



## Town of Hilton Head Island

### William Hilton Parkway Gateway Corridor Independent Review Advisory Committee Meeting

Wednesday, March 27, 2024, 1:00 PM  
1 Town Center Court, Hilton Head Island, SC  
Benjamin M. Racusin Council Chambers

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

1. **Call to Order**
2. **Approval of the Minutes**
  - a. Regular Meeting Minutes of February, 14, 2024
3. **Unfinished Business**
  - a. Update on Project Scope of Work
4. **New Business**
  - a. Update on Community Outreach Related to Project Impacts
  - b. Presentation of Preliminary Findings of the End to End Independent Study for the William Hilton Parkway Gateway Corridor Project
    1. 2023 Existing Conditions - VISSIM Model Based Findings
    2. 2045 No Build Conditions - VISSIM Model Based Findings
    3. Evaluation and Findings to Date of Four Alternatives
5. **Appearance by Citizens:**
6. **Adjournment**

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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  
WILLIAM HILTON PARKWAY GATEWAY  
CORRIDOR INDEPENDENT REVIEW  
ADVISORY COMMITTEE MEETING  
Wednesday, February 14, 2024, 1:00 PM  
Minutes**

**1. Call to Order**

Mayor Perry called the meeting to order at 1:00 PM. Present were: Mayor Alan Perry, Diederik Advocaat, Charles Walczak, Edward C. Warner, Jr., and Willie Young. Henry Ford was absent.

**2. Approval of the Minutes**

**a. Regular Meeting Minutes of January 10, 2024**

A motion was made by Mr. Walczak to approve the minutes of the January 10, 2024 meeting as presented. A second was made by Mr. Warner, and the motion was unanimously passed.

**3. Unfinished Business**

**a. William Hilton Parkway Gateway Corridor Independent Study - Project Progress**

Shawn Colin, Assistant Town Manager - Community Development, presented a short overview of the progress made since the Town Council adoption of the resolution creating the Committee. Those tasks completed included the appointment of the membership Committee by Town Council; putting together the RFQ and scope of work to solicit a qualified consultant and helping select the "Preferred Consultant"; and making a recommendation to contract with that firm. He noted that the final task of the Committee was to work with staff to guide the work of Lochmueller, consistent with the final scope of work that was approved by both Town Council and the Committee. He outlined in detail the 5 tasks within the scope of work that was approved by the Committee and Town Council and the status of each, all as shown in the presentation included in the agenda packet. Nate Nohren, Project Manager for Lochmueller Group, briefly presented an update on project progress - key tasks completed and those they are continuing to work on since the last Committee meeting, as outlined in the presentation attached to the agenda packet. He noted videos and preliminary findings will be provided for the March meeting. Questions from Committee members were addressed by Mr. Nohren and Kate Swinford.

**1. Presentation of Final Recommendation for Growth Rate**

Shariff Ullah, with Lockmueller Group, appearing remotely, reviewed in detail how the annual population growth rate for Hilton Head Island was determined, as is shown in the presentation included in the agenda packet. Questions from the Committee were addressed by Mr. Ullah and Ms. Swinford. Mr. Ullah indicated they had a 95% confidence rate in their calculations.

## **2. Presentation of Adaptive System Operations**

Tyson King, from Lochmueller, appearing remotely, presented travel time run observations for the adaptive systems operations, as shown in the presentation included in the agenda packet. A video dash cam was shown of a trip from Moss Creek across the bridges through intersections at Squire Pipe Road, Spanish Wells, and Gum Tree intersections. Questions from the Committee members were addressed by Mr. King.

## **3. Presentation of 2023 Existing Conditions - Syncro Modeling based Findings**

Ms. Swinford, from Lochmueller, appearing remotely, presented the preliminary 2023 existing conditions modeling based findings using Synchro 11 methodology, as outlined in the presentation included in the agenda packet. Final results will be presented at the March Committee meeting. Questions from Committee members were answered by Ms. Swinford.

## **4. Update on VISSIM Modeling**

Ms. Swinford explained briefly how the VISSIM calibration methodology is developed with a high degree of confidence, as shown in the presentation included in the agenda packet. Questions from Committee members were answered by Ms. Swinford.

## **4. Appearance by Citizens**

No citizens have requested to appear before the Committee regarding items not on the agenda. Public comments concerning agenda items were to be submitted electronically via the Open Town Halal portal. No comments were received. Public comments were made by several citizens in attendance.

## **5. New Business**

A discussion ensued concerning the Committee's scope of work, which Mayor Perry reminded the Committee is to study and review independently the plans that Beaufort County and SCDOT have presented to minimize any negative results impacting the Town.

## **6. Adjournment**

The meeting was declared adjourned at 3:02 PM.

## **Approved:**

The recording of this Meeting can be found on the Town’s website at [www.hiltonheadislandsc.gov](http://www.hiltonheadislandsc.gov)



# TOWN OF HILTON HEAD ISLAND

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## *William Hilton Parkway Gateway Corridor Advisory Committee*

**TO:** Advisory Committee  
**FROM:** Shawn Colin  
**DATE:** March 27, 2024  
**SUBJECT:** Transmittal of Meeting Materials from the Lochmueller Group  
Agenda

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### **RECOMMENDATION:**

This memo serves as the transmittal document to cover the materials submitted for consideration by the Lochmueller Group. This material will be covered at the March 27, 2024 meeting of the William Hilton Parkway Gateway Corridor Advisory Committee.

### **ATTACHMENTS:**

1. The Lochmueller Group Document Transmittal Memo – dated March 22, 2024
2. Presentation by the Lochmueller Group – dated March 27, 2024

# TRANSMITTAL

**To:** Shawn Colin, AICP – Town of Hilton Head Island  
**From:** Nate Nohren, PE, PTOE  
**Date:** March 22, 2024  
**Subject:** Copy of Power Point Presentation for 3/27/2024 Advisory Committee Meeting  
RE: William Hilton Parkway Gateway Corridor Independent Review

Hi Shawn,

Attached please find a PDF copy of the power point slides we will be presenting at the March 27, 2024, Advisory Committee meeting. The content provided within our presentation can be summarized as follows:

- **Update on Project Progress** – we will provide the Committee an update on what our team has been working on and/or completed since the February 14 Committee meeting. We also provide current status of percent-of-work completed to date, as well as on-going or upcoming work subtasks, relative to Tasks 1, 2, and 3, as described in the Town approved Scope of Services Addendum (9/29/2023). As you are aware, Tasks 4 and 5 cannot be initiated until Task 3 is completed.
- **Presentation of 2023 Existing Conditions & 2045 No-Build (VISSIM Based Findings)** – we will share our VISSIM based findings relative to 2023 Existing and 2045 No-Build Conditions for the entire project study area. We will provide information related to travel times; calibration results in terms of travel time and volumes; speed maps; videos of congested locations during peak hours; and summary of overall findings. For the sake of time, we do not intend to speak about traffic volumes and operating conditions at each individual intersection during the presentation; however, we have provided exhibits illustrating traffic and operating conditions (Synchro and VISSIM based findings) at all project intersections within the Appendix of the presentation, and can speak to specific questions if they do come up.
- **Presentation of Four Recommended Alternatives** – we will present the four corridor Alternatives we've selected for evaluation, with respect to the Modified Original Project Study Area (US 278/WHP from Moss Creek to Gum Tree Road). We've completed traffic operational evaluations for three of the four corridor Alternatives, and will go into detail as to what is included in each Alternative; why it was selected for consideration; and provide a preliminary pros/cons list for each Alternative. We are still working on finalizing traffic operational evaluations for the fourth Alternative, so we will not have that level of information ready for discussion; however, we've prepared a conceptual exhibit that shows basic geometry of what we're envisioning, as well as anticipated pros/cons of this Alternative. For the sake of time, we do not intend to speak about traffic volumes and operating conditions at each individual intersection for each Alternative during the presentation; however, we have provided exhibits illustrating traffic and operating conditions (Synchro based findings) at all project intersections within the Appendix of the presentation, and can speak to specific questions if they do come up.

Please let me know if you have any questions regarding the information shared above. Otherwise, we look forward to speaking with you all on March 27.

Sincerely,



Nate Nohren, PE, PTOE

# William Hilton Parkway Gateway Corridor Independent Review Advisory Committee Meeting

*March 27<sup>th</sup>, 2024*



# Agenda

- ❑ Update on Project Progress
- ❑ Presentation of 2023 Existing Conditions (VISSIM Based Findings)
- ❑ Presentation of 2045 No Build Conditions (VISSIM Based Findings)
- ❑ Presentation of Four Recommended Alternatives

# Update on Project Progress

## *(Key Tasks Completed & Continuing to Work on Since Last Meeting)*

- ✓ Completed 2045 No-Build analyses in Synchro.
- ✓ Completed 2023 Existing & 2045 No-Build VISSIM speed maps for the entire study area; videos focusing on congested locations during peak hours; calibration results in terms of travel time and volumes.
- ✓ Completed preliminary traffic analyses & Synchro modeling for proposed Alternatives #1, #2, & #3.
- ✓ Continuing to finalize preliminary traffic analyses & Synchro modeling for proposed Alternative #4.
- ✓ Evaluating Roadway, ROW, and Environmental impacts & developing high-level, order of magnitude costs for Alternatives #1, #2, #3, & #4.
- ✓ Met with Town Staff on March 7, March 14, and March 20 to discuss project progress leading up to this March 27 Advisory Committee meeting.

# Update on Overall Project Progress (as of 3/22/24)

**Overall ~45% Complete**



- **Task #1: Project Initiation and Coordination**

- **~70% Complete**



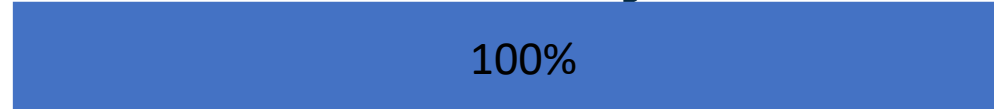
- Task #1 Subtasks On-Going:

- Remaining scheduled meetings with Town (Bi-Weekly) staff and Committee (Monthly)
    - Continual review/reference previously completed existing reports and historical documentation
    - Reviewing background information received to date related to Task 1.3.3 and Task 1.8; forthcoming brief technical memorandums and/or high level opinions of probable costs.

# Update on Overall Project Progress (as of 3/22/24)

## Task #2: Review of Travel Demand Model & Evaluation of 2023 Existing Operating Conditions (Entire Study Area)

- 100% Complete



# Update on Overall Project Progress (as of 3/22/24)

- Task #3: Traffic Model and Operational Update – Modified Original Project Study Area

- ~35% Complete



- Key Subtasks On-Going:

- Continuing to finalize preliminary traffic analyses & Synchro modeling for proposed Alternative #4.
- Evaluating Roadway, ROW, and Environmental impacts & developing high-level, order of magnitude costs for Alternatives #1, #2, #3, & #4.

- Key Subtasks Forthcoming:

- Prepare Draft & Final Summary of Findings Memos RE: Alternatives Analysis
- Participation in Public Open-House / Design Charrette (if required), to be led by Town staff

# 2023 Existing Results (VISSIM)

- Travel Time results

Corridor		Observed travel time (secs)		Simulated travel time (secs)		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1108	672	1157	619	4.42%	-7.91%
	WB	605	1202	572	1252	-5.50%	4.17%
Hilton Parkway @Moss Creek to Cross Island Parkway @Sea Pine	SB	1378	821	1356	857	-1.58%	4.37%
	NB	800	1516	826	1520	3.20%	0.25%

All travel time targets are satisfied and met

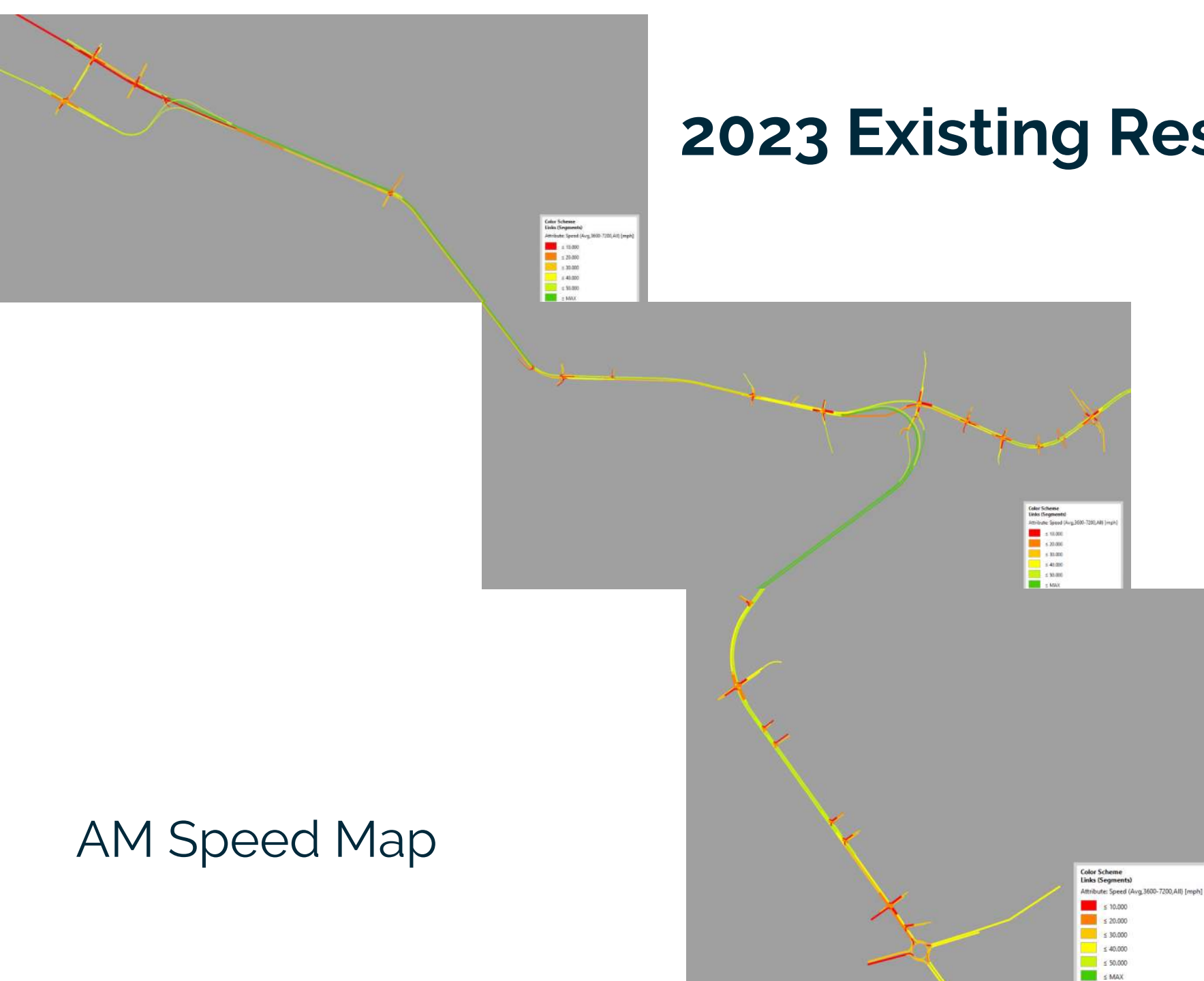
# 2023 Existing Results (VISSIM)

- Volume results

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

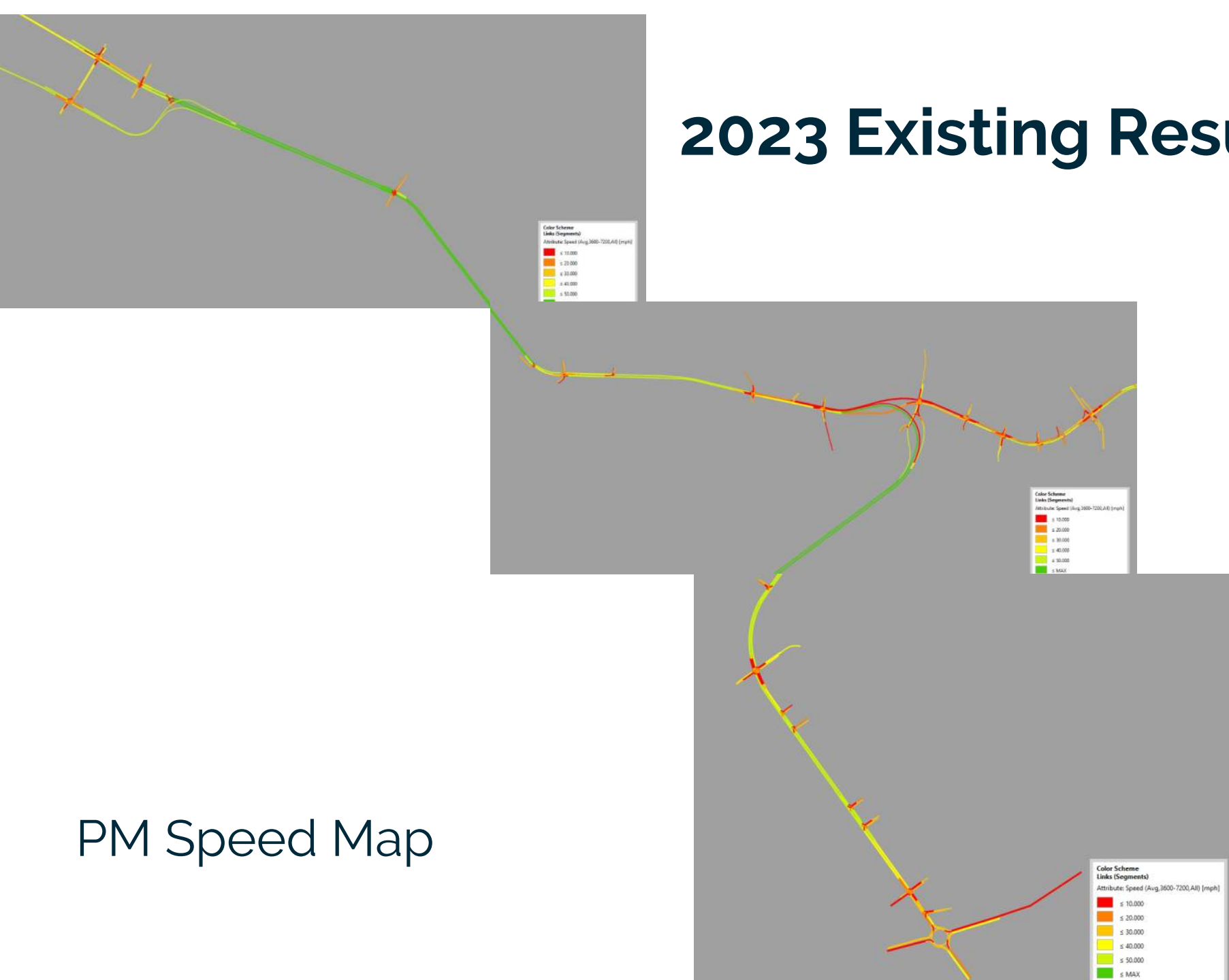
All volume targets are satisfied and met

# 2023 Existing Results (VISSIM)



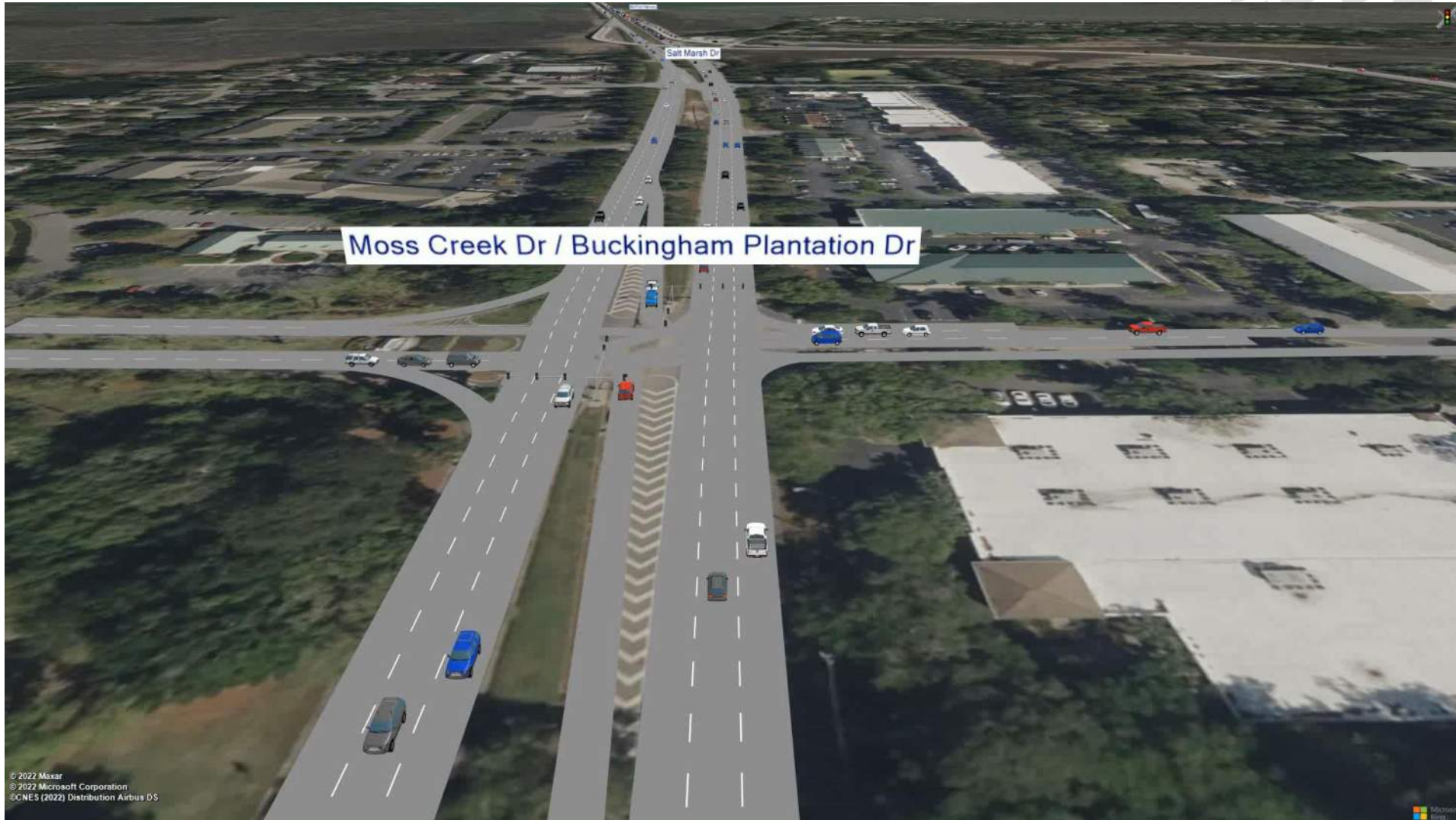
AM Speed Map

# 2023 Existing Results (VISSIM)



PM Speed Map

# 2023 Existing Results (VISSIM) - AM



# 2023 Existing Results (VISSIM) - PM



# 2045 No Build Results (VISSIM)

- Travel time results:
  - Travel time is expected to increase by up to approximately 62% when comparing Existing Conditions to 2045 No Build Conditions

