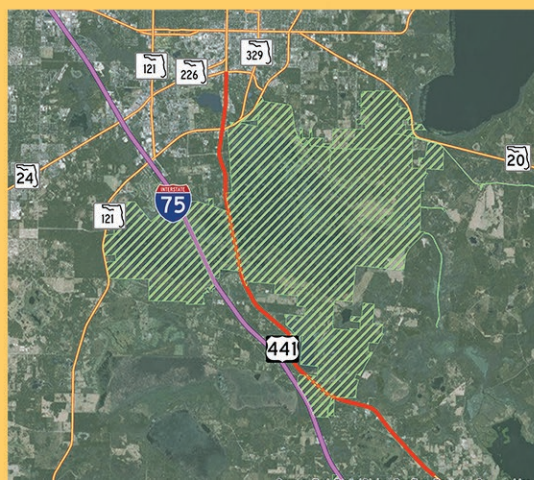




NORTH I-75 MASTER PLAN Summary Report

Financial Project ID: 191985-2-12-01

August 2017



NORTH I-75 MASTER PLAN Summary Report

**Interstate 75 (SR 93)
From the Florida's Turnpike Interchange
to the I-10 Interchange**

**Alachua, Bradford, Clay, Citrus, Columbia, Duval, Levy,
Marion, and Sumter Counties, Florida**

Financial Project ID: 191985-2-12-01



June 2017

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TABLE OF CONTENTS

1	EXECUTIVE SUMMARY	1
2	PROJECT BACKGROUND & PURPOSE.....	2
2.1	Background	2
2.2	I-75 Relief Task Force Recommendations.....	2
3	STUDY AREA CORRIDORS.....	4
3.1	Study Area	4
4	STUDY METHODOLOGY & PUBLIC INVOLVEMENT	6
5	EXISTING AND FUTURE I-75 TRANSPORTATION	7
5.1	Recurring and Non-Recurring Congestion.....	7
5.1.1	Recurring Congestion	7
5.1.2	Non-Recurring Congestion.....	7
5.2	Roadway Geometry.....	8
5.3	I-75 Existing/Future Traffic and Level of Service	8
6	EXISTING AND FUTURE PARALLEL CORRIDORS	9
6.1	Existing and Future Traffic and Level of Service on US 41, US 441, and US 301	10
7	STUDY CORRIDOR CONSTRAINTS	12
7.1	Social Constraints	12
7.2	Natural Constraints	13
7.3	Cultural Constraints	13
8	I-75 CAPACITY IMPROVEMENT OPTIONS.....	14
8.1	I-75 Short-Term Improvements	14
8.2	I-75 Ultimate Improvements	14
8.3	Rail Feasibility Study	15
9	SUMMARY AND CONCLUSION.....	15
9.1	Next Steps.....	16

1 EXECUTIVE SUMMARY

Interstate 75 (I-75) is part of the Strategic Intermodal System (SIS) and a major interstate highway supporting tourism, economic development, emergency management, and mobility of people and goods. The I-75 corridor from Florida's Turnpike to I-10 exhibits unique characteristics in that its traffic congestion occurs due to both recurring congestion (traffic bottlenecks) and non-recurring congestion (incidents, seasonal and special events, and weather). The combination of recurring and non-recurring congestion is contributing to unsatisfactory traffic operations witnessed in both the existing and future conditions on I-75.

- Improvements are needed to the I-75 corridor to accommodate additional projected growth in freight, visitor, and local commuter traffic and to enhance public safety and emergency evacuation.
- Alternative parallel corridors (US 41, US 441, and US 301) would require significant improvements in urban areas to serve as reliever routes to I-75. These improvements would have significant impacts to the social, cultural, physical, and natural environment and would require changes to local government Comprehensive Plans.
- A series of short-term improvements to enhance safety, improve operations, and extend the life of the I-75 corridor should be evaluated and implemented within the next 2-5 years. Some examples of short-term improvements include signal coordination, fiber interconnection, Road Ranger's service patrol, and enhanced regional transportation management center operations.
- Given the importance of I-75 to freight, tourism, mobility of people and goods, and emergency evacuation in the state of Florida, the Florida Department of Transportation (FDOT) should immediately begin planning studies to determine long-term improvements such as addition of General Use Lanes or Express Lanes. However, the widening of I-75 alone does not address the issue of non-recurring congestion and the long-term corridor travel demand.
- This Master Plan focused only on existing facilities and determined these existing facilities (I-75, US 41, US 441, and US 301) cannot accommodate the recurring and non-recurring congestion. Capacity improvements to these corridors will have significant social, cultural, physical, and natural environment impacts. It is FDOT's mission and goal to evaluate the state's long-term mobility needs and maintain acceptable operations and safety standards. New multimodal and multiuse corridors were recommendations of the I-75 Relief Task Force and should be evaluated in other future studies.

2 PROJECT BACKGROUND & PURPOSE

2.1 Background

In October 2015, FDOT Secretary Jim Boxold established the I-75 Relief Task Force for the purpose of providing consensus recommendations on maximizing existing and developing new high-capacity transportation corridors to serve the Tampa Bay to Northeast Florida study area, with initial emphasis on the area along and to the west of I-75. The Task Force included 21 members representing state agencies, local governments, regional planning councils, environmental organizations, businesses, economic development interests, and the public.

