) [<25] {106}	C (23.2) [56] {261}
Northbound Approach	B (10.5) [29] {261}	B (15.7) [92] {612}
Southbound Approach	B (10.9) [94] {873}	B (14.2) [67] {606}
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	C (17.1) [<25] {50}	C (18.1) [<25] {52}
Southbound Left Turn	A (3.2) [<25] {<25}	B (13.2) [<25] {<25}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	C (18.0) [<25] {53}	C (17.4) [<25] {53}
Southbound Left Turn	A (4.0) [<25] {37}	A (7.5) [<25] {<25}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	D (27.5) [<25] {<25}	D (30.0) [<25] {35}
Westbound Right Turn	A (8.4) [<25] {58}	B (13.1) [<25] {68}
Southbound Left Turn	A (3.6) [<25] {40}	B (11.0) [<25] {26}
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	D (30.6) [<25] {27}	D (32.8) [<25] {39}
Westbound Right Turn	A (8.8) [<25] {63}	B (11.4) [<25] {75}
Southbound Left Turn	A (4.3) [<25] {98}	B (11.9) [<25] {<25}
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	B (16.0)	B (17.6)
Eastbound Approach	C (33.3) [<25] {110}	D (41.8) [62] {248}
Westbound Approach	D (37.1) [35] {151}	C (29.4) [38] {149}
Northbound Approach	A (9.7) [28] {214}	B (13.3) [71] {508}
Southbound Approach	B (15.4) [287] {1309}	B (13.9) [99] {742}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	F (184.7) [<25] {50}	F (65.5) [<25] {75}
Westbound Right Turn	A (9.1) [<25] {84}	B (13.1) [<25] {110}
Southbound Left Turn	B (10.4) [112] {512}	B (12.5) [<25] {383}
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	E (37.0)	F (51.8)
Eastbound Approach	F (208.4) [615] {814}	F (51.0) [285] {770}
Westbound Approach	A (7.5) [<25] {263}	F (168.3) [1635] {1658}
Northbound Approach	A (4.2) [<25] {223}	D (30.8) [228] {738}
Southbound Approach	B (12.9) [194] {461}	A (8.4) [85] {460}

APPENDIX D: TRAFFIC FORECASTING MEMORANDUM

MEMORANDUM



To:	Shawn Colin, AICP (Town of Hilton Head)
Cc:	Bryan McIlwee, PE (Town of Hilton Head) Jim Iwanicki, PE (Town of Hilton Head)
From:	Nate Nohren, PE, PTOE Sharif Ullah, PE, PTP
Date:	February 12, 2024
Subject:	Independent Study of WHP Gateway Corridor Traffic Forecasting Memorandum

Lochmueller Group (Lochmueller) was retained by the Town of Hilton Head Island to conduct an independent study of the William Hilton Parkway (WHP) Gateway Corridor. This memorandum summarizes the review of the existing Lowcountry Area Transportation Study (LATS) Travel Demand Model (TDM) and recommends future traffic growth at the William Hilton Parkway Bridge connecting Hilton Head Island with the mainland. The future traffic growth estimation was based on a thorough review of historic traffic volumes, socio-economic trends for Jasper and Beaufort Counties, and accommodation and restaurant tax revenues collected per year by the Town of Hilton Head.

LATS TDM Evaluation

The Lowcountry TDM was updated in December 2021 with a new base year, 2019, and a new horizon year, 2045. Lochmueller completed a thorough review of the TDM to determine its ability to forecast traffic growth along WHP.

The detailed review of the LATS TDM revealed the following:

- The latest update was limited/minor in nature and did not include any major model changes.
- 2045 Horizon year roadway network did not include all future planned projects.
- Socio-economic (e.g., population, household, employment) growth for the horizon year 2045 was forecasted by simply extrapolating 2040 attributes of the previous version of the TDM.
- Socio-economic projections did not consider recent land-use plan updates from municipalities within the TDM boundaries.
- The TDM update did not include a complete model re-estimation and re-calibration.
- The LATS Long-Range 2045 Transportation Plan forecasts 48,500 more future population in Jasper and Beaufort Counties than incorporated into the TDM.

Based on these findings, Lochmueller staff determined the LATS TDM may not provide accurate traffic forecasts for WHP. To that end, alternative methods of traffic forecasting were investigated. First, key data indicators of traffic growth were researched.

Socio-Economic Trends for Hilton Head Island, Jasper County, and Beaufort County

Hilton Head Island is located in Beaufort County. Beaufort and neighboring Jasper County experienced significant growth over the last 20 years. **Table 1** shows population growth trends for Beaufort and Jasper Counties and Hilton Head Island based on the US Census. This data reflects permanent residents.

Table 1: Population Trends¹

Geographic Unit	Year			Annual Growth (%) (2000 -2010)	Annual Growth (%) (2010 -2020)
	2000	2010	2020		
Beaufort County	120,937	162,233	187,117	3.0	1.4
Jasper County	20,678	24,777	28,791	1.8	1.5
Hilton Head Island	33,862	37,099	37,661	0.9	0.2

As shown in **Table 1**, both Beaufort and Jasper Counties experienced significant population growth since 2000. However, population growth was much slower between 2010 and 2020 compared to 2000 to 2010. Hilton Head Island experienced a modest growth rate of 0.2% from 2010 and 2020.

Table 2 shows the total employment for Beaufort and Jasper Counties and Hilton Head Island for 2010 and 2020.

Table 2: Total Employment Trend¹

Geographic Unit	Year		Annual Growth (%) (2010 -2020)
	2010	2020	
Beaufort County	51,761	62,001	1.8
Jasper County	6,522	9,819	4.2
Hilton Head Island	21,346	21,854	0.2

As can be seen in **Table 2**, both Jasper and Beaufort Counties experienced significant growth in jobs between 2010 and 2020. Overall job growth in Hilton Head Island was small and similar to the island's population growth rate.

Population Growth Projections for Beaufort and Jasper Counties

Population growth estimates are a key element in forecasting traffic growth for a region. For this study, Lochmueller staff researched reliable population growth estimates for Beaufort and Jasper counties. The State of South Carolina's Revenue and Fiscal Affairs Office provides population growth estimates for all counties within the state through 2035. **Table 3** shows the population projections for Beaufort and Jasper Counties for 2035 and the corresponding growth rates.

Table 3: Population Growth Projections²

County	Year		Annual Growth Rate (%)
	2020	2035	
Beaufort	187,691	204,374	0.56
Jasper	29,073	34,046	1
Total	216,764	238,420	0.6

Historic Annual Average Daily Traffic Volume Trends at the WHP Bridge

Lochmueller staff obtained Annual Average Daily Traffic (AADT) volumes on WHP near the WHP Bridge (Site ID #0035) from the South Carolina Department of Transportation's Traffic Data Site³. **Table 4** shows the AADT volumes by year. These volumes effectively represent the volume of traffic entering and exiting Hilton Head Island via US 278.

As shown in **Table 4**, there was a significant reduction in growth between 2019 and 2020 and a significant increase in growth between 2020 and 2021. Such sudden changes were attributed to COVID-19 pandemic-related restrictions. Overall traffic growth on WHP from 2010 to 2023 was approximately 16.5%.

Table 4: AADT Volumes on WHP near the WHP Bridge³

Year	AADT	Annual Growth (%)
2010	49,600	
2011	49,900	0.60%
2012	50,700	1.60%
2013	52,200	2.96%
2014	53,200	1.92%
2015	54,700	2.82%
2016	54,700	0.00%
2017	56,300	2.93%
2018	56,100	-0.36%
2019	57,100	1.78%
2020	51,400	-9.98%
2021	57,400	11.67%
2022	57,400	0.00%
2023	57,800	0.70%

Short-Term Rental Permit and Tax Revenue Data

Lochmueller staff received information on the short-term rental units per year and the accommodation (hotel) and restaurant tax revenues collected by the Town of Hilton Head. The short-term rental unit information was available only for 2023. Thus, this information was not used in statistical analysis. The accommodation and restaurant tax revenue information was available from 2018 to 2023. Lochmueller staff evaluated the revenue data to test any relation between revenues and the volume of traffic entering and exiting Hilton Head Island. These measures are intended to represent the visitor population as compared to permanent residents reflected in the Census data. **Table 5** shows the annual accommodation and restaurant tax revenue information for the Town of Hilton Head Island.

Table 5: Annual Accommodation and Hospitality Tax (Source: Town of Hilton Head Island)

Year	Tax Revenue (2021 USD)	
	Accommodation Tax	Hospitality Tax
2018	\$3,827,423	\$7,419,881
2019	\$3,964,475	\$6,807,961
2020	\$3,624,196	\$6,598,684
2021	\$5,561,900	\$8,051,256
2022	\$6,534,674	\$9,213,533
2023	\$6,260,297	\$8,905,425

As shown in **Table 5**, the tax revenues have increased significantly since 2020 after a reduction due to Covid-19 Pandemic-related impacts. These increases have outpaced traffic growth on WHP entering/exiting the island and can be at least partially attributed to factors beyond the number of visitors to the island, such as high rates of inflation in recent years.

Traffic Growth Estimation Using Available Data

Lochmueller staff performed regression analyses utilizing the preceding available socio-economic and revenue information data as indicators of traffic on WHP at the WHP bridge. The regression analyses considered AADT volumes as the dependent variable and evaluated whether different independent variables (e.g., population, employment, tax revenue) had a statistically significant influence on the AADT volumes.

In regression analysis, the coefficient of determination (R^2) and the P-values were used to identify independent variables with significant impact on the dependent variable. R^2 values explain to what degree an independent variable (e.g., population) explains the variation of the dependent variable (AADT). R^2 values range from 0 to 1. An R^2 value of 0.7 indicates that 70% of the variation in the output variable can be explained by the independent variable(s).

The P-value is the probability that the observed difference between the dependent and independent variables is due to chance. Its value ranges from 0 to 1. A P-value close to 0 means that any observed difference in the dependent variable is more likely due to the independent variable (not by chance). For regression analysis with a 95% confidence interval, a P-value less than 0.05 would represent a strong correlation between the dependent and independent variables.

Table 6 shows the simple regression analysis (95% Confidence Interval) results in terms of R^2 and P-values for various independent variables relative to the dependent variable (AADT).

Table 6: Simple Regression Analysis Results with Different Independent Variables

Independent Variable	Co-efficient of Determination (R^2)	P-Value
Total Population of Beaufort and Jasper Counties	0.95	1.5E-08
Total Employment in Beaufort and Jasper Counties	0.9	8.1E-07
Accommodation Tax	0.64	0.1
Hospitality Tax	0.37	0.28

As shown in **Table 6**, the total population and total employment in Beaufort and Jasper Counties clearly influence the AADT volumes. P-values in both of these cases are very close to zero, which confirms the differences in AADT are influenced by changes in population and employment numbers in the two counties. On the other hand, there is no clear correlation between hospitality tax and AADT and between accommodation tax and AADT.

Lochmueller staff also completed a more complex multiple regression analysis combining both independent variables (population and employment). With the multiple regression analysis, the adjusted R^2 value showed almost no improvement. Therefore, the simple regression analysis using the total population of Beaufort and Jasper Counties was utilized to formulate an equation for estimating AADT on WHP as a function of population in the counties. **Equation 1** shows the regression equation for the AADT estimate.

Equation 1: Regression Equation for AADT Estimate
 $AADT = 0.262684 * (Total\ Population\ of\ Beaufort\ and\ Jasper\ Counties) + 830$

Equation 1 was then used to forecast future traffic on WHP based on anticipated population growth. Lochmueller estimated the 2045 population of Beaufort and Jasper Counties utilizing the following assumptions:

- Annual population growth in Hilton Head Island from 2020 to 2045 will be very small (0.1%). As the population within Hilton Head Island is stable and available land for development is very limited. Moreover, population growth in Hilton Head Island from 2010 to 2020 was only 0.2% per year.
- Annual population growth from 2020 and 2045 for the rest of Beaufort County and Jasper County will be 0.6%, as suggested by the State of South Carolina’s Revenue and Fiscal Affairs Office, referenced in **Table 3**.

Based on the above-mentioned population growth assumptions, **Table 7** shows the projected 2045 population for the Beaufort and Jasper Counties.

Table 7: Projected Population

Geographic Unit	Projected Annual Growth Rate	Population	
		2020	2045
Hilton Head Island	0.10%	37,661	38,614
Jasper County and Beaufort County (Excluding Hilton Head Island)	0.60%	178,247	207,000
Total		215,908	245,614

As shown in **Table 7**, the total population in 2045 for Beaufort and Jasper Counties was estimated at 245,614. Applying **Equation 1**, that population number would translate to 65,349 AADT on WHP at the WHP Bridge.

Table 8 shows the estimated annual traffic growth rate from 2023 to 2045 based on the 2045 forecast of 65,425 compared to the 2023 traffic count.

Table 8: Projected Traffic Growth Rate at the WHP Bridge

Year	AADT	Annual Growth Rate (%)
2023	57,800	0.56
2045	65,349	

Conclusion

Lochmueller determined that the LATS TDM may not be a reliable source of future traffic on WHP. Through careful application of statistical analysis, an alternative method for forecasting traffic on WHP was developed using the population of Beaufort and Jasper Counties as the key indicator. Based on this method, traffic on WHP at the WHP Bridge is expected to increase by 0.56 percent annually, resulting in an AADT forecast of 65,349 daily vehicles in 2045.

Lochmueller Group appreciates the opportunity to serve the Town of Hilton Head by performing this independent analysis to determine the appropriate annual background growth rate that should be utilized for the overall corridor study. Should you have any questions regarding the information shared within this technical memorandum, please do not hesitate to contact us at nnohren@lochgroup.com or 217-821-8435.

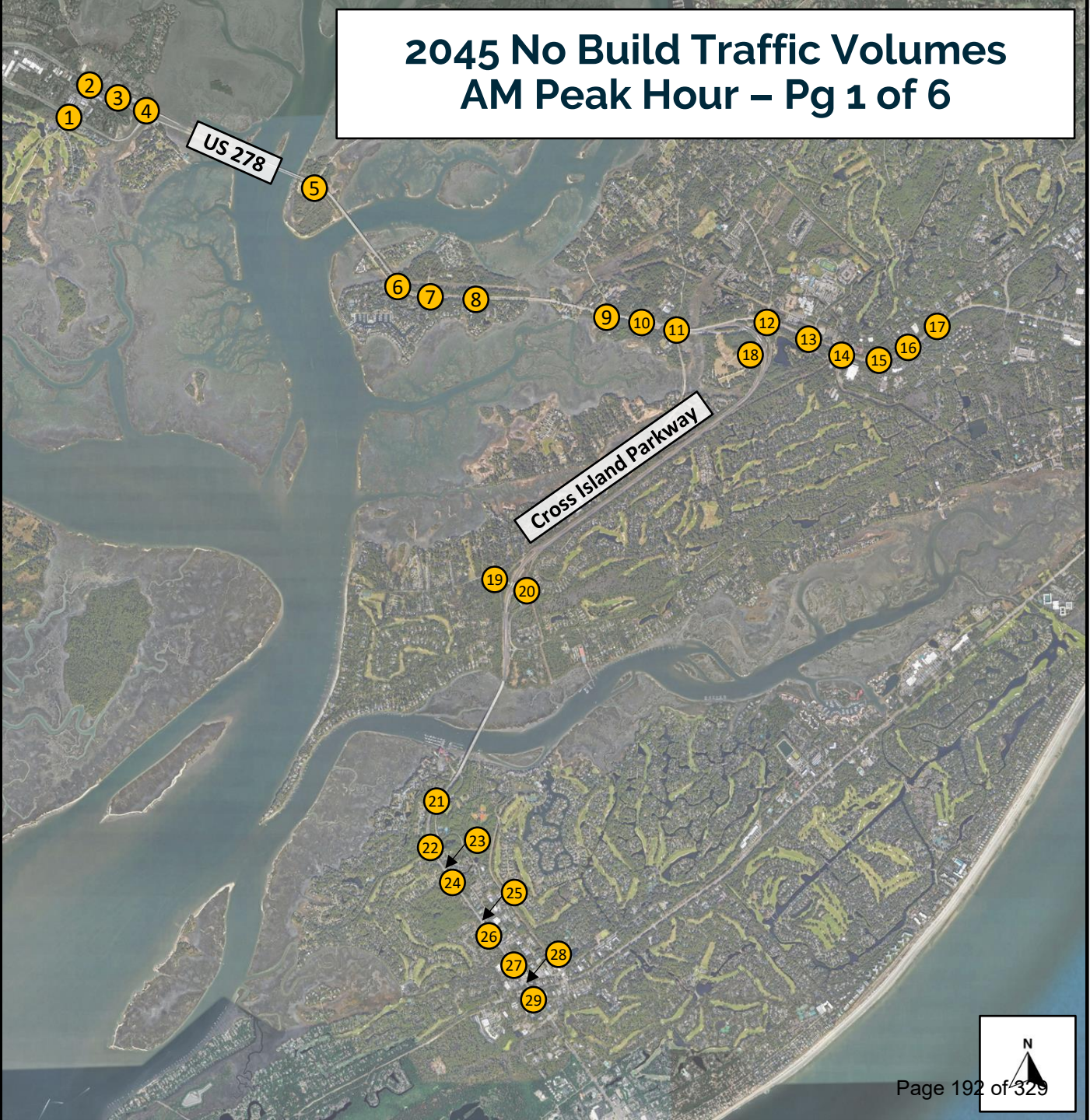
Reference

1. U.S. Census Bureau (www.census.gov)
2. South Carolina Revenue and Fiscal Affairs Office. (www.rfa.sc.gov).
3. South Carolina Department of Transportation Traffic Counts Website. (www.scdot.org/travel/travel-trafficdata.aspx)

APPENDIX E: 2045 NO-BUILD TRAFFIC VOLUMES

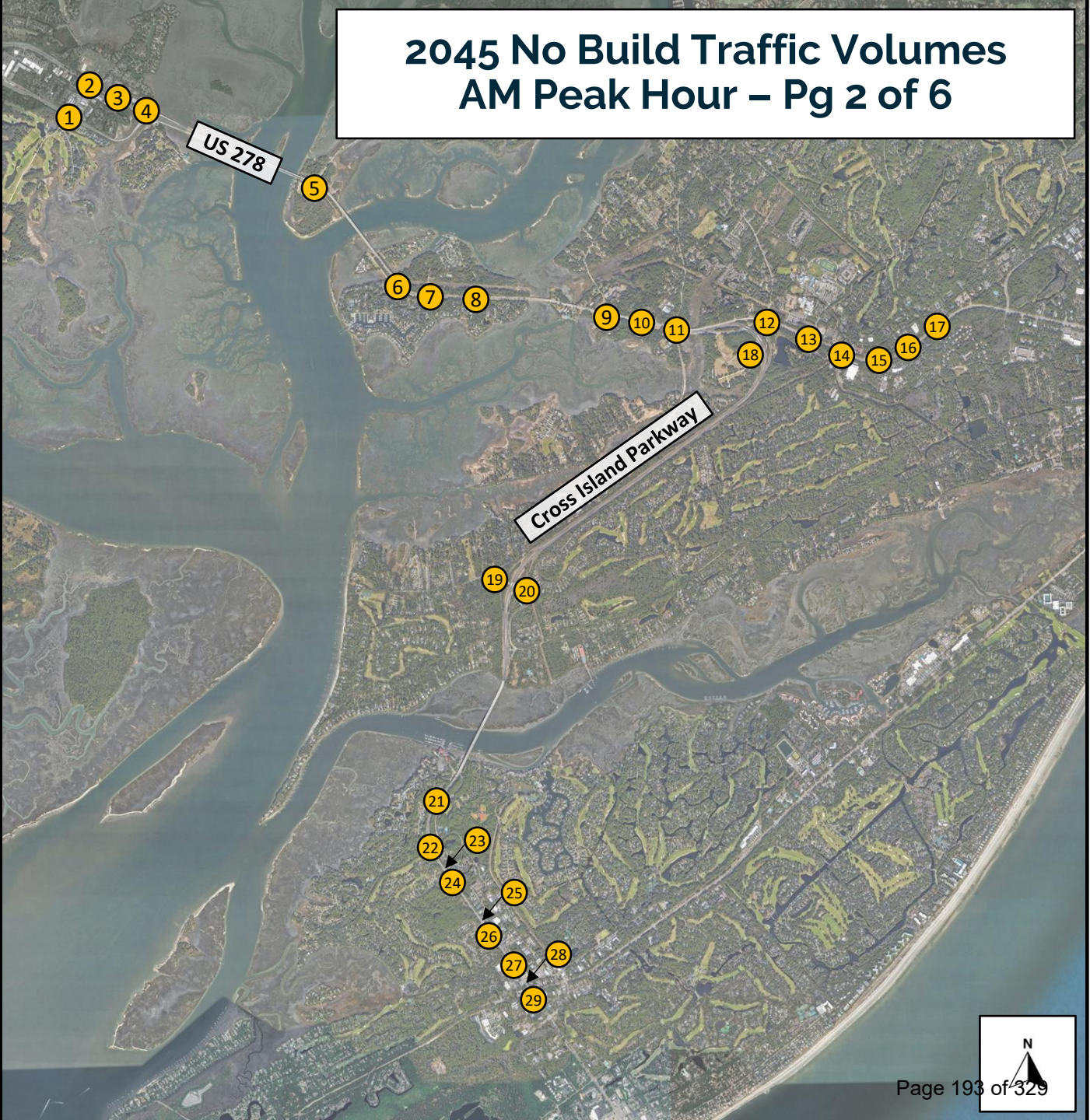
2045 No Build Traffic Volumes
AM Peak Hour – Pg 1 of 6

1 84 2 5 18 493 7 Bluffton Pkwy Buckingham Plantation Dr	5 0 0 0 0 1837 0 US 278 Wildlife Refuge	9 240 0 51 49 1612 2 US 278 Squire Pope Rd
2 77 28 47 26 1265 23 US 278 Buckingham Plantation Dr	6 1835 0 US 278 Blue Heron Point Rd	10 86 23 1577 US 278 Old Wild Horse Rd
3 88 0 9 97 1226 7 US 278 Salt Marsh Dr	7 1 3 1818 34 US 278 Crosstree Dr	11 14 79 144 63 1449 80 US 278 Spanish Wells Rd
4 1314 5 US 278 Fording Island Rd Ext	8 7 5 6 1848 US 278 Jenkins Rd	12 104 202 240 214 876 218 US 278 Gum Tree Rd
263 994 28 31 12 32	2 3124 5 0 0 2	176 2963 2 2 0 6

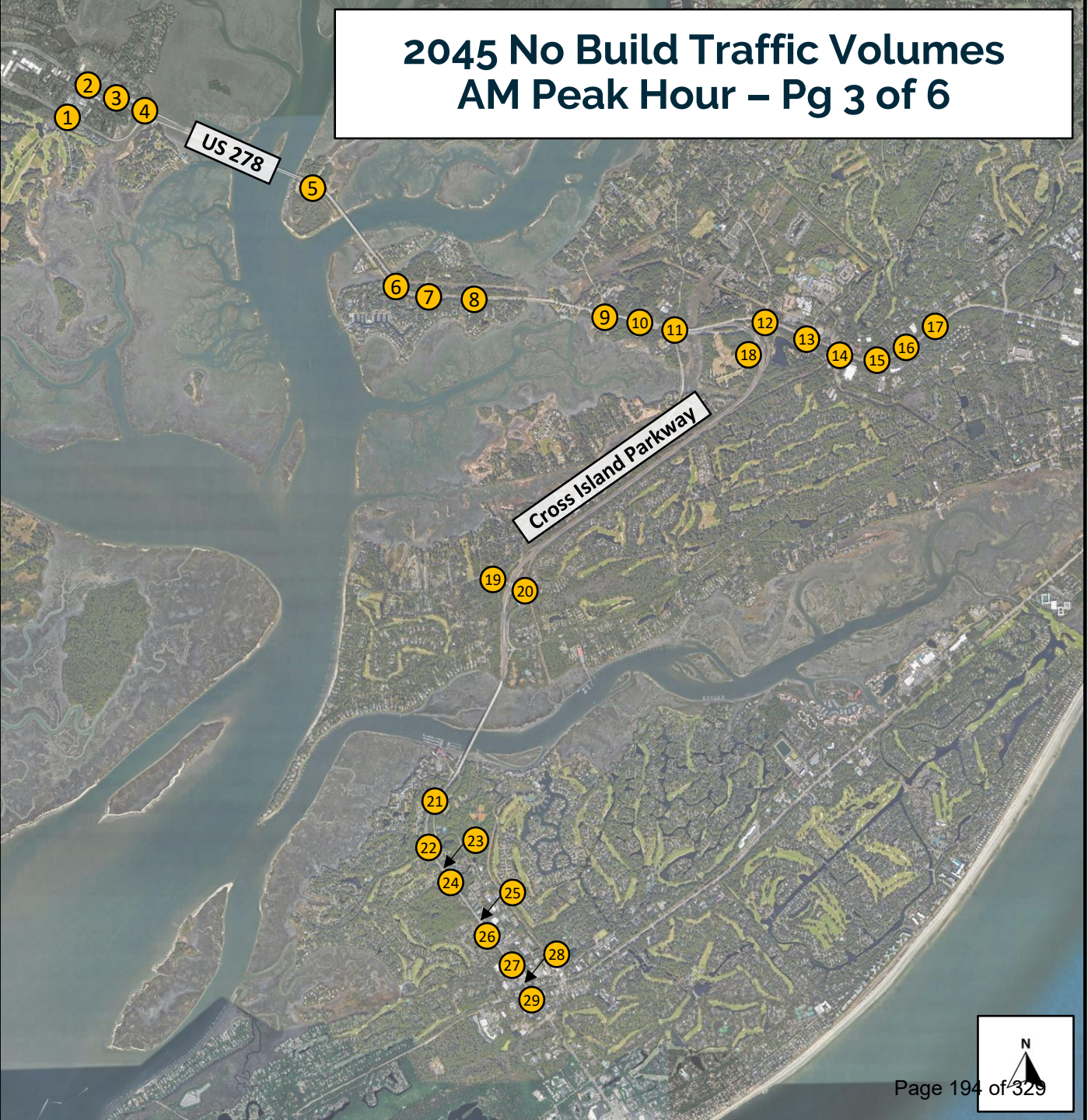
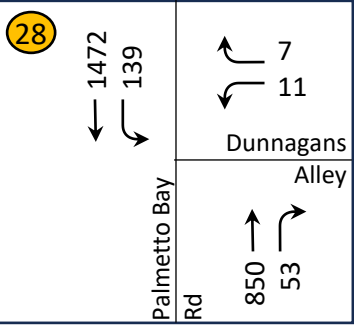
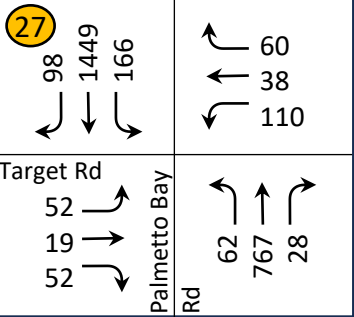
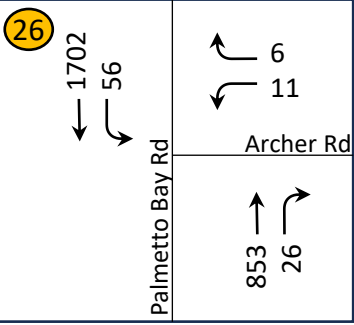
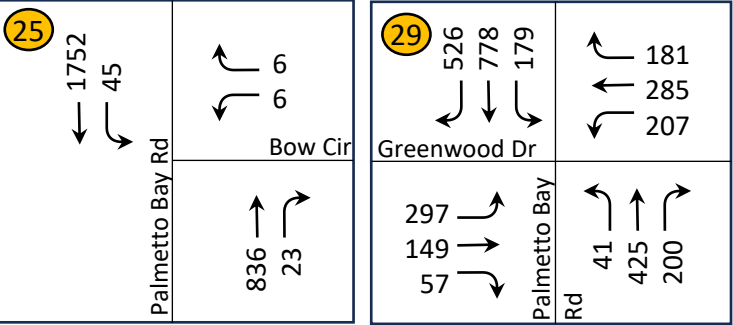


2045 No Build Traffic Volumes
AM Peak Hour – Pg 2 of 6

13 205 31 276 341 1077 2 US 278 286 1932 77 Jarvis Park Rd 26 51 0	17 126 77 242 188 973 37 US 278 146 1601 62 Indigo Run Dr 90 58 37	21 0 1938 7 1018 Bay Pines Rd Palmetto Bay Rd
14 51 14 20 35 1076 37 US 278 90 1845 273 Pembroke Dr 293 24 42	18 7 422 2 0 Honey Horn Rd Cross Island Pkwy SB	22 60 1632 252 135 12 43 Arrow Rd 130 17 156 Palmetto Bay Rd 50 760 38
15 23 23 1125 6 US 278 6 1895 6 Central Ave 6	19 41 0 26 158 130 Marshland Rd 254 274 Cross Island Pkwy SB	23 1813 18 6 6 Genesta St 842 6 Palmetto Bay Rd
16 11 46 1143 US 278 1797 104 Hatton Pl 12	20 89 208 142 138 Marshland Rd 80 66 Cross Island Pkwy NB	24 1791 28 6 6 Palmetto Bay Rd 842 0 Palmetto Business Park Dr

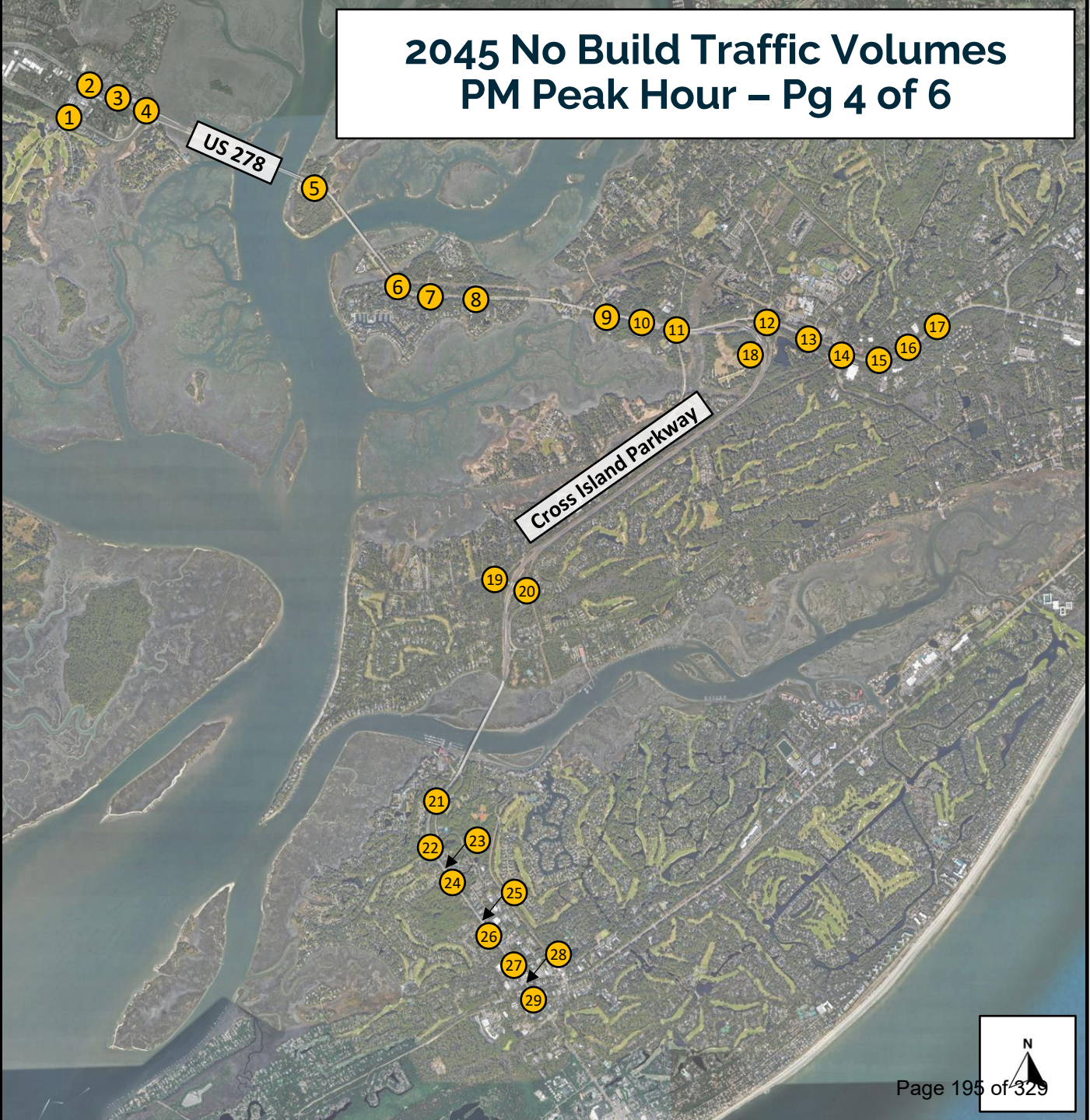


2045 No Build Traffic Volumes
AM Peak Hour – Pg 3 of 6



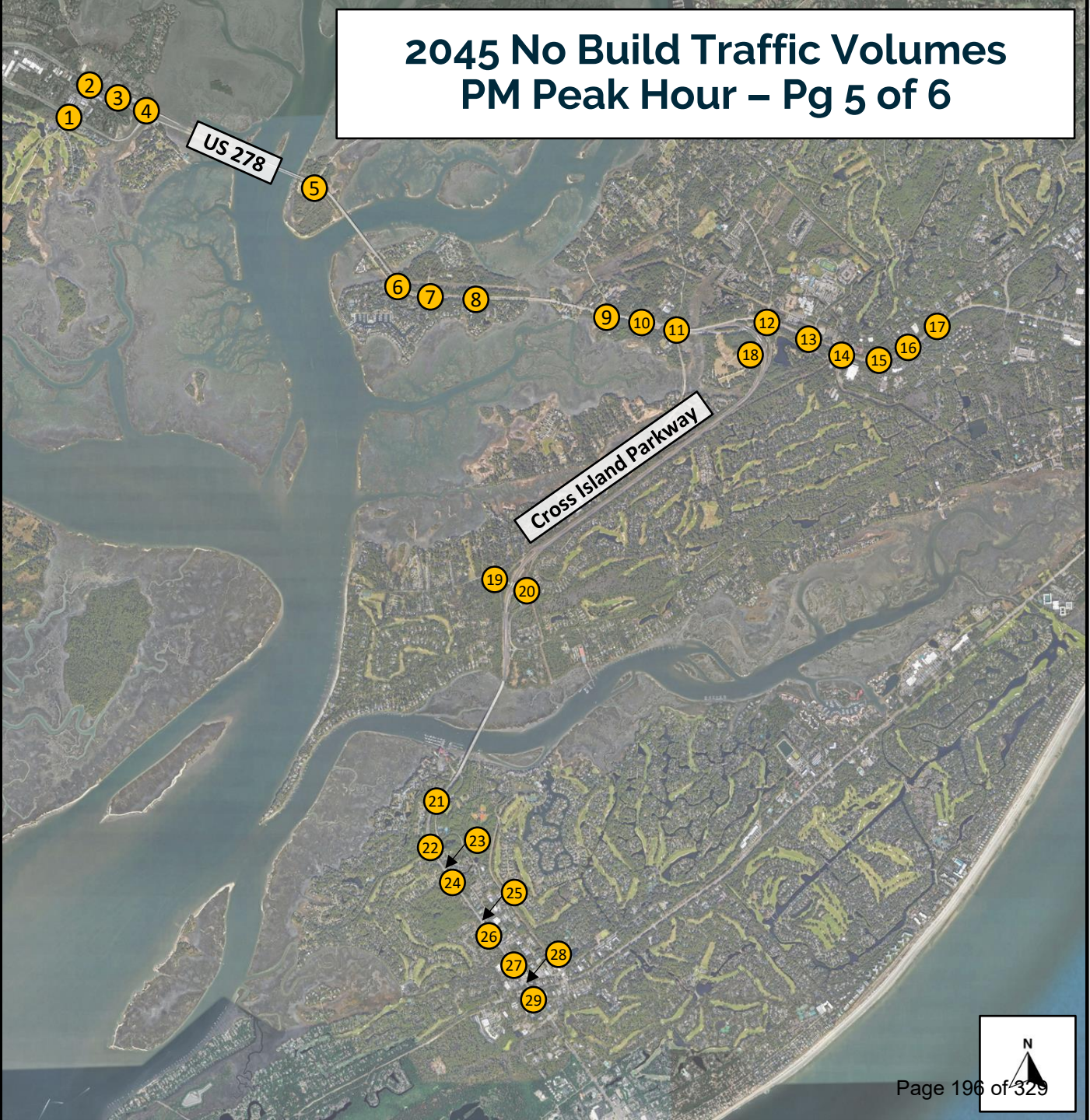
2045 No Build Traffic Volumes
PM Peak Hour – Pg 4 of 6

