

Bi - County Study

Phase II: Concept Report



Burnt Store Road - Veterans Parkway - Colonial Boulevard Lee and Charlotte Counties

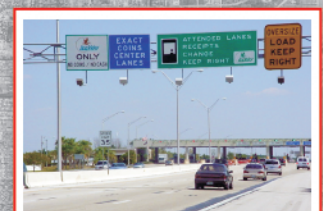
Project No. 4085

FINAL

Prepared by:



May 2005
(Revised August 2005)





EXECUTIVE SUMMARY

This study identifies mobility improvements to meet the long-term 2030 travel needs along this transportation corridor. Preliminary estimates of right-of-way (ROW) and construction costs were developed as part of this phase. At the conclusion of this study, Lee and Charlotte counties will have information to choose feasible alternatives and develop a schedule for funding and implementing these improvements. Following these decisions, further engineering and design phases will be needed under separate contracts before the right-of-way (ROW) and construction phases can be initiated.

Currently, segments of Colonial Boulevard operate at deficient levels of service (LOS). By 2010, segments of Veterans Parkway will operate at deficient LOS. Between 2010 and 2020 Burnt Store Road will operate at a deficient LOS.

Future travel demand is anticipated to increase significantly along the Burnt Store Road, Veterans Parkway, and Colonial Boulevard corridors. The most significant increase in travel demand was forecasted on the Burnt Store Road corridor.

Conceptual designs were developed for the project corridor based on the anticipated growth and traffic forecasts. Input was provided from agency staff, elected officials, and the community. Typical sections and corridor alignment alternatives were developed considering design criteria and access management standards. Impacts, project cost, and ROW needs were evaluated.

A recommended implementation plan was outlined for the project corridor based on when additional capacity is needed. The plan summarized the roadway improvements and cost, as well as recommended timing of design, ROW, and construction projects. The construction staging considered project cost in addition to location and proximity of other construction projects proposed. Additionally, the recommended implementation plan considered that funding is not available to complete all improvements within a short term horizon. Should funding become available sooner, segments can be advanced

Charlotte County – Punta Gorda

The proposed typical sections for Jones Loop Road from I-75 to Taylor Road consist of widening the existing roadway by 2030, resulting in a six-lane suburban roadway.

The existing four-lane roadway along Jones Loop Road from Taylor Road to Tamiami Trail will accommodate the projected 2030 traffic volumes. Therefore, no improvements to the existing typical section are proposed.

Two typical sections were evaluated for Burnt Store Road from Tamiami Trail to Notre Dame Boulevard and subsequently labeled Option A and Option B. The four-lane divided urban typical section (Option A), without expansion to six-lanes, is recommended by 2015 to provide a low design speed and to minimize impacts to the residential parcels in this area. Public comments from the public information workshops also supported Option A. This four-lane option is consistent with the current Charlotte MPO LRTP.

The proposed typical section for the Tuckers Grade extension from Burnt Store Road to Tamiami Trail consists of new construction of a four-lane divided rural roadway by 2040.

The proposed typical section for Burnt Store Road from Notre Dame Boulevard to the Lee County Line consists of new construction of a four-lane divided rural roadway by 2015.

The total project cost for Charlotte County – Punta Gorda was estimated at \$183.2 Million (2004 Dollars). Possible project financing would be through Charlotte County's capital improvement program, which includes road impact fees and gas taxes. Currently, the capital improvement program would not be sufficient to finance these improvements consistent with the recommended implementation plan. A new funding program was created by the FDOT to partially fund regional multi-modal transportation systems like Burnt Store Road. Furthermore, the CIP funds could be used for a matching contribution. Commitments from future developments in the area could possibly assist with project financing. A figure showing the recommended construction staging for Charlotte County – Punta Gorda is provided on the following page.



Recommended Construction Staging Lee County - Fort Myers

PRELIMINARY

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

4-20-05



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Flight Date: April 2002

Legend

Colonial Boulevard McGregor Blvd. to Cleveland Ave.

By 2020 Express Lanes, Overpass & Ramps
Design, ROW & Construction
Project Cost \$103.3 Million

Colonial Boulevard Cleveland Ave. to Metro Pkwy.

By 2025 Express Lanes, Overpass & Ramps
Design, ROW & Construction
Project Cost \$130.6 Million

Colonial Boulevard Winkler Ave. to I-75

By 2030 Express Lanes, Overpass, Ramps & Flyover
Design & Construction
Project Cost \$159.2 Million

Colonial Boulevard Metro Pkwy. to Winkler Ave.

2030 Express Lanes, Overpass & Ramps
Design & Construction
Project Cost \$58.2 Million

Lee County – Cape Coral

The proposed typical section for Burnt Store Road from the Charlotte County Line to Van Buren Parkway consists of new construction of a four-lane divided rural roadway by 2015, with a two-lane two-way frontage road system.

Three typical sections were evaluated for Burnt Store Road from Van Buren Parkway to Pine Island Road and subsequently labeled Option A1, Option A2, and Option B. Option A1 and A2 require that the 155-ft deep parcels adjacent to the east ROW line be acquired. Option B would not require acquisition of the full 155-ft parcel. However, the 30-ft roadway and drainage easement on both sides of the ROW would be utilized. The four-lane divided rural typical section with a residential access road (Option A2) is recommended by 2015. This option is recommended to provide a consistent design speed and to minimize ROW acquisition on both sides of the corridor. Public comments from the public information workshops also supported Option A2.

The existing four-lane roadway along Veterans Parkway from Pine Island Road to Skyline Boulevard, and six-lane roadway from Skyline Boulevard to Del Prado Boulevard will accommodate the projected 2030 traffic volumes. However, turn lane improvements and urban interchanges are proposed beginning in 2020 for Chiquita Boulevard, Skyline Boulevard, Santa Barbara Boulevard, and Country Club Boulevard.

The existing four-lane roadway for the Midpoint Memorial Bridge from Del Prado Boulevard to McGregor Boulevard will accommodate the project traffic volumes, until which time express lanes are implemented on Colonial Boulevard from McGregor Boulevard to I-75. The implementation of the express lanes is recommended for completion in 2030. However, based on the current deficit of project funding, it is likely that the recommended implementation may be extended beyond 2030.

The project cost for Lee County – Cape Coral was estimated at \$214 Million (2004 Dollars). Possible project financing would be through the Lee County capital improvement program, which includes road impact fees, gas taxes, and surplus toll revenues. However, surplus toll revenues based on current toll pricing would not be sufficient to finance these improvements. A new funding program was created by the FDOT to partially fund regional multi-modal transportation systems, like Burnt Store Road. Furthermore, the CIP funds could be used for a matching contribution. Commitments from future developments in the area could possibly assist with project financing. A figure showing the recommended construction staging for Lee County-Cape Coral is provided on the following page.



Midpoint Memorial Bridge:
Toll Plaza

PRELIMINARY



Recommended Construction Staging Lee County - Cape Coral

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

4-20-05



Legend

Burnt Store Road
Van Buren Pkwy. to Pine Island Rd.

**By
2015**

Widen to 4 lanes Rural with Access Roads
Design, ROW & Construction
Project Cost \$52-61 Million

Burnt Store Road
County Line to Van Buren Pkwy.

**By
2015**

Widen to 4 lanes Rural with Frontage Roads
Design, ROW & Construction
Project Cost \$37.5 Million

Veterans Parkway
Santa Barbara Blvd.

**By
2020**

Urban Interchange over Santa Barbara Blvd.
Design & Construction
Project Cost \$31.1 Million

Veterans Parkway
Country Club Blvd.

**By
2025**

Urban Interchange over Country Club Blvd.
Design & Construction
Project Cost \$31.1 Million

Veterans Parkway
Chiquita Blvd.

**By
2025**

Urban Interchange over Chiquita Blvd.
Design & Construction
Project Cost \$31.1 Million

Veterans Parkway
Skyline Blvd.

**By
2030**

Urban Interchange over Skyline Blvd.
Design & Construction
Project Cost \$31.1 Million

Lee County – Fort Myers

The proposed typical section for Colonial Boulevard from McGregor Boulevard to Cleveland Avenue consists of new construction of a four-lane divided elevated expressway by 2020, with a three-lane one-way frontage road system on both sides. An existing overpass is located at McGregor Boulevard and an urban interchange is located at Cleveland Avenue. Additional overpasses are proposed for Summerlin Road and DeLeon Street, with slip ramps east and west of Summerlin Road.

The proposed typical section for Colonial Boulevard from Cleveland Avenue to Metro Parkway consists of new construction of a four-lane divided elevated expressway by 2025, with a three-lane one-way frontage road system on both sides. Overpasses are proposed for Fowler Street, the railroad crossing, and Metro Parkway. Slip ramps are proposed east and west of Fowler Street and east of Metro Parkway.

The proposed typical section for Colonial Boulevard from Metro Parkway to Winkler Avenue consists of new construction of a six-lane divided expressway in 2030, with a two-lane one-way frontage road system on both sides. The segment between Metro Parkway and Veronica Shoemaker Boulevard is proposed to be elevated, while the segment between Veronica Shoemaker Boulevard and Winkler Avenue is proposed to be at-grade. An overpass is proposed for Veronica Shoemaker Boulevard.

The proposed typical section for Colonial Boulevard from Winkler Avenue to Forum Boulevard (east of I-75) consists of new construction of a four-lane divided elevated expressway by 2030, with a three-lane one-way frontage road system on both sides. Overpasses are proposed for Winkler Avenue, Ortiz Avenue/Six Mile Cypress Parkway, I-75, and Forum Boulevard. Slip ramps are proposed east and west of Winkler Avenue and east of Forum Boulevard.

The project cost for Lee County – Fort Myers was estimated at \$451.3 Million (2004 Dollars). Colonial Boulevard from McGregor Boulevard to Cleveland Avenue is not on the State Highway System (SHS) and likely would not meet eligibility requirements for state or federal funding, like the facility east of Cleveland Avenue.

Possible project financing from McGregor Boulevard to Cleveland Avenue could be from the Lee County capital improvement program, which includes road impact fees, gas taxes, and surplus toll revenues. However, surplus toll revenues based on current toll pricing would not be sufficient to finance the improvements for this segment.

Since the project corridor east of Cleveland Avenue is on the SHS, this facility has a better chance of meeting eligibility requirements for state or federal funding. It should be noted that Colonial Boulevard was not identified as a corridor or connector in Florida's Strategic Intermodal System (SIS) Plan. The SIS Plan proposed that a greater amount (75 percent) of the state's discretionary transportation capacity funding will be allocated to SIS facilities by 2015, up from approximately 62 percent currently. A figure showing the recommended construction staging for Lee County-Fort Myers is provided on the following page. A separate report addressing additional financing options for Lee County is being prepared. This report will be available at Lee County Department of Transportation.



Colonial Boulevard: A SHS Facility

PRELIMINARY



Recommended Construction Staging Lee County - Fort Myers

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

4-20-05



Legend

Colonial Boulevard McGregor Blvd. to Cleveland Ave.

**By
2020** Express Lanes, Overpass & Ramps
Design, ROW & Construction
Project Cost \$103.3 Million

Colonial Boulevard Cleveland Ave. to Metro Pkwy.

**By
2025** Express Lanes, Overpass & Ramps
Design, ROW & Construction
Project Cost \$130.6 Million

Colonial Boulevard Winkler Ave. to I-75

**By
2030** Express Lanes, Overpass, Ramps & Flyover
Design & Construction
Project Cost \$159.2 Million

Colonial Boulevard Metro Pkwy. to Winkler Ave.

2030 Express Lanes, Overpass & Ramps
Design & Construction
Project Cost \$58.2 Million



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SECTION 1.0 INTRODUCTION

Travelers in Southwest Florida are faced with increasing traffic congestion and delays as the demands of a rapidly growing population put additional stress on existing roadways. In order to develop a plan to improve mobility for the traveling public, this bi-county study has been initiated.

The transportation corridor study began in October 2003. The study process included two phases; the first phase included data collection, existing conditions, and future travel demand. The second phase included an analysis of the conceptual alternatives.

Through the study process, the general public and elected officials were updated on the project's progress. Updates were also provided on the website throughout the course of the study. Local government agency coordination occurred primarily through a task force consisting of staff from the agencies.

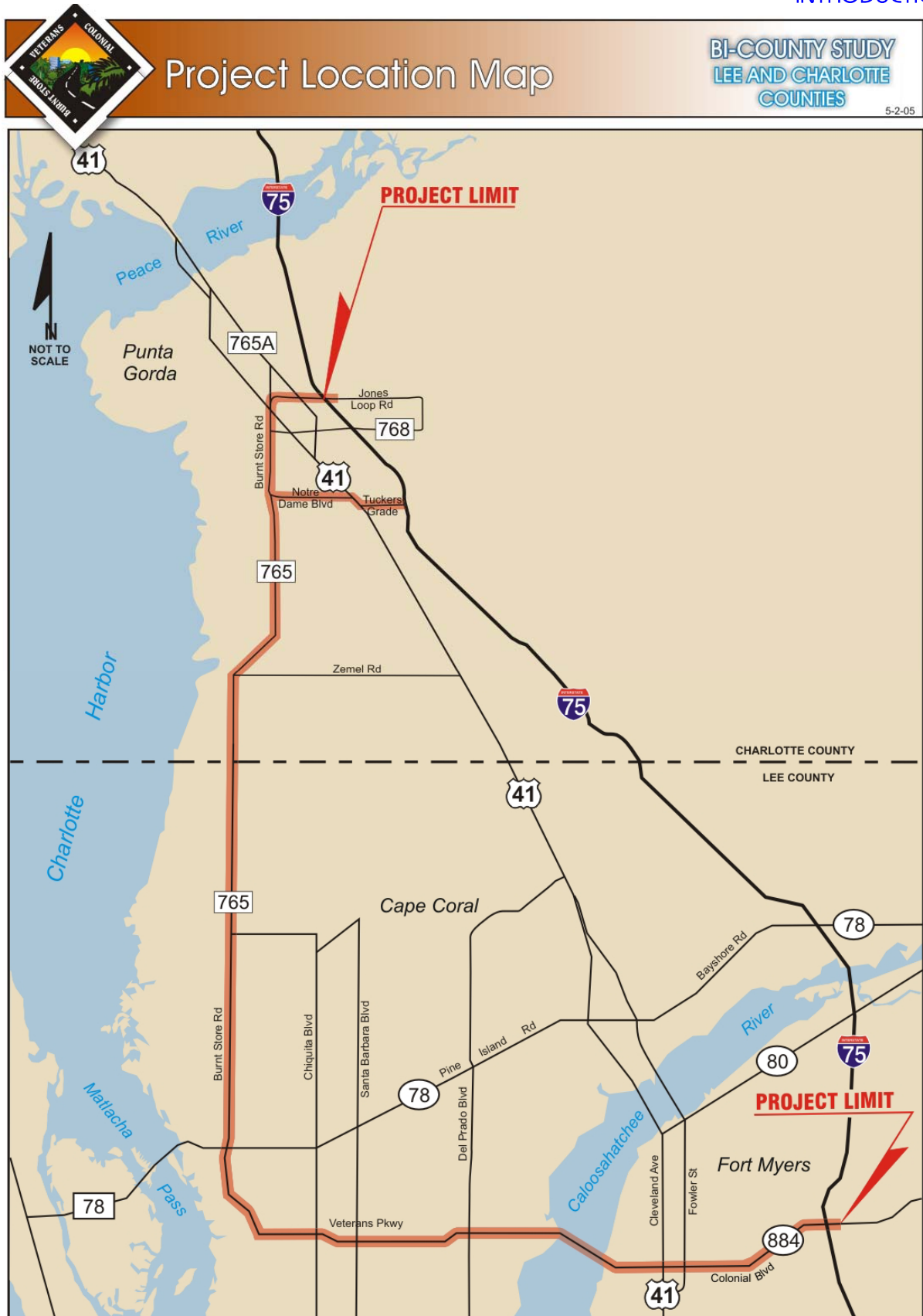
Project management and contract administration was conducted by the Lee County Department of Transportation (LC DOT). The City of Cape Coral contributed to the funding for the study with its share of surplus toll revenue from the Midpoint Memorial Bridge. The Charlotte County Board of County Commissioners funded the portion of the study in Charlotte County. The Charlotte County – Punta Gorda Metropolitan Planning Organization (Charlotte MPO) assisted Lee County with project management in Charlotte County.

1.1 STUDY PURPOSE

The study identifies mobility improvements to meet the long-term 2030 travel needs along this transportation route. Preliminary estimates of right-of-way (ROW) and construction costs were developed as part of this study. At the conclusion of this study, Lee and Charlotte counties will have information to choose feasible alternatives and develop a schedule for funding and implementing these improvements. Following these decisions, further engineering and design will be needed under separate contracts before the ROW and construction phases can be initiated.

1.2 PROJECT DESCRIPTION

Lee and Charlotte counties funded the transportation corridor study from Interstate 75 (I-75) and Jones Loop Road in Charlotte County, south along Burnt Store Road, then east along Veterans Parkway and Colonial Boulevard to I-75 in Lee County. A connection to Tuckers Grade was evaluated from Burnt Store Road to Tamiami Trail, in the vicinity of Notre Dame Boulevard. The study route travels through the cities of Punta Gorda, Cape Coral, and Fort Myers. These communities are also participating in this study. A Project Location Map is provided as Figure 1-1.



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1.3 NEED FOR IMPROVEMENT

- Phase One of the corridor study identified roadway laneage needs to meet long-term 2030 travel needs in Lee and Charlotte counties. The recommended improvements were based on data available at the commencement of the study. This data included the future land uses projected for the surrounding corridor area, the projected population and employment data, and the travel demand estimates for this corridor study.
- Currently, segments of Colonial Boulevard operate at deficient levels of service (LOS). By 2010, segments of Veterans Parkway will begin to operate at deficient LOS during the peak hours due to queuing delay. Between 2010 and 2020 Burnt Store Road will operate at a deficient LOS.
- The City of Cape Coral City Council passed a resolution to encourage Lee County to adopt a 355 foot typical section for Burnt Store Road, between Van Buren Parkway and Pine Island Road. The City Council further created a Burnt Store Road Right-of Way Committee to coordinate with Lee County.



SECTION 2.0 EXISTING CONDITIONS

Roadway and environmental data along the project corridor was collected and existing conditions were summarized.

2.1 EXISTING ROADWAY CHARACTERISTICS

Roadway characteristics were collected from original design plans and field observations along the project corridor. Additionally, information from local and state agencies was used to summarize the existing roadway. These characteristics were considered when developing conceptual designs.

2.1.1 Functional Classification

The functional classification of a roadway affects elements of design such as design speed, LOS requirements, and local access accommodations. Review of the Charlotte County-Punta Gorda 2025 Long Range Transportation Plan (LRTP) reveals Jones Loop Road from I-75 to Tamiami Trail and Burnt Store Road from south of Notre Dame Boulevard to the Lee County Line is classified as a rural minor arterial. Burnt Store Road from Tamiami Trail to south of Notre Dame Boulevard is classified as an urban minor arterial.

