I-95 at First Coast Expressway –

I-95 from International Golf Parkway to Atlantic Boulevard
Systems Interchange Modification Report (SIMR) Re-evaluation

Financial Project Identification Numbers:
432259-1-21-01: I-95 Corridor Planning between International Golf Parkway and Atlantic Boulevard

Duval and St. Johns Counties, Florida

Prepared for

Florida Department of Transportation
District Two

April 2022

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Florida Department of Transportation

Determination of Safety, Operational and Engineering Acceptability

Acceptance of this document indicates successful completion of the review and determination of safety, operational and engineering acceptability of the Interchange Access Request. Approval of the access request is contingent upon compliance with applicable Federal requirements, specifically the National Environmental Policy Act (NEPA) or Department's Project Development and Environment (PD&E) Procedures. Completion of the NEPA/PD&E process is considered approval of the project location design concept described in the environmental document.

Requestor	DocuSigned by: David Tyler, PE — FDOT District Two Interchange Review Coordinator	5/16/2022 | 12:06 PM EDT — Date
Interchange Review Coordinator	DocuSigned by: David Tyler, PE — FDOT District Two Interchange Review Coordinator	5/16/2022 | 12:06 PM EDT — Date
Systems Management Administrator	DocuSigned by: Jenna Bowman, PE — Systems Implementation Office – Central Office	5/17/2022 | 8:12 AM EDT — Date
Federal Highway Administration	DocuSigned by: James Stevenson — Federal Highway Administration, Florida Division	5/26/2022 | 8:18 AM EDT — Date

SYSTEMS IMPLEMENTATION OFFICE

QUALITY CONTROL CERTIFICATION FOR INTERCHANGE ACCESS REQUEST SUBMITTAL

Submittal Date: 4/14/2022

FM Number: 432259-1-21-01

Project Title: I-95 at First Coast Expressway – I-95 from International Golf Parkway to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation

District: Two

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Document Type: ☐ MLOU ☐ IJR ☐IMR ☐ IOAR ☒OTHER SIMR

Status of Document (Only complete documents will be submitted for review; however, depending on the complexity of the project, interim reviews may be submitted as agreed upon in the MLOU)

Completed document with appendices and model files.

Quality Control (QC) Statement

This document has been prepared following FDOT Procedure Topic No. 525-030-160 (New or Modified Interchanges) and complies with the FHWA two policy requirements. Appropriate District level quality control reviews have been conducted and all comments and issues have been resolved to their satisfaction. A record of all comments and responses provided during QC review is available in the project file or Electronic Review Comments (ERC) system.

Requestor: _____ Date: 4/19/2022
David Tyler, PE

IRC: _____ Date: 4/19/2022
David Tyler, PE

PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with BW Engineers and Planners, Inc., a Florida corporation authorized to operate under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes by the State of Florida Board of Professional Engineers and I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice hereby reported for:

PROJECT: I-95 at First Coast Expressway – I-95 from International Golf Parkway to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation

LOCATION: Duval and St. Johns County, FL

FPID NUMBER: 432259-1-21-01

This report includes a summary of the data collection effort, safety analysis, operational analysis, discussion of build alternative, and summary of conclusions. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering and planning as applied through professional judgment and experience.

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Signature: _____

Date: 02/25/2022

Executive Summary

The purpose of this Systems Interchange Modification Report (SIMR) re-evaluation is to provide the required technical documentation for obtaining Federal Highway Administration (FHWA) approval of a re-evaluation of the approved July 2021 I-95 from International Golf Parkway (IGP) to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation. The only interchange being re-evaluated in this study is the First Coast Expressway (FCE) interchange with I-95 and, therefore, will be the primary focus of this SIMR Re-evaluation.

The primary reason for this re-evaluation is due to a design modification to the approved I-95 at FCE interchange concept. Per the 2020 Interchange Access Request User's Guide (IARUG), the re-evaluation shall show that the revised concept satisfies the safety, operational and engineering (SO&E) acceptability requirements and FHWA's policy points. This means the re-evaluation shall demonstrate that the proposed concept satisfies the measures of effectiveness (MOEs) used in the evaluation of the approved 2021 SIMR Re-evaluation concept.

This re-evaluation proposes one design change. The design change is for the northbound access ramps at the I-95 and FCE interchange. Two alternatives have been evaluated in this SIMR for future conditions – 2021 SIMR Concept and FCE SIMR Concept. Each of these alternatives is described below.

Alternative 1 – 2021 SIMR Concept: This alternative is the same as the approved July 2021 SIMR Re-evaluation concept. At the FCE interchange, the northbound access ramps to/from I-95 and FCE are located on the left side of the I-95 mainline.

Alternative 2 – FCE SIMR Concept: This SIMR Re-evaluation is the same as the approved 2021 SIMR Re-evaluation concept except for the design change at the FCE interchange. At the FCE interchange, the proposed design change relocates the FCE northbound access ramps from the left side of the I-95 mainline to the right side of the I-95 mainline. There are no other modifications to the previously approved July 2021 SIMR Concept.

The Methodology Letter of Understanding (MLOU) was prepared in February 2022. The primary basis for traffic projections in this SIMR is Version 2 of the adopted Northeast Regional Planning Model (NERPM) Activity-Based Model (ABM) which has a base year of 2010 and a cost feasible year of 2040. The analysis year for this study is Design Year 2045. The operational analysis for this study is performed using microsimulation (Vissim). The traffic development, operational analysis procedures and MOEs are consistent with the previously approved July 2021 SIMR Re-evaluation.

The purpose of this re-evaluation is to ensure the proposed modifications to the FCE interchange do not adversely impact the operations or safety of I-95 and surrounding interchanges. In addition, typical driver expectations place ramps on the right side of the roadway.

The Design Year 2045 operational analysis results also show that the FCE SIMR Concept performs similar to the 2021 SIMR Concept within the I-95 study area. During the 2045 AM peak hour, the FCE SIMR Concept alternative shows a similar average speed and total travel time. The FCE SIMR Concept does show a slight reduction in delay of 2%. During the PM peak, similar operations to the AM peak are experienced.

In terms of safety, the FCE SIMR Concept is expected to reduce crashes due to the northbound access ramps modifications at the FCE interchange, hence providing safer travel conditions. The FCE SIMR Concept provides an overall 16% decrease in annual predicted crashes.

In conclusion, the FCE SIMR Concept showed similar operational conditions and improved safety conditions over the 2021 SIMR Concept in the Design Year 2045. Based on the safety and traffic operational analyses performed, the FCE SIMR Concept is considered the preferred alternative for this SIMR.

This SIMR has been developed in accordance with Florida Department of Transportation (FDOT) Policy No. 000-525-015: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160: New or Modified Interchanges, 2020 Interchange Access Request User's Guide (IARUG) and the 2019 FDOT Traffic Forecasting Handbook (Procedure No. 525-030-120).

E.1 Compliance with FHWA General Requirements

The following requirements serve as the primary decision criteria used in the approval of interchange modification projects. Responses to the FHWA policy points are provided to show that the proposed project is viable based on the analysis performed to date.

E.1.1 FHWA Policy Point 1

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d), and 23 CFR 655.603(d)).

An in-depth operational and safety analysis was conducted to study the operational and safety benefits offered by the proposed modifications at the FCE interchange. Consistent with the approved MLOU, the approved

concept from the July 2021 SIMR Re-evaluation was compared with the new FCE SIMR Concept. The FCE SIMR Concept recommends the northbound access ramps at the FCE interchange be relocated from the left side of the I-95 mainline to the right side. The operational analysis was performed using Vissim microsimulation for the Design Year 2045. Several performance measures were used to compare the traffic operations and safety. Key measures include:

- Peak hour link-level freeway mainline segments
  - Travel speed
  - Simulated (throughput) volume
  - Density
- Peak period link-level density heat maps for the freeway mainline segments
- Network-Wide Performance
  - Average speed
  - Total delay
  - Latent delay
  - Latent demand
  - Total travel time
  - Total stops
  - Vehicles Arrived
- Safety
  - Predicted reduction in crashes

The Design Year 2045 operational analysis results show that the FCE SIMR Concept will operate at similar conditions compared to the 2021 SIMR Concept. For both alternatives within the area of influence, I-95 will operate at nearly free-flow speed. In addition to operational analysis, safety analysis has been performed to compare the two alternatives. A predictive safety analysis was performed using Highway Safety Manual (HSM) methodologies. Based on this analysis, the FCE SIMR Concept is expected to reduce crashes by 22% annually along the I-95 mainline at the northbound off ramp to FCE and 20% annually at the northbound on ramp from FCE. Overall, crashes within the study area are expected to reduce by 16% annually compared to the 2021 SIMR Concept.

In summary, the proposed modifications will provide similar operations along I-95 and safety benefits to the study corridor (I-95) at the FCE interchange.

E.1.2 FHWA Policy Point 2

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards for federal-aid projects on the interstate system (23 CFR 625.2(a), 625.4(a) (2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

I-95 is a public facility and all interchanges within the study area provide full access and will continue to do so with the FCE SIMR Concept. The FCE SIMR Concept will maintain and provide interchange access catering to all traffic movements to/from existing interchanges within the study limits.

The proposed improvements under the FCE SIMR Concept were designed to meet current standards for federal-aid projects on the interstate system and conform to the American Association of State Highway and Transportation Officials (AASHTO) and the FDOT Design Manual (FDM). Various border width variations are expected between MP 0.977-6.138. These variations are justified because the project will still be able to accommodate proposed signing, lighting, drainage features, guardrail, fencing, clear zone and construction and maintenance despite having substandard border width.

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1.0 INTRODUCTION

1.1 Background

The Applicant, Florida Department of Transportation (FDOT) District Two, requests the Federal Highway Administration (FHWA) approval of a re-evaluation of the approved July 2021 I-95 from International Golf Parkway (IGP) to Atlantic Boulevard Systems Interchange Modification Report (SIMR) Re-evaluation. The only interchange being re-evaluated in this study is the First Coast Expressway (FCE) interchange with I-95 and, therefore, is the primary focus of this SIMR Re-evaluation. The design modifications proposed at the I-95 and FCE interchange require a re-evaluation of the previously approved July 2021 SIMR Re-evaluation. The changes to the FCE interchange have been analyzed and compared with the previously approved 2021 SIMR Re-evaluation. This SIMR Re-evaluation has been developed in accordance with FDOT Policy No. 000-525-015: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure No. 525-030-160: New or Modified Interchanges, 2020 Interchange Access Request User's Guide (IARUG) and the 2019 FDOT Traffic Forecasting Handbook (Procedure No. 525-030-120).

This study area has been evaluated in four previously approved IARs, which include: 1) I-95 at FCE Interchange Justification Report (IJR) approved in 2012, 2) I-95 Express Phase 1: IGP to I-295 SIMR approved in October 2016, 3) I-95 Express Lanes Analysis: I-295 to Atlantic Boulevard SIMR approved in September 2018 and 4) I-95 from IGP to Atlantic Boulevard SIMR Re-evaluation approved in July 2021. The most recently approved SIMR Re-evaluation approved in July 2021 is provided in **Appendix A**.

The I-95 capacity improvements and new interchange with the FCE interchange are included in the North Florida Transportation Planning Organization's (TPO) Long Range Transportation Plan (LRTP). An Efficient Transportation Decision Making (ETDM) process has been completed for the project.

1.2 Purpose and Need

The purpose and need for this SIMR Re-evaluation are consistent with the purpose and need from the approved 2021 SIMR.

The purpose of this SIMR is to perform the safety, operations, and engineering (SO&E) analysis for adding capacity along I-95 from IGP to the Atlantic Boulevard interchange, which is required for obtaining FHWA approval. In addition, it is the purpose of this re-evaluation to ensure the proposed modifications to the FCE interchange do not adversely impact the operations of I-95 and surrounding interchanges.

The need for this SIMR Re-evaluation remains consistent with the approved July 2021 SIMR. In 2019, I-95 carried an Annual Average Daily Traffic (AADT) volume of 85,000 vehicles south of IGP; 100,400 vehicles south of SR 9B; 133,000 vehicles north of I-295; 155,000 vehicles north of SR 202 (Butler Boulevard); and 135,000 vehicles north of Emerson Street. Due to high peak period volumes, pockets of congestion exist along the facility.

Substantial population increases in St. Johns and Duval Counties have occurred since 1970, as shown in **Table 1-1**. This trend is expected to continue and add a significant number of trips to the existing roadway network. The proposed improvements on I-95 will provide additional capacity on the constrained roadway network which is anticipated to alleviate congestion and improve traffic safety.

Table 1-1 Regional Population Growth

County	1970	1980	1990	2000	2010 (Census)
St. Johns	31,065	51,303	83,829	123,135	190,039
Duval	528,865	571,003	672,971	778,879	864,263

Source: St. John's River Crossing Environmental Impact Statement

Interstate-95, a north/south facility, is an integral part of the Strategic Intermodal System (SIS) providing for high-speed and high-volume traffic movements within the state of Florida. Interstate-95 is mainly a six-lane facility within the area of influence.

In addition, typical driver expectations place ramps on the right side of the roadway. To meet this expectation, operational and safety analysis of a right side ramp has been initiated.

1.3 Project Location

The proposed I-95 mainline modifications are located in Duval County and St. Johns County, Florida from south of the IGP interchange on the southern end of the project and the Atlantic Boulevard interchange on the northern end of the project (which covers 26 miles). However, for this SIMR Re-evaluation, the proposed modifications are at the I-95 at FCE interchange located in St. Johns County, Florida. As a result, this SIMR Re-evaluation will focus on I-95 from south of the IGP interchange to north of the CR 210 interchange; a distance of approximately 8.3 miles. The location of the project is shown in **Figure 1-1**.

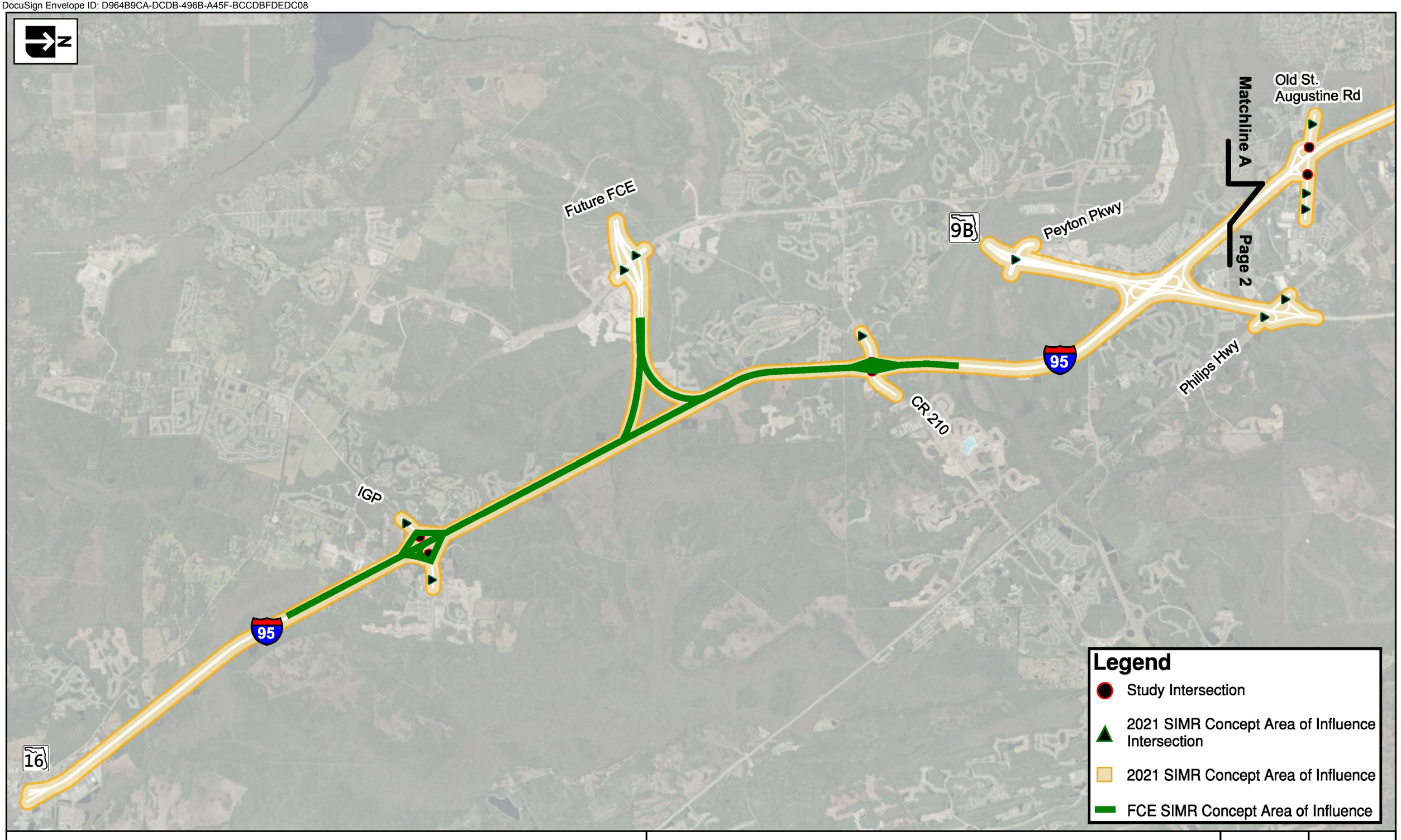
1.4 Reason for Re-evaluation

The primary reason for this re-evaluation is due to a design modification to the I-95 at FCE interchange concept. This re-evaluation proposes one design change. The design change recommends the access ramps be moved from the left side of the I-95 mainline northbound to the right side at the I-95 and FCE interchange. Per the 2020 IARUG, the re-evaluation shall show that the revised concept satisfies the safety, operational and engineering (SO&E) acceptability requirements and FHWA's policy points. This means the re-evaluation shall demonstrate that the proposed concept satisfies the MOEs used in the evaluation of the approved 2021 SIMR Re-evaluation concept.

