

EXECUTIVE SUMMARY

Interstate 275 (I-275)/State Road 93 (SR 93) is a major north-south thoroughfare that extends from Manatee County into Pasco County crossing through Pinellas and Hillsborough Counties, and connects interstates and other major arterials in the area, specifically, Interstate 75 (I-75), Interstate 4 (I-4)/State Road 400 (SR 400) and State Road 60 (SR 60). These roadways are designated as Strategic Intermodal System (SIS) Corridors, which are integral to the high priority network of transportation facilities important to the state's economy and mobility. Additionally, State Road 618 (SR 618)/Lee Roy Selmon Expressway connects to I-4 via the Selmon Expressway Connector in the project vicinity. The I-275 system also provides access to the Tampa International Airport, Port of Tampa, Downtown Tampa, and Downtown St. Petersburg, all of which are major hubs of economic development in the area.

I-4 is a major east-west thoroughfare that extends from Hillsborough County to Volusia County crossing through Polk, Osceola, Orange and Seminole Counties, and connects major interstates and arterials. The I-4 system provides access to several major attractions in the Orlando Metropolitan Area crucial for Florida's economy.

I-275 and I-4 provide vital regional links in Central Florida. The study area represents the spine of the transportation network for the City of Tampa and Hillsborough County and provides access to employment, residential neighborhoods, tourist and recreational destinations, and services. Forecasts from the Tampa Bay Regional Planning Model (TBRPM) project employment to increase 110 percent in Downtown Tampa and 64 percent in the Westshore area from 2015 to 2045. Maintaining access to key business, residential, and activity centers, such as Downtown Tampa and the Westshore area, and improving freeway capacity that will provide reliable travel times along these roadways is crucial to economic development and vitality in the Tampa Bay Region. Additionally, ensuring safe and efficient operations along I-275 and I-4 is critical given that these interstates are on the SIS plan and the Florida Division of Emergency Management has designated I-275 and I-4 as evacuation routes to be used during a disaster.

FDOT through its commitment to developing comprehensive and multimodal regional transportation systems to modernize infrastructure and prepare for the future created the Tampa Bay Next (TBNext) program. Tampa Bay Next priorities include:



- Move people and goods safely and efficiently
- Build a comprehensive regional transportation system
- Create meaningful opportunities for public input
- Balance regional needs with community concerns
- Commit to sustainable infrastructure decisions

The Tampa Bay area is the fifth fastest-growing metro area in the nation, with approximately 58,000 people moving here in 2016, and more than 22 million visitors to Hillsborough County in 2015. Demand on our current interstate system is steadily increasing, and traffic projections show average daily traffic doubling in some sections of I-275 by 2040. Tampa's two major interchanges – in the Westshore area and Downtown – were built in the 1960s and have only had intermittent operational improvements since then. They no longer function properly and cause traffic backups on the interstates that affect the arterials and local street systems. When drivers are sitting in gridlock on the Howard Frankland Bridge, Veterans Expressway, I-275 north of Downtown, or I-4 east of Downtown, that congestion is primarily caused by increased demand and the funneling effect at these two interchanges. To fix these bottlenecks, bringing the Westshore area and Downtown interchanges up to modern standards while enhancing operating conditions is critical.

The Final Environmental Impact Statement (FEIS) prepared for the Tampa Interstate Study (TIS) and approved by the Federal Highway Administration (FHWA) in January 1997, documented the need for multi-lane improvements on I-275 from the north end of the Howard Frankland Bridge to north of Dr. Martin Luther King, Jr. (Dr. MLK, Jr.) Boulevard and on I-4 from I-275 to 50th Street. The FHWA, in cooperation with the Florida Department of Transportation (FDOT), prepared a Supplemental Environmental Impact Statement (SEIS) to examine the impacts and to modify the Locally Preferred Alternative (LPA) for the Tampa Interstate Study (TIS) to improve portions of I-275, I-4, and SR 60 in Hillsborough County, Florida.