The Lee County Comprehensive Plan classifies Burnt Store Road from the Charlotte County Line to Pine Island Road and Colonial Boulevard from east of Metro Parkway to east of I-75 as a rural minor arterial. Veterans Parkway from Pine Island Road to east of Del Prado Boulevard and Colonial Boulevard from west of McGregor Boulevard to east of Metro Parkway is classified as an urban minor arterial. Furthermore, the City of Cape Coral's Functional Classification Map designates Burnt Store Road and Veterans Parkway as a principal arterial within the City Limits.

2.1.2 Access Management Classifications

The objective of the access classification system is to protect the public safety, enhance the mobility of people and goods, and preserve the functional integrity of the State Highway System (SHS). Further information about the access classification system can be found in the State Highway System Access Management Classification System and Standards¹.

A portion of Colonial Boulevard from Cleveland Avenue to east of I-75 is a part of the SHS. This segment of roadway is currently comprised of three different access classifications. The current access classification for Colonial Boulevard from Cleveland Avenue to Metro Parkway is Access Class 5. This classification is distinguished by restrictive medians. Access Class 5 is used where existing land use and roadway sections have been built out and where the probability of major land use changes is not high. The minimum Access Class 5 standards are provided in Table 2-1.

From Metro Parkway to Ortiz Avenue, the current access classification for Colonial Boulevard is Access Class 2. Access Class 2 applies to highly controlled access facilities distinguished by their ability to carry high speed, high volume traffic over long distances. The minimum Access Class 2 standards are provided in Table 2-1.

EXISTING CONDITIONS

Colonial Boulevard from Ortiz Avenue to east of I-75 is currently classified as Access Class 3. This classification is distinguished by restrictive medians with maximum distance between signals and driveway connections. Access Class 3 is used where existing land use and roadway sections have not been built out to the maximum capacity, or where the probability of significant land use change in the future is high. The minimum Access Class 3 standards are provided in Table 2-1.

Veterans Parkway and the Midpoint Memorial Bridge were designated by the Lee County Board of County Commissioners (BOCC), Resolution² as a limited access facility with established access points. The resolution adopted by the Lee County BOCC, Resolution in 2003 identified Veterans Parkway from Pine Island Road to Del Prado Boulevard and the portion of the Midpoint Memorial Bridge from Del Prado Boulevard to the Caloosahatchee River as a limited access facility. The access points included full median openings at the current major intersections, spaced approximately one mile apart. Additional access points allowing right-in/right-out traffic movements were identified. The Lee County BOCC, Resolution recognized that this corridor was constructed to operate as an expressway in the future, allowing for the uninterrupted movement of through traffic.



Veterans Parkway:
Limited Access Facility

Table 2-1
Access Classification Criteria

Access Classification	Facility Design Features	Connection Spacing (Ft)	Median Opening Spacing Directional (Ft)	Median Opening Spacing Full (Ft)	Signal Spacing (Ft)
Class 2	Restrictive w/ Service Roads	1320/660*	1320	2640	2640
Class 3	Restrictive	660/440*	1320	2640	2640
Class 5	Restrictive	440/245*	660	2640/1320*	2640/1320*

* Greater than 45 mph posted speed / less than or equal to 45 mph posted speed

2.1.3 Right-of-Way

Existing right-of-way (ROW) data was collected from the maintaining agencies along the corridor. The ROW varied through each jurisdiction. Summarized in Table 2-2 are the existing ROW widths.

Table 2-2
Existing Right-of-Way

Segment	Limits	ROW Width
Jones Loop Road	I-75 to Taylor Road	200-ft
	Taylor Road to Tamiami Trail	170-ft
Tuckers Grade	I-75 to Tamiami Trail	150 ft +/-
Notre Dame Boulevard	Tamiami Trail to Burnt Store Road	120 ft +/-
Burnt Store Road	Tamiami Trail to Notre Dame Boulevard	65-ft to 100-ft
	Notre Dame Boulevard to County Line	65-ft to 108-ft
	County Line to Pine Island Road	200-ft
Veterans Parkway	Pine Island Road to Skyline Boulevard	230-ft to 430-ft
	Skyline Boulevard to Del Prado Boulevard	144-ft to 368-ft
Midpoint Memorial Bridge	Del Prado Boulevard to McGregor Boulevard	200-ft to 504-ft
Colonial Boulevard	McGregor Boulevard to 10 Mile Canal	117-ft to 200-ft
	10 Mile Canal to west of Ortiz Avenue	250-ft
	West of Ortiz Avenue to I-75	300-ft

2.1.4 Typical Sections

The project corridor contains several different typical sections that vary from a two-lane undivided rural roadway to a six-lane divided suburban roadway. A discussion of the existing typical sections for each segment of roadway follows:

Jones Loop Road: I-75 to Taylor Road

The existing typical section for this segment of Jones Loop Road is a four-lane divided suburban roadway. The typical section contains two 12-foot (ft) travel lanes and an 8-ft outside shoulder, of which 4-ft is paved, in each direction separated by a 22-ft raised median. Curb and gutter is provided in the median, adjacent to the travel lanes. Sidewalks 6-ft in width are present on both sides of the roadway, adjacent to the ROW lines. Open drainage ditches for storm water conveyance parallel both sides of the roadway. The existing ROW width is 200-ft. The existing land use consists of large tracts of undeveloped lands. Near I-75 is a commercial node that includes housing, fast food restaurants, and gas stations. The existing posted speed limit in this segment is 45 miles per hour (mph).

Jones Loop Road: Taylor Road to Tamiami Trail

The existing typical section for this segment of Jones Loop Road is a four-lane divided rural roadway. The typical section contains two 12-ft travel lanes, 5-ft grassed inside shoulder, and an 8-ft outside shoulder, of which 4-ft is paved, in each direction separated by a 22-ft raised median. Sidewalks 5-ft in width are present on both sides of the roadway, adjacent to the ROW lines. Open drainage ditches for storm water conveyance parallel both sides of the roadway. The existing ROW

width is 170-ft. The existing land use consists of large tracts of undeveloped lands. The existing posted speed limit in this segment is 45 mph.

Tuckers Grade: I-75 to Tamiami Trail

The existing typical section for this segment to Tuckers Grade is a four-lane divided rural roadway. The typical section contains two travel lanes, grassed inside shoulder, and paved outside shoulder, in each direction separated by a depressed median. There are no pedestrian or bicycle facilities located within the segment limits. The existing ROW width is 150 ft +/- . The existing land use consists of large tract of undeveloped lands. The existing posted speed limit in this segment is 45 mph.

Notre Dame Boulevard: Tamiami Trail to Burnt Store Road

The existing typical section for this segment of Notre Dame Boulevard is a two-lane undivided rural roadway. The typical section contains one travel lane in each direction. There are no pedestrian or bicycle facilities located within the segment limits. The existing ROW width is 120 ft +/- . The existing land use primarily consists of low-density residential developments and undeveloped lands. The existing posted speed limit in this segment is 45 mph.



Burnt Store Road:
Typical Section

Burnt Store Road: Tamiami Trail to Lee County Line

The existing typical section for this segment of Burnt Store Road is a two-lane undivided rural roadway. The typical section contains one 10-ft travel lane and an 8-ft grassed shoulder in each direction. There are no pedestrian or bicycle facilities located within the segment limits. The existing ROW width varies from 65-ft to 108-ft. The existing land use primarily consists of low-density residential developments, undeveloped lands, and environmental lands. The existing posted speed limit in this segment varies from 25 mph to 55 mph.

Burnt Store Road: Charlotte County Line to Pine Island Road

The existing typical section for this segment of Burnt Store Road is a two-lane undivided rural roadway, offset to the west within the existing ROW. The typical section contains one 10-ft travel lane and an 8-ft grassed shoulder in each direction. There are no pedestrian or bicycle facilities located within the segment limits. The existing ROW width is 200 ft. The existing land uses are a mix of developed and undeveloped lands as well as environmental lands. Residential developments are under construction throughout the segment limits. The existing posted speed limit in this segment is 55 mph.

Veterans Parkway: Pine Island Road to Skyline Boulevard

The existing typical section for this segment of Veterans Parkway is a four-lane divided suburban roadway. The typical section contains two 11-ft travel lanes and a 10-ft outside shoulder, of which 4-ft is paved, in each direction separated by a 28-ft raised median. Curb and gutter is provided in the median, adjacent to the travel lanes. An asphalt bike path, 8-ft in width, is provided on the west and south sides of the roadway. Berms 6-ft in height are provided along both sides, separated from the roadway by open drainage ditches. The existing ROW width varies from 230-ft to 430-ft. The existing land use consists primarily of medium density residential developments and commercial centers. A large tract of undeveloped land (Sandoval DRI) stands on the north side of the Veterans

Parkway just as the roadway curves northward toward Pine Island Road. Environmental lands are also present. The existing posted speed limit in this segment varies from 50 mph to 55 mph.

Veterans Parkway: Skyline Boulevard to Del Prado Boulevard

The existing typical section for this segment of Veterans Parkway is a six-lane divided suburban roadway. The typical section contains three 11-ft travel lanes and a 10-ft outside shoulder, of which 4-ft is paved, in each direction separated by a 28-ft raised median. Curb and gutter is provided in the median, adjacent to the travel lanes. An asphalt bike path, 8-ft in width, is provided on the south side of the roadway. Berms 6-ft in height are provided along both sides, separated from the roadway by open drainage ditches. The existing ROW width varies from 144-ft to 368-ft. The existing land use consists primarily of medium density residential developments and commercial centers. The existing posted speed limit in this segment varies from 45 mph to 50 mph.

Midpoint Memorial Bridge: Del Prado Boulevard to East of McGregor Boulevard

The existing typical section for the Midpoint Memorial Bridge is a four-lane divided urban roadway. The typical section contains two 11-ft travel lanes, a 6-ft inside shoulder, and a 10-ft outside shoulder in each direction separated by a 2-ft barrier wall. The majority of the segment contains high fill embankment with Mechanically Stabilized Earth (MSE) retaining walls. The existing ROW width varies from 200-ft to 504-ft. The existing land use consists primarily of medium-density residential developments. The existing posted speed limit in this segment is 50 mph.

Colonial Boulevard: East of McGregor Boulevard to West of Cleveland Avenue

The existing typical section for the Midpoint Memorial Bridge is a six-lane divided urban roadway. The typical section contains three 12-ft travel lanes in each direction separated by a 27.5-ft raised median. Sidewalks 6-ft and 8-ft in width are present on the south and north sides of the roadway, respectively. The existing ROW width varies from 121.75-ft to 132.75-ft. The existing land use consists primarily of high-density residential developments with light industrial uses, hotels, and shopping centers. The existing posted speed limit in this segment is 45 mph.



Colonial Boulevard:
Typical Section

Colonial Boulevard over Cleveland Avenue

The existing typical section for this segment of Colonial Boulevard is a four-lane divided urban roadway. The typical section contains two 11-ft travel lanes, a 6-ft inside shoulder, and a 10-ft outside shoulder in each direction separated by a 2-ft barrier wall. This segment contains high fill embankment with MSE retaining walls. The existing ROW width varies from 125-ft to 200-ft. The existing land use consists primarily of high-density residential developments with light industrial uses, hotels, and shopping centers. The existing posted speed limit in this segment is 45 mph.

Colonial Boulevard: East of Cleveland Avenue to Fowler Street

The existing typical section for this segment of Colonial Boulevard is a six-lane divided urban roadway. The typical section contains three 11-ft travel lanes in each direction separated by a 29-ft raised median. Sidewalks 6-ft in width are present on both sides of the roadway, adjacent to the back of curb. The existing ROW width is 123-ft. The existing land use consists primarily of high-

density residential developments with light industrial uses, hotels, and shopping centers. The existing posted speed limit in this segment is 45 mph.

Colonial Boulevard: Fowler Street to Metro Parkway

The existing typical section for this segment of Colonial Boulevard is a six-lane divided suburban roadway. The typical section contains three travel lanes in each direction, which vary in width from 11-ft to 12-ft. The median width varies from 16.5-ft to 40-ft. Curb and gutter is provided in the median with 10-ft shoulders, of which 5-ft are paved, on the outside. Open drainage ditches for storm water conveyance parallel both sides of the roadway. Sidewalks, which vary in width from 6-ft to 8-ft, are present on both sides of the roadway throughout the segment. The existing ROW width varies from 200-ft to 250-ft. The existing land use consists primarily of high-density residential developments with light industrial uses, hotels, and shopping centers. The existing posted speed limit in this segment is 50 mph.

Colonial Boulevard: Metro Parkway to I-75

The existing typical section for this segment of Colonial Boulevard is a six-lane divided rural roadway. The typical section contains three 12-ft travel lanes, 8-ft grassed inside shoulder, and a 10-ft outside shoulder, of which 4-ft is paved, in each direction separated by a 40-ft depressed median. Open drainage ditches for storm water conveyance parallel both sides of the roadway. A sidewalk, 8-ft in width, is present on the south side of the roadway. The existing ROW width varies from 250-ft to 300-ft. The existing land use consists of undeveloped tracts of land, sparse commercial development, low to medium density residential development, and environmental lands. The existing posted speed limit in this segment is 55 mph.

2.1.5 Pedestrian and Bicycle Facilities

There are limited pedestrian and bicycle facilities on Jones Loop Road. Burnt Store Road currently has no pedestrian and bicycle facilities. Pedestrian and bicycle facilities are located on Veterans Parkway and on Colonial Boulevard. The existing pedestrian and bicycles facilities are described below:

Jones Loop Road

- Paved shoulders are provided on both sides of the roadway between I-75 and Tamiami Trail
- Sidewalks 5 ft to 6 ft in width are provided on both sides of the roadway between I-75 and Tamiami Trail

Burnt Store Road: Charlotte and Lee Counties

There are no pedestrian or bicycle facilities along Burnt Store Road

Veterans Parkway

- Paved shoulders are provided on both sides of the roadway between Pine Island Road and Del Prado Boulevard
- A multi-purpose path 8 ft in width, is provided on the western/southern side of the roadway between Pine Island Road and Surfside Boulevard
- Multi-purpose paths 8 ft in width, are provided on both sides of the roadway between Surfside Boulevard and Skyline Boulevard
- Multi-purpose paths are provided in limited areas between Surfside Boulevard and Skyline Boulevard



Veterans Parkway:
Multi-Purpose Path

Midpoint Memorial Bridge

There are bicycle facilities along the bridge.

Colonial Boulevard

- Wide outside travel lanes are provided on both sides of the roadway between McGregor Boulevard and Cleveland Avenue
- Paved shoulders are provided on both sides of the roadway between Cleveland Avenue and Metro Parkway
- No paved shoulders east of I-75
- Sidewalks are provided on both sides of the roadway between McGregor Boulevard and Metro Parkway
- A multi-purpose path 8 ft in width is provided on the south side of the roadway between Metro Parkway and Winkler Avenue
- A multi-purpose path 8 ft in width is provided on the south side of the roadway between Winkler Avenue and Ortiz Avenue/Six Mile Cypress Parkway. On the north side of the roadway, the 8 ft multi-purpose path begins outside of the ROW north of Colonial Boulevard and enters the ROW midway to Ortiz Avenue/Six Mile Cypress Parkway. The multi-purpose path continues within the ROW to Ortiz Avenue/Six Mile Cypress Parkway
- Multi-purpose paths 8 ft in width are provided on both sides of the roadway between Ortiz Avenue/Six Mile Cypress Parkway and Forum Boulevard

2.1.6 Intersections and Signalization

Existing signalized intersections are located mostly in the urban areas and at major intersections. There are some signalized intersections in the developing areas along the study corridor. The signalized intersections are listed below:

Jones Loop Road

- Taylor Road

Tuckers Grade

- Tamiami Trail (flashing)

Burnt Store Road

- Tamiami Trail
- Pine Island Road

Veterans Parkway

- Chiquita Boulevard
- Skyline Boulevard
- Santa Barbara Boulevard
- Country Club Boulevard
- Del Prado Boulevard (Interchange)



Veterans Parkway:
Signalized Intersection at
Skyline Boulevard

Colonial Boulevard

- McGregor Boulevard (Overpass)
- Summerlin Road
- DeLeon Street
- Cleveland Avenue (Interchange)
- Solomon Boulevard
- Fowler Street
- Evans Avenue
- Metro Parkway
- McGregor Baptist Church Entrance
- Winkler Avenue
- Ortiz Avenue/Six Mile Cypress Parkway
- I-75 ramps (Interchange)

2.1.7 Lighting

Highway lighting is located mostly in the urban areas and at major intersections. There was some lighting along the developing areas of the corridor. The segments with highway lighting are listed below:

Jones Loop Road

- Poles and high mast lighting fixtures are located at the interchange with I-75
- Poles with top mounted lighting fixtures are located from I-75 to Tamiami Trail

Tuckers Grade

- Poles and high mast lighting fixtures are located at the interchange with I-75

Burnt Store Road

- Single pole with cobra head lighting fixture is located in the vicinity of the Charlotte Harbor Environmental Center entrance and at Royal Poinciana Boulevard
- Single pole with cobra head lighting fixture is located in the vicinity of Cuneo Road and at Notre Dame Boulevard
- Poles with cobra head lighting fixtures are located from Yacht Club Boulevard to Islamorada Boulevard (Burnt Store Marina entrance)
- Single pole with cobra head lighting fixture is located in the vicinity of Kismet Boulevard, Gulfstream Parkway, and Tropicana Parkway
- Poles with dual arm cobra head lighting fixtures are located at the intersection of Pine Island Road

Veterans Parkway

- Single pole with cobra head lighting fixture is located in the vicinity of Kismet Parkway, Gulfstream Parkway, and Tropicana Parkway
- Poles with cobra head lighting fixtures are located at the intersection of Surfside Boulevard, Chiquita Boulevard, Skyline Boulevard, Santa Barbara Boulevard, Country Club Boulevard, and Del Prado Boulevard

Midpoint Memorial Bridge

- Poles with dual arm cobra head lighting fixtures are located from Del Prado Boulevard to McGregor Boulevard

Colonial Boulevard

- Poles with dual arm cobra head lighting fixtures are located from McGregor Boulevard to Fowler Street
- Poles with cobra head lighting fixtures are located from Fowler Street to east of Metro Parkway
- Poles with top mounted lighting fixtures are located from Metro Parkway to I-75
- Poles and high mast lighting fixtures are located at the interchange with I-75



Midpoint Memorial Bridge:
Lighting Fixtures

2.1.8 Utilities

Existing utilities located above ground were noted during a field review of the corridor. The utilities consisted of mostly power poles and lines. Utility markers for buried cable lines were noted where visible. A description of the approximate location of utilities were as follows:

Jones Loop Road

- Power poles are located on the south side of the project corridor between I-75 and Tamiami Trail

Burnt Store Road: Charlotte County

- Large power poles are located mostly on the east side of the project corridor between Tamiami Trail and Notre Dame Boulevard
- Power poles are located on the east side of the project corridor between Notre Dame Boulevard and the Lee County Line



Burnt Store Road:
FPL Poles

Burnt Store Road: Lee County

- Power poles are located on the west side of the project corridor between the Charlotte County Line and Pine Island Road

Veterans Parkway

There were limited overhead utilities along this segment of the project corridor. Utility markers for buried cable lines were noted along the corridor. The overhead utilities are described as follows:

- Power poles are located on the south side of the project corridor west of Surfside Boulevard
- Major power lines cross the project corridor at the intersection of SW 20th Avenue

Colonial Boulevard

- Power poles are located primarily on the south side of the project corridor between McGregor Boulevard and I-75
- Utility markers for buried cable lines were noted along the project corridor

2.1.9 Railroad Crossings

There is one railroad crossing along the Jones Loop Road corridor and one railroad crossing along the Tuckers Grade corridor in Charlotte County. Also, there is one railroad crossing along the Colonial Boulevard corridor:

- Jones Loop Road Crossing (No. 623 244-F) – East of Tamiami Trail
- Tuckers Grade Crossing (No. 623 248-H) – East of Tamiami Trail
- Colonial Boulevard Crossing (No. 626 401-G) – East of Evans Avenue

2.1.10 Aesthetics and Landscaping

Aesthetics and landscaping were noted during a field review of the corridor. A description of the type and vicinity of these features were as follows:

Jones Loop Road

There were no aesthetic or landscape features noted along the project corridor.