2.2 I-75 Relief Task Force Recommendations

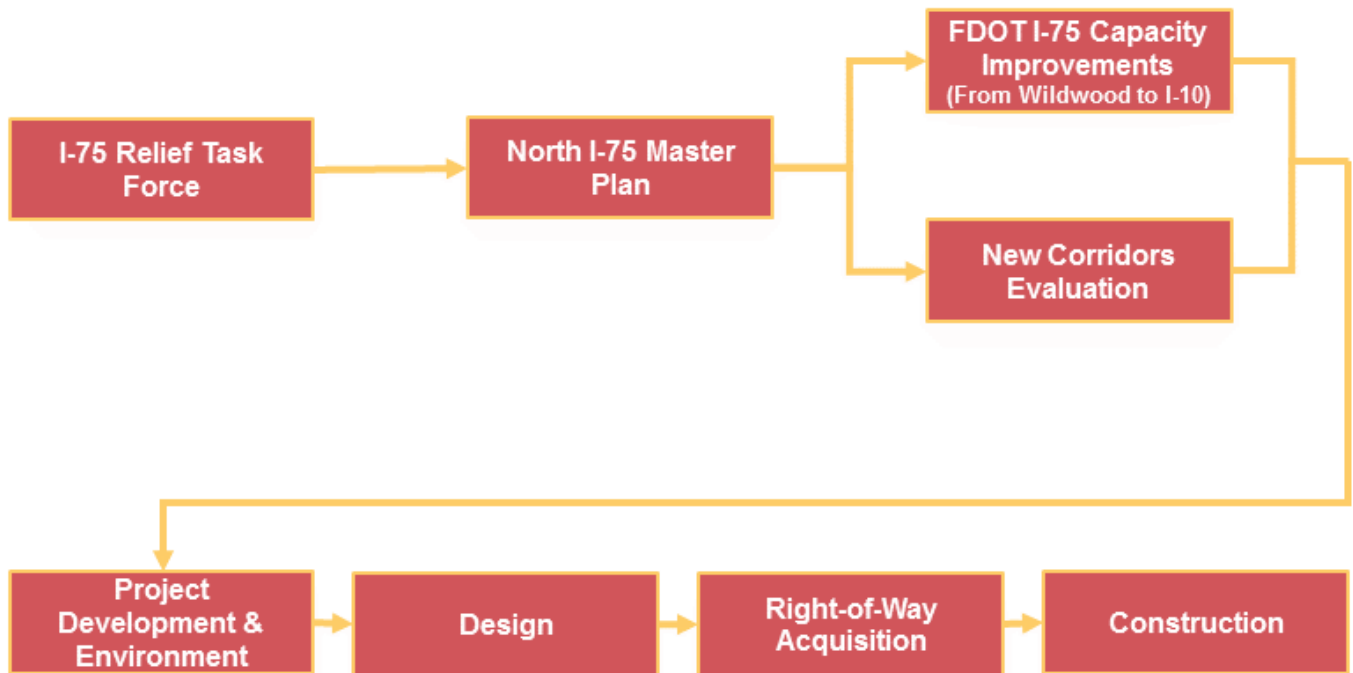
The Task Force focused on mobility needs along I-75 in six counties (Alachua, Citrus, Hernando, Levy, Marion, and Sumter). The Task Force met seven times at various locations between December 2015 and August 2016 and recommended a range of options. These recommendations include:

1. Optimize existing transportation corridors;
2. Evaluate potential enhancements to, or transformation of, existing transportation corridors; and
3. Evaluate potential areas of opportunity for new multimodal, multipurpose corridors after evaluation of enhancements to I-75 and other I-75 connector roads, and determination of need.

To better evaluate the need for I-75 improvements, the Task Force recommendations included evaluation of potential capacity and connectivity enhancements on major north-south corridors parallel to I-75, including the US 41 and US 301 corridors, to analyze their ability to provide traffic relief to I-75.

Based on the Task Force Recommendations, the North I-75 Master Plan study was initiated to evaluate I-75 and the parallel corridors as a system and determine their ability to accommodate the future congestion. This Master Plan focused only on existing facilities of I-75, US 41, US 441, and US 301. A new corridor evaluation was outside the scope of this study. It is FDOT's mission and goal to evaluate the state's long-term mobility needs to maintain acceptable operational and safety standards. New multimodal and multiuse corridors were recommendations of the I-75 Relief Task Force and should be evaluated in future studies.

The flow chart below shows the origination of this Master Plan and the next steps in the overall Transportation Planning Process.



The North I-75 Master Plan Study area and methodology are presented in the next sections.

3 STUDY AREA CORRIDORS

3.1 Study Area

The North I-75 Master Plan study area encompasses nine counties: Alachua, Bradford, Clay, Citrus, Columbia, Duval, Levy, Marion, and Sumter. In addition to the I-75 corridor, which spans from Florida's Turnpike in Sumter County to the I-10 interchange in Columbia County, the study also evaluates three major north-south corridors per the recommendations of the I-75 Relief Task Force. The Task Force initially focused on a six-county study area but it was later expanded to nine counties in this Master Plan to include I-75 and the adjacent parallel corridors. The parallel corridors are US 41, which is located to the west of I-75, and US 441 and US 301, which are located to the east of I-75. The corridor limits are:

- US 41 from SR 44 in Citrus County to the I-75/US 41 interchange in Columbia County;
- US 441 from the City of Belleview in Marion County to the I-75/US 441 interchange in Alachua County. US 441 was not recommended by the Relief Task Force but was added to this Master Plan as it runs parallel to I-75 and can serve as a potential alternate route; and
- US 301 from the Florida's Turnpike/US 301 interchange in Sumter County to the I-10/US 301 interchange in Duval County.