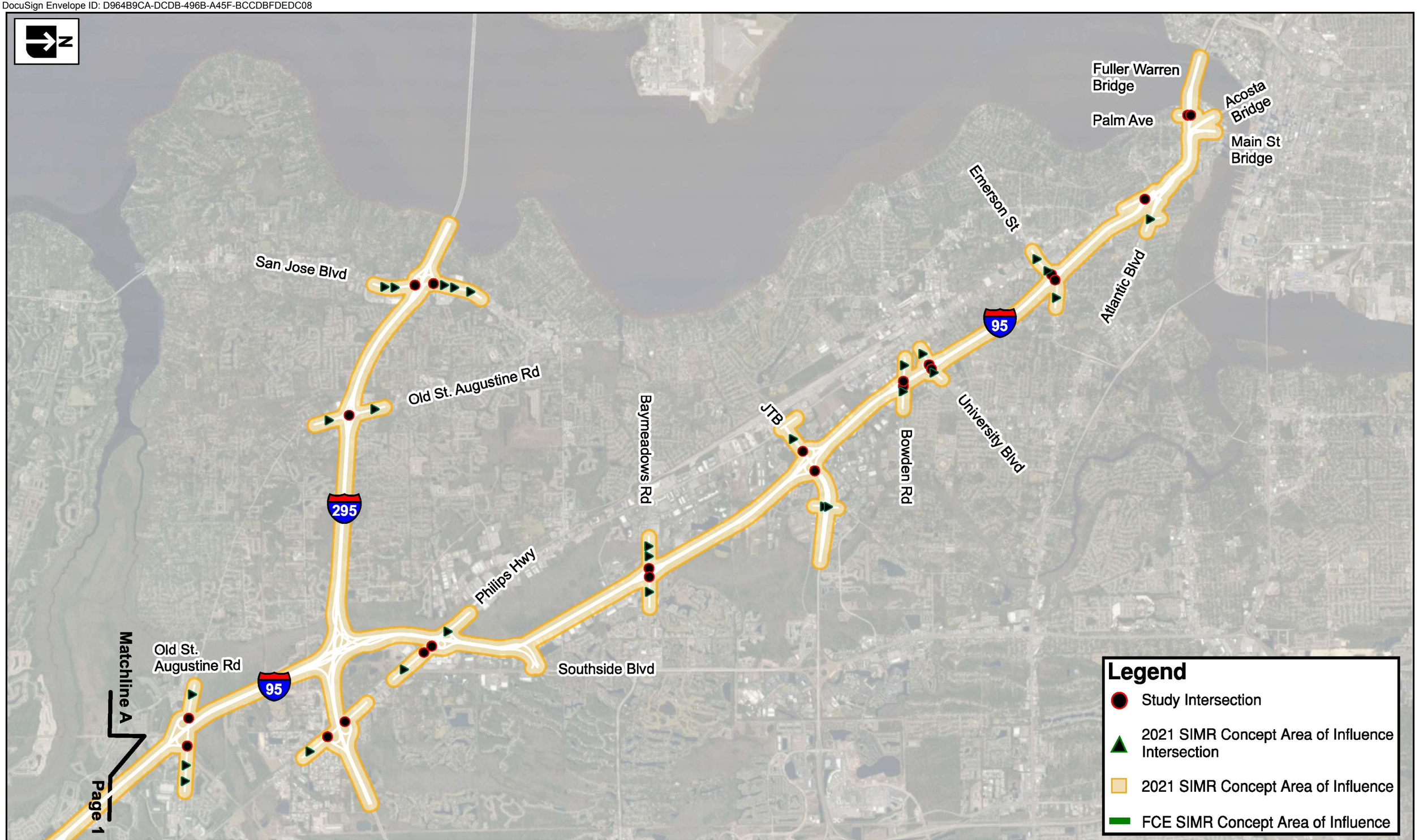
To be consistent with the 2020 IARUG Chapter 4, the following alternatives have been evaluated:

Alternative 1 – 2021 SIMR Concept: The first alternative is the same as the approved 2021 SIMR Re-evaluation concept. At the FCE interchange, the northbound access ramps to/from I-95 and FCE are located on the left side of the I-95 mainline.

Alternative 2 – FCE SIMR Concept: This SIMR Re-evaluation is the same as the approved SIMR Re-evaluation concept except for the design change at the FCE interchange. At the FCE interchange, the proposed design change relocates the FCE northbound access ramps from the left side of the I-95 mainline to the right side of the I-95 mainline. There are no other modifications to the previously approved July 2021 SIMR Concept.



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	Project Location and Area of Influence	Figure 1-1	Page 1 of 2



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	Project Location and Area of Influence	Figure 1-1	Page 2 of 2

2.0 METHODOLOGY

2.1 Overview

A Methodology Letter of Understanding (MLOU) was prepared to document the methodology for the analysis and evaluation of this SIMR Re-evaluation. The MLOU was submitted for approval by the FDOT District Two Interchange Review Coordinator (IRC), FDOT Central Office and FHWA in February 2022. A copy of the MLOU is provided in **Appendix B**. The following sections summarize the methodology as outlined in the MLOU.

2.2 Analysis Years

The following study years are established for this SIMR:

Traffic Forecasting

- Base Year: 2010
- Horizon Year: 2040

The adopted travel demand model has not changed since the 2021 SIMR Re-evaluation approval.

Traffic Operational Analysis

- Design Year: 2045

Opening Year analysis has not been performed in this SIMR Re-evaluation because I-95 within the area of influence of this SIMR Re-evaluation, from IGP to CR 210, showed acceptable operations with no failures on the mainline or ramps in Design Year 2045. This section of I-95 also showed acceptable operations (LOS C or better) in Opening Year and Design Year of the approved 2021 SIMR. In addition, with construction dates along the overall 2021 SIMR corridor being so closely spaced, the areas of concern along I-95 after FCE opening up will be impacted by construction work zones almost immediately and no practical use in having an opening year analysis due to this. The maintenance of traffic (MOT) plans of these subsequent projects will need to account for the additional traffic impacts of the FCE project during interim years.

2.3 Area of Influence

The area of influence for this re-evaluation focuses on the proposed design changes at the I-95 and FCE interchange. It is expected operations will only be impacted along I-95 between IGP and CR 210 and therefore operational and safety analyses, in this re-evaluation, have been reported for the I-95 mainline from south of the IGP interchange to north of the CR 210 interchange. The operations at the ramp terminal intersections are not expected to be impacted by the proposed modifications at the FCE interchange and, therefore, are not included in the area of influence for this re-evaluation. The area of influence for this SIMR Re-evaluation is depicted in **Figure 1-1**. The interchanges to be analyzed in this SIMR Re-evaluation are:

Along the I-95 mainline (south to north):

- International Golf Parkway (IGP)
- First Coast Expressway (FCE)
- CR 210

The previously approved 2021 SIMR Re-evaluation area of influence is depicted in the approved 2021 SIMR Re-evaluation provided in **Appendix A**.

2.4 Data Collection

No additional data collection took place to prepare this re-evaluation. The previously approved July 2021 SIMR included several types of traffic data including:

- Field Traffic Counts (Collected in March and April 2019)
- StreetLight Data Origin-Destination Data (AM/PM peaks for February-April 2019)
- Signal Timing and Phasing (City of Jacksonville, and St. Johns County)
- FDOT Transportation System Data
- Existing Traffic Data from Florida Traffic Online (FTO)
- Existing Traffic Data from other recently completed studies
- St. Johns County and Duval County Land Use Data
- Existing Plans, Programs and Project Lists from FDOT
- Approved Studies within the area (PD&E, Master Plans, DRIs)
- Crash Data

2.5 Base Traffic Data and Traffic Factors

Base traffic data and traffic factors utilized in this SIMR Re-evaluation are consistent with the approved July 2021 SIMR Re-evaluation.

The factors used for design traffic analysis include the D, K, and T_f factors. The T_f factor is the percentage of truck traffic during the peak hour and can be estimated as half of the T_{24} factor. The K Factor was determined using count data from the 2018 Florida Traffic Information (FTI) DVD as well as reasonableness checks from 2019 traffic counts. Lastly, the K factor, from the FTI DVD and traffic counts, was compared with the guidance provided in the FDOT Project Traffic Forecasting Handbook. A similar process was used to determine the D and T_f factors.

The traffic factors recommended for use in this SIMR are presented in **Table 2-1**.

Table 2-1 Summary of Traffic Factors

Facility	K	D	T_{24}	T_f	MOCF
Freeways	8.5%	55%	11%	6%	0.97
Arterials	8.5%	56%	2%	1%	0.97

Source: FDOT FTI DVD

2.6 Use of Department's Adopted Validated Models

The travel demand forecasting performed in the approved July 2021 SIMR Re-evaluation remains unchanged in this SIMR Re-evaluation. The Design Year 2045 projected volumes for the 2021 SIMR Concept and FCE

SIMR Concept were considered to be the same. A summary of the travel demand forecasting process including the travel demand model used and volume development is discussed below.

2.6.1 Travel Demand Forecasting

The travel demand forecasts for this study were developed for future years 2030 and 2045. The North Florida Transportation Planning Organization's (NFTPO's) NERPM ABM Version 2 was used to develop future volumes for this study. Version 2 of this model was the approved, validated version provided by the Department, which has a base year of 2010 and a 2040 planning horizon.

2.6.2 FSUTMS Model Runs

NERPM ABM Version 2 was used for the development of future year traffic projections for this SIMR. This model was the approved, validated model provided by the Department. This model has a base year of 2010 and a cost feasible year of 2040. Sub-area validation was performed for the base year 2010 model using FTO count data to validate the reasonableness of the NERPM traffic demand forecast in the project area of influence. A detailed review of the network coding and TAZ connections that load traffic onto the network, and link attributes, such as speed and capacity, was performed.

2.6.3 Model Network Updates

To accommodate the traffic volumes that will result from the projected growth in the Northeast Florida region, the state, county and various local governments having jurisdiction within the project area have planned or programmed several roadway improvements.

The NERPM network was reviewed for the inclusion of planned and programmed roadway improvements obtained from the NFTPO's 2040 LRTP. The 2040 Cost Feasible model network was reviewed to ensure the correct number of lanes, correct facility types and correct speed/capacity parameters were coded into the model. No additional network updates were made to the model.

2.6.4 Future Traffic Volumes

The development of future year traffic volumes was based on Existing Year 2019 AADTs (actual counts) and the 2010 and 2040 NERPM ABM AADT forecast volumes. Using the 2010 and 2040 NERPM forecasts, a NERPM-based 2019 AADT volume set was developed by interpolation for comparison with the 2019 traffic count data. The difference (delta) between the 2019 traffic counts and the 2019 NERPM forecast was calculated for all the mainline and ramp links within the study area. An adjusted 2040 AADT forecast was developed by applying the calculated difference in 2019 AADTs to the 2040 NERPM ABM forecast AADTs. In addition to adjusting the 2040 AADTs, a minimum growth rate was developed for the study area by comparing the growth between 2019 AADTs and 2040 AADTs on all roadway links in the study area. This linear growth rate was used to develop future year volumes for locations where the 2040 NERPM forecast was lower than the 2010 NERPM forecast as well as for locations that were not coded into the NERPM network such as arterial side streets.

The Opening Year 2030 forecasts were developed by interpolation between the final 2019 and 2040 AADT volumes; Design Year 2045 AADTs were calculated by extrapolation.

Total demand volume for the 2021 SIMR Concept and FCE SIMR Concept was considered to be the same.

2.7 Development of Design Traffic

The development of design traffic for this SIMR Re-evaluation followed procedures consistent with the process defined in the approved July 2021 SIMR Re-evaluation. As a result, the FCE SIMR and 2021 SIMR Directional Design Hour Volumes (DDHVs) are the same.

The future year DDHVs were developed by applying the selected K- and D-factors to the project AADTs. These peak hour volumes were balanced along the freeway mainlines as well as between arterial intersections. The final future year volumes were checked for reasonableness. A reasonable effort was made to maintain consistency in future traffic projections with other ongoing studies within and near the project area of influence. The DDHVs used for the 2021 SIMR Concept were unchanged for the FCE SIMR Concept.

2.8 Analysis Procedures

The operational analysis for this study was performed using Vissim 11. Vissim microsimulation was used to assess the study area on a network-wide basis. In addition, it was used to assess the traffic operation conditions of individual facilities, such as the freeway mainline and ramps. The proposed modifications at the FCE interchange are not expected to impact the operation of the study intersections in the July 2021 SIMR Re-evaluation. As a result of this assumption, no additional intersection analysis has been performed in this SIMR Re-evaluation. To review the intersection analysis within the study area, please refer to the approved July 2021 SIMR Re-evaluation in **Appendix A.**

2.8.1 Vissim Analysis Procedure

The microsimulation analysis using Vissim software was conducted to evaluate the system-wide operational performance. Microsimulation analysis enhances the capability of capturing the network-wide vehicular interaction between the individual roadway elements (mainline segments and ramp junctions). The microsimulation model was calibrated to the existing year traffic counts and speeds observed in the field. The simulation model was modified accordingly to reflect future conditions. A four-hour AM and PM peak period analysis was conducted using 15-minute flow rates with microsimulation for Existing Year 2019. The microsimulation was performed consistently with guidelines provided in the FDOT Traffic Analysis Handbook. Ramp, mainline, and entry volumes were calibrated to within 10% of counts. Travel time was calibrated to within 15% for all the study locations using field-collected travel time run data, and speed profiles of the field data and simulation data illustrated similar trends.

Vissim is a stochastic model that produces different results by changing the random seed numbers. To ensure model variation does not skew the results, a certain number of model runs is required. A sample size of 10 runs was used for the initial test and the results from these runs were averaged. The number of required runs was calculated from the t-test using a 95% confidence level with 10% allowable error.

The following sections document the modeling methodology used for performing Vissim microsimulation operational analysis for this study.

2.8.1.1 Modeling Analysis Years and Alternatives

The Vissim models were developed for the AM and PM peak periods for the Design Year 2045 and the following alternatives:

- 2021 SIMR Concept
- FCE SIMR Concept

The Design Year 2045 models were developed to guide the ultimate design for the area of influence.

2.8.1.2 Model Traffic Volumes

All Vissim model scenarios include AM and PM peak period volumes using 15-minute volume intervals. The 15-minute volumes were developed using volume profiles from the Existing Year 2019.

2.8.1.3 Model Spatial Limits

The Vissim model spatial limits are the same as the approved July 2021 SIMR Re-evaluation area of influence. The area of influence typically includes adjacent interchanges that could be affected by the construction of the proposed project or future improvements to adjacent interchanges that could influence how the proposed project is constructed.

Vissim Model Spatial Limits

For this study, the influence area for the Vissim analysis includes the following study elements:

- I-95 from south of IGP interchange to north of CR 210 interchange

2.8.1.4 Model Temporal Limits

The temporal limits of the modeling period relate to the location of the project, the length of peak periods, and the duration of the expected congestion. Field observations and travel time run data were used to determine the temporal limits and develop speed profiles for this project.

The model temporal limit assumed for this study was a four-hour AM and four-hour PM peak period for existing calibration and a four-hour AM and four-hour PM peak period for future year models. The four-hour AM and PM peak period models were achieved by developing "shoulder hours" to the AM and PM peaks, which were based on the existing traffic counts in the study area. The shoulder hours allowed the modeling to capture the buildup to the congestion, the potential failure, and the recovery of the transportation network in the area of influence for this study. Additionally, a forty-five-minute seed period was used to load traffic prior to the start of the four-hour period. Fifteen-minute volumes were developed for each hour of the peak period.

2.8.1.5 Model Calibration

To better represent the traffic operations in the study area, calibration of the existing models was performed by adjusting the driving behavior parameter sets such that travel time results along the facility reasonably replicate field travel time data. The calibration efforts used criteria from FDOT's Traffic Analysis Handbook (2014), and all reasonable efforts were made to calibrate the Vissim model to the proposed criteria.

2.8.1.6 Vissim Measures of Effectiveness

The following MOEs from the Vissim analysis results were used to evaluate the operational performance of the study elements:

- Operating speed, volume, and density were provided for the freeway mainline segments of the general use lanes. Lane schematics provide speed, volume throughput and density along the freeway mainline segments. An approximate level of service (LOS) is also provided for each segment, based on the density thresholds provided in the Highway Capacity Manual (HCM).
- Density heat diagrams were provided to illustrate operations along the freeway mainline segments over the entire peak periods.
- Network-wide MOEs (average speed, total delay, latent delay, latent demand, total travel time, total stops, and vehicles arrived) were used to evaluate and compare network-wide operational performance between the alternatives.

The key MOEs listed above have been used to assess the traffic operation conditions by comparing MOEs between the 2021 SIMR Concept and FCE SIMR Concept alternatives.

3.0 EXISTING CONDITIONS

This SIMR Re-evaluation did not perform a new existing year conditions analysis. For existing conditions information such as the existing transportation network, existing traffic data, existing operational analysis and existing crash and safety information, refer to the approved 2021 SIMR Re-evaluation in **Appendix A**.

3.1 Consistency with Master Plans, LRTP, LGCP and DRIs

This SIMR considered all programmed and planned roadway improvements in the area. These capacity improvements are consistent with those specified in the regional transportation plans including the following:

- FDOT Five Year Work Program
- FDOT SIS plans
- Committed improvements from local and private sources
- North Florida TPO LRTP

The need for improvements identified in this SIMR has been identified in the TPO's 2045 Cost Feasible LRTP.

4.0 NEED

The primary reason for this re-evaluation is due to a design modification to the approved I-95 at FCE interchange concept. The approved 2021 SIMR Concept has the northbound access ramps to/from I-95 and FCE being located on the left side of the I-95 mainline. The design change, in this re-evaluation, recommends the access ramps be moved from the left side of the I-95 mainline to the right side. Per the 2020 IARUG, the re-evaluation shall show that the revised concept satisfies the SO&E acceptability requirements and FHWA's policy points. In addition to the new design change, the need for this SIMR Re-evaluation remains consistent with the approved July 2021 SIMR Re-evaluation.

In addition, typical driver expectations place ramps on the right side of the roadway. To meet this expectation, operational and safety analysis of a right side ramp has been initiated.

5.0 FUTURE CONDITIONS

The future transportation network utilized in the approved July 2021 SIMR Re-evaluation remains unchanged in this FCE SIMR Re-evaluation. This section documents the future conditions within the study area of influence, including the transportation improvements programmed for the area roadways. The operational analysis includes the future year daily and peak hour traffic forecasts for the area of influence.

5.1 Future Transportation Network

The North Florida TPO plays a critical role in addressing regional transportation issues, convening stakeholders, and identifying the long-term transportation needs within Duval, portions of Nassau, St. Johns and Clay Counties. It also serves as the coordinating forum for all the local governments in the counties for matters relating to the maintenance and development of the county's transportation network. Together they establish long-term planning goals and objectives, set priorities, and identify the agency or agencies with responsibility for funding and implementing needed transportation improvements.

The North Florida TPO is also responsible for maintaining the FSUTMS based NERPM travel demand model. Updates to the roadway network in NERPM are based on projects identified in the TPO's current adopted LRTP Cost Feasible Plan.

Three projects are planned within this SIMR's area of influence that adds capacity along I-95 and improves interchange operations (as shown in **Table 5-1**).

The capacity improvements incorporated in the 2021 SIMR Concept have been incorporated in the FCE SIMR Concept along I-95 as a result of approved studies that have been incorporated into the SIS First Five Year Plan. The capacity improvements include:

On I-95 between IGP and CR 210, a new system-to-system interchange with FCE will be provided. FCE will connect I-95 in St. John's County to I-10/US 90 in Duval County and is expected to reduce congestion on I-95 within the study area by providing an alternative route.

Several minor interchange improvements and arterial improvements were also included in the networks. At the IGP interchange, the westbound left-turn lane was offset to provide additional storage and improve traffic flow through the interchange. In addition, intersection improvements including additional turn lanes and lengthening of storage lanes were provided at the World Commerce Parkway intersection to alleviate congestion from additional traffic growth expected due to the construction of a large fuel/retail property at the southeastern quadrant of the intersection. At the CR 210 interchange, minor improvements to the northbound ramp terminal include providing an additional northbound right-turn lane.

Table 5-1 Future Roadway Network Improvements

Roadway	Location	Project Description	Source	Year[1]
I-95	First Coast Expressway	New Interchange	2045 LRTP	2030
I-95	International Golf Parkway	Interchange Improvements	Buc-ee's Capacity Improvements	2030
I-95	CR 210	Interchange Improvements	2045 LRTP	2030

[1] Projects are assumed to open to traffic by the year listed.

