



1.0 INTRODUCTION

The Florida Department of Transportation (FDOT) proposes construction of a new interchange along Interstate 95 (I-95) at Pioneer Trail (County Road (CR) 4118) near milepost (MP) 19.032 in Volusia County. The proposed interchange is located between two existing interchanges along the Interstate: I-95 and State Road (SR) 44 (Lytle Avenue) located near MP 16.287, approximately 2.75 miles to the south and I-95 and SR 421 (Dunlawton Avenue) located near MP 23.300, approximately 4.27 miles to the north. This IJR Reevaluation is being conducted to provide documentation of the safety, operational and engineering viability of the proposed interchange. This project is being developed concurrently with the I-95 Interchange at Pioneer Trail PD&E Study.

1.1 Purpose and Need

The purpose of the proposed I-95 at Pioneer Trail interchange is to relieve traffic congestion at the two adjacent interchanges north and south of the project (SR 421 and SR 44, respectively) and to support economic development associated with existing and approved developments, including three Developments of Regional Impact (Farmton, Restoration, and Pavilion at Port Orange). Additionally, the new interchange is anticipated to enhance regional mobility by providing improved connectivity and serving as a viable alternative for emergency evacuations and incident management for this area in southern Volusia County.

The need for the project was identified in the previously approved *Interchange Justification Report (April 2017)* prepared by FDOT and can be summarized into four primary categories:

- Reduce congestion at adjacent interchanges
- Regional mobility
- Emergency evacuation
- Support economic viability associated with future development

1.1.1 Traffic Congestion

Within Volusia County and the cities of Port Orange and New Smyrna Beach, a significant number of development plans have already been identified. This growth will place a burden on the regional roadway system including the adjacent interchanges of SR 421 and SR 44. SR 421 to the north is currently operating at or near capacity with extended queues during the peak hours and is constrained in terms of possible improvements to the existing configuration. The SR 44 interchange to the south is identified as one of the highest crash locations in Volusia County. Over the last 12 years, FDOT, the Cities of Port Orange and New Smyrna Beach and Volusia County have made numerous improvements to the both of these existing interchanges to address the safety issues and increase in congestion that has occurred in this area, as illustrated in **Figure 2A** through **Figure 2D**. However, these improvements do not meet the purpose of this project which is to reduce traffic congestion by providing an alternate route such that vehicles do not need to travel through the existing interchanges. The new interchange at Pioneer Trail is an ideal location to provide relief to the existing operational conditions at the SR 421 interchange and serve as an alternative to the SR 44 interchange in the future.

1.1.2 Regional Transportation Need

The I-95 at Pioneer Trail interchange has a long history of being identified as a regional transportation need. The proposed interchange has been identified as a Strategic Intermodal System (SIS) priority project by the River-to-

