

1 Project Overview

1.1 Introduction

The intent of this project is to address existing capacity conditions of the southbound US-1/SR-5 to westbound I-595/SR-862 single-lane on-ramp. This Interchange Operational Analysis Report (IOAR) has been prepared to evaluate the impacts of adding a second lane to southbound US-1 to westbound I-595 on-ramp. The Florida Department of Transportation (FDOT), District 4 is the applicant seeking approval of this Interchange Operational Access Report (IOAR) that presents the necessary documentation for such improvements.

State of Florida established the Strategic Intermodal System (SIS), which consists of high priority transportation facilities and services of statewide and interregional significance. These SIS facilities are critical to the movement of people and goods in Florida, and their function is considered to be vital to Florida's economic competitiveness.

I-595, which is a designated SIS facility, is an east-west roadway that links I-75, Florida's Turnpike, SR 7, I-95 and US-1. It is a vital thoroughfare that links multi-modal hubs to facilitate the safe and efficient movement of goods and people. The interchange of I-595 at US-1 is significant for the passenger and freight movements.

Field review was conducted in November of 2016 to observe traffic operations at the interchange of I-595 and US-1. Congestion was observed southbound US-1 from SR-84 intersection leading to the on-ramp to I-595. During PM peak, several vehicles were observed unsafely overtaking trucks in the diverge area of the SB US-1 to WB I-595 by using the gore area of the on-ramp (see picture below). Vehicles were observed traveling at a very low speed on the ramp. To address this issue along the US-1 arterial segment, FDOT prepared a Concept Development Report in April 2018 that included reconfiguring the intersection geometry at US-1 and SE 28th Street to consist of only four legs.



SB US-1 TO WB I-595 ON-RAMP GORE AREA

This IOAR was prepared to document the safety, operational and engineering acceptability of an additional lane on southbound US-1 to westbound I-595 on-ramp. Preliminary engineering plans were developed, in conjunction with the US-1 arterial segment Concept Development Report, to address capacity deficiencies within the existing right-of-way to minimize impacts and costs. Conceptual design plans for the improvements are provided in this report for the project, along with a cost estimate and documentation of the benefits of the project. The concept developed throughout this report is to:

- **Add a Second Southbound Lane to the On-Ramp.** By adding a second lane to the Southbound US-1 to Westbound I-595 On-Ramp, the improvements would decrease delay for motorists to reach westbound I-595 and to ensure that queues do not impact US-1 operations.