6.0 ALTERNATIVES

This section offers a discussion on the alternatives considered as part of this SIMR, which are as follows:

- 2021 SIMR Concept
- FCE SIMR Concept

The alternatives were analyzed to assess their effectiveness in meeting the future travel demand of the area, as well as the physical impacts and safety associated with each alternative.

6.1 Future Year Design Traffic

The Design Year 2045 traffic was developed using NERPM ABM Version 2. The proposed modification at the FCE interchange should not result in a change in traffic patterns. Therefore, the 2021 SIMR Concept and FCE SIMR Concept maintain the same volume distribution. Future Year AM and PM peak hour volumes for 2045 are presented in **Section 7**.

6.2 2021 SIMR Concept

The first alternative is the same as the approved 2021 SIMR Re-evaluation concept. At the FCE interchange, the northbound access ramps to/from I-95 and FCE are located on the left side of the I-95 mainline.

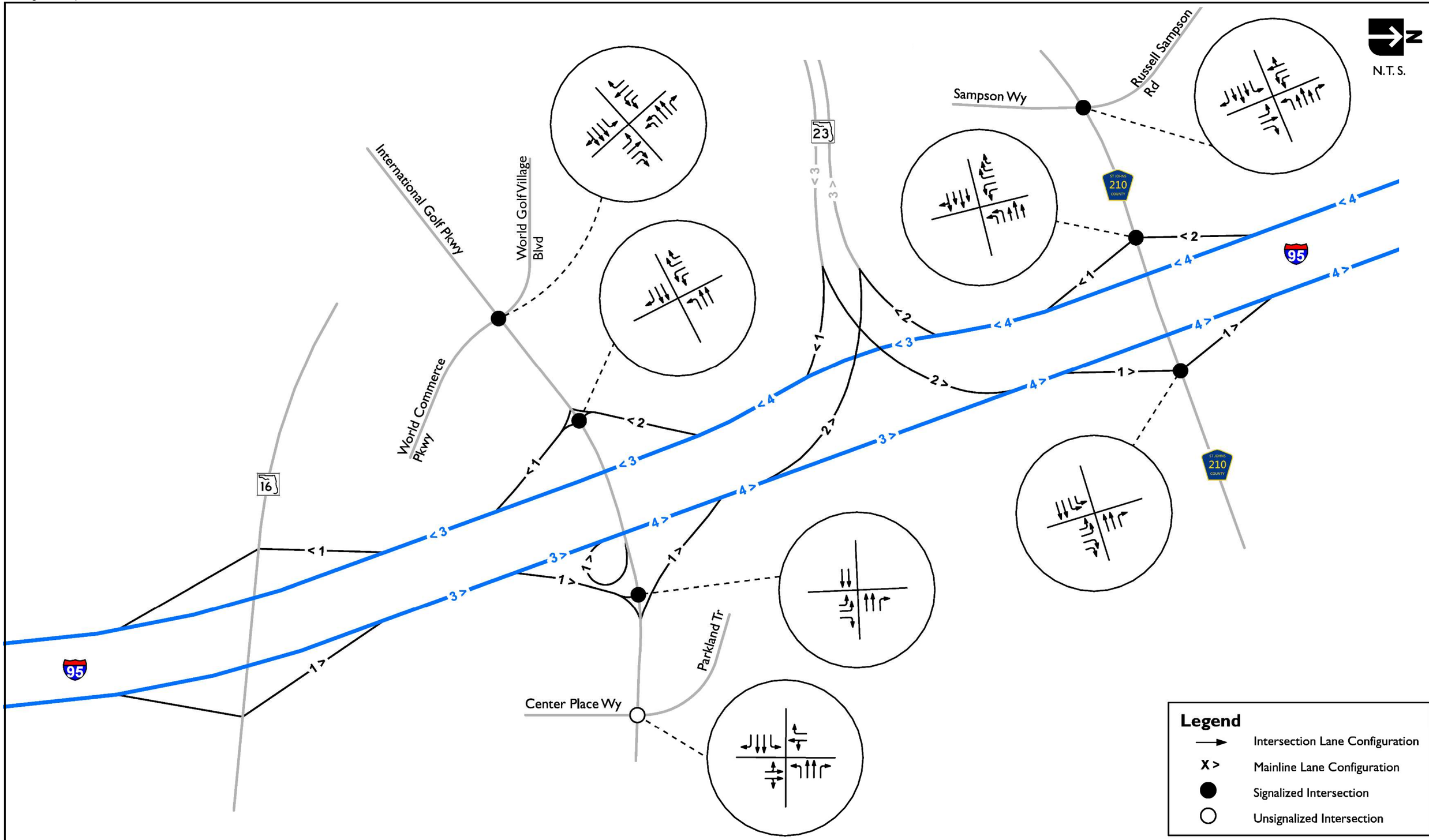
The lane configuration for the 2021 SIMR Concept is provided in **Figure 6-1**. The concept plans from the previously approved 2021 SIMR are included in **Appendix A**.

6.3 FCE SIMR Concept

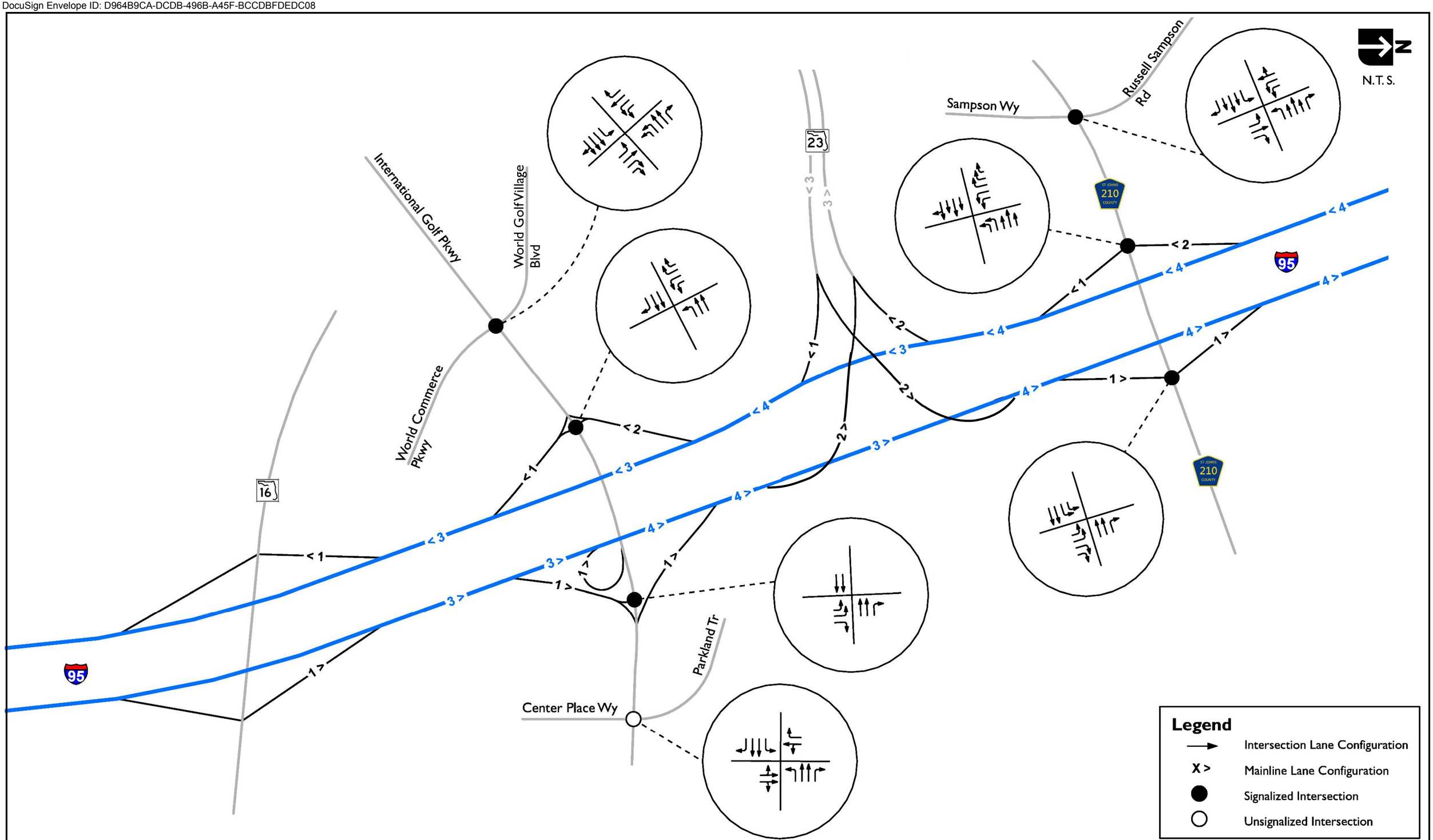
The second alternative is the same as the approved SIMR Re-evaluation Concept except for the design change at the FCE interchange. At the FCE interchange, the proposed design change relocates the FCE northbound access ramps from the left side of the I-95 mainline to the right side of the I-95 mainline.

The FCE SIMR Concept lane configuration is shown in **Figure 6-2**. The concept plan for the FCE SIMR Concept is provided in **Figure 6-3**.

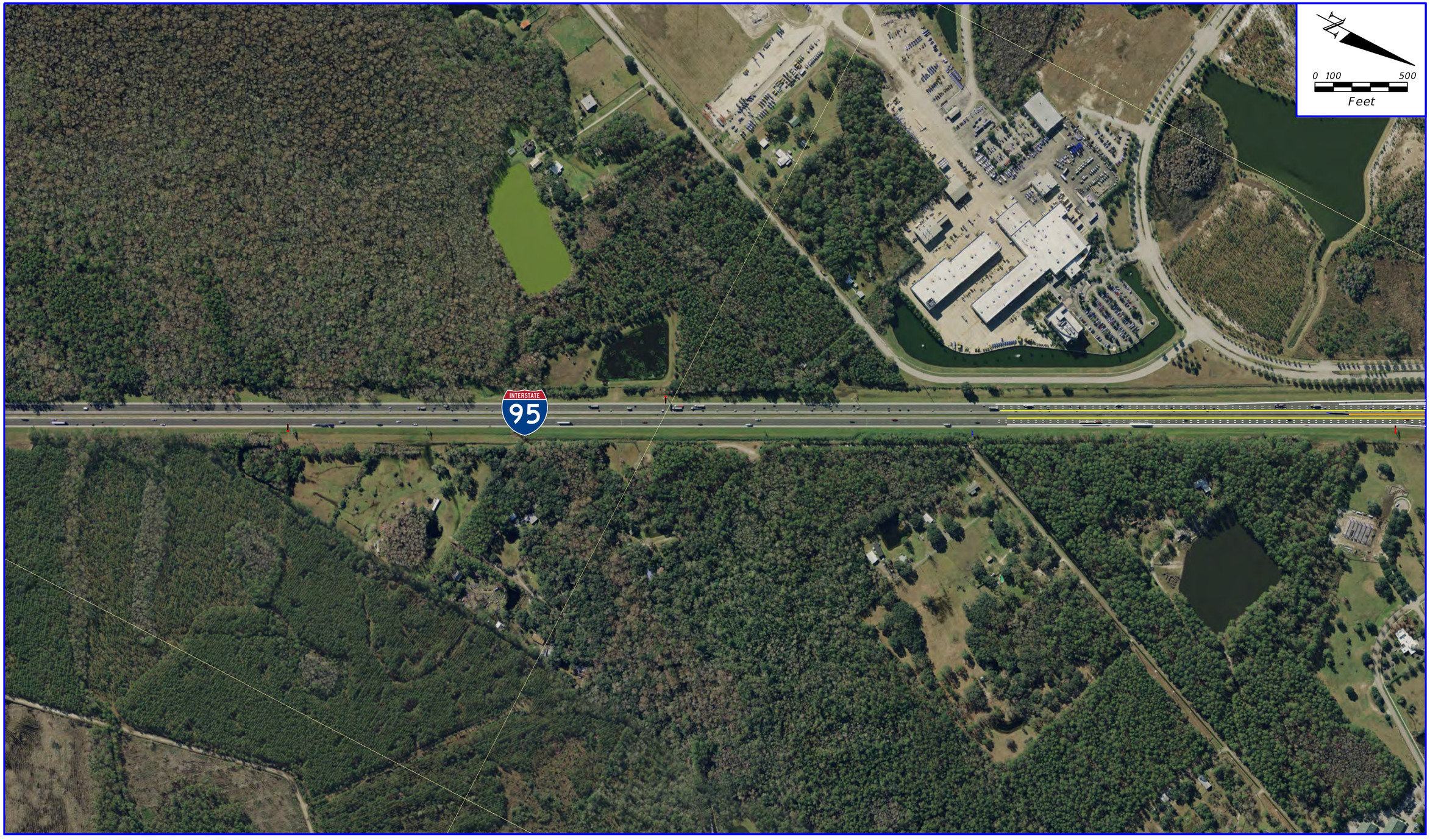
N.T.S.



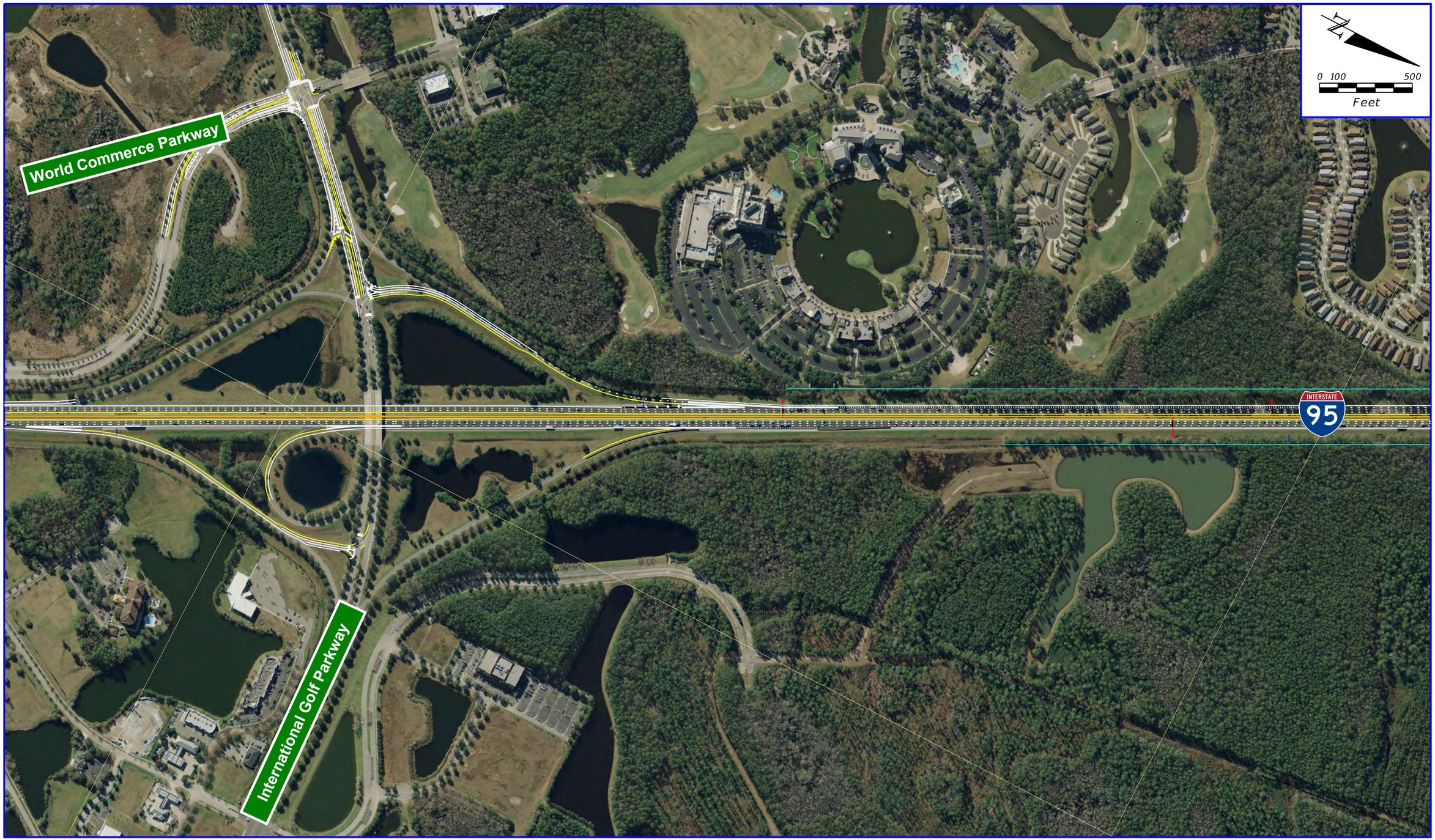
I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	2021 SIMR Concept Design Year 2045 Lane Configuration	Figure 6-1	Page 1 of 1



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept Design Year 2045 Lane Configuration	Figure 6-2	Page 1 of 1