FDOT completed a preliminary screening in 2017 to narrow the range of alternatives that would be evaluated in the SEIS. The preliminary screening analysis focused on whether the alternatives could address the Purpose and Need. To do this, FDOT developed screening criteria and measures, based on the Purpose and Need and public input. FDOT presented the results publicly in October 2017 to the community in a public workshop. A description of the alternatives considered for further study in the TIS Draft SEIS is provided in the following sections.



Five interchange design options were considered for the Downtown Interchange in TIS Segment 2B that are within the SIMR project limits. They represent both tolled and non-tolled options for managed lanes. Two options are full reconstruction of the interchange with a larger footprint, two are viaduct alternatives that would build tolled express lanes next to the existing infrastructure but have a smaller footprint, and the fifth option focuses on operational and safety improvements. The Design Options are described in the following sections.

Options A and B (Reconstructed Interchange) - The proposed improvements under Options A and B would include reconstructing the interchange to provide a fully directional interchange for the I-4/I-275 connection, with tolled express lanes; adding a direct connection to the downtown local street network and slip ramp access north and east of Downtown Tampa; adding overpasses at several locations to open cross-connections of local streets through the interstate footprint.

- Option A (Reconstructed Interchange with Express Lane Ramps to the North): Option A would include direct express lane ramp connections to the north leg of I-275.
- Option B (Reconstructed Interchange without Express Lane Ramps to the North): Option B would not include express lane ramp connections to the north leg of I-275.

Options C and D (Existing Interchange with Elevated Express Lanes) - The proposed improvements under Options C and D would include preserving the existing I-275 and I-4 interstate while adding tolled express lanes on elevated structure from west of the Hillsborough River to I-4. Access would be provided to the downtown street grid from the elevated express lanes.

- Under Option C, the elevated express lanes would fly out from the median of I-275 west of the Hillsborough River over the northbound I-275 lanes to the outside of the existing interstate and run adjacent to the existing northbound I-275 lanes from the Hillsborough River to I-4, on the south side of I-275. The elevated express lanes would turn east along I-4 by crossing over to the north side of I-4, adjacent to the westbound I-4 lanes from I-275 to east of 15th Street. The elevated express lanes would then fly over the westbound I-4 lanes back into the median of I-4 just west of 21st Street.
- Under Option D, the elevated express lanes would fly out from the median of I-275 west of the Hillsborough River over the southbound I-275 lanes to the outside of the existing interstate and run adjacent to the existing southbound I-275 lanes from



the Hillsborough River to I-4, on the north side of I-275. The elevated express lanes would turn east along I-4, adjacent to the westbound I-4 lanes from I-275 to east of 15th Street. The elevated express lanes would then fly over the westbound I-4 lanes back into the median of I-4 just west of 21st Street.

Option E (Safety and Operational Improvements) - In May 2019, FDOT held Alternatives Public Workshops to receive input on the Westshore and Downtown Alternatives, including Options A, B, C, and D, with the intent of recommending one of the options to carry forward as a part of the Recommended Locally Preferred Alternative (LPA). While there is definitive public support for reconstruction of the I-275/SR 60 Interchange (TIS Segment 1A), there are many factors that may impact the plans in the I-275/I-4 (TIS Segment 2B). Therefore, FDOT developed Option E in response to input from the public and area stakeholders, including:

- Continuous comments from the public to minimize ROW impacts to downtown neighborhoods
- Comments and concerns related to the closure of the Floribraska Avenue ramps
- Comments and concerns related to the potential impacts to the Perry Harvey Sr Park
- Support for safety and operational improvements in the Downtown Interchange area

FDOT reviewed the Options A, B, C, and D within the I-275/I-4 interchange and extracted and refined three improvements from the current concepts that would enhance safety and operational performance in alignment with the Purpose and Need. The movements below would not be tolled. The improvements would include relocating the western exit ramp to Ybor City and East Tampa from the existing location at 21st/22nd Street to 14th/15th Street. The relocated exit ramp would provide enhanced access to businesses, educational institutions, and residential areas. Drivers would still access 21st/22nd Street via widening the existing single- lane frontage road, East 13th Avenue, to two lanes. These proposed operational improvements would be completed almost entirely within the existing FDOT owned ROW. Fewer parcels will be affected under Option E.