1 112 14 2 11 1044 23 Bluffton Pkwy Buckingham Plantation Dr	5 11 0 5 7 3394 2 US 278 5 2499 5 Wildlife Refuge 2 0 7	9 386 2 46 64 3039 2 US 278 251 2253 33 Squire Pope Rd 2 28 2
2 138 41 76 51 2252 24 US 278 106 1629 63 Buckingham Plantation Dr	6 3398 2 US 278 2502 9 Blue Heron Point Rd 5 14	10 11 73 3094 US 278 2301 Old Wild Horse Rd
3 88 0 6 63 2239 32 US 278 27 1692 9 Salt Marsh Dr 0 0 45	7 0 6 3364 57 US 278 2482 34 Crosstree Dr 36 0 59	11 37 88 70 95 2837 35 US 278 58 2113 130 Spanish Wells Rd 293 53 68
4 2311 18 US 278 1716 27 Fording Island Rd Ext 23 23	8 11 7 11 3416 US 278 11 2530 Jenkins Rd	12 121 207 274 369 1745 220 US 278 141 1204 26 Gum Tree Rd 253 234 313

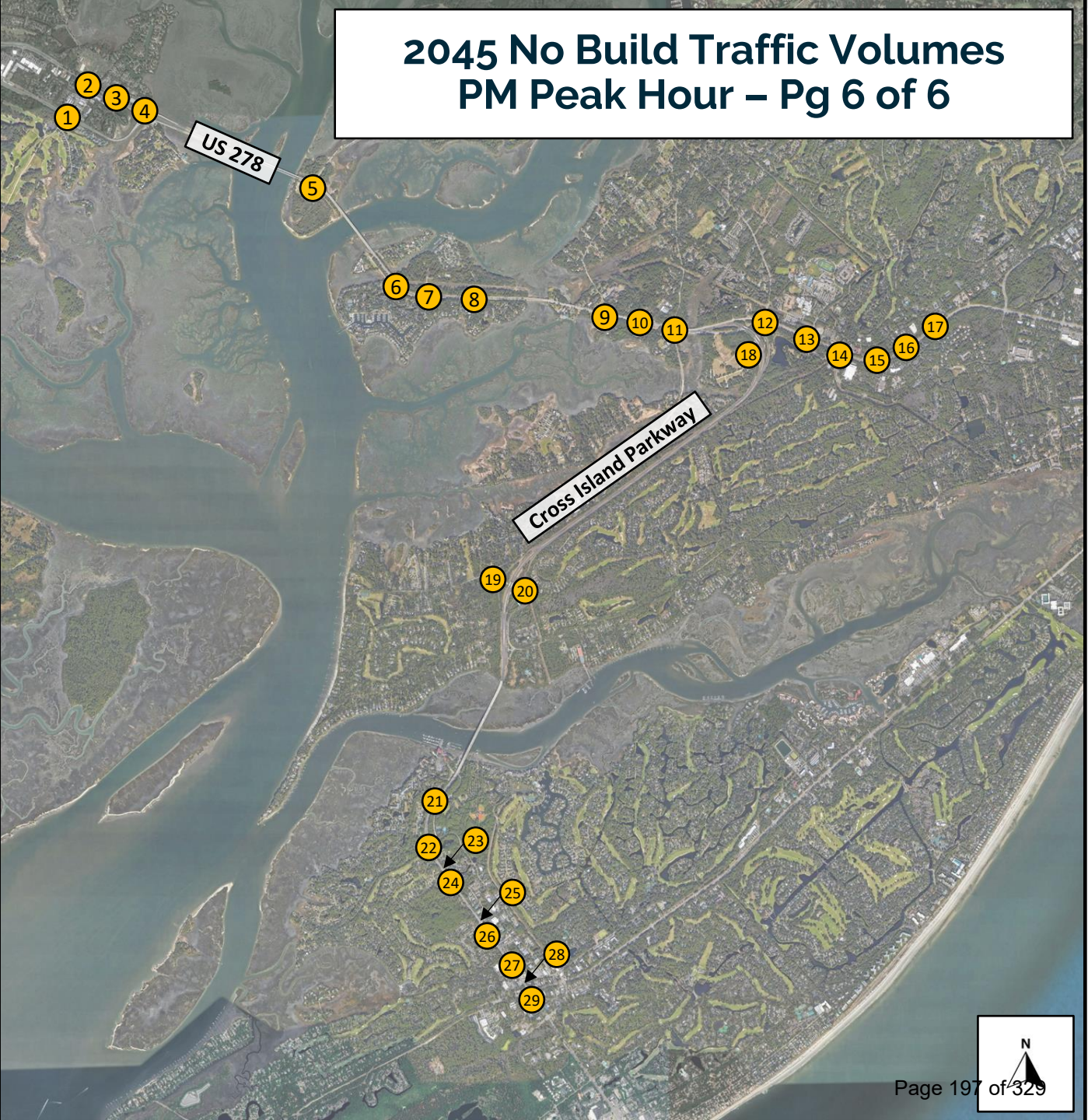
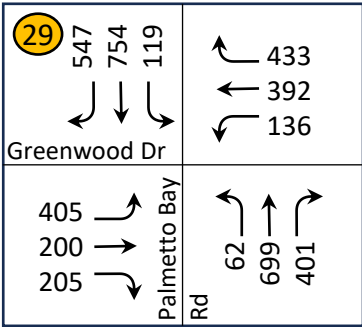
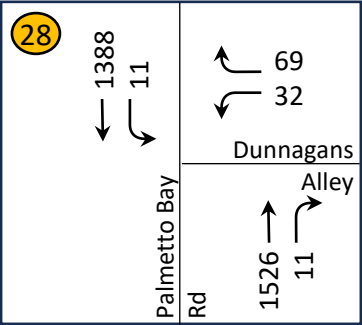
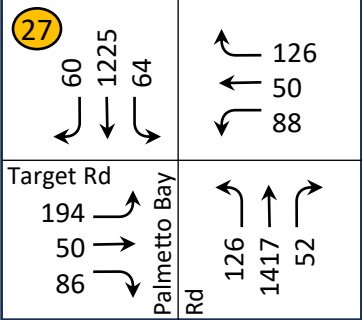
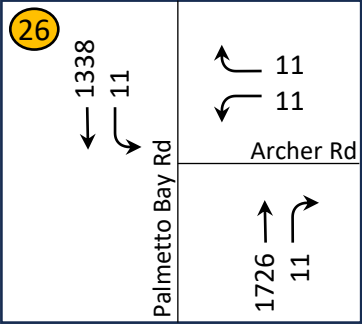
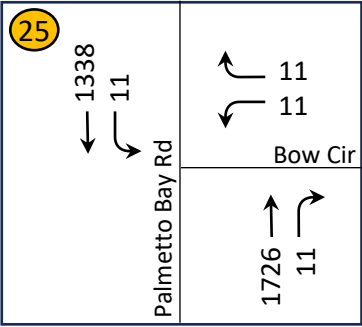


2045 No Build Traffic Volumes
PM Peak Hour – Pg 5 of 6

13 278 9 97 72 1993 5 US 278 128 1608 55 Jarvis Park Rd 63 9 11	17 126 130 284 344 1547 58 US 278 185 1301 53 Indigo Run Dr 72 130 55	21 11 1486 21 1947 Bay Pines Rd 11 11 Palmetto Bay Rd
14 58 30 16 31 1655 35 US 278 64 1422 230 Pembroke Dr 357 39 42	18 9 449 45 17 Honey Horn Rd 45 17 Cross Island Pkwy SB	22 98 1201 198 371 41 43 Arrow Rd 76 33 105 Palmetto Bay Rd 136 1521 86
15 6 24 1715 6 US 278 6 1468 6 Central Ave 11	19 88 2 69 475 155 Marshland Rd 147 153 Cross Island Pkwy SB	23 1343 6 6 6 Genesta St 1737 5 Palmetto Bay Rd
16 11 11 1734 US 278 1473 6 Hatton Pl 66	20 42 345 54 162 Marshland Rd 54 162 Cross Island Pkwy NB 285 161	24 1343 6 11 6 Palmetto Bay Rd 1731 6 Palmetto Business Park Rd



2045 No Build Traffic Volumes
PM Peak Hour – Pg 6 of 6



APPENDIX F: 2045 NO-BUILD TRAFFIC OPERATING CONDITIONS (SYNCHRO)

Table F-1. 2045 No Build Operating Conditions (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (17.6)	C (25.5)
Eastbound Approach	B (15.1) [298] <0.54>	B (16.0) [207] <0.50>
Westbound Approach	C (25.4) [202] <0.38>	D (36.7) [#496] <0.86>
Northbound Approach	B (15.9) [37] <0.08>	B (15.7) [30] <0.11>
Southbound Approach	A (9.9) [m23] <0.18>	A (6.1) [m21] <0.23>
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (18.2)	C (26.9)
Eastbound Approach	B (16.9) [443] <0.64>	B (17.1) [345] <0.75>
Westbound Approach	B (17.9) [290] <0.51>	C (28.1) [#644] <0.89>
Northbound Approach	C (21.2) [98] <0.56>	D (49.7) [m#76] <0.74>
Southbound Approach	C (31.2) [70] <0.45>	E (60.9) [#123] <0.88>
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (18.9) [<25] <0.04>	F (65.8) [33] <0.33>
Westbound Left Turn	E (44.8) [<25] <0.08>	D (34.9) [<25] <0.22>
Northbound Approach	D (34.4) [33] <0.31>	D (26.7) [30] <0.30>
Southbound Approach	F (57.0) [88] <0.63>	F (\$649.6) [273] <2.05>
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	C (21.6) [<25] <0.02>	C (17.0) [<25] <0.06>
Northbound Approach	F (\$684.9) [115] <1.63>	F (\$1880.2) [225] <4.10>
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (17.8) [<25] <0.01>	F (67.3) [<25] <0.08>
Westbound Left Turn	No volumes observed	D (28.7) [<25] <0.01>
Northbound Approach	F (50.7) [<25] <0.03>	D (32.3) [<25] <0.09>
Southbound Approach	No volumes observed	F (74.9) [<25] <0.26>
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	No volumes observed	D (30.2) [<25] <0.01>
Northbound Approach	F (\$1763.6) [73] <2.35>	F (\$5024.3) [145] <8.33>

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	E (67.8)	F (92.1)
Eastbound Approach	F (105.5) [#2262] <1.19>	C (33.3) [#1547] <1.00>
Westbound Approach	A (5.9) [320] <0.64>	F (133.8) [#2434] <1.26>
Northbound Approach	B (14.6) [34] <0.39>	E (77.5) [#106] <0.86>
Southbound Approach	O (0.0) [<25] <0.01>	O (0.0) [<25] <0.00>
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (18.3) [<25] <0.03>	F (91.5) [<25] <0.22>
Southbound Approach	F (\$1398.4) [65] <1.86>	F (151.3) [73] <.69>
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (23.4)	F (144.6)
Eastbound Approach	B (15.2) [918] <0.81>	B (12.6) [370] <0.91>
Westbound Approach	C (31.1) [625] <0.74>	F (233.2) [m#2394] <1.49>
Northbound Approach	B (13.0) [<25] <0.02>	E (70.6) [67] <0.29>
Southbound Approach	E (69.0) [#286] <0.92>	F (231.6) [#577] <1.46>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	D (26.7) [40] <0.36>	F (77.9) [<25] <0.20>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (37.5)	D (45.1)
Eastbound Approach	D (38.7) [#1280] <1.02>	C (20.5) [381] <0.89>
Westbound Approach	C (24.0) [344] <0.91>	D (45.2) [m909] <0.99>
Northbound Approach	D (51.5) [214] <0.60>	F (171.7) [#606] <1.35>
Southbound Approach	F (94.1) [#306] <0.97>	D (49.3) [168] <0.34>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	F (84.2)	F (82.7)
Eastbound Approach	F (94.6) [~1146] <1.16>	D (54.0) [#842] <0.99>
Westbound Approach	D (43.1) [#390] <0.90>	D (50.3) [m594] <0.99>
Northbound Approach	F (113.6) [#372] <1.13>	F (137.9) [#466] <1.29>
Southbound Approach	F (119.0) [#473] <1.09>	F (178.8) [#506] <1.33>

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (19.7)	C (27.2)
Eastbound Approach	B (15.9) [m199] <0.89>	A (7.2) [m262] <0.77>
Westbound Approach	B (11.8) [306] <0.68>	C (33.4) [#1335] <0.99>
Northbound Approach	F (82.7) [136] <0.58>	F (259.8) [#208] <1.33>
Southbound Approach	D (49.4) [249] <0.75>	C (24.8) [100] <0.65>
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	C (27.9)	D (38.3)
Eastbound Approach	B (15.8) [#1252] <0.91>	B (14.1) [351] <0.71>
Westbound Approach	D (36.7) [681] <0.55>	D (47.7) [1072] <0.89>
Northbound Approach	E (73.6) [254] <0.76>	F (86.1) [#355] <0.89>
Southbound Approach	C (32.7) [74] <0.36>	D (49.5) [93] <0.68>
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (11.4) [<25] <0.01>	C (17.2) [<25] <0.02>
Westbound Left Turn	C (18.7) [<25] <0.02>	B (13.6) [<25] <0.01>
Northbound Right Turn	C (21.0) [<25] <0.03>	C (15.9) [<25] <0.04>
Southbound Right Turn	B (13.8) [<25] <0.06>	C (19.5) [<25] <0.03>
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	C (20.2) [<25] <0.05>	C (18.4) [<25] <0.21>
Southbound Right Turn	B (13.6) [<25] <0.03>	C (20.1) [<25] <0.05>
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	B (18.0)	D (36.4)
Eastbound Approach	A (3.5) [<25] <0.79>	B (16.9) [#297] <0.93>
Westbound Approach	B (19.2) [407] <0.51>	D (38.4) [#951] <0.92>
Northbound Approach	E (62.2) [112] <0.52>	E (70.5) [#245] <0.82>
Southbound Approach	D (54.9) [178] <0.71>	E (67.7) [212] <0.86>
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	B (13.8) [<25] <0.19>	B (13.8) [<25] <0.19>
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (9.2) [<25] <0.14>	A (8.6) [<25] <0.17>
Southbound Left Turn	C (19.7) [<25] <0.1>	E (49.9) [58] <0.49>
Southbound Right Turn	A (9.4) [<25] <0.05>	B (14.1) [<25] <0.19>

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (8.3) [<25] <0.13>	A (8.6) [<25] <0.06>
Northbound Left Turn	C (16.2) [<25] <0.21>	D (34.1) [160] <0.76>
Northbound Right Turn	A (9.4) [<25] <0.08>	B (10.6) [<25] <0.23>
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	F (\$454) [48] <0.75>
Eastbound Right Turn	C (21.7) [<25] <0.03>	C (16.5) [<25] <0.04>
Northbound Left Turn	C (19.4) [<25] <0.03>	B (14.5) [<25] <0.06>
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (17.1)	C (26.9)
Eastbound Approach	D (46.0) [171] <0.71>	C (24.5) [102] <0.35>
Westbound Approach	C (23.8) [73] <0.44>	E (55.3) [#376] <0.94>
Northbound Approach	A (9.7) [136] <0.37>	C (21.7) [443] <0.86>
Southbound Approach	B (15.2) [670] <0.73>	C (24.3) [434] <0.88>
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	E (45.4) [<25] <0.13>	F (146[28] <0.37>
Southbound Left Turn	B (10.0) [<25] <0.03>	C (16.8) [<25] <0.02>
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	E (47.3) [<25] <0.13>	F (114.3) [33] <0.37>
Southbound Left Turn	B (10.1) [<25] <0.04>	C (16.7) [<25] <0.02>
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	D (27.7) [<25] <0.04>	F (54.8) [<25] <0.14>
Westbound Right Turn	B (11.6) [<25] <0.01>	C (19.0) [<25] <0.04>
Southbound Left Turn	B (10.3) [<25] <0.07>	C (16.7) [<25] <0.04>
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	D (29.0) [<25] <0.07>	F (54.8) [<25] <0.14>
Westbound Right Turn	B (11.7) [<25] <0.01>	C (19.0) [<25] <0.04>
Southbound Left Turn	B (10.5) [<25] <0.09>	C (16.7) [<25] <0.04>
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	B (10.8)	B (18.7)
Eastbound Approach	C (33.2) [81] <0.31>	D (51.4) [241] <0.82>
Westbound Approach	D (48.8) [152] <0.69>	C (30.4) [115] <0.50>
Northbound Approach	B (10.9) [240] <0.37>	B (19.0) [585] <0.72>
Southbound Approach	A (4.6) [149] <0.69>	A (7.3) [233] <0.66>

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	D (33.5) [<25] <0.09>	F (55.4) [<25] <0.33>
Westbound Right Turn	B (12.0) [<25] <0.02>	C (20.0) [<25] <0.24>
Southbound Left Turn	B (11.5) [<25] <0.22>	B (14.6) [<25] <0.03>
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	F (56.0)	F (60.3)
Eastbound Approach	F (83.3) [375] <1.04>	F (117.9) [550] <1.16>
Westbound Approach	D (26.1) [200] <0.79>	F (92.4) [425] <1.08>
Northbound Approach	C (16.4) [125] <0.66>	F (78.2) [525] <1.07>
Southbound Approach	F (134.4) [650] <1.24>	F (94.3) [675] <1.13>

– 95th Percentile volume exceeds capacity

\$ – Delay more than 300 seconds

m – Upstream metering is in effect

APPENDIX G: 2045 NO-BUILD TRAFFIC OPERATING CONDITIONS (VISSIM)

Table G-1. 2045 No-Build Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	C (22.3)	B (15.9)
Eastbound Approach	C (26.6) [123] {700}	B (18.5) [43] {241}
Westbound Approach	B (14.0) [<25] {168}	B (14.4) [32] {218}
Northbound Approach	B (14.1) [<25] {68}	B (14.5) [<25] {53}
Southbound Approach	A (6.6) [<25] {56}	A (8.5) [<25] {83}
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	E (74.1)	B (18.6)
Eastbound Approach	F (146.0) [1628] {1658}	B (16.6) [86] {567}
Westbound Approach	B (14.1) [37] {302}	B (18.4) [86] {474}
Northbound Approach	C (26.4) [25] {186}	D (39.3) [<25] {91}
Southbound Approach	D (35.8) [<25] {88}	C (24.4) [<25] {119}
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	F (54.8) [1075] {1304}	C (18.8) [<25] {55}
Westbound Left Turn	F (4,646.8) [142] {214}	B (12.4) [<25] {45}
Northbound Approach	B (12.3) [<25] {63}	A (7.4) [<25] {62}
Southbound Approach	D (29.4) [49] {107}	A (8.1) [<25] {77}
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	F (3,675.2) [85] {146}	C (19.0) [<25] {34}
Northbound Approach	F (3,448.2) [171] {189}	C (18.4) [<25] {43}
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (20.9) [902] {1658}	D (26.6) [<25] {<25}
Westbound Left Turn	No volumes observed	C (21.4) [<25] {<25}
Northbound Approach	F (426.9) [<25] {38}	C (20.6) [<25] {47}
Southbound Approach	No volumes observed	C (17.5) [<25] {42}
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	No volumes observed	F (131.6) [<25] {<25}
Northbound Approach	F (2,505.2) [214] {351}	E (49.9) [<25] {74}
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	A (9.5)	B (13.4)
Eastbound Approach	B (11.3) [433] {1093}	B (10.6) [216] {1092}
Westbound Approach	A (5.3) [26] {601}	A (6.0) [86] {913}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Northbound Approach	D (41.6) [<25] {138}	F (237.4) [193] {326}
Southbound Approach	A (9.8) [<25] {<25}	A (0.0) [<25] {<25}
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (14.4) [<25] {<25}	D (32.0) [<25] {33}
Southbound Approach	D (29.2) [<25] {47}	E (43.5) [<25] {62}
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (26.8)	E (70.7)
Eastbound Approach	D (38.4) [361] {1332}	B (13.9) [235] {1106}
Westbound Approach	A (8.4) [55] {700}	F (128.0) [1018] {1383}
Northbound Approach	C (21.2) [<25] {42}	E (67.4) [<25] {73}
Southbound Approach	B (19.2) [<25] {189}	F (80.3) [228] {693}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (1.4) [<25] {26}	A (8.0) [<25] {29}
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (30.3)	F (328.8)
Eastbound Approach	C (25.2) [169] {787}	B (15.1) [98] {668}
Westbound Approach	B (15.5) [80] {365}	F (637.7) [896] {989}
Northbound Approach	E (63.1) [122] {407}	F (510.5) [1241] {1288}
Southbound Approach	F (147.4) [192] {319}	D (49.1) [51] {243}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (51.9)	E (76.0)
Eastbound Approach	D (43.1) [838] {1562}	D (50.4) [254] {711}
Westbound Approach	C (31.2) [128] {375}	E (76.3) [1203] {1623}
Northbound Approach	D (38.8) [166] {334}	F (92.7) [280] {356}
Southbound Approach	F (143.1) [1039] {1452}	F (121.3) [657] {1380}
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (22.3)	C (33.4)
Eastbound Approach	B (17.7) [169] {962}	B (12.6) [51] {552}
Westbound Approach	C (21.5) [106] {673}	D (42.5) [907] {1289}
Northbound Approach	E (67.4) [42] {178}	F (281.4) [153] {297}
Southbound Approach	D (36.9) [65] {225}	C (25.8) [32] {153}
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	C (22.1)	E (55.1)
Eastbound Approach	B (17.8) [227] {1081}	B (18.9) [99] {679}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Westbound Approach	B (19.5) [72] {553}	D (54.5) [998] {1279}
Northbound Approach	D (52.8) [71] {260}	F (260.2) [397] {719}
Southbound Approach	C (31.1) [<25] {87}	D (43.2) [<25] {114}
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (13.4) [<25] {<25}	C (21.6) [87] {146}
Westbound Left Turn	C (22.4) [<25] {25}	C (21.8) [<25] {<25}
Northbound Right Turn	C (16.2) [<25] {29}	B (12.6) [<25] {31}
Southbound Right Turn	B (12.3) [<25] {44}	F (2,448.4) [87] {171}
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (8.1) [<25] {<25}	A (6.9) [<25] {64}
Southbound Right Turn	B (11.0) [<25] {36}	F (1,211.0) [123] {244}
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	C (24.5)	E (66.7)
Eastbound Approach	B (19.7) [107] {764}	C (34.5) [115] {636}
Westbound Approach	B (17.3) [53] {371}	E (75.8) [1341] {1658}
Northbound Approach	E (55.2) [32] {110}	E (76.4) [65] {265}
Southbound Approach	D (47.7) [57] {203}	F (126.4) [327] {1023}
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	A (9.7) [<25] {45}	B (12.1) [<25] {72}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (4.5) [<25] {62}	A (2.4) [<25] {67}
Southbound Left Turn	A (9.8) [<25] {53}	B (11.1) [<25] {79}
Southbound Right Turn	A (6.1) [<25] {86}	A (7.9) [<25] {112}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (1.6) [<25] {49}	A (1.5) [<25] {<25}
Northbound Left Turn	B (11.9) [<25] {77}	D (27.8) [46] {252}
Northbound Right Turn	A (6.0) [<25] {102}	A (8.0) [62] {277}
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	E (48.5) [<25] {35}
Eastbound Right Turn	C (15.6) [<25] {<25}	B (13.9) [<25] {32}
Northbound Left Turn	B (12.8) [<25] {<25}	A (7.8) [<25] {31}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (14.0)	B (18.2)
Eastbound Approach	C (30.2) [51] {187}	C (29.0) [38] {164}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Westbound Approach	B (17.3) [<25] {108}	C (28.2) [79] {337}
Northbound Approach	B (12.4) [38] {311}	B (15.5) [94] {596}
Southbound Approach	B (11.6) [91] {737}	B (16.3) [90] {601}
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	E (41.7) [<25] {57}	D (25.4) [<25] {53}
Southbound Left Turn	A (5.5) [37] {255}	A (8.8) [<25] {<25}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	F (65.1) [<25] {75}	C (21.0) [<25] {59}
Southbound Left Turn	A (5.7) [35] {176}	B (12.8) [<25] {<25}
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	F (69.4) [46] {98}	E (40.7) [<25] {48}
Westbound Right Turn	A (9.1) [59] {131}	B (13.1) [<25] {81}
Southbound Left Turn	C (16.2) [551] {1040}	B (14.1) [<25] {67}
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	F (1,234.0) [40] {69}	D (31.8) [<25] {34}
Westbound Right Turn	B (11.6) [62] {105}	B (11.5) [<25] {70}
Southbound Left Turn	C (16.2) [228] {469}	B (12.0) [<25] {28}
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	C (26.9)	B (18.6)
Eastbound Approach	C (26.5) [<25] {105}	D (37.6) [62] {250}
Westbound Approach	C (34.2) [32] {157}	C (26.1) [38] {144}
Northbound Approach	B (12.5) [39] {235}	B (15.4) [83] {522}
Southbound Approach	C (33.5) [1209] {1511}	B (15.6) [129] {820}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	F (872.0) [62] {148}	F (87.7) [<25] {97}
Westbound Right Turn	E (36.3) [88] {182}	B (13.0) [30] {132}
Southbound Left Turn	C (20.8) [258] {513}	B (13.1) [<25] {416}
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	F (60.5)	F (81.8)
Eastbound Approach	F (314.7) [808] {838}	F (168.2) [805] {838}
Westbound Approach	B (14.3) [56] {434}	F (200.4) [1645] {1658}
Northbound Approach	A (4.2) [<25] {207}	F (61.1) [534] {794}
Southbound Approach	C (34.4) [297] {461}	A (8.2) [88] {460}

**APPENDIX H: FOUR LANE VIABILITY REVIEW TECHNICAL MEMORANDUM; SEISMIC STUDY
REVIEW; CURSORY REVIEW OF SOUTHERN BYPASS**

MEMO

To: Town of Hilton Head, South Carolina
From: Lochmueller Group
Date: May 3, 2024
Subject: Independent Study of the William Hilton Parkway Gateway Corridor
Four Lane Viability Review Technical Memorandum – Task 1.3.3

Lochmueller Group (Lochmueller) is preparing an independent study that evaluates congestion and mobility challenges along the William Hilton Parkway Gateway Corridor. As part of this independent study, Lochmueller evaluated the viability of several strategies in order to determine if they should be included or excluded from further consideration as part of this project. These items include the viability of maintaining four lanes along William Hilton Parkway (US 278) between Windmill Harbour and Squire Pope Road; the implementation of a second bridge; modifications to the existing mass transit system; implementation of a new ferry system; and the implementation of a facility usage fee. It should be noted that an in-depth detailed analysis of any of these items was excluded from the scope of work.

The intention of this memorandum is to provide the Town of Hilton Head with Lochmueller's professional opinion regarding the feasibility of William Hilton Parkway being able to remain a four lane facility within areas between Moss Creek Drive and Squire Pope Road, if one or more of these strategies were implemented.

Viability of Maintaining Four Lanes Between Windmill Harbour and Squire Pope Road

Lochmueller evaluated the viability of maintaining four lanes between Windmill Harbour and Squire Pope Road. Currently, the intersection of Squire Pope Road and US 278 experiences significant congestion, specifically during the PM peak hour. The westbound approach has failing conditions and queues which extend 2,500 feet from Squire Pope past Spanish Wells. This congestion is expected to be exacerbated by 2045 with the forecasted growth.

Travel times were calculated using VISSIM, which is a microsimulation tool that accurately replicates individual vehicles and their interactions within complex traffic streams, such as interchanges, freeways, and expressway corridors with signalized intersections. A robust amount of data and field observations were conducted to calibrate VISSIM to reproduce field conditions.

The travel time results are provided in **Table 1**. As shown, it currently takes approximately 19 minutes to travel along US 278 between Moss Creek Drive and Indigo Run Drive during the AM peak hour, and it takes approximately 21 minutes to travel along US 278 between Indigo Run Drive and Moss Creek Drive during the PM peak hour today.

US 278 between Moss Creek Drive and Indigo Run Drive is approximately 8.2 miles. Based on the travel times, the existing average speed along this corridor is 26 miles per hour (mph) during the AM peak hour and 23 mph during the PM peak hour. This is well below the posted speed limits of 45 mph and 55 mph along the corridor.

These travel times are expected to increase by approximately 36% during the AM peak hour and by approximately 23% during the PM peak hour in the year 2045 with the anticipated background growth. It is evident based on the travel times that the existing four-lane section already struggles to accommodate the 2023 traffic volumes, and the 2045 forecasted traffic volumes would be expected to significantly deteriorate operating conditions along the corridor.

TABLE 1. VISSIM 2023 EXISTING AND 2045 NO BUILD TRAVEL TIME RESULTS

Corridor		2023 Existing Simulated travel time (secs)		2045 No Build Simulated travel time (secs)		% Difference	
		AM	PM	AM	PM	AM	PM
William Hilton Parkway between Moss Creek and Indigo Run	EB	1157	619	1579	642	36.47%	3.72%
	WB	572	1252	584	1544	2.10%	23.32%

A preliminary analysis was completed in an effort to determine how much the 2023 existing and 2045 no build traffic volumes would need to be reduced in order for the existing four-lane section to operate acceptably. It was determined that the 2023 existing traffic volumes would need to be reduced by approximately 30% for the current four-lane configuration to operate acceptably. Furthermore, based on an annual growth rate of 0.56%, the 2045 traffic volumes would need to be reduced by approximately 40% for the current four-lane configuration to operate acceptably.

Implementation of a Second Bridge

Lochmueller was asked to evaluate the implementation of a second bridge and/or point of access onto Hilton Head Island from the mainland. It is Lochmueller's understanding that a second bridge or point of access has been discussed locally to address congestion along US 278. A new bridge could take up to twenty years to come to fruition once all studies, planning, environmental, design, and construction is complete.

While there are clear benefits to providing a second bridge, such as redundancy, the operating conditions along US 278 are already congested today. As previously stated, the 2023 existing traffic volumes would need to be reduced by approximately 30% and the 2045 traffic volumes would need to be reduced by approximately 40% for the current four-lane configuration to operate acceptably. Given the congestion already experienced along this corridor today and the time it would take to construct a second bridge, it is our opinion that a six-lane section of US 278 onto Hilton Head Island is needed independently of a second bridge.

Modifications to Existing Transit System

Lochmueller evaluated whether modifications to the existing mass transit system and its services, or the implementation of a new mass transit system, could provide enough benefit to maintain the needed levels of efficiency and operations of a four-lane section between Windmill Harbour and Squire Pope Road.

Based on data provided by the Lowcountry Regional Transportation Authority (LRTA), transit service in the region has been on the decline. It should be noted that the transit service does show signs of rebounding; however, it remains to be seen what the new normal or equilibrium state may mean and if this is sustainable and long lasting for passenger volumes as transit agencies struggle with driver shortages, funding gaps and other operational challenges.

The following ridership data was provided from the LRTA:

- The Palmetto Breeze commuter bus's yearly unlinked trips peaked in 2019 at 196,978
- Trips declined to 129,160 in 2021 (post pandemic)
- Trips increased by 4.45% to 134,916 in 2022 according to the Federal Transit Administration (FTA) National Transit Database (NTD) data

The transit service in the region is fragmented by service area and type (commuter/worker, worker/tourist) and serves different markets with limited coordination. According to the LRTA, they currently have 72,963 yearly unlinked trips or 201 unlinked trips daily across all the routes that serve Hilton Head, with 363 service days and one AM and PM trip respectively. The Breeze Trolley, a seasonal service had 34,600 unlinked trips (2023) across 143 service days or 242 trips per day with 18 daily runs Sunday to Thursday and 20 runs on Friday and Saturday. The trolley runs April through Labor Day from 1 PM to 10 PM daily, with extended service to 11 PM Friday and Saturday.

There is an on-demand van service countywide with trips to Hilton Head. However, the ridership is unknown, and a 24 hour prior reservation is needed to make a trip. There is also a Beach Parking shuttle which operates 47 days per year from 10 AM to 4:30 PM on Friday, Saturday, Sunday and holidays from Memorial Day to Labor Day, with 3,980 riders (2023).

The fixed route Breeze transit option, as currently structured, only largely addresses the employment side to/from the island, and the trolley partially addresses trips of visitors, residents and likely some workers once they are on the island. The Breeze service does provide long distance routes. The on-island trolley is seasonal and has limited service hours. Overall, there is little coordination between the transit service types (commuter bus and trolley/shuttle), and there is service gap from Labor Day to April when the trolley does not currently run.

Based upon Lochmueller's evaluations, it appears transit across all services currently only provides a fraction of the total regional trip making to and from, and on, the island. In the future, transit would need to be more robust in terms of service span (number of trips daily and days per year of service) and coordinated to be most effective, with some sort of travel time advantage and way to address the last mile distribution once passengers are on the island.

As described in the preceding sections of this memorandum, the 2023 existing traffic volumes would need to be reduced by approximately 30% and the 2045 traffic volumes would need to be reduced by approximately 40% for the current 4-lane configuration to operate acceptably. By comparison, in 2021, the transit mode share was less than 1% in the region¹, and would therefore have to grow exponentially to be effective enough to reduce the need for six lanes along US 278 in the area under study.

¹ <https://datausa.io/profile/geo/hilton-head-island-bluffton-towns-beaufort-city-puma-sc#housing>

Therefore, it is Lochmueller's opinion that even if significant modifications were made to the existing Palmetto Breeze transit system, it would be highly unlikely these modifications alone could account for enough trips and the mode share percentage needed to sufficiently reduce the number of trips across the US 278 bridges, such that a four-lane facility could be maintained.

Ferry System/Facility Usage Fee

In addition to expanding the existing mass transit system, Lochmueller evaluated whether the implementation of a new ferry system or the implementation of a facility usage fee, also commonly known as congestion pricing, would provide enough benefit to maintain the existing four-lane section across the US 278 bridges and/or between Windmill Harbour and Squire Pope Road.

In regard to the implementation of a new ferry system, it is our understanding that during the development of the 2045 Lowcountry Area Transportation Study (LATS) Long Range Transportation Plan (LRTP), long-term transit considerations were discussed with the public and stakeholders. One of these considerations included implementing high-speed ferry services between Hilton Head Island and Beaufort or Port Royal to the north, and Savannah or Tybee Island to the south.