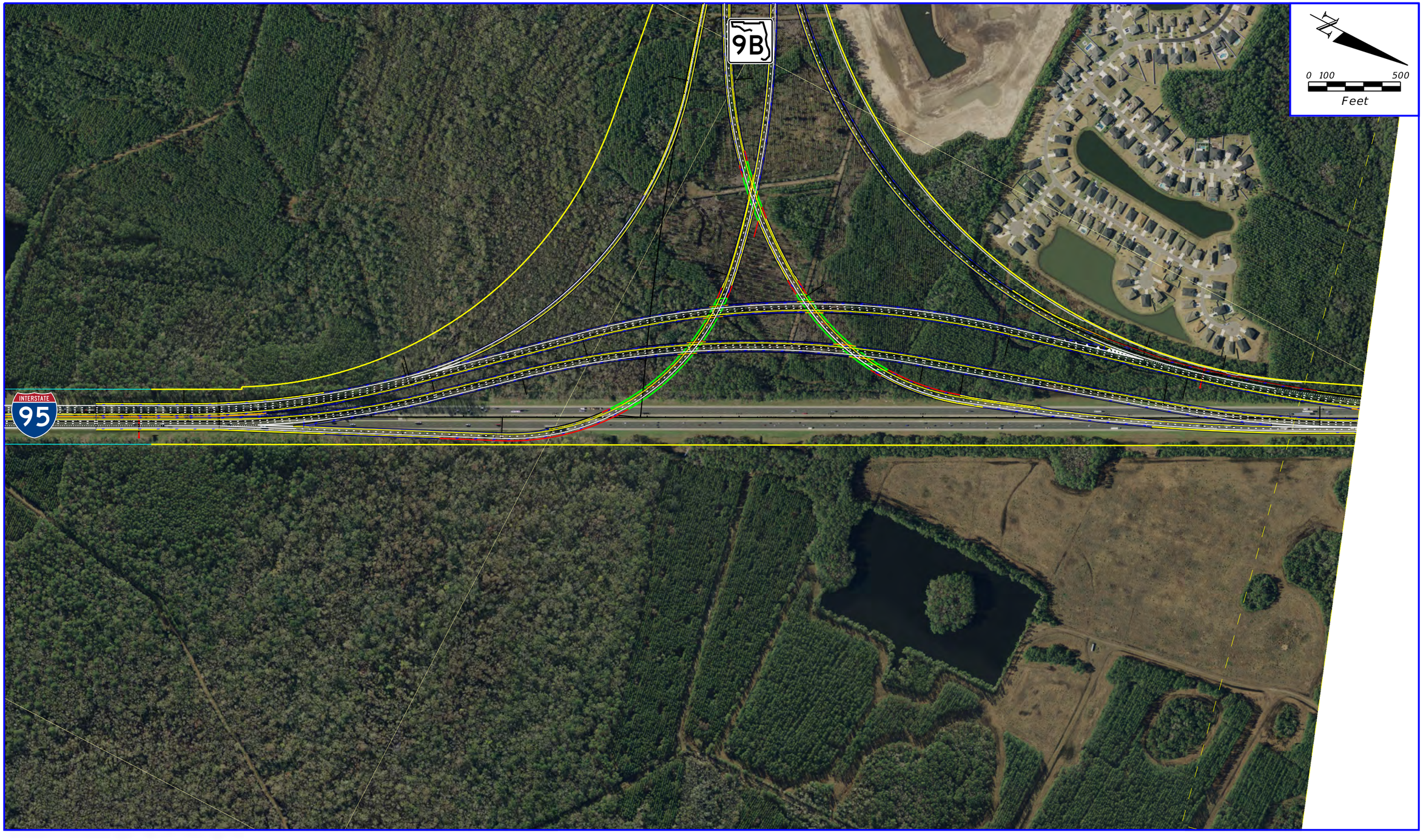


I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 1

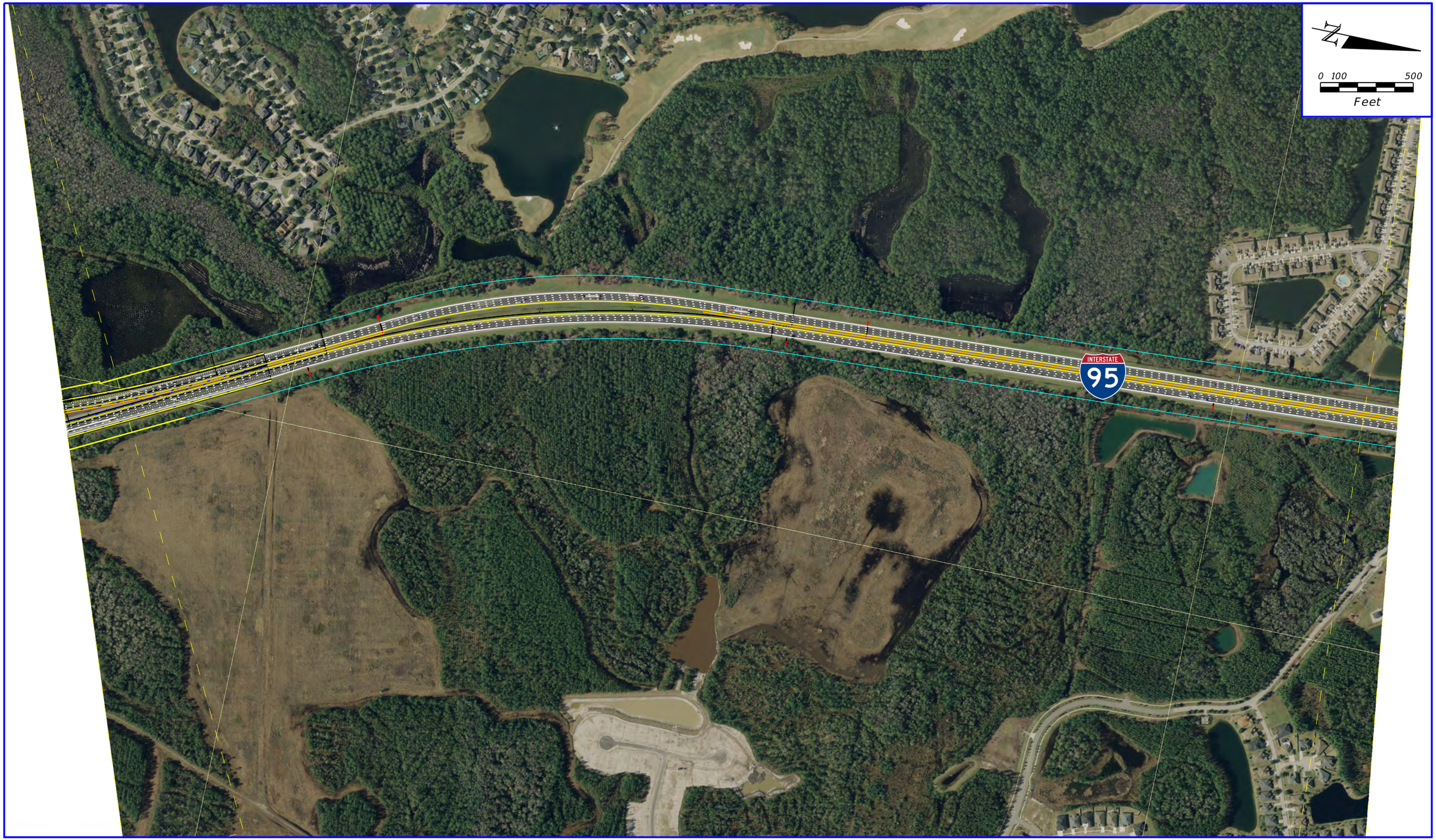


I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 2

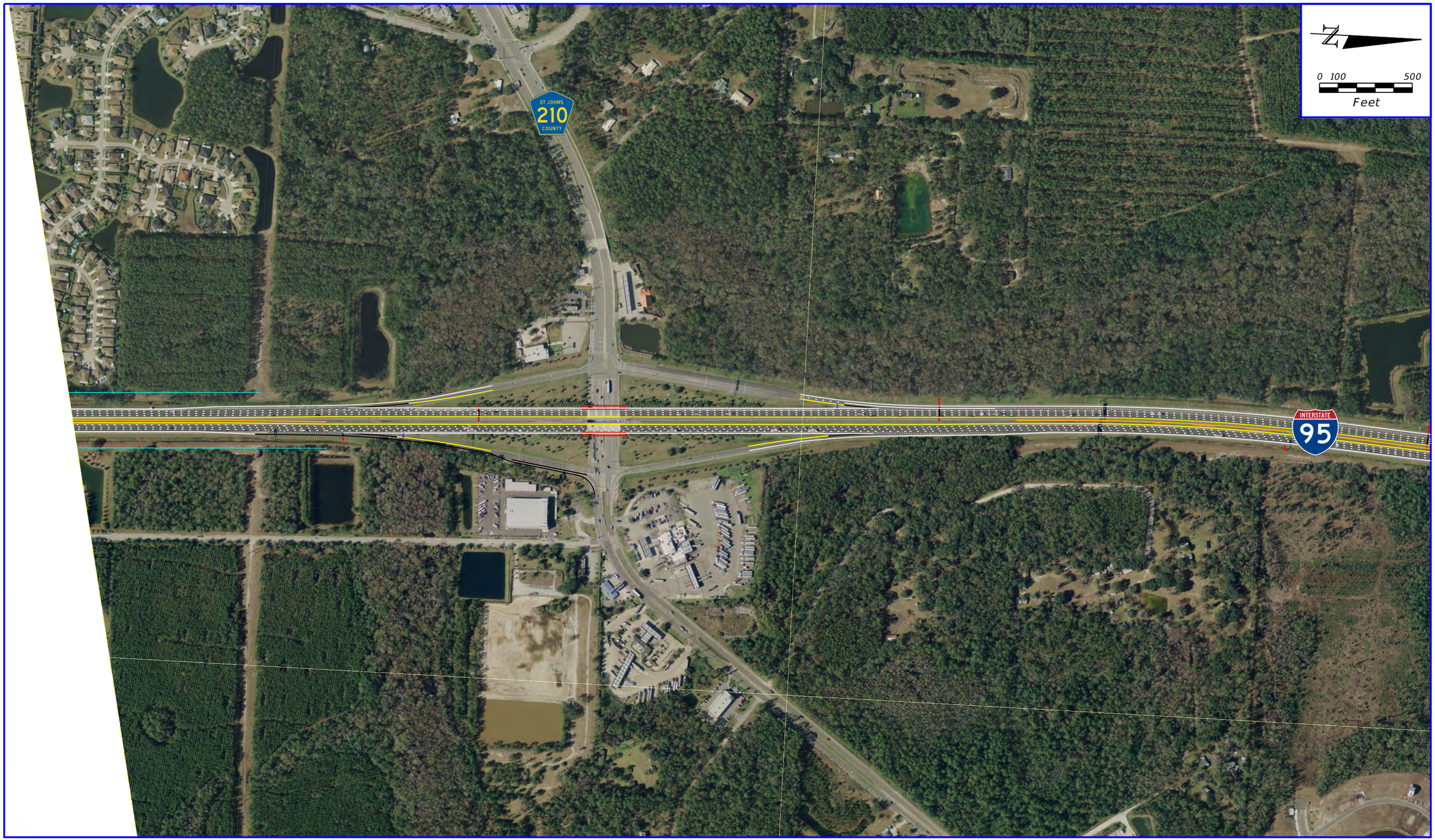
I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 3



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 4



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 5



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept	Figure 6-3	Page 6

7.0 EVALUATION OF ALTERNATIVES

7.1 Introduction

This section discusses the analysis of alternatives based on engineering, safety, and financial factors. The 2021 SIMR Concept and FCE SIMR Concept are analyzed and compared in this section. The evaluation criteria include:

- Conformance with Regional and State Transportation Plans
- Compliance with FHWA Requirements
- Traffic Operational Performance
- Safety
- Achievement of Objectives

7.2 Conformance with Local, Regional and State Transportation Plans

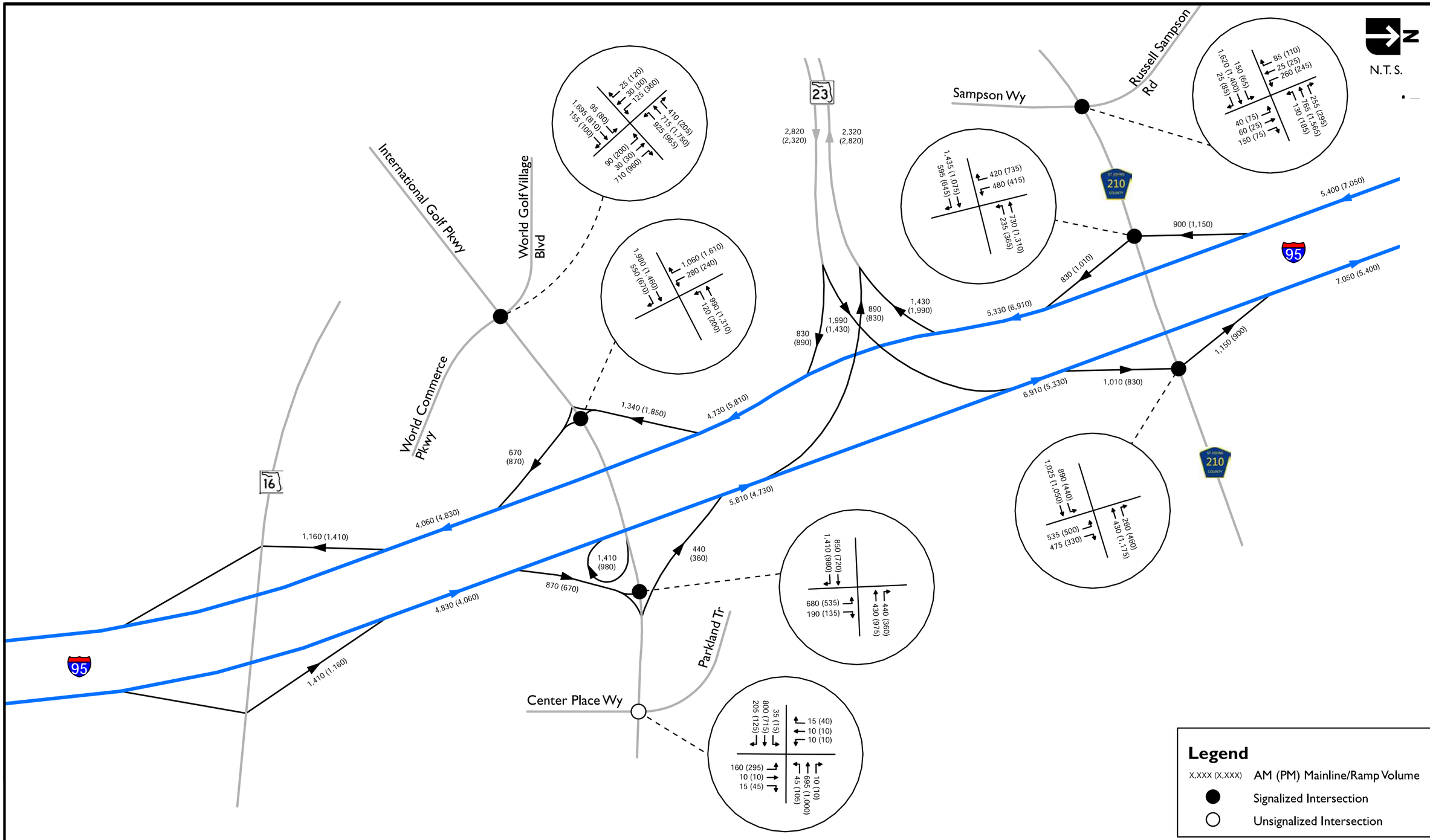
This SIMR Re-evaluation is consistent with the Transportation Improvement Program (TIP) and the SIS Plan for the area. Additional I-95 capacity within the study limits is listed as one of the cost feasible projects in the North Florida TPO 2045 Cost Feasible Plan.

7.3 Traffic Operational Performance

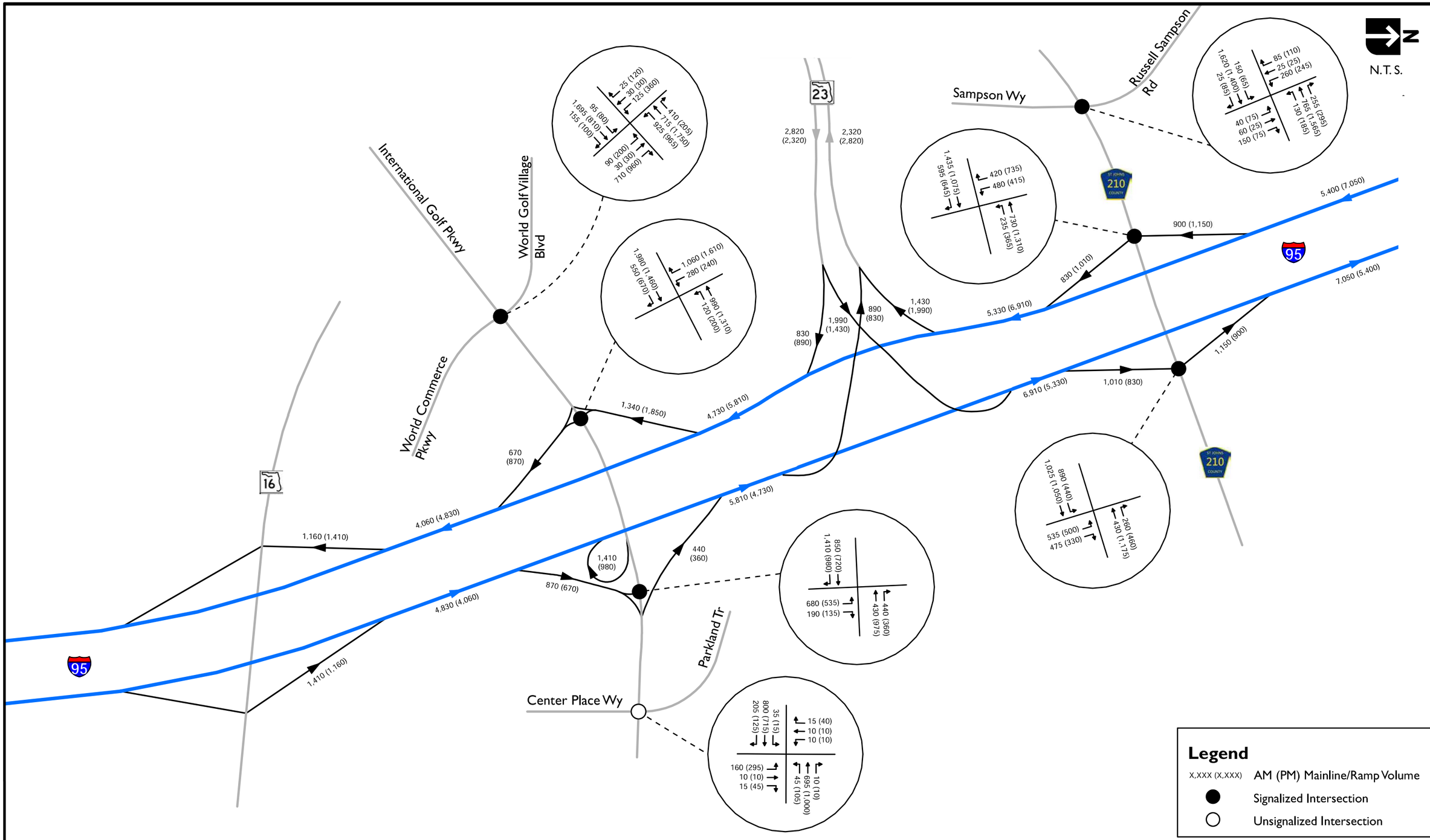
A detailed microsimulation analysis using Vissim 11.0 was conducted to evaluate the system-wide operational performance of the study area. Vissim was used to analyze the Design Year 2045 AM and PM peak periods for the 2021 SIMR Concept and FCE SIMR Concept Alternatives. The primary objective of this analysis was to establish the alternatives' operational conditions along I-95.

The operations at the ramp terminal intersections are not expected to be impacted by the proposed modifications at the FCE interchange and, therefore, intersection operational analysis is not included in this re-evaluation. The intersection results are provided in the 2021 SIMR Re-evaluation included in **Appendix A** of this FCE SIMR.

The 2021 SIMR Concept and FCE SIMR Concept AM and PM peak hour volumes were developed using the methodology described in **Section 2**. The proposed modifications at the FCE interchange will not result in a variation in travel patterns between the two alternatives. The 2021 SIMR Concept Design Year 2045 peak hour volumes are presented in **Figure 7-1**. The Design Year 2045 AM and PM peak hour volumes for the FCE SIMR Concept are provided in **Figure 7-2**.



FDOT **I-95 at First Coast Expressway Systems Interchange Modification Report Re-evaluation**	2021 SIMR Concept Design Year 2045 Peak Hour Volumes	Figure 7-1	Page 1 of 1



FDOT **I-95 at First Coast Expressway Systems Interchange Modification Report Re-evaluation**	FCE SIMR Concept Design Year 2045 Peak Hour Volumes	Figure 7-2	Page 1 of 1

7.3.1 2045 Operational Analysis

The Design Year 2045 Vissim models analyzed four-hour AM and PM peak periods. Peak-hour traffic forecasts were developed using NERPM. Fifteen-minute flow rates were used to develop the four-hour AM and PM peak period Vissim models. The Design Year 2045 simulation model parameters are based on those used for the Existing Year 2019 calibrated model. The simulation time consisted of a 45-minute seed time to load traffic into the network, followed by a 4-hour peak period consisting of a preceding shoulder hour, the peak hour, and two subsequent off-peak hours. The purpose of the off-peak hours was to allow all or most of the congestion built during the peak hour to subside during the simulation period.

