

1.0 Project Description

Interstate 75 (I-75/SR 93A) is a major interstate highway that is part of Florida's Strategic Intermodal System (SIS); a high priority network of transportation facilities important to the state's economy and mobility. I-75 primarily runs north-south along the western portion of the State of Florida and plays a critical role in transporting people, freight, and goods safely and efficiently between South Florida (at its terminus with SR 826/Palmetto Expressway) and the rest of the United States via its entry into the State of Georgia, approximately midway between Lake City in northern Florida and City of Valdosta in southern Georgia. County Road 672 (Big Bend Road) is a four-lane divided arterial roadway that serves a dual purpose: to provide access to residential communities located in unincorporated southern Hillsborough County; and to form an east-west connection linking three primary north-south routes in the Tampa Bay Region (US 41 to the west, US 301 to the east, and I-75 approximately midway between US 41 and US 301). West of I-75, Big Bend Road is designated as a SIS Connector due to its important intermodal connection to Port Tampa Bay.

In recent years, southern Hillsborough County has experienced significant growth in residential development that has placed a strain on an interchange that was originally constructed in the 1970s when the surrounding land uses were rural in nature. As a result of this growth, the I-75/Big Bend Road interchange currently fails to operate at an acceptable Level of Service (LOS) target and exhibits a greater number of vehicle crashes than other highway facilities across the State of Florida. The need for improvement has become so acute that Hillsborough County had petitioned and received a federal earmark to assist in the funding of new north-oriented on and off ramps to/from I-75 at Big Bend Road. The Florida Department of Transportation (FDOT) District Seven, in coordination with Hillsborough County, proposes to modify the I-75/Big Bend Road interchange to provide for these new north-oriented ramps, and to also widen Big Bend Road to six lanes from Covington Garden Drive west of I-75 to Simmons Loop east of I-75. The social/economic, cultural, natural, and physical impacts of implementing these improvements are currently being evaluated under two ongoing Project Development and Environment (PD&E) Studies: I-75 PD&E Study Update from north of Moccasin Wallow Road in Manatee County to south of US 301 in Hillsborough County – Work Program Item Segment Number (WPID) 419235-2; and Big Bend Road Widening PD&E Study – Hillsborough County Capital Improvement Project Number (CIP) 6965600. Both studies have been screened through FDOT's Efficient Transportation Decision Making (ETDM) process: I-75 PD&E Study – ETDM #8001 and Big Bend Road PD&E Study – ETDM #9291.

This Interchange Modification Report (IMR) documents the evaluation of the safety, operational and engineering acceptability of the improvements proposed for the I-75/Big Bend Road interchange in Hillsborough County, Florida. The IMR is developed in accordance with the FDOT's *Interchange Access Request User's Guide (IARUG)* prepared by the Systems Implementation Office (SIO) and FDOT Topic No: 525-030-160-I (*New or Modified Interchanges*).

1.1 Purpose and Need

The purpose of this Interchange Access Request (IAR) is to identify the multimodal transportation improvements needed for the I-75/Big Bend Road interchange, that would not only provide for immediate relief to existing traffic congestion and highway safety deficiencies, but also allow for added highway capacity to support future growth and economic development. The need for this project is based on the following list of identified transportation deficiencies:

- There exists a safety problem associated with vehicles queuing on the southbound I-75 off ramp during the afternoon peak period and spilling back onto the high-speed (70-mile per hour posted speed) I-75 mainline lanes, thereby causing a disproportionate number of severe rear end crashes;

- Motorists experience undue vehicle delay and vehicle queuing as the result of an antiquated interchange design. The lack of north-oriented ramps to/from I-75 at Big Bend Road forces traffic that would normally operate as a free flow right turn movement under a conventional diamond interchange to operate as a signal-controlled left turn movement;
- Poor traffic operations currently exist on a designated hurricane evacuation route, causing concern for the safety of motorists during an evacuation event;
- Big Bend Road is both a designated truck route and a SIS Connector west of I-75; and is integral to providing regional truck traffic access to Port Tampa Bay. Elevated levels of traffic congestion at the I-75/Big Bend Road interchange reduce travel reliability for freight and goods movement to/from the Tampa Bay Region's largest economic engine;
- The poor levels of service exhibited at the subject interchange during peak travel periods do not support economic development and prosperity within the rapidly growing study area. This shortcoming will be further exacerbated with the onset of new development planned for the study area; and
- There is limited pedestrian and bicycle amenities on Big Bend Road within the vicinity of I-75. This is a concern for safety given that Eisenhower Middle School and East Bay High School generate non-motorized traffic that may conflict with passenger cars and trucks.

1.2 Project Location

The I-75/Big Bend Road interchange is in southern Hillsborough County, 5.9 miles north of SR 674 (Sun City Center Boulevard) and 4.2 miles south of Gibsonton Drive. Big Bend Road connects I-75 with US 41 (located 1.7 miles to the west) and US 301 (located 1.3 miles to the east). **Figure 1** graphically displays the location of the I-75/Big Bend Road interchange and the distances to key roadways. The northwest quadrant of the I-75/Big Bend Road interchange is occupied by the Hillsborough County Public Works Department's South Service Unit Operations maintenance facility, Eisenhower Middle School, and East Bay High School. The northeast quadrant is occupied by the newly constructed Spurling Family YMCA and Vance Vogel Park, and can be accessed through Bullfrog Creek Road. Old Big Bend Road, located immediately north of Big Bend Road, runs parallel in the east-west direction, and connects land uses in the northwest and northeast quadrants. In the southeast quadrant, the 90-bed St. Joseph's Hospital was opened in 2015. Currently, the southwest quadrant of the interchange is vacant.

1.3 Area of Influence

For the purposes of evaluating the safety and operational acceptability of the proposed modifications to the I-75/Big Bend Road interchange, the following list of highway segments, ramp junctions, and intersections are within the area of influence:

A. Highway Segments:

- On I-75, from south of the south oriented on and off ramps at Big Bend Road to north of the on and off ramps at Big Bend Road. Since the adjacent I-75 interchanges at Sun City Center Boulevard and Gibsonton Drive are located more than 4.2 miles away from the Big Bend Road interchange, there is no interaction in traffic flow on I-75 amongst the interchanges; and
- On Big Bend Road, from Covington Garden Drive west of I-75 to Simmons Loop east of I-75.