FIGURE 2A: HISTORICAL INTERSECTION IMPROVEMENTS

I-95 AND SR44

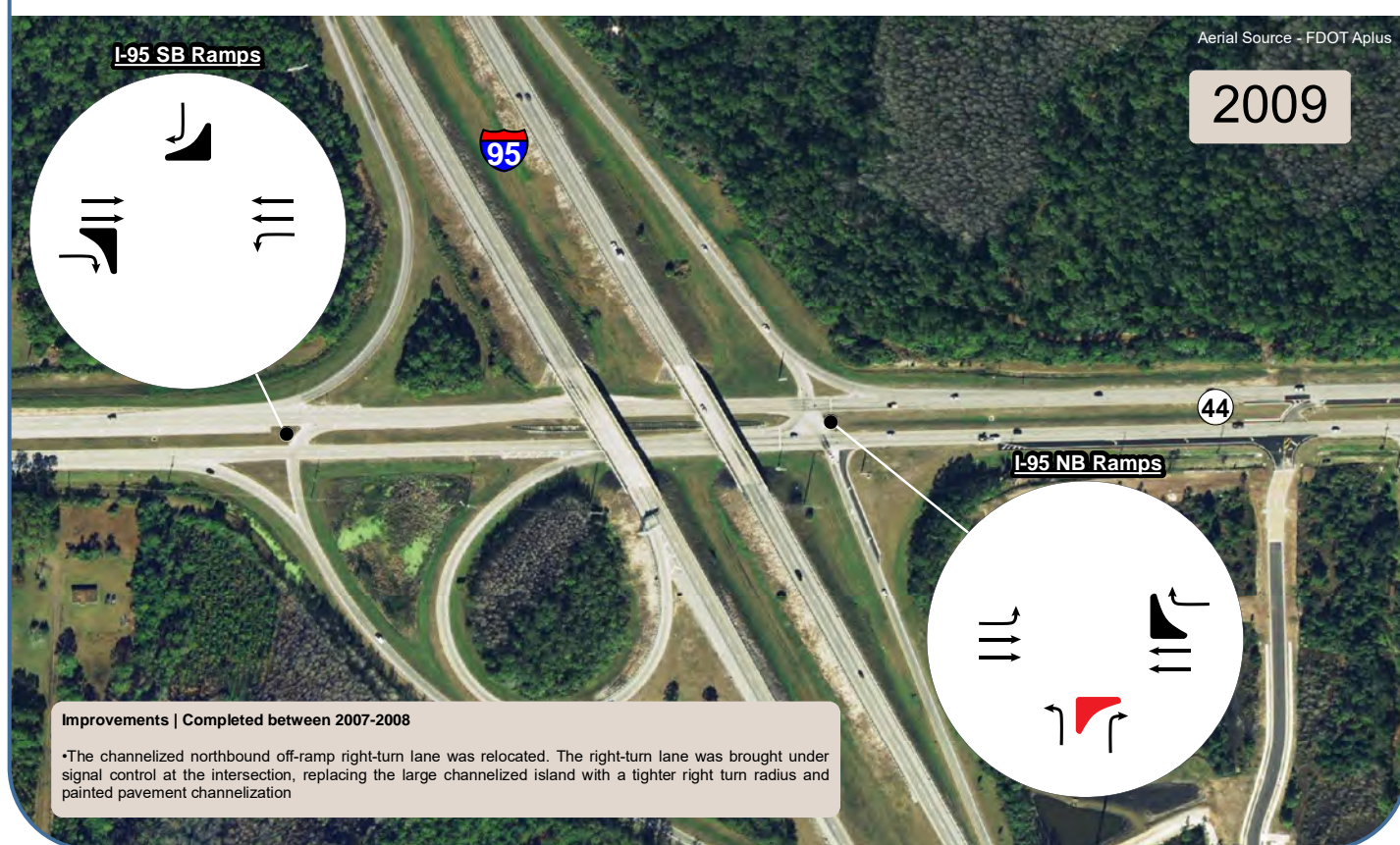
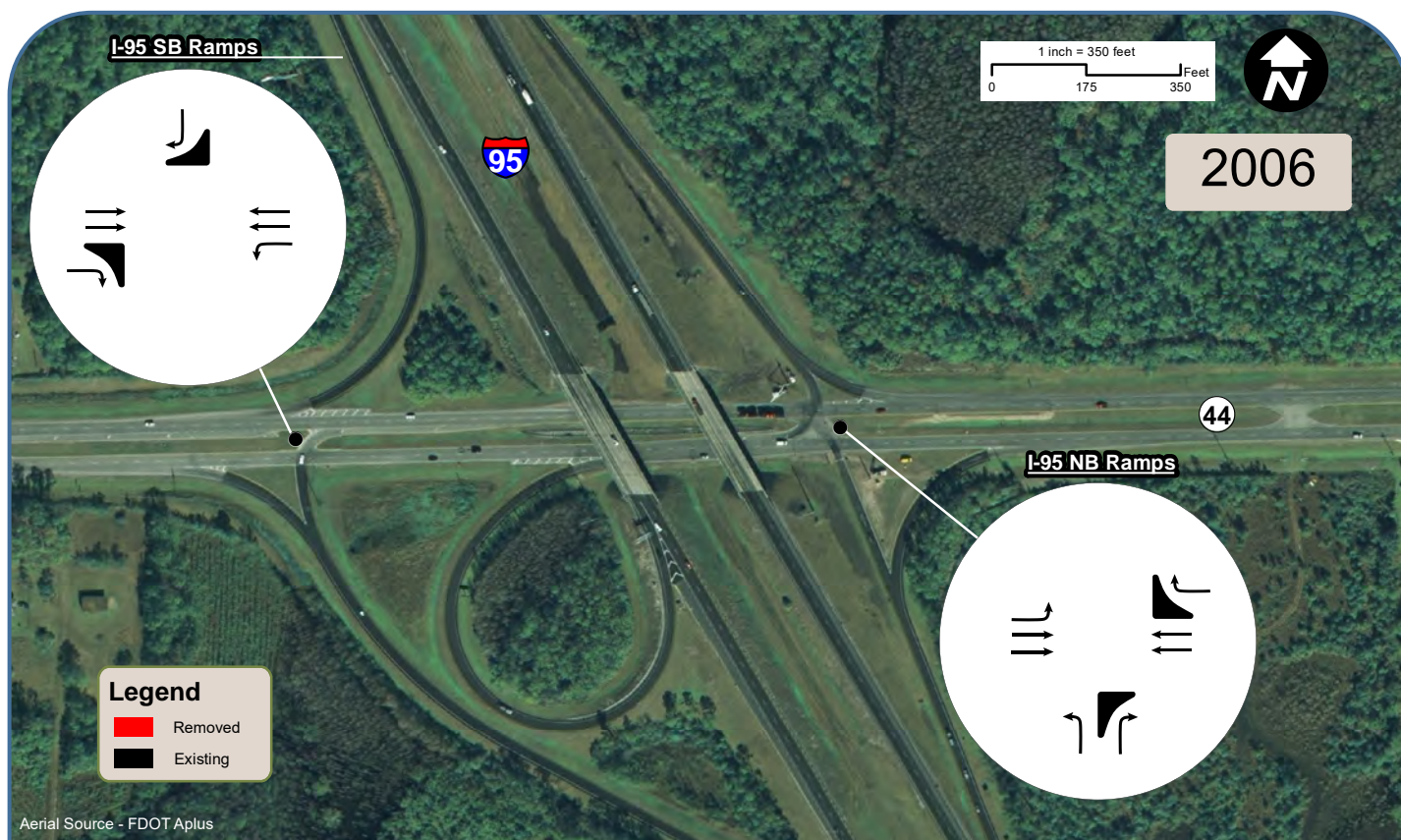
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FIGURE 2B: HISTORICAL INTERCHANGE IMPROVEMENTS