The following MOEs were used to evaluate the network's operational performance:

- Freeways (peak hour)
  - Travel speed
  - Simulated (throughput) volume
  - Density
  - Estimated LOS
- Density heat maps for the freeway mainline segments (peak period)
- Network-Wide Performance
  - Average speed
  - Total delay
  - Latent delay
  - Latent demand
  - Total travel time
  - Total stops
  - Vehicles arrived

The MOEs listed above were used to compare the operational performance of the 2021 SIMR Concept and FCE SIMR Concept. Performance targets for the freeway segments are LOS D and operating speed 45 mph. The following sections provide a summary of the operational performance based on the Vissim modeling results.

2045 Peak Hour Results Overview

The lane schematics presented in **Figures 7-3** through **7-6** provide an operational overview of the freeway facilities during the peak hours of each alternative. Therefore, the speed, density and throughput presented in these figures only represent data collected during the peak hour (Hour 2) of the simulations.

Figure 7-3 shows the 2021 SIMR Concept Design Year 2045 results for the AM peak hour. No significant congestion is observed along I-95 from south of IGP to north of CR 210. The segments operate with a LOS of C or better. Within the FCE interchange, northbound I-95 operates with an average speed of 68 mph.

The 2045 PM peak hour results for the 2021 SIMR Concept are shown in **Figure 7-4.** No significant congestion is observed along I-95 from south of IGP to north of CR 210. The segments operate with a LOS of C or better. Within the FCE interchange, northbound I-95 operates with an average speed of 71 mph.

All I-95 merge and diverge areas of the system interchange showed speeds at or near free-flow speed (65 mph or greater) and low levels of density (26 vpmpl or less).

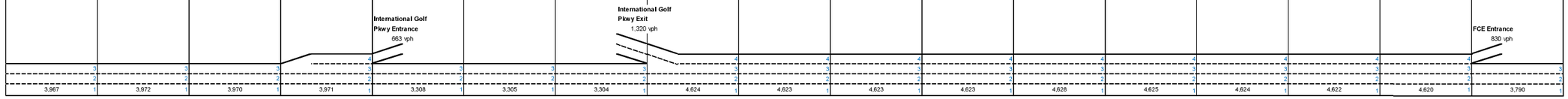
The 2045 FCE SIMR Concept results for the AM peak hour are shown in **Figure 7-5**. No significant congestion is observed along I-95 from south of IGP to north of CR 210. The segments operate with a LOS of C or better. Within the FCE interchange, northbound I-95 operates with an average speed of 69 mph.

The 2045 FCE SIMR Concept results for the PM peak are shown in **Figure 7-6**. No significant congestion is observed along I-95 from south of IGP to north of CR 210. The segments operate with a LOS of C or better. Within the FCE interchange, northbound I-95 operates with an average speed of 71 mph.

All I-95 merge and diverge areas of the FCE system interchange showed speeds at or near free-flow speed (65 mph or greater) and low levels of density (26 vpmpl or less). At the FCE northbound on-ramp, the FCE SIMR Concept increases the speed along I-95 from 65 mph to 67 mph.

In Summation, the peak hour results show that the FCE SIMR Concept experiences similar operations to the 2021 SIMR Concept during the Design Year 2045 analysis.

Distance (ft)	2,000	2,000	924	581	1,326	2,001	1,070	1,531	1,728	1,931	1,978	1,603	1,464	1,450	413	1,612	871
Speed (mph)	71	70	70	70	72	72	71	70	71	71	72	72	72	72	72	71	71
Density (veh/mi/ln)	19	19	19	14	15	15	16	17	16	16	16	16	16	16	16	16	18
Level of Service (LOS)	C	C	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Total Demand Volume (vph)	4,060	4,060	4,060	4,060	3,390	3,390	3,390	4,730	4,730	4,730	4,730	4,730	4,730	4,730	4,730	4,730	3,900
Total Simulated Volume (vph)	3,967	3,972	3,970	3,971	3,308	3,305	3,304	4,624	4,623	4,623	4,623	4,628	4,625	4,624	4,622	4,620	3,790



I-95 Southbound

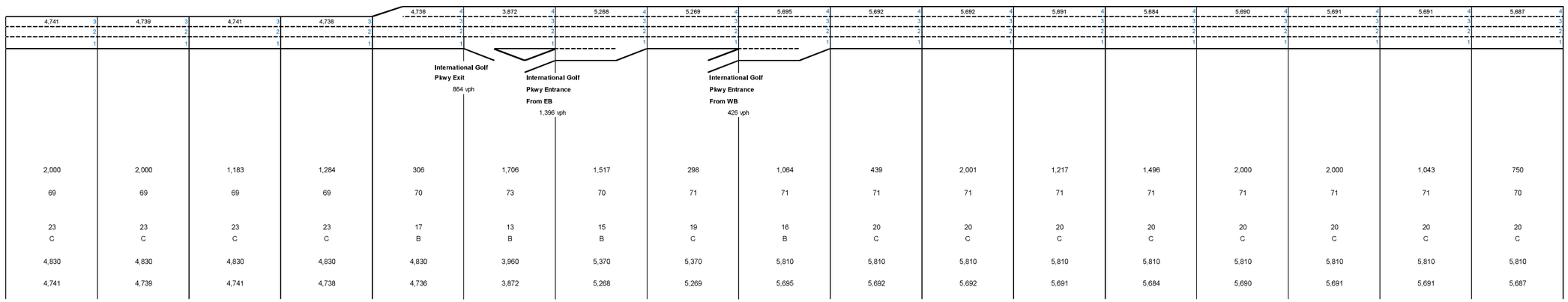
Legend

- Speed > 45 mph
- Speed 30-45 mph
- Speed 20-30 mph
- Speed ≤ 20 mph
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl
- Simulated volume if difference > 10% of demand

N

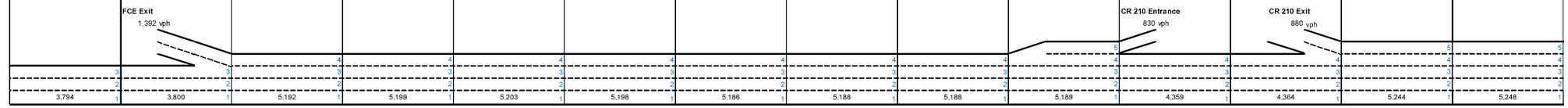
I-95 Northbound

Distance (ft)	2,000	2,000	1,183	1,284	306	1,706	1,517	298	1,064	439	2,001	1,217	1,496	2,000	2,000	1,043	750
Speed (mph)	69	69	69	69	70	73	70	71	71	71	71	71	71	71	71	71	70
Density (veh/mi/ln)	23	23	23	23	17	13	15	19	16	20	20	20	20	20	20	20	20
Level of Service (LOS)	C	C	C	C	B	B	B	C	B	C	C	C	C	C	C	C	C
Total Demand Volume (vph)	4,830	4,830	4,830	4,830	4,830	3,960	5,370	5,370	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810
Total Simulated Volume (vph)	4,741	4,739	4,741	4,738	4,736	3,872	5,268	5,269	5,695	5,692	5,692	5,691	5,684	5,690	5,691	5,691	5,687



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	2021 SIMR Concept Design Year 2045 AM Peak Hour Lane Schematic	Figure 7-3	Page 1 of 3

Distance (ft)	1,765	1,327	1,565	977	1,933	1,986	1,092	1,013	671	922	1,796	1,098	1,542	1,920
Speed (mph)	71	71	70	70	71	71	71	71	71	70	72	72	71	72
Density (veh/mi/ln)	18	18	19	19	18	18	18	18	18	15	15	15	15	15
Level of Service (LOS)	B	B	C	C	B	B	B	B	B	B	B	B	B	B
Total Demand Volume (vph)	3,900	3,900	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	4,500	4,500	5,400	5,400
Total Simulated Volume (vph)	3,794	3,800	5,192	5,199	5,203	5,198	5,186	5,188	5,188	5,189	4,359	4,364	5,244	5,248



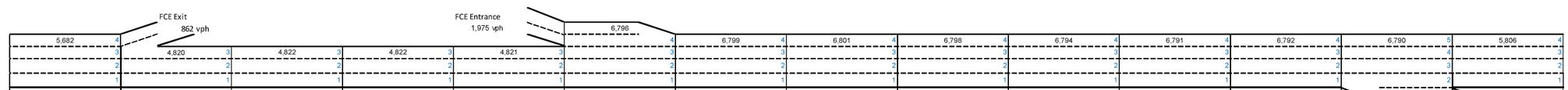
I-95 Southbound

Legend

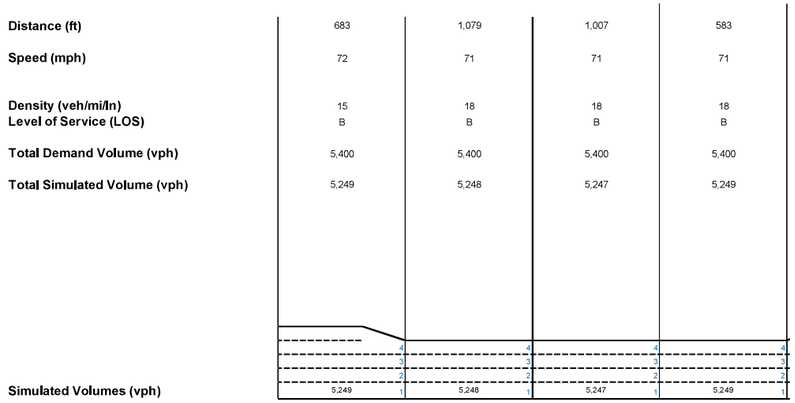
- Speed > 45 mph
- Speed 30-45 mph
- Speed 20-30 mph
- Speed ≤ 20 mph
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl
- Simulated volume if difference > 10% of demand

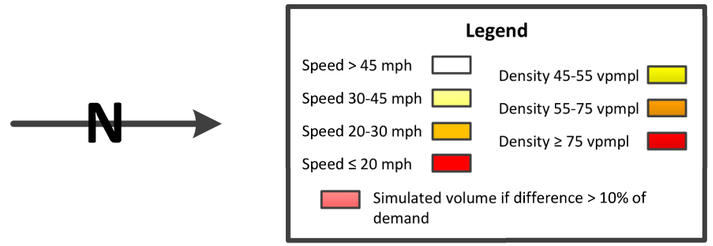
N

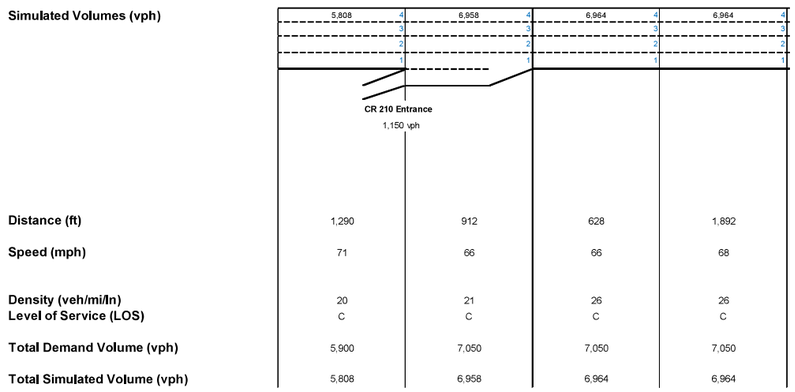
I-95 Northbound

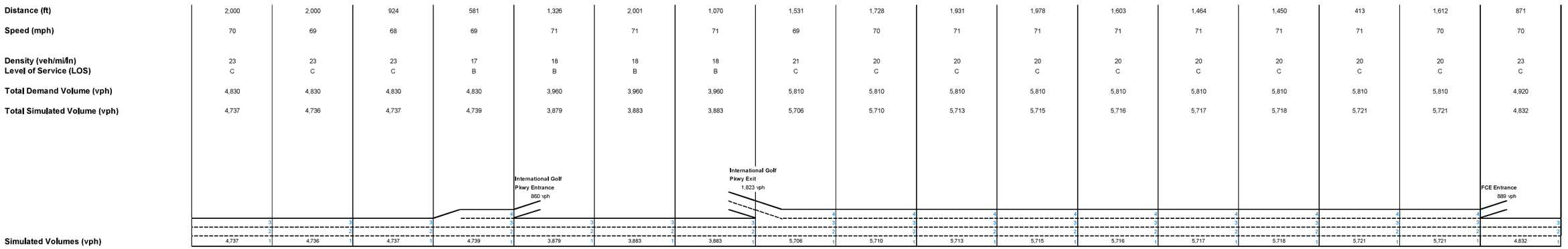


Distance (ft)	1,680	1,264	1,303	1,547	422	1,312	895	896	1,359	2,000	1,692	914	697	1,601
Speed (mph)	68	69	70	70	69	65	69	69	69	69	69	70	71	71
Density (veh/mi/ln)	21	23	23	23	23	21	25	25	25	25	25	24	19	20
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Total Demand Volume (vph)	5,810	4,920	4,920	4,920	4,920	6,910	6,910	6,910	6,910	6,910	6,910	6,910	6,910	5,900
Total Simulated Volume (vph)	5,682	4,820	4,822	4,822	4,821	6,796	6,799	6,801	6,798	6,794	6,791	6,792	6,790	5,806


Distance (ft)
683
1,079
1,007
583
Speed (mph)
72
71
71
71
Density (veh/mi/ln)
15
18
18
18
Level of Service (LOS)
B
B
B
B
Total Demand Volume (vph)
5,400
5,400
5,400
5,400
Total Simulated Volume (vph)
5,249
5,248
5,247
5,249
Simulated Volumes (vph)
5,249
5,248
5,247
5,249
I-95 Southbound

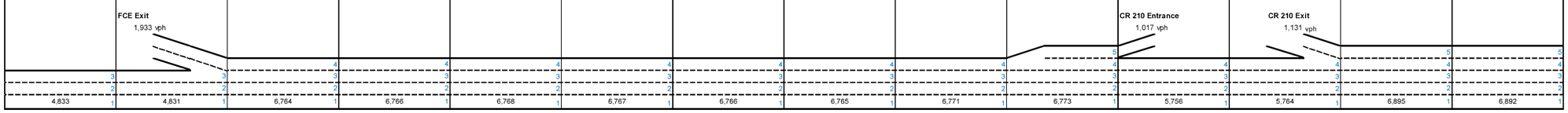

N
Legend
Speed > 45 mph
Speed 30-45 mph
Speed 20-30 mph
Speed ≤ 20 mph
Density 45-55 vpmpl
Density 55-75 vpmpl
Density ≥ 75 vpmpl
Simulated volume if difference > 10% of demand


I-95 Northbound
Simulated Volumes (vph)
5,808
6,958
6,964
6,964
CR 210 Entrance
1,150 vph
Distance (ft)
1,290
912
628
1,892
Speed (mph)
71
66
66
68
Density (veh/mi/ln)
20
21
26
26
Level of Service (LOS)
C
C
C
C
Total Demand Volume (vph)
5,900
7,050
7,050
7,050
Total Simulated Volume (vph)
5,808
6,958
6,964
6,964



I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	2021 SIMR Concept Design Year 2045 PM Peak Hour Lane Schematic	Figure 7-4	Page 1 of 3

Distance (ft)	1,765	1,327	1,565	977	1,933	1,986	1,092	1,013	671	922	1,796	1,098	1,542	1,920
Speed (mph)	70	69	66	67	69	70	70	69	68	68	71	71	70	71
Density (veh/mi/ln)	23	23	26	25	25	24	24	25	25	25	27	27	20	19
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	D	D	C	C
Total Demand Volume (vph)	4,920	4,920	6,910	6,910	6,910	6,910	6,910	6,910	6,910	6,910	5,900	5,900	7,050	7,050
Total Simulated Volume (vph)	4,833	4,831	6,764	6,766	6,768	6,767	6,766	6,765	6,771	6,773	5,756	5,764	6,895	6,892



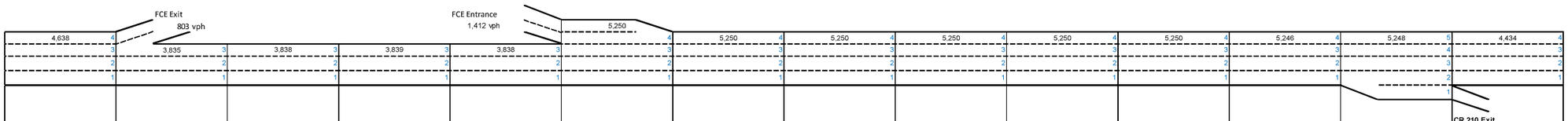
I-95 Southbound

N

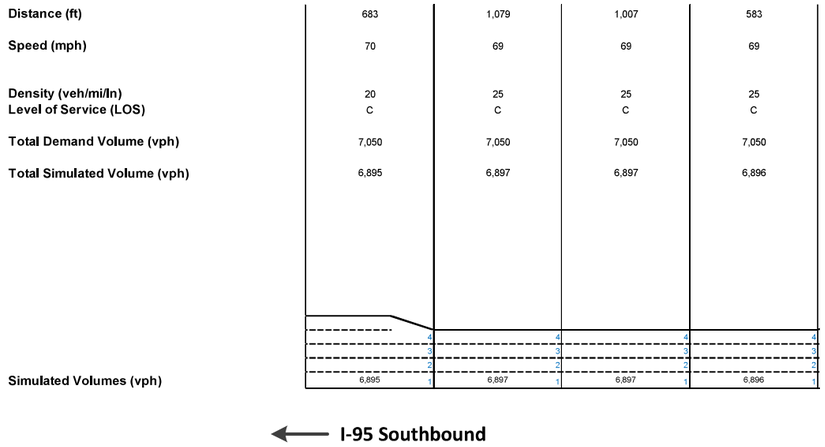
Legend

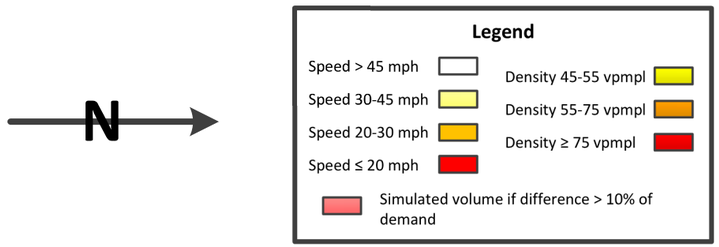
- Speed > 45 mph
- Speed 30-45 mph
- Speed 20-30 mph
- Speed ≤ 20 mph
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl
- Simulated volume if difference > 10% of demand