Collectively the three operational/safety improvements that make up the geometric improvements to the Downtown Interchange, which will be Design Option E, are described below.



- Southbound I-275 to Eastbound I-4 The southbound I-275 to eastbound I-4 improvements include widening the existing flyover ramp to two lanes with an exit to 21st/22nd Streets via a slip ramp to 14th/15th Streets and frontage road. The proposed improvement also provides a new ramp from I-275 northbound to 21st/22nd Street via the 14th/15th Streets ramp and frontage road.
- Westbound I-4 to Northbound I-275 An additional lane would be provided from west of 14th Street on westbound I-4 to MLK Boulevard on northbound I-275. The entrance ramp from 21st Street that currently merges onto I-4 in the vicinity of 16th Street will become an add lane, utilizing existing pavement and not requiring any widening of existing pavement until west of 14th Street. The additional lane would continue along the off-ramp to northbound I-275 by widening the off-ramp to the outside to two lanes. The additional lane would then continue along northbound I-275 by widening to the outside to MLK Boulevard. A second additional lane would be added to the outside of northbound I-275 with the addition of an auxiliary lane between the on-ramp from Floribraska Avenue and the off-ramp to MLK Boulevard. The off-ramp to MLK Boulevard would be widened to two lanes.
- Westbound I-4 to Southbound I-275 The westbound I-4 to southbound I-275 operational improvements would include widening the southbound I-275 ramp from two lanes to three lanes. The three lanes would join the two lanes from southbound I-275 to provide five lanes. The exit from northbound I-275 would be located between Palm Avenue and Nebraska Avenue while the exit from southbound I-275 would be located off the two-lane flyover to eastbound I-4. Those two separate ramps would then combine along the south side of the eastbound I-4 mainline east of Nebraska Avenue and would tie into 14th/15th Street, providing a new access point that would serve both the 14th/15th Street and 21st/22nd Street.

Preferred Alternative

In May 2019, FDOT held Public Workshops to receive input on the proposed design for the 2018 Express Lanes Alternative (Tolled), which includes the Westshore interchange and Design Options A, B, C, and D for the Downtown interchange (TIS Segments 2B and 3A). FDOT intended to identify a Recommended Locally Preferred Alternative (LPA) soon thereafter. Many factors, including comments and concerns related to the potential impacts to the Perry Harvey Sr. Park, ROW impacts to downtown neighborhoods, and the need to provide safety improvements in the Downtown Interchange area, led FDOT to develop Design Option E.

FDOT identified the 2018 Express Lanes Alternative (Tolled) with Design Option E for TIS



Segments 2B and 3A as the Recommended LPA for the TIS. The Recommended LPA selection process involved numerous considerations, which balanced engineering and environmental considerations as well as local preference gleaned through both the public involvement process and meetings with stakeholders and local officials. This section explains the factors considered by FDOT in recommending for FHWA approval Design Option E, in combination with the Westshore Interchange and Express Lanes from the HFB to Ashley Drive, as the Recommended LPA. FDOT presented the Recommended LPA at the public hearing that FDOT held on February 25 and 27, 2020. As a result of coordination with the City of Tampa and public comments on the TIS Draft SEIS, FDOT made some refinements to the Recommended LPA to mitigate potential safety issues, which resulted in the Preferred Alternative.

Based on consideration of all the social, economic, and environmental evaluations contained in the Final SEIS, with input received from other agencies, organizations, and the public, the FHWA has determined that the TIS Preferred Alternative is hereby the selected alternative. On September 15, 2020, the FHWA granted Location and Design Concept Acceptance (LDCA) for the TIS SEIS, Record of Decision (ROD), and Section 4(f) Evaluation. All the improvements that are considered as part of the SIMR are consistent with the approved SEIS Preferred Alternative.