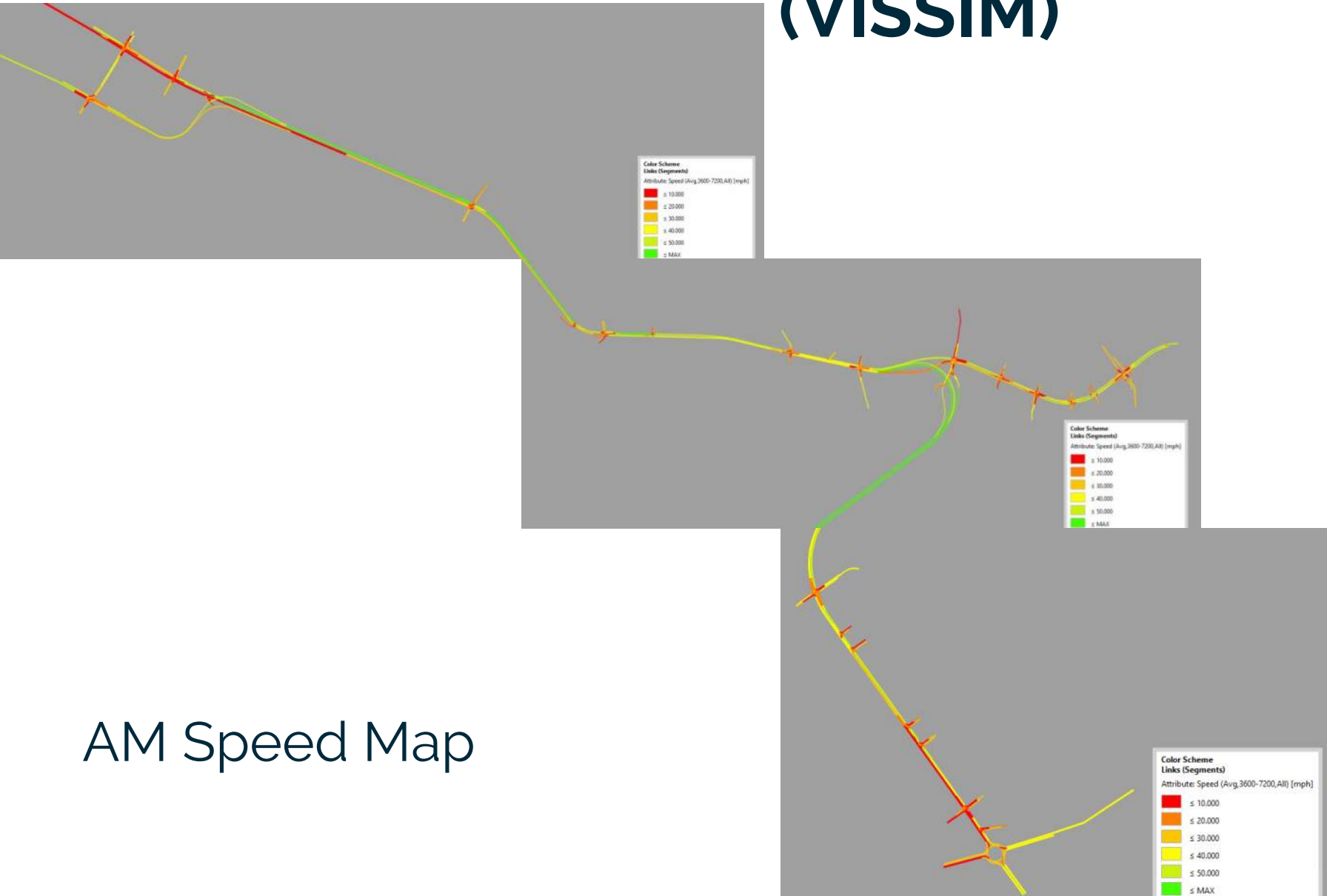
Corridor		Existing Simulated travel time (secs)		2045 No Build Simulated travel time (secs)		% Difference	
		AM	PM	AM	PM	AM	PM
Hilton Parkway between Moss Creek and Indigo Run	EB	1157	619	1579	642	<b>36.47%</b>	<b>3.72%</b>
	WB	572	1252	584	1544	<b>2.10%</b>	<b>23.32%</b>
Hilton Parkway @ Moss Creek to Cross Island Parkway @ Sea Pine	SB	1356	857	1984	873	<b>46.31%</b>	<b>1.87%</b>
	NB	826	1520	823	2465	<b>-0.36%</b>	<b>62.17%</b>

# 2045 No Build Results (VISSIM)

- Volume results:
  - Note that the % Difference with negative values are due to over-saturation. This results in vehicles not being able to enter the network to go through intersection.

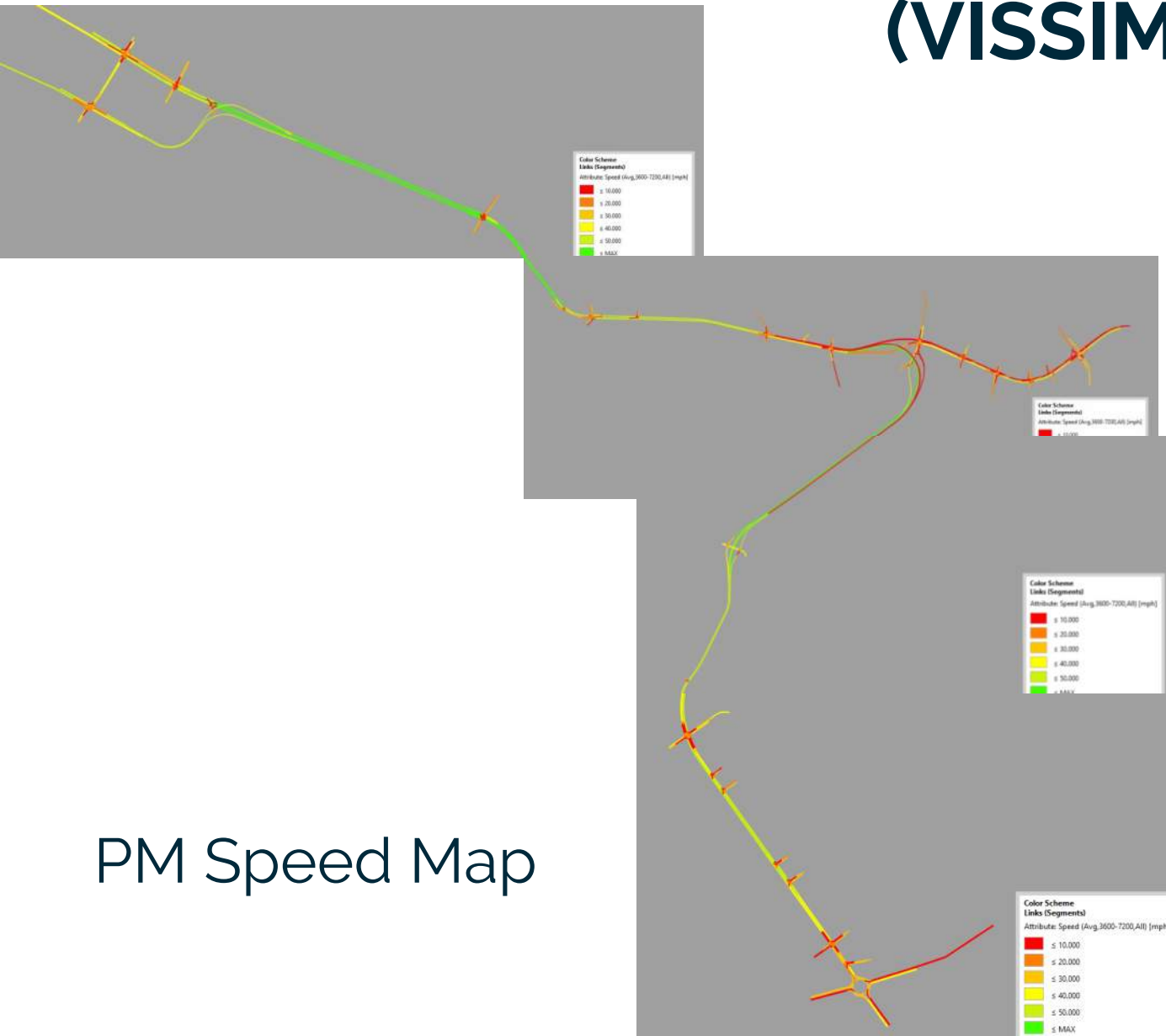
Location	Existing Simulated volume results (vehicles)		2045 No Build Simulated volume results (vehicles)		% Difference	
	AM	PM	AM	PM	AM	PM
Hilton Parkway west of Squire Pope EB	2970	2240	2783	2524	-6.30%	12.68%
Hilton Parkway west of Squire Pope WB	1650	2898	1843	2754	11.70%	-4.97%
Hilton Parkway east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

# 2045 No Build Results (VISSIM)



AM Speed Map

# 2045 No Build Results (VISSIM)



PM Speed Map

# 2045 No Build Results (VISSIM) - AM



# 2045 No Build Results (VISSIM) - PM



# Existing and 2045 No Build Conclusions

- As shown, significant congestion currently exists throughout the study area. This congestion is expected to be exacerbated by 2045 with the forecasted growth.
- 2023 existing traffic volumes would need to be reduced by approximately 30% for the current 4-lane configuration to operate acceptably.
- Based on an annual growth rate of 0.56%, 2045 traffic volumes would need to be reduced by approximately 40% for the current 4-lane configuration to operate acceptably.
- Therefore, it is our recommendation that a six-lane section is necessary to accommodate the projected traffic volumes.

# Second Bridge

- A second bridge has been discussed locally as a potential solution
- A new bridge could take up to 20 years to construct once all the studies, planning, design, and construction is complete
- The operating conditions today already show significant congestion
- Our focus is to mitigate the existing and forecasted conditions, and as shown in 20 years, the congestion along the corridor will be significant
- It is our opinion that a 6-lane section is needed independently of a second bridge

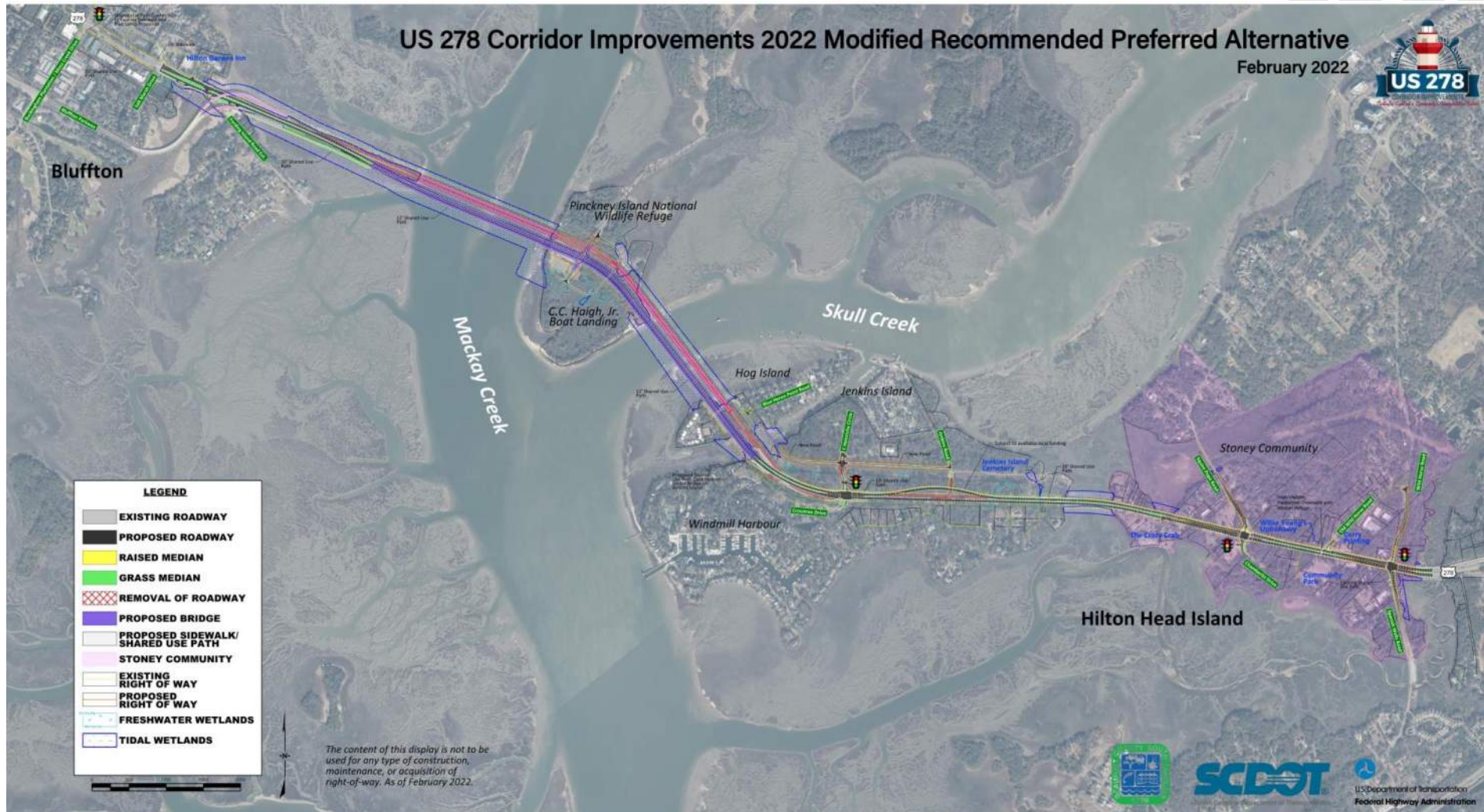
# Town of Hilton Head Island Gateway Corridor Project Guiding Principles

- Lochmueller Group studied four alternatives to help improve the US 278 corridor. In determining the most beneficial and appropriate alternatives, the following guiding principles were top of mind:
  - 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/Low County values
    - Safe and functional pathways for pedestrians and cyclists
    - Minimizes environmental impacts and enhances the national asset of Pinckney Island

# Recommended Alternative Improvements

- 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
- Alternative 4: Elevated Bypass

# Alternative 1 – SCDOT Modified Recommended Preferred



# Alternative 1 – SCDOT Modified Recommended Preferred

- This alternative considers the Modified Recommended Preferred Alternative from SCDOT's concept in addition to the following updates:
  - Adaptive signals in place
  - 0.56% growth rate
  - Improvements to Gumtree
    - At-grade intersection
    - Complete reconfiguration is expected to improve the efficiency of the intersection
    - Dual left-turn lanes at the westbound, northbound, and southbound approaches were included

# Alternative 1 – SCDOT Modified Recommended Preferred

- Summary of forecasted operating conditions:
  - 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
  - Side-street and unsignalized approaches may still experience long delays
- Travel times were performed in Synchro along the Hilton Parkway corridor between Moss Creek and Indigo Run.
  - When compared to the 2045 No Build Scenario, the following changes in travel time were calculated:

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	+18	-16.1%	2.7%
	WB	+43	-276	6.3%	-34.2%

# Alternative 1 – SCDOT Modified Recommended Preferred

- In order to potentially reduce the required ROW, Lochmueller evaluated if any modifications to Alternative 1 could be implemented. The following modifications were considered:
  - Reduce the dual eastbound left-turn lanes at Squire Pope to one left-turn lane
    - Results:
      - The movement would be over capacity
      - The queue length would be expected to increase from approximately 7 vehicles to 23 vehicles (+16 vehicles) during the PM peak hour.
      - The delays at the movement are expected to increase from approximately 75 seconds to 214 seconds (+139 seconds.) during the PM peak hour
  - Reduce the dual southbound right-turn lanes at Squire Pope to one right-turn lane
    - Results:
      - The movement would be over capacity
      - The queue length would be expected to increase from approximately 9 vehicles to 24 vehicles (+15 vehicles) during the PM peak hour.
      - The delays at the movement are expected to increase from approximately 50 seconds to 116 seconds (+66 seconds.) during the PM peak hour



Alternative 1



Potential Changes to Decrease Needed ROW

# Alternative 2 – Bowties at Squire Pope and Spanish Wells



# Alternative 2 – Bowties at Squire Pope and Spanish Wells

- This alternative removes left-turns from Squire Pope and Spanish Wells
  - Vehicles must navigate through bowtie intersections to make their left-turn movements



Hilton Pkwy at Squire Pope



Hilton Pkwy at Spanish Wells

# Alternative 2 – Bowties at Squire Pope and Spanish Wells

- Pros of Bowties
  - Improves safety as fewer conflicting vehicle and pedestrian movements are allowed
    - Bowtie intersections have 12 fewer conflict points when compared to traditional intersections
  - Encourages lower vehicle speeds through the roundabouts
  - Reduces the size of intersections as left-turn lanes are removed
  - Increases the efficiency of the signalized intersections as more of the signal time can go to the main through movements, improving traffic operations
- Cons of Bowties
  - Requires a change in decision making for drivers as all left-turn movements would become right-turns at Squire Pope and Spanish wells
  - Increases the amount of travel time for left-turning vehicles
  - Requires additional ROW for the roundabouts

# Alternative 2 – Bowties at Squire Pope and Spanish Wells

- Summary of forecasted operating conditions:
  - The same improvements to study intersections other than Squire Pope and Spanish Wells (including Gumtree) that were included in Alternative 1 were also included in Alternative 2
  - Bowties at Squire Pope and Spanish Wells is 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
  - Side-street and unsignalized approaches may still experience long delays
- Travel times were performed in Synchro along the Hilton Parkway corridor between Moss Creek and Indigo Run.
  - When compared to the 2045 No Build Scenario, the following changes in travel time were calculated:

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	-39	-15.3%	-6.6%
	WB	+9	-290	1.4%	-36.4%

# Alternative 2 – Bowties at Squire Pope and Spanish Wells

- The expected changes in travel time for the displaced left-turn movements are as follows:

	<u>Squire Pope</u>			<u>Spanish Wells</u>	
	AM Peak Hour	PM Peak Hour		AM Peak Hour	PM Peak Hour
Eastbound Left-Turn	63 seconds	42 seconds	Eastbound Left-Turn	-10 seconds	-26 seconds
Westbound Left-Turn	82 seconds	81 seconds	Westbound Left-Turn	-13 seconds	-7 seconds
Northbound Left-Turn	101 seconds	120 seconds	Northbound Left-Turn	89 seconds	-42 seconds
Southbound Left-Turn	44 seconds	4 seconds	Southbound Left-Turn	43 seconds	61 seconds

