

## 1.1 Purpose and Need

The purpose of this IMR is to improve operations on southbound I-75 between SR 56 and the southbound off ramp to I-275 (I-275/I-75 Apex). This project is needed to address the effect on safety and operations by eliminating the need for southbound vehicles to weave in the project area. The proposed improvements are expected to enhance the overall safety and improve the operating conditions within the project limits, as well as improve LOS for the southbound I-75 ramp junction with I-275. The need for this project is based on the following list of identified deficiencies:

- High speed vehicle weaving movements occur on southbound I-75 between the SR 56 on ramp and the major diverge area at the I-275/I-75 Apex, causing increased traffic congestion and reduced highway safety. During the AM peak hour, a heavy volume of traffic entering onto southbound I-75 from SR 56 is required to make up to two lanes changes to access southbound I-75 before the exit to I-275, while crossing the paths of traffic traveling on southbound I-75 that desire to head southbound on I-275. The intense vehicle weaving maneuvers within this section of freeway leads to a high number of lane-changing related crashes on southbound I-75 between SR 56 and I-275. The existing vehicle weaving issue is anticipated to be further exacerbated with the onset of the I-75 at SR 56 DDI. The DDI will allow higher traffic volumes to enter onto southbound I-75 at a faster rate.
- An existing C-D road is located adjacent to the northbound I-75 mainline lanes between the I-275/I-75 Apex and SR 56, but a corresponding C-D road is not provided adjacent to the southbound I-75 mainline lanes between SR 56 and the I-275/I-75 Apex. Providing a companion C-D road in the southbound direction would place less safe/higher speed vehicle weaving movements that occur on the higher priority I-75 mainline, onto a lower priority C-D road. Removing the vehicle weaving section on the southbound I-75 mainline would enhance safety and increase roadway capacity to support future growth and economic development.

## 1.2 Project Location

Southbound I-75 from SR 56 to the I-275/I-75 Apex is at the border of Hillsborough and Pasco Counties, 3.8 miles north of the I-75 at CR 581 (Bruce B. Downs Boulevard) interchange and 3.4 miles south of the I-75 at SR 54 interchange. SR 56 connects I-75 with US 19 (located 23.2 miles to the west), SR 589 (located 10.4 miles to the west), US 41 (located 5.3 miles to the west), and US 301 (located 12.0 miles to the east). **Figure 1** graphically displays the location of southbound I-75 from SR 56 to the I-275/I-75 Apex and the spacing between adjacent interchanges on I-75.

## 1.3 Area of Influence

For the purposes of evaluating the safety and operational acceptability of the proposed modifications along southbound I-75 from SR 56 to the I-275/I-75 Apex, the following list of highway segments, ramp junctions, and intersections are within the area of influence:

### Roadway Segments:

- Southbound I-75 from north of the southbound I-75 off ramp at SR 56 to south of the I-275/I-75 major diverge area;
- I-275, south of the I-275/I-75 major diverge area; and
- SR 56 from west of the southbound I-75 ramp terminal intersection to east of the northbound I-75 ramp terminal intersection.