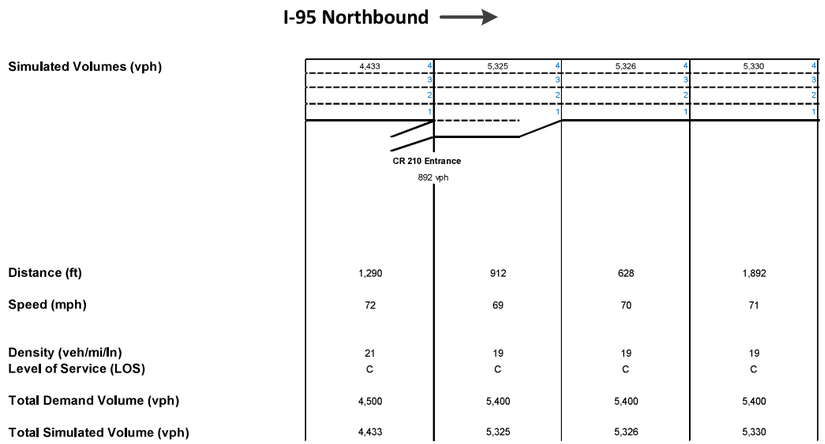
I-95 Northbound



Distance (ft)	1,680	1,264	1,303	1,547	422	1,312	895	896	1,359	2,000	1,692	914	697	1,601
Speed (mph)	70	70	71	71	71	70	71	71	71	71	71	71	72	72
Density (veh/mi/ln)	17	18	18	18	18	15	18	18	18	18	18	18	18	21
Level of Service (LOS)	B	B	B	B	B	B	B	B	B	B	B	B	B	C
Total Demand Volume (vph)	4,730	3,900	3,900	3,900	3,900	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	4,500
Total Simulated Volume (vph)	4,638	3,835	3,838	3,839	3,838	5,250	5,250	5,250	5,250	5,250	5,250	5,246	5,248	4,434







I-95 at First Coast Expressway **Systems Interchange Modification Report Re-evaluation**	2021 SIMR Concept Design Year 2045 PM Peak Hour Lane Schematic	Figure 7-4	Page 3 of 3

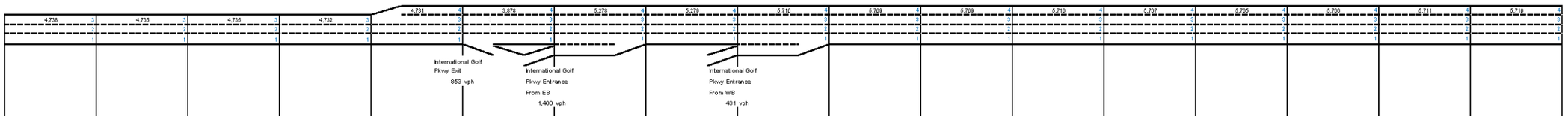
Distance (ft)	2,000	2,000	924	581	1,326	2,001	1,070	1,531	1,728	1,931	1,978	1,603	1,464	1,450	413	1,612	871	
Speed (mph)	71	70	70	70	71	72	71	70	71	71	72	72	72	72	72	71	71	
Density (veh/mi/ln)	19	19	19	14	15	15	15	16	16	16	16	16	16	16	16	16	18	
Level of Service (LOS)	B	B	C	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
Total Demand Volume (vph)	4,060	4,060	4,060	4,060	3,390	3,390	3,390	4,730	4,730	4,730	4,730	4,730	4,730	4,730	4,730	4,730	3,900	
Total Simulated Volume (vph)	3,976	3,976	3,976	3,973	3,307	3,304	3,312	4,627	4,627	4,631	4,632	4,628	4,629	4,626	4,620	4,624	3,802	

Simulated Volumes (vph)	3,976	3,976	3,976	3,973	3,307	3,304	3,312	4,627	4,627	4,631	4,632	4,628	4,629	4,626	4,620	4,624	3,802	

I- 95 Southbound

I- 95 Northbound

Simulated Volumes (vph)	4,738	4,735	4,735	4,732	4,731	3,878	5,278	5,279	5,710	5,709	5,709	5,710	5,707	5,705	5,706	5,711	5,710	

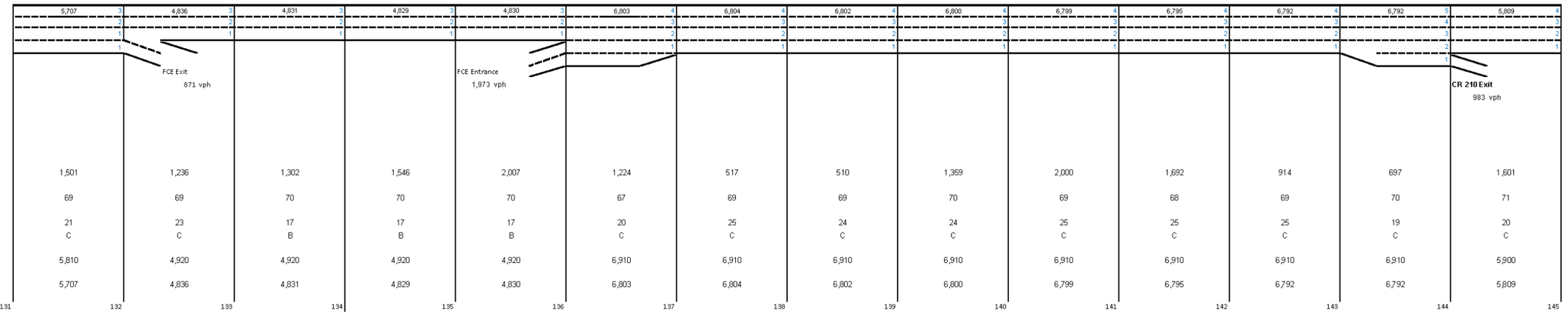


Distance (ft)	2,000	2,000	1,183	1,284	306	1,706	1,517	298	1,064	439	2,001	1,217	1,496	2,000	1,900	782	650	
Speed (mph)	69	69	69	69	70	73	70	71	71	71	71	71	71	71	71	71	69	
Density (veh/mi/ln)	23	23	23	23	17	13	15	19	16	20	20	20	20	20	20	20	21	
Level of Service (LOS)	C	C	C	C	B	B	B	B	B	C	C	C	C	C	C	C	C	
Total Demand Volume (vph)	4,830	4,830	4,830	4,830	4,830	3,960	5,370	5,370	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	5,810	
Total Simulated Volume (vph)	4,738	4,735	4,735	4,732	4,731	3,878	5,278	5,279	5,710	5,709	5,709	5692	5,707	5,705	5,706	5,711	5,710	

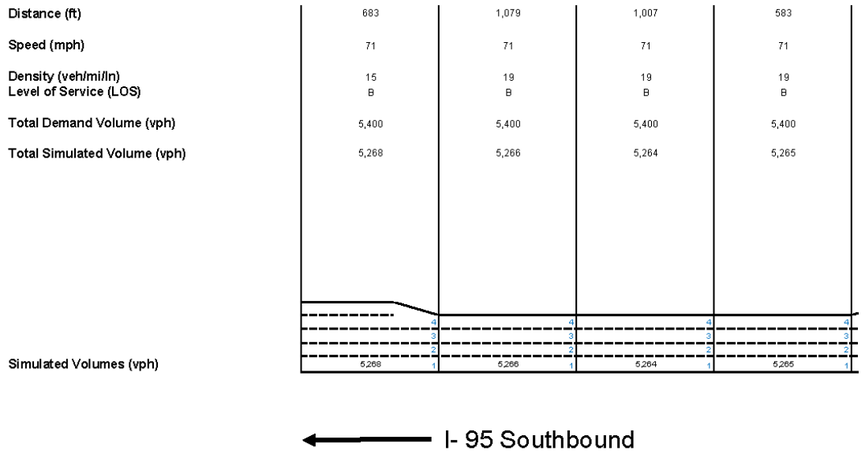
Distance (ft)	1,765	1,327	1,565	977	1,933	1,986	1,092	1,013	671	922	1,796	1,098	1,542	1,920	
Speed (mph)	71	71	70	70	71	71	71	71	71	70	72	72	71	72	
Density (veh/mi/ln)	18	18	19	19	18	18	18	18	18	15	15	15	15	15	
Level of Service (LOS)	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
Total Demand Volume (vph)	3,900	3,900	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	4,500	4,500	5,400	5,400	
Total Simulated Volume (vph)	3,803	3,806	5,199	5,202	5,201	5,195	5,190	5,191	5,194	5,196	4,369	4,374	5,260	5,263	

I- 95 Southbound

I- 95 Northbound



Distance (ft)	1,501	1,236	1,302	1,546	2,007	1,224	517	510	1,359	2,000	1,692	914	697	1,601
Speed (mph)	69	69	70	70	70	67	69	69	70	69	68	69	70	71
Density (veh/mi/ln)	21	23	17	17	17	20	25	24	24	25	25	25	19	20
Level of Service (LOS)	C	C	B	B	B	C	C	C	C	C	C	C	C	C
Total Demand Volume (vph)	5,810	4,920	4,920	4,920	4,920	6,910	6,910	6,910	6,910	6,910	6,910	6,910	6,910	5,900
Total Simulated Volume (vph)	5,707	4,836	4,831	4,829	4,830	6,803	6,804	6,802	6,800	6,799	6,795	6,792	6,792	5,809



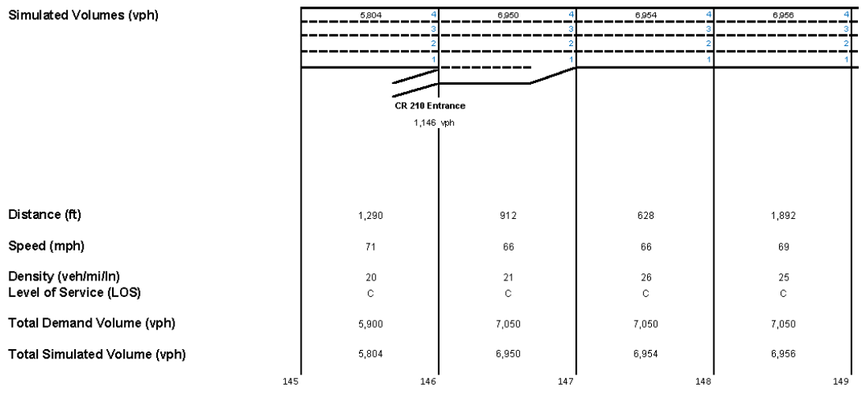
I- 95 Southbound

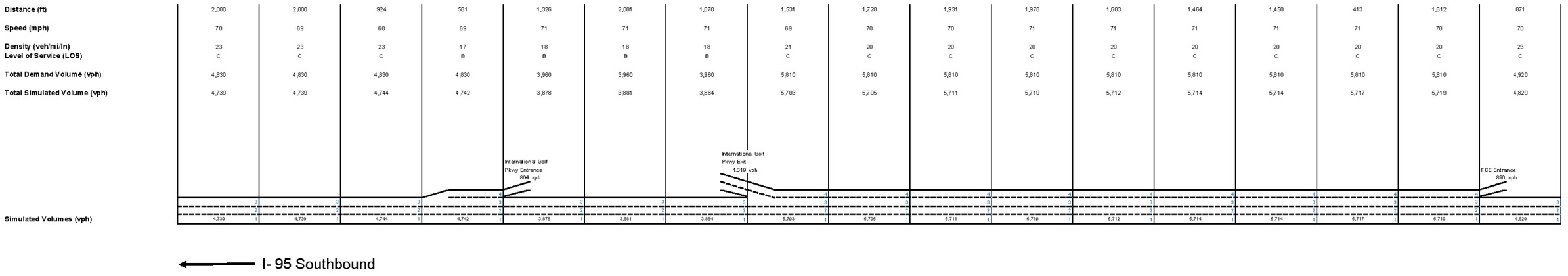
N

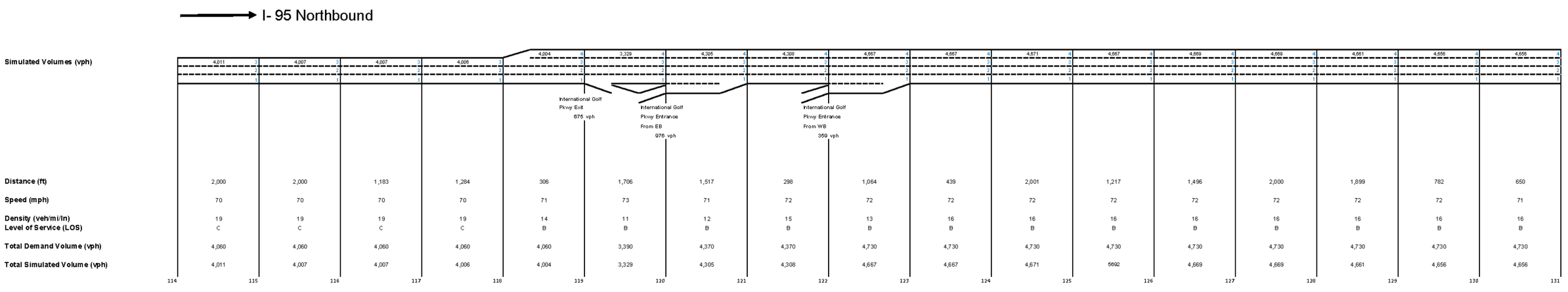
Legend

- Speed > 45 mph
- Speed 30-45 mph
- Speed 20-30 mph
- Speed ≤ 20 mph
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl
- Simulated volume if difference > 10% of demand

I- 95 Northbound







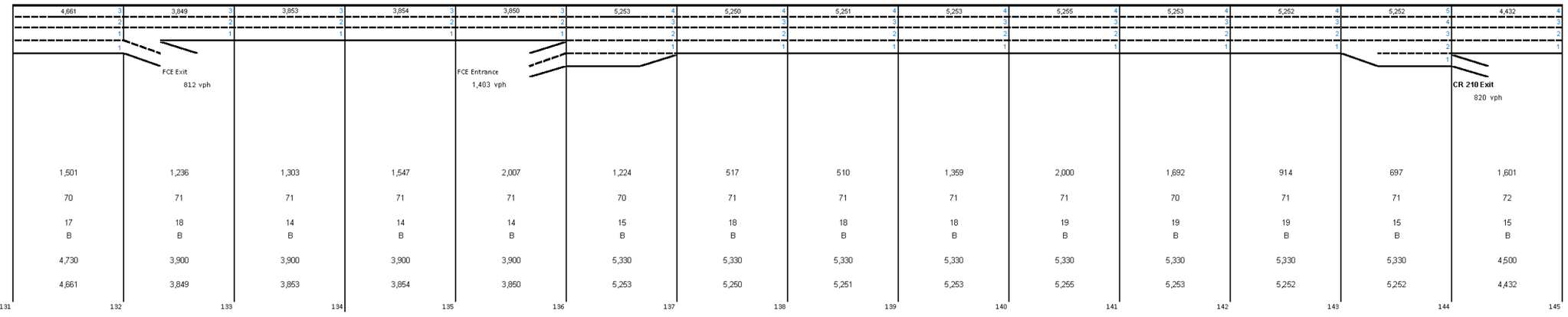
Distance (ft)	1,765	1,327	1,565	977	1,933	1,986	1,092	1,013	671	922	1,796	1,098	1,542	1,920
Speed (mph)	70	70	65	67	69	70	70	69	68	68	71	71	70	72
Density (veh/mi/ln)	23	23	26	25	24	24	24	25	25	20	20	20	20	19
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Total Demand Volume (vph)	4,920	4,920	6,910	6,910	6,910	6,910	6,910	6,910	6,910	6,910	5,900	5,900	7,050	7,050
Total Simulated Volume (vph)	4,832	4,830	6,767	6,765	6,764	6,762	6,766	6,772	6,774	6,774	5,757	5,764	6,900	6,898

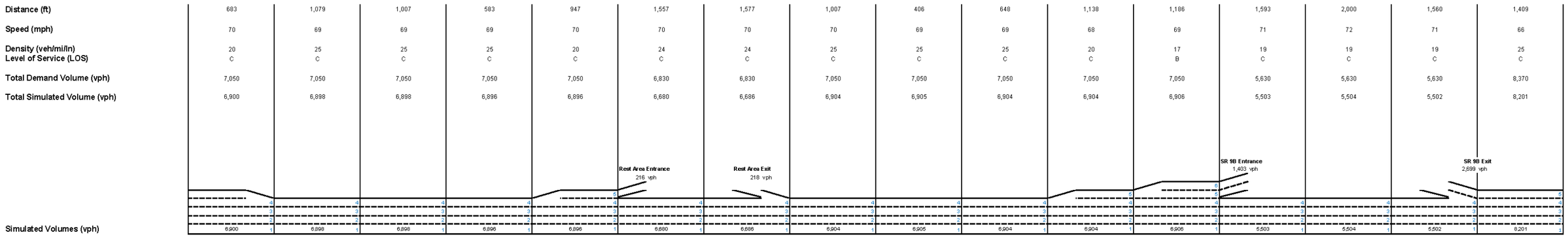
Simulated Volumes (vph)	4,832	4,830	6,767	6,765	6,764	6,762	6,766	6,772	6,774	6,774	5,757	5,764	6,900	6,898

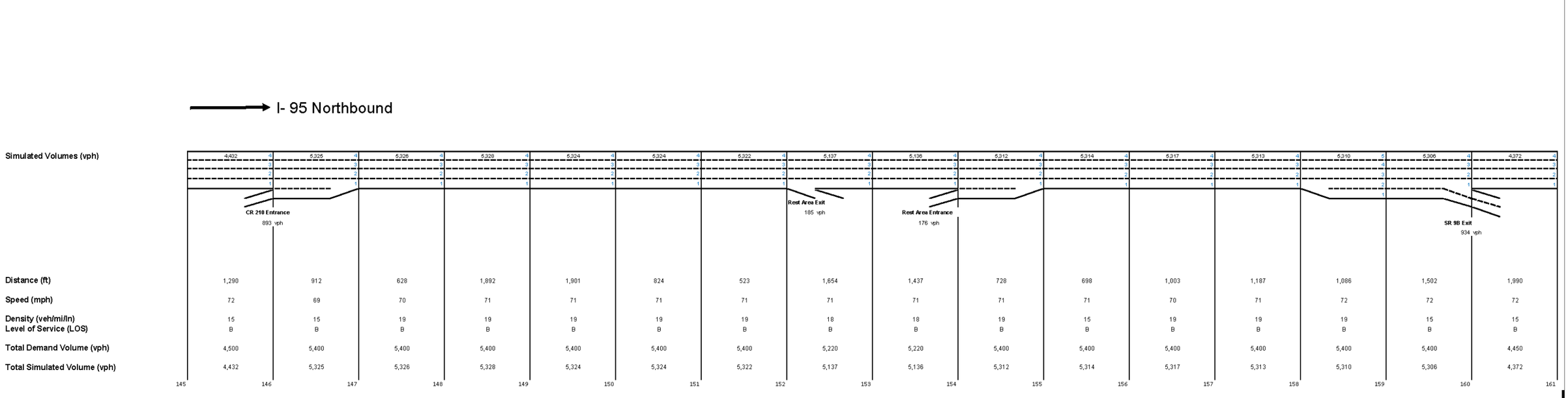
I- 95 Southbound

I- 95 Northbound

Simulated Volumes (vph)	4,661	3,849	3,853	3,854	3,850	5,253	5,250	5,251	5,253	5,255	5,253	5,252	5,252	4,432
Distance (ft)	1,501	1,236	1,303	1,547	2,007	1,224	517	510	1,359	2,000	1,692	914	697	1,601
Speed (mph)	70	71	71	71	71	70	71	71	71	71	70	71	71	72
Density (veh/mi/ln)	17	18	14	14	14	15	18	18	18	19	19	19	15	15
Level of Service (LOS)	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Total Demand Volume (vph)	4,730	3,900	3,900	3,900	3,900	5,330	5,330	5,330	5,330	5,330	5,330	5,330	5,330	4,500
Total Simulated Volume (vph)	4,661	3,849	3,853	3,854	3,850	5,253	5,250	5,251	5,253	5,255	5,253	5,252	5,252	4,432







2045 Peak Period Analysis

Density output for I-95 was processed using travel time segments within the Vissim networks for all four hours of the simulation period. Analysis of the off-peak hours is critical since this includes the buildup and dissipation of the congestion that occurs during the peak hour (see the previous discussion). The data described within the following section are presented in density-based heat diagrams. Heat maps are provided for I-95 within the study area and show the buildup and dissipation of congestion in terms of density.

