EXECUTIVE SUMMARY

The interchange of I-75 with SR 951/Collier Boulevard is scheduled to undergo improvements through a Design/Build (D/B) project. A re-evaluation of the Interchange Modification Report (IMR) was required since the D/B concept slightly differs from the Request for Proposal (RFP) Concept. The initial planned improvements were identified through a Project Development and Environment (PD&E) Study and an Interchange Modification Report prepared in 2013 and approved in 2014, which recommended a partial clover leaf interchange with loop ramps in the northeast and southwest quadrants of the interchange. The main difference between the interchange configuration proposed by the D/B team and the Preferred Alternative evaluated in the PD&E/IMR documents is the number of entrance ramps in the eastbound direction along the I-75 freeway mainline.

The project is located along I-75 (Roadway ID: 03175000) at the interchange with SR 951/Collier Boulevard from Milepost (MP) 50.096 through MP 50.757. This interchange is located east of the City of Naples, in Collier County.

Based upon the results of this IMR Re-evaluation performed at the subject interchange, the following conclusions are summarized below:

- The Purpose and Need stated in the 2013 PD&E Study and in the 2013 IMR is still applicable for this IMR Re-evaluation. The purpose of the interchange modification is to improve the safety, LOS, and traffic operations at the I-75/Collier Boulevard interchange and adjacent intersections. Other goals of the project are to preserve the operational integrity and regional functionality of I-75, and enhance emergency evacuation and response times.
- The area of influence for this IMR Re-evaluation was selected in close coordination with FDOT D1 and using the guidelines described in the IARUG. Based on coordination with FDOT D1, it was decided that the main area of influence would concentrate only on the I-75 freeway segments and ramp junctions in proximity with the SR 951/Collier Boulevard interchange.
- In the case of this IMR Re-evaluation the analysis will focus on evaluating two alternatives; specifically, the RFP and D/B Concepts.
- Travel demand forecasting was performed using historical traffic data, the D1RPM model, and FDOT manuals to obtain future traffic volumes for the area of influence. It should be noted that for the development of the travel demand forecasting, planned and programmed projects were considered. Forecasted volumes were utilized in the safety and operational analysis.
- A freeway operational analysis was performed, using HCS, for each alternative for the future years of 2025 and 2045. Based on the results of the 2025 and 2045 operational analysis, both alternatives are expected

to operate at acceptable LOS and meet the FDOT LOS target of D. Although both alternatives are expected to operate satisfactorily, the D/B alternative seems to operate slightly better than the RFP alternative in certain portions of the I-75 mainline.

- A freeway safety analysis was performed, using ISATe, for each alternative for the future year of 2045. Overall, based on the results of the 2045 safety analysis, the RFP and D/B concepts are expected to have 18.9 and 19.6 crashes/year, respectively. This represents a slight increase (0.7 crashes/year) in the number of minor injury and property damaged only type crashes when comparing the D/B and RFP alternatives. It is noted that based on a review of the historical five-year crash data (2017-2021), the existing crash frequency (with the diamond interchange configuration) is about 13.75 crashes/year.
- Both alternatives would require identical design variations for several roadway elements related to horizontal curve radius, shoulder width, and horizontal clearance.
- Both alternatives would require identical environmental permits and no additional environmental impacts are expected.
- The cost for the RFP alternative is $114,258,982.00 and the cost for the D/B alternative is $97,900,000.00. The cost estimates are inclusive of preliminary engineering (PE), construction engineering and inspection (CEI), and contingency.
- The comparison of the two alternatives is based on numerous factors including construction costs, safety and operational performance, environmental and socioeconomic impacts, etc. Based on this comparison, the D/B alternative was determined to result in construction cost savings and offers similar safety and operational performances in comparison to the RFP alternative.
- A review of the FHWA policy points demonstrated that the D/B Alternative is expected to have similar safety and operational performances when compared to the RFP alternative, will not have adverse effects to the interstate facility, and will meet the FHWA policy points requirements.

Recommendation(s): Based on a comprehensive review documented in this IMR re-evaluation, it was determined that the D/B Concept performs equal to or better when compared to the RFP Concept. Design changes proposed by the D/B Concept are minor when compared to the RFP Concept. Based on the results of the analysis, the D/B alternative is expected to cost less, and it satisfies the purpose and need, SO&E requirements and FHWA's policy points, similar to the RFP Concept.