The parallel corridor limits were determined based on feasible diversion locations available from I-75 to the parallel corridors. The limits were also presented to Planning staff of the Counties.

A map illustrating the study corridors is shown in **Figure 1** on the following page.

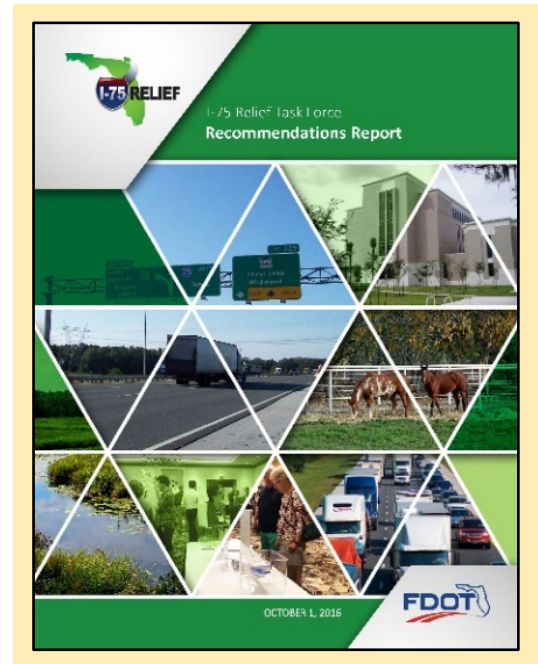
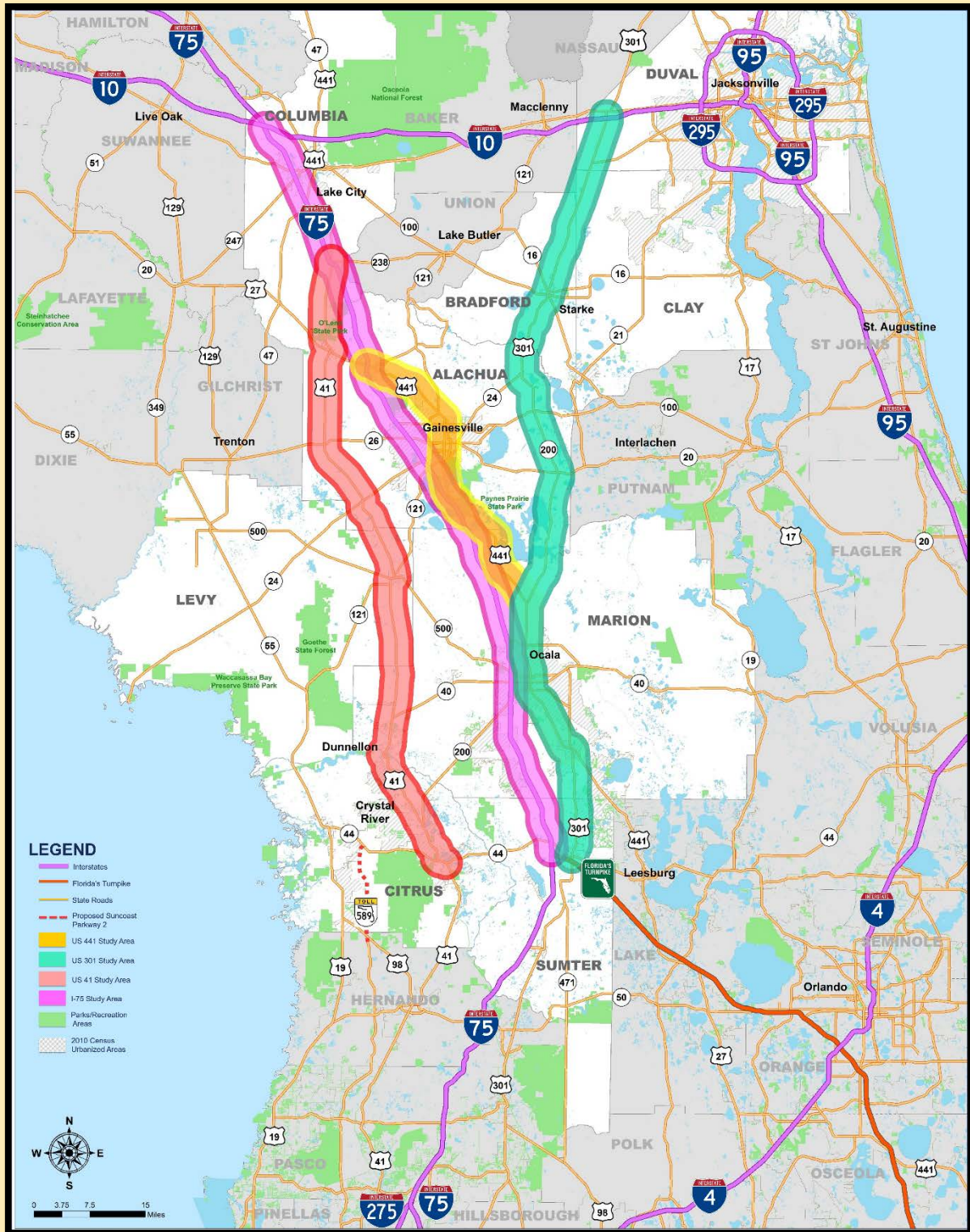


Figure 1 – Study Corridors



4 STUDY METHODOLOGY & PUBLIC INVOLVEMENT

The study methodology was designed to address the I-75 Relief Task Force recommendations to immediately optimize existing transportation corridors; and to evaluate potential enhancements to, or transformation of, existing transportation corridors.