I-95 AND SR 44

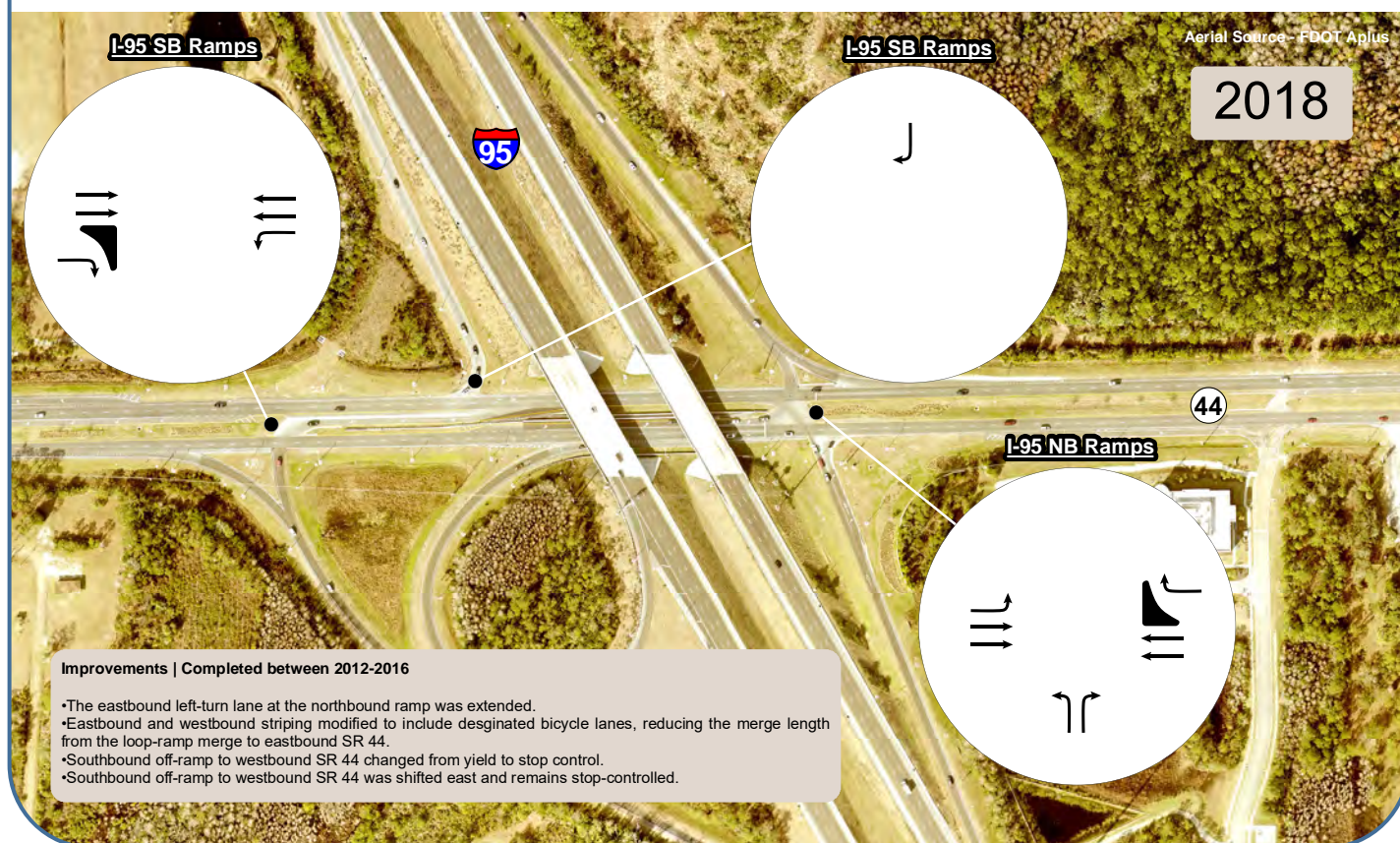
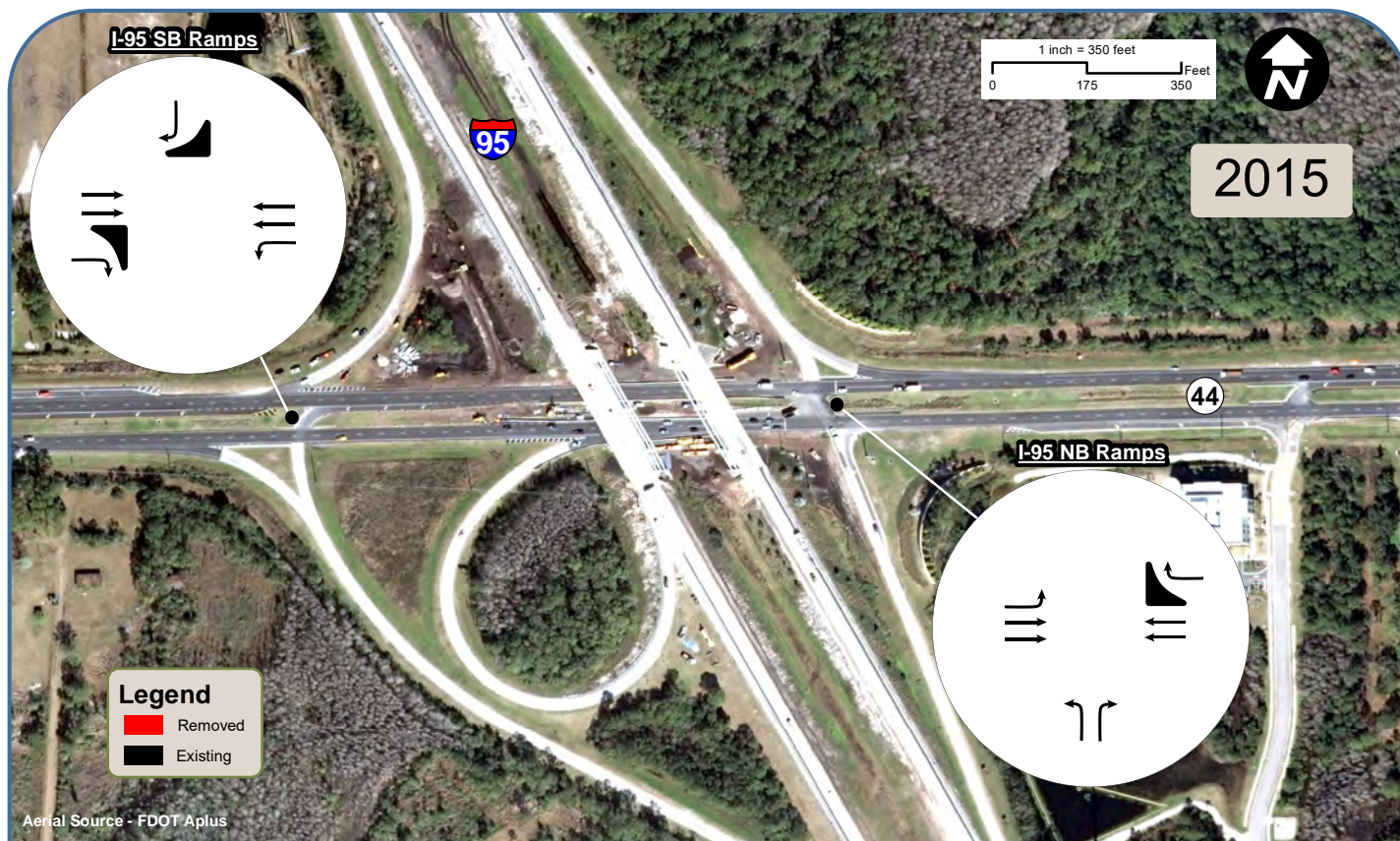
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FIGURE 2C: HISTORICAL INTERSECTION IMPROVEMENTS