# Alternative 3 – Echelon / Center Turn Overpass



Echelon



Center-Turn Overpass

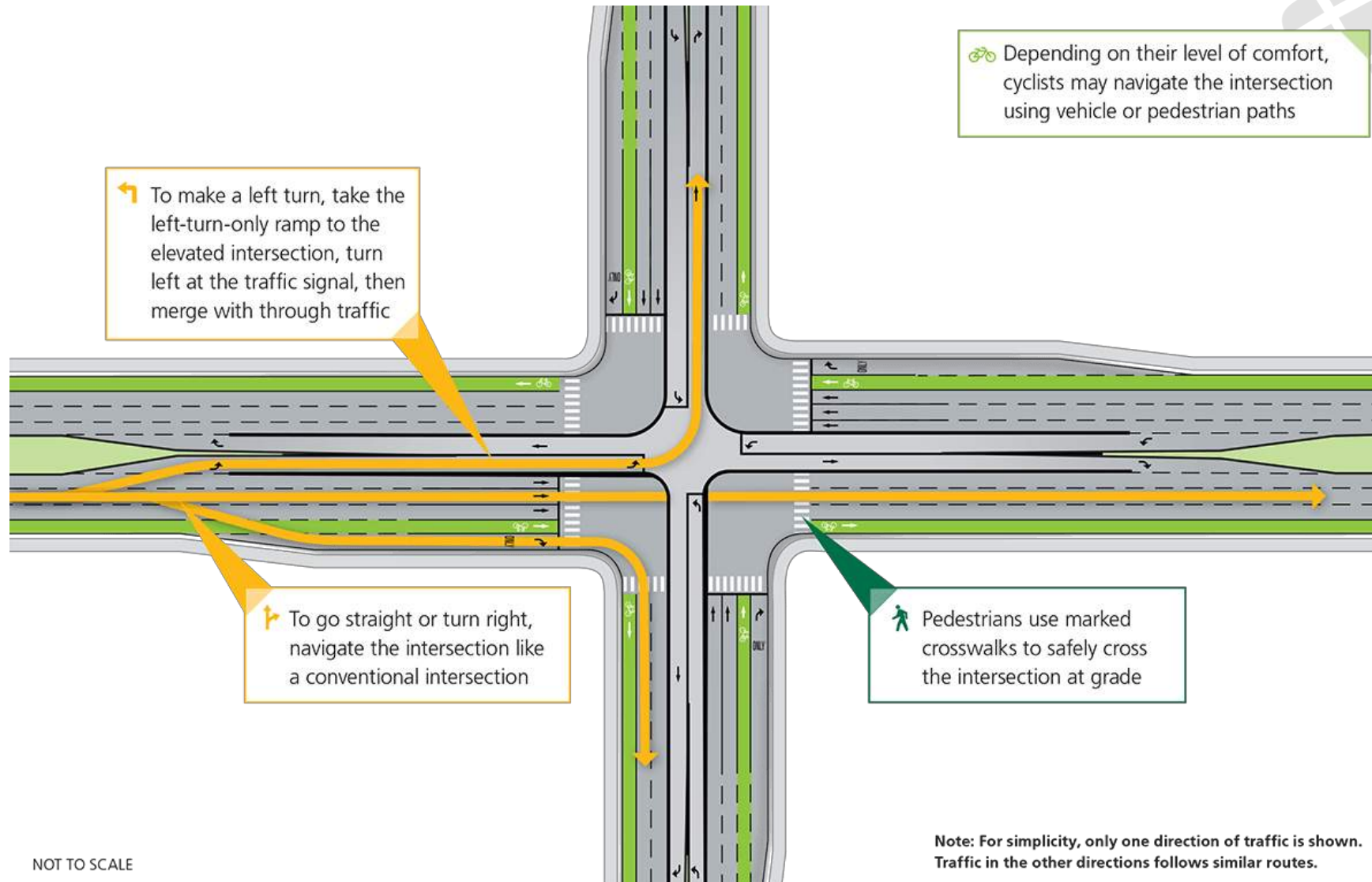
# Alternative 3 – Echelon



# Alternative 3 – Echelon

- Pros of Echelon
  - Improves safety as fewer conflicting vehicle and pedestrian movements are allowed
    - Echelon intersections have 10 fewer conflict points when compared to traditional intersections
  - Does not require a change in decision making for drivers as all movements would remain at Squire Pope and Spanish wells
  - Increases the efficiency of the signalized intersections as more of the signal time can go to the main through movements, improving traffic operations
  - While each approach would likely need the same lane configurations shown in Alternative 1, only two approaches would conflict, which would reduce the amount of ROW for each respective grade
- Cons of Echelon
  - Requires grade separation of intersections
  - Overall, large intersections would likely remain as all movements (left-turn, through, and right-turn) are still allowed

# Alternative 3 – Center Turn Overpass



NOT TO SCALE

# Alternative 3 – Center Turn Overpass

- Pros of 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
  - Increases the efficiency of the signalized intersections as more of the signal time can go to the main through movements, improving traffic operations
  - Reduces the size of intersections as left-turn lanes are removed at-grade
- Cons of Center Turn Overpass
  - Requires grade separation of intersections
  - Overall, large intersections would likely remain as all movements (left-turn, through, and right-turn) are still allowed

# Alternative 3 – Echelon / Center Turn Overpass

- Summary of forecasted operating conditions:
  - The same improvements to study intersections other than Squire Pope and Spanish Wells (including Gumtree) that were included in Alternative 1 were also included in Alternative 3
  - 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
  - Side-street and unsignalized approaches may still experience long delays
  - The long queues and delay that are expected under the 2045 No Build Scenario would be expected to be improved overall

# Alternative 3 – Echelon / Center Turn Overpass

- Travel times were performed in Synchro along the Hilton Parkway corridor between Moss Creek and Indigo Run.
- When compared to the 2045 No Build Scenario, the following changes in travel time were calculated:

Scenario		Difference in Travel Time (seconds) when Compared to 2045 No Build		% Difference from 2045 No Build	
		AM	PM	AM	PM
2045 Alternative 3: Echelon at Squire Pope	EB	-191	-68	<b>-32.1%</b>	<b>-12.1%</b>
	WB	-79	-407	<b>-13.9%</b>	<b>-60.0%</b>
2045 Alternative 3: Echelon at Spanish Wells	EB	-140	-11	<b>-21.6%</b>	<b>-1.8%</b>
	WB	-15	-331	<b>-2.3%</b>	<b>-44.0%</b>
2045 Alternative 3: Center Turn Overpass at Squire Pope	EB	-122	+23	<b>-18.4%</b>	<b>3.5%</b>
	WB	-21	-319	<b>-3.3%</b>	<b>-41.6%</b>
2045 Alternative 3: Center Turn Overpass at Spanish Wells	EB	-134	-17	<b>-20.6%</b>	<b>-2.9%</b>
	WB	-16	-339	<b>-2.5%</b>	<b>-45.4%</b>

# Alternative 4 – Elevated Bypass



Note: The alignment shown is preliminary. Additional information such as operating results and tie-in points will be further defined in the April 10<sup>th</sup> meeting

# Alternative 4 – Elevated Bypass



Note: The alignment shown is preliminary. Additional information such as operating results and tie-in points will be further defined in the April 10<sup>th</sup> meeting

# Alternative 4 – Elevated Bypass



Note: The alignment shown is preliminary. Additional information such as operating results and tie-in points will be further defined in the April 10<sup>th</sup> meeting

# Alternative 4 – Elevated Bypass

- Pros of Elevated Bypass
  - Improves safety as fewer through vehicles would remain at grade, reducing the conflicts between vehicles and pedestrians
  - Increases the efficiency of the at-grade signalized intersections
  - Significantly reduces the size of at-grade intersections
  - Provides room for growth along the corridor
- Cons of Elevated Bypass
  - Most expensive alternative
  - Results in the largest construction impact
  - Requires grade separation
  - Requires a change in decision making as drivers looking to go through the local intersections of Squire Pope, Old Wildhorse Drive, and Spanish Wells would need to enter the bypass.
    - However, full access would still be provided at-grade

# Next Steps

- Each alternative will be compared to the same categories as shown in the draft matrix
- The scores shown are examples for illustrative purpose only. The final matrix will be provided in the April 10 meeting

	Traffic Operations (Throughput and Traffic Simulations)	ROW Impact	Environmental Impact	Safety	Bike/Pedestrian Impact	Community and Social Impact	Aesthetic	Cost
Alternative 1	1	2						
Alternative 2	2	2						
Alternative 3	3							
Alternative 4	4							

1 = Highest Ranking

# QUESTIONS?



# APPENDIX



# Travel Time Comparison

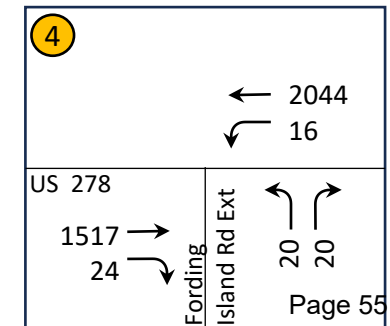
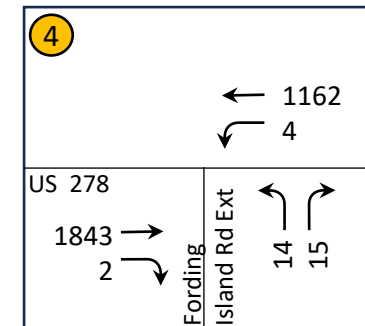
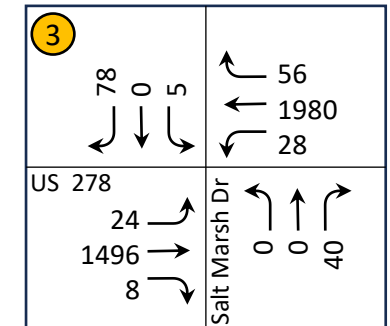
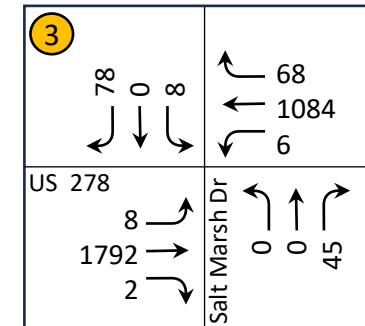
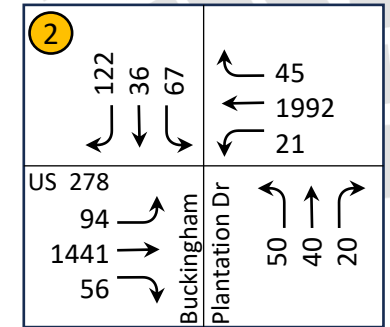
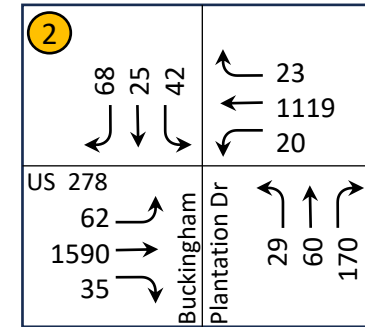
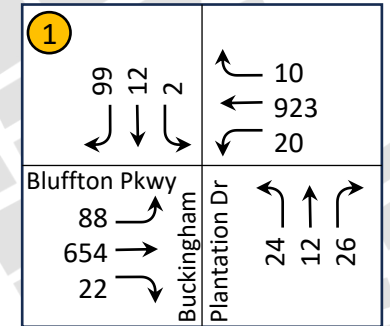
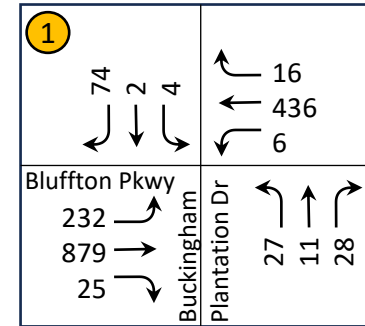
Scenario		Difference in Travel Time (seconds) when Compared to 2045 No Build		% Difference	
		AM	PM	AM	PM
2045 Alternative 1: SCDOT Modified Recommended Preferred	EB	-109	+18	<b>-16.1%</b>	<b>2.7%</b>
	WB	+43	-276	<b>6.3%</b>	<b>-34.2%</b>
2045 Alternative 2: Bowties at Squire Pope and Spanish Wells	EB	-104	-39	<b>-15.3%</b>	<b>-6.6%</b>
	WB	+9	-290	<b>1.4%</b>	<b>-36.4%</b>
2045 Alternative 3: Echelon at Squire Pope	EB	-191	-68	<b>-32.1%</b>	<b>-12.1%</b>
	WB	-79	-407	<b>-13.9%</b>	<b>-60.0%</b>
2045 Alternative 3: Echelon at Spanish Wells	EB	-140	-11	<b>-21.6%</b>	<b>-1.8%</b>
	WB	-15	-331	<b>-2.3%</b>	<b>-44.0%</b>
2045 Alternative 3: Center Turn Overpass at Squire Pope	EB	-122	+23	<b>-18.4%</b>	<b>3.5%</b>
	WB	-21	-319	<b>-3.3%</b>	<b>-41.6%</b>
2045 Alternative 3: Center Turn Overpass at Spanish Wells	EB	-134	-17	<b>-20.6%</b>	<b>-2.9%</b>
	WB	-16	-339	<b>-2.5%</b>	<b>-45.4%</b>

Note that the travel times were completed in Synchro for the Hilton Parkway corridor between Moss Creek and Indigo Run

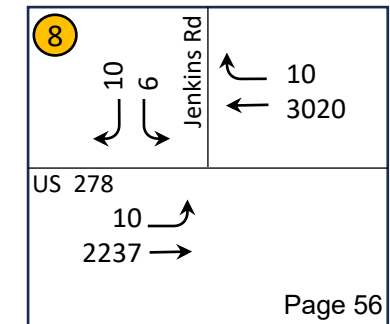
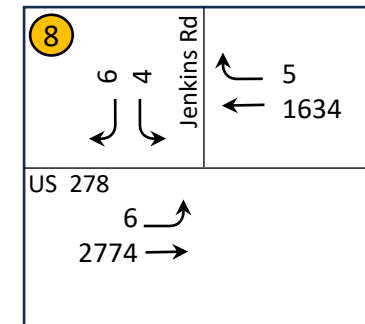
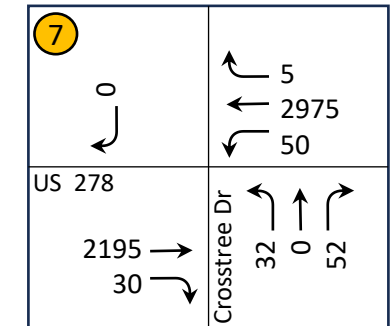
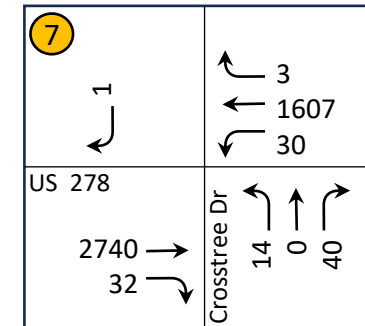
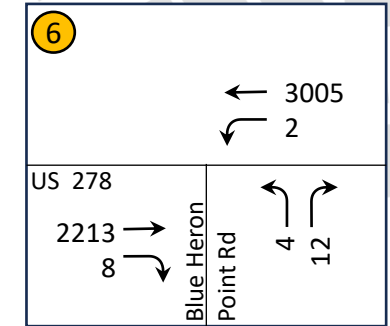
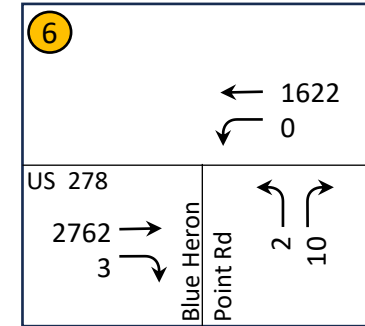
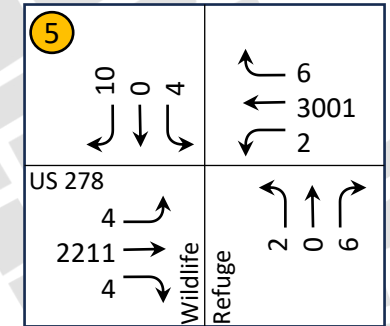
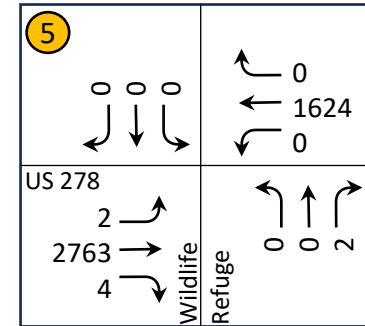
# 2023 Existing VISSIM Results



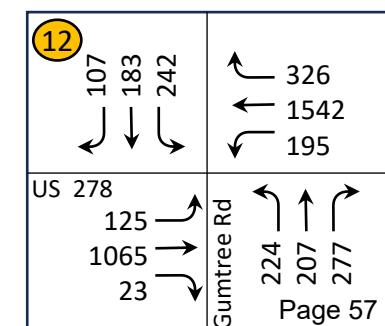
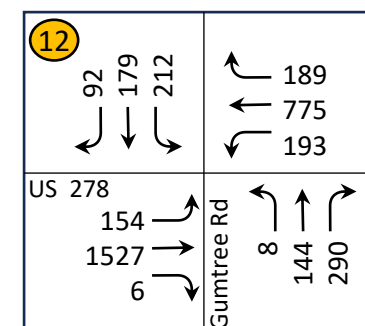
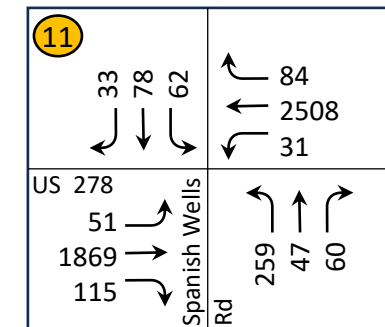
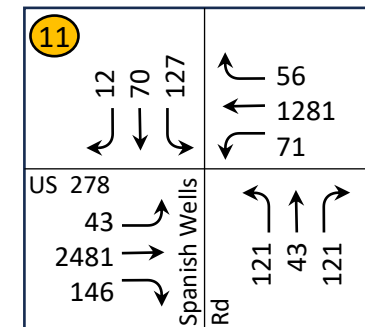
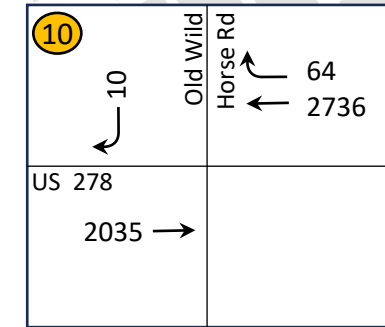
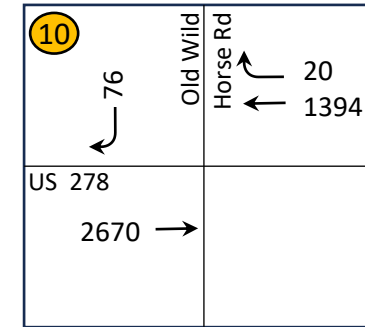
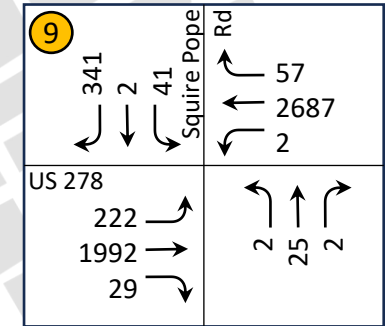
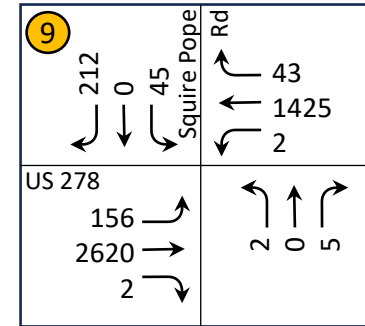
# 2023 Existing Traffic Volumes



# 2023 Existing Traffic Volumes

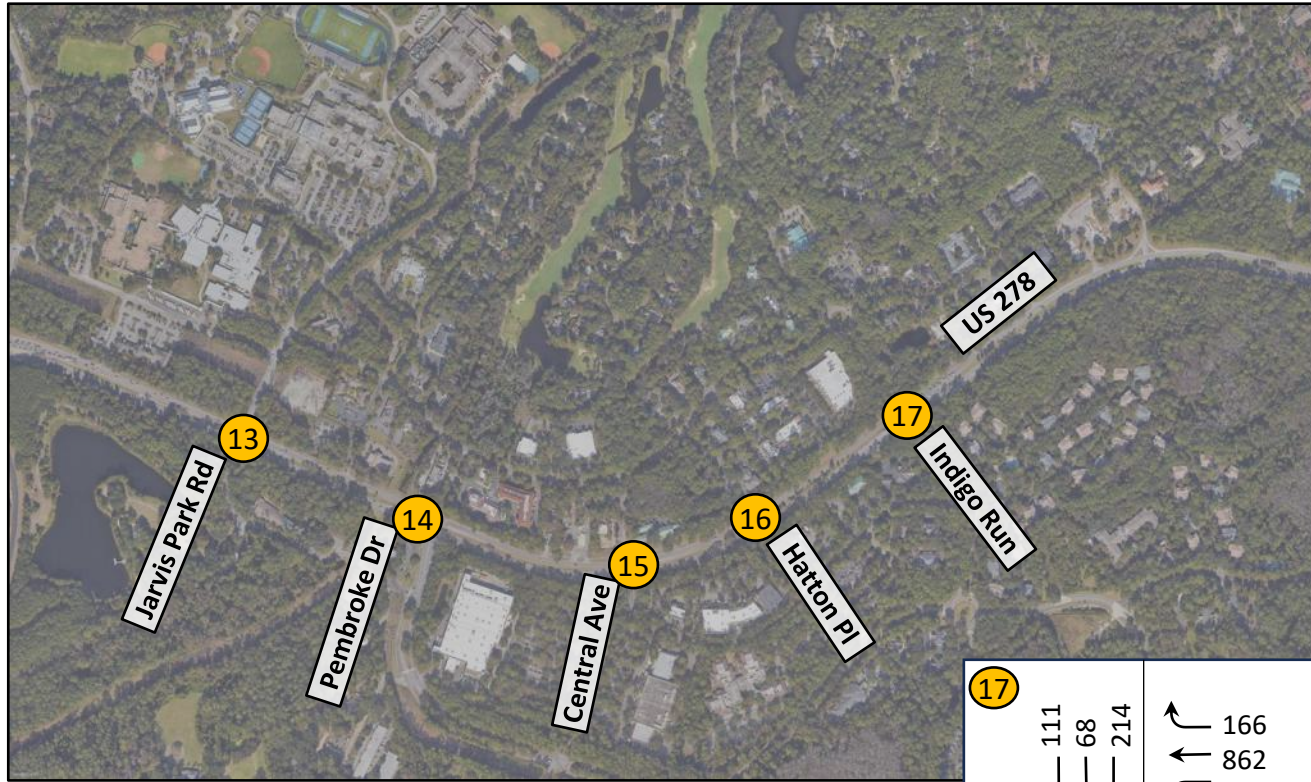


# 2023 Existing Traffic Volumes



# 2023 Existing Traffic Volumes

AM Peak Hour Volumes    PM Peak Hour Volumes



<p><b>13</b></p> <p>181 27 244</p>	<p>302 953 2</p>
<p>US 278</p> <p>253 1708 68</p>	<p>Jarvis Park</p> <p>23 45 0</p>