For the I-75 corridor, short-term and long-term improvements were evaluated to address capacity needs, improve traffic operations, and enhance safety. For the US 41, US 441, and US 301 corridors, capacity improvements were evaluated at major bottlenecks to determine if these corridors could function as relief corridors to I-75.

Traffic forecasts for all four corridors (I-75, US 41, US 441, and US 301) were developed by the Florida's Turnpike Enterprise (FTE) using the I-75 Relief Study Model (RSM). The I-75 RSM was developed for this Study and based on latest socio economic data obtained from the local Metropolitan Planning Organizations (MPOs). Roadway segments, where the projected 2040 traffic Level of Service (LOS) exceeded FDOT standards, were evaluated for potential widening to address capacity needs through year 2040. The evaluation of the corridors included an analysis of potential impacts to the natural, social, cultural, and physical environment. Project costs covering all phases including Design, Right-of-Way (ROW), and Construction were estimated. Finally, the consistency of potential improvements with appropriate comprehensive plans was considered.

Extensive public outreach was performed to identify stakeholders, develop strategies to inform and engage stakeholders, and to obtain feedback on the potential improvements. Local agency staff meetings were held with planning and engineering staff representing counties and cities within the study area. In addition, presentations were made to the Gainesville Metropolitan Transportation Planning Organization (MTPO), Ocala/Marion Transportation Planning Organization (TPO), Lake-Sumter Metropolitan Planning Organization (MPO), Hernando/Citrus MPO, and Columbia County Board of County Commissioners. Finally, three public open houses were held in Citrus County, Marion County, and Alachua County to obtain input on the study results. The location, date, and times of the open houses were emailed to stakeholders, advertised in four local newspapers, published in the Florida Administrative Register, and placed in the Florida Department of Transportation Public Notices' Website. Details of the project's public involvement efforts are documented under a separate report, *North I-75 Master Plan Public Involvement Plan*.

5 EXISTING AND FUTURE I-75 TRANSPORTATION

Vehicular traffic and congestion occurs on roadways when LOS failures occur leading to bottlenecks. The I-75 Corridor is a unique corridor because its LOS failures occur due to both recurring and non-recurring congestion. The traffic spikes during holidays, special events, and frequent lane closures make up the majority of LOS failures. The LOS failures analyzed occur presently due primarily to non-recurring congestion and it is anticipated that LOS failures will also occur in the next 10 to 12 years due to recurring congestion.

5.1 Recurring and Non-Recurring Congestion

5.1.1 Recurring Congestion

Recurring congestion is caused by increased traffic volumes and bottlenecks created during the peak hour commute as residents travel to work in the morning and return home in the evening. Bottlenecks cause about 20 percent of the congestion on I-75.

5.1.2 Non-Recurring Congestion

Non-recurring congestion accounts for about 80 percent of the total congestion on I-75 (as shown in Figure 2 below) and significantly affects driving conditions. There are four major factors that contribute to non-recurring congestion:

1. Special Events and Seasonal Traffic: Sporting events such as football games, spring break, summer, and holidays such as Labor Day, Thanksgiving, and Christmas account for approximately 30 percent of the congestion on I-75;
2. Incidents: Lane closing traffic incidents which cause significant congestion issues account for approximately 21 percent of the congestion on I-75. On average, more than 500 incidents a year cause all lanes to be closed on I-75 within the study area, once every 9 days;
3. Work Zones: Construction and maintenance work zones account for approximately 14 percent of the congestion on I-75; and
4. Weather: Rain was identified as the leading weather-related driving hazard and accounts for 15 percent of the congestion on I-75.

Figure 2 illustrates how I-75 is affected by recurring and non-recurring congestion.

