7.5 Environmental Impacts

The I-75 IMR study area is currently in compliance with the federal (Environmental Protection Agency) air quality standards for carbon monoxide, ozone and particulate matter. The current proposed design and potential associated design changes are not expected to have a negative impact on air quality.

The PD&E Study identified substantial wetland impacts estimated at approximately 24.1 acres of wetlands (within PD&E Segments 4-5). Design alternatives are being reviewed to avoid and minimize these wetland impacts to the greatest extent practicable. Updated design-phase estimates suggest that approximately 6.25 acres of unavoidable wetland impacts and 1.84 acres of surface water impacts will result from the I-75/SR 64 interchange improvements project. Final mitigation needs will be determined by performing a detailed UMAM assessment of unavoidable wetland impacts. The FDOT will coordinate further with the necessary environmental and other agencies (such as the Southwest Florida Water Management District, U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service) during project design to develop compensatory mitigation for proposed wetland and wetland-dependent species habitat impacts. Based on mitigation, no net loss of wetlands is anticipated from this project.

For threatened and endangered species, evaluation cited within the I-75 PD&E studies finds that the project is expected to have a moderate involvement/impact. The U.S. Fish and Wildlife Service has determined that this project "may affect, but is not likely to adversely affect" the Gulf sturgeon, eastern indigo snake, wood stork and West Indian manatee. There are also project commitments specific to conducting design-phase resurveys for gopher tortoise and Florida sandhill crane. Based upon evaluation cited in the I-75 PD&E studies, ongoing agency coordination, and with the implementation of commitments and standard protection measures (i.e., for the eastern indigo snake), the proposed project is not likely to adversely affect the existence of any threatened or endangered species, even though they are known or expected to occur within or adjacent the project limits.

There will be no impacts to community focal points such as schools and church buildings under either 'Build' alternative and minimal impacts to any archaeological or historical sites are anticipated. There are no navigable waterways within the study area.

7.6 Safety

In order to obtain a better understanding of the safety concerns in the study area, an analysis of crash data was conducted. Within the study boundary, there were 263 crash records from January 1, 2008 to December 31, 2012, including 128 crashes (26 crashes/year average) on SR 64 and 135 crashes (27 crashes/year average) on I-75. This information is detailed in Section 3.3.2. The recommended alternative (Alternative 2: NW Loop Only Interchange) from this study will not have a negative impact on safety as the access points to the mainline will remain the same and the intersections and movements are similar to the existing condition.

7.7 Recommended Alternative

Based on the results identified in Section 7, Alternative 2: NW Loop Only interchange accommodates the design year traffic better than Alternative 1: 2012 SIMR Recommended Diamond Interchange. In addition, the configuration identified under Alternative 2 will make the existing configuration more salvageable. With a loop ramp only in the NW quadrant, the weaving maneuvers that exist currently are eliminated. Alternative 2 also reduces the number of lanes turning onto ramps. This reduction allows the lane drop distances to be shorter on the ramps. In addition to the above improvements, this study developed the queue length requirements at the study intersections based on Synchro analysis (See Appendix K for output) for the design year 2040 traffic conditions.

Table 7-9 illustrates the critical queue lengths at the signalized intersections. Please note that the queue lengths for southbound right turn (at SR 64/I-75 SB Ramps) and northbound right turn (at SR 64/I-75 NB Ramps) movements are assumed equal to the corresponding left turn queue lengths to avoid left turning vehicles blocking the right turning vehicles.

Table 7-9: Year 2040 Recommended Queue Lengths – NW Loop Only Interchange (Preferred Alternative)

Intersection	Approach	Recommended Queue Length (feet)	
		Left Turn	Right Turn
SR 64 & 66th St. Ct./64th St. Ct.	EB	200	-
	WB	250	100
	NB	100	175
	SB	175	100
SR 64 & I-75 SB Ramps	SB	275	275
SR 64 & I-75 NB Ramps	EB	525	-
	WB	-	100
	NB	525	525
SR 64 & Grand Harbour Parkway	EB	225	-
	WB	100	100
	SB	100	475

It should be noted that the specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. Actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

8.0 Justification for Project

The following requirements serve as the primary decision criteria used in approval of interchange projects. Each of the eight policy points from the FHWA is described briefly and the detailed description is provided below in italic text. The justification response to each point follows.

8.1 Existing system is incapable of accommodating the traffic

The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).