

INTERCHANGE MODIFICATION REPORT (IMR)

SR 9/I-95 from S. of Woolbright Road to N. of Woolbright Road
Project Development and Environment Study
FPID: 437279-1-22-02

lane) and SB (two lanes) directions. At the Woolbright Road interchange, the I-95 NB and SB ramp terminals are signalized intersections.

Bicycle lanes are located along Woolbright Road in the eastbound and westbound directions from SW 8th Street to I-95 NB ramp terminal intersection. There are no bike lanes along Woolbright Road east of I-95 interchange. Within the study area, sidewalks are present along Woolbright Road in the eastbound and westbound direction.

The project is listed in the FDOT Strategic Intermodal System (SIS) Adopted 5-Year Plan (FY 2019/2020 to 2023/2025). The SIS First Five-Year Plan illustrates projects on the SIS that are funded by the legislature in the Work Program (Year 1) and projects that are programmed for proposed funding in the next 2 to 5 years.

The IMR stems from a recently completed Project Traffic Analysis Report (PTAR), dated June 2020. The PTAR is part of the PD&E Study done to evaluate the proposed improvements at the I-95 interchange with Woolbright Road.

This IMR is being prepared to seek approval for the proposed improvements to the interstate access point of I-95 at Woolbright Road in Palm Beach County. This IMR has been developed in accordance with the FDOT Policy Statement 000-525-015: Approval of New or Modified Access to Limited Access Highways on the State Highway System (SHS), FDOT Procedure Topic 525-030-160: New or Modified Interchanges, Interchange Access Request User's Guide (IARUG), and the FDOT Procedure Topic 525-030-120: Project Traffic Forecasting.

1.2 Purpose and Need

The purpose of this study is to identify long-term needs of I-95 and develop concepts to address traffic spillback onto I-95, reduce congestion on I-95 and Woolbright Road, improve interchange operations, and improve safety at the I-95 and Woolbright Road interchange through the 2045 design year horizon. This project will also consider SIS connector improvements needed within the project area and will be consistent with plans for the I-95 mainline, including the potential extension of I-95 Express lanes through Palm Beach County.

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Additional considerations for the purpose and need for this project are further described in the following sections that include System Linkage, Capacity, Transportation Demand, Social Demands/Economic Development, Modal Interrelationships, and Safety.

System Linkage: I-95 is a part of the state's Strategic Intermodal System (SIS) and the National Highway System (NHS). A need exists to ensure that I-95 continues to meet the minimum requirements as a component of those two systems. The project is not proposing to change system linkage; however, the interchange modifications would improve movements within the existing systems. The proposed project at I-95 and Woolbright Road will help improve connectivity and capacity within the roadway network by addressing traffic spillback onto I-95 and improving interchange connections.

Capacity: Using field review data collected in 2018, A.M. and P.M. peak conditions were observed at all intersections in the study area. At the Corporate Drive/SW 8th Street intersection, during the P.M. peak hour, all approaches experienced minimal queues, except for the westbound and eastbound directions. The westbound left-turn queue experienced spillback into the through lanes and the eastbound direction experienced long queues. During the P.M. peak hour on the I-95 southbound ramp intersection, the eastbound approach experienced long queues, but all queues cleared the intersection during each signal cycle. The southbound approach experienced significant queues, with the queue not clearing during one signal cycle. During the P.M. peak hour at the I-95 northbound ramps intersection, the eastbound approach experienced minimal queue buildup and the northbound and westbound approaches experienced long queues; however, all queues cleared the intersection in one signal cycle for all approaches.

Transportation Demand: Interchange improvements to I-95 at Woolbright Road is included in the Palm Beach County TPA's 2045 LRTP under projects funded with SIS revenues, which includes federal funds. The project is consistent with the plans for the I-95 mainline, including the extension of express lanes into Palm Beach County.

Social Demands/Economic Development: Social and economic demands on the I-95 corridor will continue to increase as population and employment increase. The Palm Beach County TPA 2040 LRTP states that the population would grow 27 percent from 1.32 million in 2010 to 1.68 million in 2040. The employment was also forecasted to grow from 571,000 to 820,000 employees in the same 30 year period for an

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increase of nearly 44 percent. The predicted increase in population and employment will increase congestion in the study area.

Modal Interrelationships: Currently, sidewalks and crosswalks are provided on both sides of Woolbright Road. Palm Tran Route 70 services Seacrest Boulevard both north and south of Woolbright Road east of the interchange, as well as the Boynton Beach Tri-Rail station 2.68 miles north of Woolbright Road. The project proposes to provide undesignated bicycle lanes on both sides of Woolbright Road. Capacity improvements at the interchange will enhance the mobility of people and goods by alleviating current and future congestion at the interchange and the surrounding freight and transit networks. Reduced congestion will serve to maintain and improve viable access to the major transportation facilities and businesses in the area.

Safety: The crash data for the latest available five-year period (2013 to 2017) along Woolbright Road (93220000) from SW 8 Street to S. Seacrest Boulevard was retrieved from the FDOT SSOGis Tool. SSOGis is a database maintained annually by FDOT for crashes reported along the state highway facilities. The database provides information on various characteristics associated with each crash including: collision type, severity, weather conditions, road surface conditions and date/time information.