Burnt Store Road

There were no aesthetic or landscape features noted along the project corridor.

Veterans Parkway

Landscaping was noted in the median and along shoulders between Pine Island Road and Del Prado Boulevard. Berms, 6 ft in height, were noted on both sides of the corridor.

Midpoint Memorial Bridge

Landscaping was noted on the approach to the west side of the bridge. A veteran's memorial sculpture is located on the north side of the project corridor, west of the bridge. Additionally, a gateway sign to the City of Cape Coral is located west of the bridge. The Caloosahatchee River as well as coastal vegetation is visible from the bridge.



Colonial Boulevard:
Existing Landscape

Colonial Boulevard

Landscaping was noted in the median along the project corridor between McGregor Boulevard and Fowler Street. Landscaping was also noted around the intersections at McGregor Boulevard and at Cleveland Avenue.

2.2 EXISTING STRUCTURES

There are bridge structures over Jones Loop Road and Tuckers Grade at these I-75 interchanges in Charlotte County. There are few bridges along Burnt Store Road, as well as several culverts in Charlotte County and Lee County. Along Veterans Parkway and Colonial Boulevard in Lee County, there are several bridges.

Jones Loop Road

- I-75 Bridges (Nos. 010073; 010074): at Jones Loop Road interchange; dual two-lane bridges.

Tuckers Grade

- I-75 Bridges (Nos. 010059; 010060): at Tuckers Grade interchange; dual two-lane bridges.

Burnt Store Road: Charlotte County

- South Fork Alligator Creek Bridge: north of Acline Road; two-lanes undivided; low-level crossing.

Burnt Store Road: Lee County

- Gator Slough Bridge (No. 120025): north of Van Buren Parkway; two-lanes undivided; low-level crossing.
- Arroz Canal Bridge (No. 120033): south of Van Buren Parkway; two-lanes undivided; low-level crossing.
- Horseshoe Canal Bridge (No. 120034): north of Diplomat Parkway; two-lanes undivided; low-level crossing.
- Hermosa Canal Bridge (No. 120036): north of Tropicana Parkway; two-lanes undivided; low-level crossing.
- Shadroe Canal Bridge (No. 120035): south of Embers Parkway; two-lanes undivided; low-level crossing.

Veterans Parkway

- Canal Culvert: east of Surfside Boulevard; four-lanes divided; low-level crossing.
- Canal Culvert: west of Chiquita Boulevard; four-lanes divided; low-level crossing.
- Aries Canal Bridge (No. 224094): west of Skyline Boulevard; four-lanes divided; mid-level crossing.
- Challenger/Niagara Canal Bridge (No. 124097): between Skyline Boulevard and Santa Barbara Boulevard; six-lanes divided; mid-level crossing.
- Canal Culvert: between Santa Barbara Boulevard and Country Club Boulevard; six-lanes divided; low-level crossing.
- Pioneer Canal Bridge (No. 124099): east of Country Club Boulevard; six-lanes divided; mid-level crossing.
- Del Prado Boulevard Bridge (No. 129999): at Del Prado Boulevard interchange; four-lanes divided.
- Canal Culvert: east of toll plaza; four-lanes divided; low-level crossing.

Midpoint Memorial Bridge

- Midpoint Memorial Bridge (No. 124096): Caloosahatchee River; four-lane divided; mid-level crossing with high span.



Midpoint Memorial Bridge:
Crossing the Caloosahatchee River

Colonial Boulevard

- McGregor Boulevard Bridge: at McGregor Boulevard interchange; four-lanes divided.
- Cleveland Avenue Bridge: at Cleveland Avenue interchange; four-lanes divided.
- Ten Mile Canal Bridge (No. 120077): east of Evans Avenue; six-lanes divided low-level bridge.
- I-75 Bridges (Nos. 120120; 120121): at Colonial Boulevard interchange; dual two-lane bridges.



Colonial Boulevard:
Interchange at Cleveland Avenue

2.3 ENVIRONMENTAL CHARACTERISTICS

Environmental characteristics were collected from a literature search of available information and databases from local, state, and federal agencies. Discussions with agency staff and field reviews of existing characteristics were conducted to verify features along the project corridor. These characteristics were considered when developing conceptual designs and evaluating impacts.

2.3.1 Cultural Features

Data collection included local community facilities such as schools, parks, recreation areas, churches, social service agencies, medical facilities, community centers, wildlife refuges, bikeways, managed conservation land, and police and fire protection. The data was collected from a search of available literature. Additional, features were noted from a field review. A summary of existing cultural features are summarized below:

Jones Loop Road

The Charlotte Memorial Funeral Home and Memorial Gardens is located more than 1,000 feet (ft) south of the project corridor west of Taylor Road.

Burnt Store Road: Tamiami Trail to Lee County Line

Charlotte Harbor State Buffer Preserve (State Reserve) abuts the west side of Burnt Store Road. The Charlotte Harbor Environmental Center is located within the state preserve.

The Burnt Store Presbyterian Church is located on the east side of Burnt Store Road.

The Charlotte Harbor Flatwoods Project crosses the project just north of Zemel Road.

The Florida Fish and Wildlife Conservation Commission (FWCC) Management Area Yucca Pens Unit crosses the corridor within this section.



Burnt Store Road:
Charlotte Harbor
Environmental Center

Burnt Store Road: Charlotte County Line to Pine Island Road

The FFWCC Management Area Yucca Pens Unit crosses the corridor within this section.

A public boat ramp is located on the west side of Burnt Store Road, north of Pine Island Road.

Veterans Parkway

The Matlacha Pass Aquatic Preserve is a conservation area located west of the roadway, south of Pine Island Road.

Community Facilities include the Jason Verdlow Park, the First Church of Christ Scientist and the First Christian Church, located south of the roadway and west of Country Club Boulevard. The Cape Coral High School is located north of Veterans Parkway and west of Santa Barbara Boulevard. St. Andrews Catholic Church is located south of Veterans Parkway and west of Del Prado Boulevard.

Community Facilities include the Church of the Epiphany and the Cape Coral Fire Station #3, both are located south of the roadway and east of Del Prado Boulevard.

The Four Mile Cove Ecology Park is a conservation area located north of the roadway on the river and a public boat ramp is located south of the roadway on the river. A memorial statue is along the roadway on the Four Mile Cove Ecology Park.

A park dedicated to the Future Veterans Memorial is located west of McGregor on the north side of the roadway.



Veterans Parkway:
Public Boat Ramp

Colonial Boulevard

Community Facilities on the north side of the roadway include the St. Hillary's Episcopal Church, on the northeast corner of McGregor Boulevard, and the Memorial Gardens Cemetery, east of Summerlin Road. South of the roadway is the Southwest Florida Historical Society and the Alliance for the Arts, both properties are located east of McGregor Boulevard.

East of Summerlin Road, south of Colonial Boulevard is the First Assembly of God and Ft. Myers Christian School. Southwest Florida College is located behind the 7-Eleven on DeLeon Street.

Community Facilities adjacent to the roadway include the Christ Community Church and the McGregor Baptist Church; both are east of Veronica Shoemaker Boulevard and south of Colonial Boulevard.

North of the roadway, west of Six Mile Cypress Parkway is the North Colonial Linear Park which buffers Colonial Boulevard and the Calusa Nature Center and Planetarium.

2.3.2 Archeological and Historical Features

Data was collected for historic structures and archaeological sites previously recorded, listed, or determined eligible for listing in the National Register of Historic Places (NRHP).

There are no archaeological sites or historic structures located within 1,000 ft of the centerline of the project.

2.3.3 Wetlands

Data was collected to identify the approximate locations and boundaries of existing wetland communities, permits that may be necessary, and permit agencies involved.

Wetlands that could be potentially impacted are open water, permanently flooded and emergents, seasonally flooded and Other Surface Waters. Permits that may be necessary include an Environmental Resource Permit from the South Florida Water Management District (SFWMD), Individual Permit from the Army Corps of Engineers (USACE), and a Generic Permit for Storm water Discharge from Large and Small Construction Activities from the Florida Department of Environmental Protection (FDEP).

A summary of existing wetland features are summarized below:

Burnt Store Road

The project crosses the south fork of Alligator Creek, which is identified as an Aquatic Preserve. Alligator Creek is located south of Tamiami Trail in Charlotte County. The project also crosses Gator Slough, located north of Van Buren Parkway in Lee County.

There are limited wetlands located between Van Buren Parkway and Pine Island Road. Wetlands in this section that may be impacted include those from the expansion of roadway canal crossings.

Veterans Parkway

There are several wetlands located adjacent to Veterans Parkway including other surface waters, herbaceous and forested wetlands. Wetlands in this section between Pine Island Road and Del Prado Boulevard are unlikely to be impacted except for canal crossings.

The Midpoint Bridge crosses the Caloosahatchee River, which is considered an Outstanding Florida Waterway.

Colonial Boulevard

The Ten Mile Canal is located west of Metro Parkway. There are many wetlands located adjacent to this section of the project including other surface waters, herbaceous and forested wetlands. The Six Mile Cypress Slough is located east of I-75.

2.3.4 Wildlife and Habitat

Data was collected to identify potential impacts to wildlife and habitat including federally or state listed protected species or designated critical habitat for these species. The data was collected from a search of available literature. Additional features were noted based on discussion with county staff. A summary of existing wildlife and habitat are summarized below:

Jones Loop Road/Notre Dame Boulevard

It was noted by Charlotte County environmental staff that there were Florida Scrub Jays inhabiting areas near the project corridor prior to the hurricane. It is not known at this time the extent of the changes in territories for these scrub jay families. The entire project should be re-surveyed for listed species during the design phase of the project.

This portion of the project is located within the Core Foraging Area for the Wood Stork. Gopher tortoise burrows have been identified along the project corridor. It will be necessary to conduct a gopher tortoise burrow survey prior to construction.

Burnt Store Road

It was noted by Charlotte County environmental staff that there were Florida Scrub Jays inhabiting the project area prior to the hurricane. It is not known at this time the extent of the changes in territories for these scrub jay families. The entire project corridor should be re-surveyed for listed species during the design phase of the project.

The FFWCC Eagle Nest Locator Database indicated that there are two Bald Eagles' nests between Tamiami Trail and the Lee County line. The project corridor is within the primary zone (750 ft) of one eagle's nest CH045, which is located 100 to 200 ft west of Burnt Store Road south of Tamiami Trail. The project corridor is within the secondary zone (1,500 ft) of another eagle's nest CH043, which is located 1500 ft northwest of the Burnt Store Road and Zemel Road intersection.

There are two Bald Eagle's nests, between Van Buren Parkway and Pine Island Road, that were identified from the FFWCC's Eagle Nest Locator Database. The project corridor is within the primary zone of one eagle's nest, and the secondary zone of the other nest. These two nests are located northeast of the Pine Island Road intersection. The City of Cape Coral: Codes and Ordinances³ for protected species also identified an Eagle Nest Management Zone buffer area, having a radius of 1,100 ft. This zone is similar to the FFWCC zonal system and is intended to promote optimum protection and nesting conditions for the Bald Eagle. The project is within the City's management zone for one of these nests. The other nest is located outside of the City Limits.

These eagles' nests have been active since 2002. Due to the hurricane that impacted this area in 2004, it will be necessary to re-confirm these nest locations and any new eagle's nests.

This portion of the project corridor is located within the Core Foraging Area for the Wood Stork. Gopher tortoise burrows have been identified along the project corridor. It will be necessary to conduct a gopher tortoise burrow survey prior to construction.

Veterans Parkway

Within this section of the project there are two Bald Eagle's nests that were identified from the FFWCC's Eagle Nest Locator Database. One nest is located south of Pine Island Road on the west side of Veterans Parkway. The project corridor is within the secondary zone of this eagle's nest. The second nest is located on the north side of the project corridor west of Surfside Boulevard. The project corridor is within the primary zone of this eagle's nest. These two nests are located outside of the City Limits.

Additionally, an Osprey nest is located on the north side of the roadway just west of Skyline Boulevard. Due to the hurricane that impacted this area in 2004, it will be necessary to re-confirm these nest locations and any new nests.

This portion of the project is located within a Strategic Habitat Conservation Area, the Core Foraging area for the Wood Stork. A gopher tortoise survey should also be conducted prior to construction of the project.



Veterans Parkway:
Osprey Nest

Colonial Boulevard

This project corridor is within the Core Foraging area for the Wood Stork. Portions of the county east of I-75 is critical habitat for the Florida Panther. It will be necessary to conduct a survey prior to construction.

A gopher tortoise survey should be conducted, between Metro Parkway and I-75, prior to construction.

2.3.5 Potential Contamination

A search of all available regulatory files from the following data bases was performed for the project corridor:

- US Environmental Protection Agency (USEPA) files for Comprehensive Environmental Response, Compensation & Liability Information System List (CERCLIS)
- RCRIS Handlers with Corrective Action (CORRACTS)
- Emergency Response Notification System List (ERNS)
- Archived CERCLIS Sites (NFRAP)
- RCRA-LQG
- SQG
- CESQG and Transporters (NONTSD)
- National Priorities List (NPL)
- RCRA-Treatment, Storage and/or Disposal Sites (TSD)
- FDEP files for Leaking Underground Storage Tanks List (LUST)
- Solid Waste Facilities List (SLDWST)
- State Sites List (STCERC)
- State Funded Action Sites (STNPL)
- Underground/Aboveground Storage Tanks (TANKS)
- Florida Dry Cleaners (DRY)

- Facility Index System List (FINDS)
- Toxic Release Inventory System (TRIS).

A summary of potential contamination sites are summarized below:

Jones Loop Road

Three sites were identified between I-75 and Taylor Road during the regulatory file review.

- Citgo-On-The-Go, located on the north side of the project corridor
- Rally, located on the north side of the project corridor
- Pilot Travel Center, located on the south side of the project corridor

Further investigation of these three sites should be performed prior to construction.

Burnt Store Road

Five sites were identified between Tamiami Trail and the Lee County Line during the regulatory file review:

- Burnt Store Dry Cleaners, previously operated west of the project corridor
- BP Amoco, located west of the project corridor
- Citgo-On-The-Go, located east of the project corridor
- River Haven Mobile Home Park, located on Alligator Creek east of the project corridor
- The County Store, located north of Zemel Road east of the project corridor

One site was identified between the Charlotte County Line and Pine Island Road during the regulatory file review.

- The Twin City Plaza, located on Pine Island Road east of the project corridor

Further investigation of these six sites should be performed prior to construction.

Veterans Parkway

Five sites were identified between Pine Island Road and Del Prado Boulevard during the regulatory file review:

- Circle K #4729, located on Santa Barbara Boulevard north of the project corridor
- David & Sons Auto Repair, located on SE 25th Lane south of the project corridor and west of Del Prado Boulevard
- Cape Coral Fleet Management, located on Everest Parkway south of the project corridor and east of Del Prado Boulevard
- Mobil #19502, located on Santa Barbara Boulevard north of the project corridor
- USA #167, located on Del Prado Boulevard north of the project corridor

Further investigation of these five sites should be performed prior to construction.

Colonial Boulevard

Nine sites were identified between McGregor Boulevard and Metro Parkway during the regulatory file review:

- Colonial Chevron, previously operated on the north side of Colonial Boulevard east of McGregor Boulevard
- Fina #7040, previously operated on the north side of Colonial Boulevard west of Cleveland Avenue
- 7-Eleven #32209, located on the south side of Colonial Boulevard east of DeLeon Street
- Gallentine Exxon, previously operated on the north side of Colonial Boulevard east of Cleveland Avenue
- Sam Galloway Ford, previously operated on the south side of Colonial Boulevard east of Cleveland Avenue
- Sunoco #0611, located on the south side of Colonial Boulevard east of Fowler Street
- Shell, located on the north side of Colonial Boulevard east of Evans Avenue
- Mobil #10021, located on the north side of Colonial Boulevard west of Metro Parkway
- 7-Eleven #32312, located on the south side of Colonial Boulevard west of Metro Parkway

Five sites were identified between Metro Parkway and I-75 during the regulatory file review:

- Hess #09341, located on the south side of Colonial Boulevard east of Metro Parkway
- 7-Eleven #32599, located on the north side of Colonial Boulevard west of Winkler Avenue
- BP Colonial, located on the north side of Colonial Boulevard east of Winkler Avenue
- Murphy USA #6920, located on the south side of Colonial Boulevard west of Ortiz Avenue
- Shell, located on the south side of Colonial Boulevard east of Ortiz Avenue

Further investigation of these 14 sites on Colonial Boulevard should be performed prior to construction.

2.4 REFERENCES

1. State Highway System Access Management Classification System and Standards; Chapter 14-97; Florida Department of Transportation, Office of System Planning; Tallahassee, FL; December 1990.
2. Lee County Board of County Commissioners, Resolution; Agenda Item Summary; Blue Sheet No. 20021328; Fort Myers, FL; January 2003.
3. City of Cape Coral: Codes and Ordinances; Chapter 23, Protected Species; Cape Coral, FL; March 1992.



SECTION 3.0 FUTURE TRAFFIC CONDITIONS

This section provides a summary of the process used to forecast future travel demand for the study corridor. In addition, discussions are included regarding the methodology used to develop the future peak hour volumes and the assumptions used to evaluate future operating conditions. Finally, the proposed interim and 2030 improvements needed to accommodate the future traffic conditions are highlighted in this section.

3.1 TRAVEL DEMAND FORECASTS

As mentioned in the Phase I: Data Collection, Existing Conditions, and Future Travel Demand Report¹ of the Bi-County Corridor Study, extensive coordination occurred with the Staff Technical Task Force (STTF) in order to develop a methodology to estimate future travel demand for the study corridor. Based on the recommendation of the STTF, a refined travel demand forecasting model specific to the study corridor was developed from the adopted 2020 Lee County MPO Needs Plan Model to forecast 2030 daily traffic conditions. In addition to Lee County, the adopted model includes Southern Charlotte County and the City of Punta Gorda. The Charlotte MPO model was considered for use. However, it was not used for this study due to limitations and flaws in forecasts. The Charlotte MPO model is currently being updated and will be completed in late 2005. Detailed documentation of the refinements to the 2020 Lee County MPO Needs Plan Model is provided in Section 5 of the Phase I: Data Collection, Existing Conditions, and Future Travel Demand Report.