It should be noted, however, that no formal studies have been initiated by the LATS Policy Committee or other governing bodies to determine the feasibility of implementing and/or maintaining a high-speed ferry system to/from Hilton Head Island. Therefore, it is reasonable to assume that a high speed ferry system to/from Hilton Head Island would not be fully operational within the next ten to fifteen years. If/when a new ferry system is implemented, it is highly unlikely the resulting reduction in traffic would allow for a four-lane section to be maintained along US 278 across the bridges and/or between Windmill Harbour and Squire Pope Road (e.g., 30% reduction in 2023 traffic or 40% reduction in traffic by 2045), given that the existing Palmetto Breeze transit system accounts for less than 1% of the region's transit mode share today.

In regard to the implementation of a facility usage fee, it is our understanding that laws within the State of South Carolina only allow tolls/fees to be implemented on new roads within the State system. As such, implementing facility usage fees on any of the existing roadways that are within the William Hilton Parkway Gateway Corridor Study area would be prohibited. It should be noted that, even if a facility usage fee could be implemented, the fee would largely impact commuters, not tourists, who enter and exit the island for work, as the majority of traffic during the AM and PM peak hours is a result of commuter traffic. Therefore, even if a facility usage fee could be implemented, it is highly unlikely the resulting reduction in traffic would allow for a four-lane section to be maintained along US 278 across the bridges and/or between Windmill Harbour and Squire Pope Road (e.g., e.g., 30% reduction in 2023 traffic or 40% reduction in traffic by 2045).

Conclusions

Lochmueller evaluated the viability of maintaining four lanes along William Hilton Parkway (US 278) between Windmill Harbour and Squire Pope Road; the implementation of a second bridge; modifications to the existing mass transit system; implementation of a new ferry system; and the implementation of a facility usage fee. These evaluations were completed by Lochmueller to determine feasibility of maintaining a four lane section along William Hilton Parkway between Moss Creek Drive and Squire Pope Road, if one or more of these strategies were implemented.

As noted in this technical memorandum, the existing traffic volumes already create significant congestion along US 278, and the congestion is expected to be exacerbated by 2045 with the forecasted background growth. Based on a preliminary analysis, the existing traffic volumes would need to be reduced by approximately 30%, and the 2045 traffic volumes would need to be reduced by approximately 40%, in order for a four-lane section to operate acceptably.

Based on Lochmueller's evaluations, it was concluded that it would be highly unlikely that modifications to the existing transit system alone could account for enough trips and the mode share percentage needed to sufficiently reduce the number of trips across the US 278 bridges, such that a four-lane facility could be maintained, given that the current transit mode share within the region is less than 1%, and would therefore have to increase exponentially to reach the target goal. In addition, neither the implementation of a new ferry system, nor the implementation of a facility usage fee (if there were a legal way to implement said fee), would be able to significantly reduce the number of vehicles along US 278 within the study area to allow for a four-lane section to be maintained.

In order for the existing four-lane section to operate acceptably, the total reduction in vehicles from mass transit, a new ferry system, and the implementation of a facility usage fee would need to be between 30-40%. While implementing the aforementioned types of transportation strategies would help slow future traffic growth on US 278, it is Lochmueller's opinion that even if all of these strategies are implemented, the reduction in vehicles would not reach 30%. Furthermore, these strategies would not address the structural issues associated with the existing bridges over Mackay Creek and Skull Creek. Consequently, it is Lochmueller's opinion that these strategies should not be considered as viable alternatives to be used individually and/or collectively to solely address traffic congestion and mobility related concerns along US 278 within the project study area, that could allow a four-lane section to be maintained along US 278 within the study area.

In regard to implementing a second bridge and/or point of access onto Hilton Head Island from the mainland, while it is acknowledged there are clear benefits to providing a second bridge (e.g., redundancy during natural disasters), Lochmueller's evaluations show that operating conditions along US 278 are already congested today. Given the congestion that is already experienced along this corridor today, the amount of traffic that would need to be removed from the existing traffic stream to be able to maintain four lanes across the bridge (i.e., 30% reduction in 2023 traffic or 40% reduction in traffic by 2045), and the time it would take to construct a second bridge, it is our opinion that a six-lane section of US 278 onto Hilton Head Island is needed independently of a second bridge.

MEMO

To: Town of Hilton Head Island, South Carolina
From: Lochmueller Group
Date: May 31, 2024
Subject: Independent Study of the William Hilton Parkway Gateway Corridor
 SCDOT Seismic Study Review Findings – Task 1.8

During the May 8, 2024, William Hilton Parkway Gateway Corridor Independent Review Advisory Committee meeting, Lochmueller provided findings related Lochmueller's cursory, high-level review the US 278 Bridge Seismic Study prepared by the South Carolina Department of Transportation (SCDOT) in April of 2020. Lochmueller was asked to perform this cursory, high-level review of SCDOT's Seismic Study to offer a professional opinion regarding the feasibility of seismically retrofitting and structurally rehabilitating the existing US 278 bridges to allow for six travel lanes (three eastbound lanes and three westbound lanes), rather than constructing the new six-lane bridge proposed by SCDOT. A copy of the Seismic Study Review related slides that were presented during the 5/8 Committee meeting are attached to this memorandum as **Appendix A**.

The SCDOT Seismic Study included an evaluation of options to retrofit, widen, or replace the existing US 278 bridges onto Hilton Head Island, and provided information to SCDOT to implement best replacement strategies, as well as detailed Life Cycle Cost Analysis (LCCA) results, considering three Options:

- **Option #1** – Construct a new eastbound bridge over Mackay Creek & Skull Creek; widen the existing westbound bridge over Mackay Creek; and modify the existing Skull Creek bridges for westbound movements.
- **Option #2** – Construct a new eastbound bridge over Mackay Creek & Skull Creek; replace the existing westbound bridge over Mackay Creek; and modify the existing Skull Creek bridges for westbound movements.
- **Option #3** – Construct a new six-lane bridge between Bluffton and Hilton Head Island, and then remove all existing bridges across Mackay Creek and Skull Creek.

A copy of the LLCA prepared by SCDOT's Design team is shown below:

	Option 1	Option 2	Option 3
Initial Construction Cost	\$ 129,560,000.00	\$ 137,837,000.00	\$ 171,108,500.00
Future Construction Cost	\$ 85,233,000.00	\$ 53,151,000.00	\$ -
User Cost	\$ 10,920,000.00	\$ 10,920,000.00	\$ -
Maintenance Cost	\$ 22,900,000.00	\$ 20,850,000.00	\$ 11,350,000.00
Total LCCA Cost	\$ 248,613,000.00	\$ 222,758,000.00	\$ 182,458,500.00
Construction Schedule	60 Months	60 Months	36 Months

It should be noted that Lochmueller's efforts in reviewing the Seismic Study prepared by SCDOT were limited to a cursory review of the SCDOT Design Team's structural analysis related assumptions and findings; LLCA results; their noted benefits/risks with Options 1/2/3; and if these efforts by SCDOT's Design Team appeared to following standard engineering practices. Lochmueller's efforts did not include any detailed evaluations of the SCDOT Design Team's design calculations or software modeling inputs/results; any considerations for alternative Options to consider for inclusion in the Seismic Study; any roadway, bridge, or environmental design/review services; or coordination with SCDOT, their Design Team, Beaufort County, Town of Hilton Head, and/or any other governing Agency or design consultant associated with the US 278 project.

Key observations from Lochmueller's review of the SCDOT Seismic Study are summarized below. Please refer to **Appendix A** for additional information:

- The SCDOT Design Team's structural analysis findings; LLCA results; and noted benefits/risks with Options 1/2/3 appear valid and appear to follow standard engineering practices.
- The LLCA results do not account for costs that would be required to improve seismic conditions for Options 1 & 2. Therefore, true costs associated with Options 1 & 2 would be significantly higher to implement, than what is shown in the LLCA table above.
- Options 1 & 2 would take approximately 2 years longer to construct vs Option 3. The rehabilitated structures would still need to be replaced at some point, and time required to do so is not accounted for in this table.
- Existing bridge structures would be approximately 50 years old after improvements made by Options 1 or 2, with rehab efforts likely to extend life of existing structures by approximately 25 to 35 years. By comparison, typical design life for Option 3 newly constructed bridges approximately 75 to 100 years.
- Options 1 & 2 being pursued for use solely as temporary condition would require more than \$130M to construct initially (using 2020 costs), and these costs do not account for needed Functional Evaluation Earthquake (FEE) seismic design improvements. Depending upon when remaining structures were replaced, the future/user/maintenance costs req'd over that time would assuredly lead to higher overall cost than building new at outset.
- Options 1 & 2 would put maintenance/replacement schedules of the structures on varying timeframes, which would cause additional user disruptions in the future.
- Existing structures under Options 1 & 2 would never meet Safety Evaluation Earthquake (SEE) seismic design requirements. New structures can be built to meet SEE seismic design requirements.
- In summary, Lochmueller does not recommend rehabilitation and/or retrofit options being pursued for this project, in lieu of constructing a new six-lane bridge connecting Bluffton and Hilton Head Island.

SCDOT Seismic Study Review Findings (Task 1.8)

- **Objective: Perform cursory, high-level review of seismic study and offer professional opinion regarding feasibility of seismic retrofit & structural rehab existing bridges vs. constructing new bridge**
 - PDF copy of SCDOT approved US 278 Bridge Seismic Study (dated April 2020) provided to Lochmueller on 4/15/24.
 - Study included evaluation of options to retrofit, widen, or replace the existing US 278 bridges onto HHI, and provided information to SCDOT to implement best replacement strategy, as well as detailed Life Cycle Costs Analysis (LCCA) results, considering following three Options:
 - **Option #1** – Construct new EB bridge over Mackay Creek & Skull Creek; widen existing WB bridge over Mackay Creek; modify existing Skull Creek bridges for WB movements.
 - **Option #2** – Construct new EB bridge over Mackay Creek & Skull Creek; replace existing WB bridge over Mackay; modify existing Skull Creek bridges for WB movements.
 - **Option #3** – Construct new 6-lane bridge; remove all existing bridges

SCDOT Seismic Study Review Findings (Task 1.8)

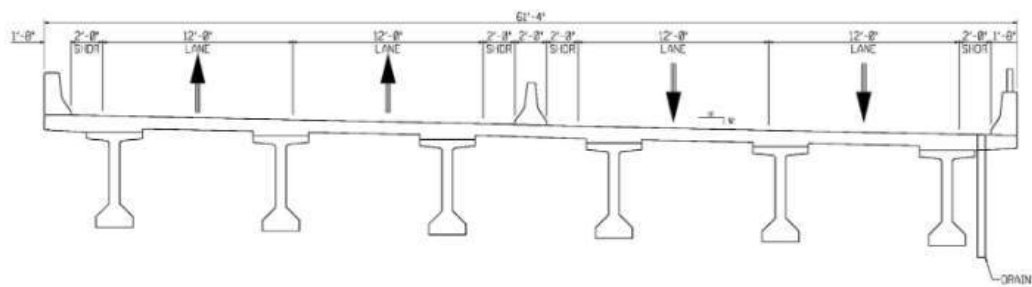
- With each Option, a new EB bridge will be constructed
 - Designed to SCDOT standards to withstand seismic events
 - Serve as a "lifeline" bridge in case of significant seismic event for Options 1 or 2
- Assumed Construction Sequence
 - **Options #1 or #2:**
 - New EB structure constructed wide enough to accommodate 4-Lanes, 2-Way traffic in temporary condition & 6-Lanes in permanent condition.
 - All traffic moved to new EB structure, while demolition / seismic retrofits / structural repairs & replacements take place on existing structures.
 - Traffic then moved in to final positions
 - If necessary, traffic can be returned to the 4-Lanes, 2-Way traffic pattern on EB structure
 - **Option #3:**
 - Entire new 6-Lane structure can constructed with traffic retained in existing patterns

SCDOT Seismic Study Review Findings (Task 1.8)

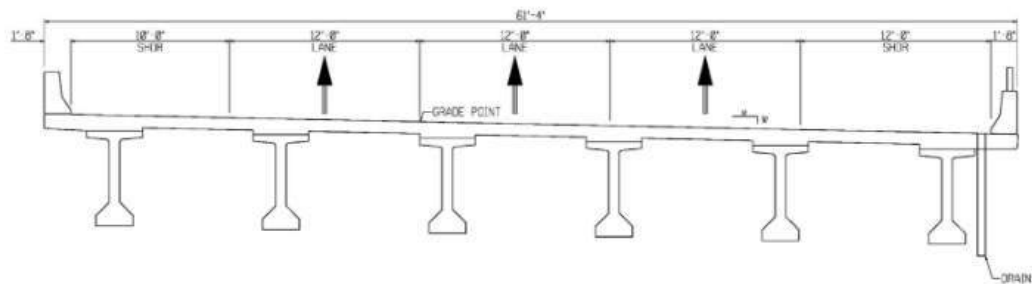


US 278 Bridge Seismic Study

Figure 3.2-1: Option 1 & 2 – New EBL over Skull Creek & Mackay Creek



PROPOSED SECTION
US 278 OVER SKULL CREEK & MACKAY CREEK
(TEMPORARY PATTERN)



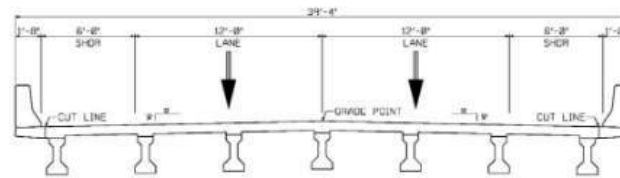
PROPOSED EBL SECTION
US 278 OVER SKULL CREEK & MACKAY CREEK

SCDOT Seismic Study Review Findings (Task 1.8)

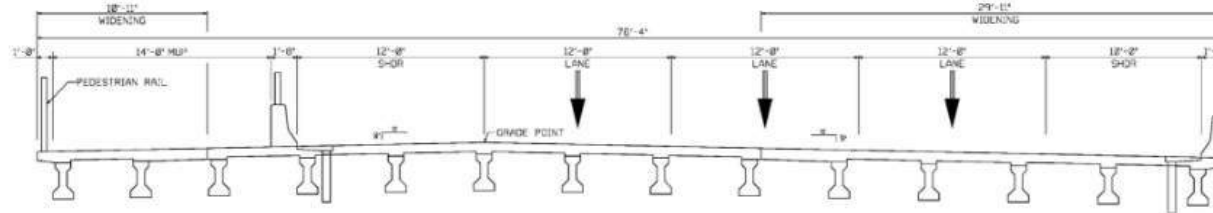
US 278 Bridge Seismic Study



Figure 3.2-2: Option 1 – Widen WBL Mackay Creek



**EXISTING WBL SECTION
US 278 OVER MACKAY CREEK**



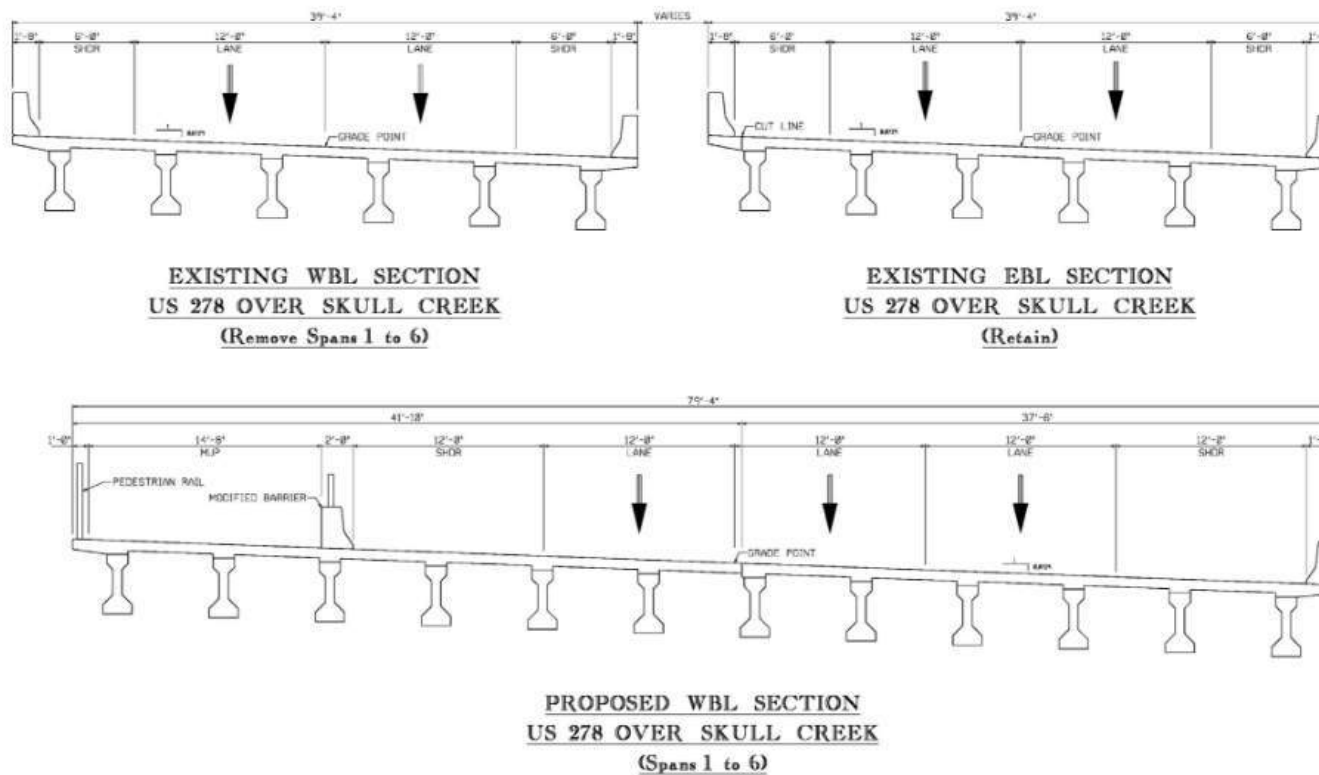
**PROPOSED WBL SECTION
US 278 OVER MACKAY CREEK**

SCDOT Seismic Study Review Findings (Task 1.8)

US 278 Bridge Seismic Study



Figure 3.2-3: Option 1 & 2 - Combine Skull Creek Bridges
(Information for Spans 1-6)

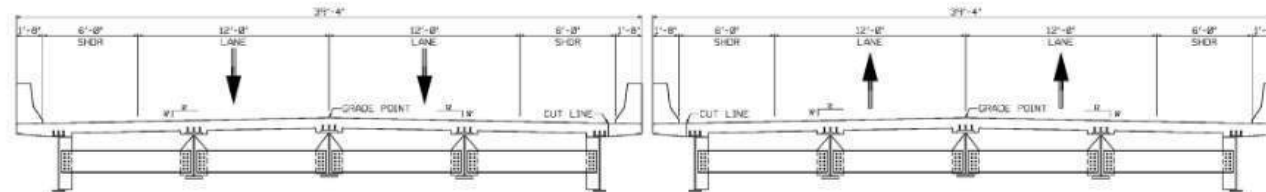


SCDOT Seismic Study Review Findings (Task 1.8)

US 278 Bridge Seismic Study

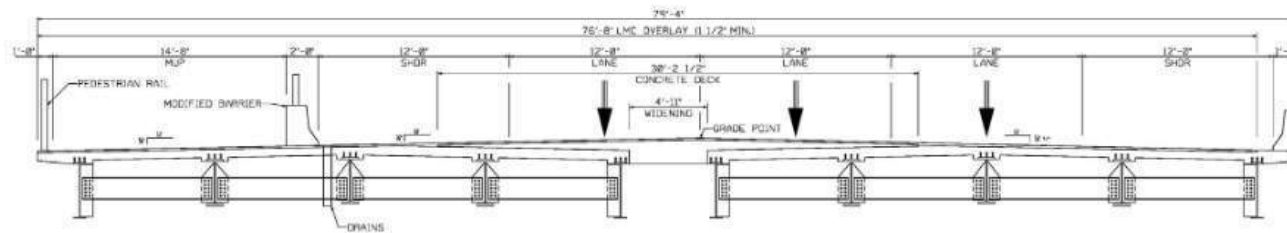


Figure 3.2-4: Option 1 & 2 - Combine Skull Creek Bridges
(Information for Spans 7-26)



EXISTING WBL SECTION
US 278 OVER SKULL CREEK

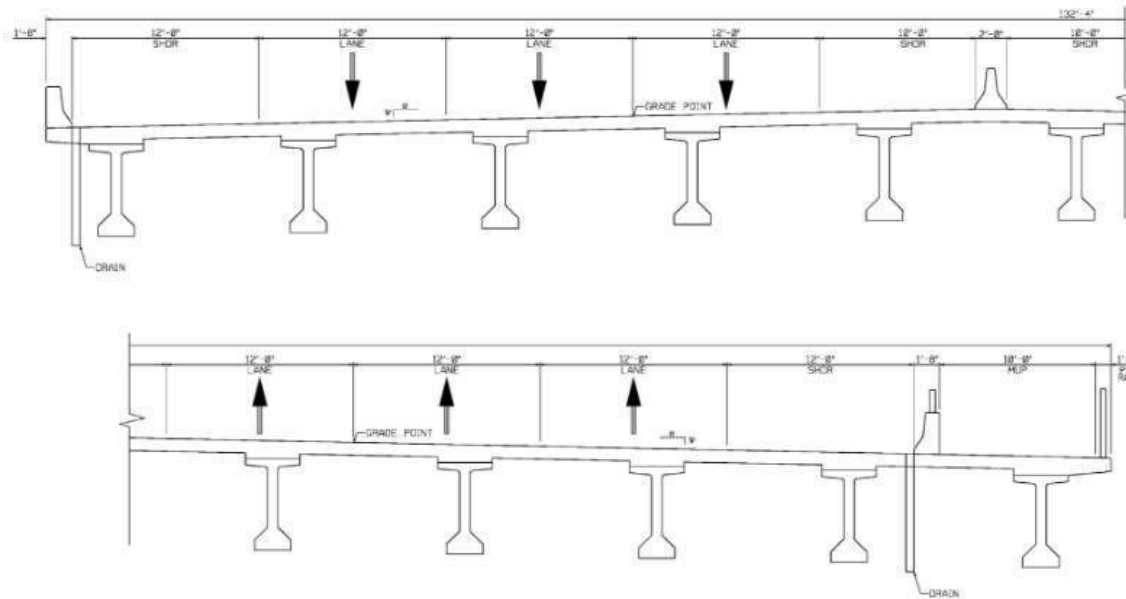
EXISTING EBL SECTION
US 278 OVER SKULL CREEK



PROPOSED WBL SECTION
US 278 OVER SKULL CREEK
(Spans 7 to 26)

SCDOT Seismic Study Review Findings (Task 1.8)

Figure 3.2-5: Option 3 - New 6-Lane Structure over Mackay Creek & Skull Creek



PROPOSED SECTION
US278 OVER SKULL CREEK & MACKAY CREEK



SCDOT Seismic Study Review Findings (Task 1.8)

- **Key Assumptions/Findings Noted by SCDOT Design Team:**
 - All existing bridges designed and constructed prior to SCDOT's implementation of seismic analysis and detailing. Therefore, **all existing bridges are considered inadequate when compared to today's seismic design standards.**
 - In order to model existing structures, SCDOT design team assumed minimum level of seismic retrofits would be performed. Design team did not determine if existing structures could withstand any seismic event without minimum retrofits being performed.
 - SCDOT design team intended to evaluate the bridges for two seismic events as required by SCDOT Seismic Design Specifications (SDS):
 - **Functional Evaluation Earthquake (FEE)** = lower magnitude earthquake event that has higher chance of occurrence during life of the bridge.
 - **Safety Evaluation Earthquake (SEE)** = higher magnitude earthquake event that has lower chance of occurrence during life of the bridge.
 - NOTE: US 278 Bridges assigned highest SCDOT SDS classification rating OC 1; therefore, must meet FEE design thresholds at a minimum

SCDOT Seismic Study Review Findings (Task 1.8)

- **Key Assumptions/Findings Noted by SCDOT Design Team (cont.):**
 - It was determined that soils around and below the existing bridge foundations and roadway approaches can liquefy at ground accelerations just above the FEE event:
 - This liquefaction could cause bridges/roadways to settle, slide or collapse during and/or after seismic event.
 - Design team recognized that mitigation for liquefaction (i.e., add'l foundations, deep soil mixing, etc.) would likely exceed costs for new construction, and would greatly increase environmental disturbance.
 - Design team therefore elected to limit structural improvements through seismic retrofits to FEE level, w/ SCDOT concurrence.
 - New bridges can be constructed to meet SEE requirements; existing bridges only will be able to attain FEE requirements at best.

SCDOT Seismic Study Review Findings (Task 1.8)

- **Key Assumptions/Findings Noted by SCDOT Design Team (cont.):**
 - SCDOT Design team prepared LCCA, for Options 1/2/3, as shown below.
 - Costs are in 2020 dollars, assume annual inflation of 2% for future costs.
 - Construction costs developed from historical data, as well as correspondence w/ local Contractors. **Widening existing structures over water ~1.5 to 2 times more expensive than new construction.**
 - User Costs developed from SCDOT provided data, based on cost/lane/day.
 - Maintenance costs based on existing bridge details and assumed new bridges.
 - NOTE: LCCA costs only reflect rehabilitation related costs (e.g., widening, maintenance, cosmetic improvements), and do **not** include retrofit related costs (e.g., seismic related improvements). Therefore, **true costs to attain FEE standards for Options 1 & 2 would be significantly higher than those shown in the table below.**

	Option 1	Option 2	Option 3
Initial Construction Cost	\$ 129,560,000.00	\$ 137,837,000.00	\$ 171,108,500.00
Future Construction Cost	\$ 85,233,000.00	\$ 53,151,000.00	\$ -
User Cost	\$ 10,920,000.00	\$ 10,920,000.00	\$ -
Maintenance Cost	\$ 22,900,000.00	\$ 20,850,000.00	\$ 11,350,000.00
Total LCCA Cost	\$ 248,613,000.00	\$ 222,758,000.00	\$ 182,458,500.00
Construction Schedule	60 Months	60 Months	36 Months

SCDOT Seismic Study Review Findings (Task 1.8)

- **Key Assumptions/Findings Noted by SCDOT Design Team (cont.):**
 - SCDOT Design team evaluated benefits & risks of Options 1/2/3

Benefits / Risks of Options 1, 2 and 3

Option 1	Initial Construction Cost	Least (assumed)	Initial cost of retrofits and widening may be less than the cost of a new structure and demolition.
	Utility Relocation	Least	Every option will require the relocation of the 24" diameter waterline as well as the fiber optic line. May require the relocation of the power line on poles. Avoids the power lines on towers.
	Constructability	Hardest	New EBL built off alignment from ground, barge and temporary work trestle. Skull Creek will be challenging to retrofit, especially in curved sections. Mackay Creek widening will follow demolition of existing EBL bridge.
	Future Maintenance	Greatest	WBL Mackay and Skull Creek bridges will be 50 year old bridges at completion of project and require more substantial maintenance. Steel bridges also require additional maintenance versus concrete bridges.
	Pickney Island Access	Worst	Island access still tied to existing (improved) interchange along US 278. New bridge could include ramps to access island.
	Environmental Impact	Least	The new EBL bridge and widening of WBL over Mackay Creek will increase impacts. The removal of existing EBL will reduce impacts.
	Seismic Response	FEE / SEE	The new EBL bridge will be designed for the SEE event. WBL Skull Creek may only withstand the FEE event. Mackay Creek may not be able to withstand the FEE event within acceptable performance limits.

SCDOT Seismic Study Review Findings (Task 1.8)

• Key Assumptions/Findings Noted by SCDOT Design Team (cont.):

- SCDOT Design team evaluated benefits & risks of Options 1/2/3 (cont.)

Option 2	Initial Construction Cost	Middle	Replacing WBL Mackay Creek bridge may cost more than widening and retrofit. All other costs are similar.
	Utility Relocation	Least	Same as Option 1.
	Constructability	Middle	WBL Mackay Creek will be constructed after demolition is performed, increasing construction schedule. Existing EBL Mackay Creek bridge may be used for construction access.
	Future Maintenance	Middle	Skull Creek bridges will be 50 year old bridges at completion of project and require more substantial maintenance. Steel bridges also require additional maintenance versus concrete bridges. New Mackay Creek WBL will reduce maintenance versus Option 1.
	Pickney Island Access	Worst	Same as Option 1.
	Environmental Impact	Middle	There will be a slight increase in environmental impact due to new construction versus widening for Option 1.
	Seismic Response	FEE / SEE	The new WBL Mackay Creek bridge and new EBL bridge will be designed for the SEE event. WBL Skull Creek bridges may only withstand the FEE event within acceptable performance limits.
Option 3	Initial Construction Cost	Most	Replacing all bridges will be most expensive initial construction cost.
	Utility Relocation	Most	Power lines south of the Skull Creek bridges will need to be relocated in addition to the waterline and fiber optic line. This may be the same for all 3 options.
	Constructability	Easiest	Bridge will be constructed off alignment. Provides the shortest construction schedule.
	Future Maintenance	Least	All bridges will be new.
	Pickney Island Access	Best	A new interchange can be constructed with right-in, right-out only access. Existing Skull Creek bridges could be modified to maintain Pinckney Island access while US 278 bypasses the island.
	Environmental Impact	Most	A new 6 lane alignment will have highest impacts. Removal of existing bridges and causeway will reduce impacts.
	Seismic Response	SEE	All bridges will be designed for SEE event.

SCDOT Seismic Study Review Findings (Task 1.8)

- **Key Observations by Lochmueller Group:**

- SCDOT Design Team's structural analysis findings; LCCA results; and noted benefits/risks associated with Options 1/2/3 appear valid and appear to follow standard engineering practices.

	Option 1	Option 2	Option 3
Initial Construction Cost	\$ 129,560,000.00	\$ 137,837,000.00	\$ 171,108,500.00
Future Construction Cost	\$ 85,233,000.00	\$ 53,151,000.00	\$ -
User Cost	\$ 10,920,000.00	\$ 10,920,000.00	\$ -
Maintenance Cost	\$ 22,900,000.00	\$ 20,850,000.00	\$ 11,350,000.00
Total LCCA Cost	\$ 248,613,000.00	\$ 222,758,000.00	\$ 182,458,500.00
Construction Schedule	60 Months	60 Months	36 Months

- LCCA results do not account for costs that would be required to improve seismic conditions for Options 1 & 2. Therefore, **true costs associated with Options 1 & 2 would be significantly higher to implement, than what is shown in the LCCA table above.**
- Options 1 & 2 would take ~ 2 years longer to construct vs Option 3. **The rehabilitated structures would still need to be replaced at some point, and time required to do so is not accounted for in this table.**

SCDOT Seismic Study Review Findings (Task 1.8)

- Key Observations by Lochmueller Group (cont.):

	Option 1	Option 2	Option 3
Initial Construction Cost	\$ 129,560,000.00	\$ 137,837,000.00	\$ 171,108,500.00
Future Construction Cost	\$ 85,233,000.00	\$ 53,151,000.00	\$ -
User Cost	\$ 10,920,000.00	\$ 10,920,000.00	\$ -
Maintenance Cost	\$ 22,900,000.00	\$ 20,850,000.00	\$ 11,350,000.00
Total LCCA Cost	\$ 248,613,000.00	\$ 222,758,000.00	\$ 182,458,500.00
Construction Schedule	60 Months	60 Months	36 Months

- Existing bridge structures would be ~50 years old after improvements made by Options 1 or 2, with rehab efforts likely to extend life of existing structures by ~25 to 35 years. By comparison, **typical design life for Option 3 newly constructed bridges ~ 75 to 100 years.**
- Options 1 & 2 being pursued for use solely as temporary condition would require >\$130M to construct initially (using 2020 costs), and **these costs do not account for needed FEE improvements.** Depending upon when remaining structures were replaced, the future/user/maintenance costs req'd over that time would assuredly lead to higher overall cost than building new at outset.

SCDOT Seismic Study Review Findings (Task 1.8)

- Key Observations by Lochmueller Group (cont.):

	Option 1	Option 2	Option 3
Initial Construction Cost	\$ 129,560,000.00	\$ 137,837,000.00	\$ 171,108,500.00
Future Construction Cost	\$ 85,233,000.00	\$ 53,151,000.00	\$ -
User Cost	\$ 10,920,000.00	\$ 10,920,000.00	\$ -
Maintenance Cost	\$ 22,900,000.00	\$ 20,850,000.00	\$ 11,350,000.00
Total LCCA Cost	\$ 248,613,000.00	\$ 222,758,000.00	\$ 182,458,500.00
Construction Schedule	60 Months	60 Months	36 Months

- **Options 1 & 2** would put maintenance/replacement schedules of the structures on varying timeframes, which **would cause additional user disruptions in the future**.
- **Existing structures under Options 1 & 2 would never meet SEE seismic design requirements.** New structures can be built to meet SEE seismic design requirements.
- In summary, Lochmueller does not recommend rehabilitation and/or retrofit options be pursued.

MEMO

To: Town of Hilton Head Island, South Carolina
From: Lochmueller Group
Date: May 13, 2024
Subject: Independent Study of the William Hilton Parkway Gateway Corridor
Response to Advisory Committee Desire to Fully Evaluate Southern Bypass Alternative

During the May 8, 2024, William Hilton Parkway Gateway Corridor Independent Review Advisory Committee meeting, Lochmueller provided cursory, high-level observations related to traffic, geometric, ROW, and environmental challenges associated with the “Southern Bypass” alternative that has been brought up by citizens and/or Committee members. The primary purpose for sharing this information with the Committee and others in attendance was to provide reasoning as to why Lochmueller did not include this Southern Bypass alternative as one of the four alternatives that were thoroughly evaluated as a part of our independent study. A copy of the Southern Bypass related slides that were presented during the 5/8 Committee meeting are attached to this memorandum as **Appendix A**.

As specified during the May 8 Committee meeting, Lochmueller has been clear that our professional opinion is that any iteration of a new terrain route along the south side of US 278 is not feasible due to the many sensitive resources that would be impacted. However, the May 8 Committee meeting included a passing voice vote that seemingly puts Lochmueller in the position of having to evaluate an alternate concept that still has considerable identified flaws and only perpetuates a fallacious motive by some members of the Committee. We contend that further exploration and detailed evaluation of such a concept only serves as an exercise in futility and would not expend the Town’s money prudently, as the results will remain unchanged. Additionally, we can predict with certainty that South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA) will outright reject such a concept, regardless of its location south of US 278, because such a premise fails to regard the basic NEPA principles applied to projects of avoid, minimize, and mitigate. If the Town expands our scope to provide an in-depth analysis regarding the viability of a southern bypass alternative, we want to be certain the following is clear:

- 1) The FHWA and SCDOT will not accept any version of a route that extends on new terrain creating more direct impacts to the Stoney TCP and other Section 4(f) resources.
- 2) Recommending the inclusion of the southern bypass as part of SCDOTs recommended preferred alternative has grave implications associated with the trajectory of the level of NEPA document being prepared, if adopted by SCDOT. Currently, SCDOT is preparing an Environmental Assessment (EA) for the project. An EA is prepared for projects where it is unknown whether there are clear significant impacts to the natural or human environment, and typically culminates with FHWA issuing a Finding of No Significant Impact (FONSI). The FONSI is FHWA’s decision document for the project that acknowledges the absence of any significant impacts to the natural or human environment. However, at any point during the development of an EA, FHWA can elevate the level of environmental documentation to an Environmental Impact Statement

Huntington Tower, 201 W Springfield Avenue, Suite 1012
Champaign, Illinois 61820
PHONE: 217.673.7633

(EIS) if they foresee the potential for significant impacts. EIS-level projects conclude with FHWA issuing a Record of Decision (ROD), which is their acceptance of the preferred alternative and identification of all mitigation measures to offset the significant impacts. If FHWA elevates this project to an EIS, it is likely to require at least an additional two years to reach a ROD. Some of this time is attributed to necessary backsteps in the process to make the transition to the higher level of document, but a majority of it resides with time needed to update / complete the essential technical analyses that would be prompted by such an action in this case. A summary of some major actions associated with the elevation to an EIS for this project is listed below.