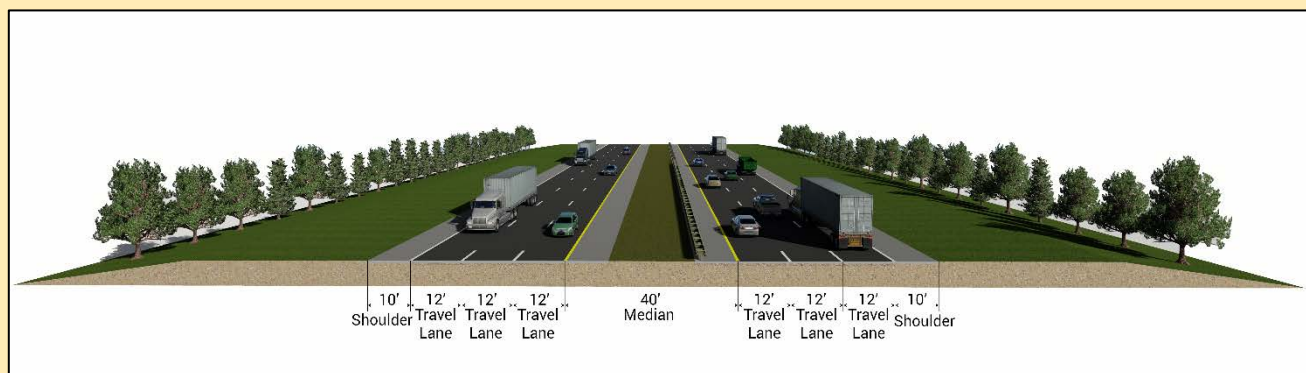
5.2 Roadway Geometry

The I-75 corridor is a six-lane divided limited access freeway from Florida's Turnpike in Sumter County to I-10 in Columbia County. The posted speed limit is 70 miles per hour (mph) and there are no sidewalks or bicycle lanes located along the corridor. A typical section of I-75 near US 41 in Columbia County is shown below in **Figure 3**.

Figure 2 – Congestion Effects on I-75



Figure 3 – I-75 Typical Section in Columbia County



5.3 I-75 Existing/Future Traffic and Level of Service

Traffic analysis of I-75 shows failing LOS on segments of I-75 occurring before the year 2040 in or near urban areas like the Cities of Gainesville and Ocala. I-75 near the City of Ocala begins to fail around year 2030 while I-75 near the City of Gainesville begins to fail around year 2035 due solely to recurring congestion. However, when factoring in non-recurring congestion, the I-75 corridor begins to fail as early as 2020. In fact, non-recurring congestion alone is currently causing I-75 to operate at LOS F 40 percent of the year.

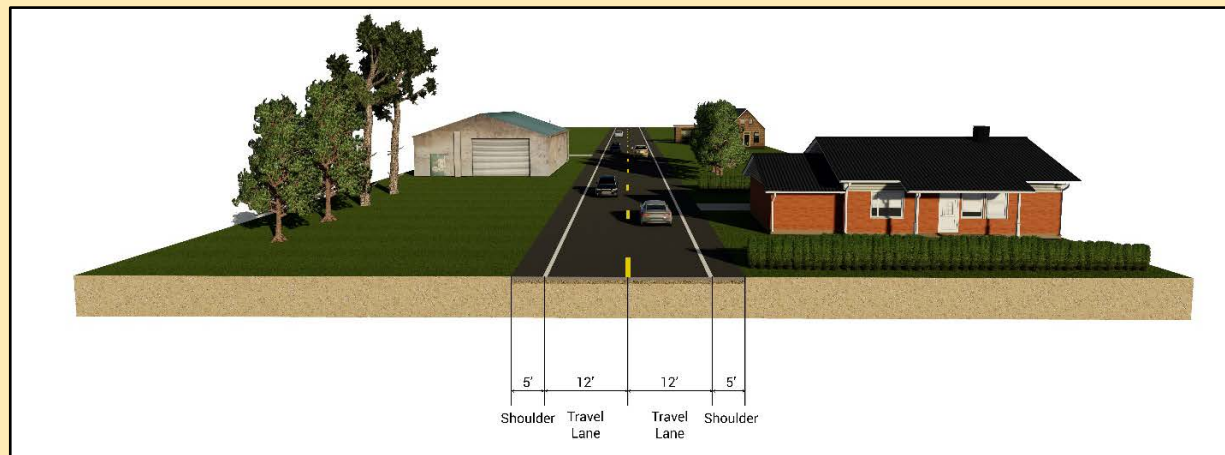
Table 1 below illustrates the existing and future traffic and LOS.

Table 1: I-75 Existing and Future Traffic and LOS							
From	To	2015 AADT	2040 AADT	LOS Target	2015 LOS	2040 LOS	Fall Below LOS Target
City of Ocala							
SR 200	SR 40	80,900	141,500	D	C	F	Yes
SR 40	US 27	80,000	138,400	D	C	F	Yes
US 27	49th Street	71,700	126,000	D	C	E	Yes
City of Gainesville							
SR 121	SR 24	67,700	121,100	D	B	E	Yes
SR 24	SR 26	79,600	120,000	D	C	E	Yes

6 EXISTING AND FUTURE PARALLEL CORRIDORS

The US 41 corridor is primarily a rural 2-lane undivided highway. The segment from SR 44 to West Main Street within the City of Inverness is classified as a 4-lane divided arterial segment. The speed limit varies from 35 to 65 mph. There are also sidewalks and bicycle lanes at various locations along the corridor that accommodate pedestrians and bicyclists. A typical 2-lane section of US 41 near Raleigh Road in Alachua County is shown below in **Figure 4**.