The model was used to evaluate options for Lee County and Charlotte County. The following provides a brief summary of the options considered for both counties.

Lee County Options

The following three model network options were developed for Lee County. Each Lee County option was evaluated in conjunction with each Charlotte County option, also discussed in this section.

- **Short-Range Option:** This option provided 2030 baseline conditions for the study corridor. The improvements assumed for this option are displayed in Figure 3-1. This option provided the bases for the development of the 2010 and 2020 Annual Average Daily Traffic (AADT) volumes for the study corridor.
- **Mid-Range Option:** This option was developed as an upgrade of the short-range option. The major improvement is the conversion of Colonial Boulevard to a partially controlled-access arterial. The improvements assumed for the Mid-Range Option are depicted in Figure 3-2.
- **Long-Range Option:** This option was developed to facilitate the conversion of Colonial Boulevard and Veterans Parkway to a controlled-access arterial and expressway. Some driveways and minor intersections were assumed to still exist, however, all major roadway crossings would be upgraded to overpasses. Figure 3-3 displays the improvements associated with the Long-Range Option. This option provided the basis for the development of the 2030 AADT volumes for the study corridor.

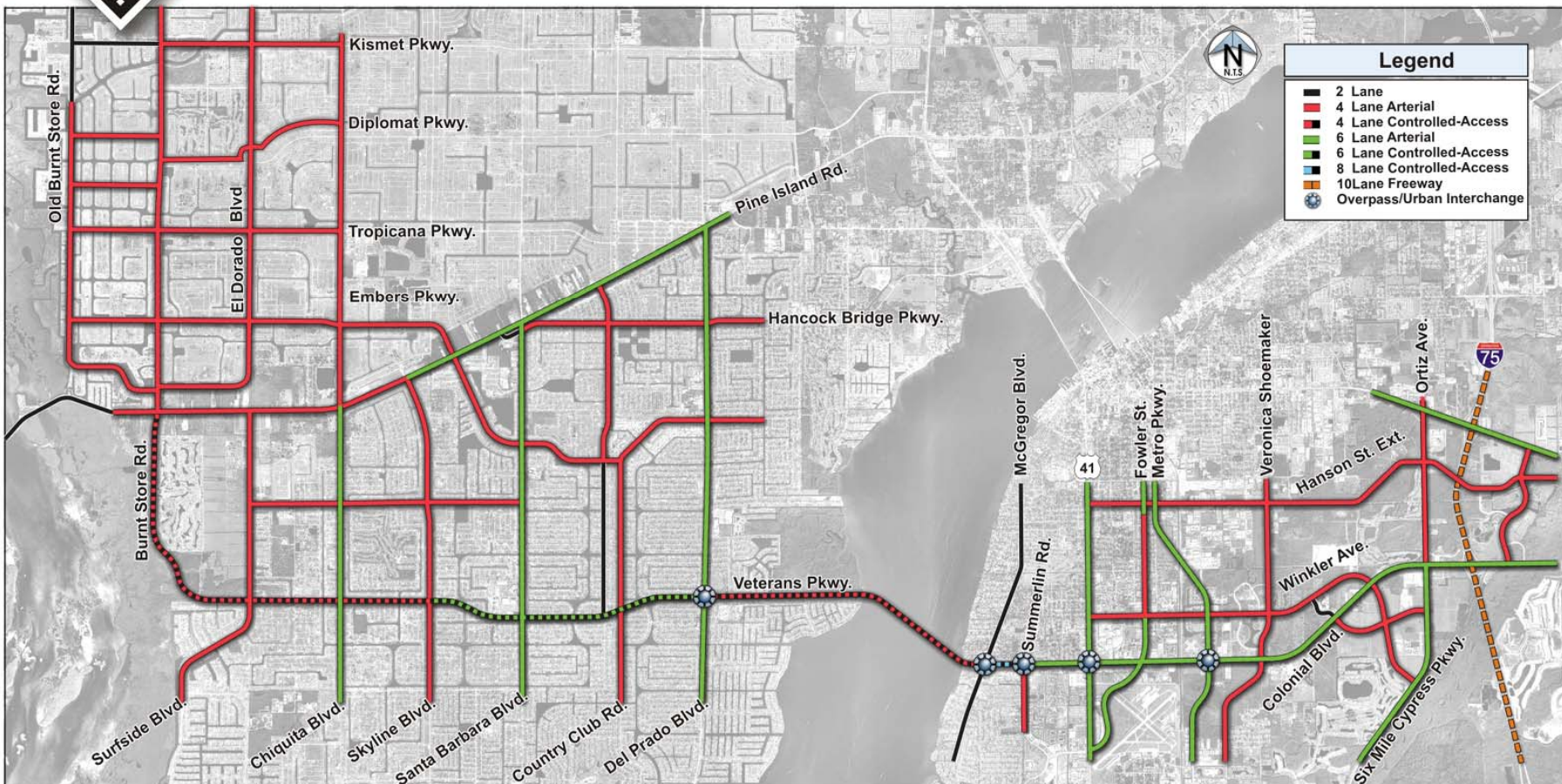


2030 Roadway Network Short-Range Option

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BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

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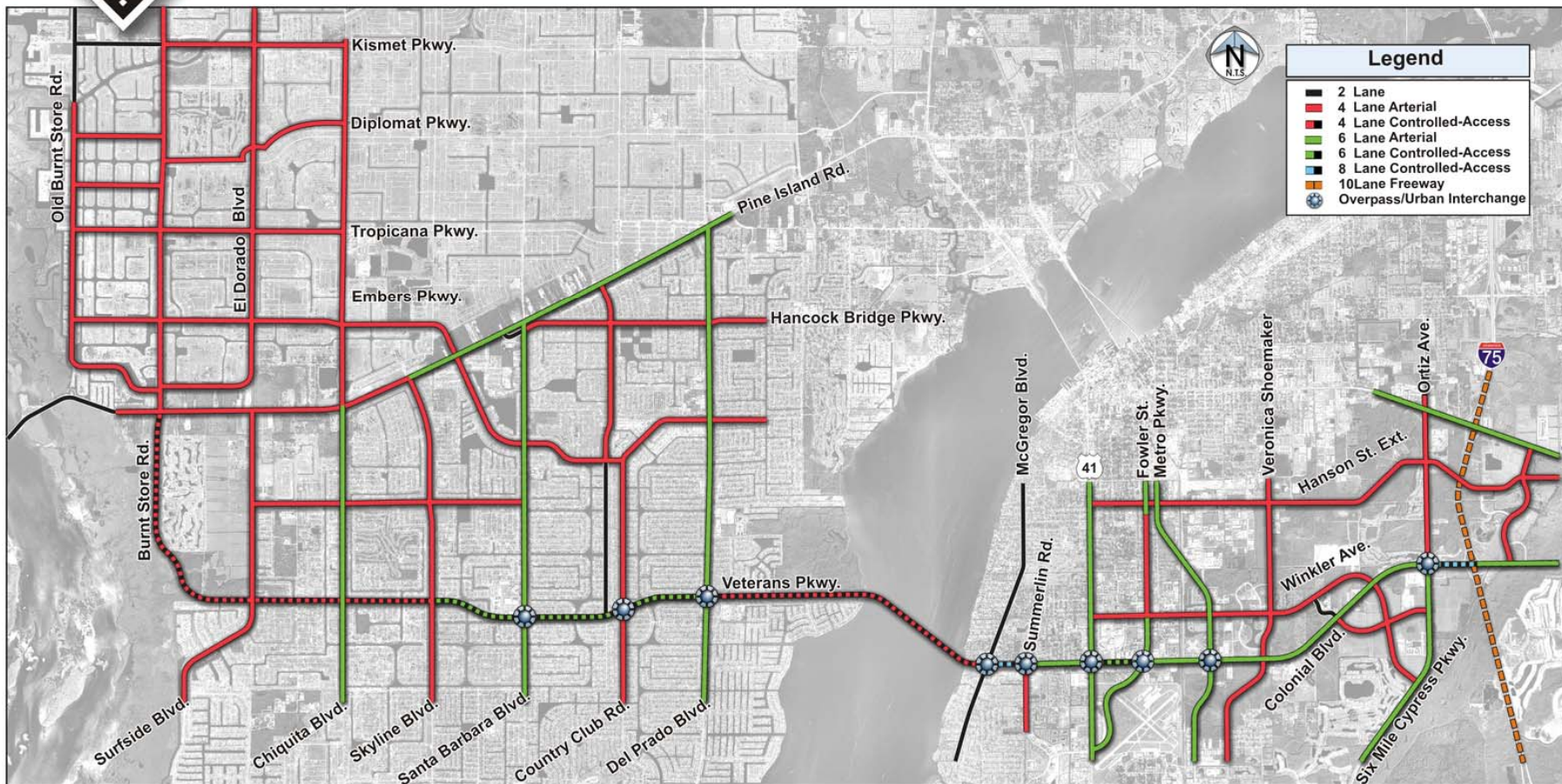


2030 Roadway Network Mid-Range Option

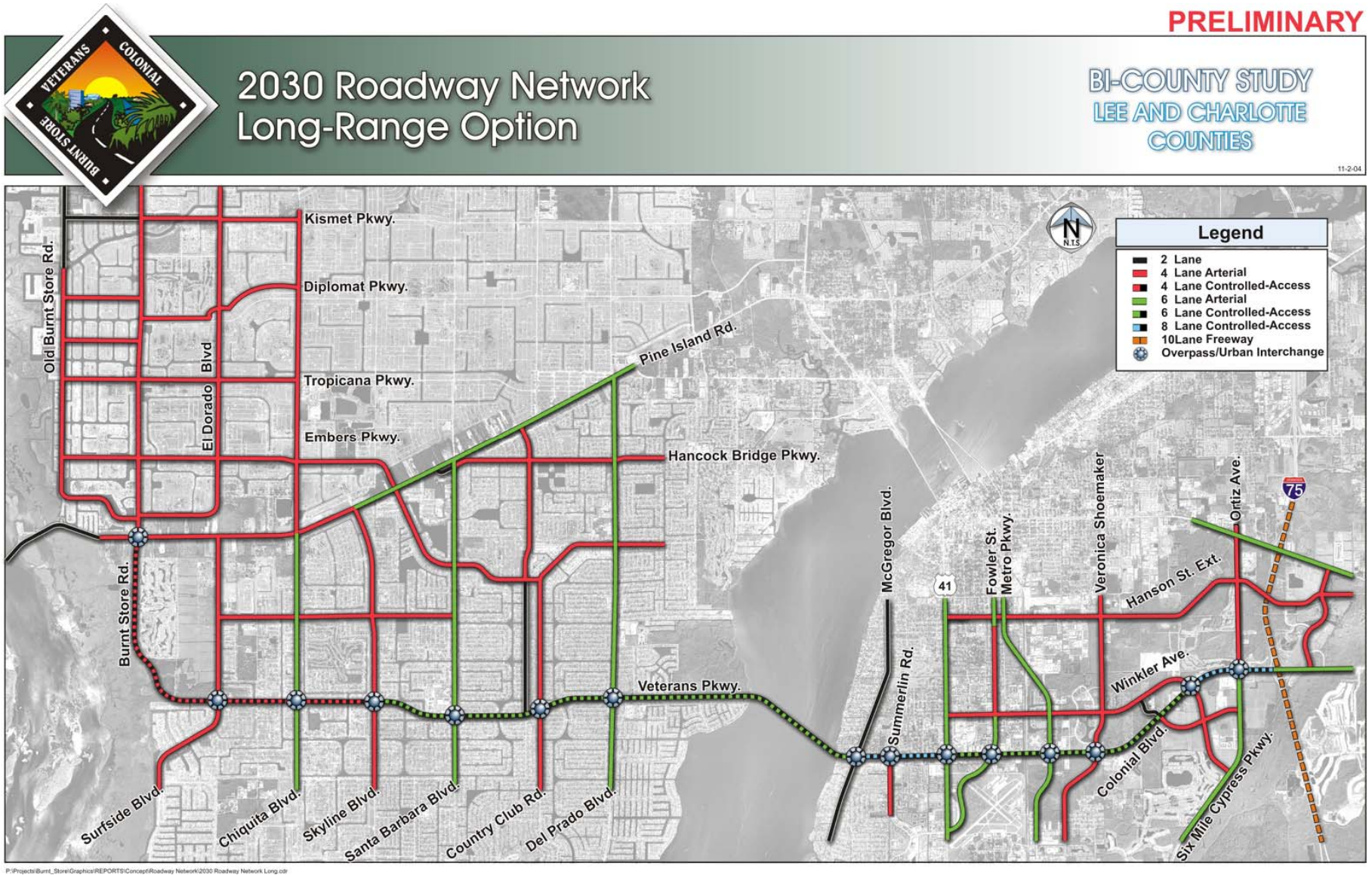
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Charlotte County Options

Three model network options were developed for Charlotte County, as depicted in Figure 3-4. Each Charlotte County option was evaluated in conjunction with all three Lee County options. It was discovered that the corridor options in Lee County had little to no effect on travel demand in Charlotte County. This appears to be the result of travel patterns along the corridor, which change dramatically north of the City of Cape Coral.

- Option A: This option, which represented the baseline condition, was the four-lane widening of Burnt Store Road from the Lee County line to Tamiami Trail in Punta Gorda.
- Option B: This option included the widening of Burnt Store Road to four lanes, the widening of Notre Dame Boulevard to four lanes and realigning Notre Dame Boulevard with Tuckers Grade. This option provided additional access to the area from I-75.
- Option C: The third option included the widening of Burnt Store Road to four lanes and the four-lane widening of Zemel Road from Burnt Store Road to Tamiami Trail.

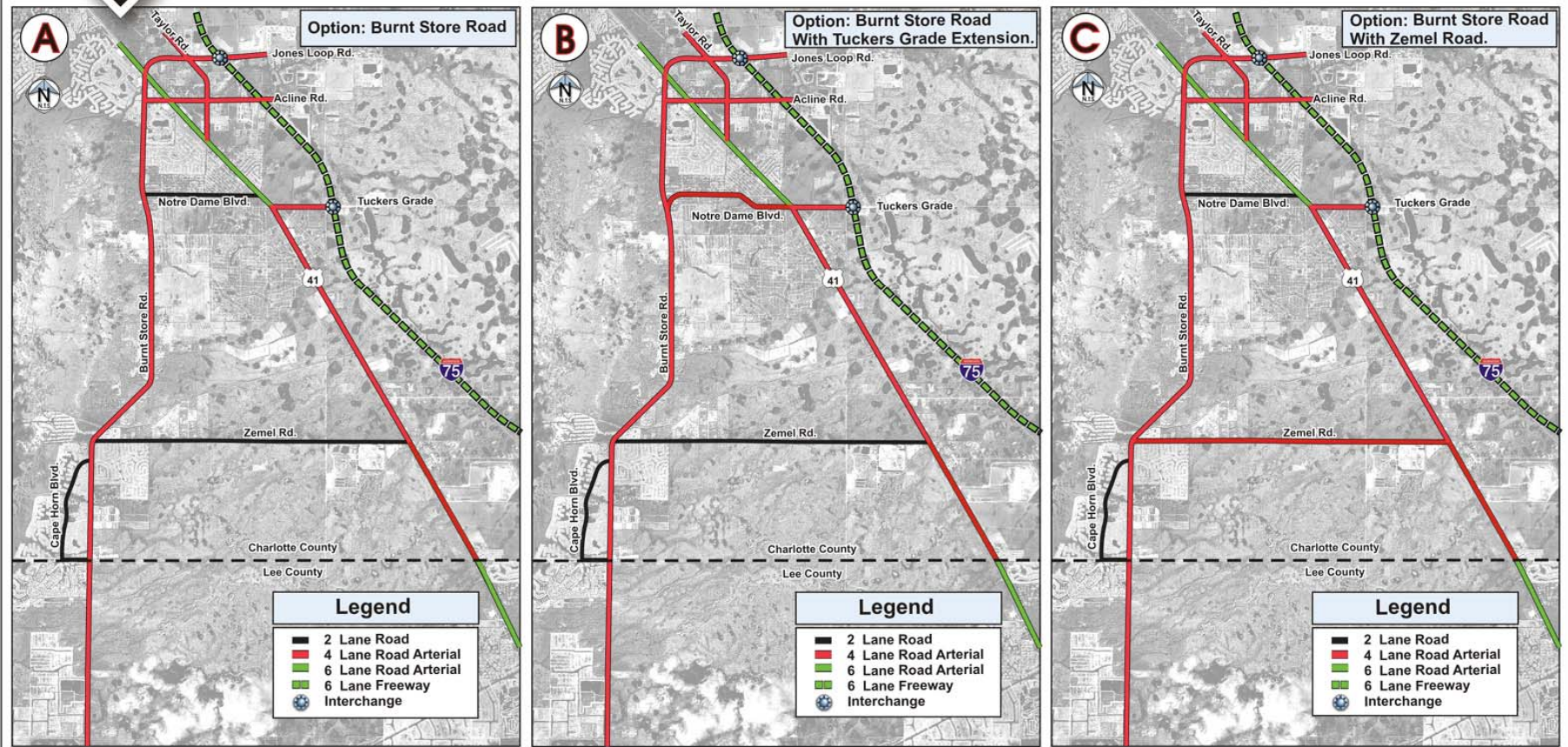


2030 Roadway Network Charlotte County Options

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3.2 FUTURE DAILY TRAFFIC PROJECTIONS

As mentioned in Section 3.1, the 2020 Lee County MPO Needs Plan Model refined for this study was used to forecast 2030 daily traffic conditions for the study corridor. Per the recommendation of the STTF, the peak season weekday average daily traffic volumes produced by the 2020 model were adjusted by 1.00 to reflect 2030 AADT conditions. The 2030 Long-Range Option and Option A model network was used to develop the 2030 AADT volumes. Assessment of the 2030 AADT projections revealed a few locations where the model volumes needed adjusting for reasonableness. Figures 3-5 (a-g) display the 2030 AADT traffic volumes.

In addition, daily traffic volumes were developed for interim years 2010 and 2020. The 2030 Short-Range Option and Option A model network was used to develop the interim year AADT volumes. The volumes were developed by interpolating between existing and the 2030 Short Range Option and Option A traffic projections. The 2010 and 2020 forecasts were then adjusted and smoothed to reflect improvements that are anticipated to occur within the corridor area over the next 15 years. Information obtained from the Lee County MPO regarding the area's Transportation Improvement Program (TIP) and the short-range components of the LRTP were used in developing the 2010 and 2020 forecasts. As such, committed improvements such as the construction of Veronica Shoemaker Boulevard and the six lane widening improvements to Metro Parkway were considered in developing the 2010 and 2020 forecast. However, no major committed capacity improvements were identified along the study corridor in the short-range component of the LRTP. The 2010 and 2020 AADT volumes are provided in a separate Technical Appendix.

It should be noted that a Burnt Store Area Plan⁷ was prepared as a cooperative effort by property owners in Southern Charlotte County to plan future improvements along the Burnt Store Road corridor and the surrounding area. The study proposed amendments to the Charlotte County Comprehensive Plan – Future Land Use Element. If approved, the new land uses and developments will increase traffic on Burnt Store Road. Furthermore, a Notice of Proposed Change was prepared for Tern Bay Country Club Resort located on Burnt Store Road in Charlotte County. This project, formally known as Caliente Springs Development of Regional Impact, has not been developed.