I-95 AND SR 421

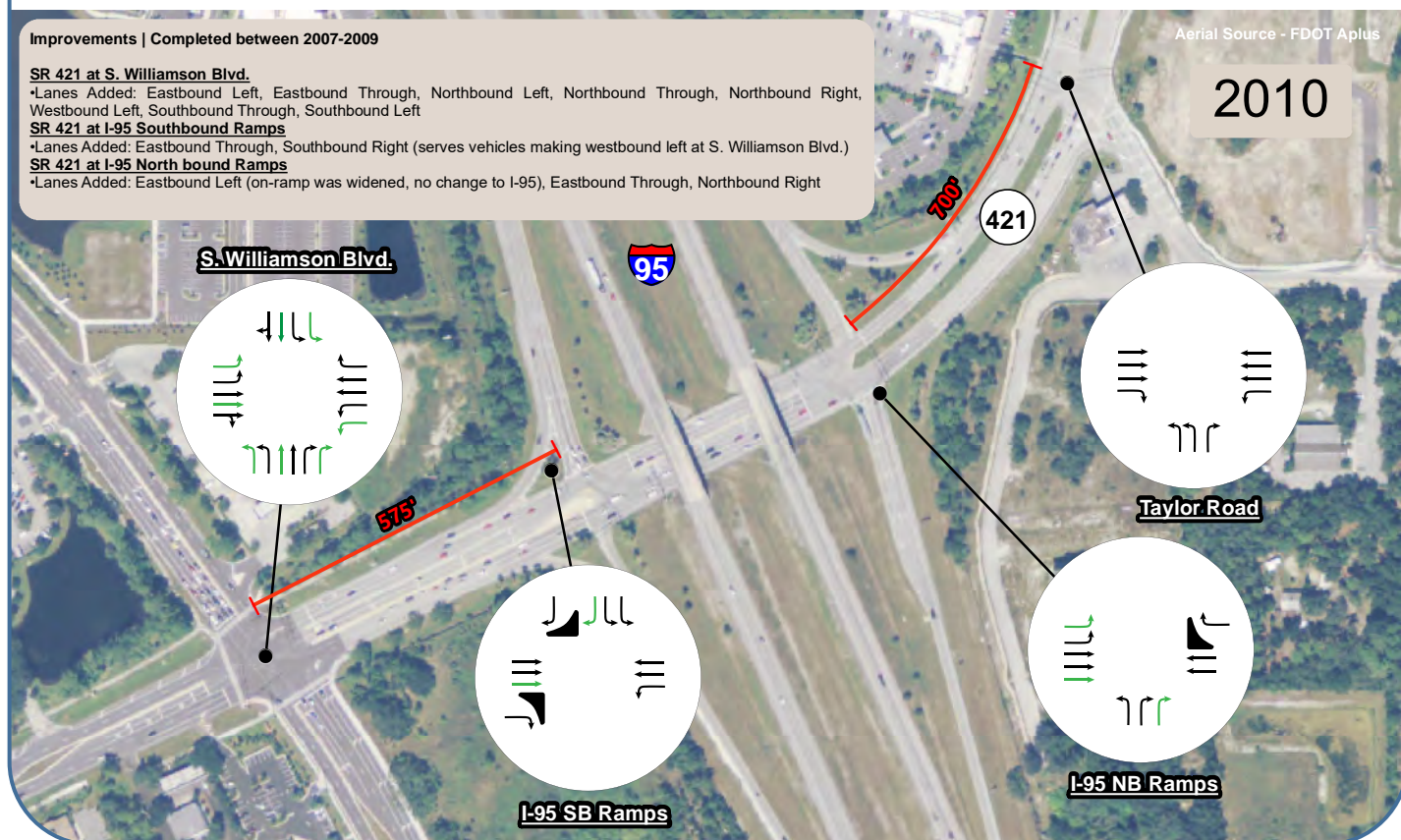
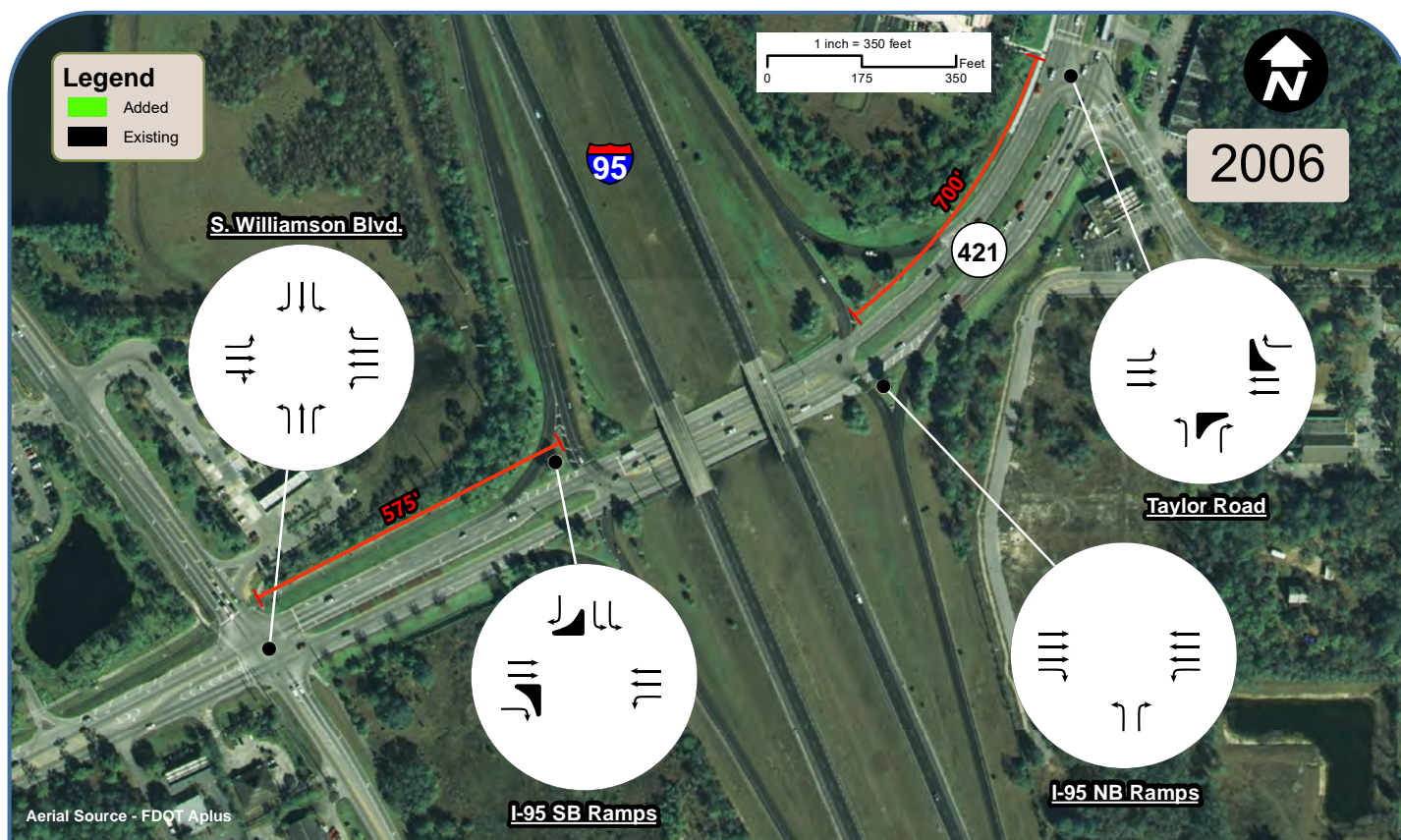