2021 SIMR Concept – Design Year 2045 Alternative

A summary of the 2021 SIMR Concept density outputs during the AM and PM peak periods is provided below.

During the AM peak (**Figure 7-7**), no significant congestion is observed on I-95, with density levels remaining less than 30 vpmpl for the extent of the simulation.

During the PM peak (**Figure 7-8**), no significant congestion is observed on I-95, with density levels remaining less than 30 vpmpl for the extent of the simulation.

In summary, the 2045 simulation results show that the 2021 SIMR Concept is expected to operate with no areas of congestion on I-95 from south of IGP to north of CR 210.

FCE SIMR Concept – Design Year 2045 Alternative

A summary of the FCE SIMR Concept density outputs during the AM and PM peak periods is provided below.

The FCE SIMR Concept shows similar densities over the 2021 SIMR Concept. Focusing on the modified FCE northbound interchange ramps, the density along I-95 does slightly reduce with the FCE SIMR Concept. During the AM peak (**Figure 7-9**), no significant congestion is observed on I-95, with density levels remaining less than 30 vpmpl for the extent of the simulation.

During the PM peak (**Figure 7-10**), no significant congestion is observed on I-95, with density levels remaining less than 30 vpmpl for the extent of the simulation.

In summary, the 2045 simulation results show that the FCE SIMR Concept is expected to experience similar operations to the 2021 SIMR Concept.

I-95 Northbound

Density (veh/mi/ln)

Location (Northbound)	Hour 1 0.25	Hour 1 0.50	Hour 1 0.75	Hour 1 1.00	Hour 2 0.25	Hour 2 0.50	Hour 2 0.75	Hour 2 1.00	Hour 3 0.25	Hour 3 0.50	Hour 3 0.75	Hour 3 1.00	Hour 4 0.25	Hour 4 0.50	Hour 4 0.75	Hour 4 1.00
South of IGP	20	21	21	22	23	23	23	23	20	18	16	16	15	14	12	10
	20	21	21	22	23	23	23	23	20	18	17	16	15	14	12	10
	20	21	21	22	23	23	23	23	21	18	17	16	15	14	12	10
	20	21	21	22	23	23	23	23	21	18	17	16	15	14	12	10
Diverge to IGP	15	16	16	16	17	17	17	17	15	13	12	12	11	10	9	8
Between IGB Off/EB On Ramps	12	13	13	13	13	13	13	13	12	11	10	9	9	8	7	6
Merge from IGB EB	13	14	14	15	15	15	15	15	14	12	11	11	10	10	8	7
Between IGB EB/WB On Ramps	16	17	18	18	18	18	18	19	17	15	13	13	12	12	10	9
Merge from IGB WB	14	15	15	15	16	16	16	16	15	13	12	11	11	10	9	7
Between IGP and FCE	18	19	19	19	20	20	20	20	18	16	15	14	14	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	20	18	16	15	14	13	13	11	9
	18	19	19	19	20	20	20	21	18	16	15	14	13	13	11	10
Diverge to FCE	18	20	20	20	21	21	21	21	20	17	15	14	14	13	11	10
Between FCE On/Off Ramps	20	22	22	23	23	23	23	24	22	19	17	16	16	15	13	11
	20	21	22	22	23	23	23	23	22	19	17	16	15	15	13	11
	20	21	22	22	23	23	23	23	22	19	17	16	16	15	13	11
	20	22	22	22	23	23	23	23	22	19	17	16	16	15	13	11
Merge from FCE	18	19	20	20	20	21	21	21	19	16	15	14	15	12	11	9
Between FCE and CR 210	22	23	23	24	24	25	25	25	23	20	18	17	16	15	13	11
	22	23	23	24	24	25	25	25	23	20	18	17	16	15	13	11
	22	23	23	24	24	24	25	25	23	20	18	17	16	15	13	11
	22	23	23	24	24	24	25	25	23	20	18	17	16	15	13	11
	21	23	23	24	24	24	25	25	23	20	18	17	16	15	13	11
	21	23	23	24	24	24	24	25	23	20	18	17	16	15	13	11
Diverge to CR 210	17	18	18	19	19	19	19	19	18	16	14	13	13	13	11	9
Between CR 210 On/Off Ramps	18	19	19	20	20	20	21	21	20	17	15	14	14	13	11	10
	18	19	19	20	20	20	21	21	20	17	15	14	14	13	11	10
Merge from CR 210	18	19	20	20	21	21	21	22	20	17	15	14	14	13	11	10
North of CR 210	23	24	24	25	26	26	27	27	25	21	19	17	17	16	14	12
	22	23	24	24	26	26	26	26	24	20	19	17	17	15	14	12
	22	23	24	24	26	26	25	26	24	20	19	17	17	16	14	12
	22	23	24	24	26	26	25	26	24	20	19	17	17	16	14	12

I-95 Southbound

Density (veh/mi/ln)

Location (Southbound)	Hour 1 0.25	Hour 1 0.50	Hour 1 0.75	Hour 1 1.00	Hour 2 0.25	Hour 2 0.50	Hour 2 0.75	Hour 2 1.00	Hour 3 0.25	Hour 3 0.50	Hour 3 0.75	Hour 3 1.00	Hour 4 0.25	Hour 4 0.50	Hour 4 0.75	Hour 4 1.00
North of CR 210	16	17	18	18	18	19	19	19	18	16	15	13	12	13	11	9
	16	17	18	18	18	19	19	19	18	16	15	13	12	13	11	9
	16	17	18	18	18	19	19	19	18	16	15	13	12	13	11	9
	13	14	14	18	18	19	19	19	18	16	15	13	12	13	11	9
	13	13	14	18	18	19	19	19	18	16	15	13	12	13	11	9
Diverge to CR 210	13	14	14	15	14	15	15	15	14	13	12	11	10	10	8	7
Between CR 210 On/Off Ramps	18	19	19	20	20	20	21	21	20	18	17	15	14	13	12	10
	18	18	19	20	19	20	21	20	20	18	17	15	14	13	12	10
Merge to CR 210	16	17	18	18	18	18	19	19	18	16	15	13	12	12	11	9
Between CR 210 and FCE	16	17	18	18	18	18	19	19	18	16	15	13	12	12	10	9
	16	17	18	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	18	18	18	18	19	18	18	16	15	13	12	12	11	9
	16	17	18	18	18	18	19	18	18	16	15	13	12	12	11	9
	16	17	18	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	18	18	18	18	19	19	18	16	15	14	12	12	11	9
Diverge to FCE	16	17	17	18	18	18	19	19	18	16	15	14	12	12	11	9
Between FCE On/Off Ramps	15	16	17	18	17	18	18	18	18	16	14	13	12	12	11	9
	15	16	17	18	17	18	18	18	18	16	14	13	12	12	11	9
	15	16	17	18	17	18	18	18	18	16	14	13	12	12	11	9
Merge from FCE	14	15	15	16	16	16	17	16	16	14	13	12	11	11	9	8
Between FCE and IGP	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	11	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	11	9	8
Diverge to IGP	14	15	15	16	16	16	17	17	16	15	13	12	11	11	9	8
Between IGB Off/On Ramps	13	14	14	15	15	15	16	16	15	14	12	12	11	10	9	8
	13	14	14	15	15	15	16	16	15	14	12	12	11	10	9	8
	13	14	14	15	15	15	16	16	15	14	12	12	11	10	9	8
Merge from IGB	12	13	13	14	14	14	14	14	14	12	11	10	10	9	8	7
South of IGP	16	18	18	18	19	19	19	19	19	17	15	14	13	12	11	9
	16	18	17	18	19	19	19	19	18	17	15	14	13	12	11	9
	16	18	17	18	18	19	19	19	18	17	15	14	13	12	11	9

Legend

- Density ≤ 30 vpmpl
- Density 30-45 vpmpl
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl

I-95 Northbound

Location	Layout	Density (veh/mi/ln)															
		Hour 1				Hour 2				Hour 3				Hour 4			
		0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00
South of IGP	Northbound	16	16	17	18	19	19	19	19	16	14	12	12	11	10	9	8
		16	16	17	18	19	19	19	19	16	14	12	12	11	10	9	8
		16	16	17	18	19	19	19	19	16	14	12	12	11	10	9	8
Diverge to IGP		16	16	17	18	19	19	19	19	16	14	12	12	11	10	9	8
		12	12	12	13	14	14	14	14	13	11	9	9	8	8	7	6
Between IGB Off/EB On Ramps		10	10	10	11	11	11	11	11	10	9	8	7	7	6	6	5
		11	10	11	12	12	12	12	12	11	9	8	8	7	7	6	6
Merge from IGB EB		13	13	13	14	15	15	15	15	14	11	10	9	9	8	7	7
		11	11	11	12	13	13	13	13	12	10	9	8	8	7	6	6
Between IGB EB/WB On Ramps		14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	7
		14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	7
Merge from IGB WB		14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	7
		14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	7
Between IGP and FCE		14	14	14	15	16	16	16	16	15	13	11	10	10	9	8	8
		14	14	14	15	16	17	16	16	15	13	11	10	10	9	8	8
		14	14	14	15	16	17	16	16	15	13	11	10	10	9	8	8
Diverge to FCE		16	16	16	17	18	19	18	18	17	14	12	11	11	10	9	8
		16	16	16	17	18	18	18	18	17	14	12	11	11	10	9	8
Between FCE On/Off Ramps		16	16	16	17	18	18	18	18	17	14	12	11	11	10	9	8
		16	16	16	17	18	18	18	18	17	14	12	11	11	10	9	8
Merge from FCE		13	13	13	14	15	15	15	15	14	11	10	9	9	8	7	7
		16	16	16	17	18	19	18	19	17	14	12	11	11	10	9	8
Between FCE and CR 210		16	16	16	17	18	19	18	19	17	14	12	11	11	10	9	8
		16	16	16	17	18	19	18	19	17	14	12	11	11	10	9	8
		16	16	16	17	18	19	19	19	17	15	12	11	11	10	9	8
Diverge to CR 210		16	16	16	17	18	19	19	19	17	15	12	11	11	10	9	8
		13	12	13	14	15	15	15	15	14	12	10	9	9	8	7	7
Between CR 210 On/Off Ramps		14	13	14	14	15	15	15	15	15	12	10	10	9	9	8	7
		14	13	14	14	15	16	15	16	15	12	10	10	9	9	8	7
Merge from CR 210		14	13	14	14	15	15	16	15	15	12	10	10	9	8	8	7
		17	16	17	18	19	19	19	19	18	15	13	12	11	10	9	8
North of CR 210		16	16	17	17	19	19	19	19	18	15	13	12	11	10	9	8
		16	16	17	17	19	19	19	19	18	15	13	12	11	10	9	8
		16	16	16	17	18	19	19	19	18	15	13	12	11	10	9	8

Direction of Travel

I-95 Southbound

Location	Layout	Density (veh/mi/ln)															
		Hour 1				Hour 2				Hour 3				Hour 4			
		0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00
North of CR 210	Southbound	22	21	22	23	24	25	25	25	25	21	17	16	15	13	12	11
		22	21	22	23	24	25	25	25	25	21	17	16	15	13	12	11
		22	21	22	23	24	25	25	25	25	21	18	16	15	13	12	9
Diverge to CR 210		17	17	17	18	19	19	20	20	19	17	14	12	12	11	10	9
		17	17	17	18	19	19	20	20	19	17	14	12	12	11	10	9
Between CR 210 On/Off Ramps		17	17	17	18	19	19	20	20	20	17	14	13	12	11	10	9
		24	23	24	25	27	27	28	28	27	24	20	17	16	15	14	13
Merge to CR 210		24	23	24	25	26	27	27	28	27	24	20	17	16	15	14	13
		22	21	22	23	24	25	25	26	24	21	17	16	15	12	12	11
Between CR 210 and FCE		22	21	22	23	24	25	25	26	25	21	17	15	14	12	12	11
		22	21	22	23	24	25	24	25	24	21	17	15	14	12	12	11
		21	21	22	22	24	25	24	25	24	21	17	15	14	12	12	11
Diverge to FCE		22	21	22	22	24	25	24	25	24	21	17	15	14	12	12	11
		22	21	22	22	24	25	24	25	24	21	18	15	15	12	12	11
Between FCE On/Off Ramps		22	21	22	23	24	25	25	26	25	22	18	16	15	12	12	11
		22	21	22	23	24	25	26	26	25	22	18	16	15	12	12	11
Merge from FCE		20	20	20	21	22	23	23	24	23	20	16	15	14	13	12	11
		20	20	20	21	22	23	23	24	23	20	16	15	14	13	12	11
Between FCE and IGP		20	20	20	21	22	23	23	24	23	20	16	15	14	13	12	11
		18	18	18	19	20	20	21	21	20	17	14	13	12	11	10	10
		18	17	18	18	19	20	20	20	19	17	14	13	12	11	10	9
		18	17	18	19	19	20	21	20	20	17	14	13	12	11	10	9
		18	17	18	19	19	20	21	21	20	17	14	13	12	11	10	9
Diverge to IGP		18	17	18	19	19	20	21	21	20	17	14	13	12	11	10	9
		18	18	18	19	19	20	20	21	20	18	14	13	12	11	10	9
Between IGB Off/On Ramps		18	18	18	19	20	20	21	21	20	18	14	13	12	11	10	9
		18	18	18	19	20	20	21	21	20	18	14	13	12	11	10	10
Merge from IGB		18	18	18	19	20	20	21	21	20	18	15	13	12	11	10	10
		17	16	16	17	17	18	19	19	18	16	13	12	11	10	9	9
South of IGP		16	16	16	16	17	18	19	19	18	16	13	12	11	10	9	9
		17	16	16	17	17	18	19	19	18	16	13	12	11	10	9	9
		15	15	15	16	16	17	18	17	17	15	12	11	10	10	9	8
		21	20	20	21	22	23	24	24	25	20	17	15	14	13	12	10
		20	20	20	21	22	23	23	23	22	20	17	15	13	13	11	10
		20	20	20	21	22	23	23	23	22	20	17	15	13	13	12	10

Direction of Travel

Legend

- Density ≤ 30 vpmpl
- Density 30-45 vpmpl
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl

I-95 Northbound

Density (veh/mi/ln)

Location (Northbound)	Hour 1 0.25	Hour 1 0.50	Hour 1 0.75	Hour 1 1.00	Hour 2 0.25	Hour 2 0.50	Hour 2 0.75	Hour 2 1.00	Hour 3 0.25	Hour 3 0.50	Hour 3 0.75	Hour 3 1.00	Hour 4 0.25	Hour 4 0.50	Hour 4 0.75	Hour 4 1.00
South of IGP	20	21	22	22	23	22	23	23	21	18	17	15	15	14	12	10
	21	21	22	22	23	23	23	23	21	18	17	16	15	14	12	10
	21	21	22	22	23	23	23	23	21	18	17	16	15	14	12	10
	21	21	22	22	23	23	23	23	21	18	17	16	15	14	12	10
Diverge to IGP	15	16	16	16	17	17	17	17	16	14	12	12	11	10	9	8
Between IGB Off/EB On Ramps	12	13	13	13	13	13	13	14	12	11	10	9	9	8	7	6
Merge from IGB EB	14	14	15	15	15	15	15	15	14	13	11	11	10	9	8	7
Between IGB EB/WB On Ramps	17	17	18	18	18	18	19	19	17	15	14	13	12	11	10	9
Merge from IGB WB	14	15	15	15	16	16	16	16	15	13	12	11	11	10	9	8
Between IGP and FCE	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	19	19	20	20	20	20	19	17	15	14	13	12	11	10
	18	19	20	20	20	20	21	21	18	17	15	14	14	12	11	10
Diverge to FCE	18	19	20	20	21	20	21	21	20	17	15	14	14	12	11	10
Between FCE On/Off Ramps	20	22	22	22	23	23	23	24	22	19	17	16	15	14	12	11
	20	21	22	22	23	23	23	23	22	19	17	16	15	15	13	11
	20	21	22	22	23	23	23	23	22	19	17	16	16	15	13	11
	20	22	22	22	23	23	23	23	22	19	17	16	16	15	13	11
Merge from FCE	18	19	19	19	20	20	20	21	19	16	15	13	13	12	11	9
Between FCE and CR 210	22	23	23	24	24	24	25	25	23	20	18	17	16	15	13	11
	22	23	23	23	24	24	25	25	23	20	18	17	16	15	13	11
	22	23	23	23	24	24	24	25	23	20	18	17	16	15	13	11
	22	23	23	24	24	24	25	25	24	20	18	17	16	15	13	11
	22	23	24	24	25	25	25	25	24	21	18	17	16	15	13	12
	22	23	23	24	24	24	25	25	24	21	18	17	16	15	13	12
Diverge to CR 210	17	18	18	19	19	19	19	20	19	16	14	13	13	12	11	9
Between CR 210 On/Off Ramps	18	19	19	20	20	20	21	21	20	17	15	14	13	13	11	10
	18	19	19	20	20	20	21	21	20	17	15	14	13	13	11	10
Merge from CR 210	18	20	20	20	21	21	21	21	20	17	15	14	13	12	11	10
North of CR 210	22	24	24	25	26	26	26	27	25	21	19	17	16	15	14	12
	22	23	24	24	25	25	26	26	24	21	19	17	16	15	14	12
	22	23	24	24	25	25	25	26	24	21	18	17	16	15	14	12
	22	23	24	24	24	25	25	26	24	21	18	17	16	15	14	12

Layout: Direction of Travel

I-95 Southbound

Density (veh/mi/ln)