Overall, there was a total of 1076 crashes along I-95 mainline, ramps and Woolbright Road during the 5-year period. Of the 1076 crashes reported, 341 crashes occurred along Woolbright Road. Based on crash severity, front to rear (rear-end) crashes were the most common type of crash accounting for 163 (47.8%) of total crashes along Woolbright Road followed by 76 angle crashes accounting for (22.3%), and 27 sideswipe crashes (7.9%), 2 pedestrian crashes (0.6%) of total crashes. Majority of the crashes (256 crashes 75.1%) occurred under daylight conditions with 73 crashes (21.4%) occurred during nighttime. The percentage of nighttime crashes is lower than the statewide percentage of 33%. Poor surface conditions contributed only marginally to the number of crashes recorded over the five-year period as 289 (84.8%) of the total crashes occurred during clear weather conditions and on dry pavement surface. 52 of crashes (15.2%) occurred on wet pavement. This is lower than the statewide average of 15%.

One (1) fatal crash occurred within the study limits during the five-year period. Property Damage Only (PDO) crashes accounted for 192 (56.3%) of all crashes; 148 crashes resulted in Injury. Among the contributing causes documented in the crash data, “carelessness of negligent manner” (119 crashes, 34.9%), resulted in the most crashes. Other contributing causes included “failed to yield right-of-way” (45

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crashes, 13.2%), “followed too closely” (22 crashes, 6.5%), “ran red light” (23 crashes, 6.7%). A significant number of crashes were documented to have been the result of “no contributing action” (21 crashes, 6.2%) and “other contributing action” (26 crashes, 7.6%).

1.3 Project Location

The subject interchange is located in Palm Beach County along I-95 at Milepost 13.75, Section number 93220000. The I-95 at Woolbright Road interchange is located between of the I-95 at Boynton Beach Boulevard interchange to the north and I-95 at Atlantic Avenue interchange to the south. Woolbright Road is approximately 1.0 mile south of Boynton Beach Boulevard and 3.8 miles north of Atlantic Avenue. All signalized intersections along Woolbright Road from Corporate Drive/SW 8th Street to Seacrest Boulevard are included in the study area. The project location and the study area are shown in **Figure 1-1**. The study area does not extend to Atlantic Avenue interchange because it is over 3.5 miles south of the study interchange.

4. NEED

The Woolbright Road interchange with I-95 is an important component of the SIS in Palm Beach County, Florida and provides a key transportation element. This interchange is an important connection for commuters and freight traffic in the region. The objective of the IMR is to propose improvements that will provide a safer and more operationally efficient interchange.

Operational Performance

The I-95 NB and SB ramp terminal intersections operate at LOS E or worse during AM and PM peak hours in Existing Year 2019. However, traffic congestion and long delays are experienced by some movements at the study intersections, where they operate at LOS F during the PM peak hour. At the Woolbright Road and I-95 SB ramp terminal, the eastbound right and southbound left movements operate at LOS F in the Existing Year 2019. Also, the westbound right and northbound left movements at Woolbright Road and I-95 NB ramp terminal intersection operate at LOS F during the PM peak hour. Travel demand forecasts indicate that the study area is expected to experience substantial traffic growth in future years. Based on the anticipated growth in traffic, operating conditions at the interchange and the study intersections will further deteriorate. Under No-Build Alternative, the traffic analysis performed for the signalized intersections indicated that all the study intersections will operate at an overall LOS F during the peak hours by Design Year 2045. The proposed project will address these concerns by increasing capacity at the interchange and providing acceptable operating conditions through the Design Year (2045).

Transportation Capacity

An increase in demand on I-95 and Woolbright Road interchange is anticipated in the future due to planned growth in the area. As a result, additional traffic demand on major arterials within the study area will need to be addressed. **Table 4-1** summarizes the anticipated growth within the study area.

Table 4-1: Forecasted Growth in Traffic Volumes

Segment	Existing (2019)	Opening (2025)	Design (2045)
I-95 south of Woolbright Road	228,000	232,000	242,000
I-95 north of Woolbright Road	237,000	243,000	261,000
Woolbright Road west of I-95	42,500	44,500	52,000
Woolbright Road east of I-95	40,500	42,000	46,000

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The study area also has a high volume of heavy traffic along I-95. For the purpose of this study, it was assumed that trucks would increase proportionally with traffic volumes. I-95 experiences a 7.4% of daily truck percentage to the north of Woolbright Road and a 6.1% of daily truck percentage to the south of Woolbright Road. The truck volume will increase proportionally to the vehicular traffic and will result in further deteriorated conditions.

Safety

The existing safety analysis provided in **Section 3.3.3** shows that high crash locations exist within the study area. Specifically, Woolbright Road at SW 8th Street intersection and Seacrest Boulevard along Woolbright Road have higher crash rates than the statewide average. The increased traffic volumes and high travel speeds create an environment that is prone to crashes.

If no operational and safety improvements are made within the project limits, traffic operations within the study area will progressively become worse, increasing the number of crashes, and deteriorating the access to and from I-95 and Woolbright Road for users.

Emergency Evacuation and Response Times

I-95 and Woolbright Road serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management and Palm Beach County. As designated evacuation facilities, the interchange is critical in facilitating traffic flow during emergency evacuation periods. Woolbright Road is a major east-west corridor in eastern Palm Beach County providing linkage to I-95.