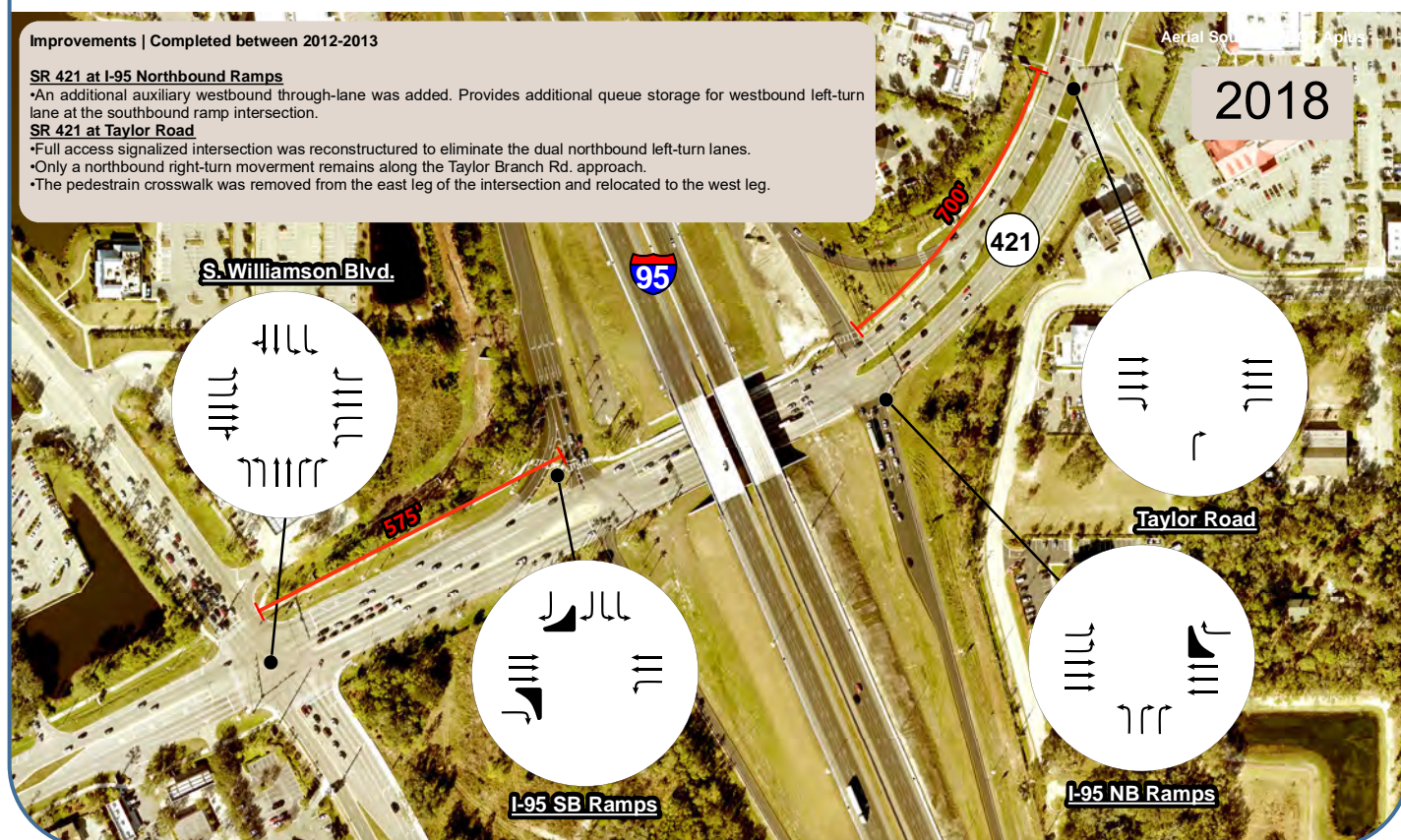
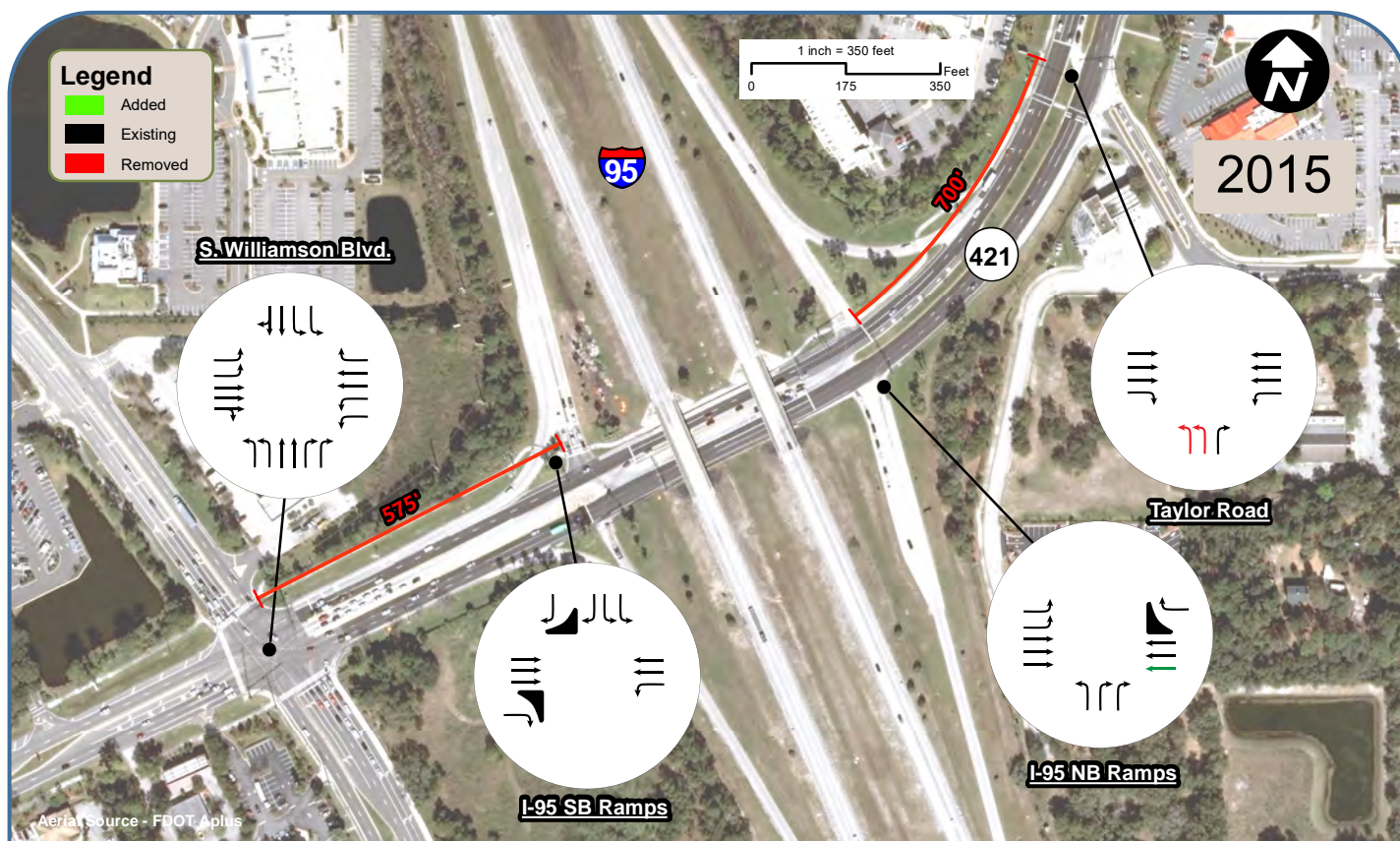
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FIGURE 2D: HISTORICAL INTERSECTION IMPROVEMENTS