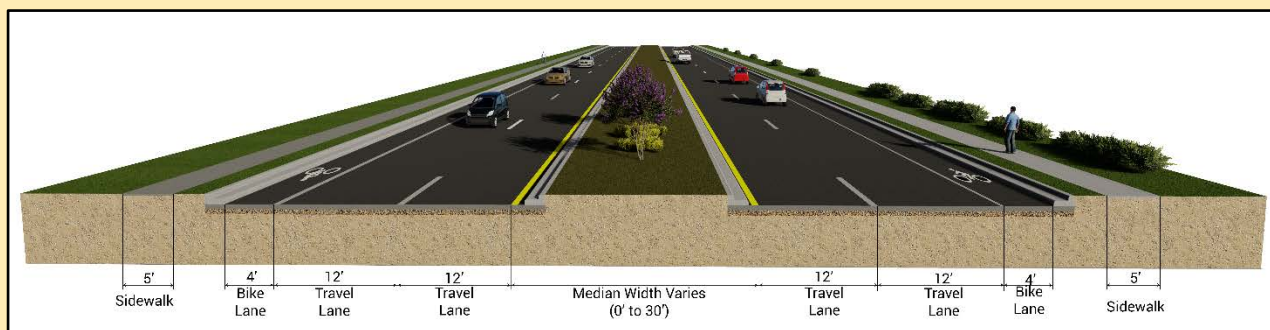
Figure 4 – US 41 Typical Section



The US 441 corridor is primarily a 4-lane divided arterial from the US 301/US 441 split to I-75. The corridor narrows to a 4-lane undivided arterial at a single location in Marion County from Avenue H to Avenue B within downtown Ocala. The speed limit along the corridor varies from 35 to 65 mph. Sidewalks and bicycle lanes are located primarily within the urban city limits of Ocala and

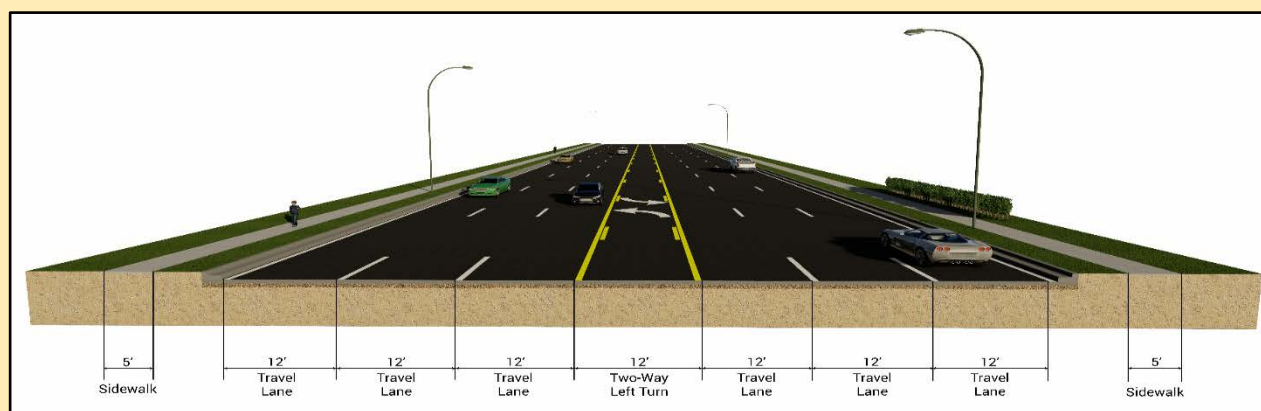
Gainesville. A typical section of US 441 located just south of SR 24A in Gainesville is shown below in **Figure 5**.

Figure 5 – US 441 Typical Section



The US 301 corridor is primarily a 4-lane divided arterial from Florida's Turnpike to I-10 except for two areas: South of Belleview, from CR 42 to north of SE 145th Street, where the corridor narrows to a 2-lane arterial, and within the City of Ocala, from SE 1st Avenue to NW 2nd Street, where the corridor expands to a 7-lane arterial. The speed limit varies from 35 to 65 mph. Sidewalks and bicycle lanes are mainly located in the urban city limits of Ocala. The 7-lane US 301 typical section near CR 464 in Ocala is shown below in **Figure 6**.

Figure 6 – US 301 Typical Section



6.1 Existing and Future Traffic and Level of Service on US 41, US 441, and US 301

Traffic analysis of US 41, US 441, and US 301 shows failing LOS in all the urban areas (Gainesville, Ocala, Inverness, and Williston). It is important to note the US 41, US 441, and US 301 corridors

are failing due to local traffic and do not have the capacity to accommodate any traffic diverted from I-75. **Tables 2, 3, and 4** below show the existing and future traffic LOS along US 41, US 441, and US 301, respectively.

Table 2: US 41 Existing and Future Traffic and LOS							
From	To	2014 AADT	2040 AADT	LOS Standard	2014 LOS	2040 LOS	Fall Below LOS Target
City of Inverness							
SR 44	W Main Street	37,400	65,200	D	F	F	Yes
W Main Street	E Mimosa Lane	13,900	28,000	D	D	F	Yes
City of Williston							
SR 121	7th Avenue	9,000	18,800	C	C	E	Yes
7th Avenue	SR 500	9,000	18,800	C	C	E	Yes
SR 500	SR 121	15,300	29,100	C	C	E	Yes

Table 3: US 441 Existing and Future Traffic and LOS							
From	To	2014 AADT	2040 AADT	LOS Target	2014 LOS	2040 LOS	Fall Below LOS Target
City of Gainesville							
SR 331/Williston Road	SR 226	22,000	23,200	D	C	C	No
SR 226	SR 24/Archer Road	32,000	45,100	D	D	F	Yes
SR 24/Archer Road	SR 26/University Avenue	32,100	44,200	D	D	F	Yes
SR 26/University Avenue	SR 12/N 23rd Avenue	31,700	44,400	D	D	F	Yes
SR 12/N 23rd Avenue	SR 222	27,400	35,100	D	D	F	Yes
SR 222	SR 20	17,100	21,400	D	C	C	No
SR 20	SR 121	23,400	32,300	D	C	C	No