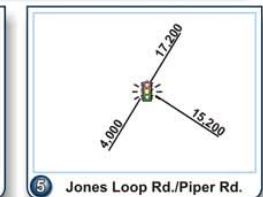
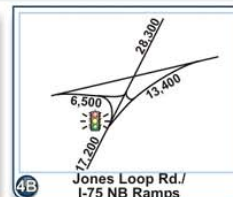
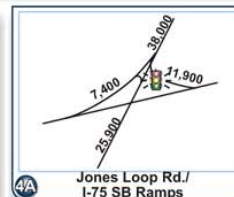
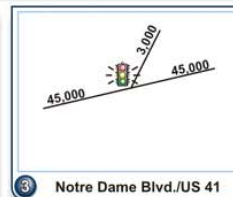
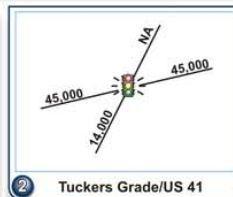
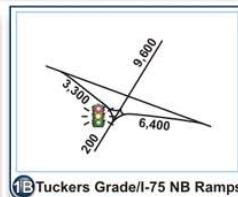
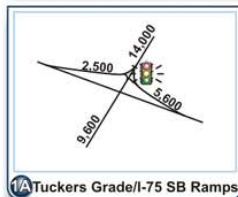
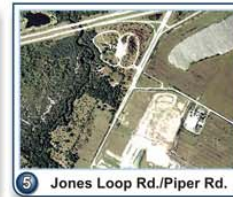
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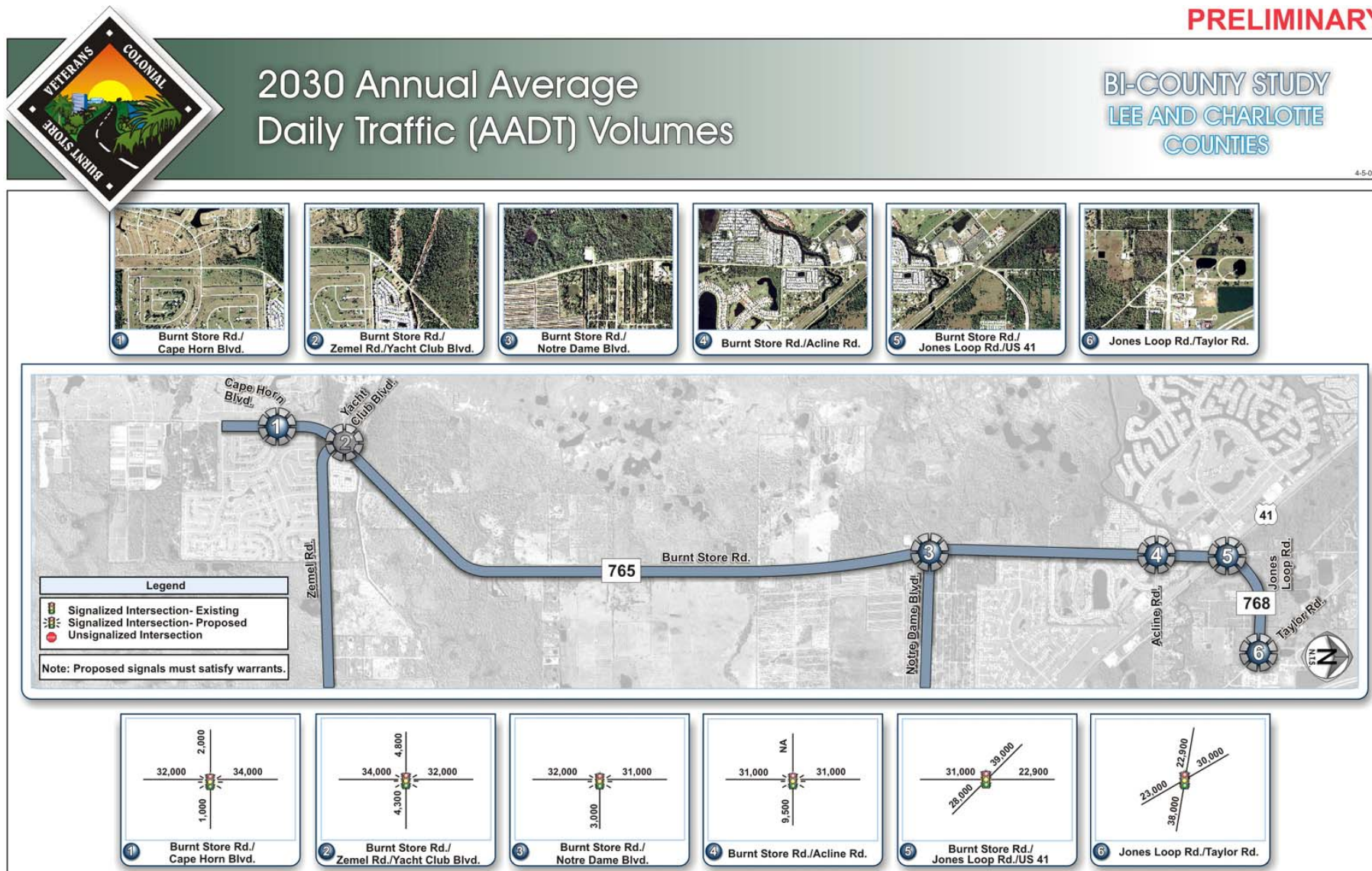


2030 Annual Average Daily Traffic (AADT) Volumes



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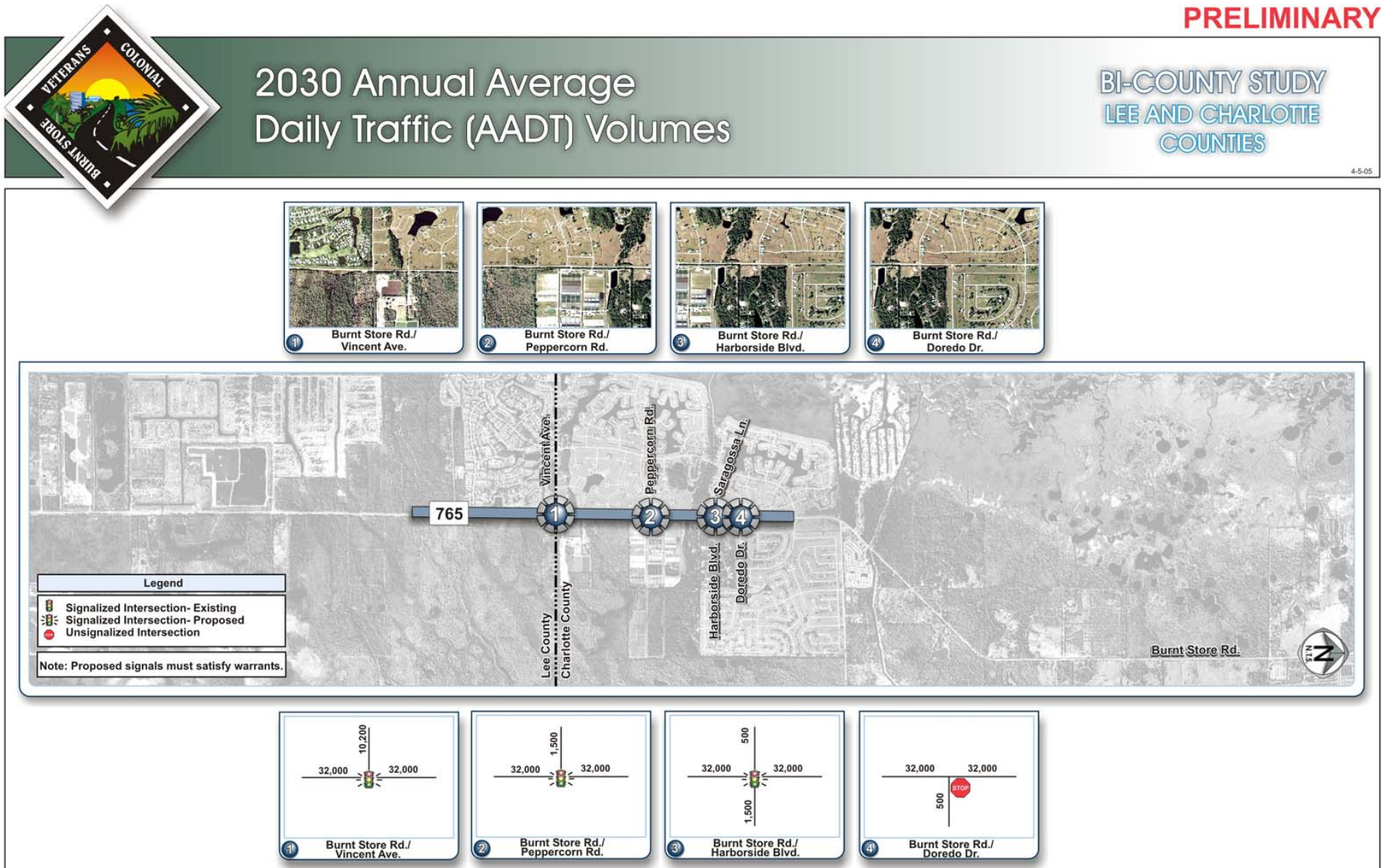


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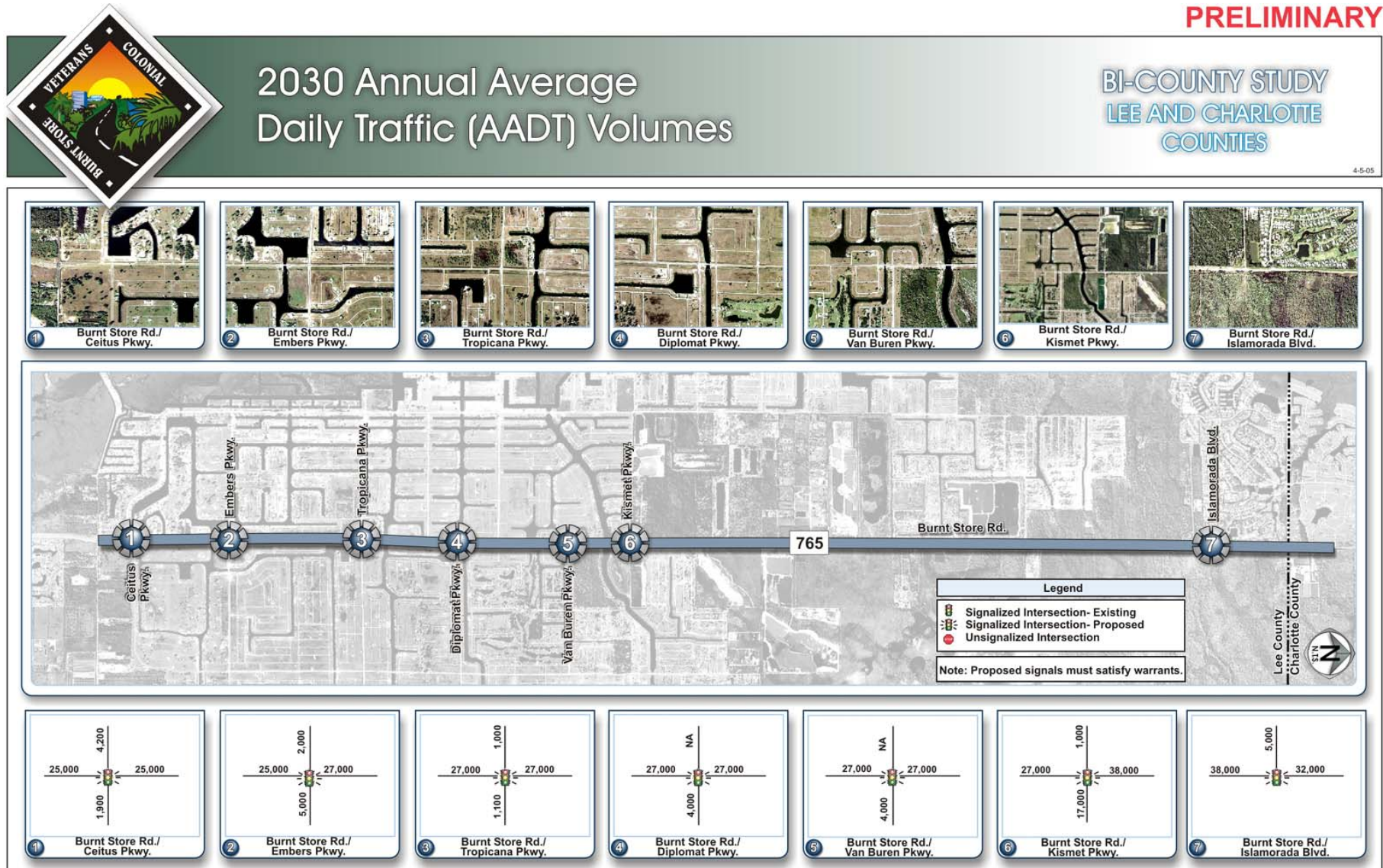
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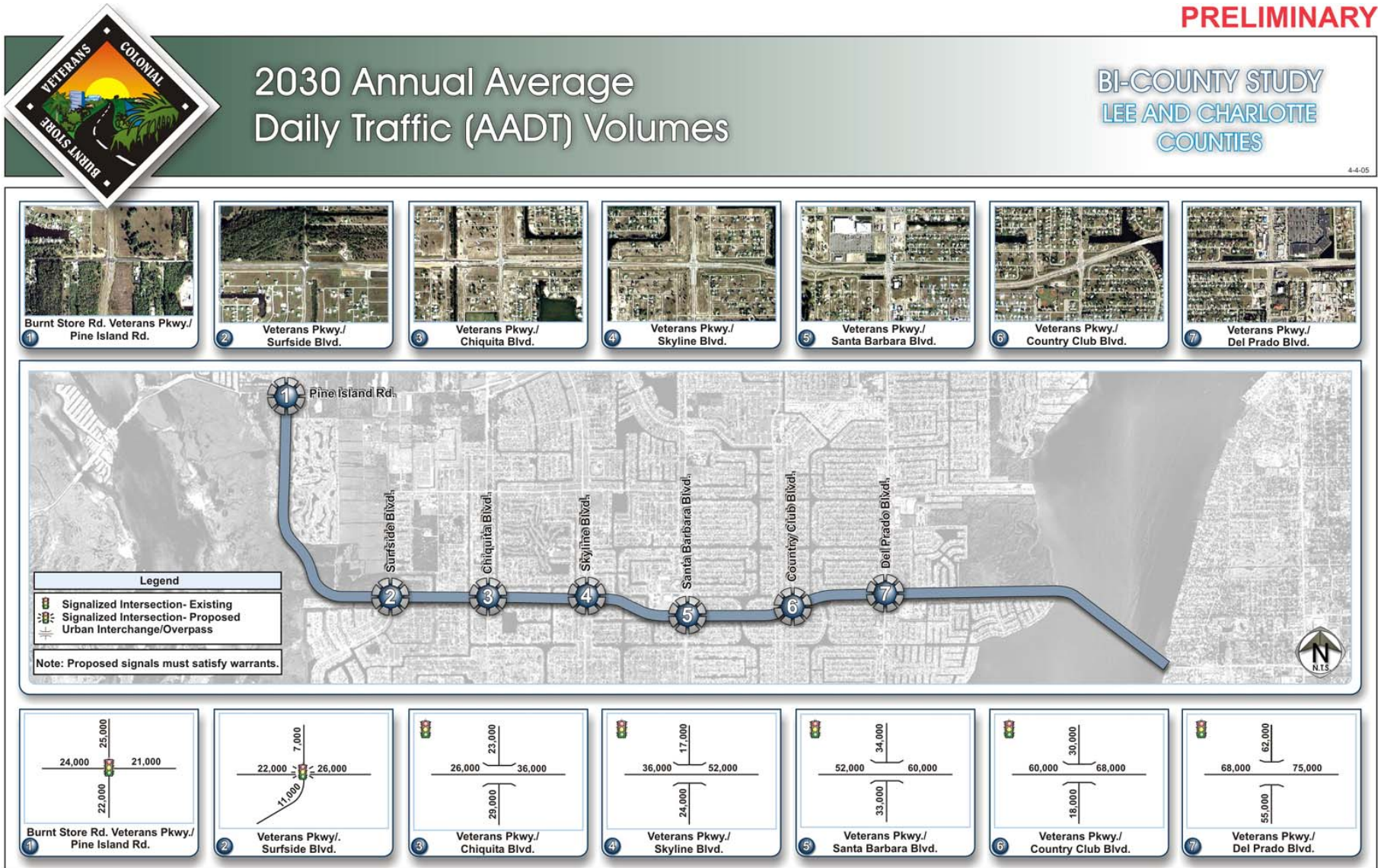
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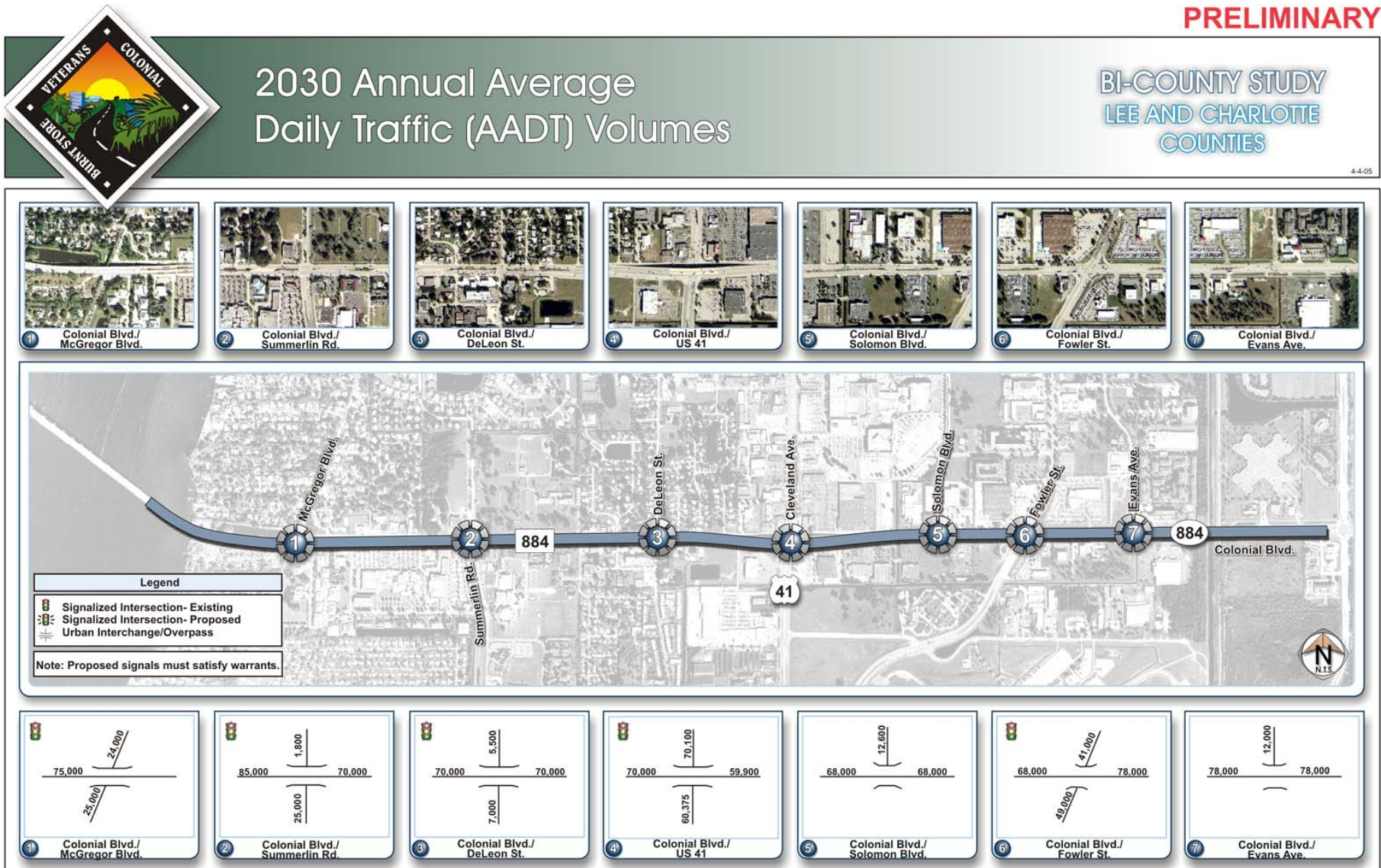


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3.3 FUTURE PEAK HOUR TRAFFIC PROJECTIONS

The future AADT traffic volumes and traffic characteristics displayed in Table 3-1 were used to develop the peak hour traffic projections. In general, the methodology to develop the peak hour traffic volumes included applying the K_{30} factors and D_{30} factors to the future AADT volumes developed for the study corridor.