I-95 AND SR 421

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Sea Transportation Planning Organization (R2CTPO) and supported by the cities of Port Orange and New Smyrna Beach, as well as Volusia County. It was included in the 2025 Cost Feasible Roadway projects and the 2035 Needs Plan of the Volusia County Long Range Transportation Plan (LRTP). Subsequently, the proposed interchange was moved to the Cost Feasible Plan Projects List in the 2040 R2CTPO LRTP. The current PD&E phase of the project conforms to the NEPA approval process and is part of an extensive transportation planning effort that includes the following previously conducted studies that demonstrated the importance and need for the Pioneer Trail interchange.

- The “*I-95 at Pioneer Trail Interchange Justification Report*” accepted by FHWA in May 2017 determined that not only would the interchange reduce congestion through the SR 421 interchange area, it would also support the economic vitality and approved future development of the area.
- The *I-95 Sketch Interstate Plan (SIP)* [March 2010] included the Pioneer Trail interchange as a new designated future roadway project
- The “*SR 421/I-95 Interchange Analysis*” study conducted by the City of Port Orange in 2009 studied the Pioneer Trail interchange as part of an alternate corridor evaluation and concluded that the Pioneer Trail interchange would provide relief to the critical SR 421 interchange.
- The *I-95 Systems Operational Analysis Report (SOAR)* [November 2005, August 2016] identified that the Pioneer Trail interchange meets minimum spacing requirements.
- The “*Pioneer Trail Feasibility Study*” conducted in 2005 as part of the *I-95 Systems Operational Analysis Report* study concluded that the proposed interchange at Pioneer Trail would serve the regional trips and would not have adverse impacts on mainline operations. The new interchange would alleviate traffic on the adjacent interchanges.

1.1.3 Emergency Evacuation & Incident Management

The proposed I-95 at Pioneer Trail interchange is located in close proximity to the coastal communities of Port Orange, New Smyrna Beach and Edgewater. These areas are highly susceptible to storm surge from extreme weather events. Hurricane evacuation zones extend from the Eastern/Atlantic Coastline to I-95 in this area. The Spruce Creek crossing at I-95 is designated as Evacuation Zone A. The area immediately surrounding Spruce Creek and bounded by I-95 to the east, SR 421 to the north and CR 415 (Tomoka Farms Road) to the west is designated as Evacuation Zone E. Additionally, the inland areas near these coastal communities and along the Interstate have been identified by Volusia County Emergency Management as high vulnerability for risk of wildfires based on historical burn experience and other risk factors.

Volusia County Emergency Management and the Florida State Emergency Response Team provides disaster preparedness and response to natural and man-made disasters in the region. Pioneer Trail is a designated evacuation route by the Florida Division of Emergency Management as shown in **Figure 3**. The emergency evacuation facilities located within an approximate 5-mile radius of the proposed interchange are listed in **Table 1**.

Pioneer Trail contributes to the regional network and provides direct and indirect connections to all of the major arterials in the surrounding area. This includes SR 421 to the north, SR 5/ US 1 to the east, SR 44 to the south, CR 415 to the west, and I-4 using SR 44 to the west. An interchange at Pioneer Trail would provide easily accessible interchange termini and improved evacuation capacity to the area. Additionally, the proposed interchange may be used as part of a detour plan should there be a need to shutdown portions of I-95 in this area. The additional access would allow traffic to be diverted from the already severely congested areas along the