<p><b>13</b></p> <p>246 8 86</p>	<p>64 1761 4</p>
<p>US 278</p> <p>113 1422 49</p>	<p>Jarvis Park</p> <p>56 8 10</p>

<p><b>14</b></p> <p>45 12 18</p>	<p>31 953 33</p>
<p>US 278</p> <p>80 1631 241</p>	<p>Pembroke Dr</p> <p>259 21 37</p>

<p><b>14</b></p> <p>51 27 14</p>	<p>27 1462 31</p>
<p>US 278</p> <p>57 1258 203</p>	<p>Pembroke Dr</p> <p>316 35 37</p>

<p><b>15</b></p> <p>20</p>	<p>20 997 5</p>
<p>US 278</p> <p>5 1676 5</p>	<p>Central Ave</p> <p>5</p>

<p><b>15</b></p> <p>5</p>	<p>21 1515 5</p>
<p>US 278</p> <p>5 1299 2</p>	<p>Central Ave</p> <p>10</p>

<p><b>17</b></p> <p>111 68 214</p>	<p>166 862 33</p>
<p>US 278</p> <p>129 1415 55</p>	<p>Indigo Run Dr</p> <p>80 51 33</p>

<p><b>16</b></p> <p>10</p>	<p>Hatton Pl</p> <p>41 1012</p>
<p>US 278</p> <p>1589 92</p>	<p>10</p>

<p><b>17</b></p> <p>111 115 251</p>	<p>304 1366 51</p>
<p>US 278</p> <p>164 1152 47</p>	<p>Indigo Run Dr</p> <p>64 115 49</p>

<p><b>16</b></p> <p>10</p>	<p>Hatton Pl</p> <p>10 1531</p>
<p>US 278</p> <p>1304 5</p>	<p>59</p>

# 2023 Existing Traffic Volumes



<b>18</b> 6 ↙    ↓ 374	Cross Island Pkwy SB
Honey Horn Rd 2    ↘ 0    ↓	

<b>18</b> 8 ↙    ↓ 397	Cross Island Pkwy SB
Honey Horn Rd 40    ↘ 15    ↓	

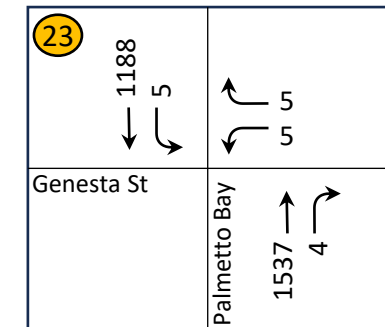
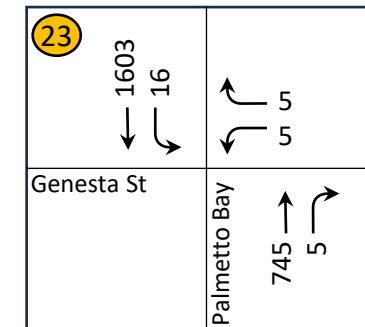
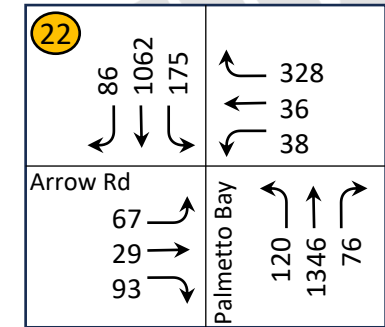
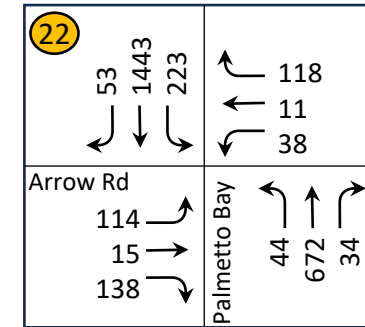
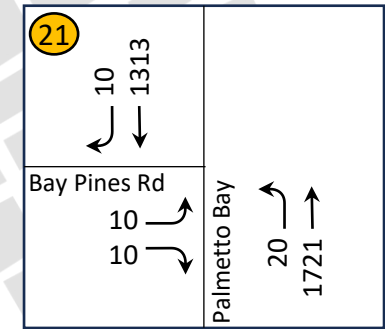
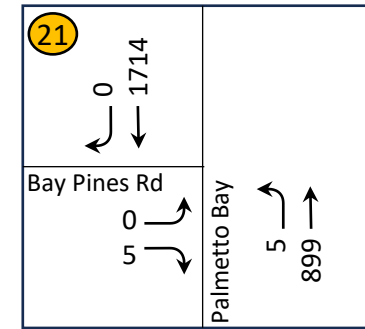
<b>19</b> 36 ↙    ↓    ↘ 0    23	Cross Island Pkwy SB	↙    ↘ 140 115
Marshland Rd 225    → 242    ↓		

<b>19</b> 78 ↙    ↓    ↘ 2    61	Cross Island Pkwy SB	↙    ↘ 420 137
Marshland Rd 130    → 135    ↓		

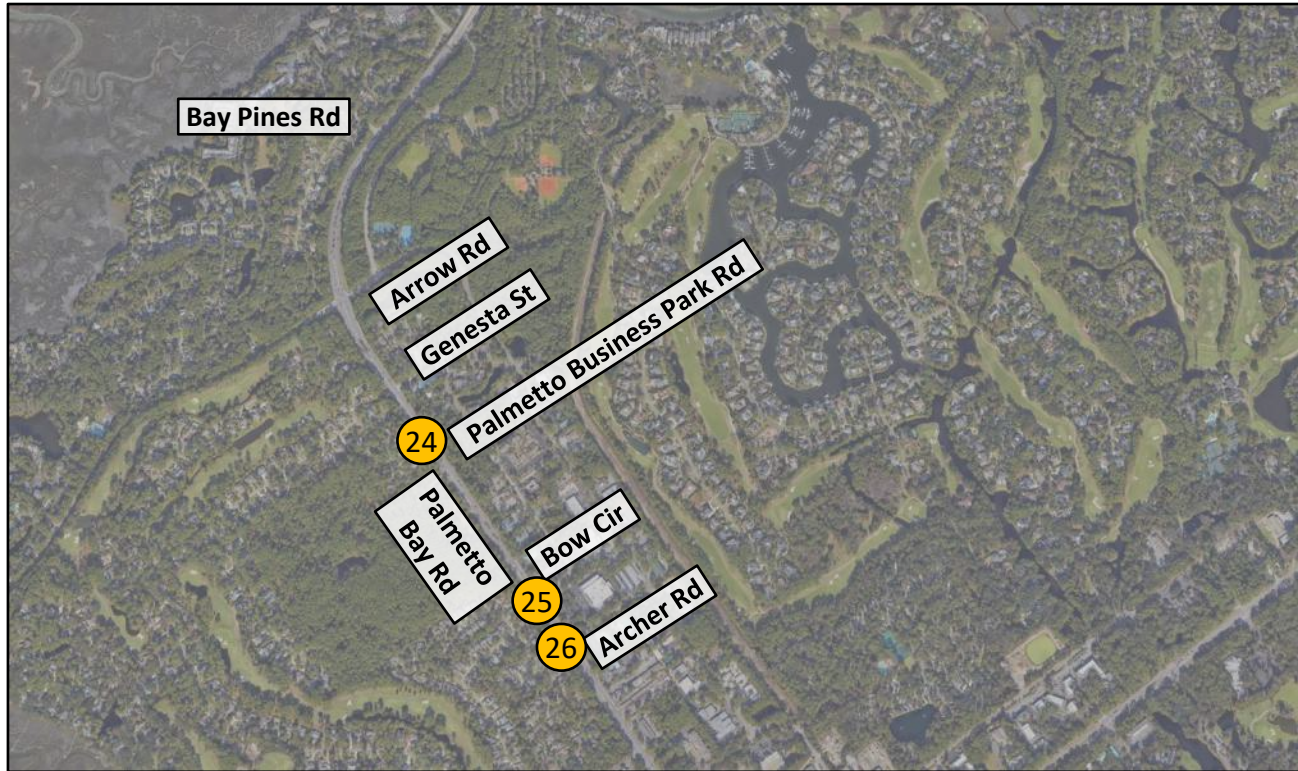
<b>20</b>	↙    ↘ 79 184
Marshland Rd 126    ↘ 122    ↓	Cross Island Pkwy NB 71    ↘ 58    ↓

<b>20</b>	↙    ↘ 37 305
Marshland Rd 48    ↘ 143    ↓	Cross Island Pkwy NB 252    ↘ 142    ↓

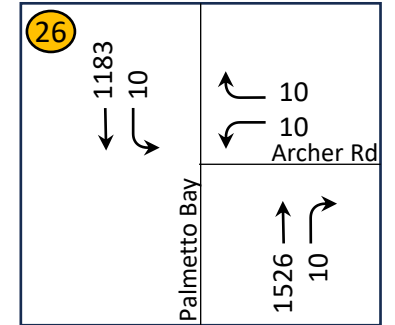
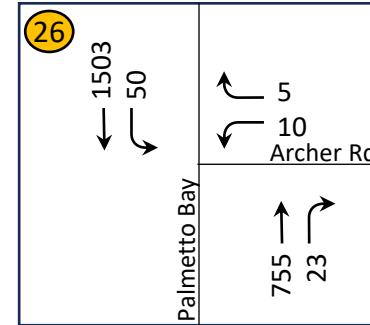
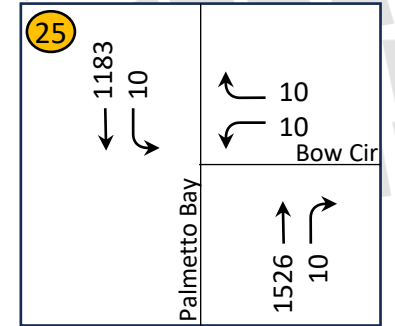
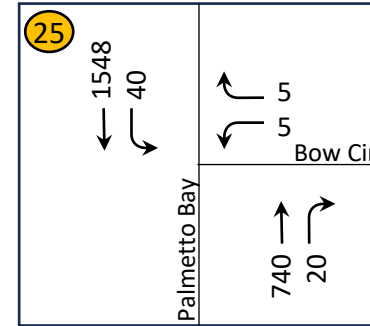
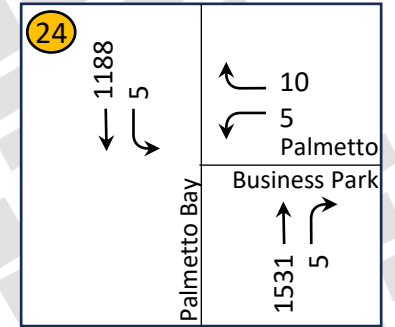
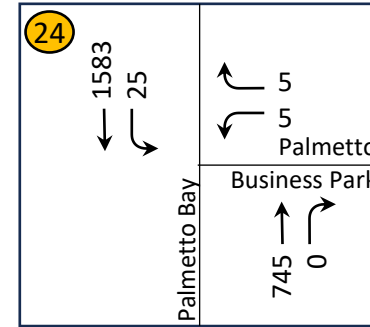
# 2023 Existing Traffic Volumes



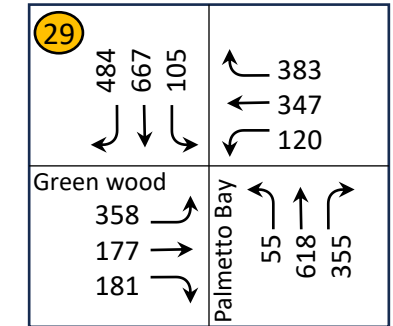
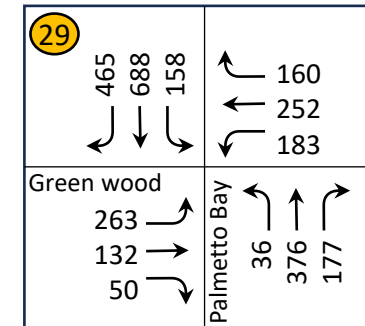
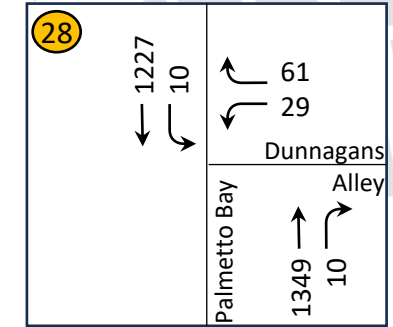
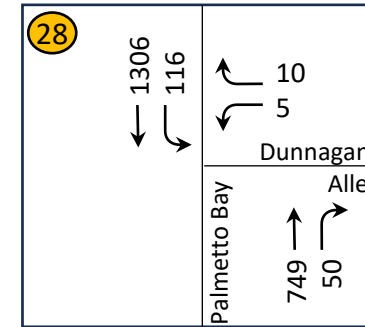
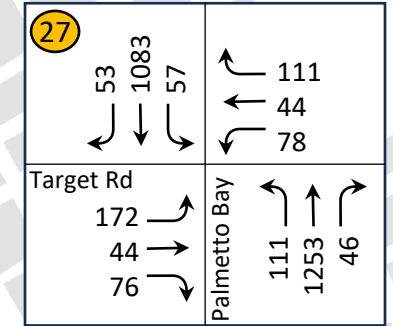
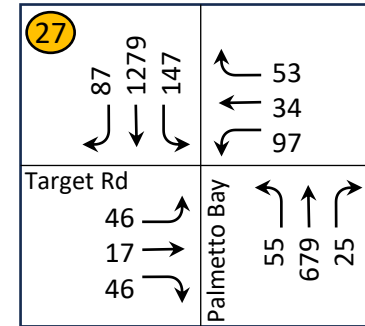
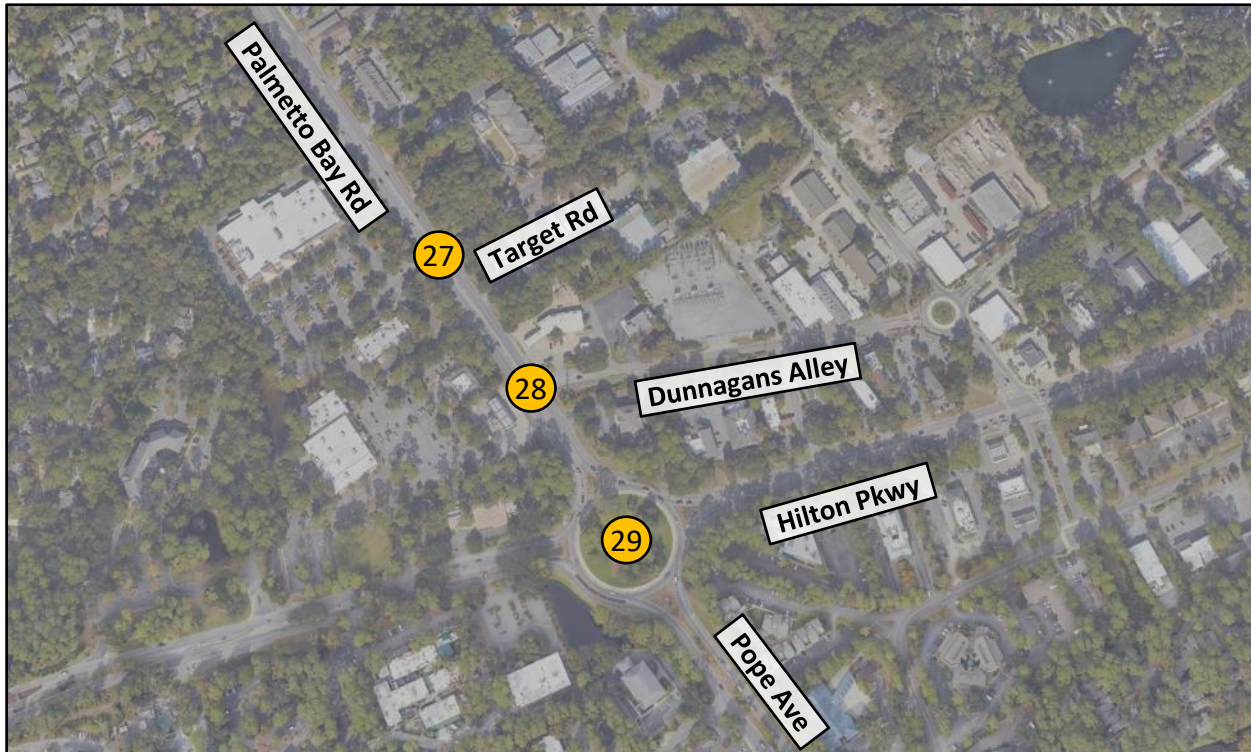
# 2023 Existing Traffic Volumes



AM Peak Hour Volumes    PM Peak Hour Volumes



# 2023 Existing Traffic Volumes



# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>1: Buckingham Plantation Dr &amp; Bluffton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (12.2)</b>	<b>B (11.4)</b>
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}
<b>2: Buckingham Plantation Dr/Moss Creek Dr &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (47.2)</b>	<b>B (19.5)</b>
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}
<b>3: Salt Marsh Dr/Moss Creek Village &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	E (35.3) [720] {1302}	C (19.7) [<25] {47}
Westbound Left Turn	<b>F (414.9) [37] {107}</b>	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}
<b>4: Fording Island Rd Ext &amp; Hilton Pkwy (un-signalized)</b>		
Westbound Left Turn	E (40.7) [46] {102}	C (16.8) [<25] {28}
Northbound Approach	<b>F (591.0) [120] {186}</b>	C (17.5) [<25] {41}



# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>5: Boat Landing Driveway/Wildlife Refuge Driveway &amp; Hilton Pkwy (un-signalized)</b>		
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	<b>F (270.5) [&lt;25] {38}</b>	C (20.8) [<25] {46}
Southbound Approach	No volumes observed	C (18.2) [<25] {39}
<b>6: Blue Heron Point Rd &amp; Hilton Pkwy (un-signalized)</b>		
Westbound Left Turn	No volumes observed	D (27.7) [<25] {<25}
Northbound Approach	<b>F (1,270.4) [123] {228}</b>	C (23.8) [<25] {60}
<b>7: Crosstree Dr (Windmill Harbour) &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (10.4)</b>	<b>A (8.2)</b>
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}
<b>8: Jenkins Rd &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	A (8.2) [<25] {<25}	<b>F (98.0) [&lt;25] {54}</b>
Southbound Approach	<b>F (51.8) [&lt;25] {44}</b>	<b>F (109.4) [&lt;25] {92}</b>



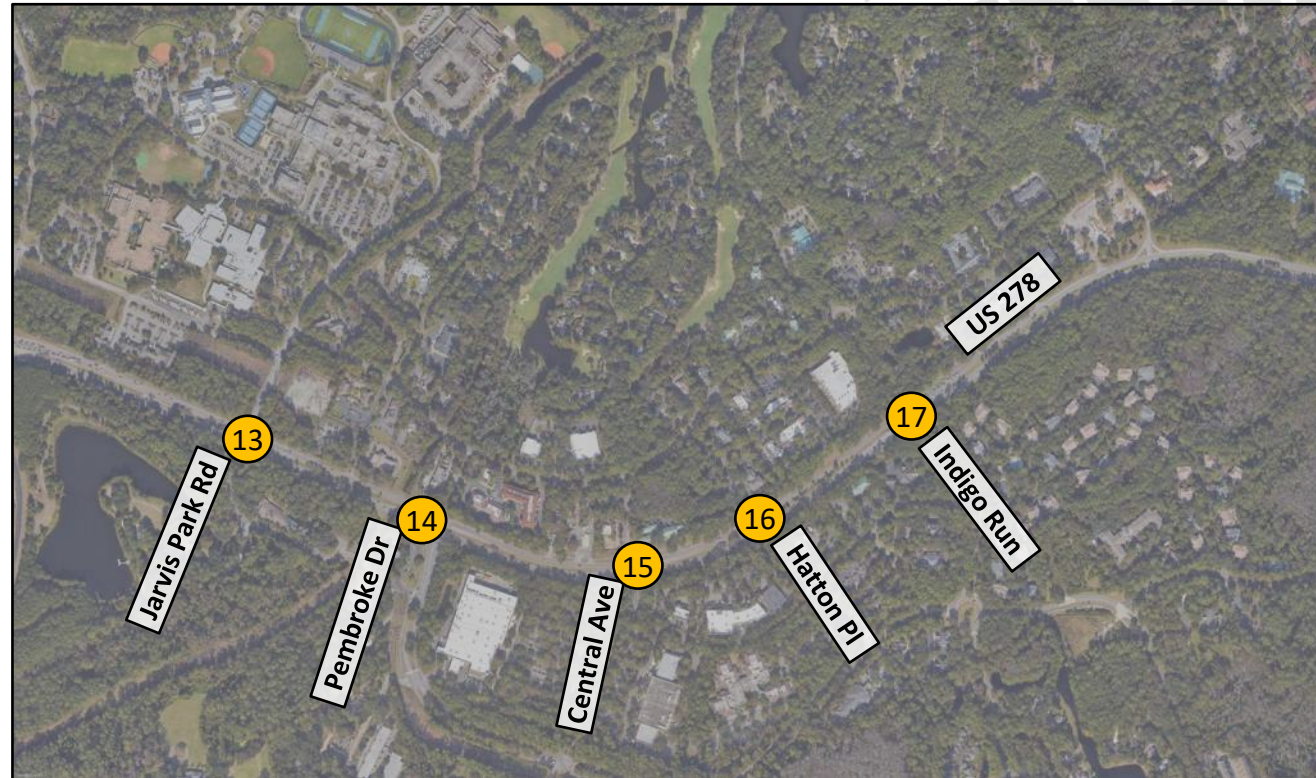
# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (39.2)</b>	<b>E (67.3)</b>
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}
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	A (1.3) [<25] {<25}	A (6.4) [<25] {25}
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (29.8)</b>	<b>F (240.4)</b>
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}
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (40.7)</b>	<b>E (66.4)</b>
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}



# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>13: Jarvis Park Rd/Wilborn Rd &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>C (21.8)</b>	<b>C (25.8)</b>
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	<b>F (81.1) [45] {168}</b>	E (77.4) [43] {186}
Southbound Approach	D (45.4) [72] {233}	C (21.7) [28] {120}
<b>14: Pembroke Dr/Museum St &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>B (18.7)</b>	<b>C (33.7)</b>
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}
<b>15: Central Ave &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	A (8.5) [<25] {<25}	<b>F (55.9) [&lt;25] {50}</b>
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}	<b>F (165.1) [&lt;25] {65}</b>
<b>16: Hatton Pl/Merchant St &amp; Hilton Pkwy (un-signalized)</b>		
Northbound Right Turn	B (11.5) [<25] {25}	A (7.7) [<25] {61}
Southbound Right Turn	B (10.6) [<25] {46}	<b>F (93.1) [&lt;25] {72}</b>
<b>17: Indigo Run Dr/Whooping Crane Way &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>C (23.3)</b>	<b>D (44.1)</b>
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}



# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>18: Cross Island Pkwy SB Ramp/Gumtree Rd &amp; Honey Horn Rd (un-signalized)</b>		
Eastbound Approach	A (9.1) [<25] {45}	B (10.9) [<25] {61}
<b>19: Cross Island Pkwy SB Ramp &amp; Marshland Rd (un-signalized)</b>		
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}
<b>20: Cross Island Pkwy NB Ramp &amp; Marshland Rd (un-signalized)</b>		
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}



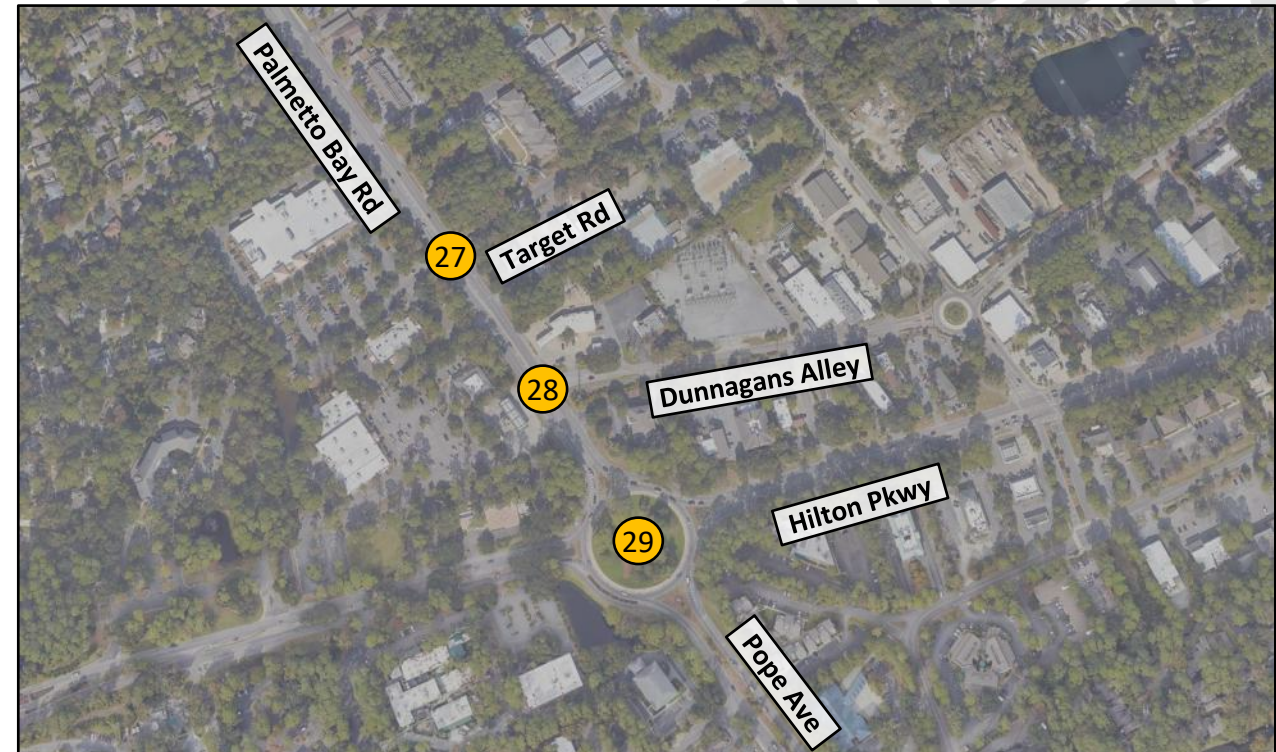
# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>21: Palmetto Bay Rd &amp; Bay Pines Rd (un-signalized)</b>		
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}
<b>22: Palmetto Bay Rd &amp; Point Comfort Rd/Arrow Rd (signal)</b>		
Overall Intersection	<b>B (13.2)</b>	<b>B (16.9)</b>
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}
<b>23: Palmetto Bay Rd &amp; Genesta St (un-signalized)</b>		
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}
<b>24: Palmetto Bay Rd &amp; Palmetto Business Park Rd (un-signalized)</b>		
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}
<b>25: Palmetto Bay Rd &amp; Bow Cir (un-signalized)</b>		
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}
<b>26: Palmetto Bay Rd &amp; Archer Rd (un-signalized)</b>		
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}



# 2023 Existing Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>27: Palmetto Bay Rd &amp; Target Rd (signal)</b>		
<b>Overall Intersection</b>	<b>B (16.0)</b>	<b>B (17.6)</b>
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}
<b>28: Palmetto Bay Rd &amp; Dunnagans Alley (un-signalized)</b>		
Westbound Left Turn	<b>F (184.7) [&lt;25] {50}</b>	<b>F (65.5) [&lt;25] {75}</b>
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}
<b>29: Palmetto Bay Rd &amp; Hilton Pkwy (Sea Pines Circle, RAB)</b>		
<b>Overall Intersection</b>	<b>E (37.0)</b>	<b>F (51.8)</b>
Eastbound Approach	<b>F (208.4) [615] {814}</b>	<b>F (51.0) [285] {770}</b>
Westbound Approach	A (7.5) [<25] {263}	<b>F (168.3) [1635] {1658}</b>
Northbound Approach	A (4.2) [<25] {223}	D (30.8) [228] {738}
Southbound Approach	B (12.9) [194] {461}	A (8.4) [85] {460}



# 2045 No Build VISSIM Results



# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



**1**

84 ↓ 2 ↓ 5 ↓	18 ↑ 493 ↑ 7 ↓
Bluffton Pkwy 263 → 994 → 28 ↓	Buckingham Dr Plantation Dr 31 → 12 → 32 →

**1**

112 ↓ 14 ↓ 2 ↓	11 ↑ 1044 ↑ 23 ↓
Bluffton Pkwy 100 → 739 → 25 ↓	Buckingham Dr Plantation Dr 27 → 14 → 29 →

**2**

77 ↓ 28 ↓ 47 ↓	26 ↑ 1265 ↑ 23 ↓
US 278 70 → 1798 → 40 ↓	Buckingham Dr Plantation Dr 33 → 68 → 192 →

**2**

138 ↓ 41 ↓ 76 ↓	51 ↑ 2252 ↑ 24 ↓
US 278 106 → 1629 → 63 ↓	Buckingham Dr Plantation Dr 57 → 45 → 23 →

**3**

88 ↓ 0 ↓ 9 ↓	97 ↑ 1226 ↑ 7 ↓
US 278 9 → 2026 → 2 ↓	Salt Marsh Dr 0 → 0 → 51 →

**3**

88 ↓ 0 ↓ 6 ↓	63 ↑ 2239 ↑ 32 ↓
US 278 27 → 1692 → 9 ↓	Salt Marsh Dr 0 → 0 → 45 →

**4**

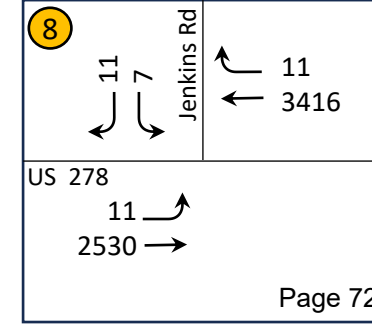
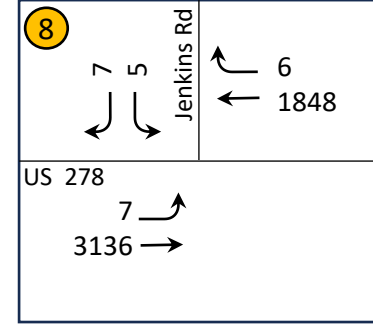
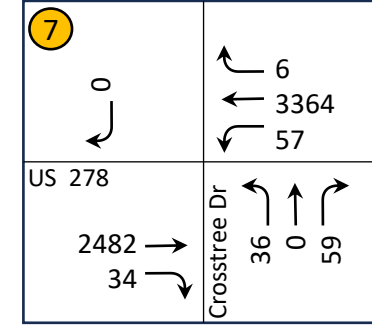
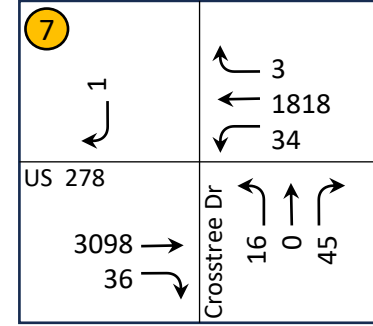
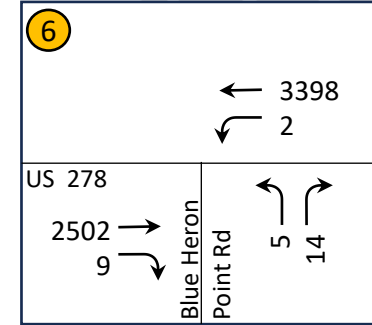
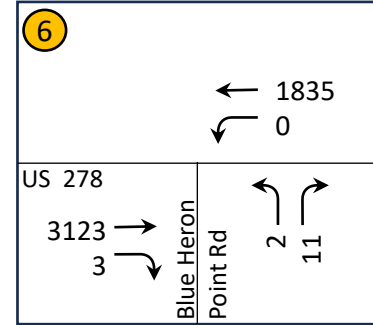
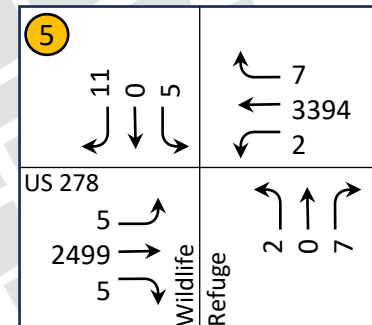
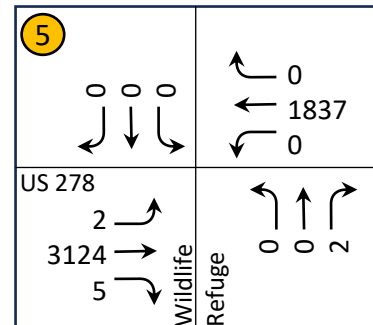
	1314 ↑ 5 ↓
US 278 2083 → 3 ↓	Fording Island Rd Ext 16 → 17 →

**4**

	2311 ↑ 18 ↓
US 278 1716 → 27 ↓	Fording Island Rd Ext 23 → 23 →

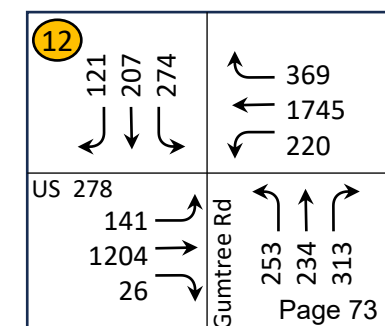
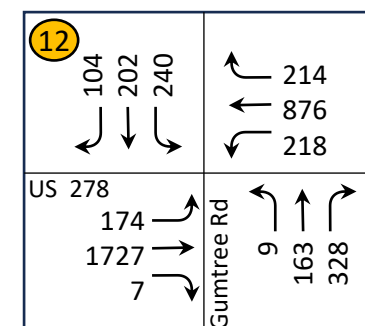
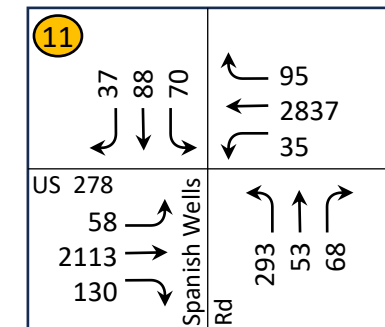
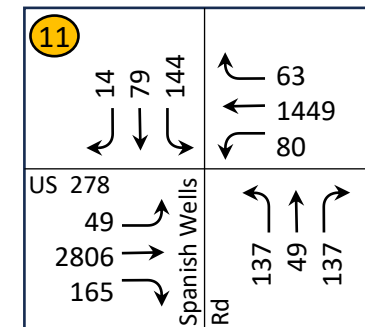
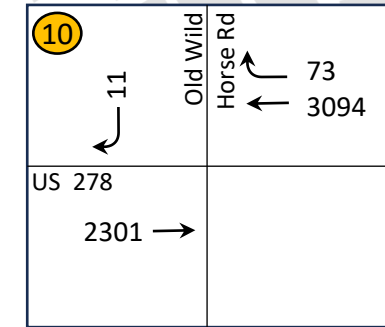
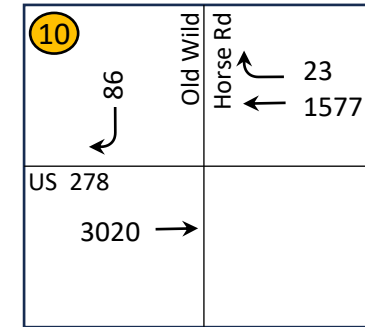
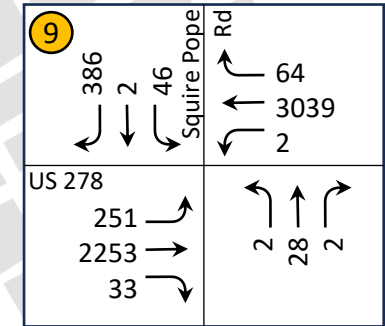
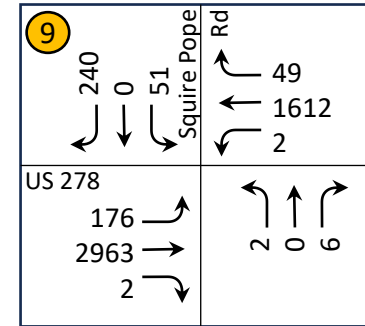
# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



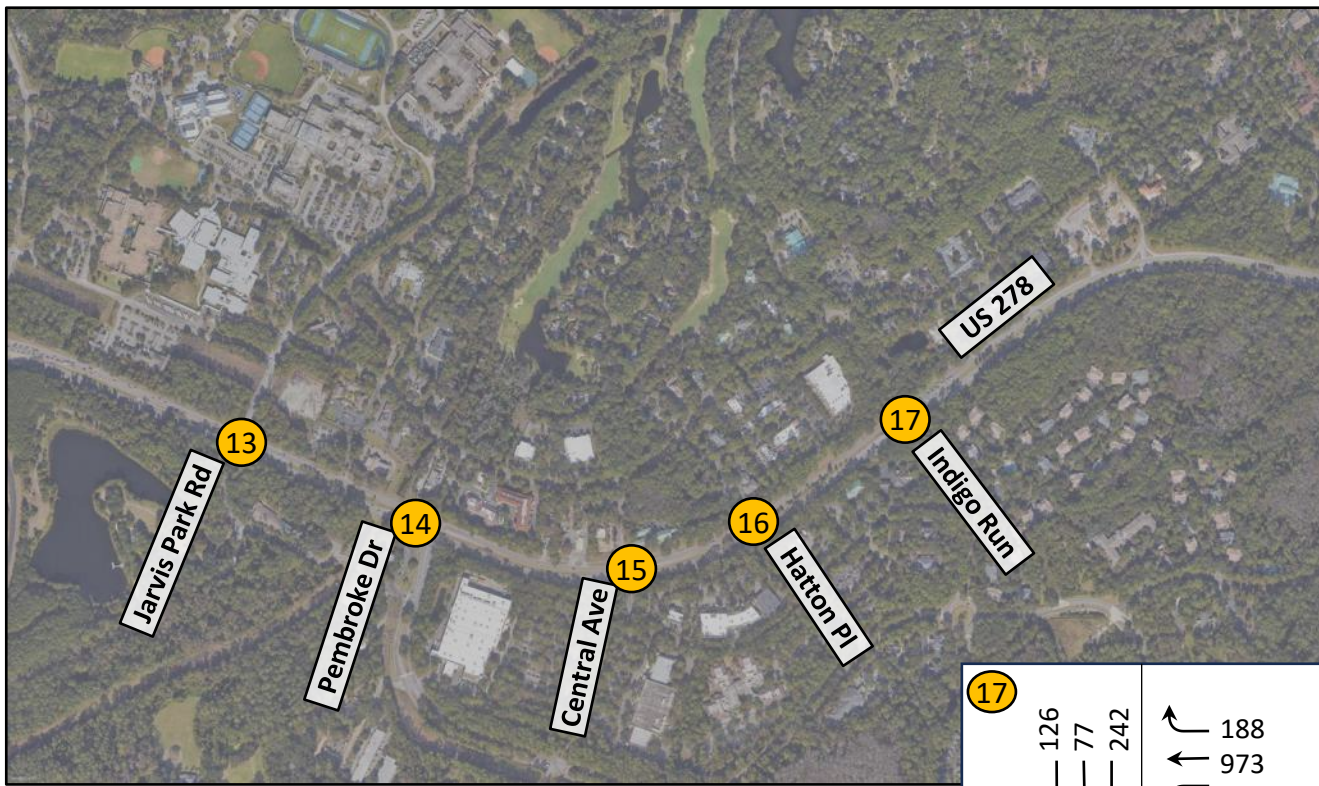
# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



<p><b>13</b></p> <p>205 31 276</p>	<p>341 1077 2</p>
<p>US 278</p> <p>286 1932 77</p>	<p>Jarvis Park</p> <p>26 51 0</p>

<p><b>13</b></p> <p>278 9 97</p>	<p>72 1993 5</p>
<p>US 278</p> <p>128 1608 55</p>	<p>Jarvis Park</p> <p>63 9 11</p>

<p><b>14</b></p> <p>51 14 20</p>	<p>35 1076 37</p>
<p>US 278</p> <p>90 1845 273</p>	<p>Pembroke Dr</p> <p>293 24 42</p>

<p><b>14</b></p> <p>58 30 16</p>	<p>31 1655 35</p>
<p>US 278</p> <p>64 1422 230</p>	<p>Pembroke Dr</p> <p>357 39 42</p>

<p><b>15</b></p> <p>23</p>	<p>23 1125 6</p>
<p>US 278</p> <p>6 1895 6</p>	<p>Central Ave</p> <p>6</p>

<p><b>15</b></p> <p>6</p>	<p>24 1715 6</p>
<p>US 278</p> <p>6 1468 6</p>	<p>Central Ave</p> <p>11</p>

<p><b>17</b></p> <p>126 77 242</p>	<p>188 973 37</p>
<p>US 278</p> <p>146 1601 62</p>	<p>Indigo Run Dr</p> <p>90 58 37</p>

<p><b>16</b></p> <p>11</p>	<p>Hatton Pl</p> <p>46 1143</p>
<p>US 278</p> <p>1797 104</p>	<p>12</p>

<p><b>17</b></p> <p>126 130 284</p>	<p>344 1547 58</p>
<p>US 278</p> <p>185 1301 53</p>	<p>Indigo Run Dr</p> <p>72 130 55</p>

<p><b>16</b></p> <p>11</p>	<p>Hatton Pl</p> <p>11 1734</p>
<p>US 278</p> <p>1473 6</p>	<p>66</p>

# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



<b>18</b> 7 ↓ 422	Cross Island Pkwy SB
Honey Horn Rd 2 ↘ 0	

<b>18</b> 9 ↓ 449	Cross Island Pkwy SB
Honey Horn Rd 45 ↘ 17	

<b>19</b> 41 ↘ 0 ↓ 26	Cross Island Pkwy SB	158 ↖ 130
Marshland Rd 254 → 274 ↘		

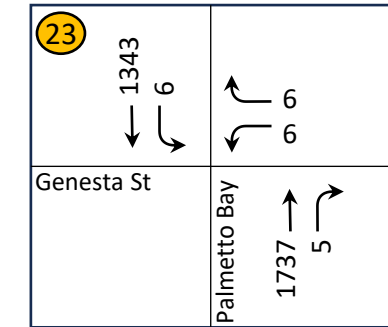
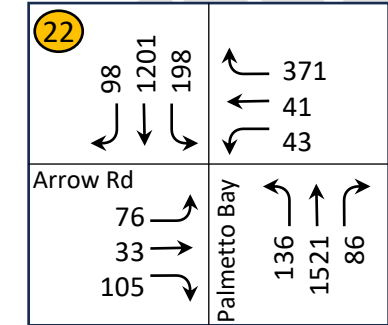
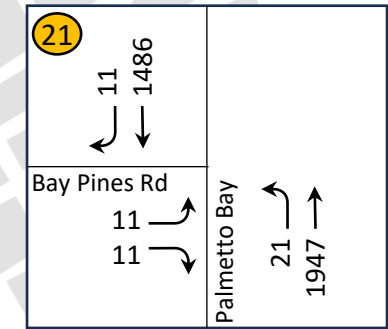
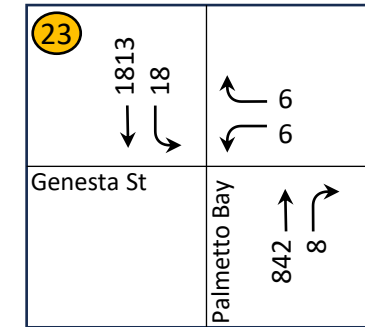
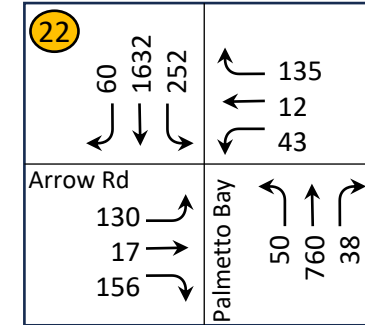
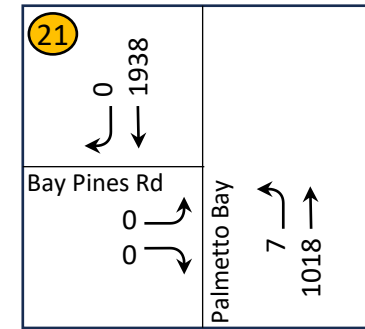
<b>19</b> 88 ↘ 2 ↓ 69	Cross Island Pkwy SB	475 ↖ 155
Marshland Rd 147 → 153 ↘		

<b>20</b>	89 ↖ 208
Marshland Rd 142 ↘ 138 →	Cross Island Pkwy NB 80 ↖ 66 ↘

<b>20</b>	42 ↖ 345
Marshland Rd 54 ↘ 162 →	Cross Island Pkwy NB 285 ↖ 161 ↘

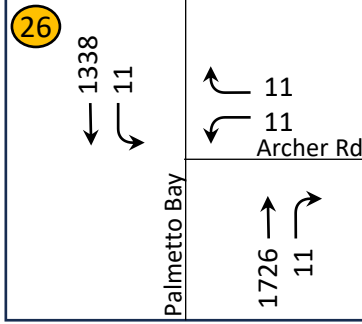
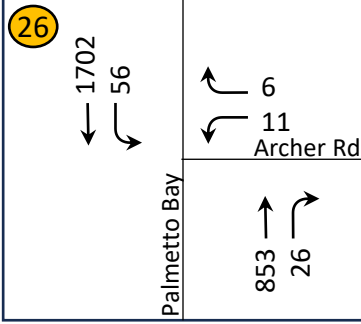
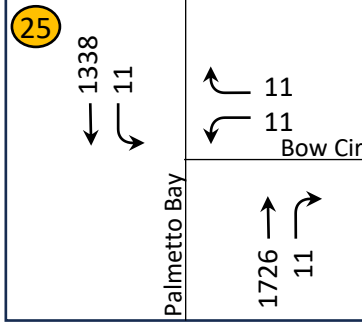
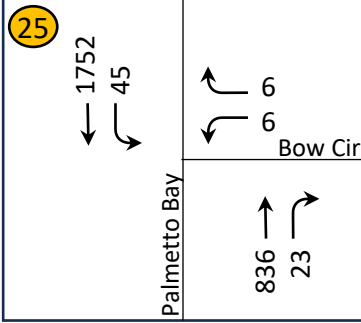
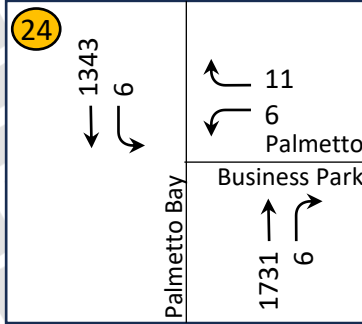
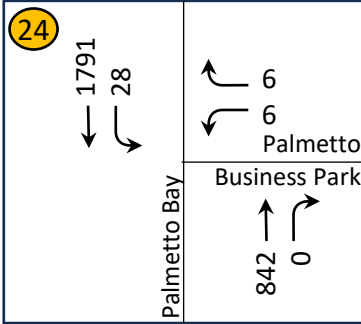
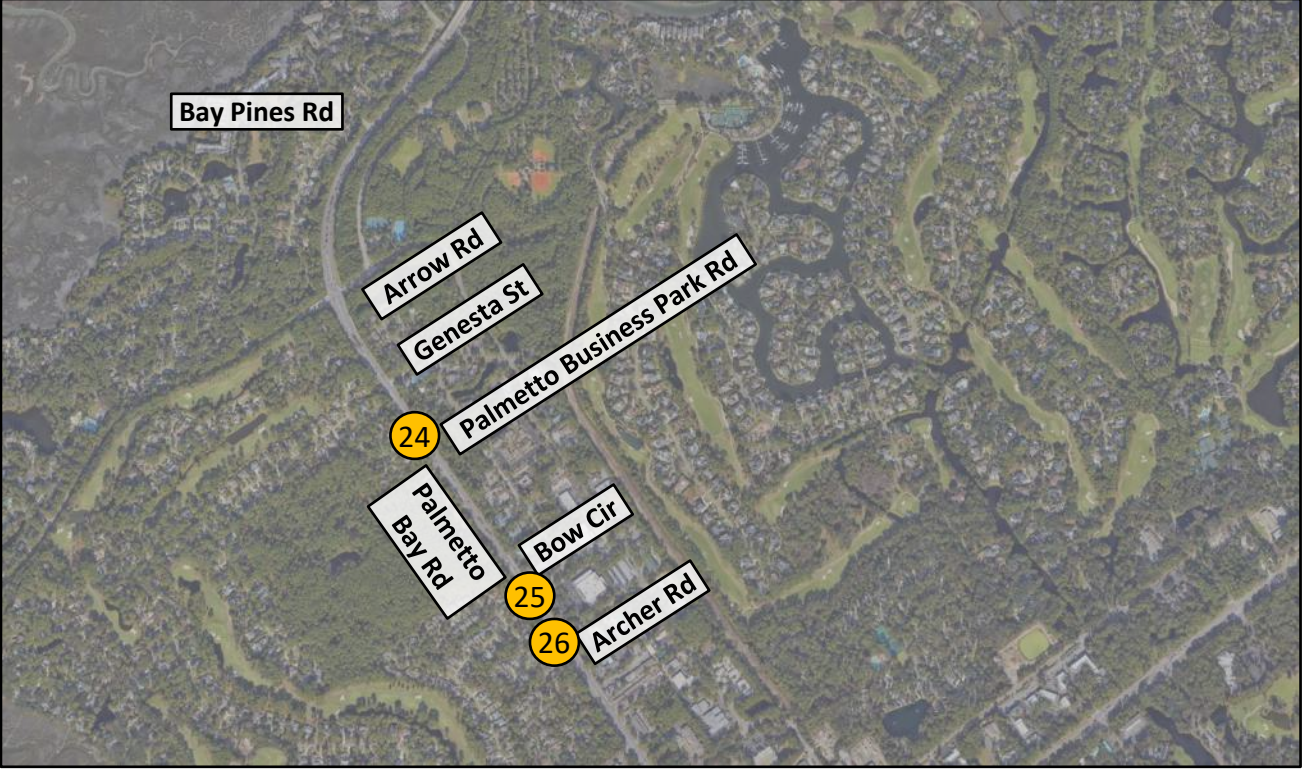
# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



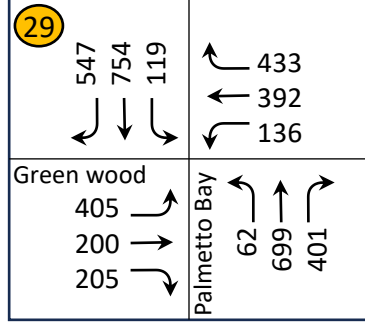
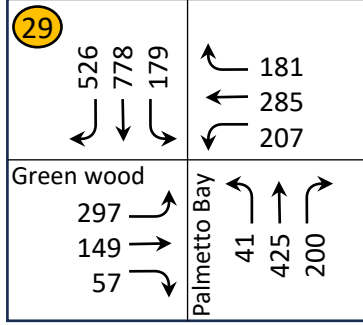
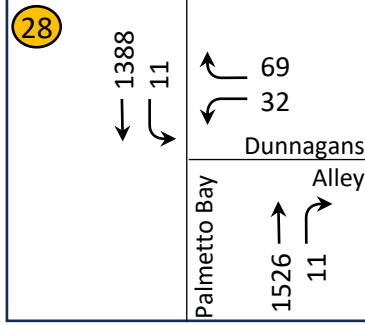
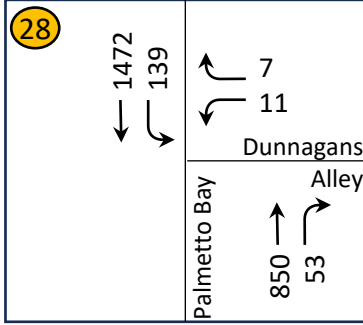
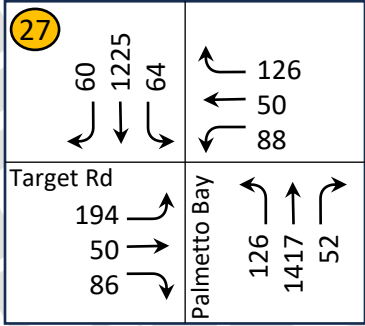
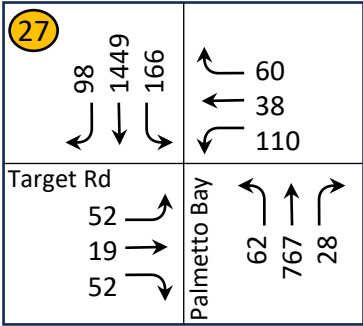
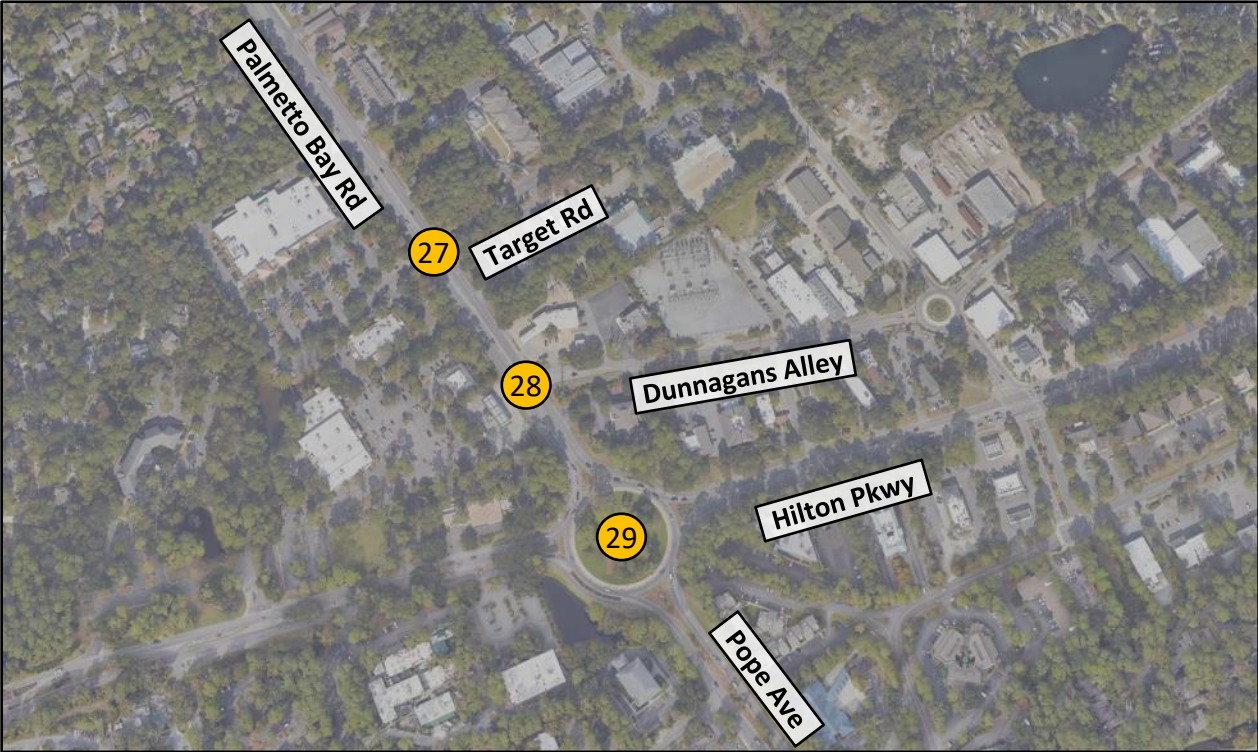
# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



# 2045 No Build Traffic Volumes

- 0.56% Annual Growth Rate Applied



# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>1: Buckingham Plantation Dr &amp; Bluffton Pkwy (signal)</b>		
Overall Intersection	<b>C (22.3)</b>	<b>B (15.9)</b>
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}
<b>2: Buckingham Plantation Dr/Moss Creek Dr &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>E (74.1)</b>	<b>B (18.6)</b>
Eastbound Approach	<b>F (146.0) [1628] {1658}</b>	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}
<b>3: Salt Marsh Dr/Moss Creek Village &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	<b>F (54.8) [1075] {1304}</b>	C (18.8) [<25] {55}
Westbound Left Turn	<b>F (4,646.8) [142] {214}</b>	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}
<b>4: Fording Island Rd Ext &amp; Hilton Pkwy (un-signalized)</b>		
Westbound Left Turn	<b>F (3,675.2) [85] {146}</b>	C (19.0) [<25] {34}
Northbound Approach	<b>F (3,448.2) [171] {189}</b>	C (18.4) [<25] {43}



2045 No Build Analysis includes a 0.56% annual growth rate as well as signal timing optimizations

# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>5: Boat Landing Driveway/Wildlife Refuge Driveway &amp; Hilton Pkwy (un-signalized)</b>		
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	<b>F (426.9) [&lt;25] {38}</b>	C (20.6) [<25] {47}
Southbound Approach	No volumes observed	C (17.5) [<25] {42}
<b>6: Blue Heron Point Rd &amp; Hilton Pkwy (un-signalized)</b>		
Westbound Left Turn	No volumes observed	<b>F (131.6) [&lt;25] {&lt;25}</b>
Northbound Approach	<b>F (2,505.2) [214] {351}</b>	E (49.9) [<25] {74}
<b>7: Crosstree Dr (Windmill Harbour) &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>A (9.5)</b>	<b>B (13.4)</b>
Eastbound Approach	B (11.3) [433] {1093}	B (10.6) [216] {1092}
Westbound Approach	A (5.3) [26] {601}	A (6.0) [86] {913}
Northbound Approach	D (41.6) [<25] {138}	<b>F (237.4) [193] {326}</b>
Southbound Approach	A (9.8) [<25] {<25}	A (0.0) [<25] {<25}
<b>8: Jenkins Rd &amp; Hilton Pkwy (un-signalized)</b>		
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}



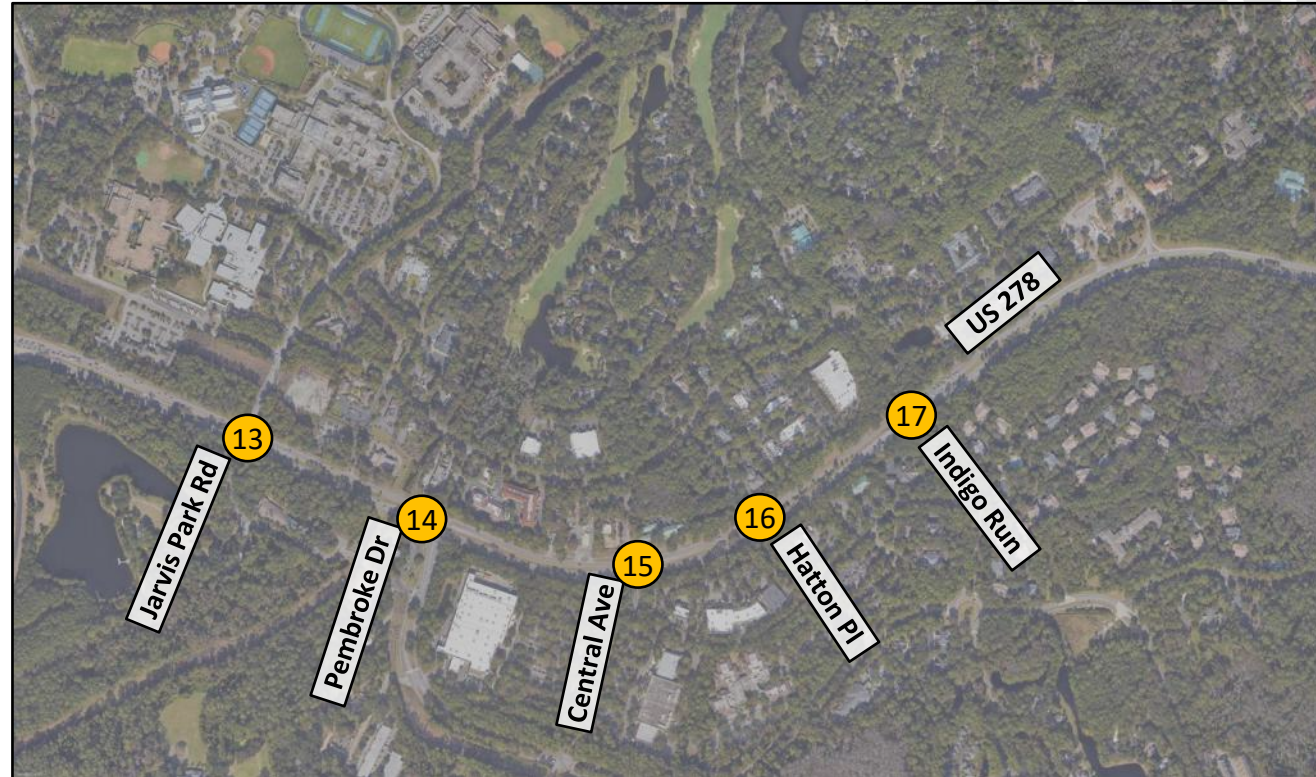
# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (26.8)</b>	<b>E (70.7)</b>
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}
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	A (1.4) [<25] {26}	A (8.0) [<25] {29}
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (30.3)</b>	<b>F (328.8)</b>
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}
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (51.9)</b>	<b>E (76.0)</b>
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}



# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>13: Jarvis Park Rd/Wilborn Rd &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>C (22.3)</b>	<b>C (33.4)</b>
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}	<b>F (281.4) [153] {297}</b>
Southbound Approach	D (36.9) [65] {225}	C (25.8) [32] {153}
<b>14: Pembroke Dr/Museum St &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>C (22.1)</b>	<b>E (55.1)</b>
Eastbound Approach	B (17.8) [227] {1081}	B (18.9) [99] {679}
Westbound Approach	B (19.5) [72] {553}	D (54.5) [998] {1279}
Northbound Approach	D (52.8) [71] {260}	<b>F (260.2) [397] {719}</b>
Southbound Approach	C (31.1) [<25] {87}	D (43.2) [<25] {114}
<b>15: Central Ave &amp; Hilton Pkwy (un-signalized)</b>		
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}	<b>F (2,448.4) [87] {171}</b>
<b>16: Hatton Pl/Merchant St &amp; Hilton Pkwy (un-signalized)</b>		
Northbound Right Turn	A (8.1) [<25] {<25}	A (6.9) [<25] {64}
Southbound Right Turn	B (11.0) [<25] {36}	<b>F (1,211.0) [123] {244}</b>
<b>17: Indigo Run Dr/Whooping Crane Way &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>C (24.5)</b>	<b>E (66.7)</b>
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}	<b>F (126.4) [327] {1023}</b>