Table 3-1
Traffic Characteristics

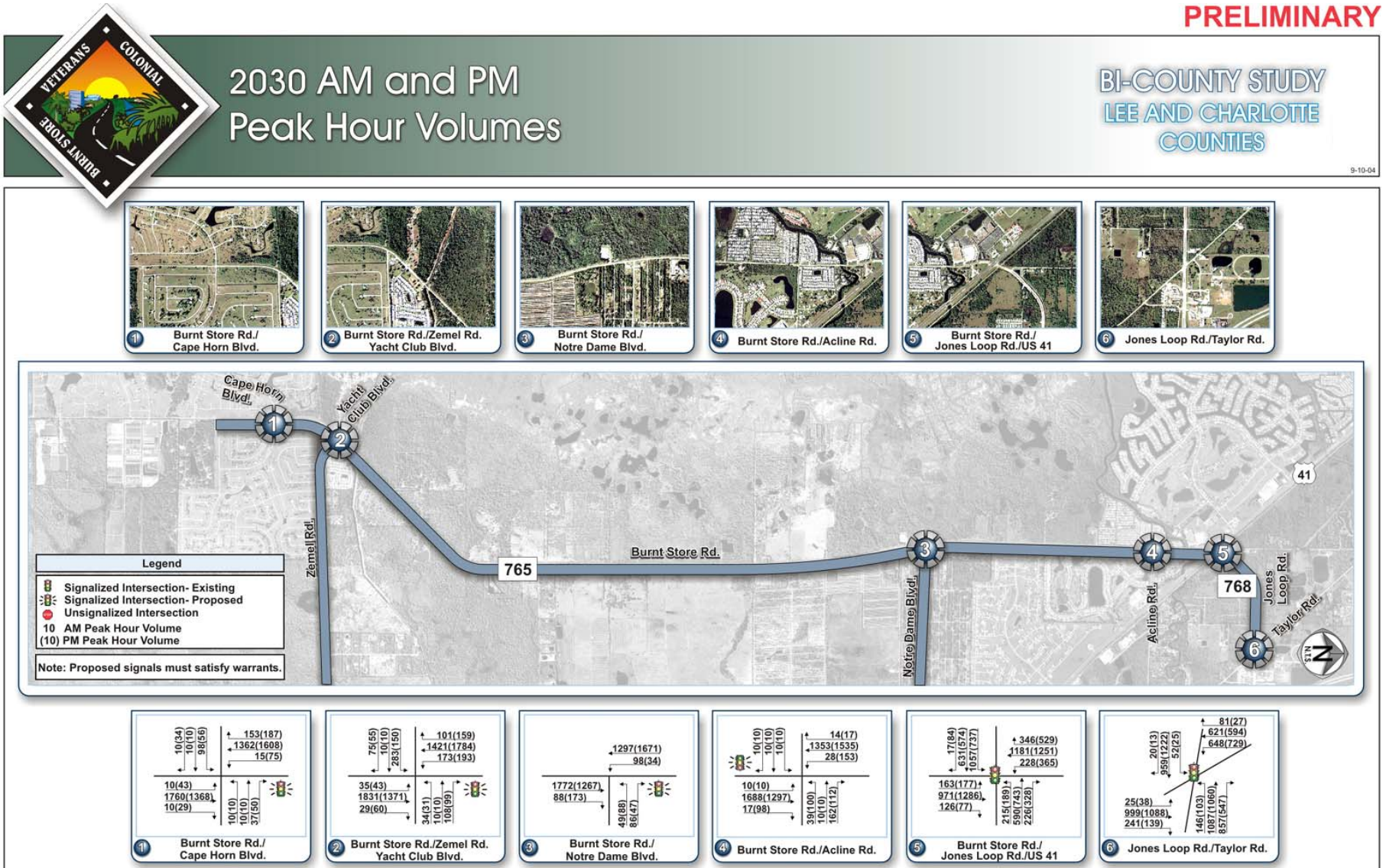
Location	K_{30}	D_{30}
Jones Loop Road	0.10	0.55
Burnt Store Road	0.10	0.55
Veteran Parkway from Pine Island Road to Del Prado Boulevard	0.10	0.60
Colonial Boulevard	0.10	0.55

Figures 3-6 (a-g) displays the 2030 AM and PM peak hour traffic volumes. Peak hour volumes were also developed for the interim years 2010 and 2020. The AM and PM peak hour volumes for the interim years are provided in a separate Technical Appendix. The detailed calculation used to develop the AM and PM peak hour volumes are also included in a separate Technical Appendix.

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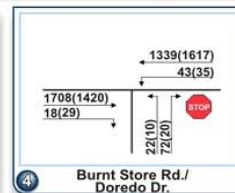
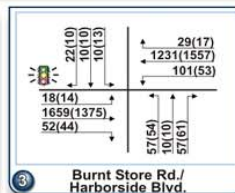
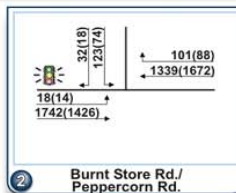
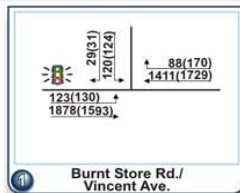
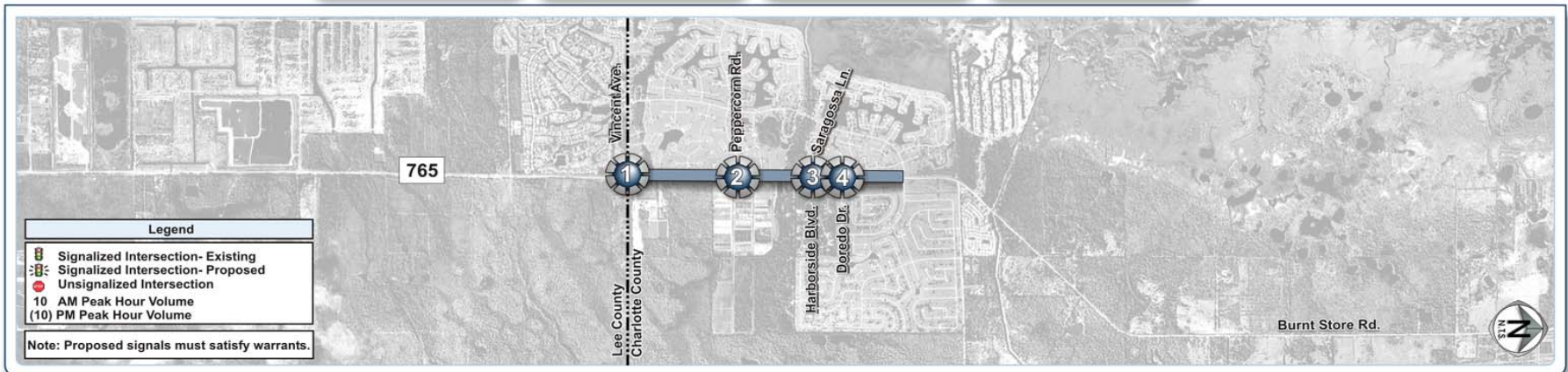
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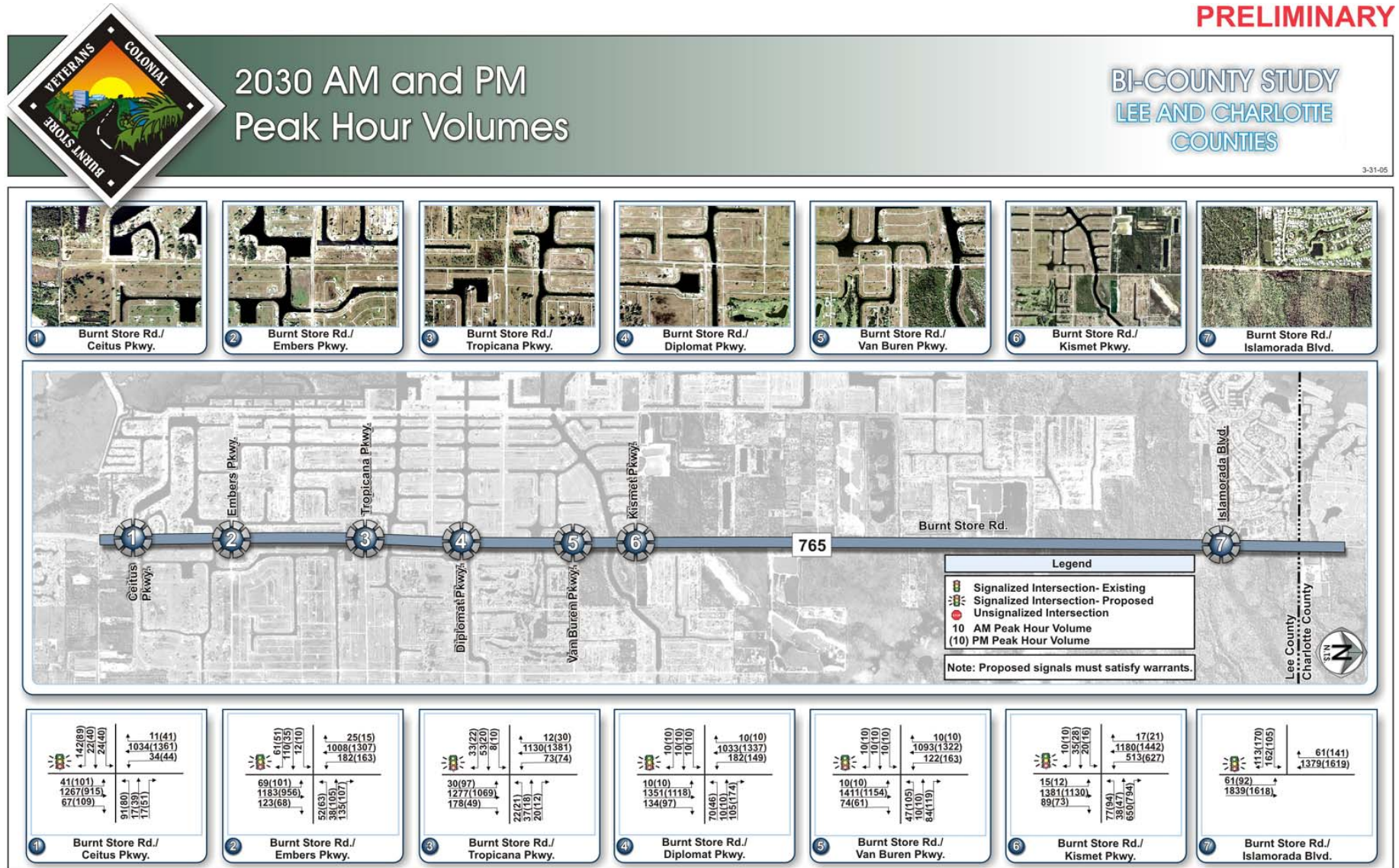
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2030 AM and PM Peak Hour Volumes