FIGURE 3: EMERGENCY EVACUATION FACILITIES
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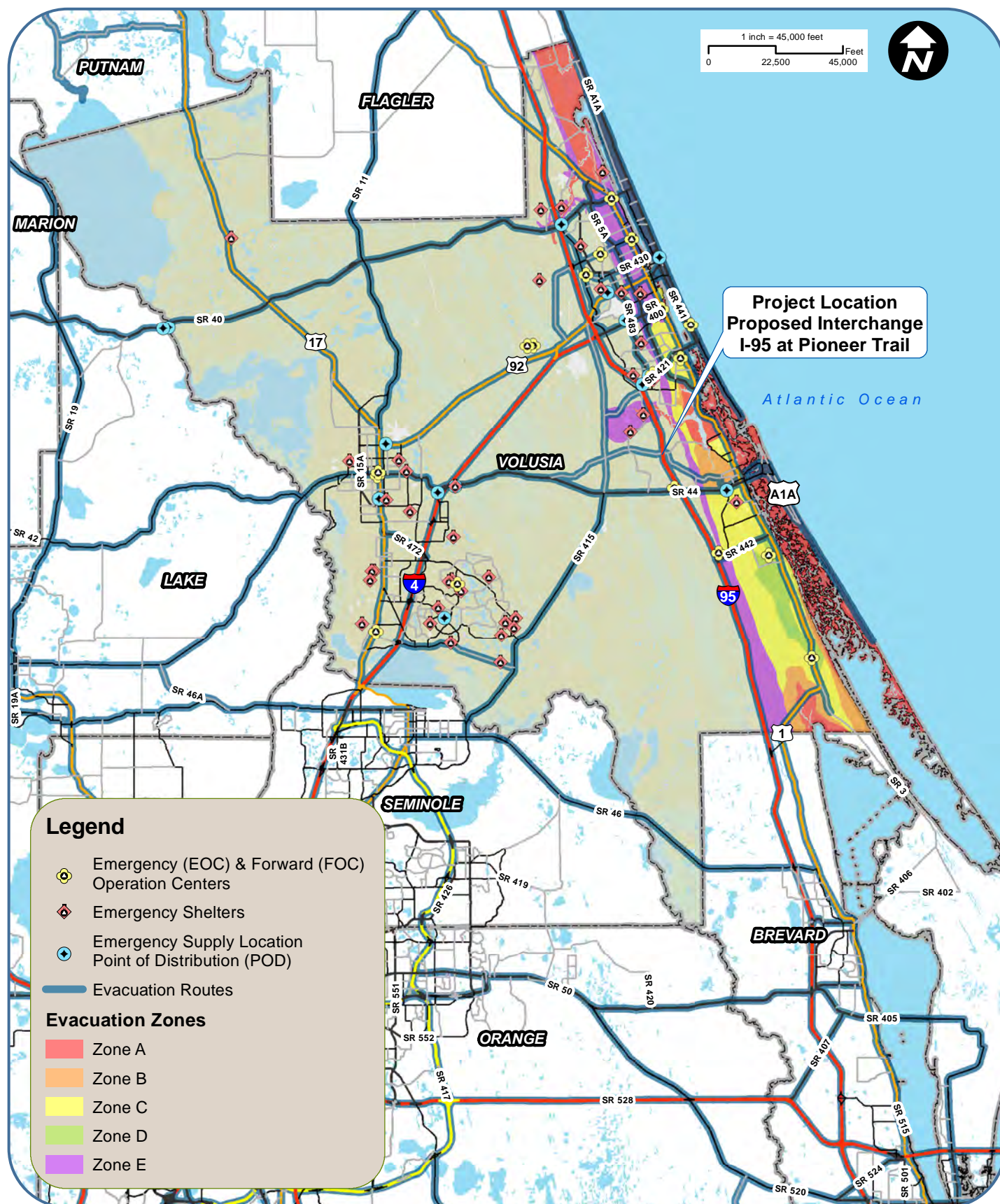




Table 1: Emergency Evacuation Facilities

Emergency Facility Type	Location/ Limits
<i>Evacuation Route</i>	
I-95	Entire Volusia County
SR 421	CR 415 - SR A1A
CR 4118 (Pioneer Trail)	Entire Volusia County
SR 44	Entire Volusia County
<i>Shelters</i>	
Creekside Middle School	6801 Airport Rd
Cypress Creek Elementary School	6100 S Williamson Blvd
Horizon Elementary School	4751 Hidden Lake Dr
New Smyrna Beach High School	1015 10th St
Sweetwater Elementary School	5800 Victoria Gardens Blvd
<i>Emergency Operations Centers</i>	
New Smyrna Beach Station 51	151 Williamson Blvd
Port Orange Police Department	1395 Dunlawton Ave
<i>Emergency Supply Point of Distribution Locations</i>	
Port Orange Home Depot	1551 Dunlawton Ave
Port Orange Lowes	1751 Dunlawton Ave
Port Orange Walmart	1590 Dunlawton Ave
Source: Volusia County Geographic Information Services shapefiles: http://maps.vcgov.org/gis/download/shapes.htm	

SR 421 corridor near I-95 and Williamson Boulevard. The proposed interchange has the potential to save valuable time for evacuating residents and reducing the length of travel detours related to incident management by providing additional access to the Interstate System.

1.1.4 Economic Development

An economic impact analysis was completed as part of the initial IJR to determine the economic impacts and associated effects of the construction of the proposed interchange. These impacts include short-term construction impacts as well as long- term benefits created from the permanent infrastructure improvement including jobs, wages and total economic output or activity, for direct, indirect and induced economic effects. The economic benefits due to the proposed interchange were quantified as follows:

- Add \$2.5 billion to the local economy due to construction activity,
- Employ approximately 700 construction and construction-related workers during the development horizon,
- Support approximately 13,000 permanent jobs, and
- Increase in spending up to \$775 million per year associated with new household operations and additional office, retail, and hotel employment