- Publication of a Notice of Intent (NOI) in the Federal Register
- Scoping meeting with resource agencies
- Update alternatives analysis
- Update noise analysis
- Update environmental justice analysis / additional outreach
- Update ecological surveys and supplemental coordination with agencies
- Updating Section 106 process to reflect adverse effects to previously reviewed resources (Stoney TCP) and new cultural resources (Honey Horn Plantation)
- Amend the Section 106 Memorandum of Agreement (MOA) to account for mitigation measures for new adverse effects
- Completion of an Individual Section 4(f) Evaluation for Stoney TCP, Park at 152 William Hilton Parkway, and Honey Horn Plantation)
- Prepare a Draft EIS
- Prepare for and conduct another public hearing
- Prepare Final EIS / ROD

This is not intended to be an exclusive list of tasks needed for the transition to an EIS but provides some insight on the breadth in task detail that will be required for such an endeavor. Elevation to an EIS would also likely make the project subject to the July 2020 regulations promulgated by the Council on Environmental Quality (CEQ) regarding Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act. Specifically, Section 1501.10(b)(2) of 40 CFR which mandates the completion of EISs within two years measured from NOI to ROD.

- 3) The requested analysis, if authorized by Town Council, is a deviation from our agreed upon scope of work and will require additional funds. We have taken the liberty of outlining some cost estimates to complete a full evaluation of the southern bypass to the same level as the other four alternatives approved by the Committee. Please note that what is provided below are ballpark estimates, intended to provide the Town with context regarding the scale of a supplemental request, and are not definitive costs.

May 13, 2024

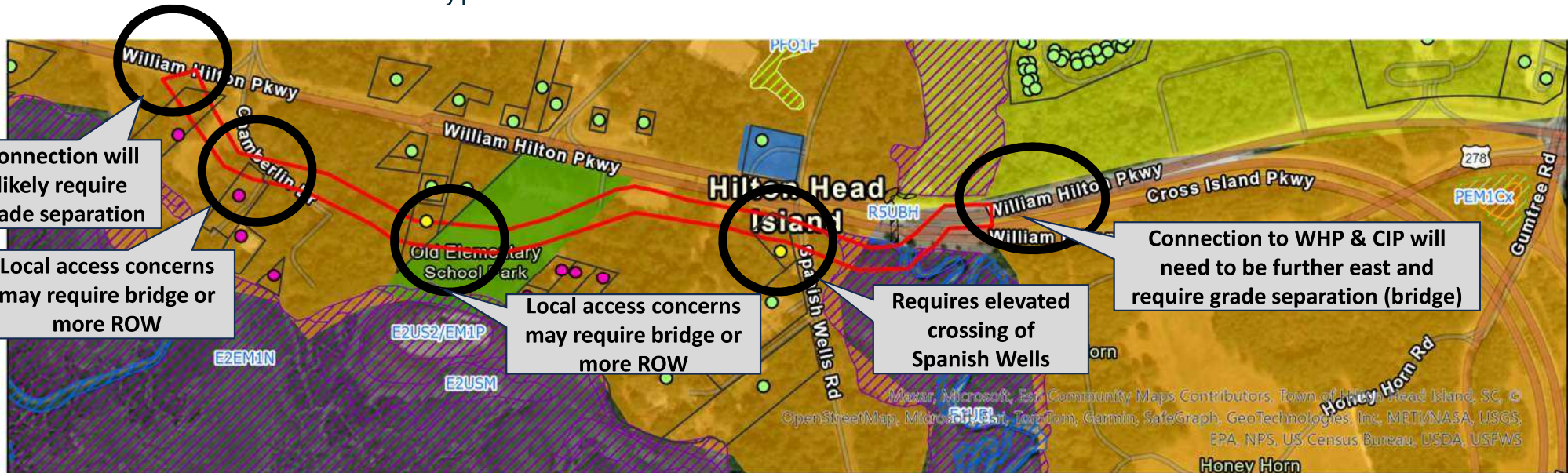
Page 3

<i>Discipline</i>	<i>Scope Modifications</i>	<i>Est. Cost</i>
Traffic Engineering Services	Evaluate concept to the level of detail identified in Task 3.3.3.	\$9,000
Environmental Services	Evaluate concept to match level of effort identified in Task 3.4.	\$8,000
Roadway/ROW/Costing Services	Define most realistic concept alignment, tie-in points to CIP, and general ROW footprint. Prepare cost estimate for concept.	\$9,000
Cursory Observation Services of TWG's Version 3.1	Initial observations already completed by Lochmueller to assess the TWG's Version 3.1 of the southern bypass, and presentation of findings at 5/8 Committee meeting.	\$5,725
TOTAL COST		\$31,725
TIME REQUIRED FOR COMPLETION (*UPON RECEIVING FORMAL NTP)		3 WEEKS

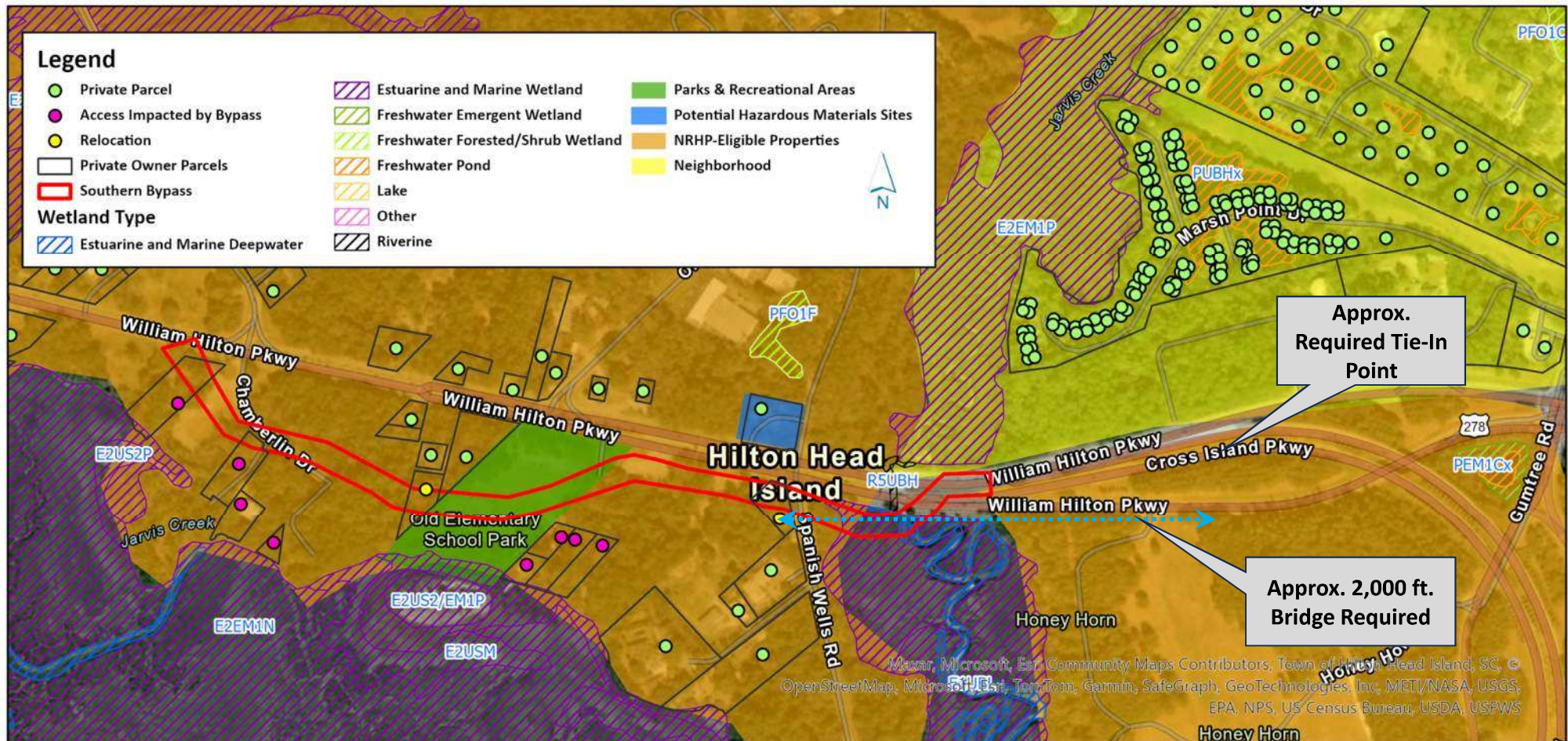
Pending a decision regarding the Southern Bypass, as per your direction, we will proceed with our Task 4 related modeling efforts for Alternative 1 (with minor modifications noted on 5/1). Any further evaluation of the Southern Bypass will be placed on hold until a definitive direction is received from you.

“Southern Bypass” | Cursory Traffic Overview

- At 12/12/23 Committee meeting, Committee members prioritized limiting impacts to ROW (any public and/or private parcels) as guidance to Lochmueller when selecting potential Alternatives. Topic re-emphasized at 3/27/24 Committee meeting.
- The “Southern Bypass” is not anticipated to improve the operating conditions of Gumtree Road, as there is no way to effectively bypass Gumtree at-grade.
- While the bypass has the opportunity to remove most of the through traffic from US 278, if the bypass is at grade, then it will still need to cross several streets as shown below, reducing the effectiveness of the bypass.



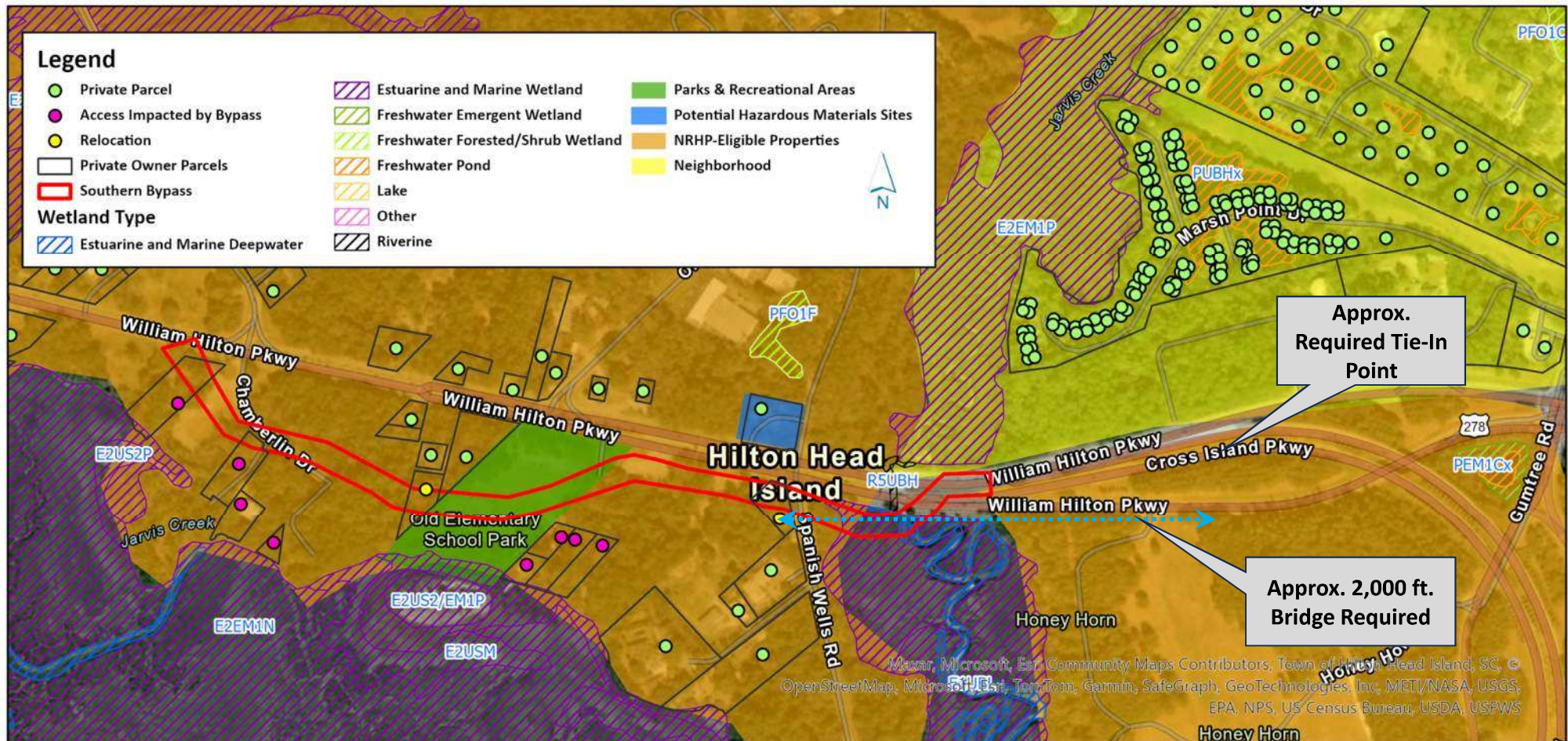
“Southern Bypass” | Cursory Overview Map



“Southern Bypass” | Cursory Engineering Overview

Categories	Prior SCDOT Findings / Considerations	Southern Bypass Constraints / Issues	Southern Bypass Overall Risks
Engineering Feasibility	• Concept not considered	• The horizontal alignment to the east tying back into US 278, as presented, is not feasible • Current at-grade alignment creates access issues at Chamberlin Drive that requires consideration (i.e., bridge) • Tie-in point requires moving east to the Cross Island Parkway ramp (US 278 East)	• Challenges in addressing the horizontal and vertical alignments need to be addressed – affects time and cost • New bridge, approximately 2,000 ft. in length required between Spanish Wells Road and Cross Island Parkway ramp
Right-of-Way	• Total of 34 acres of right-of-way required for the recommended preferred alternative	• Estimated 6 additional acres required • Eliminates approximately 1.2 acres from SCDOTs proposed right-of-way needed for recommended preferred alternative 4(a) • 23 total parcels impacted (18 publicly owned 5 privately owned) • Creates 8 private parcels with access concerns (2 of which are partially impacted)	• Additional right-of-way increases impacts to sensitive environmental resources • Additional time necessary to address access issues with the 8 parcels (total purchase or additional access road to Spanish Wells Road)
Relocations	• Two commercial relocations	• Results in at least 2 additional relocations	• Additional impacts to Stoney TCP

“Southern Bypass” | Cursory Overview Map



“Southern Bypass” | Cursory Environmental Overview

Categories	Prior SCDOT Findings / Considerations	Southern Bypass Constraints / Issues	Southern Bypass Overall Risks
Section 106 (Cultural)	• “Adverse Effect” finding for the project due to impacts to Archaeological Site 38BU66; “No Adverse Effect” for Stoney TCP	• Greater impacts to Stoney TCP • New impacts to Honey Horn Plantation if tie-in corrected	• Change in effect finding for Stoney TCP to “Adverse Effect” • New “Adverse Effect” likely for Honey Horn Plantation • Amendment to the Memorandum of Agreement likely
Section 4(f)	• <i>De minimis</i> impact finding for both Stoney TCP and the Old Elementary School Park • Honey Horn Plantation was not impacted	• Additional “use” of Stoney TCP & Old Elementary School Park • New “use” of Honey Horn Plantation	• Additional use of non-transportation land from Stoney TCP & the Old Elementary School Park likely to elevate to an Individual 4(f) evaluation • Time and cost expended to complete the Individual evaluation $\neq$ a feasible & prudent option
Environmental Justice / Community Impacts	• 1 EJ community identified – Stoney • Determined project effects are not disproportionately high & adverse compared to non-EJ areas	• New impacts to the EJ Stoney community requires: ✓ Outreach & engagement ✓ Benefits & burdens analysis ✓ Noise considerations	• New terrain route introduces potential added benefits & burdens to evaluate • Potential unacceptance by the EJ community • Added mitigation costs
Ecological Impacts	• Impacts 22.9 acres of wetlands / streams • Impacts 145 acres of floodplain • “May Affect – Not Likely to Adversely Affect” finding for threatened & endangered from U.S. Fish & Wildlife Service	• Creation of segmented forest block (Approx. 4 acres of tree clearing) • Approx. 0.7 acre of NWI wetland impact; 140 linear ft. of stream impact • Approx. 1 acre of floodplain impact	• Agency concerns with added forest, wetland, stream, & floodplain impacts • Potential elevation in Threatened & Endangered Species finding • Added mitigation costs

**APPENDIX I: 2045 ALTERNATIVE 1 TRAFFIC VOLUMES AND OPERATING CONDITIONS
(SYNCHRO)**

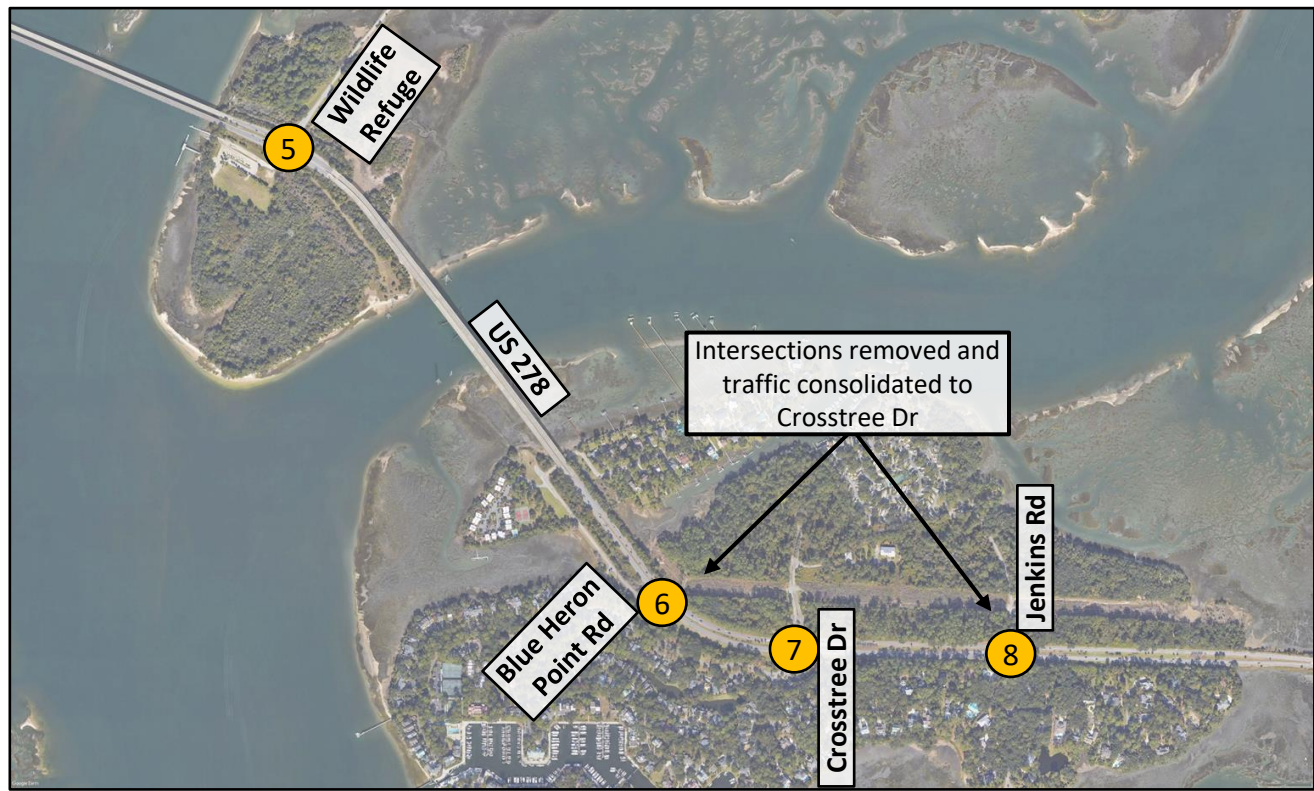
Table I-1. 2045 Alternative 1 Traffic Operating Conditions (Synchro)

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (16.9)	B (12.9)
Eastbound Approach	B (16.2) [361] <0.54>	A (8.7) [254] <0.50>
Westbound Approach	C (20.4) [180] <0.38>	B (12.1) [291] <0.86>
Northbound Approach	B (17.1) [49] <0.08>	D (47.7) [77] <0.11>
Southbound Approach	A (7.2) [55] <0.18>	C (27.1) [137] <0.23>
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (14.8)	C (19.1)
Eastbound Approach	B (13.1) [283] <0.64>	B (14.0) [274] <0.75>
Westbound Approach	B (13.9) [223] <0.51>	C (21.1) [348] <0.89>
Northbound Approach	C (24.5) [120] <0.56>	D (38.2) [97] <0.74>
Southbound Approach	C (24.4) [80] <0.45>	D (27.4) [169] <0.88>
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	C (18.9) [27] <0.04>	F (65.8) [33] <0.33>
Westbound Left Turn	E (44.8) [<25] <0.08>	D (34.9) [<25] <0.22>
Northbound Approach	B (14.2) [59] <0.31>	C (11.4) [59] <0.30>
Southbound Approach	B (17.0) [91] <0.63>	F (173.4) [305] <2.05>
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	D (27.4) [<25] <0.06>	B (17.7) [34] <0.13>
Northbound Approach	E (37.7) [53] <0.58>	F (99.8) [127] <1.26>
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Northbound Right-Turn	A (3.0) [<25] <0.00>	A (1.3) [<25] <0.00>
Southbound Right-Turn	No volumes observed	A (2.9) [<25] <0.00>
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	B (15.4)	B (14.6)
Eastbound Approach	B (18.6) [338] <0.82>	B (11.6) [283] <0.70>
Westbound Approach	A (8.4) [166] <0.45>	B (19.6) [280] <0.92>
Northbound Approach	D (52.9) [93] <0.35>	E (60.4) [108] <0.72>
Southbound Approach	C (31.0) [<25] <0.06>	D (48.9) [30] <0.14>
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
A: The Crazy Crab & William Hilton Pkwy (un-signalized)		
Westbound Left-Turn	F (169.2) [<25] <0.05>	F (77.1) [<25] <0.02>
Northbound Right-Turn	F (95.8) [<25] <0.02>	E (39.3) [<25] <0.01>
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (18.1)	C (23.3)
Eastbound Approach	B (13.3) [852] <0.75>	B (11.1) [467] <0.71>
Westbound Approach	A (3.2) [91] <0.48>	B (18.0) [522] <0.97>
Northbound Approach	E (70.6) [263] <0.07>	F (84.1) [#464] <0.29>
Southbound Approach	D (52.9) [151] <0.58>	E (65.6) [281] <0.70>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	C (17.0) [74] <0.36>	E (43.2) [32] <0.20>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (26.0)	C (20.9)
Eastbound Approach	B (11.7) [354] <0.99>	B (10.1) [216] <0.85>
Westbound Approach	A (8.7) [350] <0.91>	C (28.3) [1107] <0.99>
Northbound Approach	E (73.5) [459] <0.66>	E (70.9) [#609] <0.95>
Southbound Approach	E (58.6) [411] <0.76>	E (57.7) [430] <0.77>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (38.8)	D (38.4)
Eastbound Approach	C (32.3) [655] <0.77>	C (31.3) [489] <0.93>
Westbound Approach	D (40.4) [310] <0.75>	D (43.6) [554] <0.97>
Northbound Approach	E (57.4) [375] <0.41>	D (54.5) [319] <0.93>
Southbound Approach	E (60.8) [293] <0.87>	E (74.3) [298] <0.90>

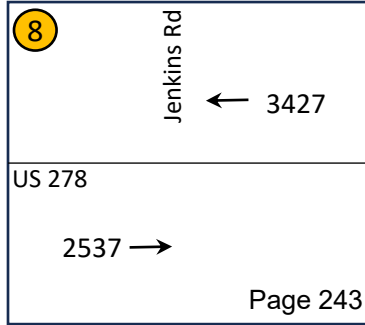
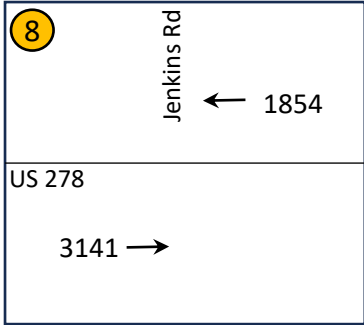
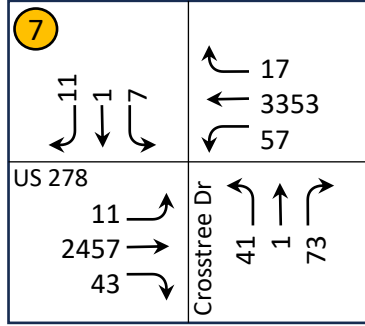
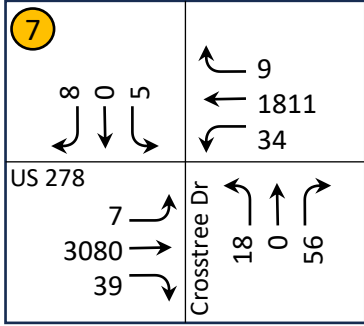
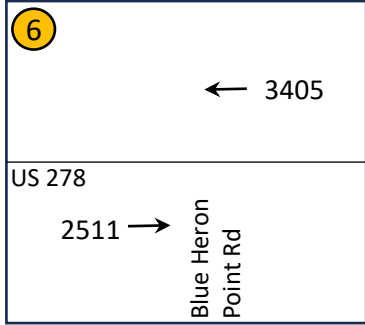
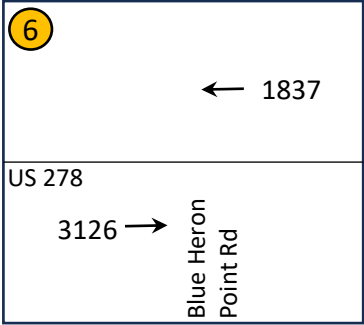
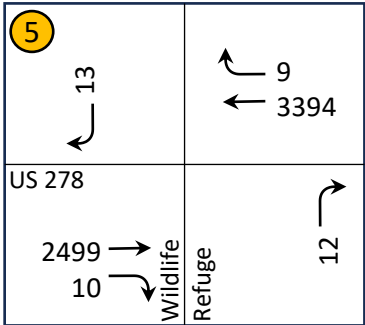
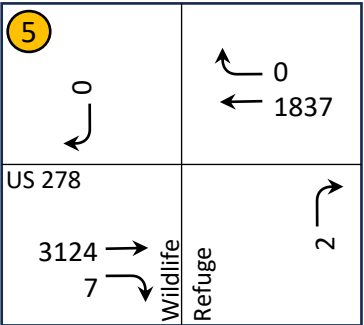
– 95th Percentile volume exceeds capacity

2045 Alternative 1. Modified Recommended Traffic Volumes



AM Peak Hour Volumes

PM Peak Hour Volumes



APPENDIX J: TECHNICAL ENVIRONMENTAL OVERVIEW

MEMO

To: Nathan Nohren, PE, PTOE, Senior Traffic Engineer

From: Chad Costa, Environmental Department Manager, Ashley Taylor, Environmental Specialist, and Samantha Beaupre, Environmental Specialist

Date: May 3, 2024

Subject: William Hilton Parkway Gateway Corridor – Technical Environmental Overview

1.0 Regulation Overview

This section encompasses a brief description of the applicable laws and regulations pertaining to the human and natural environment, which help shape the decision-making process for projects with Federal funding.

1.1 National Environmental Policy Act

The Federal Highway Administration (FHWA) is required by the National Environmental Policy Act (NEPA) to evaluate potential impacts to the social, economic, and natural environments for the proposed reasonable alternatives. According to the NEPA federal government website (www.nepa.gov), Section 101 ([42 U.S.C. §4331\(a\)](#)) of NEPA sets forth a national policy "to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." Section 102 ([42 U.S.C. §4332\(2\)\(C\)](#)) of NEPA "establishes procedural requirements, applying that national policy to proposals for major Federal actions significantly affecting the quality of the human environment by requiring Federal agencies to prepare a detailed statement on: (1) the environmental impact of the proposed action; (2) any adverse effects that cannot be avoided; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources that would be involved in the proposed action."

1.2 Clean Water Act

The Clean Water Act (CWA) ([33 U.S.C. §1251](#)) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.

1.3 Endangered Species Act

The Federal Endangered Species Act (ESA) of 1973 ([16 U.S.C. §1531](#)) is the federal regulation whose goal is "to protect and recover imperiled species and the ecosystems upon which they depend." The U.S. Fish and Wildlife Service (USFWS) manages terrestrial and freshwater organisms while the National Oceanic and Atmospheric Administration (NOAA) Fisheries manages marine and anadromous species. Both administer the ESA and establish a list of protected species.

1.4 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) of 1972 ([16 U.S.C. 1361](#)) 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.

1.5 Section 106 of the National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) ([16 U.S.C. §470](#)) requires Federal agencies to take into account the effect of federal undertakings on historic properties and provide the Advisory Council of Historic Preservation (ACHP) an opportunity to comment on the undertaking. The NHPA established the National Register of Historic Places (NRHP). Items considered for the NRHP include districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture, which possess national, state, or local significance. The NHPA also provides funding for the State Historic Preservation Officer (SHPO) and staff to conduct surveys and develop comprehensive preservation planning standards for state programs.

1.6 Section 4(f) of the U.S. Department of Transportation Act

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 states that USDOT-funded projects are prohibited from using land from certain properties unless there is no feasible and prudent alternative to the use of the Section 4(f) resource. The proposed action must also include planning to minimize harm to the property that would result from such use. The purpose of Section 4(f) is to protect historic sites and publicly owned park and recreation lands and wildlife and waterfowl refuges. Section 4(f) properties are defined by [23 U.S.C. §138](#) and the [Section 4\(f\) Policy Paper](#) as “any publicly owned land from a public park, recreation area, of wildlife and waterfowl refuge of national, state, or local significance as determined by the federal, state, or local officials having jurisdiction thereof, or any land from an historic site of national, state, or local significance as so determined by such officials.” The law prevents agencies within the USDOT from approving a project that “uses” land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites providing, 1) there is no feasible and prudent alternative to the use of the resource, 2) the project includes measures to minimize harm to the resource, or 3) the agency determines the use of the resource is considered to be a *de minimis* impact. A “use” is considered to be the conversion of a Section 4(f) property from a non-transportation use to a transportation use.

1.7 Environmental Justice

[Executive Order \(EO\) 12898](#) was signed in 1994 and requires Federal actions to identify and address potentially disproportionately high and adverse human health or environmental impacts among minority and low-income populations which may occur as part of the proposed project. [EO 13985](#) was signed in 2021 and expanded in [EO 12898](#) to consider not only minority and low-income populations, but assess “equity with respect to race, ethnicity, religion, income, geography, gender identity, sexual orientation, and disability.” The order also expanded to evaluate whether “underserved communities and their members face systemic barriers in accessing benefits and opportunities available.”

2.0 Methodology

2.1 Limitations and Exceptions

There were several limitations and exceptions considered as part of this independent environmental overview, which are described in more detail below. Lochmueller Group has applied generally accepted professional practices and standards and exercised its professional judgment, skill, and care in a manner consistent with that of other professionals performing similar work under similar conditions.

2.1.1 Independent Study

As part of the overall independent study, this document represents an overview that evaluates reasonably foreseeable environmental implications associated with conceptual alternatives for possible incorporation by the South Carolina Department of Transportation (SCDOT) into a larger recommended preferred alternative for the William Hilton Parkway Gateway Corridor project along United States (U.S.) Highway 278 within the town of Hilton Head Island, Beaufort County, South Carolina. This document discusses conceptual layouts of alternatives, which would require further agency coordination, field investigation, public involvement, and evaluation if advanced for adoption into the SCDOTs recommended preferred alternative. This document does not replicate or replace the Environmental Assessment (EA) prepared by the SCDOT. Additionally, this overview is not intended to serve as a NEPA document or even comply with NEPA requirements either independently or in conjunction with SCDOTs project.

2.1.2 Desktop Review of Environmental Resources and Constraints

The environmental impacts are based on a preliminary desktop review of potential resources located within the project area. Environmental resources were not field verified as part of this study. The environmental resources identified during the desktop review were assumed to be present, and each alternative evaluated potential impacts to those resources. These resources would need to be field delineated and evaluated under the existing EA before an alternative could be pursued.

2.1.3 Coordination Efforts

This independent overview of potential environmental implications did not complete any agency, stakeholder, or public involvement and outreach, which is a necessary component to the NEPA process. It is expected that the necessary coordination with applicable agencies, stakeholders, and the public would be undertaken by the SCDOT and their consultant as part of the NEPA evaluation for the William Hilton Parkway Gateway Corridor project.

2.1.4 Noise Analysis

A noise analysis was not conducted for this independent overview of potential environmental implications. Before an alternative could be pursued, a noise analysis would be required to determine the impacts of each alternative to the surrounding communities and whether any noise mitigation measures would be deemed necessary.

2.1.5 Reasonably Ascertainable, Publicly Available, and Practically Reviewable Information

This independent overview of potential environmental implications associated with the William Hilton Parkway Gateway Corridor Project was solely based on information that was publicly available, practically reviewable, and reasonably ascertainable. That is, the content of this overview is based on records that are feasibly retrieved for review, information that is readily available to the public upon request, and obtainable from a source within a reasonable time and cost constraint. As of the date of this independent overview, information sought from the SCDOT regarding access to specific data relating to their recommended preferred alternative (i.e., proposed right-of-way limits) and the resources identified through technical environmental studies (i.e., delineated wetlands) was not furnished to Lochmueller Group. While the absence of this information is unlikely to have affected the overall results of this overview, it does present a limiting factor in the data provided herein.

2.2 Sources Reviewed

In association with the Federal Highway Administration (FHWA) and Beaufort County, the SCDOT developed an Environmental Assessment (EA) to document the proposed U.S. Route 278 Corridor Improvements (<https://www.scdot278corridor.com/environmental-assessment>). The EA was released in June 2021 for public review and was reviewed as a part of this investigation. Information regarding hazardous material sites was retrieved from the EPA Envirofacts website (<https://enviro.epa.gov/>) and the South Carolina Department of Health and Environmental Control website (<https://scdhec.gov/>, <https://apps.dhec.sc.gov/Environment/USTRegistry>). Information about the Honey Horn Plantation site was found on the Hilton Head Island website (<https://hiltonheadislandsc.gov/parks/HoneyHorn/>).

In addition, several publicly available geographic information systems (GIS) were reviewed. The GIS resources reviewed are summarized in the table below.