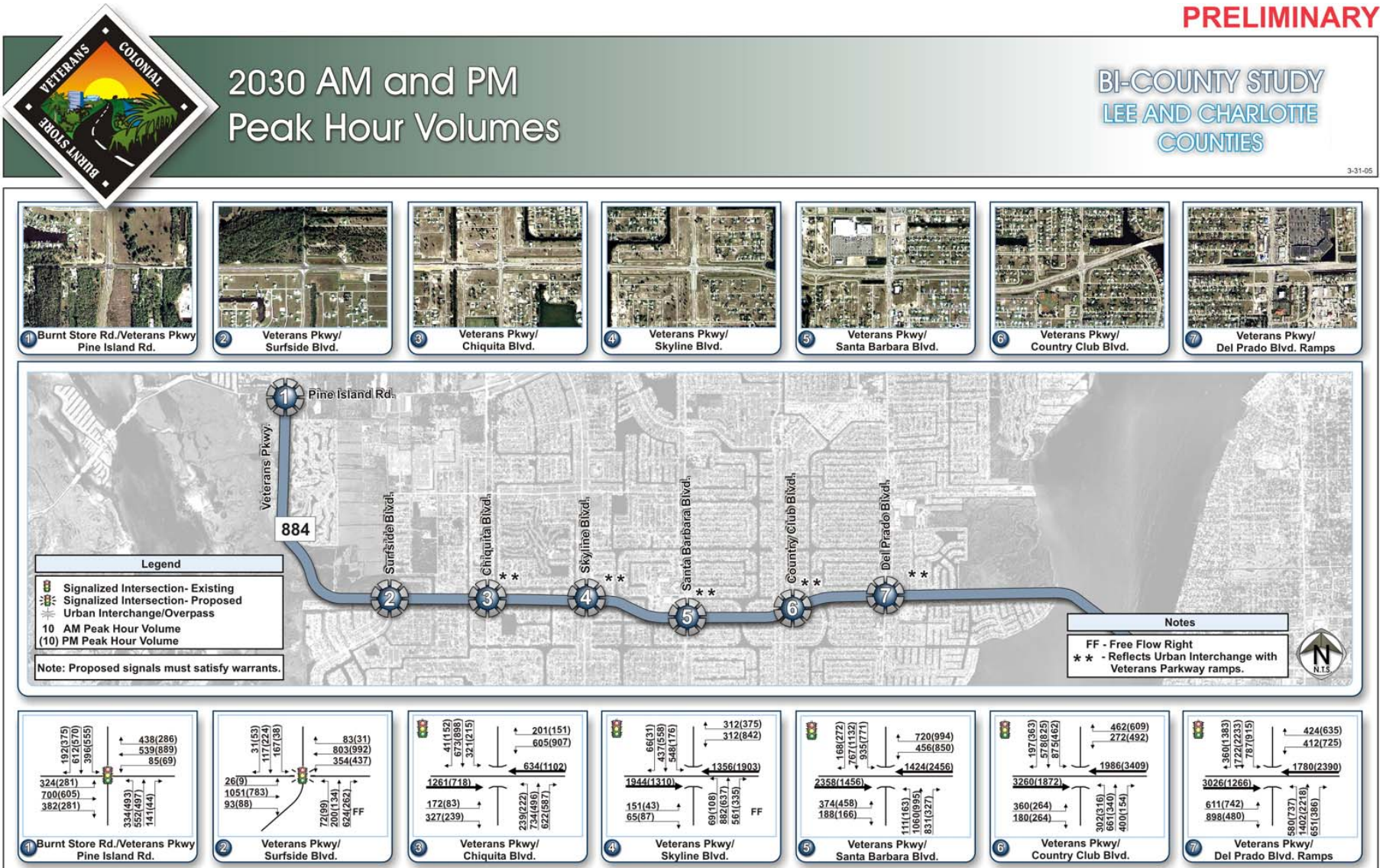


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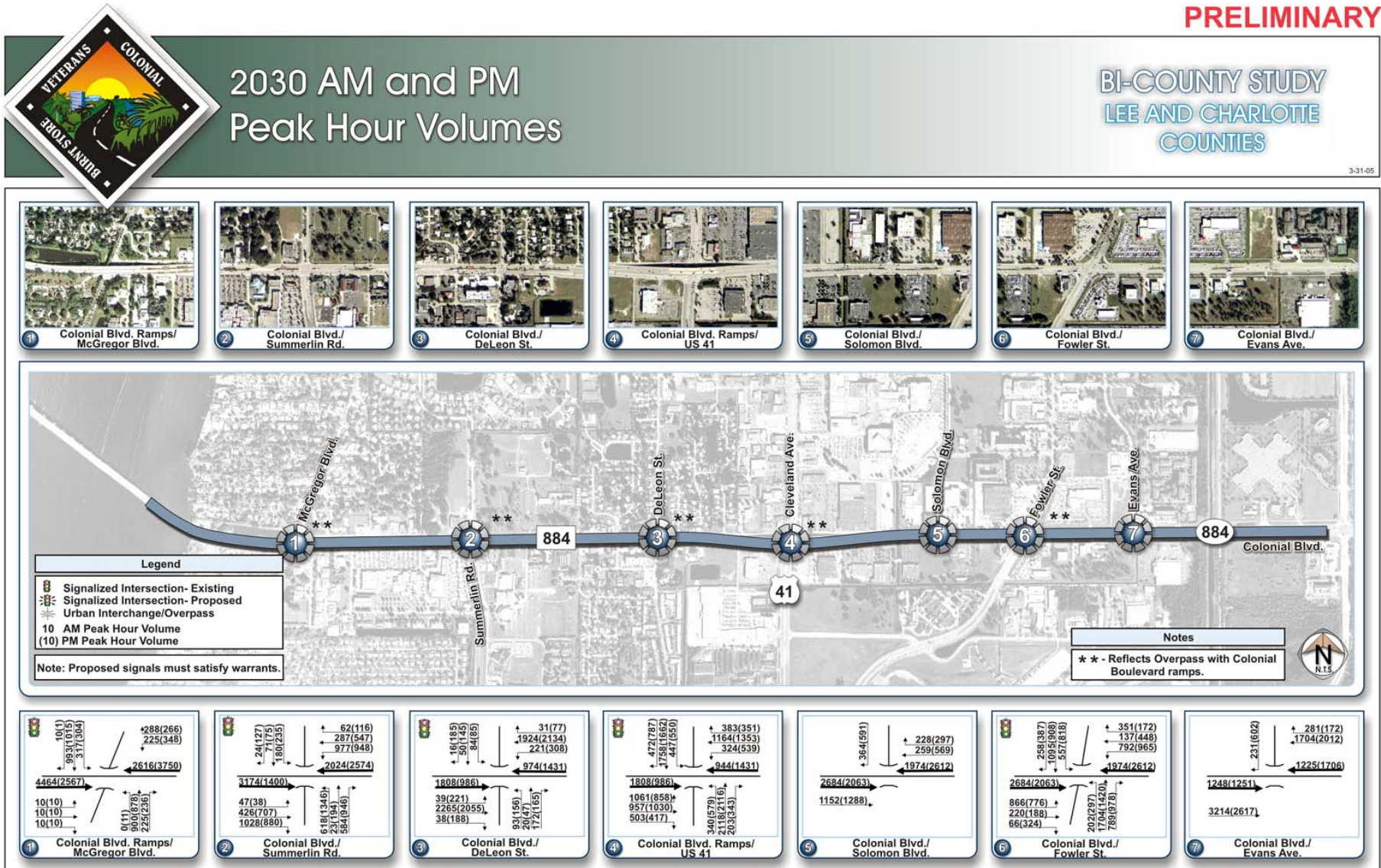
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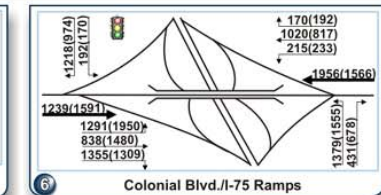
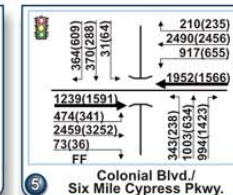
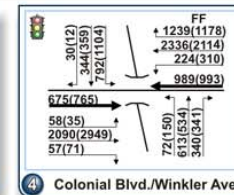
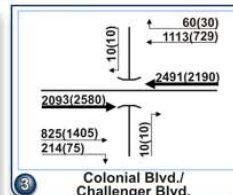
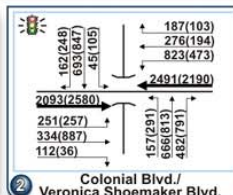
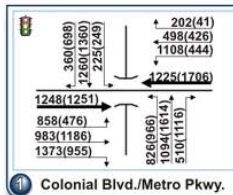
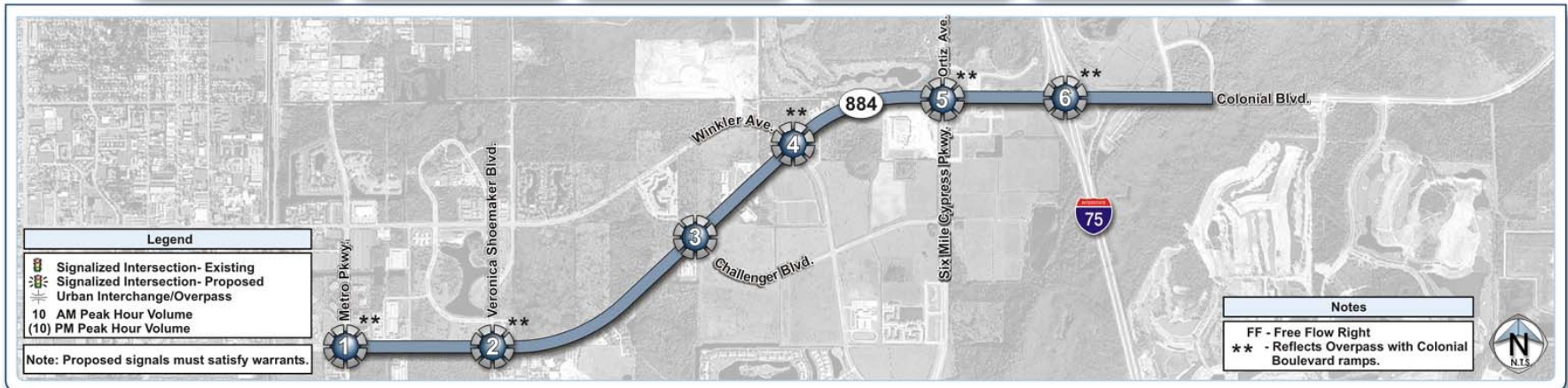
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BI-COUNTY STUDY LEE AND CHARLOTTE COUNTIES

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2030 AM and PM Peak Hour Volumes



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3.4 FUTURE OPERATIONAL ANALYSES

Future operating conditions were determined for all major intersections and all roadway segments along Burnt Store Road, Veterans Parkway and Colonial Boulevard. In addition, other roadways under study included Zemel Road, Notre Dame Boulevard, and Tuckers Grade within Charlotte County. The analysis tools used were Synchro 5.0²; 2000 Highway Capacity Software (HCS), Version 4.1d³, based on the 2000 Highway Capacity Manual⁴ and the Lee County Link-Specific Service Volumes⁵ developed by the Lee County Department of Transportation (Lee DOT); and the Quality/Level of Service Hand Book⁶ generalized peak hour two-way service volume and peak hour directional service volumes for transitioning areas, shown in Tables 4-5 and 4-8 of the handbook.

The operation standards are LOS E for Lee County intersections and roadway segments and LOS C for Charlotte County intersections and roadway segments. The LOS results for the 2030 operational analysis are displayed in Figures 3-7 (a-n). The interim years 2010 and 2020 LOS analyses results are displayed in a separate Technical Appendix. Also, the detailed analyses and LOS determinations are included in a separate Technical Appendix.

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2030 AM Peak Hour Arterial and Intersection Level of Service (LOS)



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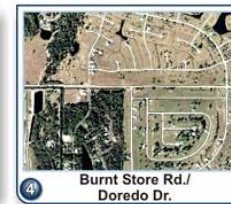
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2030 AM Peak Hour Arterial and Intersection Level of Service (LOS)

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

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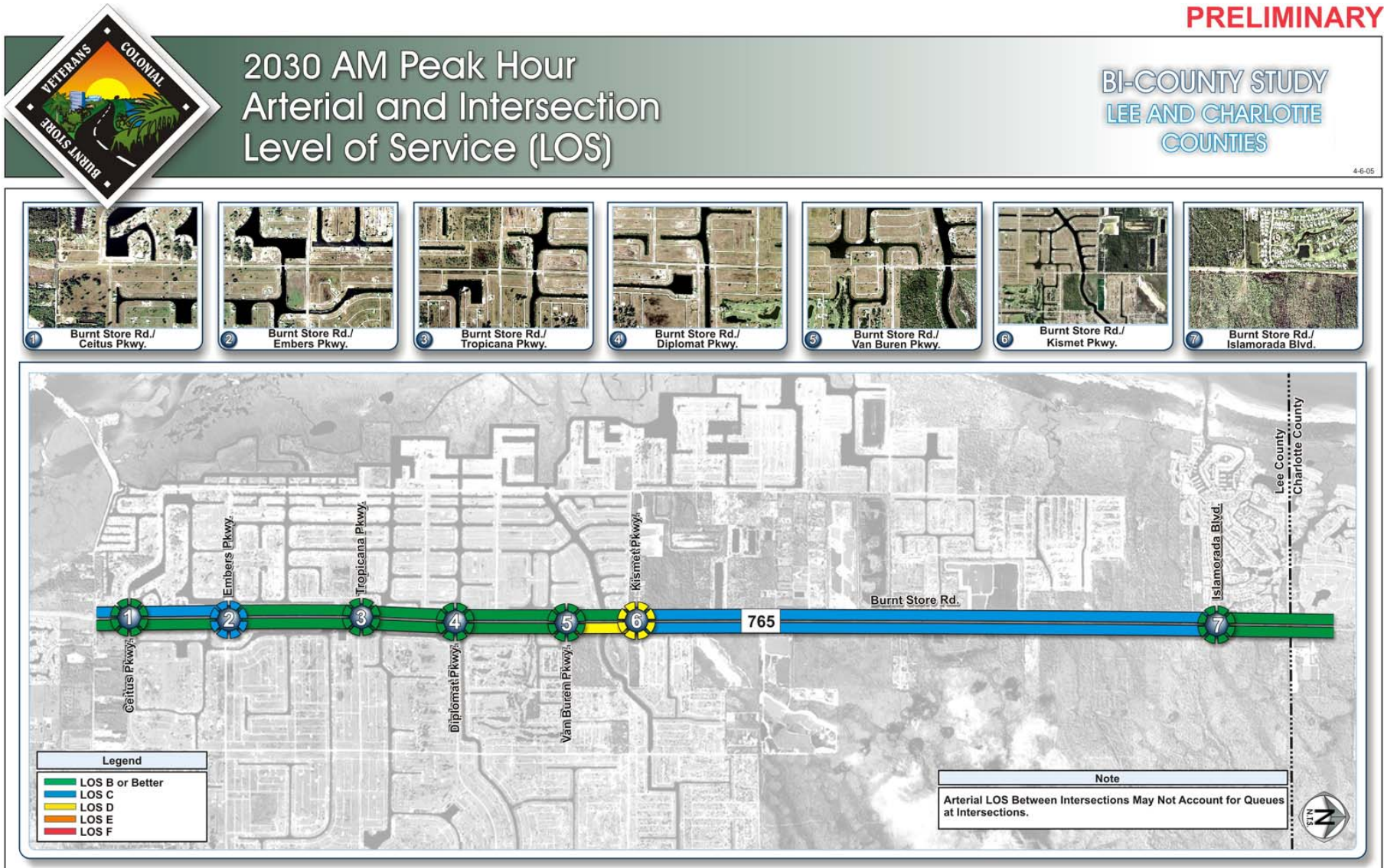


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2030 AM Peak Hour
Arterial and Intersection
Level of Service (LOS)



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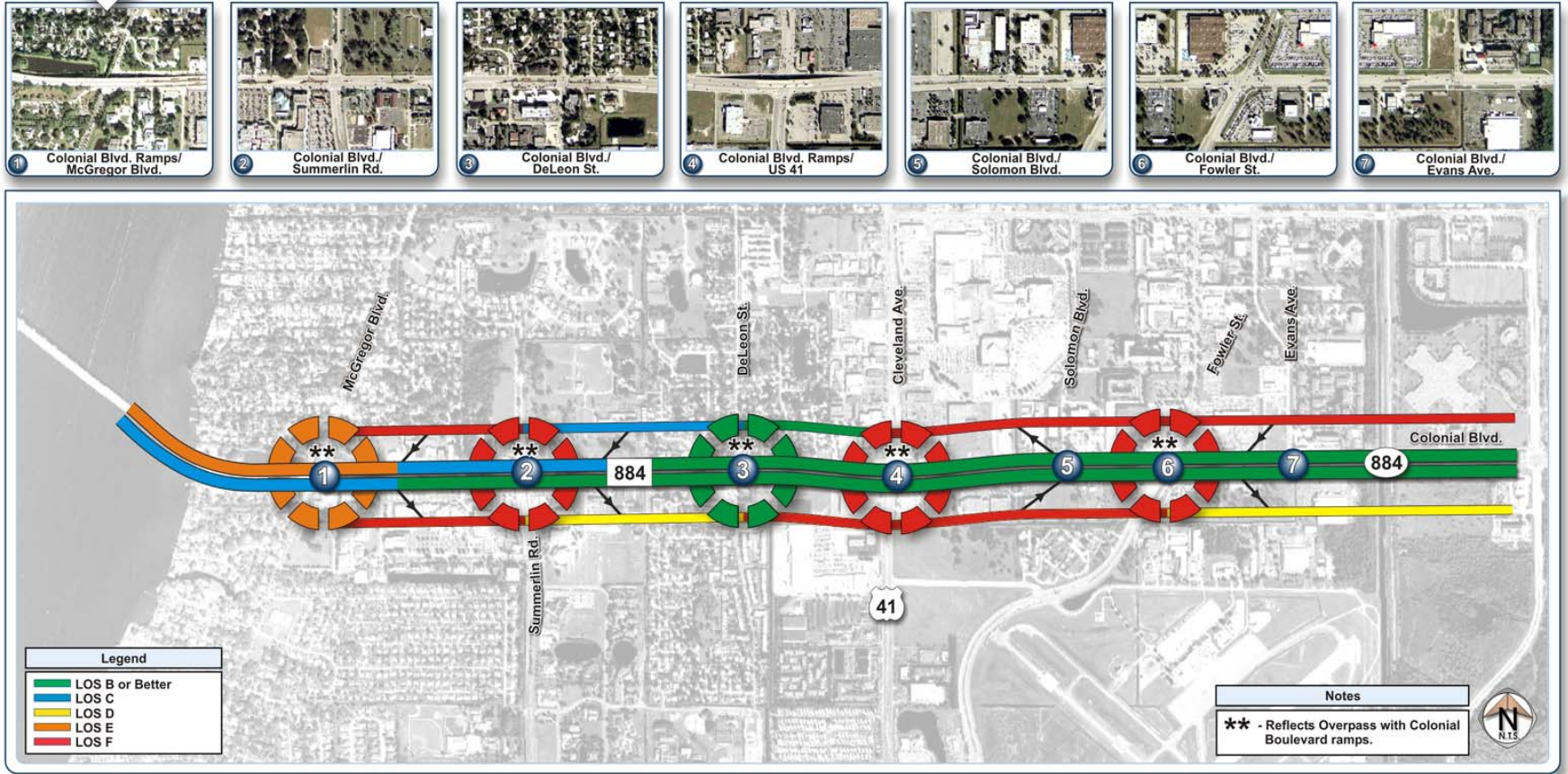


2030 AM Peak Hour Arterial, Express Lanes and Intersection Level of Service (LOS)

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BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

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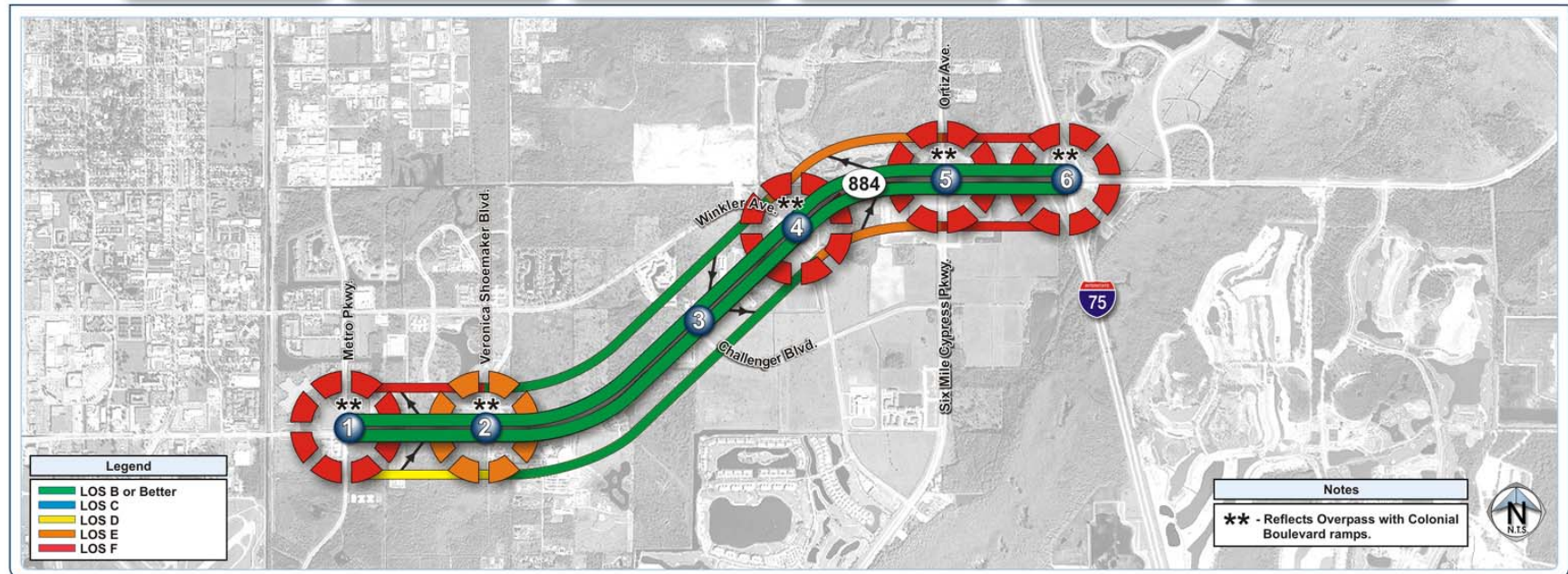
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BI-COUNTY STUDY
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2030 AM Peak Hour Arterial, Express Lanes and Intersection Level of Service (LOS)



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BI-COUNTY STUDY
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2030 PM Peak Hour Arterial and Intersection Level of Service (LOS)



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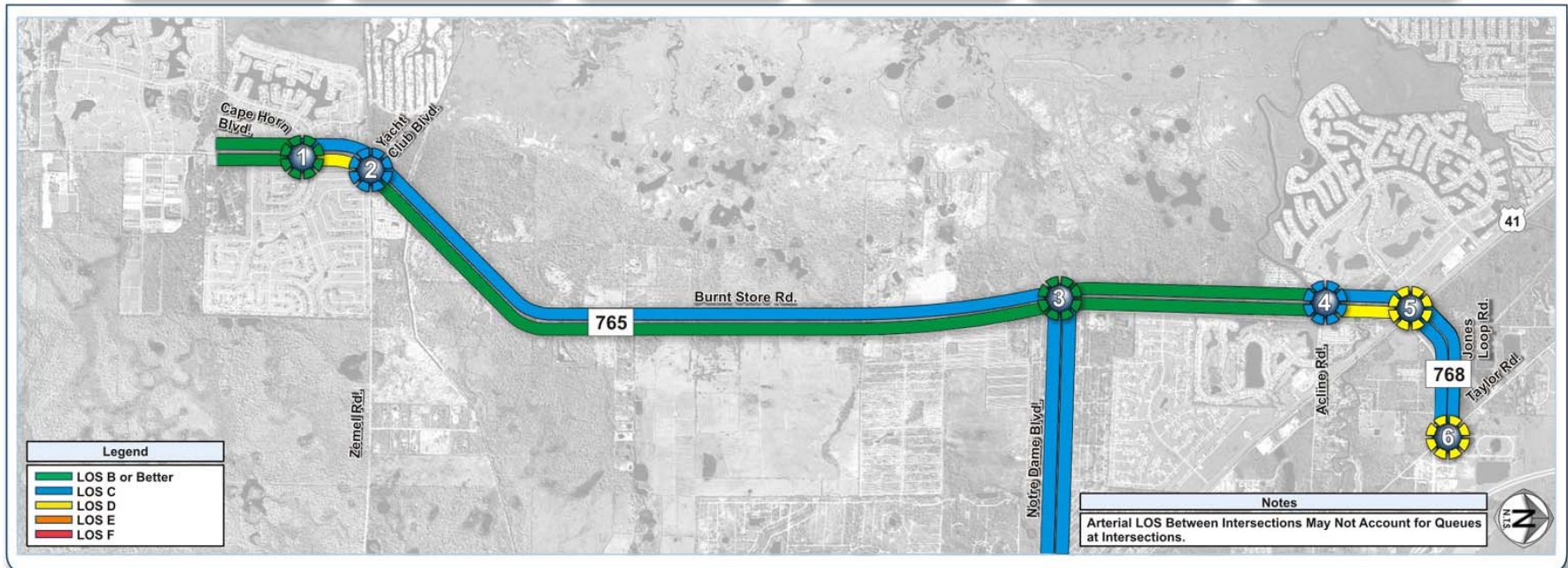
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BI-COUNTY STUDY
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2030 PM Peak Hour Arterial and Intersection Level of Service (LOS)