Table 4: US 301 Existing and Future Traffic and LOS							
From	To	2014 AADT	2040 AADT	LOS Standard	2014 LOS	2040 LOS	Fall Below LOS Target
City of Ocala							
SE 100th Street	CR 464A	26,225	59,350	C	C	E	Yes
CR 464A	SE 31st Street	26,700	49,700	C	C	E	Yes
SE 31st Street	CR 464	33,500	62,800	C	C	E	Yes
CR 464	SR 40	34,300	70,800	C	C	F	Yes
SR 40	US 27	26,800	56,850	C	C	F	Yes
US 27	NE 20th Street	28,700	46,800	C	C	E	Yes

The LOS analysis results show that to address the future traffic demand, the existing parallel corridors would need to be widened. US 41 through the City of Williston is projected to be at LOS

F by 2040. US 441 through the City of Gainesville is projected to be at LOS F by 2040. US 301 has been identified as a potential reliever route to I-75; however, several segments of US 301 are expected to fail by year 2040. US 301 through the City of Ocala is projected to be failing with a LOS F by 2040. There are social, cultural, and physical constraints along the corridors that present significant challenges to any capacity improvements.

7 STUDY CORRIDOR CONSTRAINTS

7.1 Social Constraints

The Alachua County and the City of Gainesville Comprehensive Plans restrict the number of lanes on US 441 to four lanes. Along the US 301 corridor, the Marion County Comprehensive Plan restricts widening or new construction to roadways outside their Urban Growth Boundary.

Potential widening of the parallel corridors, by adding one lane in each direction, through the urban areas would be challenging. The existing parallel corridors traverse multiple local communities and are characteristic of constrained ROW areas with multiple homes, businesses, and major community services such as the University of Florida within Gainesville. For example, widening the US 41 corridor through the City of Inverness would impact 87 parcels, one of which is residential and 86 that are commercial. Similarly, widening US 441 through the City of Gainesville would impact 199 parcels, 36 of which are residential and 163 that are commercial. These parcels include the University of Florida Campus, which is located along the US 441 corridor. Additionally, there is heavy pedestrian traffic on crosswalks near the university facilities and any widening would create safety issues. Widening of the US 301 corridor through the City of Ocala would impact 192 parcels, 6 of which are residential and 186 are commercial.

Widening improvements along US 41, through the Cities of Williston, High Springs, Dunnellon, and Inverness, would impact businesses adjacent to limited ROW. For example, the existing ROW including the existing roadway through the City of Williston and High Springs is approximately 60 feet.

Improving the University Avenue/US 441 intersection would either impact the University of Florida Campus or the Holiday Inn Hotel. In addition to ROW constraints, both the Alachua County and City of Gainesville's Comprehensive Plans state that all roadways (with the exception of I-75) should be limited to four travel lanes.

At the intersection of SR 40 and US 301, widening improvements would impact several businesses as well as the Clerk of Court Annex. In addition to ROW constraints, Marion County staff have stated that widening should not be considered.

7.2 Natural Constraints

Wetlands, conservation areas, floodplains, and the Paynes Prairie greenways and trails system exist within the study area. As part of the study, wetland impacts were quantified. Approximate wetland impacts would be 14 acres along US 41; 8 acres along US 441; and 14 acres along US 301.

Approximate impacts to conservation lands would be 16 acres along US 41; 2 acres along US 441; and 1/2 acre along US 301.

Approximate floodplain impacts would be 70 acres along US 41; 102 acres along US 441; and 188 acres along US 301.

No threatened or endangered species were observed along any of the alternative study corridors. Future studies will require additional listed species surveys to completely identify constraints.

There were specific environmental constraints addressed in the study that would impose challenges on the widening of I-75 and all of the alternate study corridors. The widening of US 41 could potentially impact Cooter Pond Park. Along I-75, US 441, and US 301, the widening could impact the Florida Greenways and Trails System, the historic Santo State Recreation Area, and the Santos Trailhead and Campground.

7.3 Cultural Constraints

In addition to social and natural impacts, there are also cultural sites and contamination sites adjacent to the parallel study corridors. Along the US 41 corridor within the City of Inverness, 3 historical buildings (Citrus County Courthouse, Masonic Temple of Citrus, and Bank of Inverness) and 47 contamination sites were identified.

Along the US 441 corridor within the City of Gainesville, 4 historical buildings (PK Yonge Old Laboratory and Mallory, Reid, and Yulee Halls) and 29 contamination sites were identified.

Along the US 301 corridor within the City of Ocala and the City of Belleview, 3 historical buildings (Belleview City Hall, Migrant House, and Belleview-Santos Elementary School) and 148 contamination sites were identified.