Table 1. GIS Resources Reviewed			
Database	Map Service	Data Retrieved	Link
Hilton Head Island Open Data	Town-Owned Property Dashboard & Property Viewer	Property data	https://opendata.hiltonheadislandsc.gov/
South Carolina Department of Natural Resources (SDNR)'s Geospatial Data	SCDNR Public Lands Map, South Carolina Public Water Access, SC Public Boat Ramps, Recreational Shellfish Map Application, & Shellfish Management Layers Public View	Public Lands, public water access, and state shellfish grounds	https://data-scdnr.opendata.arcgis.com/
National Oceanic and Atmospheric Administration (NOAA)'s GeoPlatform	Essential Fish Habitat	Essential fish habitat	https://noaa.maps.arcgis.com/home/gallery.html?sortField=relevance&sortOrder=desc
U.S. Geological Survey (USGS) National Hydrography Dataset (NHD)	The National Map Downloader	NHD lines	https://www.usgs.gov/national-hydrography/access-national-hydrography-products
Federal Emergency Management Agency (FEMA)'s Flood Map Service Center	NFHL_45013C	floodways	https://msc.fema.gov/portal/home
SC Arch Site	Subscriber View Map	Cultural resources	http://www.scarchsite.org/default.aspx
U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI)	Wetlands Data Layer	NWI wetlands	https://www.fws.gov/program/national-wetlands-inventory/wetlands-data

3.0 Alternatives Analysis on Potentially Affected Resources

Four conceptual alternatives were evaluated as part of this overview. Publicly available GIS data was used to evaluate potentially affected resources for each of the conceptual alternatives in an effort to identify potential implications associated with each. These resources were separated into two categories: 1) ecological and 2) community and social impacts (i.e., the human environment). Ecological resources included NWI wetlands, streams, floodplains, essential fish habitat types, and threatened and endangered species. Community and social impacts included relocations, right-of-way (ROW) acquisition, hazardous materials sites, neighborhood impacts, environmental justice impacts, impacts to cultural resources, and impacts to Section 4(f) resources. All alternatives identified result in some level of impact to identified resources. However, some conceptual alternatives may result in a reduction of impacts to some resources compared to the approved EA. The impacts discussed below are additional impacts anticipated as a result of each conceptual alternative and are independent of quantities identified in SCDOTs Environmental Assessment (EA). In order to be considered cumulative impacts, the quantities presented here must be added to those of the recommended preferred alternative advanced by SCDOT in the EA for the project. However, there are some extenuating issues associated with this in that resources identified in the EA have been verified through field surveys, coordination with agencies, and/or through the results of public engagement. Quantities presented in this overview are largely based on unverified resources unless reasonably obtainable from the EA in combination with available GIS resources.

3.1 Alternative 1

Alternative 1 is the SCDOT Modified Recommended Preferred Alternative. Alternative 1 would require 0.2 acre of additional ROW. The additional ROW impacts are located within the Squire Pope neighborhood. The additional ROW to be acquired is owned by the Town of Hilton Head. The SCDOT EA determined that this area is an environmental justice community. One hazardous material site, Shell Food Mart Station 101 (165 William Hilton Parkway), is located near the alternatives. No impacts to the site are anticipated as a result of Alternative 1. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. Alternative 1 is not anticipated to alter this finding. Coordination with the USFWS and the NOAA National Marine Fisheries Service (NMFS) would need to occur to affirm this finding. Alternative 1 would not result in additional impacts to NWI wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 1. No additional impacts to cultural resources or Section 4(f) properties would occur as a result of Alternative 1.

Table 2. Alternative 1 Additional Impact Summary			
Resource/Category		Units	Impacts
Ecological	NWI Wetlands	Acres	0
	Streams	Linear Feet	0
	Floodplains	Acres	0
	Essential Fish Habitat Types	Acres	0
	Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*
Community & Social	Hazardous Material Sites	No.	0
	Relocations	No.	0
	Right-of-Way	Acres	0.2
		No. of Tracts	1
	Right-of-Way Owned by Town	Acres	0.2
		No. of Tracts	1
	Neighborhoods	No.	1 (Squire Pope)
	Environmental Justice	No.	1 (Squire Pope)
	Cultural Resources	No.	0
	Section 4(f) Resources (Hist. Properties/Public Recreational Areas/Wildlife Refuges)	No.	0

*Anticipated finding, pending coordination with USFWS and NOAA-NMFS

3.2 Alternative 2

Alternative 2 would involve the construction of bowties along both Squire Pope Road and Spanish Wells Road/Wild Horse Road. Alternative 2 would require 1.10 acres of additional ROW. The Town of Hilton Head owns 0.9 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood was outside of the SCDOT EA investigation area but is also a Gullah community. The Gullah people are the only African American population in the US that have maintained a separate language and a distinct culture. Therefore, Squire Pope is likely an environmental justice community. The SCDOT recommended alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. Alternative 2 is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding. Alternative 2 would require additional impacts to the Stoney Traditional Cultural Property (TCP). The SCDOT identified the Stoney community as a TCP and as a resource eligible for inclusion in the National Register of Historic Places (NRHP). As a NRHP-eligible resource, it is also considered a Section 4(f) property. Alternative 2 would not result in additional impacts to hazardous materials sites, NWI wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 2.

Table 3. Alternative 2 Additional Impact Summary			
Resource/Category		Units	Impacts
Ecological	NWI Wetlands	Acres	0
	Streams	Linear Feet	0
	Floodplains	Acres	0
	Essential Fish Habitat Types	Acres	0
	Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*
Community & Social	Hazardous Material Sites	No.	0
	Relocations	No.	0
	Right-of-Way	Acres	1.1
		No. of Tracts	11
	Right-of-Way Owned by Town	Acres	0.9
		No. of Tracts	8
	Neighborhoods	No.	2 (Stoney & Squire Pope)
	Environmental Justice	No.	2 (Stoney & Squire Pope)
	Cultural Resources	No.	1 (Stoney TCP)
	Section 4(f) Resources (Hist. Properties/Public Recreational Areas/Wildlife Refuges)	No.	1 (Stoney TCP)

*Anticipated finding, pending coordination with USFWS and NOAA-NMFS

3.3 Alternative 3

Alternative 3 would involve an echelon or center turn overpass at either Squire Pope Road or Spanish Wells Road/Wild Horse Road intersection with William Hilton Parkway (US 278). The environmental impacts for Alternative 3 were evaluated for an echelon at the Squire Pope Road intersection and an echelon at the Spanish Wells Road/Wild Horse Road intersection. A center turn overpass would result in more impacts than an echelon at either intersection. Therefore, a center turn overpass was dismissed from further consideration.

An echelon at the Squire Pope intersection would require 1.0 acre of additional ROW. The Town of Hilton Head owns 0.75 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood is a Gullah community and is likely an environmental justice community. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. An echelon at the Squire Pope intersection is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding. An echelon at Squire Pope Road would result in additional impacts to the Stoney TCP, a cultural resource and Section 4(f) property. The addition of a grade separated intersection at Squire Pope Road also has the potential to create visual barriers within the Stoney TCP. It would not result in additional impacts to hazardous

materials sites, NWI wetlands, streams, floodplains, or essential fish habitat types. No additional relocations would occur as a result of Alternative 3.

Table 4. Alternative 3 (Echelon at Squire Pope Road) Additional Impact Summary			
Resource/Category		Units	Impacts
Ecological	NWI Wetlands	Acres	0
	Streams	Linear Feet	0
	Floodplains	Acres	0
	Essential Fish Habitat Types	Acres	0
	Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*
Community & Social	Hazardous Material Sites	No.	0
	Relocations	No.	0
	Right-of-Way	Acres No. of Tracts	1.0 12
	Right-of-Way Owned by Town	Acres No. of Tracts	0.75 7
	Neighborhoods	No.	2 (Stoney & Squire Pope)
	Environmental Justice	No.	2 (Stoney & Squire Pope)
	Cultural Resources	No.	1 (Stoney TCP)
	Section 4(f) Resources (Hist. Properties/Public Recreational Areas/Wildlife Refuges)	No.	1 (Stoney TCP)

*Anticipated finding, pending coordination with USFWS and NOAA-NMFS

An echelon at the Spanish Wells Road/ Wild Horse Road intersection would require 1.1 acres of additional ROW. The Town of Hilton Head owns 0.7 acre of the ROW that would need to be acquired. The additional ROW impacts are located within the Stoney and Squire Pope neighborhoods. The SCDOT EA determined that the Stoney neighborhood is an environmental justice community. The Squire Pope neighborhood is a Gullah neighborhood and likely an environmental justice community. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. An echelon at the Spanish Wells Road intersection is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding. An echelon at Spanish Wells Road would result in 0.29 acre of additional impacts to floodplains. It would result in additional impacts to the Stoney TCP, a cultural resource and Section 4(f) property. It would also result in 0.03 acre of additional impacts to the public park at 152 William Hilton Parkway, a Section 4(f) property. The addition of a grade separated intersection at Spanish Wells Road / Wild Horse Road also has the potential to create visual barriers within the Stoney TCP. An echelon at Spanish Wells Road would not result in additional impacts to hazardous materials sites, NWI wetlands, streams, or essential fish habitat types. No relocations would occur as a result of Alternative 3.

Table 5. Alternative 3 (Echelon at Spanish Wells Road/Wild Horse Road) Additional Impact Summary			
Resource/Category		Units	Impacts
Ecological	NWI Wetlands	Acres	0
	Streams	Linear Feet	0
	Floodplains	Acres	0.3
	Essential Fish Habitat Types	Acres	0
	Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*
Community & Social	Hazardous Material Sites	No.	0
	Relocations	No.	0
	Right-of-Way	Acres	1.1
		No. of Tracts	9
	Right-of-Way Owned by Town	Acres	0.7
		No. of Tracts	5
	Neighborhoods	No.	2 (Stoney & Squire Pope)
	Environmental Justice	No.	2 (Stoney & Squire Pope)
	Cultural Resources	No.	1 (Stoney TCP)
	Section 4(f) Resources (Hist. Properties/Public Recreational Areas/Wildlife Refuges)	No.	2 (Stoney TCP & Park at 152 William Hilton Parkway)

*Anticipated finding, pending coordination with USFWS and NOAA-NMF

3.4 Alternative 4

Alternative 4 would involve the construction of an elevated bypass lane generally within the center of the existing William Hilton Parkway (US 278) roadway section (i.e., no additional widening of the mainline). Alternative 4 would impact an additional 0.03 acre of National Wetland Inventory (NWI) wetlands and an additional 0.03 acre of essential fish habitats. Approximately 65 linear feet of Jarvis Creek would be impacted. Alternative 4 would require no additional ROW. The SCDOT recommended preferred alternative was determined to have a “may affect- not likely to adversely affect” finding for threatened and endangered species. Alternative 4 is not anticipated to alter this finding. Coordination with the USFWS and the NOAA-NMFS would need to occur to affirm this finding.

The Honey Horn Plantation is a collection of historic farm buildings and landscape and would be considered a Section 4(f) resource. It is also home to the Coastal Discovery Museum, which educates the public on the region’s cultural and natural history. Alternative 4 intersects the current boundary of Honey Horn plantation according to the South Carolina Department of Archives and History website. This is unlikely to be considered a Section 4(f) use as the proposed improvements associated with this alternative would occur entirely within existing transportation ROW. Therefore, there is likely no conversion of the resource from a non-transportation use to a transportation one. The current boundary of the site extends into the existing footprint of U.S. 278. However, this part of the site has likely been disturbed by previous construction. Further investigation and coordination with the applicable agencies would be needed to determine the exact cultural and Section 4(f) impacts to this site. No additional relocations would be required. The addition of an elevated bypass lane on a combination of fill or structure also has the

potential to create visual barriers within the Stoney TCP. However, this alternative would not result in additional encroachment on the Stoney TCP and, as such, is not quantified as a direct impact in the table below. No additional impacts to hazardous materials sites, neighborhoods, or environmental justice communities are anticipated. No impacts to floodplains are anticipated.

Table 6. Alternative 4 Additional Impact Summary			
Resource/Category		Units	Impacts
Ecological	NWI Wetlands	Acres	0.03
	Streams	Linear Feet	65
	Floodplains	Acres	0
	Essential Fish Habitat	Acres	0.03
	Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*
Community & Social	Hazardous Material Sites	No.	0
	Relocations	No.	0
	Right-of-Way	Acres No. of Tracts	0 0
	Neighborhoods	No.	0
	Environmental Justice	No.	0
	Cultural Resources	No.	1 (Honey Horn Plantation)
	Section 4(f) Resources (Hist. Properties/Public Recreational Areas/Wildlife Refuges)	No.	0

*Anticipated finding, pending coordination with USFWS and NOAA-NMFS

3.5 Summary

An overall summary of the environmental impacts for each of the alternatives can be seen in Table 7:

Table 7. Additional Environmental Impacts Summary						
Resource/Category	Units	Alternative 1	Alternative 2	Alternative 3 (Echelon at Squire Pope)	Alternative 3 (Echelon at Spanish Wells)	Alternative 4
NWI Wetlands	Acres	0	0	0	0	0.03
Streams	Linear Feet	0	0	0	0	65
Floodplains	Acres	0	0	0	0.29	0
Essential Fish Habitat	Acres	0	0	0	0	0.03
Threatened & Endangered Species	Finding	May Affect, Not Likely to Adversely Affect*	May Affect, Not Likely to Adversely Affect*	May Affect, Not Likely to Adversely Affect*	May Affect, Not Likely to Adversely Affect*	May Affect, Not Likely to Adversely Affect*
Hazardous Material Sites	No.	0	0	0	0	0
Relocations	No.	0	0	0	0	0
Right-of Way	Acres No. of Tracts	0.2 1	1.1 11	1.0 12	1.1 9	0 0
Right-of-Way Owned by Town	Acres No. of Tracts	0.2 1	0.9 8	0.75 7	0.7 5	0 0
Neighborhoods	No.	1 (Squire Pope)	2 (Stoney & Squire Pope)	2 (Stoney & Squire Pope)	2 (Stoney & Squire Pope)	0
Environmental Justice	No.	1 (Squire Pope)	2 (Stoney & Squire Pope)	2 (Stoney & Squire Pope)	2 (Stoney & Squire Pope)	0
Cultural Resources	No.	0	1 (Stoney TCP)	1 (Stoney TCP)	1 (Stoney TCP)	1 (Honey Horn Plantation)
Section 4(f) Resources	No.	0	1 (Stoney TCP)	1 (Stoney TCP)	2 (Stoney TCP & Park at 152 William Hilton Parkway)	0

*Anticipated finding, pending coordination with USFWS and NOAA-NMFS

Each environmental impact was ranked in order from least impactful (1) to most impactful (4) across the four different alternatives. The total of these rankings was calculated for each alternative and this was used to rank the alternatives from least impactful (1) to most impactful (4).

Table 8. Additional Environmental Impacts- Alternatives Ranking				
Resource/Category	Alternative 1	Alternative 2	Alternative 3	Alternative 4
NWI Wetlands	1	1	1	4
Streams	1	1	1	4
Floodplains	1	1	4	1
Essential Fish Habitat	1	1	1	4
Threatened & Endangered Species	1	1	1	1
Hazardous Material Sites	1	1	1	1
Relocations	1	1	1	1
Right-of-Way	2	4	4	1
Neighborhoods	2	4	4	1
Environmental Justice	2	4	4	1
Cultural Resources	1	4	4	4
Section 4(f) Resources	1	3	4	1
Total	15	26	30	24
Rank	1	3	4	2

4.0 Risk Assessment

The largest risk for implementing any alternative beyond those identified within the existing NEPA document is the additional time required to complete field investigations of new areas added, coordinate with appropriate regulatory agencies, and complete additional community outreach and engagement opportunities. Therefore, the project schedule would be delayed in order to complete these activities. In addition to time, there will be an added cost to complete these activities and update the existing NEPA document.

Alternatives 1 and 2 are not anticipated to change the cultural resources or Section 4(f) findings compared to the existing EA. However, additional outreach may be necessary within the Stoney and Squire Pope communities. Alternatives 3 and 4 may elevate the cultural resources finding from a No Adverse Effect (NAE) to Adverse Effect (AE) finding due to additional impacts to the Stoney Traditional Cultural Property (TCP). Additional Section 106 investigations and documentation would be required to determine if this

finding would be elevated or not. Alternatives 3 and 4 have additional involvement with Section 4(f) resources, which is not anticipated to be a “use.” However, additional evaluation and concurrence with appropriate agencies would be required for any changes to impacts to Section 4(f) resources. The specific risks associated with each alternative are summarized in Table 9.

Table 9: Summary of Risk Considerations for Each Alternative

Resource/Category Type		Alt. 1: Risk Considerations	Alt. 2: Risk Considerations	Alt. 3: Risk Considerations	Alt. 4: Risk Considerations
Ecological	Wetlands, Streams, Floodplains, Threatened & Endangered Species	Additional time will be necessary for field investigations of new areas added and coordination with the appropriate regulatory agencies.			
	Permits	Since no impacts to wetlands, streams, or floodplains are anticipated, no water resource permits are anticipated.		Water resource permits are anticipated due to impacts to the floodplain.	Water resource permits are anticipated due to impacts to wetlands, streams, and essential fish habitat.
Community & Social	Relocations	None			
	Right-of-Way	Risks same as noted in ecological.			None
	Neighborhoods	New impacts to Squire Pope community	Additional impacts within Stoney and new impacts to Squire Pope community. Turning limitations will bring additional traffic into neighborhood at bowtie locations.	Additional impacts within Stoney and new impacts to Squire Pope community. Echelons within Stoney creates potential barriers.	While no additional ROW acquired, the elevated bypass lane within Stoney creates a potential barrier dividing community.
		All impacts to neighborhoods require additional outreach and engagement opportunities to inform the public of project updates.			
	Environmental Justice	Risks are the same as noted in the neighborhoods section.			
	Cultural Resources	Current Section 106 finding is "Adverse Effect" for impacts to archaeological site 38BU66; no change in finding is expected. Additional project elements at Gum Tree may require consideration of Squire Pope as a TCP.	Current Section 106 finding is "Adverse Effect" for impacts to archaeological site 38BU66; additional ROW from Stoney; no change in finding is expected. Additional project elements at Gum Tree may require consideration of Squire Pope as a TCP.	Additional ROW from Stoney and elevated project elements creates visual effects, which may elevate Stoney TCP from NAE to AE finding and require a MOA amendment. Additional project elements at Gum Tree may require consideration of Squire Pope as a TCP.	Elevated project elements within Stoney TCP create visual effects, which may elevate Stoney TCP from NAE to AE finding and require a MOA amendment. New impacts to Honey Horn Plantation require consideration.
	Section 4(f) Resources	No change expected to current 4(f) findings in EA. Potential for Squire Pope to be considered a TCP. ROW required unlikely to be considered a conversion ("use").	No change expected to current 4(f) findings in EA. Potential for Squire Pope to be considered a TCP. ROW required unlikely to be considered a conversion ("use").	Additional "use" at Stoney & park at 152 WHP; likely AE at Stoney TCP may require additional 4(f) evaluations. Potential for Squire Pope to be considered a TCP. ROW required unlikely to be considered a conversion ("use").	Likely AE at Stoney TCP, when added to impacts identified in EA, may require additional 4(f) evaluations. Project elements within Honey Horn Plantation unlikely to be considered a conversion ("use").

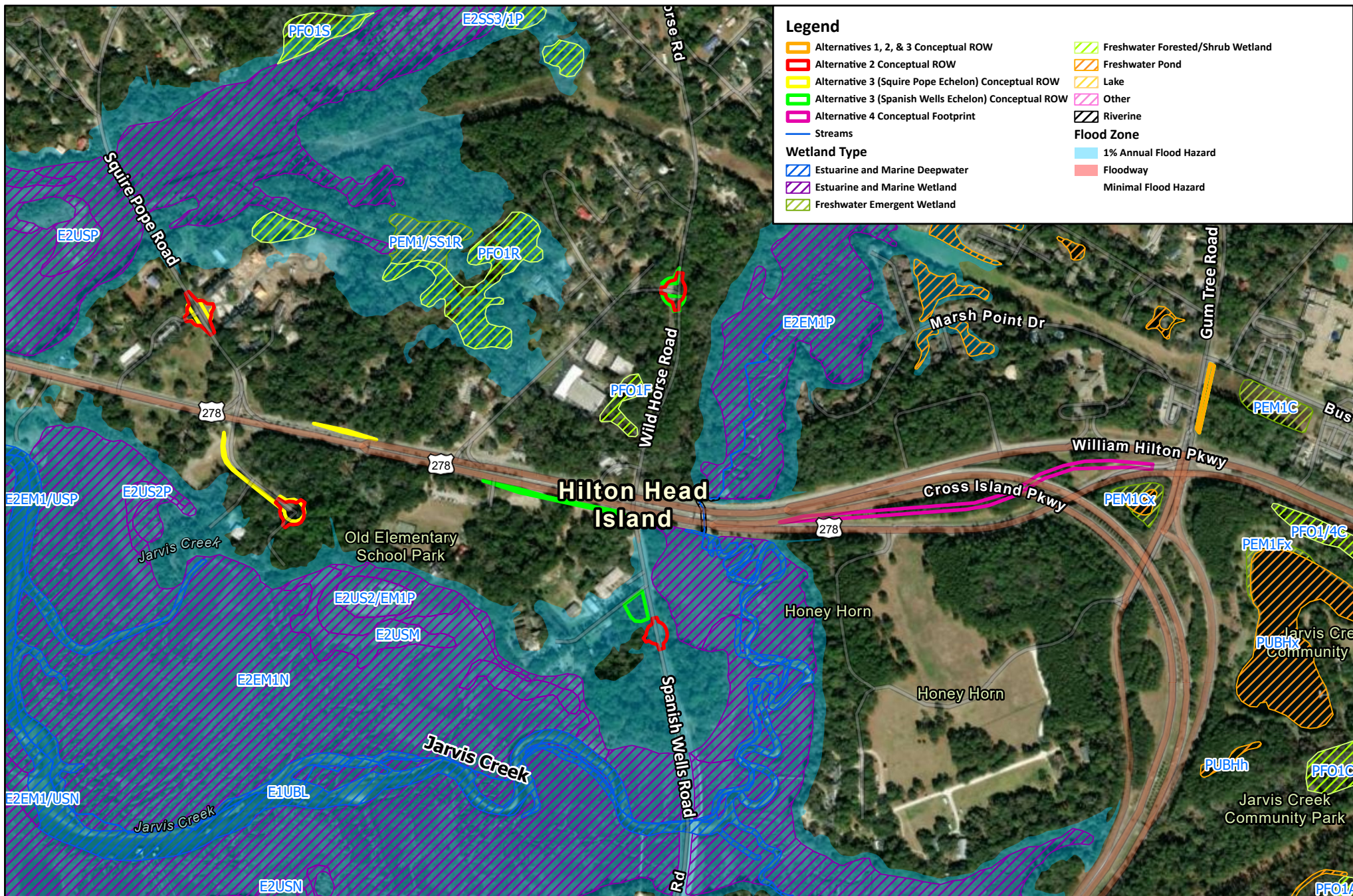
5.0 Conceptual Mitigation Strategies

For alternatives where impacts to ecological resources such as wetlands, streams, and floodplains are unavoidable, mitigation would be determined during the permitting phase of the project and in context with the overall project impacts. For alternatives where impacts to Section 106, Section 4(f), and the local communities are unavoidable, mitigation may become necessary.

Based on the risks associated with Alternative 1, additional mitigation considerations are unlikely to be required. Alternative 2 is unlikely to require mitigation for Section 106 and Section 4(f) impacts. However, mitigation measures such as traffic calming measures, inclusion of Gullah art in bowties, or the creation of a unique gateway may be necessary to address any community impacts. Alternatives 3 and 4 have higher associated risk and impacts to the surrounding communities. Mitigation strategies could include a variety of different approaches focusing on the Gullah community. This may include interpretive signage, incorporation of community art, a walking tour pamphlet, or a video documentary about the Gullah. Additionally, elements would focus on encouraging connectivity of the community on either side of U.S. 278. The specific risk level and mitigation strategies associated with each alternative are summarized in Table 10.

Table 10: Summary of Environmental Risk Levels and Potential Mitigation Strategies

Alternative		Risk Categories (related to cost and schedule implications to the NEPA process)		
		Section 106 (Cultural Resources)	Section 4(f)	Community & Social Impacts
Alt. 1 – Mod. SCDOT Rec. Preferred Alt.	Risk Considerations	Moderate	Low	Low
	Mitigation	Unlikely additional mitigation considerations would be required for this alternative.		
Alt. 2 – Bowties at Squire Pope and Spanish Wells	Risk Considerations	Moderate	Moderate	Moderate
	Mitigation	Mitigation for Section 106 and Section 4(f) unlikely. Community impacts may require mitigation. Concepts could include traffic calming measures, inclusion of Gullah art in bowties, or creation of unique gateway.		
Alt. 3 – Echelon/Center Turn Overpass	Risk Considerations	High	High	Moderate
	Mitigation	Interpretive signage about Gullah community along trails. Incorporation of Gullah art into the transportation infrastructure (crosswalks, wall murals, lighting, asphalt painting, sculptures). Walking tour pamphlet or video documentary about the Gullah. Include design elements that encourage connectivity of community on either side of U.S. 278 and traffic calming on intersecting roadways. Evaluate context sensitive design opportunities.		
Alt. 4 – Elevated Bypass	Risk Considerations	High	High	High
	Mitigation	Same as Alternative 3.		



3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

Ecological Resources Map

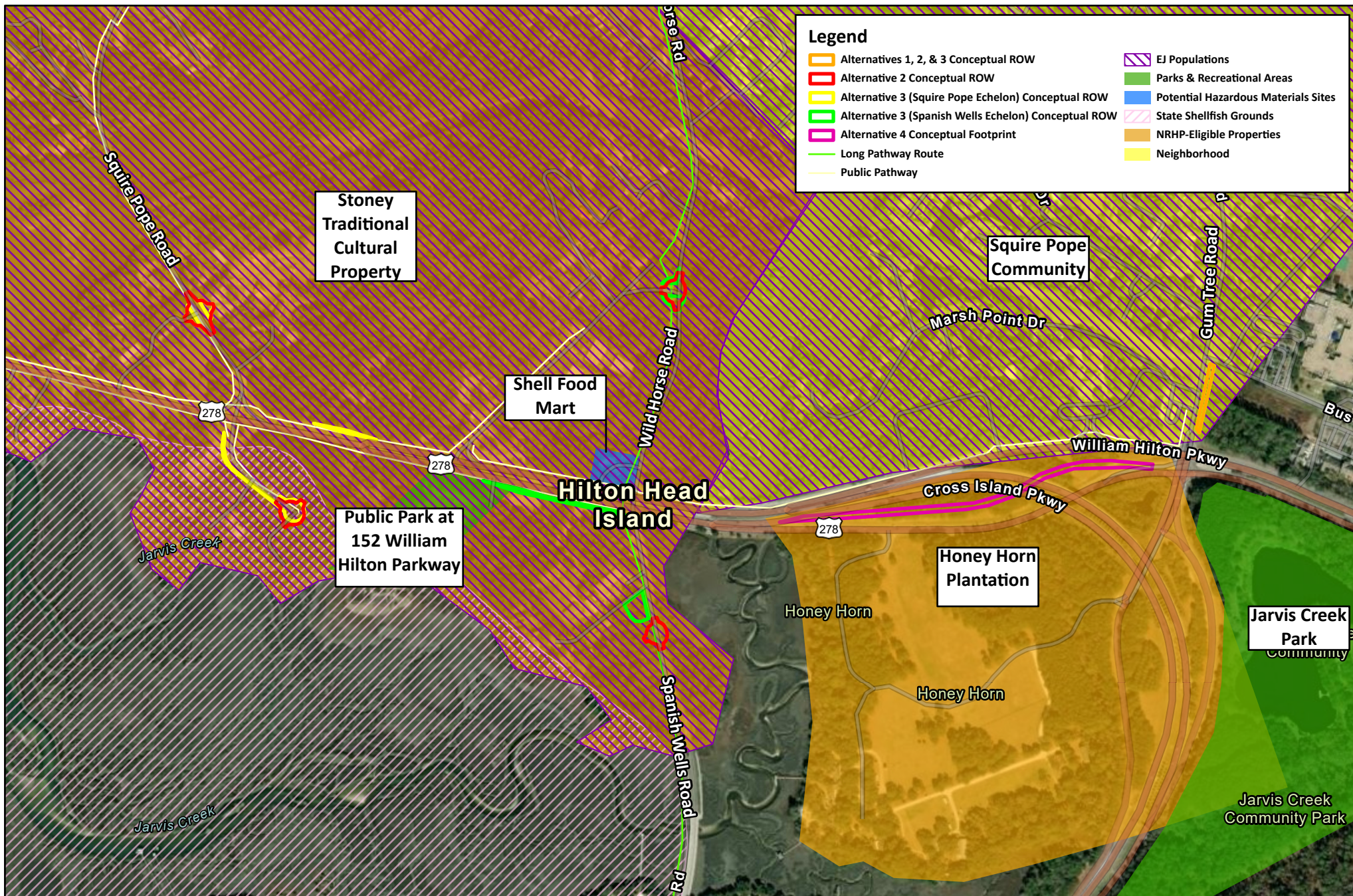
0 500 1,000
Feet



County: Beaufort
City: Hilton Head Island
State: South Carolina

Created: 5/3/2024, SBeaupre

Source(s): Maxar, Esri Community Maps Contributors, Town of Hilton Head Island, SC, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880
Fax: (317) 222-3881

Community Resources Map

0 500 1,000
Feet



County: Beaufort
City: Hilton Head Island
State: South Carolina

Created: 4/24/2024, SBeaupre

Source(s): Maxar, Esri Community Maps Contributors, Town of Hilton Head Island, SC, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

**APPENDIX K: 2045 ALTERNATIVE 2 TRAFFIC VOLUMES AND OPERATING CONDITIONS
(SYNCHRO)**

Table K-1. 2045 Alternative 2 Traffic Operating Conditions (Synchro)

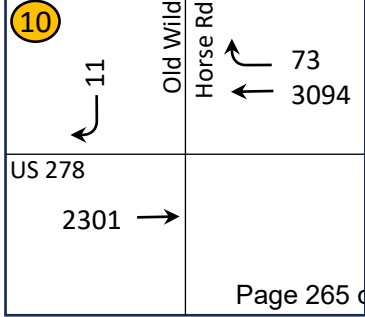
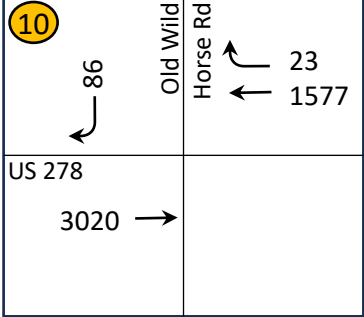
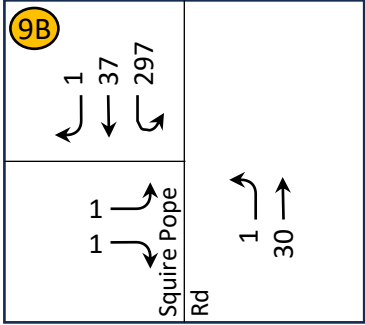
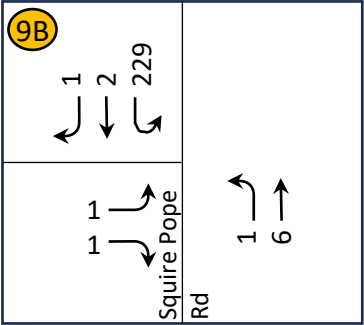
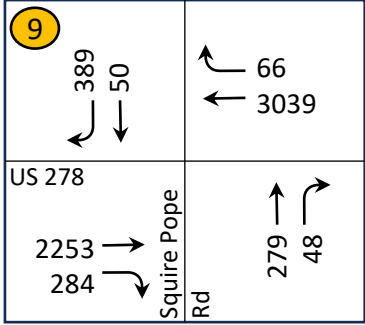
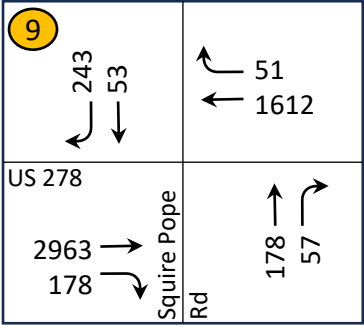
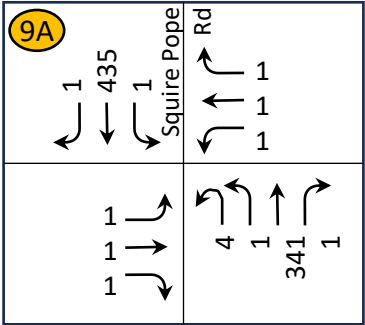
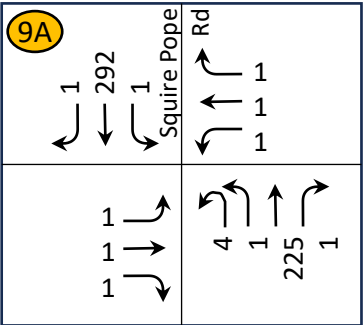
Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (16.3)	B (13.6)
Eastbound Approach	B (15.8) [394] <0.82>	B (14.7) [301] <0.65>
Westbound Approach	B (11.5) [253] <0.45>	B (11.3) [507] <0.95>
Northbound Approach	E (60.4) [277] <0.78>	D (44.0) [535] <0.94>
Southbound Approach	B (12.2) [87] <0.62>	D (51.8) [369] <0.82>
9A: Squire Pope North Bowtie (Roundabout)		
Overall Intersection	A (4.5)	A (5.5)
Eastbound Approach	A (3.7) [<25]	A (4.4) [<25]
Westbound Approach	A (3.4) [<25]	A (3.9) [<25]
Northbound Approach	A (4.2) [25]	A (5.1) [25]
Southbound Approach	A (4.7) [25]	A (5.9) [50]
9B: Chamberlin Dr South Bowtie (Roundabout)		
Overall Intersection	A (4.2)	A (4.9)
Eastbound Approach	A (3.4) [<25]	A (3.8) [<25]
Northbound Approach	A (3.5) [<25]	A (4.0) [<25]
Southbound Approach	A (4.2) [25]	A (5.0) [25]
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	C (17.0) [80] <0.36>	F (51.5) [33] <0.20>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (23.7)	C (21.2)
Eastbound Approach	C (23.8) [519] <0.87>	B (15.5) [348] <0.69>
Westbound Approach	A (5.7) [118] <0.39>	B (16.9) [357] <0.94>
Northbound Approach	D (54.4) [486] <0.88>	E (58.9) [560] <0.94>
Southbound Approach	D (42.8) [369] <0.79>	C (29.4) [245] <0.81>
11A: Wild Horse Rd North Bowtie (Roundabout)		
Overall Intersection	A (6.1)	A (6.6)
Eastbound Approach	A (4.4) [<25]	A (4.7) [<25]
Northbound Approach	A (6.3) [50]	A (6.8) [50]
Southbound Approach	A (5.7) [25]	A (6.1) [25]

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
11B: Spanish Wells Rd South Bowtie (Roundabout)		
Overall Intersection	A (7.2)	A (6.2)
Eastbound Approach	A (4.7) [<25]	A (4.0) [<25]
Northbound Approach	A (7.9) [50]	A (6.9) [50]
Southbound Approach	A (6.6) [50]	A (5.4) [25]
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (35.1)	D (36.5)
Eastbound Approach	D (40.2) [465] <0.88>	C (29.7) [360] <0.93>
Westbound Approach	B (19.4) [314] <0.41>	D (32.9) [455] <0.97>
Northbound Approach	C (32.2) [208] <0.75>	D (44.2) [341] <0.93>
Southbound Approach	E (57.8) [244] <0.86>	E (57.9) [275] <0.90>