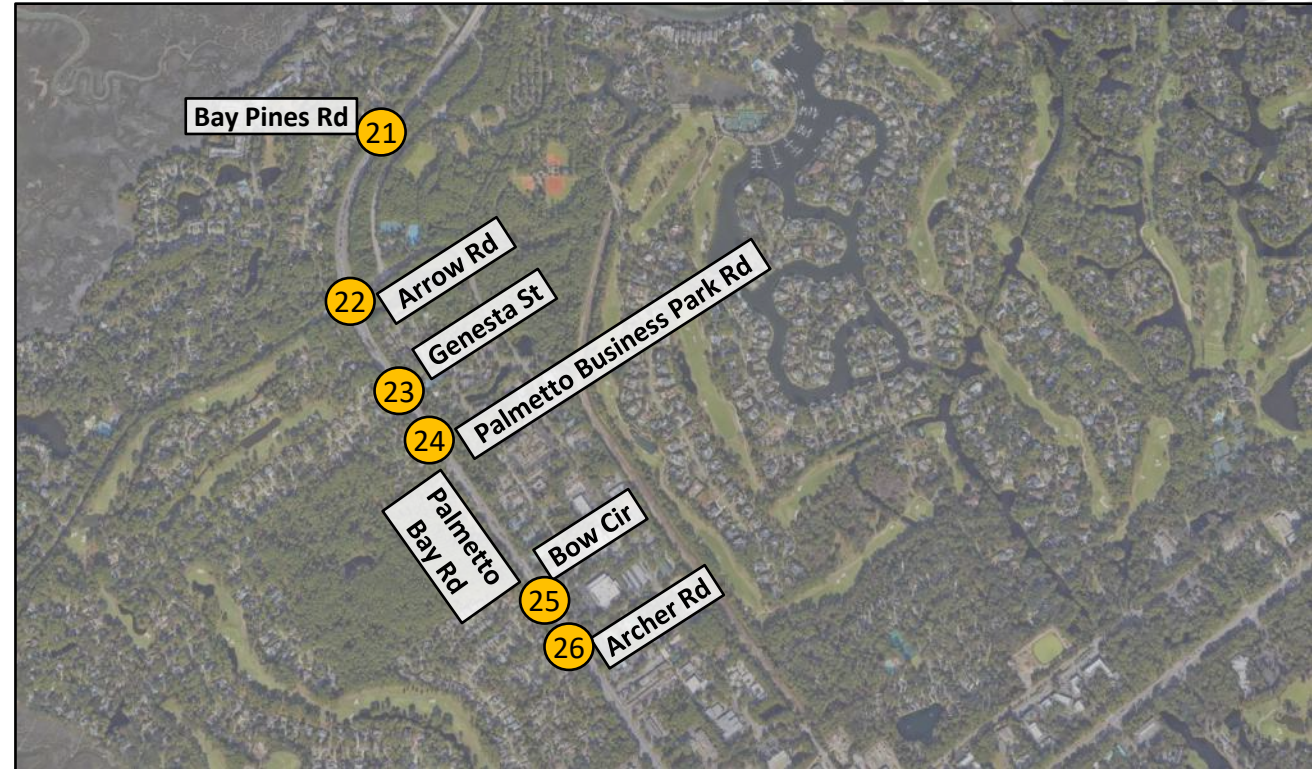
# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>18: Cross Island Pkwy SB Ramp/Gumtree Rd &amp; Honey Horn Rd (un-signalized)</b>		
Eastbound Approach	A (9.7) [<25] {45}	B (12.1) [<25] {72}
<b>19: Cross Island Pkwy SB Ramp &amp; Marshland Rd (un-signalized)</b>		
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}
<b>20: Cross Island Pkwy NB Ramp &amp; Marshland Rd (un-signalized)</b>		
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}



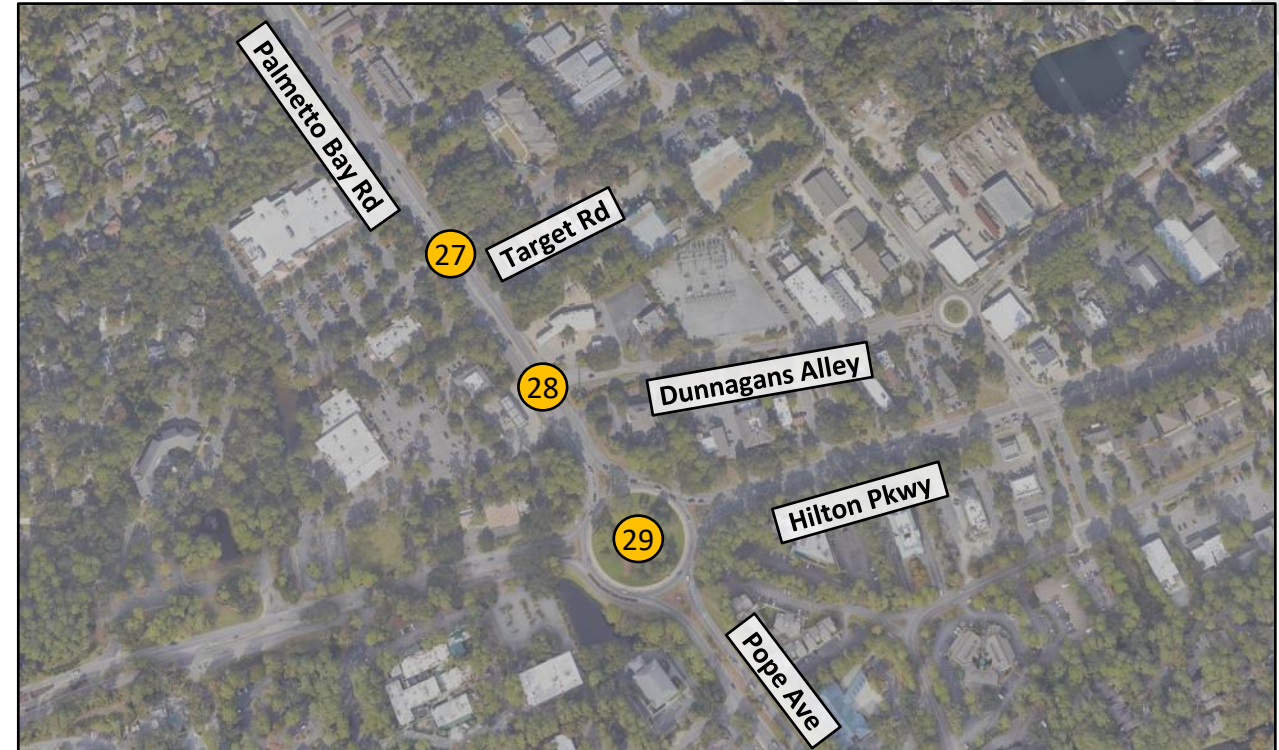
# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>21: Palmetto Bay Rd &amp; Bay Pines Rd (un-signalized)</b>		
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}
<b>22: Palmetto Bay Rd &amp; Point Comfort Rd/Arrow Rd (signal)</b>		
Overall Intersection	<b>B (14.0)</b>	<b>B (18.2)</b>
Eastbound Approach	C (30.2) [51] {187}	C (29.0) [38] {164}
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}
<b>23: Palmetto Bay Rd &amp; Genesta St (un-signalized)</b>		
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}
<b>24: Palmetto Bay Rd &amp; Palmetto Business Park Rd (un-signalized)</b>		
Westbound Approach	<b>F (65.1) [&lt;25] {75}</b>	C (21.0) [<25] {59}
Southbound Left Turn	A (5.7) [35] {176}	B (12.8) [<25] {<25}
<b>25: Palmetto Bay Rd &amp; Bow Cir (un-signalized)</b>		
Westbound Left Turn	<b>F (69.4) [46] {98}</b>	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}
<b>26: Palmetto Bay Rd &amp; Archer Rd (un-signalized)</b>		
Westbound Left Turn	<b>F (1,234.0) [40] {69}</b>	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}



# 2045 No Build Results (VISSIM)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] {Max Queue, ft}	
	AM Peak Hour	PM Peak Hour
<b>27: Palmetto Bay Rd &amp; Target Rd (signal)</b>		
<b>Overall Intersection</b>	<b>C (26.9)</b>	<b>B (18.6)</b>
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}
<b>28: Palmetto Bay Rd &amp; Dunnagans Alley (un-signalized)</b>		
Westbound Left Turn	<b>F (872.0) [62] {148}</b>	<b>F (87.7) [&lt;25] {97}</b>
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}
<b>29: Palmetto Bay Rd &amp; Hilton Pkwy (Sea Pines Circle, RAB)</b>		
<b>Overall Intersection</b>	<b>F (60.5)</b>	<b>F (81.8)</b>
Eastbound Approach	<b>F (314.7) [808] {838}</b>	<b>F (168.2) [805] {838}</b>
Westbound Approach	B (14.3) [56] {434}	<b>F (200.4) [1645] {1658}</b>
Northbound Approach	A (4.2) [<25] {207}	<b>F (61.1) [534] {794}</b>
Southbound Approach	C (34.4) [297] {461}	A (8.2) [88] {460}



# 2045 No Build Synchro Results



# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>1: Buckingham Plantation Dr &amp; Bluffton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (17.6)</b>	<b>C (25.5)</b>
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>
<b>2: Buckingham Plantation Dr/Moss Creek Dr &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (18.2)</b>	<b>C (26.9)</b>
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>
<b>3: Salt Marsh Dr/Moss Creek Village &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	C (18.8) [<25] <0.03>	<b>F (65.8) [33] &lt;0.33&gt;</b>
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	<b>F (57.0) [88] &lt;0.63&gt;</b>	<b>F (649.6) [273] &lt;2.05&gt;</b>
<b>4: Fording Island Rd Ext &amp; Hilton Pkwy (un-signalized)</b>		
Westbound Left Turn	C (21.6) [<25] <0.02>	C (17.0) [<25] <0.06>
Northbound Approach	<b>F (684.9) [115] &lt;1.63&gt;</b>	<b>F (\$1880.2) [225] &lt;4.10&gt;</b>



2045 No Build Analysis includes a 0.56% annual growth rate as well as signal timing optimizations

# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>5: Boat Landing Driveway/Wildlife Refuge Driveway &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	C (17.8) [<25] <0.01>	F (67.3) [<25] <0.08>
Westbound Left Turn	No volumes observed	C (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>
<b>6: Blue Heron Point Rd &amp; Hilton Pkwy (un-signalized)</b>		
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>
<b>7: Crosstree Dr (Windmill Harbour) &amp; Hilton Pkwy (signal)</b>		
Overall Intersection	<b>E (67.8)</b>	<b>F (92.1)</b>
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) [~2456] <1.26>
Northbound Approach	B (14.6) [34] <0.39>	E (77.5) [#106] <0.86>
Southbound Approach	0 (0.0) [<25] <0.01>	0 (0.0) [<25] <0.00>
<b>8: Jenkins Rd &amp; Hilton Pkwy (un-signalized)</b>		
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>



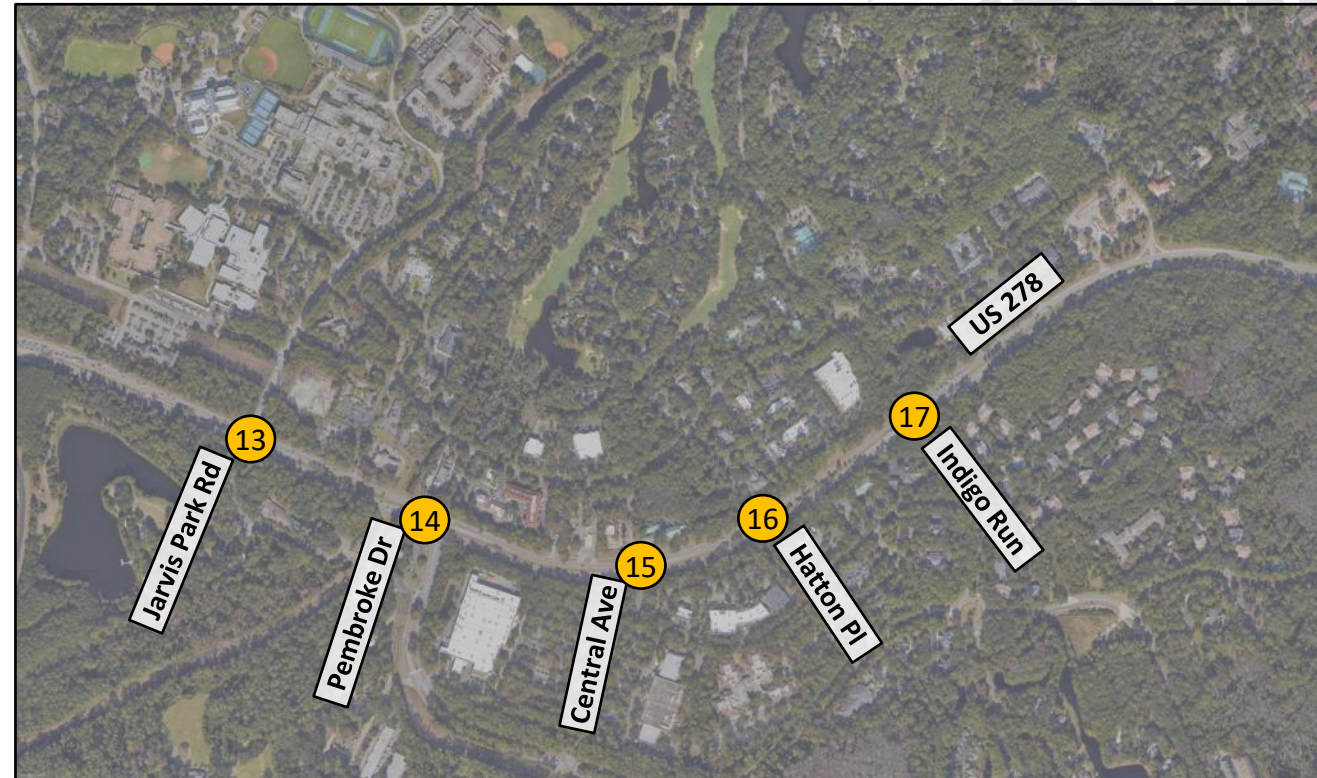
# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (23.4)</b>	<b>F (144.6)</b>
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>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	D (26.7) [40] <0.36>	F (77.9) [<25] <0.20>
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (37.5)</b>	<b>D (45.1)</b>
Eastbound Approach	D (38.7) [#1280] <1.02>	C (20.5) [381] <0.89>
Westbound Approach	C (24.0) [345] <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>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>F (84.2)</b>	<b>F (80.1)</b>
Eastbound Approach	F (94.6) [~1146] <1.16>	D (54.0) [#842] <0.99>
Westbound Approach	D (43.1) [#391] <0.90>	D (44.6) [m539] <0.97>
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>



# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>13: Jarvis Park Rd/Wilborn Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (20.2)</b>	<b>E (57.5)</b>
Eastbound Approach	B (16.0) [257] <0.90>	A (7.6) [m262] <0.76>
Westbound Approach	B (12.0) [306] <0.69>	D (38.2) [#1335] <1.01>
Northbound Approach	<b>F (82.7) [136] &lt;0.58&gt;</b>	<b>F (259.8) [#208] &lt;1.33&gt;</b>
Southbound Approach	D (52.5) [249] <0.73>	<b>F (250.2) [#358] &lt;1.61&gt;</b>
<b>14: Pembroke Dr/Museum St &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (27.8)</b>	<b>D (38.3)</b>
Eastbound Approach	B (15.6) [#1252] <0.91>	B (13.7) [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>	<b>F (86.1) [#355] &lt;0.89&gt;</b>
Southbound Approach	C (32.7) [74] <0.36>	D (49.5) [93] <0.68>
<b>15: Central Ave &amp; Hilton Pkwy (un-signalized)</b>		
Eastbound Left Turn	B (11.4) [<25] <0.01>	B (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>
<b>16: Hatton Pl/Merchant St &amp; Hilton Pkwy (un-signalized)</b>		
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>
<b>17: Indigo Run Dr/Whooping Crane Way &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (18.0)</b>	<b>D (36.4)</b>
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>



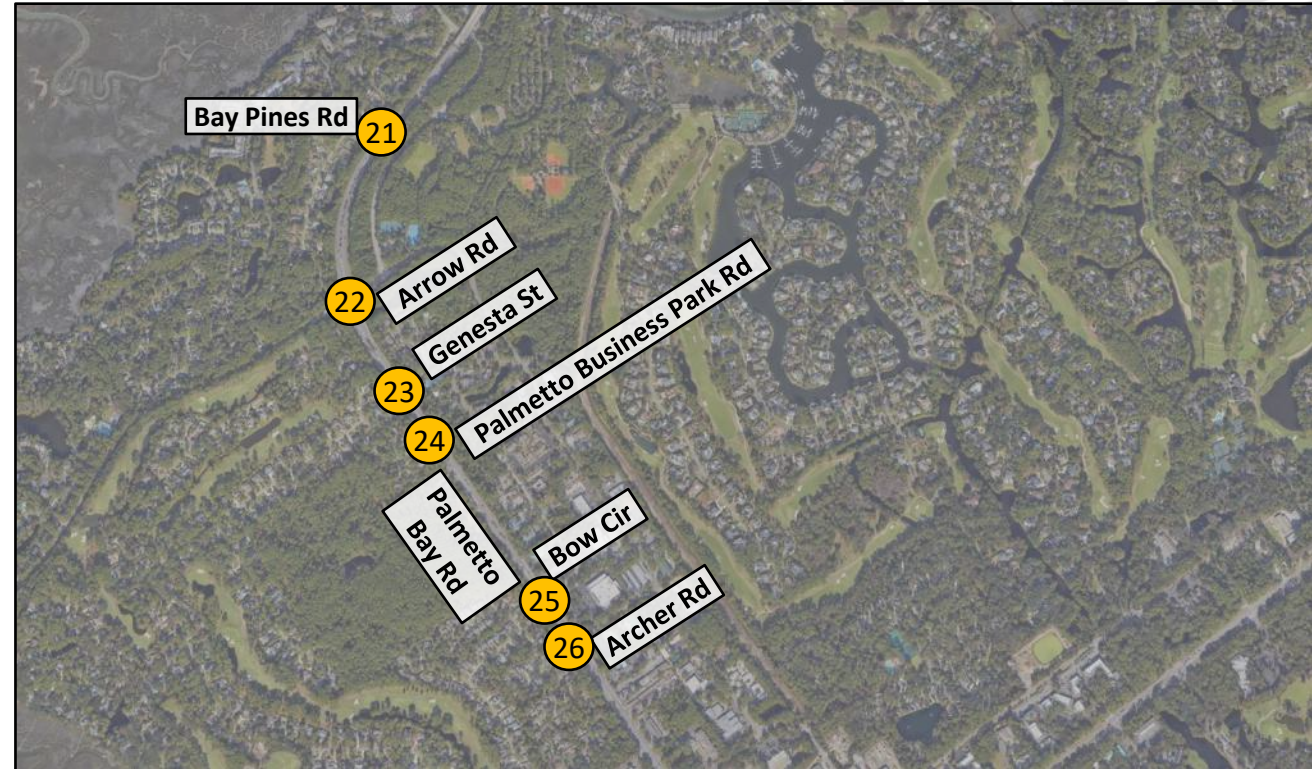
# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>18: Cross Island Pkwy SB Ramp/Gumtree Rd &amp; Honey Horn Rd (un-signalized)</b>		
Eastbound Approach	B (11.5) [<25] <0.00>	B (13.8) [<25] <0.19>
<b>19: Cross Island Pkwy SB Ramp &amp; Marshland Rd (un-signalized)</b>		
Westbound Left Turn	A (9.1) [<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>
<b>20: Cross Island Pkwy NB Ramp &amp; Marshland Rd (un-signalized)</b>		
Eastbound Left Turn	A (8.3) [<25] <0.12>	A (8.6) [<25] <0.06>
Northbound Left Turn	C (16.2) [<25] <0.21>	D (34.1) [160] <0.75>
Northbound Right Turn	A (9.4) [<25] <0.08>	B (10.6) [<25] <0.23>



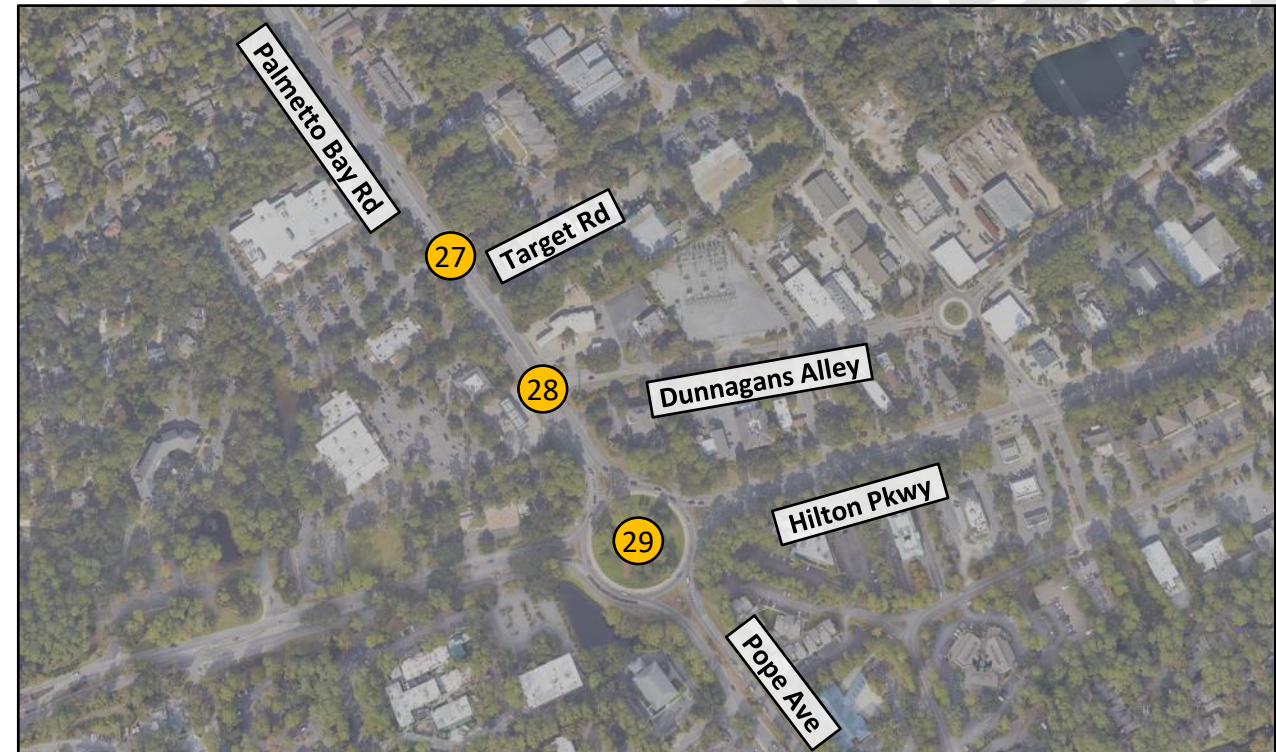
# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>21: Palmetto Bay Rd &amp; Bay Pines Rd (un-signalized)</b>		
Eastbound Left Turn	No volumes observed	F (\$454) [50] <0.74>
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>
<b>22: Palmetto Bay Rd &amp; Point Comfort Rd/Arrow Rd (signal)</b>		
Overall Intersection	<b>B (17.1)</b>	<b>C (26.9)</b>
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>
<b>23: Palmetto Bay Rd &amp; Genesta St (un-signalized)</b>		
Westbound Approach	E (46.3) [<25] <0.13>	F (159.5) [30] <0.37>
Southbound Left Turn	B (10.0) [<25] <0.02>	C (16.8) [<25] <0.02>
<b>24: Palmetto Bay Rd &amp; Palmetto Business Park Rd (un-signalized)</b>		
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>
<b>25: Palmetto Bay Rd &amp; Bow Cir (un-signalized)</b>		
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>
<b>26: Palmetto Bay Rd &amp; Archer Rd (un-signalized)</b>		
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] <0.08>	C (16.7) [<25] <0.04>