8 I-75 CAPACITY IMPROVEMENT OPTIONS

8.1 I-75 Short-Term Improvements

As part of this study, short-term improvements were developed to address traffic congestion concerns along I-75. These short-term improvements would help enhance safety, improve operations, and extend the life of the system before the need for additional lanes on I-75. Some of the key short-term improvements being considered include providing:

- Road Rangers Service Patrol
- Dynamic Message Signs
- Fiber Interconnection between Major Cities
- Signal Coordination on Arterials
- Enhanced Regional Transportation Management Center Operations

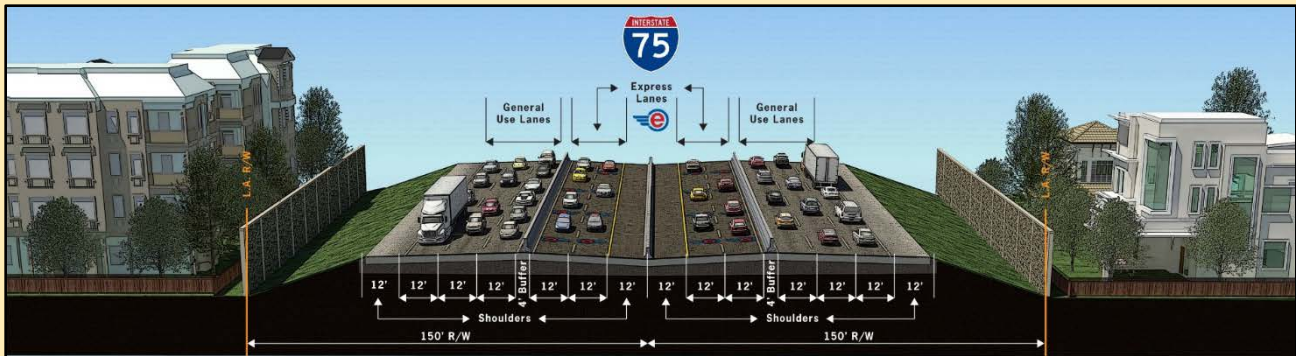
8.2 I-75 Ultimate Improvements

In addition to short-term improvements, this study also considered ultimate (long-term improvement) alternatives for I-75. The ultimate alternatives include the addition of general use lanes and/or express lanes. Truck only lanes were not found to be feasible based on the preliminary analysis and were not evaluated further in this study. An illustration of the General Use Lanes Alternative is shown below in **Figure 7** and an illustration of the Express Lanes Alternative is shown in **Figure 8**.

Figure 7 - General Use Lanes Alternative



Figure 8 - Express Lanes Alternative



8.3 Rail Feasibility Study

The I-75 Task Force recommendations included providing more choices for long-distance travel, including analyzing the feasibility of enhanced or new passenger rail services. FDOT has initiated a rail feasibility study to analyze the need for additional passenger service from Tampa to Jacksonville. As part of the I-75 North Master Plan, the potential for enhanced or new intercity passenger rail between Tampa Bay and Jacksonville is being studied, including an analysis of existing and historical rail corridors. Preliminary results indicate the projected ridership for enhanced or new service through the year 2040 would be similar to the existing ridership levels on the Amtrak Tampa to Jacksonville service via Orlando. Based on the anticipated ridership levels, new intercity passenger rail service between Tampa to Jacksonville is not anticipated to be cost-feasible or result in any substantial diversion of auto traffic from I-75.

9 SUMMARY AND CONCLUSION

The North I-75 Master Plan has evaluated recommendations from the I-75 Relief Task Force and concluded the following:

- I-75 is a unique corridor that experiences substantial increases in traffic during holidays, special events, and frequent closures due to incidents or weather. LOS failures occur presently due to non-recurring congestion and LOS failures are also anticipated in the next 10 to 12 years due to recurring congestion.
- Short-term and long-term capacity improvements are needed to the I-75 corridor to accommodate additional projected growth in freight, visitor, and local commuter traffic and to enhance public safety and emergency evacuation.

- Three parallel corridors, US 41, US 441, and US 301 would not serve as efficient diversion routes. These corridors would require significant improvements and substantial community impacts within the urban areas if they are to serve as alternative routes to I-75. These improvements would result in significant social, cultural, and natural impacts and would require changes to local comprehensive plans.
- I-75 widening will also have impacts to the natural and physical environment. Widening of I-75 does not address the issue of non-recurring congestion. Weather related congestion, incidents, and holiday/seasonal traffic affect the entire I-75 corridor. Currently, non-recurring congestion is responsible for failing conditions on I-75 for about 40 percent of the time in a year.

9.1 Next Steps

1. FDOT Districts 2 and 5, along with Central Office, are also considering several projects that would implement short-term improvements along I-75 before ultimate improvements are constructed.
2. The next step after this Master Plan is to initiate the next project phases for the critical segments of I-75 followed by Design and Construction phases as funding becomes available. FDOT Districts 2 and 5 have initiated a planning study for evaluating improvements along I-75. The limits of this study are from Wildwood in District 5 to I-10 in District 2.
3. Additionally, FDOT has initiated a rail feasibility study to analyze the need for additional passenger service from Tampa to Jacksonville. The ongoing study will document potential intercity passenger rail connections for further study as travel demand for rail increases.
4. This Master Plan focused only on existing facilities and determined the existing facilities (I-75, US 41, US 441, and US 301) cannot accommodate the recurring and non-recurring congestion. Capacity improvements to these corridors will have significant social, cultural, and natural impacts. It's FDOT's mission and goal to evaluate the state's long-term mobility needs to maintain acceptable operational and safety standards. New multimodal and multiuse corridors were recommendations of the I-75 Relief Task Force and should be further evaluated in future studies.