2045 Alternative 2. Bowties at Spanish Wells and Squire Pope Traffic Volumes



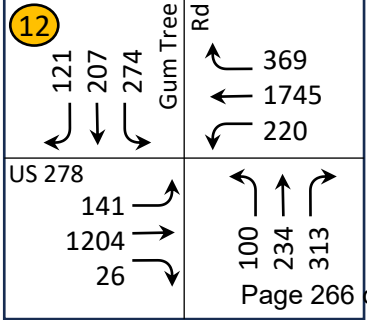
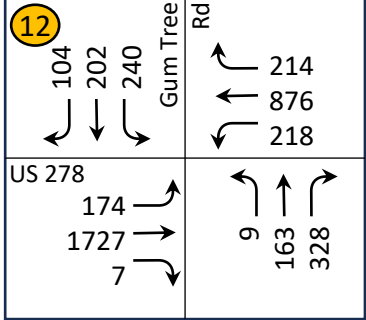
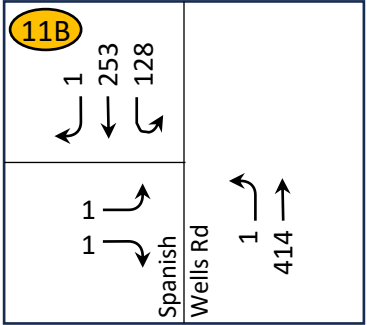
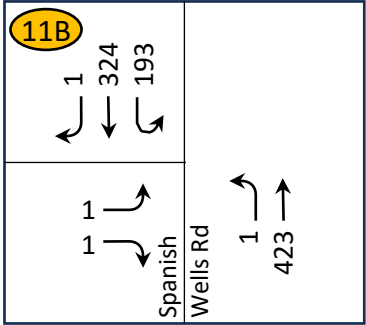
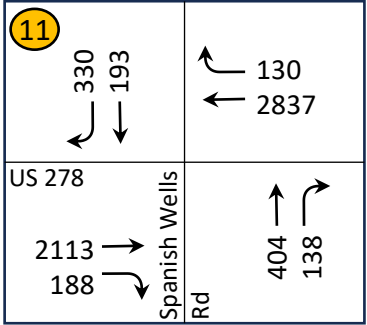
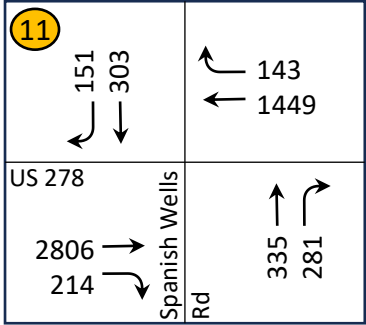
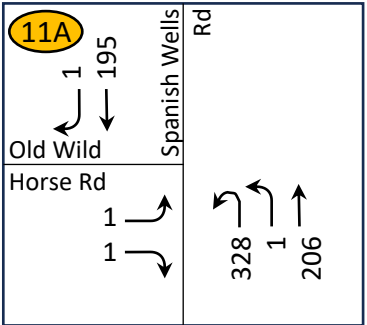
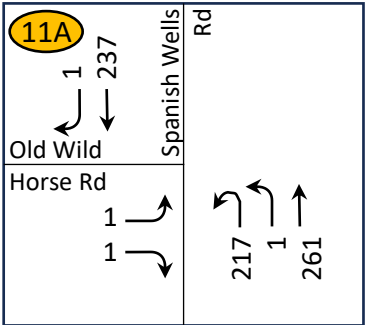
AM Peak Hour Volumes PM Peak Hour Volumes



2045 Alternative 2. Bowties at Spanish Wells and Squire Pope Traffic Volumes



AM Peak Hour Volumes PM Peak Hour Volumes



**APPENDIX L: 2045 ALTERNATIVE 3 TRAFFIC VOLUMES AND OPERATING CONDITIONS
(SYNCHRO)**

Table L-1. 2045 Alternative 3 Traffic Operating Conditions – Echelon at Spanish Wells (Synchro)

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (11.2)	C (20.4)
Eastbound Approach	B (12.4) [236] <0.75>	C (24.4) [478] <0.89>
Westbound Approach	A (7.7) [159] <0.48>	B (15.5) [332] <0.94>
Northbound Approach	D (41.3) [29] <0.03>	E (62.3) [77] <0.28>
Southbound Approach	B (16.7) [102] <0.57>	C (26.9) [274] <0.83>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (4.2) [37] <0.36>	A (4.8) [<25] <0.17>
11A: Wild Horse Rd & William Hilton Pkwy (signal) - Echelon		
Overall Intersection	B (10.8)	B (12.8)
Westbound Approach	A (7.2) [134] <0.38>	B (11.5) [249] <0.82>
Southbound Approach	C (34.5) [138] <0.58>	C (32.8) [131] <0.53>
11B: Spanish Wells Rd & William Hilton Pkwy (signal) - Echelon		
Overall Intersection	B (18.3)	B (12.4)
Eastbound Approach	B (17.3) [474] <0.95>	A (9.4) [288] <0.75>
Northbound Approach	C (28.1) [147] <0.72>	C (29.1) [233] <0.77>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (44.6)	D (44.2)
Eastbound Approach	D (53.1) [449] <0.88>	D (42.5) [406] <0.93>
Westbound Approach	C (30.0) [479] <0.38>	D (42.1) [824] <0.97>
Northbound Approach	C (33.3) [213] <0.75>	D (46.0) [356] <0.93>
Southbound Approach	E (59.5) [239] <0.86>	D (54.4) [274] <0.90>

Table L-2. 2045 Alternative 3 Traffic Operating Conditions - Echelon at Squire Pope (Synchro)

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9A: Squire Pope Rd & William Hilton Pkwy (signal) - Echelon		
Overall Intersection	A (3.6)	C (35.0)
Westbound Approach	A (2.2) [57] <0.51>	A (8.4) [258] <0.95>
Southbound Approach	B (6.6) [156] <0.62>	F (250.5) [858] <1.02>
9B: Chamberlin Dr & William Hilton Pkwy (signal) - Echelon		
Overall Intersection	C (25.9)	A (4.6)
Eastbound Approach	C (25.9) [263] <0.66>	A (4.1) [167] <0.54>
Northbound Approach	C (26.9) [151] <0.05>	D (37.9) [66] <0.19>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	C (17.6) [85] <0.36>	B (12.7) [<25] <0.17>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (35.5)	D (39.6)
Eastbound Approach	D (45.0) [906] <0.99>	B (17.4) [369] <0.67>
Westbound Approach	B (11.8) [168] <0.69>	D (52.5) [984] <0.93>
Northbound Approach	D (43.2) [167] <0.51>	E (67.8) [239] <0.90>
Southbound Approach	E (61.3) [214] <0.98>	D (47.1) [166] <0.37>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (35.5)	D (42.4)
Eastbound Approach	D (44.9) [464] <0.87>	D (35.6) [399] <0.87>
Westbound Approach	B (17.1) [204] <0.41>	D (42.8) [801] <0.83>
Northbound Approach	C (28.7) [202] <0.75>	D (43.3) [364] <0.89>
Southbound Approach	D (52.7) [230] <0.77>	E (55.1) [260] <0.77>

Table L-3. 2045 Alternative 3 Traffic Operating Conditions - Center Turn Overpass at Spanish Wells

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (12.6)	C (26.8)
Eastbound Approach	B (11.4) [210] <0.75>	D (39.0) [620] <0.81>
Westbound Approach	B (14.5) [306] <0.48>	B (16.3) [456] <0.96>
Northbound Approach	D (49.0) [<25] <0.07>	E (63.9) [64] <0.26>
Southbound Approach	B (14.7) [99] <0.58>	C (24.5) [292] <0.77>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	B (13.6) [78] <0.36>	E (46.6) [36] <0.20>
11A: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (12.9)	A (8.8)
Eastbound Approach	B (13.8) [346] <0.87>	A (8.6) [271] <0.62>
Westbound Approach	A (5.9) [139] <0.64>	A (5.7) [135] <0.75>
Northbound Approach	C (32.4) [209] <0.81>	C (34.6) [146] <0.62>
Southbound Approach	E (59.8) [146] <0.51>	E (56.6) [186] <0.69>
11B: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal) – Center Turn Overpass		
Overall Intersection	B (19.1)	B (17.9)
Eastbound Approach	B (16.3) [58] <0.07>	B (12.2) [55] <0.08>
Northbound Approach	C (20.1) [102] <0.22>	B (19.2) [176] <0.46>
Southbound Approach	B (18.8) [32] <0.02>	B (16.9) [68] <0.11>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (36.7)	D (35.4)
Eastbound Approach	D (48.2) [465] <0.87>	C (31.9) [347] <0.93>
Westbound Approach	B (17.1) [337] <0.41>	C (30.9) [571] <0.97>
Northbound Approach	C (28.6) [203] <0.75>	D (37.4) [286] <0.93>
Southbound Approach	D (51.2) [234] <0.77>	E (58.8) [249] <0.90>

Table L-4. 2045 Alternative 3 Traffic Operating Conditions - Center Turn Overpass at Squire Pope (Synchro)

Intersection & Movements	LOS (Delay, sec) [95th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9A: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	A (3.2)	A (9.3)
Eastbound Approach	A (3.5) [40] <0.78>	A (4.8) [139] <0.64>
Westbound Approach	A (2.0) [42] <0.43>	A (7.4) [234] <0.93>
Northbound Approach	D (37.3) [21] <0.05>	E (68.1) [67] <0.11>
Southbound Approach	A (6.1) [149] <0.77>	D (48.3) [387] <0.89>
9B: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal) – Center Turn Overpass		
Overall Intersection	B (17.2)	B (10.0)
Eastbound Approach	B (15.9) [108] <0.21>	A (3.9) [70] <0.65>
Westbound Approach	B (10.6) [<25] <0.00>	A (4.1) [<25] <0.95>
Northbound Approach	B (18.8) [<25] <0.00>	E (56.2) [<25] <0.94>
Southbound Approach	C (21.8) [64] <0.10>	D (40.9) [77] <0.82>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	C (17.4) [77] <0.36>	E (42.4) [29] <0.20>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (32.4)	C (31.3)
Eastbound Approach	D (39.0) [771] <0.98>	B (17.6) [369] <0.68>
Westbound Approach	B (12.6) [149] <0.91>	C (22.1) [446] <0.99>
Northbound Approach	D (44.0) [162] <0.64>	F (157.4) [766] <1.28>
Southbound Approach	E (62.8) [220] <0.82>	E (57.9) [152] <0.85>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (35.8)	D (36.4)
Eastbound Approach	D (45.7) [473] <0.87>	C (32.5) [387] <0.93>
Westbound Approach	B (17.4) [263] <0.41>	C (33.5) [651] <0.97>
Northbound Approach	C (28.3) [199] <0.75>	D (36.4) [277] <0.93>
Southbound Approach	D (52.7) [228] <0.77>	E (56.5) [262] <0.90>

2045 Alternative 3. Echelon at Spanish Wells Traffic Volumes



AM Peak Hour Volumes

11A 14 79 144 63 1449 80 US 278 Spanish Wells Rd	
11B 49 2806 165 137 49 137 US 278 Spanish Wells Rd	
12 104 202 240 214 876 218 174 1727 7 9 163 328 US 278 Gum Tree Rd	

PM Peak Hour Volumes

11A 37 88 70 95 2837 35 US 278 Spanish Wells Rd	
11B 58 2113 130 293 53 68 US 278 Spanish Wells Rd	
12 121 207 274 369 1745 220 141 1204 26 100 234 313 US 278 Gum Tree Rd	

2045 Alternative 3. Echelon at Squire Pope Traffic Volumes



AM Peak Hour Volumes

PM Peak Hour Volumes

9A ← 241 ↓ 0 → 51 US 278	↶ 49 ↵ 1612 ↷ 2 Squire Pope Rd
--	---

9A ← 387 ↓ 2 → 46 US 278	↶ 64 ↵ 3039 ↷ 2 Squire Pope Rd
--	---

9B	
US 278 ↶ 176 ↵ 2963 ↷ 2	↶ 2 ↵ 0 ↷ 6 Squire Pope Rd

9B	
US 278 ↶ 251 ↵ 2253 ↷ 33	↶ 2 ↵ 28 ↷ 2 Squire Pope Rd

12 ↶ 104 ↵ 202 ↷ 240 US 278	↶ 214 ↵ 876 ↷ 218
↶ 174 ↵ 1727 ↷ 7 Gum Tree Rd	↶ 9 ↵ 163 ↷ 328

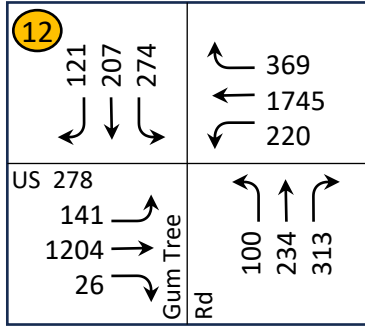
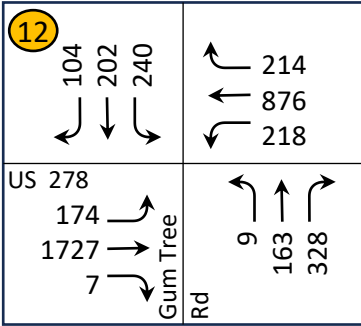
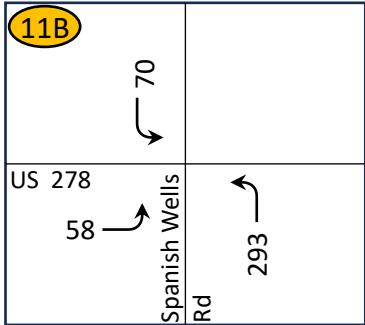
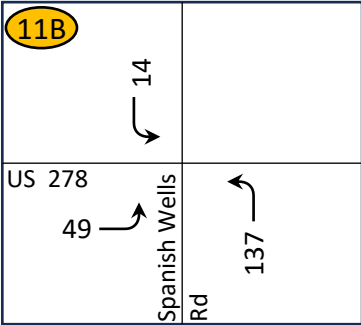
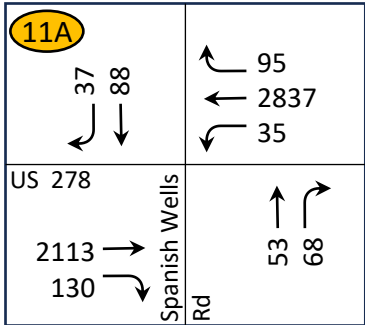
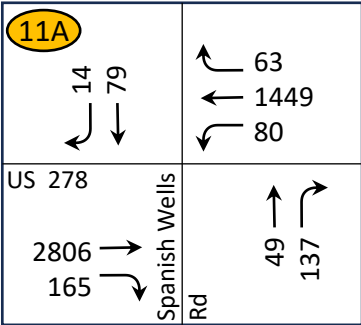
12 ↶ 121 ↵ 207 ↷ 274 US 278	↶ 369 ↵ 1745 ↷ 220
↶ 141 ↵ 1204 ↷ 26 Gum Tree Rd	↶ 100 ↵ 234 ↷ 313

2045 Alternative 3. Center Turn Overpass at Spanish Wells Traffic Volumes



AM Peak Hour Volumes

PM Peak Hour Volumes



2045 Alternative 3. Center Turn Overpass at Squire Pope Traffic Volumes



AM Peak Hour Volumes

PM Peak Hour Volumes

9A 14 79 144 US 278	63 1449 80 Squire Pope Rd
---	--

9A 37 88 70 US 278	95 2837 35 Squire Pope Rd
--	--

9B	
US 278 49 2806 165	137 49 137 Squire Pope Rd

9B	
US 278 58 2113 130	293 53 68 Squire Pope Rd

12 104 202 240 US 278	214 876 218
174 1727 7 Gum Tree Rd	9 163 328

12 121 207 274 US 278	369 1745 220
141 1204 26 Gum Tree Rd	100 234 313

**APPENDIX M: 2045 ALTERNATIVE 4 TRAFFIC VOLUMES AND OPERATING CONDITIONS
(SYNCHRO)**

Table M-1. 2045 Alternative 4 Traffic Operating Conditions (Synchro)

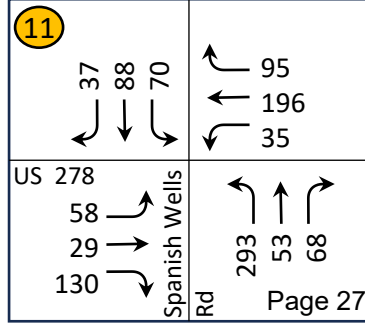
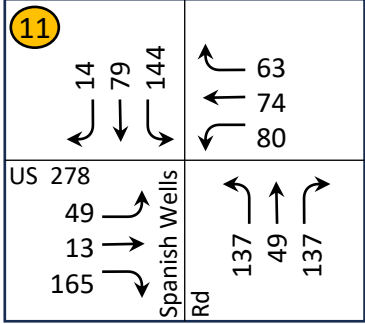
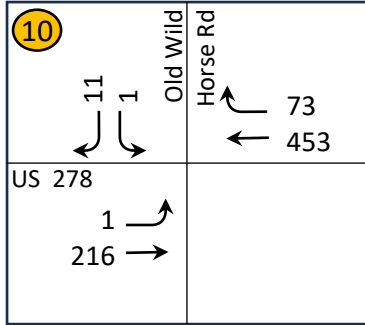
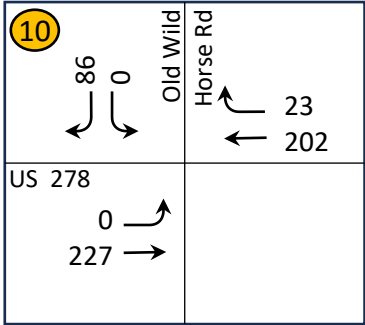
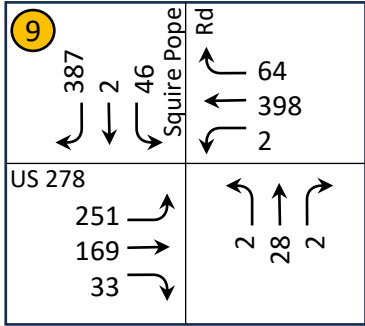
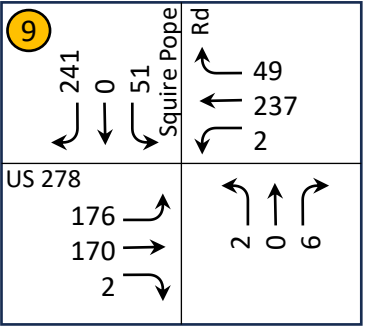
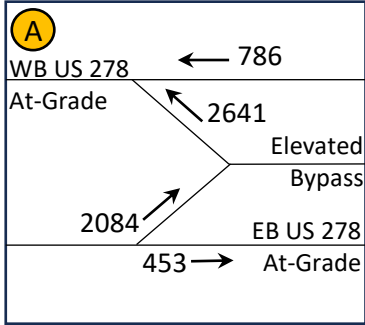
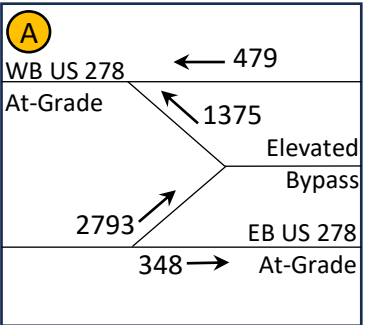
Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	A (7.5)	A (9.6)
Eastbound Approach	A (4.1) [71] <0.23>	A (4.7) [75] <0.42>
Westbound Approach	A (6.5) [75] <0.27>	A (6.5) [120] <0.46>
Northbound Approach	A (6.7) [<25] <0.01>	C (31.8) [38] <0.19>
Southbound Approach	B (12.6) [58] <0.52>	B (16.1) [103] <0.74>
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	B (3.3) [<25] <0.11>	B (11.9) [<25] <0.02>
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (28.1)	C (27.9)
Eastbound Approach	B (13.2) [63] <0.43>	B (15.0) [71] <0.44>
Westbound Approach	C (24.6) [100] <0.60>	B (13.2) [55] <0.32>
Northbound Approach	C (27.0) [102] <0.65>	D (39.6) [132] <0.78>
Southbound Approach	D (47.1) [161] <0.75>	D (46.5) [136] <0.73>
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (26.0)	C (28.5)
Eastbound Approach	B (17.1) [115] <0.25>	C (29.9) [142] <0.28>
Westbound Approach	B (10.9) [142] <0.33>	B (17.3) [205] <0.54>
Northbound Approach	C (30.4) [212] <0.70>	C (33.6) [266] <0.81>
Southbound Approach	D (42.9) [250] <0.80>	C (34.1) [211] <0.83>

2045 Alternative 4. Elevated Bypass



AM Peak Hour Volumes

PM Peak Hour Volumes

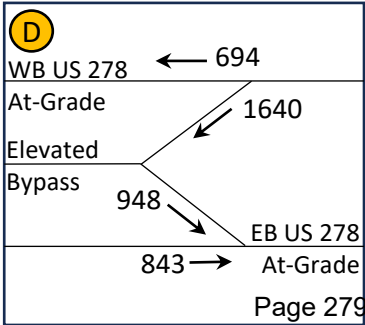
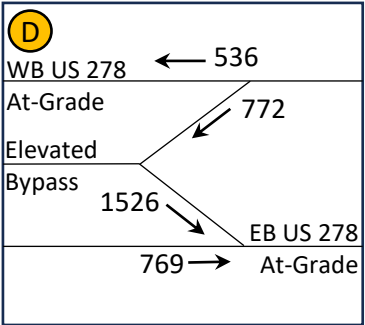
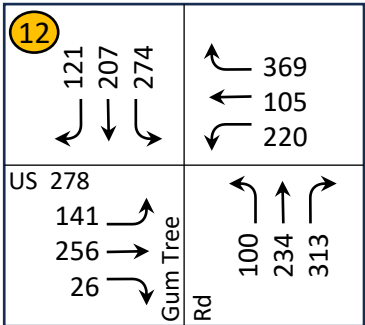
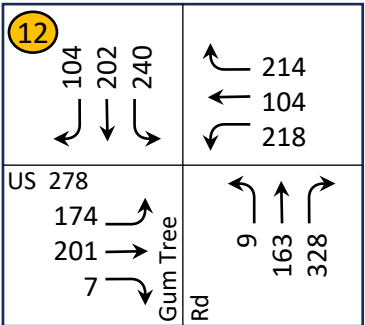
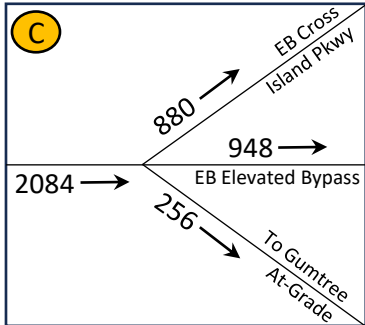
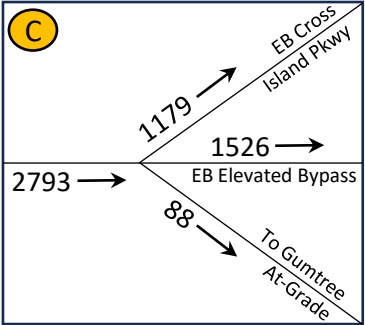
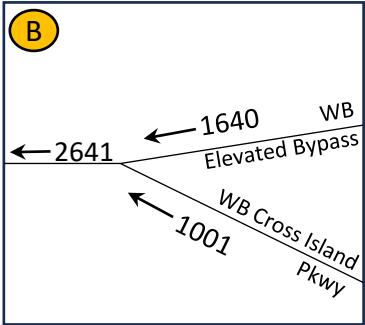
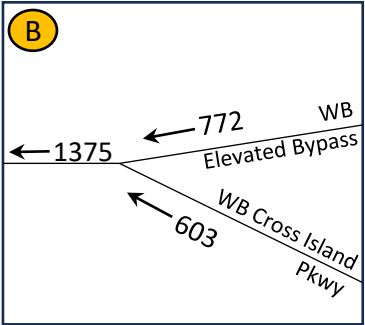


2045 Alternative 4. Elevated Bypass



AM Peak Hour Volumes

PM Peak Hour Volumes



APPENDIX N: 2045 MODIFIED ALTERNATIVE 1 OPERATING CONDITIONS (VISSIM)

Table N-1. 2045 Modified Alternative 1 Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (17.0)	B (17.3)
Eastbound Approach	B (19.6) [63] {351}	C (20.4) [50] {242}
Westbound Approach	B (12.9) [<25] {188}	B (16.0) [51] {406}
Northbound Approach	B (14.3) [<25] {74}	B (14.2) [<25] {52}
Southbound Approach	A (6.6) [<25] {57}	A (9.6) [<25] {91}
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (15.8)	B (19.7)
Eastbound Approach	B (14.6) [59] {389}	B (15.2) [51] {313}
Westbound Approach	B (15.7) [41] {286}	C (21.5) [127] {700}
Northbound Approach	B (20.0) [<25] {159}	D (37.5) [<25] {104}
Southbound Approach	C (22.8) [<25] {84}	C (26.3) [<25] {116}
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (8.0) [<25] {<25}	C (17.1) [<25] {50}
Westbound Left Turn	A (8.7) [<25] {<25}	A (8.3) [<25] {46}
Northbound Approach	B (11.3) [<25] {65}	B (10.7) [<25] {66}
Southbound Approach	A (8.6) [<25] {79}	B (10.5) [<25] {80}
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	C (16.7) [<25] {<25}	C (15.6) [<25] {32}
Northbound Approach	B (13.3) [<25] {37}	B (12.1) [<25] {43}
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Northbound Right-Turn	A (7.7) [<25] {<25}	A (6.4) [<25] {<25}
Southbound Right-Turn	No volumes observed	C (16.2) [<25] {25}
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	A (9.5)	A (7.3)
Eastbound Approach	A (8.9) [80] {818}	A (9.2) [58] {581}
Westbound Approach	A (8.6) [36] {330}	A (3.3) [31] {188}
Northbound Approach	D (42.5) [<25] {124}	E (58.1) [61] {244}
Southbound Approach	D (50.9) [<25] {92}	D (44.9) [<25] {101}
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Overall Intersection	A (8.4)	B (11.8)
Eastbound Approach	A (7.0) [102] {697}	B (11.3) [124] {484}
Westbound Approach	A (8.2) [28] {237}	A (5.8) [36] {524}
Northbound Approach	C (30.4) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.6) [<25] {170}	D (51.1) [128] {521}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (4.7) [<25] {56}	B (12.5) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (23.8)
Eastbound Approach	B (11.0) [106] {998}	C (27.9) [198] {861}
Westbound Approach	B (11.2) [56] {248}	B (11.9) [84] {779}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {196}
Southbound Approach	E (75.9) [74] {292}	E (60.6) [49] {197}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	D (37.1)	D (43.8)
Eastbound Approach	C (33.4) [164] {682}	E (57.1) [184] {562}
Westbound Approach	D (40.8) [130] {369}	D (35.4) [236] {786}
Northbound Approach	C (26.6) [61] {264}	D (37.3) [98] {327}
Southbound Approach	D (50.2) [93] {302}	D (52.7) [119] {453}
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (26.7)	B (18.8)
Eastbound Approach	C (25.4) [439] {1480}	B (16.3) [103] {735}
Westbound Approach	C (21.6) [101] {686}	B (18.2) [295] {1202}
Northbound Approach	E (68.6) [43] {170}	F (87.6) [56] {191}
Southbound Approach	D (39.1) [66] {228}	B (19.2) [29] {112}
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	C (23.1)	C (24.5)
Eastbound Approach	B (18.9) [403] {1224}	B (17.2) [128] {910}
Westbound Approach	C (20.9) [75] {532}	C (21.6) [171] {903}
Northbound Approach	D (53.1) [71] {257}	E (60.1) [92] {299}
Southbound Approach	C (30.4) [<25] {89}	D (40.3) [<25] {111}
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (7.1) [<25] {<25}	C (19.3) [<25] {25}
Westbound Left Turn	C (24.1) [<25] {26}	A (9.5) [<25] {<25}
Northbound Right Turn	C (16.5) [<25] {27}	B (13.9) [<25] {32}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Southbound Right Turn	B (12.5) [<25] {45}	C (18.3) [<25] {38}
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (7.8) [<25] {63}
Southbound Right Turn	B (11.3) [<25] {36}	C (22.9) [<25] {41}
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	C (25.1)	D (36.1)
Eastbound Approach	C (21.1) [134] {846}	C (33.6) [128] {751}
Westbound Approach	B (17.3) [53] {359}	C (28.0) [207] {887}
Northbound Approach	E (56.6) [33] {114}	E (66.9) [65] {268}
Southbound Approach	D (47.7) [56] {192}	E (57.6) [77] {264}
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	B (11.4) [<25] {45}	B (10.9) [<25] {69}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (4.5) [<25] {63}	A (2.4) [<25] {70}
Southbound Left Turn	A (6.1) [<25] {85}	A (8.7) [<25] {127}
Southbound Right Turn	A (9.0) [<25] {51}	B (12.2) [<25] {94}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (1.6) [<25] {49}	A (1.5) [<25] {<25}
Northbound Left Turn	B (12.1) [<25] {76}	D (27.7) [44] {227}
Northbound Right Turn	A (6.1) [<25] {101}	A (7.5) [61] {252}
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	E (47.6) [<25] {40}
Eastbound Right Turn	D (29.7) [<25] {41}	C (17.8) [<25] {38}
Northbound Left Turn	F (91.9) [<25] {60}	A (8.1) [<25] {26}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	C (33.0)	B (19.9)
Eastbound Approach	E (63.8) [98] {338}	C (30.6) [40] {184}
Westbound Approach	C (21.9) [26] {112}	C (28.0) [79] {328}
Northbound Approach	B (16.9) [50] {314}	B (16.6) [99] {607}
Southbound Approach	D (36.4) [840] {1658}	B (19.2) [120] {745}
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	F (303.0) [78] {175}	D (25.2) [<25] {54}
Southbound Left Turn	C (19.7) [494] {946}	B (13.6) [<25] {26}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	F (163.9) [109] {214}	C (17.9) [<25] {59}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
Southbound Left Turn	B (10.5) [233] {419}	A (9.9) [<25] {<25}
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	F (207.8) [89] {174}	E (45.5) [<25] {40}
Westbound Right Turn	F (70.2) [118] {207}	B (13.0) [<25] {74}
Southbound Left Turn	D (30.8) [1399] {1658}	B (14.3) [<25] {28}
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	F (2,462.0) [73] {88}	E (35.5) [<25] {39}
Westbound Right Turn	B (13.2) [109] {125}	B (12.9) [<25] {76}
Southbound Left Turn	C (22.2) [380] {493}	B (11.6) [<25] {28}
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	C (29.0)	B (19.0)
Eastbound Approach	D (36.9) [1380] {1512}	B (15.9) [142] {823}
Westbound Approach	B (12.9) [39] {249}	B (15.8) [85] {539}
Northbound Approach	C (26.6) [<25] {105}	D (39.5) [65] {263}
Southbound Approach	D (35.7) [34] {151}	C (25.5) [37] {140}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	F (1,033.8) [80] {183}	F (101.3) [<25] {99}
Westbound Right Turn	F (91.9) [109] {217}	B (13.3) [35] {134}
Southbound Left Turn	C (22.0) [278] {513}	B (13.7) [29] {465}
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, Roundabout)		
Overall Intersection	F (53.4)	F (79.2)
Eastbound Approach	F (314.9) [809] {838}	F (179.8) [805] {838}
Westbound Approach	B (14.0) [56] {420}	F (189.7) [1644] {1658}
Northbound Approach	A (4.1) [<25] {209}	F (52.9) [463] {788}
Southbound Approach	C (18.5) [307] {461}	A (9.1) [111] {460}

APPENDIX O: 2045 LOCAL INTERSECTIONS OPERATING CONDITIONS (VISSIM)

Table O-1. 2045 Operating Conditions - Option A (VISSIM)

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (17.7)	B (18.3)
Eastbound Approach	C (20.5) [68] {351}	C (22.5) [56] {252}
Westbound Approach	B (13.5) [<25] {175}	B (16.2) [53] {398}
Northbound Approach	B (14.4) [<25] {66}	B (14.2) [<25] {52}
Southbound Approach	A (6.7) [<25] {59}	B (11.1) [<25] {118}
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (16.1)	C (20.7)
Eastbound Approach	B (14.8) [60] {402}	B (15.0) [50] {322}
Westbound Approach	B (16.1) [42] {311}	C (23.2) [148] {752}
Northbound Approach	C (20.5) [<25] {154}	D (37.9) [<25] {103}
Southbound Approach	C (24.6) [<25] {99}	C (28.9) [25] {179}
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (7.9) [<25] {<25}	C (22.7) [<25] {58}
Westbound Left Turn	B (11.4) [<25] {<25}	A (8.3) [<25] {41}
Northbound Approach	B (11.2) [<25] {67}	B (10.1) [<25] {64}
Southbound Approach	A (8.6) [<25] {79}	A (9.7) [<25] {81}
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	C (18.2) [<25] {<25}	B (15.6) [<25] {38}
Northbound Approach	B (12.6) [<25] {39}	B (13.4) [<25] {43}
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Northbound Right-Turn	B (11.8) [<25] {<25}	A (6.6) [<25] {<25}
Southbound Right-Turn	No volumes observed	C (22.4) [<25] {37}
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	A (8.8)	A (7.3)
Eastbound Approach	A (8.8) [79] {777}	A (9.2) [59] {558}
Westbound Approach	A (7.1) [28] {282}	A (3.3) [35] {400}
Northbound Approach	D (42.2) [<25] {124}	E (57.9) [61] {244}
Southbound Approach	D (51.0) [<25] {92}	D (43.7) [<25] {101}
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	A (9.4)	B (11.8)
Eastbound Approach	A (6.9) [100] {676}	B (11.0) [117] {489}
Westbound Approach	B (11.7) [41] {263}	A (6.2) [40] {552}
Northbound Approach	C (30.8) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.3) [<25] {171}	D (52.3) [132] {518}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (4.6) [<25] {50}	B (11.2) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (26.4)
Eastbound Approach	B (11.2) [109] {990}	C (28.2) [206] {845}
Westbound Approach	B (11.2) [56] {207}	B (17.1) [113] {525}
Northbound Approach	D (48.4) [45] {140}	E (65.2) [77] {196}
Southbound Approach	E (76.0) [74] {292}	E (60.6) [49] {197}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (31.5)	D (37.2)
Eastbound Approach	C (31.3) [168] {705}	E (58.2) [187] {559}
Westbound Approach	C (24.2) [90] {261}	B (19.9) [126] {651}
Northbound Approach	C (32.4) [89] {305}	D (41.2) [143] {359}
Southbound Approach	D (48.6) [91] {306}	D (51.9) [117] {428}
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (15.5)	B (15.4)
Eastbound Approach	A (9.0) [48] {424}	A (9.8) [51] {410}
Westbound Approach	B (13.8) [62] {635}	B (16.8) [156] {1076}
Northbound Approach	E (74.8) [46] {179}	F (81.9) [53] {189}
Southbound Approach	D (40.7) [72] {233}	B (20.0) [31] {115}
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	B (19.2)	C (20.8)
Eastbound Approach	A (7.8) [80] {962}	A (7.9) [36] {439}
Westbound Approach	C (24.4) [115] {629}	C (21.8) [286] {937}
Northbound Approach	E (68.3) [84] {267}	E (60.7) [85] {301}
Southbound Approach	D (39.1) [27] {119}	D (48.3) [37] {137}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (9.9) [<25] {<25}	B (15.7) [<25] {<25}
Westbound Left Turn	C (21.8) [<25] {<25}	B (16.9) [<25] {<25}
Northbound Right Turn	C (17.9) [<25] {27}	B (13.4) [<25] {32}
Southbound Right Turn	B (12.5) [<25] {44}	B (19.3) [<25] {41}
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (7.7) [<25] {<25}	A (7.0) [<25] {64}
Southbound Right Turn	B (11.4) [<25] {37}	B (15.8) [<25] {35}
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	B (17.8)	C (30.5)
Eastbound Approach	A (6.8) [<25] {324}	C (20.9) [133] {467}
Westbound Approach	B (14.7) [43] {349}	C (26.5) [192] {872}
Northbound Approach	E (58.4) [34] {122}	E (58.3) [53] {208}
Southbound Approach	D (53.3) [64] {223}	E (58.5) [79] {274}
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	B (11.9) [<25] {45}	B (10.8) [<25] {71}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (4.5) [<25] {62}	A (2.4) [<25] {66}
Southbound Left Turn	A (6.1) [<25] {89}	A (8.6) [<25] {136}
Southbound Right Turn	A (9.8) [<25] {55}	B (12.3) [<25] {103}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (1.6) [<25] {51}	A (1.7) [<25] {<25}
Northbound Left Turn	B (12.0) [<25] {70}	D (36.9) [74] {316}
Northbound Right Turn	A (6.1) [<25] {95}	A (8.9) [93] {340}
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	D (52.2) [<25] {40}
Eastbound Right Turn	C (20.7) [<25] {26}	B (15.5) [<25] {37}
Northbound Left Turn	B (10.5) [<25] {<25}	A (9.7) [<25] {43}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (14.2)	B (17.9)
Eastbound Approach	D (36.7) [60] {211}	C (33.7) [43] {179}
Westbound Approach	B (19.7) [27] {104}	C (27.6) [71] {335}
Northbound Approach	A (10.0) [33] {213}	B (12.1) [91] {658}
Southbound Approach	B (12.1) [128] {940}	B (19.5) [110] {696}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	C (17.5) [<25] {53}	C (23.5) [<25] {53}
Southbound Left Turn	A (4.3) [<25] {28}	B (19.4) [<25] {<25}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	C (17.3) [<25] {53}	C (22.2) [<25] {61}
Southbound Left Turn	A (4.5) [<25] {55}	B (15.1) [<25] {<25}
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	E (37.4) [<25] {33}	D (54.7) [<25] {44}
Westbound Right Turn	A (9.4) [<25] {66}	B (14.1) [<25] {78}
Southbound Left Turn	A (4.3) [<25] {45}	B (17.3) [<25] {26}
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	E (37.2) [<25] {35}	D (44.7) [<25] {42}
Westbound Right Turn	A (8.5) [<25] {72}	B (14.9) [<25] {78}
Southbound Left Turn	A (4.4) [<25] {71}	B (13.9) [<25] {36}
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	B (10.5)	B (18.6)
Eastbound Approach	C (34.6) [<25] {125}	D (40.6) [67] {251}
Westbound Approach	D (39.2) [44] {154}	C (29.6) [42] {148}
Northbound Approach	A (9.2) [30] {250}	B (16.8) [112] {553}
Southbound Approach	A (5.9) [74] {1011}	B (13.1) [88] {695}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	E (40.2) [<25] {34}	E (56.1) [<25] {79}
Westbound Right Turn	A (8.0) [<25] {69}	B (14.6) [<25] {113}
Southbound Left Turn	A (7.0) [<25] {153}	B (15.4) [<25] {37}
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, Roundabout)		
Overall Intersection	A (8.9)	B (10.8)
Eastbound Approach	D (29.0) [75] {342}	C (29.8) [122] {514}
Westbound Approach	A (5.0) [<25] {123}	B (10.2) [29] {191}
Northbound Approach	A (2.8) [<25] {78}	A (4.4) [<25] {158}
Southbound Approach	A (6.6) [28] {296}	A (5.5) [<25] {231}