# 2045 No Build Results (Synchro)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>27: Palmetto Bay Rd &amp; Target Rd (signal)</b>		
<b>Overall Intersection</b>	<b>B (10.8)</b>	<b>B (18.7)</b>
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>
<b>28: Palmetto Bay Rd &amp; Dunnagans Alley (un-signalized)</b>		
Westbound Left Turn	D (33.5) [<25] <0.09>	<b>F (55.4) [&lt;25] &lt;0.33&gt;</b>
Westbound Right Turn	B (12.0) [<25] <0.02>	C (20.0) [<25] <0.24>
Southbound Left Turn	B (11.5) [<25] <0.21>	B (14.6) [<25] <0.03>
<b>29: Palmetto Bay Rd &amp; Hilton Pkwy (Sea Pines Circle, RAB)</b>		
<b>Overall Intersection</b>	<b>F (56.0)</b>	<b>F (60.3)</b>
Eastbound Approach	<b>F (83.3) [375] &lt;1.04&gt;</b>	<b>F (117.9) [550] 0.98&gt;</b>
Westbound Approach	D (26.1) [200] <0.79>	<b>F (92.4) [425] &lt;1.08&gt;</b>
Northbound Approach	C (16.4) [125] <0.65>	<b>F (78.2) [525] &lt;0.98&gt;</b>
Southbound Approach	<b>F (134.4) [900] &lt;1.23&gt;</b>	<b>F (94.3) [675] &lt;1.13&gt;</b>



# Preliminary 2045 Alternative 1 Results



# 2045 Alternative 1. Modified Recommended Traffic Volumes



AM Peak Hour Volumes PM Peak Hour Volumes

5	<p>0</p> <p>US 278</p> <p>3124 → Wildlife Refuge</p> <p>7 ↘</p> <p>2 ↗</p>	<p>0</p> <p>1837 ←</p>
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5	<p>13</p> <p>US 278</p> <p>2499 → Wildlife Refuge</p> <p>10 ↘</p> <p>12 ↗</p>	<p>9</p> <p>3394 ←</p>
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6	<p>1837 ←</p> <p>US 278</p> <p>3126 → Blue Heron Point Rd</p>	
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6	<p>3405 ←</p> <p>US 278</p> <p>2511 → Blue Heron Point Rd</p>	
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7	<p>8</p> <p>0</p> <p>5</p> <p>US 278</p> <p>3080 → Crosstree Dr</p> <p>39 ↘</p> <p>18 ↗</p> <p>0</p> <p>56</p>	<p>9</p> <p>1811 ←</p> <p>34</p>
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7	<p>11</p> <p>1</p> <p>7</p> <p>US 278</p> <p>2457 → Crosstree Dr</p> <p>43 ↘</p> <p>41 ↗</p> <p>1</p> <p>73</p>	<p>17</p> <p>3353 ←</p> <p>57</p>
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8	<p>Jenkins Rd</p> <p>1854 ←</p> <p>US 278</p> <p>3141 →</p>	
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8	<p>Jenkins Rd</p> <p>3427 ←</p> <p>US 278</p> <p>2537 →</p>	
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# Preliminary 2045 Alternative 1 Results (SimTraffic)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>1: Buckingham Plantation Dr &amp; Bluffton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (16.9)</b>	<b>B (12.9)</b>
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>
<b>2: Buckingham Plantation Dr/Moss Creek Dr &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (14.8)</b>	<b>C (19.1)</b>
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>
<b>3: Salt Marsh Dr/Moss Creek Village &amp; Hilton Pkwy (un-signalized)</b>		
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>
<b>4: Fording Island Rd Ext &amp; Hilton Pkwy (un-signalized)</b>		
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>



# Preliminary 2045 Alternative 1 Results (SimTraffic)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>5: Boat Landing Driveway/Wildlife Refuge Driveway &amp; Hilton Pkwy (un-signalized)</b>		
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>
<b>6: Blue Heron Point Rd &amp; Hilton Pkwy (un-signalized)</b>		
<i>Intersection combined with Crosstree Dr</i>		
<b>7: Crosstree Dr (Windmill Harbour) &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (15.4)</b>	<b>B (14.6)</b>
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>
<b>8: Jenkins Rd &amp; Hilton Pkwy (un-signalized)</b>		
<i>Intersection combined with Crosstree Dr</i>		
<b>A: The Crazy Crab &amp; Hilton Pkwy (un-signalized)</b>		
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>



# Preliminary 2045 Alternative 1 Results (SimTraffic)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (18.1)</b>	<b>C (23.3)</b>
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>	<b>F (84.1) [#464] &lt;0.29&gt;</b>
Southbound Approach	D (52.9) [151] <0.58>	E (65.6) [281] <0.70>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	C (17.0) [74] <0.36>	E (43.2) [32] <0.20>
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (26.0)</b>	<b>C (20.9)</b>
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>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (38.8)</b>	<b>D (38.4)</b>
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>

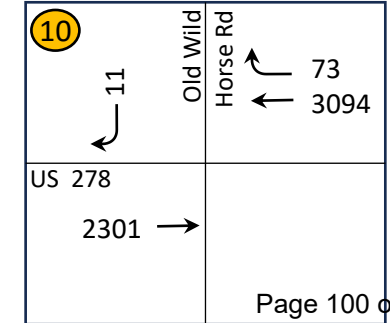
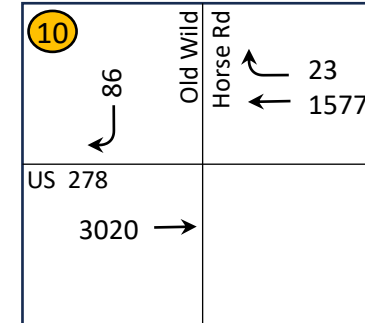
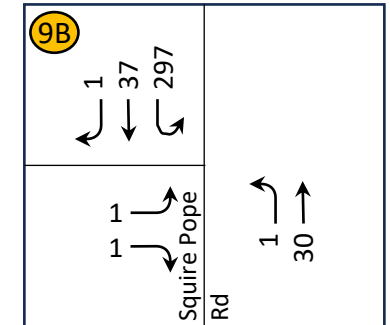
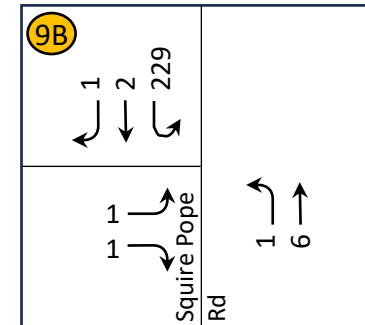
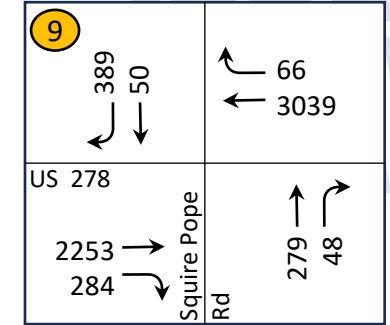
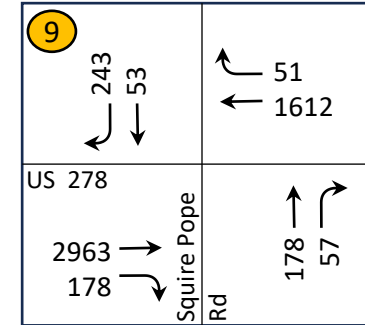
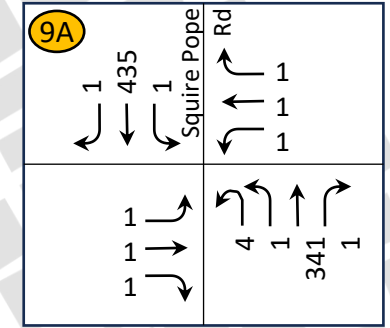
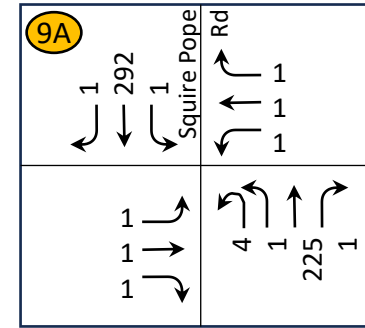


# Preliminary 2045 Alternative 2 Results



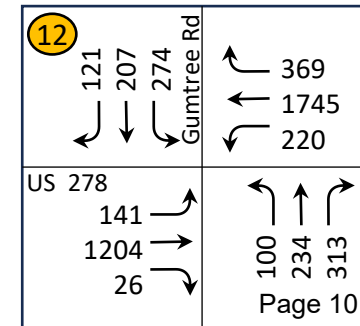
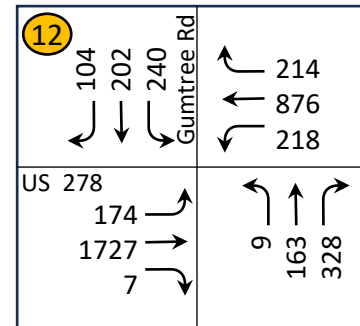
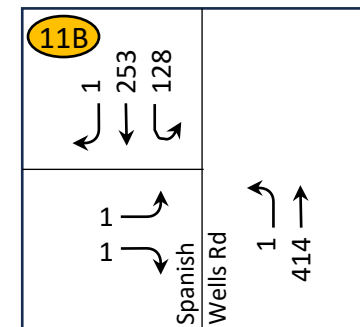
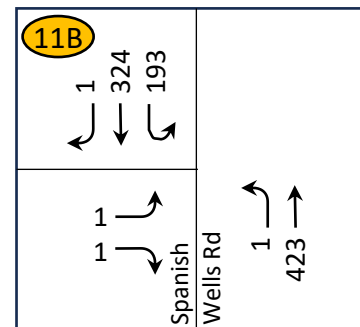
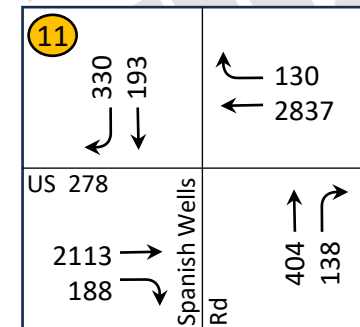
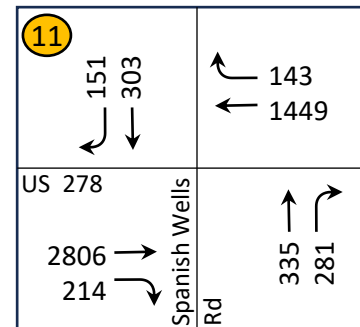
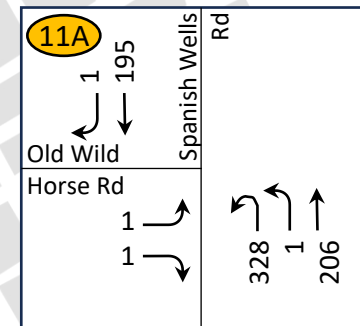
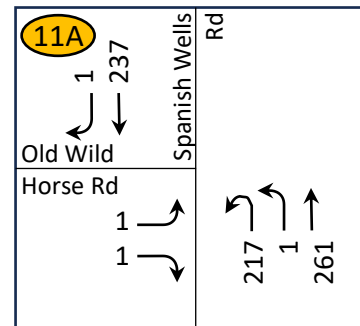
# 2045 Alternative 2. Bowties at Spanish Wells and Squire Pope Traffic Volumes

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



# Preliminary 2045 Alternative 2 Results (SimTraffic)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (16.3)</b>	<b>B (13.6)</b>
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>
<b>9A: Squire Pope North Bowtie (Roundabout)</b>		
<b>Overall Intersection</b>	<b>A (4.5)</b>	<b>A (5.5)</b>
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]
<b>9B: Chamberlin Dr South Bowtie (Roundabout)</b>		
<b>Overall Intersection</b>	<b>A (4.2)</b>	<b>A (4.9)</b>
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]
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	C (17.0) [80] <0.36>	<b>F (51.5) [33] &lt;0.20&gt;</b>



# Preliminary 2045 Alternative 2 Results (SimTraffic)

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (23.7)</b>	<b>C (21.2)</b>
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>
<b>11A: Wild Horse Rd North Bowtie (Roundabout)</b>		
<b>Overall Intersection</b>	<b>A (6.1)</b>	<b>A (6.6)</b>
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]
<b>11B: Spanish Wells Rd South Bowtie (Roundabout)</b>		
<b>Overall Intersection</b>	<b>A (7.2)</b>	<b>A (6.2)</b>
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]
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (35.1)</b>	<b>D (36.5)</b>
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>



# Preliminary 2045 Alternative 3 Results



# 2045 Alternative 3. Echelon at Spanish Wells Traffic Volumes

AM Peak Hour Volumes    PM Peak Hour Volumes



<b>11A</b>	
14 ↙ 79 ↓ 144 ↘	↖ 63 ↗ 1449 ↘ 80
US 278	Spanish Wells Rd

<b>11A</b>	
37 ↙ 88 ↓ 70 ↘	↖ 95 ↗ 2837 ↘ 35
US 278	Spanish Wells Rd

<b>11B</b>	
US 278 49 ↗ 2806 → 165 ↘	Spanish Wells Rd ↖ 137 ↗ 49 ↘ 137

<b>11B</b>	
US 278 58 ↗ 2113 → 130 ↘	Spanish Wells Rd ↖ 293 ↗ 53 ↘ 68

<b>12</b>	
104 ↙ 202 ↓ 240 ↘	↖ 214 ↗ 876 ↘ 218
US 278	Gumtree Rd
174 ↗ 1727 → 7 ↘	↖ 9 ↗ 163 ↘ 328

<b>12</b>	
121 ↙ 207 ↓ 274 ↘	↖ 369 ↗ 1745 ↘ 220
US 278	Gumtree Rd
141 ↗ 1204 → 26 ↘	↖ 100 ↗ 234 ↘ 313

# Preliminary 2045 Alternative 3 Results (SimTraffic) Echelon at Spanish Wells

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (11.2)</b>	<b>C (20.4)</b>
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>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	A (4.2) [37] <0.36>	A (4.8) [<25] <0.17>
<b>11A: Wild Horse Rd &amp; Hilton Pkwy (signal) - Echelon</b>		
<b>Overall Intersection</b>	<b>B (10.8)</b>	<b>B (12.8)</b>
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>
<b>11B: Spanish Wells Rd &amp; Hilton Pkwy (signal) - Echelon</b>		
<b>Overall Intersection</b>	<b>B (18.3)</b>	<b>B (12.4)</b>
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>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (44.6)</b>	<b>D (44.2)</b>
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>



# 2045 Alternative 3. Echelon at Squire Pope Traffic Volumes

AM Peak Hour Volumes    PM Peak Hour Volumes



<p><b>9A</b></p>	
US 278	Squire Pope Rd

<p><b>9A</b></p>	
US 278	Squire Pope Rd

<p><b>9B</b></p>	
US 278	Squire Pope Rd

<p><b>9B</b></p>	
US 278	Squire Pope Rd

<p><b>12</b></p>	
US 278	Gumtree Rd

<p><b>12</b></p>	
US 278	Gumtree Rd

# Preliminary 2045 Alternative 3 Results (SimTraffic) Echelon at Squire Pope

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9A: Squire Pope Rd &amp; Hilton Pkwy (signal) - Echelon</b>		
<b>Overall Intersection</b>	<b>A (3.6)</b>	<b>C (35.0)</b>
Westbound Approach	A (2.2) [57] <0.51>	A (8.4) [258] <0.95>
Southbound Approach	B (6.6) [156] <0.62>	<b>F (250.5) [858] &lt;1.02&gt;</b>
<b>9B: Chamberlin Dr &amp; Hilton Pkwy (signal) - Echelon</b>		
<b>Overall Intersection</b>	<b>C (25.9)</b>	<b>A (4.6)</b>
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>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	C (17.6) [85] <0.36>	B (12.7) [<25] <0.17>
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (35.5)</b>	<b>D (39.6)</b>
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>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (35.5)</b>	<b>D (42.4)</b>
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>



# 2045 Alternative 3. Center Turn Overpass at Spanish Wells Traffic Volumes

AM Peak Hour Volumes    PM Peak Hour Volumes



<b>11A</b>			
14	79	63	
US 278		1449	
2806		80	
Spanish Wells Rd		49	137

<b>11A</b>			
37	88	95	
US 278		2837	
2113		35	
Spanish Wells Rd		53	68

<b>11B</b>			
14			
US 278			
49			
Spanish Wells Rd			137

<b>11B</b>			
70			
US 278			
58			
Spanish Wells Rd			293

<b>12</b>			
104	202	214	
240		876	
US 278		218	
174			
Gumtree Rd		9	163
1727	7		328

<b>12</b>			
121	207	369	
274		1745	
US 278		220	
141			
Gumtree Rd		100	234
1204	26		313

# Preliminary 2045 Alternative 3 Results (SimTraffic) Center Turn Overpass at Spanish Wells

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (12.6)</b>	<b>C (26.8)</b>
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>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	B (13.6) [78] <0.36>	E (46.6) [36] <0.20>
<b>11A: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>B (12.9)</b>	<b>A (8.8)</b>
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>
<b>11B: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal) – Center Turn Overpass</b>		
<b>Overall Intersection</b>	<b>B (19.1)</b>	<b>B (17.9)</b>
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>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (36.7)</b>	<b>D (35.4)</b>
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>



# 2045 Alternative 3. Center Turn Overpass at Squire Pope Traffic Volumes

AM Peak Hour Volumes    PM Peak Hour Volumes



<p><b>9A</b></p> <p>14 ← 79 ↓ 144 ↘</p>		<p>63 ↗ 1449 ← 80 ↙</p>	
US 278	Squire Pope Rd		

<p><b>9A</b></p> <p>37 ← 88 ↓ 70 ↘</p>		<p>95 ↗ 2837 ← 35 ↙</p>	
US 278	Squire Pope Rd		

<p><b>9B</b></p>			
US 278	Squire Pope Rd	Squire Pope Rd	US 278
49 ↗ 2806 → 165 ↘	137 ↗ 49 → 137 ↘		

<p><b>9B</b></p>			
US 278	Squire Pope Rd	Squire Pope Rd	US 278
58 ↗ 2113 → 130 ↘	293 ↗ 53 → 68 ↘		

<p><b>12</b></p> <p>104 ← 202 ↓ 240 ↘</p>		<p>214 ↗ 876 ← 218 ↙</p>	
US 278	Gumtree Rd	Gumtree Rd	US 278
174 ↗ 1727 → 7 ↘	9 ↗ 163 → 328 ↘		

<p><b>12</b></p> <p>121 ← 207 ↓ 274 ↘</p>		<p>369 ↗ 1745 ← 220 ↙</p>	
US 278	Gumtree Rd	Gumtree Rd	US 278
141 ↗ 1204 → 26 ↘	100 ↗ 234 → 313 ↘		

# Preliminary 2045 Alternative 3 Results (SimTraffic)

## Center Turn Overpass at Squire Pope

Intersection & Movements	LOS (Delay, sec) [95 <sup>th</sup> Queue Length, ft] <v/c ratio>	
	AM Peak Hour	PM Peak Hour
<b>9A: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>A (3.2)</b>	<b>A (9.3)</b>
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>
<b>9B: Chamberlin Dr/Squire Pope Rd &amp; Hilton Pkwy (signal) – Center Turn Overpass</b>		
<b>Overall Intersection</b>	<b>B (17.2)</b>	<b>B (10.0)</b>
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>
<b>10: Old Wild Horse Rd &amp; Hilton Pkwy (un-signalized)</b>		
Southbound Approach	C (17.4) [77] <0.36>	E (42.4) [29] <0.20>
<b>11: Spanish Wells Rd/Wild Horse Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>C (32.4)</b>	<b>C (31.3)</b>
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>	<b>F (157.4) [766] &lt;1.28&gt;</b>
Southbound Approach	E (62.8) [220] <0.82>	E (57.9) [152] <0.85>
<b>12: Gumtree Rd &amp; Hilton Pkwy (signal)</b>		
<b>Overall Intersection</b>	<b>D (35.8)</b>	<b>D (36.4)</b>
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>