Location (Southbound)	Hour 1 0.25	Hour 1 0.50	Hour 1 0.75	Hour 1 1.00	Hour 2 0.25	Hour 2 0.50	Hour 2 0.75	Hour 2 1.00	Hour 3 0.25	Hour 3 0.50	Hour 3 0.75	Hour 3 1.00	Hour 4 0.25	Hour 4 0.50	Hour 4 0.75	Hour 4 1.00
North of CR 210	16	17	17	18	18	19	19	19	18	16	15	13	13	12	11	9
	16	17	18	18	18	19	19	19	18	16	15	13	13	12	11	9
	16	17	18	18	18	19	19	19	18	16	15	13	13	12	11	9
	13	14	14	14	14	15	15	15	14	13	12	11	10	10	8	7
	13	14	14	14	14	15	15	15	14	13	12	11	10	10	8	7
Diverge to CR 210	13	14	14	14	14	15	15	15	14	13	12	11	10	10	9	7
Between CR 210 On/Off Ramps	13	14	14	15	15	15	16	15	15	14	12	11	10	10	9	8
	13	14	14	15	15	15	15	15	15	13	12	11	10	10	9	8
Merge to CR 210	13	14	14	15	14	15	15	15	14	13	12	11	10	9	9	7
Between CR 210 and FCE	16	17	17	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	17	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	17	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	17	18	18	18	19	18	18	16	15	13	12	12	11	9
	16	17	17	18	18	18	19	19	18	16	15	13	12	12	11	9
	16	17	17	18	18	19	19	19	18	16	15	14	13	12	11	9
Diverge to FCE	16	17	18	18	18	19	19	19	18	16	15	14	13	12	11	9
Between FCE On/Off Ramps	16	16	17	17	17	18	18	18	17	16	14	13	12	11	10	9
	15	16	17	17	17	18	18	18	17	16	14	13	12	12	10	9
	16	16	17	18	17	18	18	18	17	16	14	13	12	12	10	9
Merge from FCE	15	15	15	16	16	16	17	17	16	14	13	12	11	10	9	8
Between FCE and IGP	14	15	15	16	16	16	16	16	15	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	15	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	15	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	15	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	16	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	17	16	14	13	12	11	10	9	8
	14	15	15	16	16	16	16	17	16	15	13	12	11	10	9	8
Diverge to IGP	14	15	16	16	16	16	17	17	16	15	13	12	11	11	9	8
Between IGB Off/On Ramps	13	14	15	15	15	15	16	16	15	14	12	12	11	10	9	8
	13	14	14	15	15	15	16	16	15	14	12	12	11	10	9	8
	13	14	14	15	15	15	16	16	15	14	13	12	11	10	9	8
Merge from IGB	12	13	13	14	14	14	14	14	14	13	11	10	10	9	8	7
South of IGP	17	17	18	18	19	19	19	19	19	17	15	14	13	12	11	9
	16	17	18	18	18	19	19	19	18	17	15	14	13	12	11	9
	16	17	18	18	18	19	19	19	18	17	15	14	13	12	11	9

Layout: Direction of Travel

Legend

- Density ≤ 30 vpmpl
- Density 30-45 vpmpl
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl

I-95 Northbound

Location	Density (veh/mi/ln)															
	Hour 1				Hour 2				Hour 3				Hour 4			
	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00
South of IGP	16	16	17	18	19	19	19	19	17	14	12	12	11	10	9	9
	16	16	17	18	19	19	19	19	17	14	12	12	11	10	9	9
	16	16	17	18	19	19	19	19	17	14	12	12	11	10	9	9
	16	16	17	18	19	19	19	19	17	14	12	12	11	10	9	9
Diverge to IGP	12	12	13	13	14	14	14	14	13	11	9	9	8	7	7	6
Between IGB Off/EB On Ramps	10	10	10	11	11	11	11	11	10	9	8	7	7	6	6	5
Merge from IGB EB	11	10	11	11	12	12	12	12	11	9	8	8	7	7	6	6
Between IGB EB/WB On Ramps	13	13	13	14	15	15	15	15	14	11	10	9	9	8	7	7
Merge from IGB WB	11	11	12	12	13	13	13	13	12	10	9	8	8	7	6	6
Between IGP and FCE	14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	8
	14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	8
	14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	8
	14	14	14	15	16	16	16	16	15	12	11	10	10	9	8	8
	14	14	14	15	16	16	16	16	15	11	10	10	10	9	8	8
	14	14	14	15	16	16	16	16	15	13	11	10	10	9	8	8
	14	14	15	15	16	17	17	17	16	13	11	10	10	9	8	8
Diverge to FCE	14	14	14	15	16	17	17	17	16	13	11	10	10	9	8	8
Between FCE On/Off Ramps	16	15	16	17	18	18	18	18	17	14	12	11	11	10	9	8
	16	**16**	**16**	**17**	**18**	**18**	**18**	**18**	**17**	**14**	**12**	**11**	**11**	**10**	**9**	**8**
	16	**16**	**16**	**17**	**18**	**18**	**18**	**18**	**17**	**14**	**12**	**11**	**11**	**10**	**9**	**8**
	16	**16**	**16**	**17**	**18**	**18**	**18**	**18**	**17**	**14**	**12**	**11**	**11**	**10**	**9**	**8**
Merge from FCE	13	13	13	14	15	15	15	15	14	11	10	9	9	8	7	7
Between FCE and CR 210	16	16	16	17	18	19	19	18	17	14	12	11	11	10	9	9
	16	16	16	17	18	19	19	18	17	14	12	11	11	10	9	9
	16	16	16	17	18	18	19	18	17	14	12	11	11	10	9	9
	16	16	16	17	18	19	19	19	17	14	12	12	11	10	9	9
	16	16	16	17	18	19	19	19	18	15	13	12	11	10	9	9
	16	16	16	17	18	19	19	19	18	15	13	12	11	10	9	9
Diverge to CR 210	13	12	13	13	14	15	15	15	14	12	10	9	9	8	7	7
Between CR 210 On/Off Ramps	14	13	13	14	15	15	16	15	15	12	11	10	9	9	8	7
	14	13	13	14	15	15	16	15	15	12	11	10	9	9	8	7
Merge from CR 210	14	13	14	14	15	15	16	15	15	12	10	10	9	8	8	7
	17	16	17	17	19	19	19	19	18	15	13	12	11	10	9	9
North of CR 210	17	16	16	17	18	19	19	19	18	15	13	12	11	10	9	9
	17	16	16	17	18	19	19	19	18	15	13	12	11	10	9	9
	17	16	16	17	18	19	19	19	18	15	13	12	11	10	9	9

I-95 Southbound

Location	Density (veh/mi/ln)															
	Hour 1				Hour 2				Hour 3				Hour 4			
	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00	0.25	0.50	0.75	1.00
North of CR 210	22	21	22	23	24	25	25	26	24	21	18	16	15	13	12	11
	22	21	22	23	24	25	25	26	24	21	18	16	15	13	12	11
	22	21	22	23	24	25	25	26	24	21	18	16	15	13	12	9
	17	17	17	18	19	19	20	20	19	17	14	13	12	11	10	9
Diverge to CR 210	17	17	17	18	19	19	20	20	19	17	14	13	12	11	10	9
	18	17	18	18	19	19	20	20	19	17	14	13	12	11	10	9
Between CR 210 On/Off Ramps	18	18	18	19	20	20	21	21	20	18	15	13	12	11	10	10
	18	18	18	19	20	20	21	21	20	18	15	13	12	11	10	9
Merge to CR 210	17	17	17	18	19	20	20	20	19	17	14	13	12	11	10	9
	22	21	22	23	24	25	25	26	24	21	17	16	14	13	12	11
Between CR 210 and FCE	22	21	21	23	24	24	25	25	24	21	17	16	14	13	12	11
	22	21	21	22	24	24	25	25	24	21	17	16	14	13	12	11
	22	21	21	22	24	24	25	25	24	21	18	16	14	13	12	11
	22	21	22	22	24	24	25	25	24	21	18	16	15	13	12	11
	22	21	22	23	24	25	26	26	25	21	18	16	15	13	12	11
Diverge to FCE	23	22	22	23	25	26	27	27	25	22	18	16	15	13	12	11
Between FCE On/Off Ramps	20	20	20	21	22	23	24	24	23	20	17	15	14	13	12	11
	20	20	20	21	22	23	23	24	22	20	17	15	14	13	12	11
Merge from FCE	20	20	20	21	22	23	23	24	22	20	17	15	14	13	12	11
	18	18	18	19	20	20	21	21	20	17	14	13	12	11	10	10
Between FCE and IGP	18	17	18	18	19	20	20	20	19	17	14	13	12	11	10	9
	18	17	18	18	20	20	21	20	20	17	14	13	12	11	10	9
	18	17	18	18	19	20	20	21	20	17	14	13	12	11	10	9
	18	17	18	18	20	20	20	21	20	17	15	13	12	11	10	9
	18	18	18	18	19	20	20	21	20	17	15	13	12	11	10	9
	18	18	18	19	20	20	20	21	20	18	15	13	12	11	10	9
Diverge to IGP	18	18	18	19	20	21	21	21	20	18	15	13	12	11	10	10
Between IGB Off/On Ramps	17	16	16	17	18	18	19	19	18	16	14	12	11	10	9	9
	16	16	16	16	17	18	19	18	18	16	14	12	11	10	9	9
Merge from IGB	17	16	16	17	17	18	19	19	18	16	14	12	11	10	9	8
	15	15	15	16	16	17	18	17	17	15	13	11	10	9	9	8
South of IGP	21	20	21	21	22	23	24	24	23	20	17	15	14	13	12	10
	20	20	20	21	22	23	23	23	22	20	17	15	14	13	12	10
	20	20	20	21	22	22	23	23	22	20	17	15	14	13	12	10

Legend

- Density ≤ 30 vpmpl
- Density 30-45 vpmpl
- Density 45-55 vpmpl
- Density 55-75 vpmpl
- Density ≥ 75 vpmpl

2045 Network-Wide Performance

Table 7-1 summarizes the network-wide performance results for the 2021 SIMR Concept and FCE SIMR Concept during the 2045 AM and PM peak periods. Comparison of the alternatives shows that the FCE SIMR Concept exhibited similar performance to the 2021 SIMR Concept in terms of average speed, delay, demand, travel time, total stops and vehicles arrived. The slight differences shown between the two alternatives are likely due to model variability. All differences are within 5% which is typically considered statistically negligible.

In the AM peak, the average speed of the FCE SIMR concept was identical to the 2021 SIMR, with an average speed of 49 mph. The total delay increased be a negligible 1% with the FCE SIMR concept. The FCE SIMR concept also decreased latent delay by -2%, decreased latent demand by -4% and increased total stops by 3%. Lastly, the total travel time and vehicles arrived were essentially identical between the two alternatives.

In the PM peak, the average speed of the FCE SIMR concept was identical to the 2021 SIMR, with an average speed of 49 mph. The total delay was similar between the two alternatives. The FCE SIMR concept also increased latent delay by 4%, decreased latent demand by -2% and increased total stops by 1%. Lastly, the total travel time and vehicles arrived were essentially identical between the two alternatives.

This upholds the results observed in the previous sections, in which, the FCE SIMR Concept operates similar to the 2021 SIMR Concept.

Table 7-1 Design Year 2045 Network-Wide Performance

AM PEAK	2021 SIMR	FCE SIMR	Δ
Average Speed (mph)	49	49	0%
Total Delay (hr)	11,411	11,518	1%
Latent Delay (hr)	2,499	2,440	-2%
Latent Demand	175	168	-4%
Total Travel Time (hr)	58,881	59,027	0%
Total Stops	906,361	930,695	3%
Vehicles Arrived	444,703	445,052	0%
PM PEAK	**2021 SIMR**	**FCE SIMR**	**Δ**
Average Speed (mph)	49	49	0%
Total Delay (hr)	10,830	10,954	0%
Latent Delay (hr)	1,791	1,867	4%
Latent Demand	199	196	-2%
Total Travel Time (hr)	56,997	57,152	0%
Total Stops	816,038	830,563	1%
Vehicles Arrived	450,830	451,045	0%

Note: Percentages indicate comparisons to the 2021 SIMR Concept.

7.4 Future Conditions Safety Analysis

The AASHTO Highway Safety Manual (HSM) methodology was used to compare the predicted crashes of the 2021 SIMR Concept and FCE SIMR Concept. The safety analysis performed for this SIMR Re-evaluation focused solely on the proposed modifications at the FCE interchange. The predictive safety analysis was performed from north of the IGP interchange to south of the CR 210 interchange. It is not expected the modifications will impact the future conditions safety analysis at any other location within the study area. To gain an understanding of the future safety conditions for the rest of the study area, please refer to the approved 2021 SIMR Re-evaluation provided in **Appendix A**.

The Enhanced Interchange Safety Analysis Tool (ISATe) was used to apply the HSM predictive methodologies for this analysis. ISATe is a spreadsheet-based tool that helps to streamline the application of Safety Performance Functions (SPFs) and Crash Modification Factors (CMFs) as specified for freeway segments from the 2014 HSM Supplement. The SPF for Multiple-Vehicle Crashes is represented by HSM Equation 18-15 and the SPF for Single-Vehicle Crashes is represented by HSM Equation 18-18. The SPFs were also specified by crash severity, Fatal and Injury (FI) and Property Damage Only (PDO), and area type, Urban, using coefficients from HSM Tables 18-5 and 18-7 for Multiple-Vehicle and Single-Vehicle crashes, respectively. The base conditions for the SPFs used are the following:

- Lane width of 12 feet
- Inside shoulder width of 6 feet
- Median width of 60 feet
- No presence of a median barrier
- No presence of shoulder rumble strip
- Outside shoulder width of 10 feet
- A clear zone of 30 feet
- No presence of an outside barrier

CMFs are applied to SPFs to estimate the Predicted Crashes for scenarios where the geometry does not match the base conditions of the SPF. The following CMFs were applied to the SPFs for FI crashes and PDO crashes during the HSM analysis:

- Lane Width
- Inside Shoulder Width
- Median Width
- Median Barrier
- Outside Shoulder Width
- Outside Clearance
- Outside Barrier

The 2030 and 2045 AADTs were utilized in the freeway segment safety analysis. **Table 7-2** contains the total annual predicted crashes for the analysis alternatives as well as the percent difference between the 2021 SIMR Concept and the FCE SIMR Concept. The FCE SIMR Concept provides enhanced safety benefits compared to the 2021 SIMR Concept as a result of the FCE northbound access ramps being relocated from the left side of I-95 to the right side. Based on this analysis, the FCE SIMR Concept is expected to reduce crashes by 22% annually along the I-95 mainline at the northbound off ramp to FCE and 20% annually at the northbound on ramp from FCE. Overall, crashes within the study area are expected to reduce by 16% annually compared to the 2021 SIMR Concept. **Appendix C** contains the detailed ISATe input and output sheets.

Table 7-2 Total Predicted Crashes (per year) for Proposed FCE Interchange Modifications

Segment	2021 SIMR Concept	FCE SIMR Concept[1]
I-95 from N of IGP to FCE NB Off/SB On Ramps	20.96	16.45 (-22%)
I-95 between FCE ramps	16.03	16.03 (0%)
I-95 from FCE NB On/SB Off Ramps to S of CR 210	26.49	21.16 (-20%)
Total	**63.48**	**53.64 (-16%)**

[1]Percentage represents the percent change in predicted crashes when compared to the 2021 SIMR Concept.

7.5 Recommended Alternative

Both alternatives provide acceptable operations through Design Year 2045. The 2021 SIMR Concept and FCE SIMR Concept provide similar results in terms of operations. The FCE SIMR Concept does show potential safety improvements. Based on predictive safety analysis it is expected the FCE SIMR Concept could reduce approximately 10 crashes per year. This report supports the conclusion that the proposed FCE northbound access ramp modifications for the FCE SIMR Concept will benefit both the interstate and regional transportation systems.

The FCE SIMR Concept operational analysis results show that the I-95 facility experiences similar operations compared to the 2021 SIMR Concept. The FCE SIMR Concept does show minor improvements in speed, demand and density along northbound I-95 within the FCE interchange. The results indicate that the FCE SIMR Concept will provide free-flow operations along I-95.

The FCE SIMR Concept also provided significant safety improvements along I-95. Using the HSM methodology, it is predicted the total number of annual crashes will reduce along I-95 by 16% as a result of the northbound access ramps modification.

There are no known environmental concerns or fatal flaws with the proposed design changes. The environmental considerations are provided in the PD&E study.

Based on the safety and traffic operations of the FCE SIMR Concept, it is considered as the preferred alternative for this SIMR. **Appendix D** provides the conceptual signing plan for the FCE SIMR Concept.

8.0 JUSTIFICATION FOR PROJECT

The proposed roadway enhancements, of the FCE SIMR Concept, enhance safety within the area of influence, as well as provide acceptable traffic operations through the Design Year 2045.

8.1 Compliance with FHWA General Requirements

The following requirements serve as the primary decision criteria used in the approval of interchange modification projects. Responses to the two FHWA policy points are provided to show that the proposed project is viable based on the analysis performed to date.

8.1.1 FHWA Policy Point 1

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d), and 23 CFR 655.603(d)).

An in-depth operational and safety analysis was conducted to study the operational and safety benefits offered by the proposed modifications at the FCE interchange. Consistent with the approved MLOU, the approved concept from the July 2021 SIMR Re-evaluation was compared with the new FCE SIMR Concept. The FCE SIMR Concept recommends the northbound access ramps at the FCE interchange be relocated from the left side of the I-95 mainline to the right side. The operational analysis was performed using Vissim microsimulation for the Design Year 2045. Several performance measures were used to compare the traffic operations and safety. Key measures include:

- Peak hour link-level freeway mainline segments
  - Travel speed
  - Simulated (throughput) volume
  - Density
- Peak period link-level density heat maps for the freeway mainline segments
- Network-Wide Performance
  - Average speed
  - Total delay
  - Latent delay
  - Latent demand
  - Total travel time
  - Total stops
  - Vehicles Arrived
- Safety
  - Predicted reduction in crashes

The Design Year 2045 operational analysis results show that the FCE SIMR Concept will operate at similar conditions compared to the 2021 SIMR Concept. For both alternatives within the area of influence, I-95 will operate at nearly free-flow speed. In addition to operational analysis, safety analysis has been performed to compare the two alternatives. A predictive safety analysis was performed using HSM methodologies. Based on this analysis, the FCE SIMR Concept is expected to reduce crashes by 22% annually along the I-95 mainline at the northbound off ramp to FCE and 20% annually at the northbound on ramp from FCE. Overall, crashes within the study area are expected to reduce by 16% annually compared to the 2021 SIMR Concept.

In summary, the proposed modifications will provide similar operations along I-95 and safety benefits to the study corridor (I-95) at the FCE interchange.

8.1.2 FHWA Policy Point 2

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

I-95 is a public facility and all interchanges within the study area provide full access and will continue to do so with the FCE SIMR Concept. The FCE SIMR Concept will maintain and provide all interchange accesses catering to all traffic movements to/from existing interchanges within the study limits.

The proposed improvements under the FCE SIMR Concept were designed to meet current standards for federal-aid projects on the interstate system and conform to the American Association of State Highway and Transportation Officials (AASHTO) and the FDOT Design Manual (FDM). Various border width variations are expected between MP 0.977-6.138. These variations are justified because the project will still be able to accommodate proposed signing, lighting, drainage features, guardrail, fencing, clear zone and construction and maintenance despite having substandard border width.

9.0 CONCEPTUAL FUNDING PLAN/CONSTRUCTION SCHEDULE

Funding for this SIMR is available through the FDOT District Two. These capacity improvements are included in the 2045 Cost Feasible Plan of NFTPO's LRTP. As part of FDOT's Five Year Work Program, I-95 from IGP to FCE and FCE from I-95 to east of CR 16A Spur are funded for FY 2023. Also as part of FDOT's Five Year Work Program, I-95 from north of FCE to the Duval County Line and I-95 from St. Johns County Line to I-295 are funded for FY 2025.