Table O-2. 2045 Operating Conditions - Option B (VISSIM)

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
1: Buckingham Plantation Dr & Bluffton Pkwy (signal)		
Overall Intersection	B (17.3)	B (18.0)
Eastbound Approach	B (19.8) [65] {335}	C (21.8) [54] {241}
Westbound Approach	B (13.6) [<25] {178}	B (16.1) [54] {419}
Northbound Approach	B (14.5) [<25] {66}	B (14.0) [<25] {51}
Southbound Approach	A (6.7) [<25] {61}	B (10.9) [<25] {103}
2: Buckingham Plantation Dr/Moss Creek Dr & William Hilton Pkwy (signal)		
Overall Intersection	B (15.9)	C (21.1)
Eastbound Approach	B (14.5) [58] {383}	B (14.8) [49] {328}
Westbound Approach	B (15.9) [42] {321}	C (24.1) [158] {798}
Northbound Approach	C (20.7) [<25] {166}	D (41.0) [<25] {109}
Southbound Approach	C (23.7) [<25] {101}	C (28.2) [25] {170}
3: Salt Marsh Dr/Moss Creek Village & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (7.9) [<25] {<25}	C (23.1) [<25] {55}
Westbound Left Turn	B (12.4) [<25] {<25}	A (9.5) [<25] {39}
Northbound Approach	B (12.0) [<25] {66}	B (10.2) [<25] {64}
Southbound Approach	A (8.5) [<25] {78}	A (9.8) [<25] {86}
4: Fording Island Rd Ext & William Hilton Pkwy (un-signalized)		
Westbound Left Turn	C (20.6) [<25] {<25}	B (17.5) [<25] {37}
Northbound Approach	B (12.5) [<25] {37}	B (12.6) [<25] {43}
5: Boat Landing Driveway/Wildlife Refuge Driveway & William Hilton Pkwy (un-signalized)		
Northbound Right-Turn	B (11.9) [<25] {<25}	A (5.9) [<25] {<25}
Southbound Right-Turn	No volumes observed	C (22.3) [<25] {33}
6: Blue Heron Point Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	
7: Crosstree Dr (Windmill Harbour) & William Hilton Pkwy (signal)		
Overall Intersection	A (8.4)	A (7.3)
Eastbound Approach	A (8.9) [80] {784}	A (9.3) [59] {605}
Westbound Approach	A (5.6) [<25] {257}	A (3.3) [35] {278}
Northbound Approach	D (42.2) [<25] {124}	E (57.9) [61] {244}
Southbound Approach	D (51.0) [<25] {92}	D (44.7) [<25] {101}
8: Jenkins Rd & William Hilton Pkwy (un-signalized)		
	Intersection combined with Crosstree Dr	

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & William Hilton Pkwy (signal)		
Overall Intersection	A (7.1)	B (12.5)
Eastbound Approach	A (6.9) [101] {590}	B (11.3) [119] {513}
Westbound Approach	A (4.5) [<25] {158}	A (7.5) [58] {670}
Northbound Approach	C (33.2) [<25] {57}	E (67.0) [<25] {109}
Southbound Approach	C (23.2) [<25] {174}	D (50.9) [127] {508}
10: Old Wild Horse Rd & William Hilton Pkwy (un-signalized)		
Southbound Approach	A (5.5) [<25] {74}	B (12.6) [<25] {26}
11: Spanish Wells Rd/Wild Horse Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (20.6)	C (21.8)
Eastbound Approach	B (11.5) [112] {1032}	C (24.6) [158] {771}
Westbound Approach	C (23.7) [113] {536}	B (10.9) [162] {951}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {186}
Southbound Approach	E (75.9) [74] {292}	E (59.8) [49] {193}
12: Gumtree Rd & William Hilton Pkwy (signal)		
Overall Intersection	C (30.9)	C (29.7)
Eastbound Approach	D (37.4) [160] {658}	C (33.0) [103] {485}
Westbound Approach	B (13.2) [53] {195}	B (18.8) [111] {575}
Northbound Approach	C (30.6) [90] {316}	D (40.5) [139] {359}
Southbound Approach	D (51.5) [99] {366}	D (51.4) [118] {443}
13: Jarvis Park Rd/Wilborn Rd & William Hilton Pkwy (signal)		
Overall Intersection	B (17.3)	B (12.3)
Eastbound Approach	B (12.8) [139] {463}	A (9.1) [53] {239}
Westbound Approach	A (9.8) [30] {434}	A (6.7) [30] {407}
Northbound Approach	E (73.3) [30] {175}	E (67.9) [30] {168}
Southbound Approach	D (49.7) [72] {248}	D (44.6) [40] {172}
14: Pembroke Dr/Museum St & William Hilton Pkwy (signal)		
Overall Intersection	C (20.5)	B (16.3)
Eastbound Approach	A (9.3) [38] {307}	B (12.7) [44] {306}
Westbound Approach	C (29.2) [87] {440}	A (7.7) [31] {214}
Northbound Approach	E (58.3) [79] {284}	E (59.5) [93] {320}
Southbound Approach	C (34.4) [<25] {105}	D (36.6) [<25] {127}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
15: Central Ave & William Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (12.6) [<25] {27}	B (10.5) [<25] {<25}
Westbound Left Turn	C (23.8) [<25] {27}	B (12.7) [<25] {<25}
Northbound Right Turn	C (18.5) [<25] {30}	B (13.7) [<25] {32}
Southbound Right Turn	A (3.6) [<25] {<25}	A (5.6) [<25] {<25}
16: Hatton Pl/Merchant St & William Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (8.2) [<25] {66}
Southbound Right Turn	B (10.6) [<25] {38}	B (15.2) [<25] {35}
17: Indigo Run Dr/Whooping Crane Way & William Hilton Pkwy (signal)		
Overall Intersection	B (16.9)	D (35.7)
Eastbound Approach	A (5.2) [<25] {278}	C (34.5) [154] {810}
Westbound Approach	B (15.7) [47] {355}	C (26.8) [195] {845}
Northbound Approach	E (57.1) [32] {106}	E (67.3) [64] {267}
Southbound Approach	D (50.7) [59] {211}	E (56.5) [75] {278}
18: Cross Island Pkwy SB Ramp/Gumtree Rd & Honey Horn Rd (un-signalized)		
Eastbound Approach	A (8.1) [<25] {45}	B (11.1) [<25] {72}
19: Cross Island Pkwy SB Ramp & Marshland Rd (un-signalized)		
Westbound Left Turn	A (4.5) [<25] {64}	A (2.4) [<25] {68}
Southbound Left Turn	A (6.0) [<25] {83}	A (8.0) [<25] {111}
Southbound Right Turn	A (9.9) [<25] {49}	B (12.0) [<25] {78}
20: Cross Island Pkwy NB Ramp & Marshland Rd (un-signalized)		
Eastbound Left Turn	A (1.6) [<25] {51}	A (1.6) [<25] {<25}
Northbound Left Turn	B (11.6) [<25] {69}	D (38.8) [79] {326}
Northbound Right Turn	A (5.9) [<25] {94}	A (9.3) [98] {351}
21: Palmetto Bay Rd & Bay Pines Rd (un-signalized)		
Eastbound Left Turn	No volumes observed	E (55.7) [<25] {41}
Eastbound Right Turn	C (19.7) [<25] {<25}	B (14.2) [<25] {38}
Northbound Left Turn	A (9.2) [<25] {<25}	A (6.8) [<25] {32}
22: Palmetto Bay Rd & Point Comfort Rd/Arrow Rd (signal)		
Overall Intersection	B (12.7)	B (16.9)
Eastbound Approach	D (35.8) [59] {213}	C (33.9) [43] {177}
Westbound Approach	B (19.7) [26] {103}	C (26.3) [68] {337}
Northbound Approach	A (6.4) [<25] {162}	B (12.2) [85] {608}
Southbound Approach	B (11.3) [93] {770}	B (17.1) [90] {644}

Intersection & Movements	LOS (Delay, sec) [Average Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
23: Palmetto Bay Rd & Genesta St (un-signalized)		
Westbound Approach	C (20.0) [<25] {55}	C (23.8) [<25] {51}
Southbound Left Turn	A (5.1) [<25] {26}	B (14.4) [<25] {<25}
24: Palmetto Bay Rd & Palmetto Business Park Rd (un-signalized)		
Westbound Approach	C (19.8) [<25] {53}	C (21.8) [<25] {57}
Southbound Left Turn	A (4.7) [<25] {30}	B (14.3) [<25] {<25}
25: Palmetto Bay Rd & Bow Cir (un-signalized)		
Westbound Left Turn	D (30.9) [<25] {32}	D (51.8) [<25] {41}
Westbound Right Turn	B (11.1) [<25] {65}	B (14.1) [<25] {75}
Southbound Left Turn	A (5.4) [<25] {39}	B (11.5) [<25] {26}
26: Palmetto Bay Rd & Archer Rd (un-signalized)		
Westbound Left Turn	E (36.6) [<25] {37}	D (36.4) [<25] {38}
Westbound Right Turn	A (9.9) [<25] {73}	B (13.9) [<25] {75}
Southbound Left Turn	A (5.6) [<25] {85}	A (8.8) [<25] {25}
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	A (8.5)	B (16.6)
Eastbound Approach	D (35.6) [<25] {125}	D (41.5) [67] {250}
Westbound Approach	D (39.1) [44] {154}	C (29.2) [42] {148}
Northbound Approach	A (5.0) [<25] {236}	B (13.2) [82] {490}
Southbound Approach	A (4.4) [28] {488}	B (11.9) [68] {432}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	D (30.3) [<25] {34}	C (34.3) [<25] {64}
Westbound Right Turn	A (8.3) [<25] {68}	B (12.8) [<25] {98}
Southbound Left Turn	A (6.2) [<25] {109}	B (10.6) [<25] {46}
29: Palmetto Bay Rd & William Hilton Pkwy (Sea Pines Circle, Roundabout)		
Overall Intersection	C (24.2)	C (25.0)
Eastbound Approach	D (45.3) [93] {237}	D (36.7) [90] {283}
Westbound Approach	D (37.7) [104] {265}	C (30.2) [107] {295}
Northbound Approach	B (15.8) [31] {204}	C (24.7) [88] {382}
Southbound Approach	B (14.7) [62] {293}	B (15.0) [55] {361}

William Hilton Parkway Gateway Corridor Independent Review Advisory Committee Meeting

August 14th, 2024



Lochmueller Team Members Participating Today

- ☐ Nate Nohren – Project Manager
- ☐ Kate Swinford – Deputy Project Manager/Traffic Analysis Lead
- ☐ Michelle Romine – Traffic Analysis Staff Engineer
- ☐ Lorne Jackson – Roadway/ROW Impacts Lead

Agenda

- ☐ Update on Project Progress
- ☐ Review of Downstream Impacts to Task 4 Intersections (Assuming Implementation of Modified Alternative 1 from Task 3)
- ☐ Additional Mitigation Solutions for Local Intersections
- ☐ Presentation of Final Results for Entire Study Area
- ☐ Questions

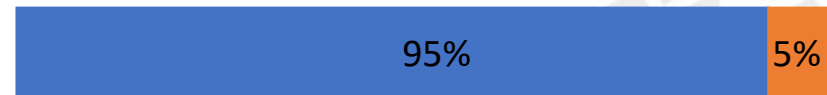
Update on Project Progress

(Key Tasks Completed & Continuing to Work on Since Last Meeting)

- ✓ Participated in 6/17 Town Council Workshop
- ✓ Attended 6/20 Special Town Council Meeting
- ✓ Completed traffic analyses, modeling (Synchro/VISSIM), and related findings to determine proposed mitigation strategies for 2045 Build Year conditions at intersections downstream of CIP
- ✓ Prepared preliminary Traffic Operations & Safety Report (deliverable for Task 5.1), which comprehensively details all work completed by Lochmueller as a part of this project
 - Submitted draft report to Town staff on 8/9

Update on Overall Project Progress (as of 8/9/24)

Overall ~95% Complete

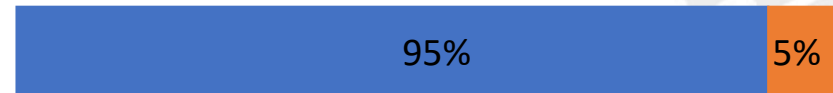


- Task #1: Project Initiation and Coordination
 - ~100% Complete
- Task #2: Review of Travel Demand Model & Evaluation of 2023 Existing Operating Conditions (Entire Study Area)
 - 100% Complete
- Task #3: Traffic Model and Operational Update – Modified Original Project Study Area
 - 100% Complete
- Task #4: Traffic Model and Operational Update – Entire Project Study Area
 - 100% Complete

Update on Overall Project Progress (as of 8/9/24)

- Task #5: Final Report

- ~95% Complete

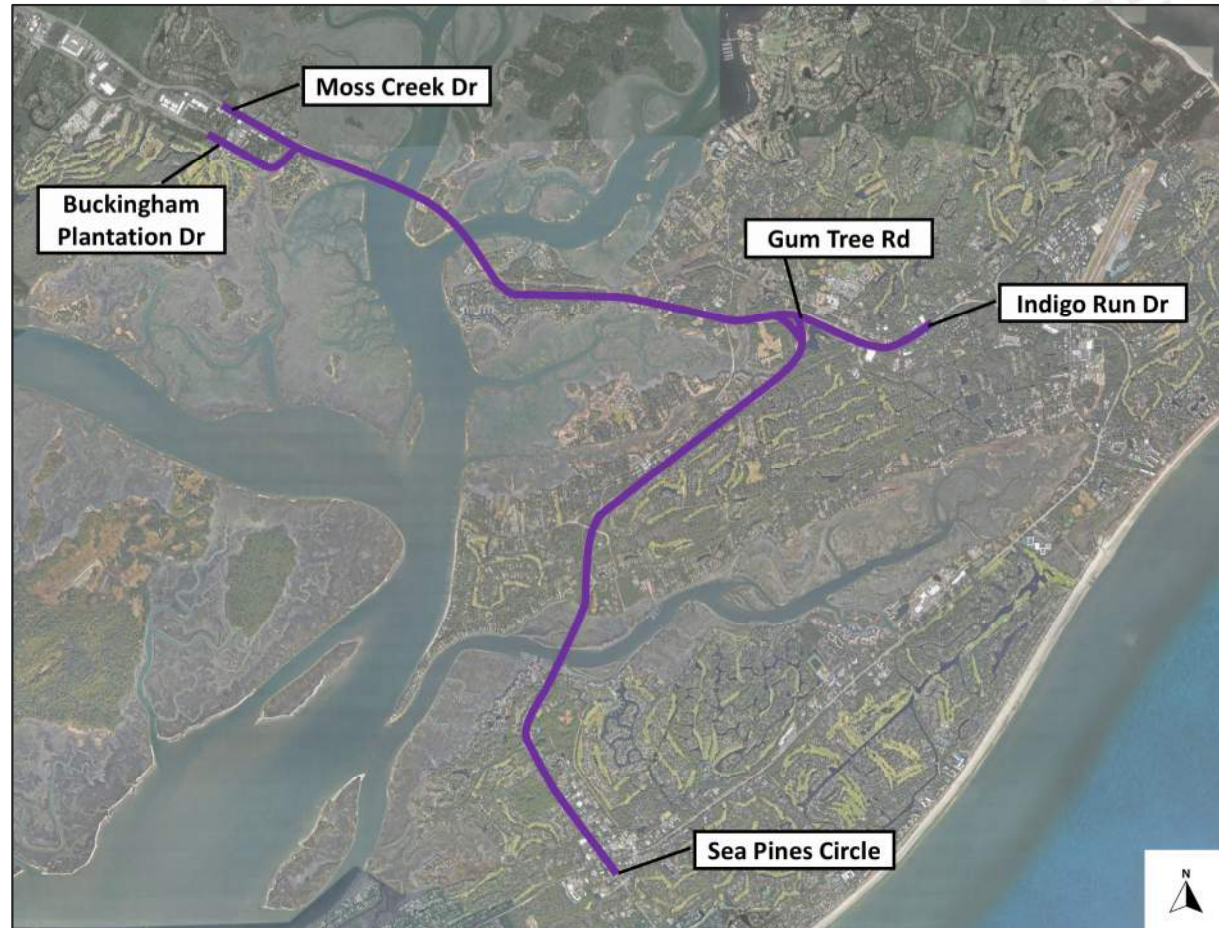


- Key Subtasks Remaining:
 - Finalize Traffic Operations & Safety Report, after receiving feedback from Town staff
 - Presentation of final report findings to Town Council

Review of Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

- Lochmueller previously analyzed four alternatives intended to improve the operating conditions along US 278 between Moss Creek Dr and Gum Tree Rd.
- After review of the findings and discussion with SCDOT, Lochmueller was directed by the Town of Hilton Head Island to pursue Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at US 278 at Squire Pope Rd.
- Lochmueller then evaluated the impacts the modified Alternative 1 would have on the entire project study area and determined what, if any, improvements should be made to accommodate the 2045 forecasted traffic.

Review of Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)



Review of Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

- VISSIM Travel Time Results:

Corridor		2045 No Build Simulated travel time (secs)		2045 Modified Alternative 1 Simulated Travel Time (secs)		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1579 [26.3]	642 [10.7]	628 [10.5]	631 [10.5]	-60.23%	-1.71%
	WB	584 [9.7]	1544 [25.7]	597 [10]	616 [10.3]	2.23%	-60.10%
Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine	SB	1984 [33.1]	873 [14.6]	1387 [23.1]	874 [14.6]	-30.09%	0.11%
	NB	823 [13.7]	2465 [41.1]	848 [14.1]	904 [15.1]	3.04%	-63.33%

Review of Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

- Overall, even with no improvements in place east of Gumtree Road or along Cross Island Parkway, it was found that the travel times would significantly improve when compared to the 2045 no build scenario.
- The intersections would be expected to operate acceptably overall. However, the eastbound and westbound approaches between Wilborn Road and Pembroke Drive are expected to experience long queues and be over capacity in the year 2045.
- Additionally, the existing roundabout at Palmetto Bay Road and Sea Pines Circle is expected to fail during both the AM and PM peak hours. As a result of the failing roundabout, the queue lengths are expected to extend beyond nearby intersections.
- Therefore, Lochmueller evaluated two options with potential solutions to the local intersections downstream of Gum Tree Road and Cross Island Parkway to help mitigate the expected long queues and delays.

Additional Mitigation Solutions for Local Intersections – Option A

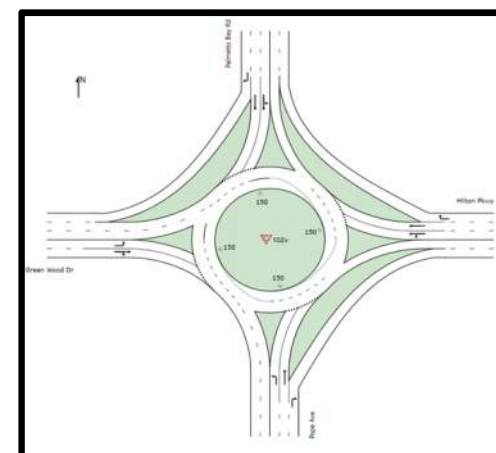
- Option A:

- William Hilton Parkway & Pembroke Drive:

- Reconfigure the northbound approach to provide dual northbound left-turn lanes, one through lane, and one right-turn lane
 - In addition to the roadway widening, this will require relocation of the shared use path on the east side, adjustments to signal equipment and additional ROW on the south leg
 - Estimated preliminary probable opinion of cost (including ROW) = \$750,000
 - Estimated construction duration = 4 months

- Palmetto Bay Road & William Hilton Parkway (Sea Pines Circle):

- Provide a two-lane roundabout
 - Each approach should have a right-turn bypass, with the exception of the west leg
 - This will require pavement widening to the inside of the traffic circle and on each of the four legs of the intersection to accommodate the additional lane
 - Estimated preliminary probable opinion of cost = \$2,000,000
 - Estimated construction duration = 8 months



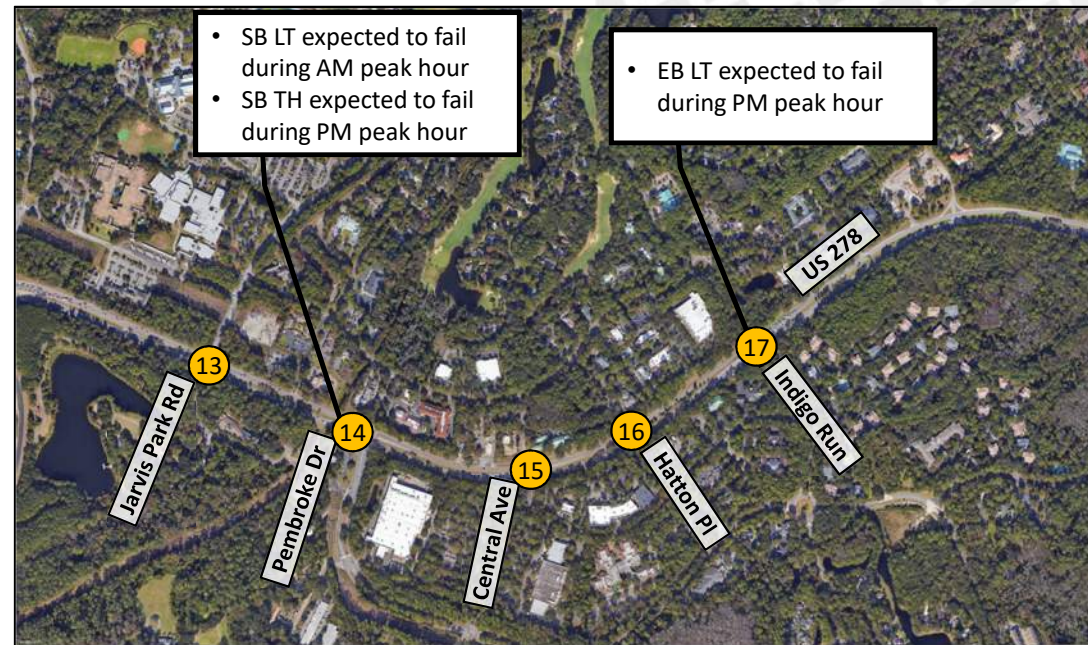
Option A Operating Conditions (VISSIM)

- VISSIM Travel Time Results:
 - Travel times along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive are expected to improve by approximately:
 - 17.2 minutes during the AM peak hour in the eastbound direction
 - 15.7 minutes during the PM peak hour in the westbound direction
 - The travel times along William Hilton Parkway at Moss Creek to the Cross Island Parkway at Sea Pines Circle are expected to improve by approximately:
 - 19.2 minutes during the AM peak hour in the southbound direction
 - 27 minutes during the PM peak hour in the northbound direction

Corridor		2045 No Build Simulated travel time (secs) [min]		2045 Modified Alternative 1 Option A Simulated Travel Time (secs) [min]		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1579 [26.3]	642 [10.7]	548 [9.1]	589 [9.8]	-65.31%	-8.21%
	WB	584 [9.7]	1544 [25.7]	556 [9.3]	600 [10]	-4.85%	-61.12%
Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine	SB	1984 [33.1]	873 [14.6]	833 [13.9]	856 [14.3]	-58.01%	-1.93%
	NB	823 [13.7]	2465 [41.1]	814 [13.6]	845 [14.1]	-1.04%	-65.72%

Option A Operating Conditions (VISSIM)

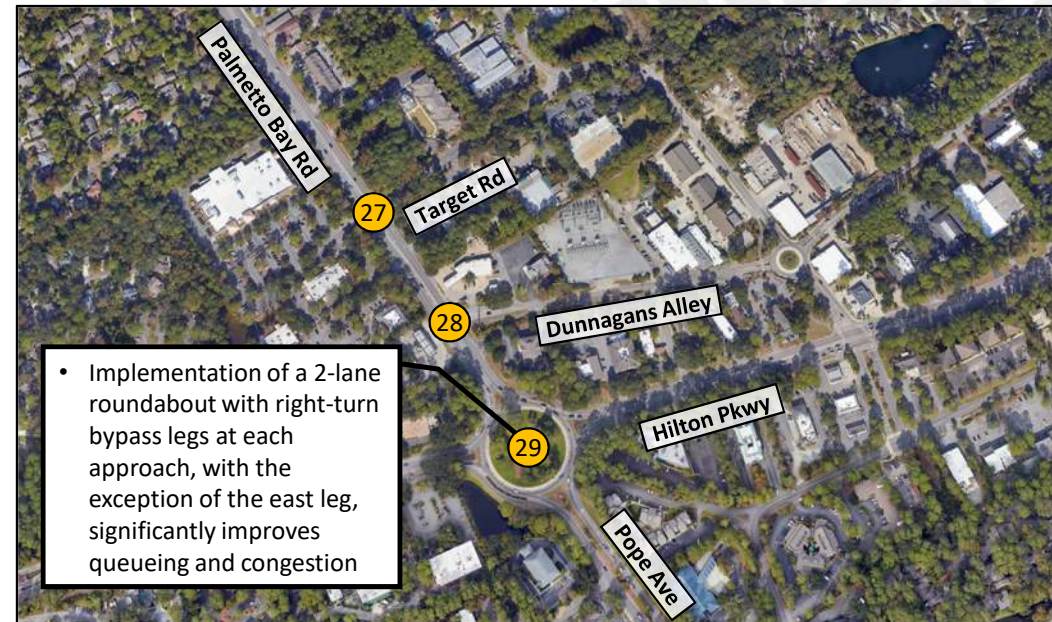
Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & Hilton Pkwy (signal)		
Overall Intersection	B (15.5)	B (15.4)
Eastbound Approach	A (9.0) [48] {424}	A (9.8) [51] {410}
Westbound Approach	B (13.8) [62] {635}	B (16.8) [156] {1076}
Northbound Approach	E (74.8) [46] {179}	F (81.9) [53] {189}
Southbound Approach	D (40.7) [72] {233}	B (20.0) [31] {115}
14: Pembroke Dr/Museum St & Hilton Pkwy (signal)		
Overall Intersection	B (19.2)	C (20.8)
Eastbound Approach	A (7.8) [80] {962}	A (7.9) [36] {439}
Westbound Approach	C (24.4) [115] {629}	C (21.8) [286] {937}
Northbound Approach	E (68.3) [84] {267}	E (60.7) [85] {301}
Southbound Approach	D (39.1) [27] {119}	D (48.3) [37] {137}
15: Central Ave & Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (9.9) [<25] {<25}	B (15.7) [<25] {<25}
Westbound Left Turn	C (21.8) [<25] {<25}	B (16.9) [<25] {<25}
Northbound Right Turn	C (17.9) [<25] {27}	B (13.4) [<25] {32}
Southbound Right Turn	B (12.5) [<25] {44}	B (19.3) [<25] {41}
16: Hatton Pl/Merchant St & Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (7.7) [<25] {<25}	A (7.0) [<25] {64}
Southbound Right Turn	B (11.4) [<25] {37}	B (15.8) [<25] {35}
17: Indigo Run Dr/Whooping Crane Way & Hilton Pkwy (signal)		
Overall Intersection	B (17.8)	C (30.5)
Eastbound Approach	A (6.8) [<25] {324}	C (20.9) [133] {467}
Westbound Approach	B (14.7) [43] {349}	C (26.5) [192] {872}
Northbound Approach	E (58.4) [34] {122}	E (58.3) [53] {208}



Even with the adaptive signals and reconfiguration of the northbound approach at Pembroke Dr to allow more of the cycle length to go to the mainline, long queues would still be expected between Gumtree Rd and Pembroke Ave. However, it is not expected that the maximum queue would extend into nearby intersections.

Option A Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	B (17.8)	C (30.5)
Eastbound Approach	A (6.8) [<25] {324}	C (20.9) [133] {467}
Westbound Approach	B (14.7) [43] {349}	C (26.5) [192] {872}
Northbound Approach	E (58.4) [34] {122}	E (58.3) [53] {208}
Southbound Approach	D (53.3) [64] {223}	E (58.5) [79] {274}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	E (40.2) [<25] {34}	E (56.1) [<25] {79}
Westbound Right Turn	A (8.0) [<25] {69}	B (14.6) [<25] {113}
Southbound Left Turn	A (7.0) [<25] {153}	B (15.4) [<25] {37}
29: Palmetto Bay Rd & Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	A (8.9)	B (10.8)
Eastbound Approach	D (29.0) [75] {342}	C (29.8) [122] {514}
Westbound Approach	A (5.0) [<25] {123}	B (10.2) [29] {191}
Northbound Approach	A (2.8) [<25] {78}	A (4.4) [<25] {158}
Southbound Approach	A (6.6) [28] {296}	A (5.5) [<25] {231}



Additional Mitigation Solutions for Local Intersections – Option B

- **Option B:**

- Extend the 6-lane section from Gumtree Road past Pembroke Drive. The 6-lane section can taper back to a 4-lane section at Central Avenue.
- In addition to the roadway widening, this will require adjustments to the shared use path on the north side of the road, new traffic signals at Wilborn and Pembroke, temporary construction easements and possibly new ROW.
 - Estimated preliminary probable opinion of cost = \$3,000,000
 - Estimated construction duration = 6 months
- William Hilton Parkway & Wilborn Road:
 - Provide dual southbound right-turn lanes
 - In addition to the roadway widening, this will require adjustments to the shared use path on the east side of the road, temporary construction easements and possibly new ROW
 - Estimated preliminary probable opinion of cost = \$1,000,000
 - Estimated construction duration = 4 months

Additional Mitigation Solutions for Local Intersections – Option B (cont.)