The following FHWA policy points serve as primary decision criteria used in the approval of this Systems Interchange Modification Report (SIMR).

1. The proposal does not adversely impact the operational safety of the existing freeway

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, and ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis should, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (Title 23, Code of Federal Regulations (CFR), paragraphs 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, should be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access should include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute, and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request should also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

I-275 and I-4 currently experience recurring congestion during peak periods within the study limits. Peak hour demand exceeds the available capacity of I-275 and I-4 causing longer travel times, poor travel-time reliability, and underperforming traffic operations. As growth in the region continues, travel times, congestion and crashes within the study area will continue to increase. Therefore, there is an immediate need for capacity and safety improvements at the I-275 and I-4 interchange to meet the existing and future peak hour traffic demand. As part of this project, safety and operational improvements are proposed for the southbound to eastbound, westbound to northbound, and westbound to southbound movements of the system-to-system interchange.

Existing condition field reviews were conducted to observe traffic conditions along the corridors. The following provides a summary of the existing traffic conditions during the AM and PM peak periods along I-275 and I-4.



I-275 Segment – From Ashley Drive/Tampa Street to Hillsborough Avenue

- Overall, traffic delays during the PM peak hour were higher compared to the AM peak hour. Due to the directionality, I-275 southbound is more congested than I-275 northbound during the AM peak hour and I-275 northbound is more congested than I-275 southbound during the PM peak hour.
- Average speeds of 57 mph and 22 mph were observed along I-275 northbound during the AM and PM peak hours, respectively.
- Heavy congestion was observed during the PM peak hour along I-275 northbound, prior to Ashley off-ramp and I-275 exit to I-4.
- Average speeds of 42 mph and 33 mph were observed along I-275 southbound during AM and PM peak hours, respectively.
- Heavy delays were observed during the AM and PM peak hour along I-275 southbound prior to the exit to I-4 eastbound, and the section of I-275 southbound from the I-4 westbound on-ramp. This is a critical segment for this facility due to high traffic volumes from westbound I-4 and southbound I-275 merging.

I-4 Segment – From I-275 to Selmon Expressway Connector West Ramps

- Overall, traffic delays along I-4 westbound were higher than the I-4 eastbound segment during both the AM and PM peak hours.
- The average speeds along I-4 westbound were slower during the AM peak hour than during the PM peak hour. The observed average speeds along I-4 westbound were 16 mph and 32 mph during the AM and PM peak hours, respectively.
- Critical bottleneck leading to congestion was experienced on the I-4 westbound segment from the Selmon Connector to the I-4 off-ramp to I-275 southbound caused by high exiting traffic volumes and reduced speeds on the off-ramp due to horizontal alignment.
- Average speeds of 59 mph and 56 mph were observed along I-4 eastbound during the AM and PM peak hours, respectively.



A total of 7,398 crashes occurred within the study area during the five-year period (2013-2017). Of these, 18 fatal crashes (0.2%), 2.335 (32%) injury crashes, and 5.045 (68%) property damage only crashes were reported. There were 1,623 crashes along I-275 northbound, 1,991 crashes along I-275 southbound, 223 crashes along I-4 eastbound, and 966 crashes along I-4 westbound. There were 976 crashes along ramps, 542 crashes at ramp terminals, and 1,077 crashes at intersections. The crash analysis suggested that along freeways, rear-end crashes were the predominant crash type (67%), followed by sideswipe crashes (20%), and hit fixed object crashes (9%). The historical crash data indicate that the majority of crashes occur near the I-275/I-4 interchange. A major contributing factor for these crashes is the excessive mainline queueing and "lane diving" at the single-lane ramp from I-275 southbound to I-4 eastbound. All of the northbound and southbound I-275 segments and majority of I-4 westbound segments exceed the statewide average crash rate of 0.976 per Million Vehicle Miles Traveled. Additionally, four out of eight ramp terminal intersections are above the statewide average in the northbound/eastbound direction, and all ramp terminal intersections are above the statewide average in the southbound/westbound direction. The total economic loss due to 7,398 crashes for the analysis years from 2013 through 2017 was estimated to be \$645,546,192.

