

1.0 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT) District Seven is preparing an Interchange Operational Analysis Report (IOAR) to document the traffic operational and highway safety benefits of improving the Interstate 275 (I-275) (State Road (SR) 93) interchange at 22nd Avenue South in Pinellas County, Florida. The location of the I-275/22nd Avenue South interchange is shown on **Figure 1**. The proposed improvement is needed to alleviate existing traffic operational/highway safety deficiencies on the southbound I-275 off ramp to 22nd Avenue South and on westbound 22nd Avenue South between I-275 and US 19.

1.2 Purpose and Need

I-275 is a vital link in the local and regional transportation network and serves as a critical evacuation route. As a major north-south corridor through Pinellas County, I-275 links the Tampa Bay region with the remainder of the state and the nation supporting commerce, trade, and tourism. I-275 is part of the Strategic Intermodal System (SIS), a statewide transportation network of highways, railways, waterways, and transportation hubs that provides for the movement of goods and people at high speeds and high traffic volumes. As an SIS facility and part of the regional roadway network, I-275 is included in the 2035 Regional Long Range Transportation Plan (LRTP) developed by the West Central Florida Metropolitan Planning Organization's (MPO) Chairs Coordinating Committee (CCC) and the Tampa Bay Area Regional Transportation Authority (TBARTA) Master Plan. Preserving the operational integrity and regional functionality of I-275 is critical to mobility and economy of the Tampa Bay region.

Twenty second Avenue South is an important east-west arterial roadway in southern Pinellas County that links the City of Gulfport to I-275. Twenty second Avenue South intersects 34th Street South (better known as US 19) west of I-275. Traffic volumes are projected to increase in the future along 22nd Avenue South and its major cross streets, as well as on I-275. The increased traffic traveling along the 22nd Avenue South corridor, combined with increased traffic entering and exiting I-275, will cause increased delays and congestion.

Excessive vehicle queuing occurs on the southbound I-275 off ramp to 22nd Avenue South as a result of the close spacing between the downstream intersection of US 19/22nd Avenue South and the southbound I-275 ramp terminal intersection. In addition, a single yield-controlled southbound-to-westbound right-turn lane on the southbound I-275 off ramp to 22nd Avenue South provides insufficient capacity to accommodate existing and future travel demand for this movement.

Currently, traffic in the westbound direction of 22nd Avenue South queues in the outside lanes between the southbound I-275 off ramp and US 19 during both the AM and PM peak periods. This vehicle queue is long enough to block right turning vehicles entering westbound 22nd Avenue South from the southbound I-275 off ramp. This causes vehicles on the off ramp to queue and spillback to the southbound I-275 mainline. Safety is severely reduced as a result of the insufficient capacity and lack of vehicle storage between closely spaced intersections, thereby leading to increased numbers of crashes; specifically, rear-end collisions. Sideswipe and merging related crashes also occur as right turning vehicles, frustrated with high delays, fail to properly yield to westbound traffic. The purpose of this study is to evaluate various geometric and traffic control improvements to enhance traffic

operations and safety. The alternatives presented in this report aim to reduce the number of crashes and vehicle queues on the southbound I-275 off ramp.