- **Option B:**

- Palmetto Bay Road & William Hilton Parkway (Sea Pines Circle):
 - Signalize the intersection rather than the existing roundabout
 - Provide a left-turn lane, two thru lanes, and a right-turn lane for every approach except the EB approach, which will have dual left-turn lanes
 - In addition to the roadway widening on each leg of the intersection to accommodate the addition of turn lane, this will require adjustments to the shared use path on the east side of the south leg, new traffic signals, temporary construction easements, and new ROW on the north and west legs
 - Estimated preliminary probable opinion of cost = \$6,000,000
 - Estimated construction duration = 12 months

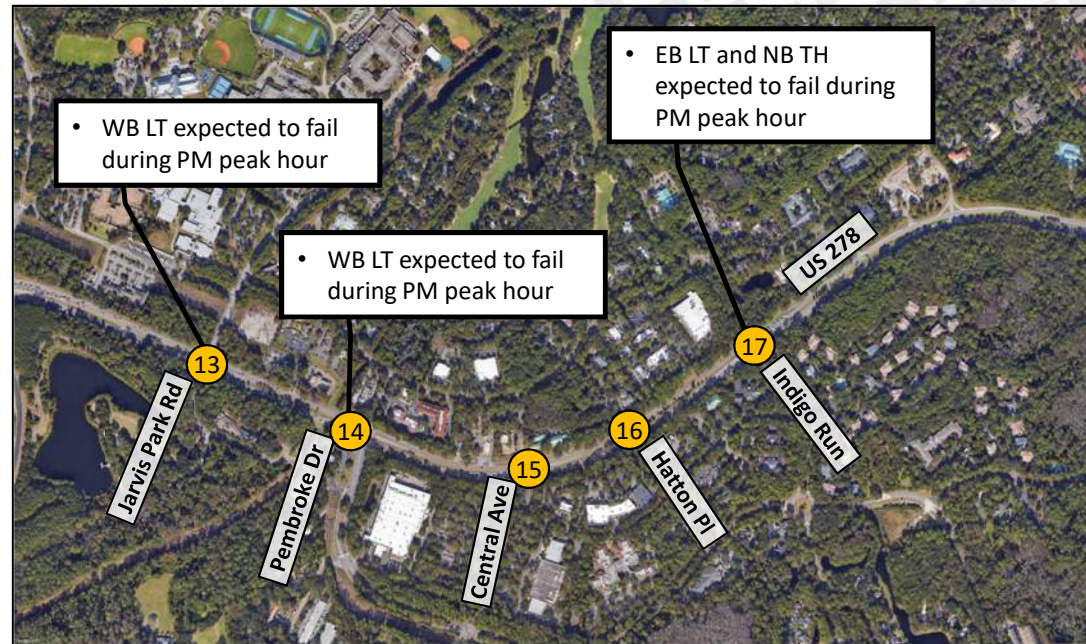
Option B Operating Conditions (VISSIM)

- VISSIM Travel Time Results:
 - Travel times along William Hilton Parkway between Moss Creek Drive and Indigo Run Drive are expected to improve by approximately:
 - 17.4 minutes during the AM peak hour in the eastbound direction
 - 16.5 minutes during the PM peak hour in the westbound direction
 - The travel times along William Hilton Parkway at Moss Creek to the Cross Island Parkway at Sea Pines Circle are expected to improve by approximately:
 - 19.4 minutes during the AM peak hour in the southbound direction
 - 27 minutes during the PM peak hour in the northbound direction

Corridor		2045 No Build Simulated travel time (secs) [min]		2045 Modified Alternative 1 Option B Simulated Travel Time (secs) [min]		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1579 [26.3]	642 [10.7]	534 [8.9]	571 [9.5]	-66.18%	-11.06%
	WB	584 [9.7]	1544 [25.7]	547 [9.1]	552 [9.2]	-6.34%	-64.25%
Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine	SB	1984 [33.1]	873 [14.6]	820 [13.7]	840 [14]	-58.67%	-3.78%
	NB	823 [13.7]	2465 [41.1]	816 [13.6]	848 [14.1]	-0.86%	-65.60%

Option B Operating Conditions (VISSIM)

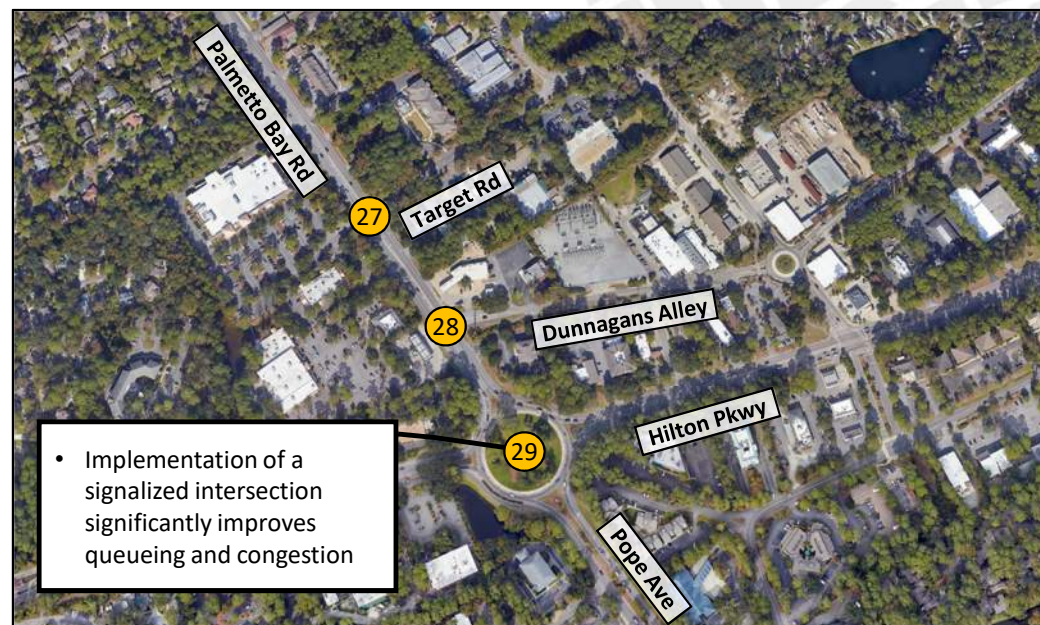
Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & Hilton Pkwy (signal)		
Overall Intersection	B (17.3)	B (12.3)
Eastbound Approach	B (12.8) [139] {463}	A (9.1) [53] {239}
Westbound Approach	A (9.8) [30] {434}	A (6.7) [30] {407}
Northbound Approach	E (73.3) [30] {175}	E (67.9) [30] {168}
Southbound Approach	D (49.7) [72] {248}	D (44.6) [40] {172}
14: Pembroke Dr/Museum St & Hilton Pkwy (signal)		
Overall Intersection	C (20.5)	B (16.3)
Eastbound Approach	A (9.3) [38] {307}	B (12.7) [44] {306}
Westbound Approach	C (29.2) [87] {440}	A (7.7) [31] {214}
Northbound Approach	E (58.3) [79] {284}	E (59.5) [93] {320}
Southbound Approach	C (34.4) [<25] {105}	D (36.6) [<25] {127}
15: Central Ave & Hilton Pkwy (un-signalized)		
Eastbound Left Turn	B (12.6) [<25] {27}	B (10.5) [<25] {<25}
Westbound Left Turn	C (23.8) [<25] {27}	B (12.7) [<25] {<25}
Northbound Right Turn	C (18.5) [<25] {30}	B (13.7) [<25] {32}
Southbound Right Turn	A (3.6) [<25] {<25}	A (5.6) [<25] {<25}
16: Hatton Pl/Merchant St & Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (8.2) [<25] {66}
Southbound Right Turn	B (10.6) [<25] {38}	B (15.2) [<25] {35}
17: Indigo Run Dr/Whooping Crane Way & Hilton Pkwy (signal)		
Overall Intersection	B (16.9)	D (35.7)
Eastbound Approach	A (5.2) [<25] {278}	C (34.5) [154] {810}
Westbound Approach	B (15.7) [47] {355}	C (26.8) [195] {845}
Northbound Approach	E (57.1) [32] {106}	E (67.3) [64] {267}



By extending the 6-lane section east towards Central Avenue, the long queue lengths between Gumtree Rd and Pembroke Dr would be mitigated.

Option B Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	A (8.5)	B (16.6)
Eastbound Approach	D (35.6) [<25] {125}	D (41.5) [67] {250}
Westbound Approach	D (39.1) [44] {154}	C (29.2) [42] {148}
Northbound Approach	A (5.0) [<25] {236}	B (13.2) [82] {490}
Southbound Approach	A (4.4) [28] {488}	B (11.9) [68] {432}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	D (30.3) [<25] {34}	C (34.3) [<25] {64}
Westbound Right Turn	A (8.3) [<25] {68}	B (12.8) [<25] {98}
Southbound Left Turn	A (6.2) [<25] {109}	B (10.6) [<25] {46}
29: Palmetto Bay Rd & Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	C (24.2)	C (25.0)
Eastbound Approach	D (45.3) [93] {237}	D (36.7) [90] {283}
Westbound Approach	D (37.7) [104] {265}	C (30.2) [107] {295}
Northbound Approach	B (15.8) [31] {204}	C (24.7) [88] {382}
Southbound Approach	B (14.7) [62] {293}	B (15.0) [55] {361}



Final Travel Time Comparison

Corridor		Hilton Parkway between Moss Creek and Indigo Run		% Difference to 2045 No Build		Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine		% Difference to 2045 No Build	
		EB	WB	EB	WB	SB	NB	SB	NB
2045 No Build Simulated travel time (secs) [min]	AM	1579 [26.3]	584 [9.7]	-	-	1984 [33.1]	823 [13.7]	-	-
	PM	642 [10.7]	1544 [25.7]	-	-	873 [14.6]	2465 [41.1]	-	-
2045 Modified Alternative 1 Simulated Travel Time (secs) [min]	AM	628 [10.5]	597 [10]	-60.23%	2.23%	1387 [23.1]	848 [14.1]	-30.09%	3.04%
	PM	631 [10.5]	616 [10.3]	-1.71%	-60.10%	874 [14.6]	904 [15.1]	0.11%	-63.33%
2045 Modified Alternative 1 Option A Simulated Travel Time (secs) [min]	AM	548 [9.1]	556 [9.3]	-65.31%	-4.85%	833 [13.9]	814 [13.6]	-58.01%	-1.04%
	PM	589 [9.8]	600 [10]	-8.21%	-61.12%	856 [14.3]	845 [14.1]	-1.93%	-65.72%
2045 Modified Alternative 1 Option B Simulated Travel Time (secs) [min]	AM	534 [8.9]	547 [9.1]	-66.18%	-6.34%	820 [13.7]	816 [13.6]	-58.67%	-0.86%
	PM	571 [9.5]	552 [9.2]	-11.06%	-64.25%	840 [14]	848 [14.1]	-3.78%	-65.60%

Neither Option A nor Option B is expected to have a meaningful impact on travel times between Moss Creek and Indigo run. But they are expected to have a meaningful impact from Moss Creek to Cross Island @ Sea Pines

Conclusions

- Lochmueller Group was directed to pursue Alternative 1: SCDOT Modified Recommended Preferred with modifications to provide a single eastbound left-turn lane and a single southbound right-turn lane at William Hilton Parkway at Squire Pope Road
- With the recommended improvements under Alternative 1: SCDOT Modified Recommended Preferred in place, the rest of the downstream intersections would be expected to operate acceptably overall. However, the eastbound and westbound approaches between Wilborn Road and Pembroke Drive are expected to experience long queues in the year 2045 and the existing roundabout at Palmetto Bay Road and Sea Pines Circle is expected to fail during both the AM and PM peak hours
- Two additional options for mitigation are provided for The Town of Hilton Head Island's consideration in the final report to help ease congestion between Gumtree Road and Indigo Run Drive as well as along the Cross Island Parkway towards Sea Pines Circle.
- **Physical improvements east of Gum Tree Road have a marginal impact on the travel times along the William Hilton Parkway corridor between Moss Creek and Indigo Run but can improve key intersection performance and help reduce queueing.**
- **Improvements such as expanding the existing roundabout at Sea Pines Circle or signaling the intersection would significantly improve the travel times along Cross Island Parkway.**

QUESTIONS?



<https://www.islandpacket.com/news/local/traffic/article235209867.html>



APPENDIX

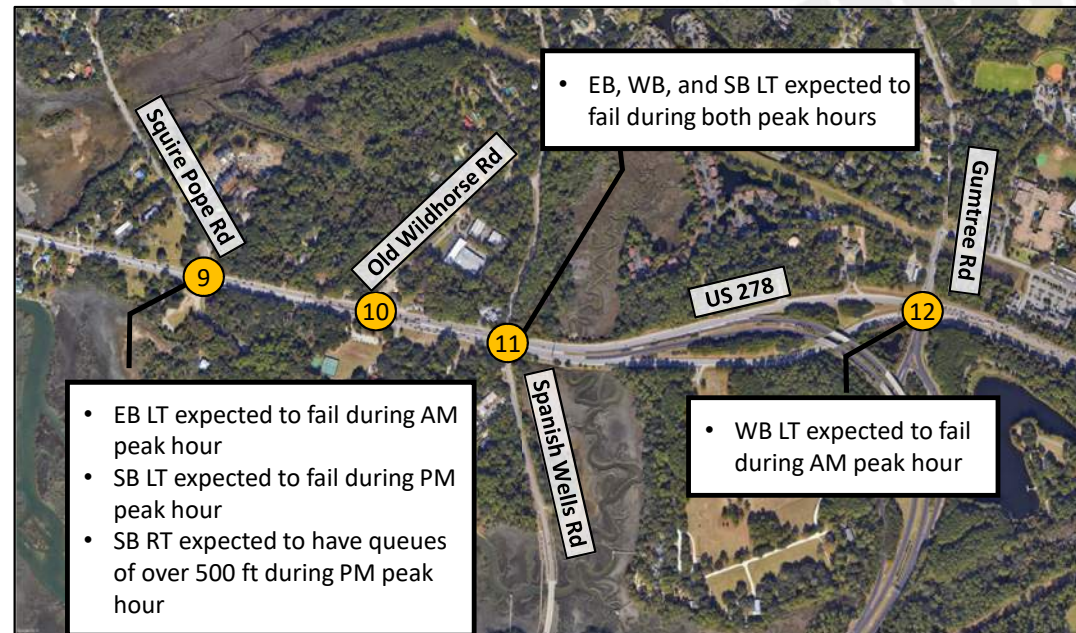


<https://www.islandpacket.com/news/local/traffic/article235209867.html>



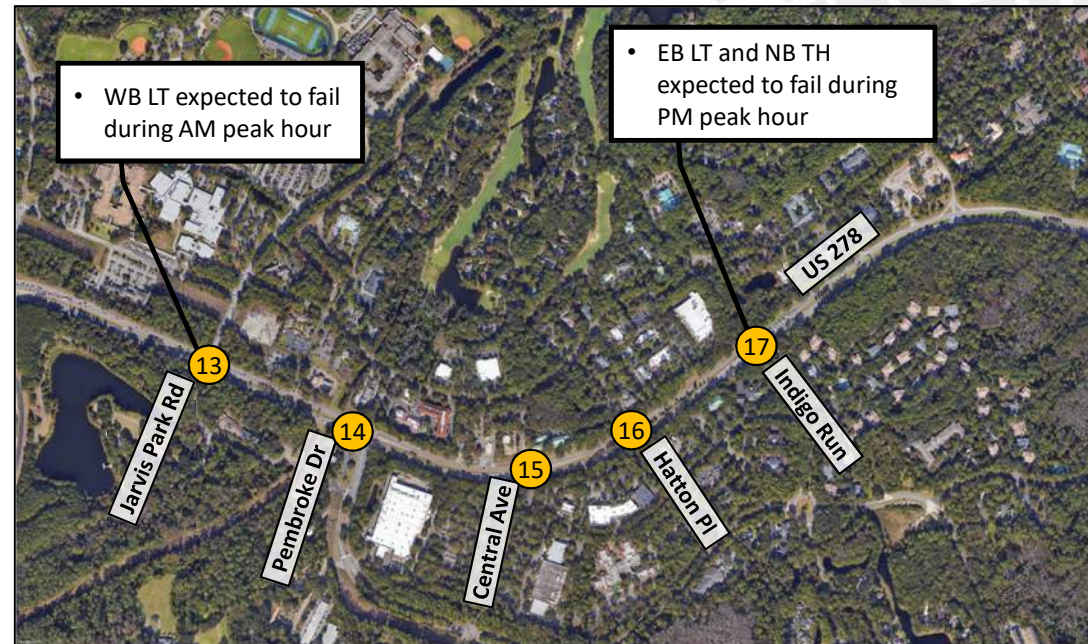
Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & Hilton Pkwy (signal)		
Overall Intersection	A (8.4)	B (11.8)
Eastbound Approach	A (7.0) [102] {697}	B (11.3) [124] {484}
Westbound Approach	A (8.2) [28] {237}	A (5.8) [36] {524}
Northbound Approach	C (30.4) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.6) [<25] {170}	D (51.1) [128] {521}
10: Old Wild Horse Rd & Hilton Pkwy (un-signalized)		
Southbound Approach	A (4.7) [<25] {56}	B (12.5) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (23.8)
Eastbound Approach	B (11.0) [106] {998}	C (27.9) [198] {861}
Westbound Approach	B (11.2) [56] {248}	B (11.9) [84] {779}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {196}
Southbound Approach	E (75.9) [74] {292}	E (60.6) [49] {197}
12: Gumtree Rd & Hilton Pkwy (signal)		
Overall Intersection	D (37.1)	D (43.8)
Eastbound Approach	C (33.4) [164] {682}	E (57.1) [184] {562}
Westbound Approach	D (40.8) [130] {369}	D (35.4) [236] {786}
Northbound Approach	C (26.6) [61] {264}	D (37.3) [98] {327}
Southbound Approach	D (50.2) [93] {302}	D (52.7) [119] {453}



Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
13: Jarvis Park Rd/Wilborn Rd & Hilton Pkwy (signal)		
Overall Intersection	C (26.7)	B (18.8)
Eastbound Approach	C (25.4) [439] {1480}	B (16.3) [103] {735}
Westbound Approach	C (21.6) [101] {686}	B (18.2) [295] {1202}
Northbound Approach	E (68.6) [43] {170}	F (87.6) [56] {191}
Southbound Approach	D (39.1) [66] {228}	B (19.2) [29] {112}
14: Pembroke Dr/Museum St & Hilton Pkwy (signal)		
Overall Intersection	C (23.1)	C (24.5)
Eastbound Approach	B (18.9) [403] {1224}	B (17.2) [128] {910}
Westbound Approach	C (20.9) [75] {532}	C (21.6) [171] {903}
Northbound Approach	D (53.1) [71] {257}	E (60.1) [92] {299}
Southbound Approach	C (30.4) [<25] {89}	D (40.3) [<25] {111}
15: Central Ave & Hilton Pkwy (un-signalized)		
Eastbound Left Turn	A (7.1) [<25] {<25}	C (19.3) [<25] {25}
Westbound Left Turn	C (24.1) [<25] {26}	A (9.5) [<25] {<25}
Northbound Right Turn	C (16.5) [<25] {27}	B (13.9) [<25] {32}
Southbound Right Turn	B (12.5) [<25] {45}	C (18.3) [<25] {38}
16: Hatton Pl/Merchant St & Hilton Pkwy (un-signalized)		
Northbound Right Turn	A (9.5) [<25] {28}	A (7.8) [<25] {63}
Southbound Right Turn	B (11.3) [<25] {36}	C (22.9) [<25] {41}
17: Indigo Run Dr/Whooping Crane Way & Hilton Pkwy (signal)		
Overall Intersection	C (25.1)	D (36.1)
Eastbound Approach	C (21.1) [134] {846}	C (33.6) [128] {751}
Westbound Approach	B (17.3) [53] {359}	C (28.0) [207] {887}
Northbound Approach	E (56.6) [33] {114}	E (66.9) [65] {268}
Southbound Approach	D (47.7) [56] {192}	E (57.6) [77] {264}



*Highlighted cells indicate that the maximum queues are expected to extend into the next intersection

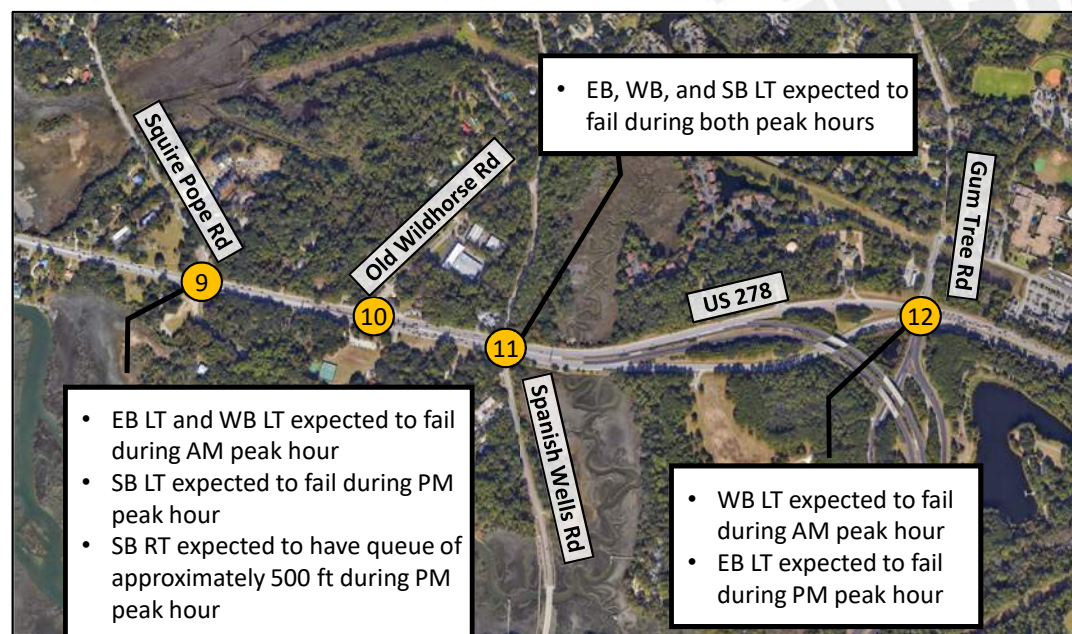
Downstream Impacts to Task 4 Intersections (Assuming only the Implementation of Modified Alternative 1)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
27: Palmetto Bay Rd & Target Rd (signal)		
Overall Intersection	C (29.0)	B (19.0)
Eastbound Approach	D (36.9) [1380] {1512}	B (15.9) [142] {823}
Westbound Approach	B (12.9) [39] {249}	B (15.8) [85] {539}
Northbound Approach	C (26.6) [<25] {105}	D (39.5) [65] {263}
Southbound Approach	D (35.7) [34] {151}	C (25.5) [37] {140}
28: Palmetto Bay Rd & Dunnagans Alley (un-signalized)		
Westbound Left Turn	F (1,033.8) [80] {183}	F (101.3) [<25] {99}
Westbound Right Turn	F (91.9) [109] {217}	B (13.3) [35] {134}
Southbound Left Turn	C (22.0) [278] {513}	B (13.7) [29] {465}
29: Palmetto Bay Rd & Hilton Pkwy (Sea Pines Circle, RAB)		
Overall Intersection	F (53.4)	F (79.2)
Eastbound Approach	F (314.9) [809] {838}	F (179.8) [805] {838}
Westbound Approach	B (14.0) [56] {420}	F (189.7) [1644] {1658}
Northbound Approach	A (4.1) [<25] {209}	F (52.9) [463] {788}
Southbound Approach	C (18.5) [307] {461}	A (9.1) [111] {460}



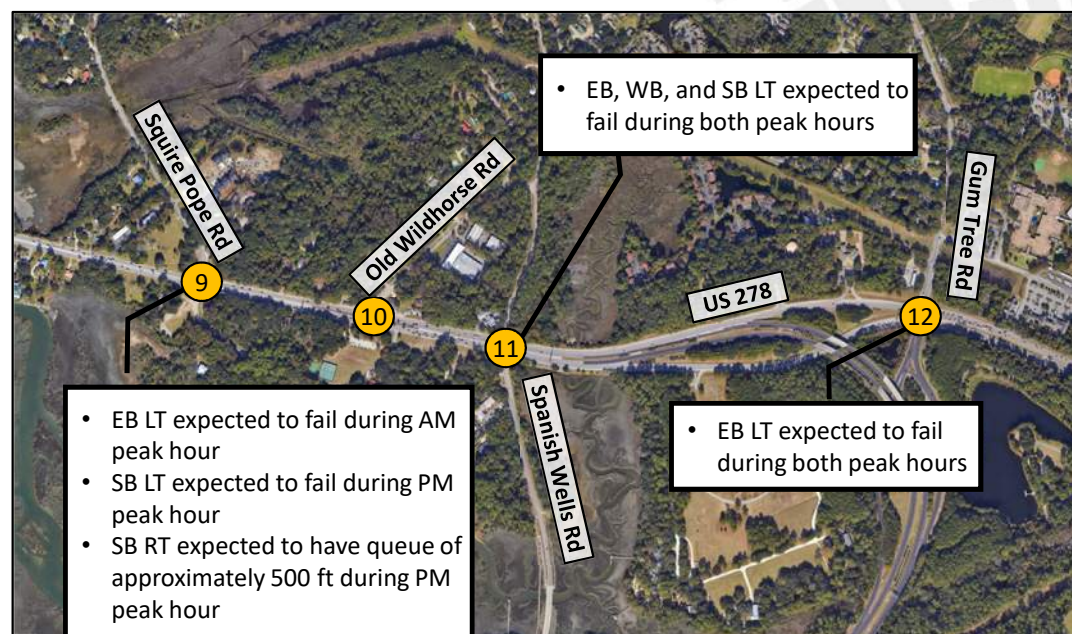
Option A Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & Hilton Pkwy (signal)		
Overall Intersection	A (9.4)	B (11.8)
Eastbound Approach	A (6.9) [100] {676}	B (11.0) [117] {489}
Westbound Approach	B (11.7) [41] {263}	A (6.2) [40] {552}
Northbound Approach	C (30.8) [<25] {56}	E (67.0) [<25] {109}
Southbound Approach	C (22.3) [<25] {171}	D (52.3) [132] {518}
10: Old Wild Horse Rd & Hilton Pkwy (un-signalized)		
Southbound Approach	A (4.6) [<25] {50}	B (11.2) [<25] {32}
11: Spanish Wells Rd/Wild Horse Rd & Hilton Pkwy (signal)		
Overall Intersection	B (16.6)	C (26.4)
Eastbound Approach	B (11.2) [109] {990}	C (28.2) [206] {845}
Westbound Approach	B (11.2) [56] {207}	B (17.1) [113] {525}
Northbound Approach	D (48.4) [45] {140}	E (65.2) [77] {196}
Southbound Approach	E (76.0) [74] {292}	E (60.6) [49] {197}
12: Gumtree Rd & Hilton Pkwy (signal)		
Overall Intersection	C (31.5)	D (37.2)
Eastbound Approach	C (31.3) [168] {705}	E (58.2) [187] {559}
Westbound Approach	C (24.2) [90] {261}	B (19.9) [126] {651}
Northbound Approach	C (32.4) [89] {305}	D (41.2) [143] {359}
Southbound Approach	D (48.6) [91] {306}	D (51.9) [117] {428}



Option B Operating Conditions (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 th Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
9: Chamberlin Dr/Squire Pope Rd & Hilton Pkwy (signal)		
Overall Intersection	A (7.1)	B (12.5)
Eastbound Approach	A (6.9) [101] {590}	B (11.3) [119] {513}
Westbound Approach	A (4.5) [<25] {158}	A (7.5) [58] {670}
Northbound Approach	C (33.2) [<25] {57}	E (67.0) [<25] {109}
Southbound Approach	C (23.2) [<25] {174}	D (50.9) [127] {508}
10: Old Wild Horse Rd & Hilton Pkwy (un-signalized)		
Southbound Approach	A (5.5) [<25] {74}	B (12.6) [<25] {26}
11: Spanish Wells Rd/Wild Horse Rd & Hilton Pkwy (signal)		
Overall Intersection	C (20.6)	C (21.8)
Eastbound Approach	B (11.5) [112] {1032}	C (24.6) [158] {771}
Westbound Approach	C (23.7) [113] {536}	B (10.9) [162] {951}
Northbound Approach	D (48.6) [45] {135}	E (65.2) [77] {186}
Southbound Approach	E (75.9) [74] {292}	E (59.8) [49] {193}
12: Gumtree Rd & Hilton Pkwy (signal)		
Overall Intersection	C (30.9)	C (29.7)
Eastbound Approach	D (37.4) [160] {658}	C (33.0) [103] {485}
Westbound Approach	B (13.2) [53] {195}	B (18.8) [111] {575}
Northbound Approach	C (30.6) [90] {316}	D (40.5) [139] {359}
Southbound Approach	D (51.5) [99] {366}	D (51.4) [118] {443}





TOWN OF HILTON HEAD ISLAND

Town Council

TO: Town Council
FROM: Shawn Colin, *Assistant Town Manager*
CC: Marc Orlando, ICMA-CM, *Town Manager*
DATE: September 17, 2024
SUBJECT: Consideration of a Resolution to Dissolve the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee

RECOMMENDATION:

Consideration of a Resolution to Dissolve the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee

BACKGROUND:

February 2023 – Town Council adopted a Resolution on February 21, 2023 to create the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee (Committee) with specific expectations as summarized below (Attachment 1):

- Review and assess the Town’s request for qualifications and all responses for an independent consultant.
- Identify firms to be considered as a “Preferred Consultant” and review consultant proposals.
- Recommend to Town Council which “Preferred Consultant” to pursue contract negotiations with.
- Work with Town staff to guide the work of the selected consultant to complete the independent review, including delivery of findings and recommendations from the consultant and advisory committee through Town staff to Town Council.

March 2023 - Appointments made on March 21, 2023.

May 2023 – Committee approved draft Request for Proposals and Scope of Work for Independent Study and forwarded to Town Council for consideration

June 2023 - Town Council approved final Request for Proposal and Scope of Work for Independent Study

August to October 2023 – Consultant, The Lochmueller Group, Inc. procured to conduct Independent Study

Oct 2023 to June 2024 – The Lochmueller Group and Town staff consultant conducted 10 public meetings with the Committee as they worked through the agreed upon scope of contracted work. Findings for the Gateway Corridor, from Moss Creek to Gum Tree Road were presented to the Committee on June 12, 2024 and Town Council on June 17, 2024.

August 2024 – The final draft report, which includes downstream impacts from the Gateway Corridor Project to Whooping Crane Way/Indigo Run Drive on the William Hilton Parkway Business Route, and to Sea Pines Circle on the Cross-island Parkway Route, was presented to the Committee on August 14, 2024. The Committee voted 2-2 to accept the final draft report, with one member of the Committee absent.

September 2024 – Town Council to consider a Resolution on September 17, 2024 to accept the final report for the William Hilton Parkway Gateway Corridor Independent Study.

The presentation of findings and recommendations for consideration, including downstream impacts and from the final report, completes the specific expectations outlined for the Committee by Town Council. Therefore, the recommendation is to consider a Resolution to Dissolve the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee (Attachment 2).

ATTACHMENTS:

1. Resolution Authorizing the Creation and Appointment of a William Hilton Parkway Gateway Corridor Independent Review Advisory Committee.
2. Resolution to Dissolve the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA**RESOLUTION NO. _____****A RESOLUTION BY THE TOWN COUNCIL OF THE TOWN OF HILTON HEAD ISLAND, AUTHORIZING THE CREATION AND APPOINTMENT OF A WILLIAM HILTON PARKWAY GATEWAY CORRIDOR INDEPENDENT REVIEW ADVISORY COMMITTEE.**

WHEREAS, the William Hilton Parkway Gateway Corridor Project, referred to herein as the "Project"; and

WHEREAS, a portion of the Project is located within the corporate limits of the Town, which impacts the citizens and visitors of the Town of Hilton Head Island, will provide for safer public transportation; and

WHEREAS, the Project will have a substantial impact on the citizens and visitors of the Town of Hilton Head Island; and

WHEREAS, separate from the design consultant for the Project retained by the South Carolina Department of Transportation (the "SCDOT"), and at the request of the Town, the County hired a design engineer, HDR, to perform an Independent Review of the project. In addition to the Independent Review, the Town hired a land planning consultant, MKSK, to assist the Town Council with evaluating the current design and to provide recommendations to enhance the Project; and

WHEREAS, as part of the Environmental Assessment process a preferred alternative for the Project was identified by the SCDOT and presented at a public hearing held on July 22, 2021; and

WHEREAS, based upon comments received from the public and from the

Town, the Project plans were updated, and a modified preferred alternative was presented at a public information meeting held on March 3, 2022; and

WHEREAS, the County and the Town determined that an independent review (the “Independent Review”) must be performed by a consultant; and

WHEREAS, the County issued a Request for Qualifications (RFQ) for an independent consultant (the “Independent Consultant”), (i.e. – one that does not have a previous or current contractual relationship with SCDOT, the County, or the Town) to perform an additional independent review of the project; and

WHEREAS, the County received only one submission for the Independent Consultant; and

WHEREAS, the Town seeks to issue its own RFQ seeking submittals for qualified firms to conduct an end-to-end simulation and study through and beyond the Project limits to include additional intersections materially consistent with the Scope of Work included in the Town RFQ; and

WHEREAS, to assist in reviewing and vetting these RFQ submissions, as well as guide work to complete the Independent Review consistent with the Scope of Work, Town Council now desires to create and appoint the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee.

NOW, THEREFORE, BE IT, AND IT HEREBY IS, RESOLVED BY THE TOWN COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA, THAT:

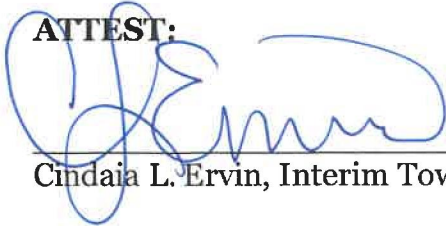
1. The William Hilton Parkway Gateway Corridor Independent Review Advisory

Committee is hereby created, and its membership shall consist of the following: one (1) member of Town Council, one (1) current or former licensed professional engineer, one (1) citizen member and (1) alternate citizen member from the Stoney Community, and two (2) citizen members from the community, to be appointed by Town Council.

2. The William Hilton Parkway Gateway Corridor Independent Review Advisory Committee, in coordination with a technical review team designated by the Town Manager, shall review and assess the Town RFQ and all responses and identify a reasonable number of firms to identify as “Preferred Consultants”.
3. Furthermore, any firm selected as a Preferred Consultant shall be required to submit a full and detailed proposal. The William Hilton Parkway Gateway Corridor Independent Review Advisory Committee, in coordination with a technical review team designated by the Town Manager, shall review these proposals and will thereafter recommend to Town Council which “Preferred Consultant with which to pursue a contract for the work.
4. The William Hilton Parkway Gateway Corridor Independent Review Advisory Committee will work in coordination with Town staff to guide work of the selected consultant, consistent with the final Scope of Work to complete the Independent Review, to include delivery of findings and recommendations from the consultant and Advisory Committee through Town staff to Town Council.

**MOVED, APPROVED, AND ADOPTED ON THIS 21st DAY OF
February, 2023.**


Alan R. Perry, Mayor

ATTEST:

Cindaia L. Ervin, Interim Town Clerk

APPROVED AS TO FORM

Curtis L. Coltrane, Town Attorney

Introduced by Council Member: Glenn Stanford

TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HILTON HEAD ISLAND, SOUTH CAROLINA, TO DISSOLVE THE WILLIAM HILTON PARKWAY GATEWAY CORRIDOR INDEPENDENT REVIEW ADVISORY COMMITTEE.

WHEREAS, Town Council adopted a Resolution on February 21, 2023 to create the William Hilton Parkway Gateway Corridor Independent Review Advisory Committee (Committee) with the following expectations:

- Review and assess the Town’s request for qualifications and all responses for an independent consultant.
- Identify firms to be considered as a “Preferred Consultant” and review consultant proposals.
- Recommend to Town Council which “Preferred Consultant” to pursue contract negotiations with.
- Work with Town staff to guide the work of the selected consultant to complete the independent review, including delivery of findings and recommendations from the consultant and advisory committee through Town staff to Town Council.

WHEREAS, Town Council appointed 5 members and an alternate member to the Committee on March 21, 2023; and,

WHEREAS, the Committee reviewed and assessed the Town’s request for qualifications, including recommending a scope of work for the RFQ on May 12, 2023 to be considered by Town Council; and,

WHEREAS, Town Council approved the RFQ and recommended scope of work on June 6, 2023; and,

WHEREAS, the Committee reviewed proposals and identified and interviewed preferred firms to be considered for contract award; and,

WHEREAS, the Committee selected The Lochmueller Group, Inc. as the preferred firm on August 28, 2023; and,

WHEREAS, the Committee met 12 times between October 2023 and August 2024 to work through the agreed upon scope of contracted work; and,

WHEREAS, Findings and recommendations for consideration for the Gateway Corridor, from Moss Creek to Gum Tree Road were presented to the Committee on June 12, 2024 and Town Council on June 17, 2024; and,

WHEREAS, the final William Hilton Parkway Gateway Corridor Independent Study was presented to Town Council on September 17, 2024; and,

WHEREAS, the Committee has now completed its work.

NOW, THEREFORE, BE IT, AND HEREBY IT IS, RESOLVED BY THE TOWN COUNCIL:

- 1. The William Hilton Parkway Gateway Corridor Independent Review Advisory Committee is hereby dissolved; and,**
- 2. The Town Council thanks the members of the Committee for their work.**

MOVED, APPROVED, AND ACCEPTED BY THE COUNCIL FOR THE TOWN OF HILTON HEAD ISLAND ON THIS _____ DAY OF _____, 2024.

THE TOWN OF HILTON HEAD ISLAND,
SOUTH CAROLINA

Alan Perry, Mayor

ATTEST:

Kimberly Gammon, Town Clerk

APPROVED AS TO FORM:

Curtis L. Coltrane, Town Attorney
Introduced by Council Member: _____