Microsimulation models were completed for the No-Build and Build Alternatives for the Opening Year (2025) and Design Year (2045) for both peak periods. The overall operations of the Build Alternative improved significantly compared to No-Build Alternative within the study limits. **ES - Table 1** compares demand volumes processed in the No-Build and Build Alternatives during AM and PM peak hours along I-275. The results indicate that more demand vehicles will be processed in the Build Alternative with the proposed improvements as compared to the No-Build Alternative.

In the Opening Year (2025) and Design Year (2045), a five percent to 25 percent increase in throughput was observed along I-275 northbound during peak hours. Similarly, a six percent to 66 percent increase in throughput was observed along I-275 southbound during peak hours.



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Roadway	Scenario	Opening Y	′ear (2025)	Design Year (2045)		
Rodalitay	Coontaine	AM	PM	AM	PM	
NB I-275	No-Build	82%	68%	73%	51%	
	Build	87%	69%	77%	64%	
	% Change	5%	1%	6%	25%	
SB I-275	No-Build	67%	86%	34%	72%	
	Build	77%	92%	56%	81%	
	% Change	15%	6%	66%	14%	

ES – Table 1: Processed Demand along I-275

ES - Table 2 compares demand volumes processed in the No-Build and Build Alternatives during AM and PM peak hours along I-4.

In the Opening Year (2025) and Design Year (2045), a five percent to 27 percent increase in throughput was observed along I-4 eastbound during the peak hours. Similarly, a 28 percent to 100 percent increase in throughput was observed along I-4 westbound during the peak hours.

Roadway	Scenario	Opening Y	′ear (2025)	Design Year (2045)		
Reduinay	Coondino	AM	PM	AM	PM	
EB I-4	No-Build	89%	87%	64%	67%	
	Build	99%	92%	82%	74%	
	% Change	11%	5%	27%	11%	
WB I-4	No-Build	68%	56%	57%	30%	
	Build	94%	83%	73%	60%	
	% Change	38%	48%	28%	100%	

ES – Table 2: Processed Demand along I-4

Since the proposed Build improvements are mainly focused on freeway facilities, the peak hour traffic operations are very similar on arterial corridors for No-Build and Build conditions within the study limits. However, with additional capacity available through proposed build improvements, more capacity will be available to satisfy demand on the interstate in the Build conditions as compared to No-Build conditions. Due to an increase in traffic near ramp terminal intersections, the traffic delays will be slightly more for some study intersections in Build conditions as compared to No-Build conditions.



In addition to the processed demand, the latent demand at the end of the peak period simulation along the freeway facility entering the study area from I-275 northbound, I-275 southbound, I-4 westbound and Selmon Expressway was also analyzed for evaluating the performance of the Build Alternative compared to No-Build Alternative. The results show a decrease in latent demand for the Build Alternative compared to No-Build Alternative, seen in **ES – Table 3**. The percent change in latent demand from the No-Build Alternative ranged from -3 to 100 percent in the Opening Year (2025) and -8 to 47 percent in the Design Year (2045).

Alternative		I-275 Northbound		I-275 Southbound		I-4 Westbound		NB Selmon Expressway Ramp to WB I-4	
		Latent Demand	Percent Latent Demand	Latent Demand	Percent Latent Demand	Latent Demand	Percent Latent Demand	Latent Demand	Percent Latent Demand
2025 No- Build	AM	1,881	4%	12,615	33%	8,949	26%	1,503	21%
	РМ	13,795	30%	3,490	11%	14,685	42%	5,335	56%
2025 Build	AM	1,074	2%	9,535	25%	5	0%	610	9%
	ΡM	14,630	31%	1,436	4%	5,239	15%	2,792	29%
Percent Change	AM	44%		24%		100%		59%	
	ΡM	-3%		59%		64%		49%	
2045 No- Build	AM	8,271	18%	33,143	66%	28,161	57%	4,016	41%
	ΡM	26,669	51%	8,602	21%	36,793	79%	5,195	42%
2045 Build	AM	5,343	12%	22,514	44%	26,830	50%	1,858	22%
	ΡM	18,548	36%	5,926	15%	25,095	50%	5,884	45%
Percent Change	AM	35%		33%		13%		47%	
	PM	31	%	31	%	37	%	-84	%

ES – Table 3: Latent Demand Summary along Freeway Facility

The results of the predictive safety analysis show that there is an anticipated reduction in crashes over the length of the study period by implementing the Build Alternative. Even though there is an increase in the annual average daily traffic (AADT), as well as number of lanes, I-275 is expected to see a reduction in crashes of 25 percent, and I-4 is expected to see a reduction of nine percent.

The I-275 corridor is expected to have reductions in fatal crashes and individual severity types with the largest decrease in injury (B) crashes with 51 percent, 48 percent reduction in serious injury (A) crashes, and 47 percent reduction in fatal injury (K) crashes. I-4 is expected to have large reductions in property damage only (PDO) crashes and possible



injury (C) crashes at 10 percent and eight percent, respectively. The Build Alternative is also expected to reduce the number of total multiple vehicle crashes along I-275 and I-4 by 25 percent and nine percent, respectively. This reduction is likely due to the proposed improvements in the Build condition creating much safer conditions for vehicles using I-275 and I-4.

The Build Alternative provides for safer and improved access to and from I-275 and I-4 interstate systems. The additional capacity as part of the Build Alternative addresses three critical movements, southbound I-275 to eastbound I-4, westbound I-4 to northbound I-275, and westbound I-4 to southbound I-275 and these improvements aid the system to efficiently collect, distribute and accommodate traffic with increased throughput, reduced latent demand. The reduction in total crashes, along with the fatal, serious injury and injury crashes for the Build Alternative provides for safer performance while meeting the needs for the future demand growth within the study limits of the project. The proposed changes to access does not result in a significant adverse impact on the safety and operations of the interstate and associated facilities included in the IAR study area.

2. A full interchange with all traffic movements at a public road is provided

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access, such as managed lanes (e.g., transit or high occupancy vehicle and high occupancy toll lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)). In rare instances where all basic movements are not provided by the proposed design, the report should include a full-interchange option with a comparison of the operational and safety analyses to the partial-interchange option. The report should also include the mitigation proposed to compensate for the missing movements, including wayfinding signage, impacts on local intersections, mitigation of driver expectation leading to wrong-way movements on ramps, etc. The report should describe whether future provision of a full interchange is precluded by the proposed design.

This project proposes a new exit ramp from northbound and southbound I-275 that provides access to 14th Street and 15th Street through 13th Avenue and 14th Avenue. This new exit ramp will replace the current eastbound I-4 exit ramp to 21st/22nd Street. The proposed exit ramp is a two-lane roadway aligning with 13th Avenue. The proposed



connection will reroute the existing traffic bound to 21st/22nd Street through 14th Street and 15th Street and increase traffic compared to the existing conditions. These modifications have been coordinated with the City of Tampa and local residential and business groups. Access Management on the cross streets will not be affected beyond the limits of this project. The Access Management Evaluation Memorandum is provided in **Appendix M**.

The new exit ramp from northbound and southbound I-275 that provides access to 14th Street and 15th Street reduces the weaving thus improving operations and safety along I-4 eastbound. In addition, the relocated exit ramp would provide enhanced access to businesses, educational institutions, and residential areas. Drivers would still access 21st/22nd Street via widening the existing single- lane frontage road, East 13th Avenue, to two lanes.

The proposed change in access will provide for all traffic movements to 14th Street, 15th Street, in addition to the existing 21st/22nd Street.

In summary, the Build Alternative provides improved throughput and safer performance as compared to the No-Build Alternative. Therefore, Safety, Operational, and Engineering (SO&E) approval is requested for the Build Alternative.