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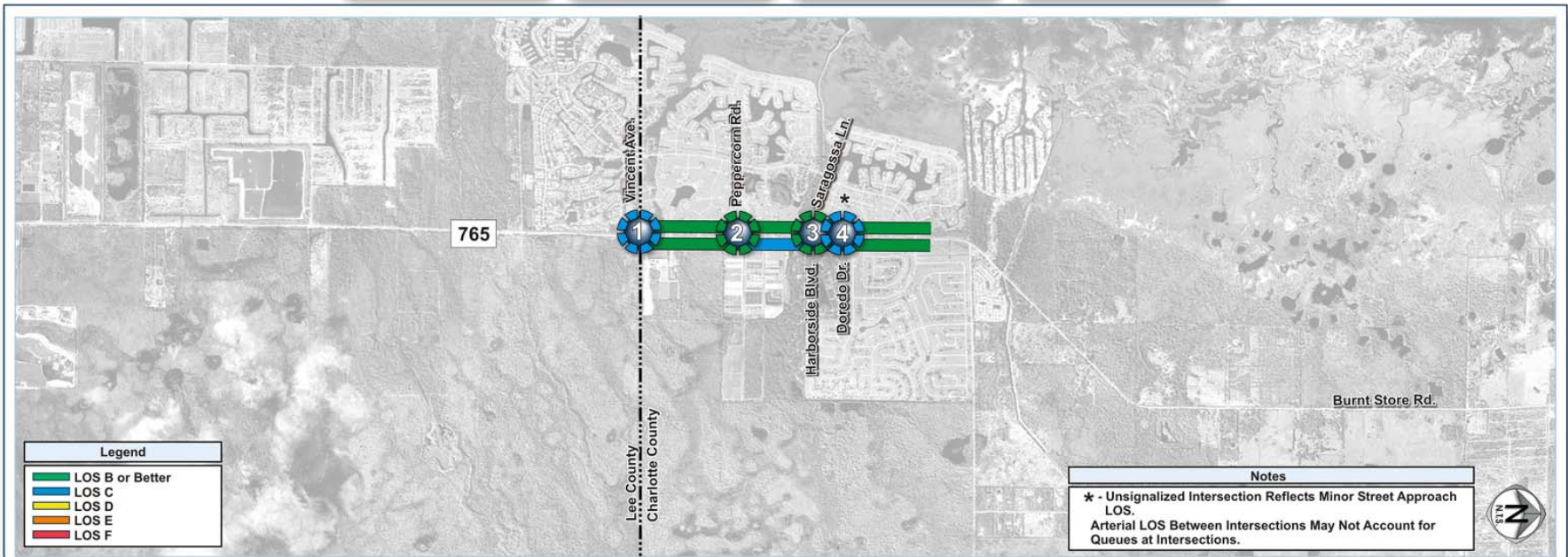
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2030 PM Peak Hour Arterial and Intersection Level of Service (LOS)

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

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2030 PM Peak Hour Arterial and Intersection Level of Service (LOS)

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

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BI-COUNTY STUDY
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COUNTIES

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2030 PM Peak Hour
Arterial and Intersection
Level of Service (LOS)



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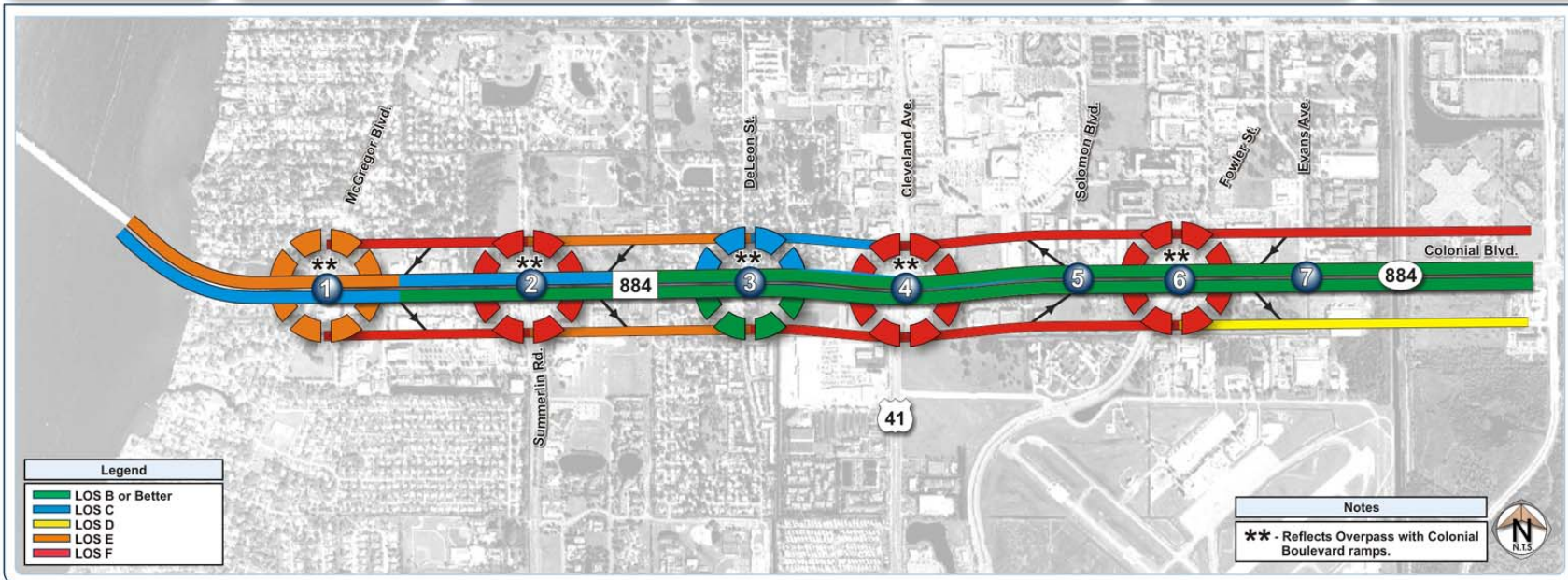
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2030 PM Peak Hour Arterial, Express Lanes and Intersection Level of Service (LOS)

BI-COUNTY STUDY
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2030 PM Peak Hour Arterial, Express Lanes and Intersection Level of Service (LOS)



1 Colonial Blvd./
Metro Pkwy.



2 Colonial Blvd./
Veronica Shoemaker Blvd.



3 Colonial Blvd./
Challenger Blvd.



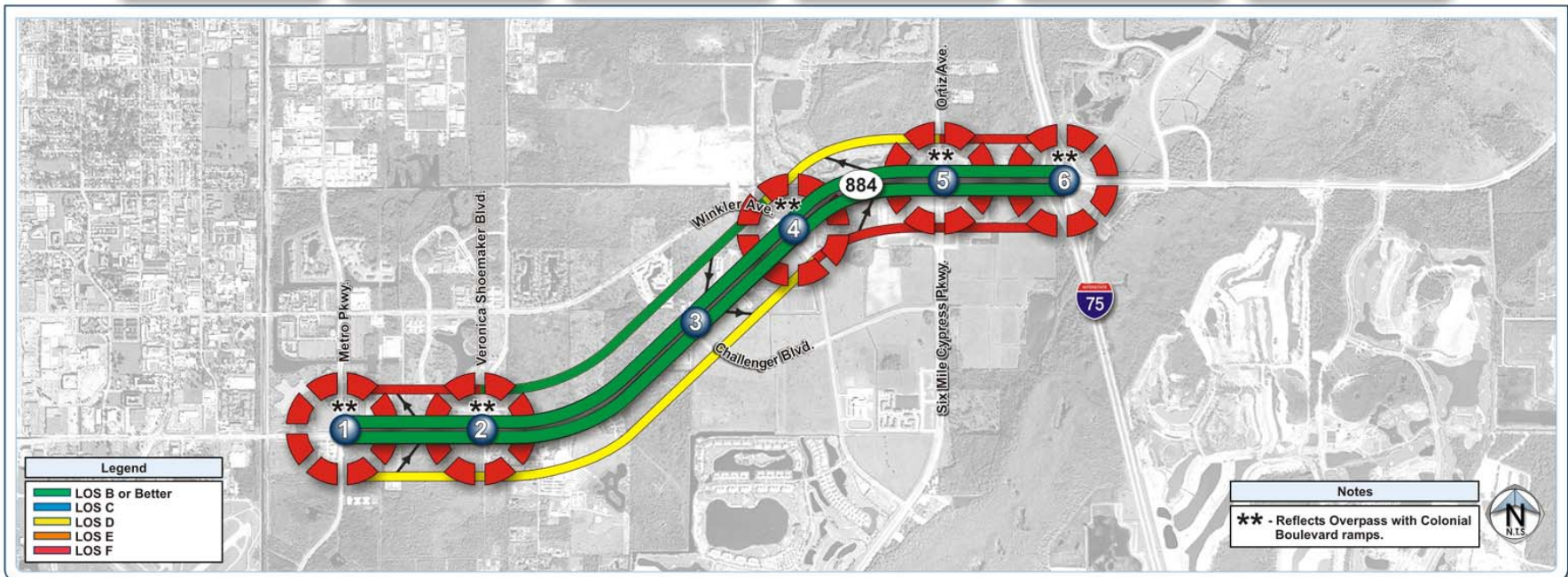
4 Colonial Blvd./
Winkler Ave.



5 Colonial Blvd./
Six Mile Cypress Pkwy.



6 Colonial Blvd./
I-75 Ramps



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3.5 INTERSECTION IMPROVEMENTS

The intersection improvements assumed for the LOS analyses and analyses year are described below. In addition, the concept plans that reflect the improvements through the year 2030 are provided on a CD in the Appendix section of this report.

An implementation plan was recommended in Section 5.0. The plan considered project phases, cost, and funding. Therefore, the recommended implementation years described in Section 5.0 may vary from what was assumed for analyses in this section.

Jones Loop Road/Tuckers Grade

- By 2010
 - I-75 SB ramp termini at Tuckers Grade to be signalized
 - I-75 NB ramp termini at Tuckers Grade to be signalized
 - Tuckers Grade and Tamiami Trail
 - Intersection to be signalized
 - EB approach – 1 Left, 1 Through and 1 Right
 - Additional left turn lane added to WB approach
- By 2020
 - I-75 SB ramp termini at Jones Loop Road to be signalized
 - I-75 NB ramp termini at Jones Loop Road to be signalized
 - Notre Dame Boulevard and Tamiami Trail intersection to be signalized
 - Jones Loop Road and Piper Road
 - SB approach - 1 Left, 1 Through and 1 Right
 - Jones Loop Road and Taylor Road
 - WB approach - 1 Left, 2 Throughs, and 1 Right
 - Additional through lane added to NB approach
 - Additional left turn lane added to SB approach
 - Additional through lane added to SB approach
- By 2030
 - Tuckers Grade and Tamiami Trail
 - Additional through lane added to NB approach
 - Additional left turn lane added to SB approach
 - Additional through lane added to SB approach
 - Notre Dame Boulevard Tamiami Trail
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Jones Loop Road and Piper Road
 - Intersection to be signalized
 - Jones Loop Road and I-75 SB Ramps
 - Additional through lane added to EB approach
 - Additional right turn lane added to SB approach
 - Jones Loop Road and I-75 NB Ramps
 - Additional left turn lane added to EB approach
 - NB approach - 1 Left, 1 Left/Through, and 1 Right
 - Jones Loop Road and Taylor Road
 - Additional through lane added to WB approach
 - Additional right turn lane added to WB approach
 - Additional through lane added to NB approach

- Additional through lane added to SB approach

Burnt Store Road – Tamiami Trail to Notre Dame Boulevard

- By 2010
 - Burnt Store Road and Tamiami Trail
 - Additional left turn lane added to EB approach
 - Additional through lane added to EB approach
 - WB approach - 1 Left, 2 Throughs, and 1 Right
 - Additional left turn lane added to SB approach
- By 2020
 - Burnt Store Road and Acline Road
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 1 Through, and 1 Through/Right
 - Burnt Store Road and Notre Dame Boulevard
 - WB approach - 1 Left and 1 Through/Right
 - NB approach - 2 Throughs and 1 Right
 - SB approach - 1 Left and 2 Throughs
- By 2030
 - Burnt Store Road and Tamiami Trail
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Additional right turn lane added to SB approach
 - Burnt Store Road and Acline Road
 - WB approach - 1 Left/Through and 1 Right
 - Burnt Store Road and Notre Dame Boulevard
 - Intersection to be signalized

Burnt Store Road – Notre Dame Boulevard to Lee County Line

- By 2020
 - Yacht Club Boulevard and Zemel Road to be aligned
 - Burnt Store Road and Yacht Club/Zemel Road
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - WB approach - 1 Left and 1 Through/Right
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Burnt Store Road and Cape Horn Boulevard
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - WB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right
 - Burnt Store Road and Doredo Drive
 - Additional through lane added to NB approach
 - SB approach - 1 Left and 2 Throughs

- Burnt Store Road and Harborside Boulevard
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - WB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right
- Burnt Store Road and Peppercorn Road
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left and 2 Throughs
 - SB approach - 2 Throughs and 1 Right
- Burnt Store Road and Vincent Avenue
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left and 2 Throughs
 - SB approach - 2 Throughs and 1 Right
- By 2030
 - Burnt Store Road and Yacht Club/Zemel Road
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach

Burnt Store Road – Charlotte County Line to Van Buren Parkway

- By 2020
 - Burnt Store Road and Islamorada Boulevard
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Burnt Store Road and Van Buren Parkway
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - WB approach - 1 Left and 1 Through/Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right

Burnt Store Road –Van Buren Parkway to Pine Island Road

- By 2020
 - Burnt Store Road and Diplomat Parkway
 - Intersection to be signalized
 - EB approach - 1 Left and 1 Through/Right
 - WB approach - 1 Left, 1 Throughs, and 1 Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right
 - Burnt Store Road and Tropicana Parkway
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right

- Burnt Store Road and Embers Parkway
 - Intersection to be signalized
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right
- Burnt Store Road and Ceitus Parkway
 - Ceitus Parkway East and Ceitus Parkway West to be aligned
 - EB approach 1 Left, 1 Through, and 1 Right
 - WB approach 1 Left, 1 Through, and 1 Right
 - NB approach - 1 Left, 2 Throughs, and 1 Right
 - SB approach - 1 Left, 2 Throughs, and 1 Right
- Burnt Store Road and Pine Island Road
 - Additional through lane is added to EB approach
 - Additional through lane is added to WB approach
 - Additional through lane is added to NB approach
- By 2030
 - Burnt Store Road and Tropicana Parkway
 - Intersection to be signalized
 - Burnt Store Road and Ceitus Parkway
 - Intersection to be signalized
 - Burnt Store Road and Pine Island Road
 - Additional left turn lane added to EB approach
 - Additional left turn lane added to NB approach
 - Additional left turn lane added to SB approach

Veterans Parkway – Pine Island Road to Skyline Boulevard

- By 2010
 - Veterans Parkway and Surfside Boulevard
 - Intersection to be signalized
 - Veterans Parkway and Skyline Boulevard
 - NB approach - 2 Lefts, 2 Throughs, and 1 Free Flow Right Turn
- By 2030
 - Veterans Parkway and Chiquita Boulevard
 - Urban Interchange over Chiquita Boulevard
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Veterans Parkway and Skyline Boulevard
 - Urban Interchange over Skyline Boulevard

Veterans Parkway – Skyline Boulevard to Del Prado Boulevard

- By 2010
 - Veterans Parkway and Del Prado Boulevard
 - Additional left turn lane added to SB approach
- By 2020
 - Veterans Parkway and Santa Barbara Boulevard
 - Urban Interchange over Santa Barbara Boulevard
 - Veterans Parkway and Del Prado Boulevard
 - Additional right turn lane added on EB approach

- By 2030
 - Veterans Parkway and Santa Barbara Boulevard
 - Additional through lane added to NB approach
 - Additional through lane added to SB approach
 - Veterans Parkway and Country Club Boulevard
 - Urban Interchange over Country Club Boulevard

Colonial Boulevard – McGregor Boulevard to Cleveland Avenue

- By 2030
 - Expressway Concept
 - Overpass over Summerlin Road
 - Overpass over Deleon Street

Colonial Boulevard – Cleveland Avenue to Metro Parkway

- By 2010
 - Colonial Boulevard and Solomon Boulevard
 - WB approach – 3 Throughs and 1 Right
 - Colonial Boulevard and Fowler Street
 - Additional right turn lane added to EB approach
 - NB approach – 2 Lefts, 1 Through, 1 Through Right, and 1 Right
 - Colonial Boulevard and Metro Parkway
 - Additional right turn lane added to EB approach
 - Additional left turn lane added to NB approach
- By 2030
 - Expressway Concept
 - Overpass over Fowler Street
 - Overpass over Railroad Crossing/10-Mile Canal
 - Overpass over Metro Parkway

Colonial Boulevard – Metro Parkway to Winkler Avenue

- By 2010
 - Colonial Boulevard and Veronica Shoemaker Boulevard
 - Intersection to be signalized
 - EB approach – 1 Left, 3 Throughs, and 1 Right
 - WB Approach – 2 Lefts, 3 Throughs, and 1 Right
 - NB and SB Approaches – 1 Left, 2 Throughs, and 1 Right
 - Colonial Boulevard and Challenger Boulevard
 - Intersection to be signalized
- 2030
 - Expressway Concept
 - Overpass over Veronica Shoemaker Boulevard

Colonial Boulevard – Winkler Avenue to I-75

- By 2010
 - Colonial Boulevard and Six Mile Cypress Parkway

- Additional left turn lane added to EB approach
 - By 2020
 - Colonial Boulevard and Six Mile Cypress Parkway
 - Additional through lane added to EB approach
 - Additional through lane added to WB approach
 - Additional through lane added to NB approach
 - Free right turn lane added to NB approach
 - Additional left turn lane added to SB approach
 - Additional through lane added to SB approach
 - Colonial Boulevard and I-75
 - Urban Interchange over Colonial Boulevard
 - EB and WB approaches – 2 Lefts and 4 Throughs
 - NB and SB approaches – 2 Lefts and 2 Rights
 - By 2030
 - Expressway Concept
 - Overpass over Winkler Avenue
 - Overpass over Ortiz Avenue/Six Mile Cypress Parkway
 - Flyover I-75

3.6 REFERENCES

1. Phase I: Data Collection, Existing Conditions, and Future Travel Demand Report; PBS&J, Tampa, FL; November 2004.
2. Synchro 5.0; TrafficWare; Albany, CA; 2003.
3. 2000 Highway Capacity Software (HCS), Version 4.1d; McTrans; University of Florida Transportation Research Center; 2004.
4. 2000 Highway Capacity Manual; Transportation Research Board; Washington, D.C.; 2000.
5. Lee County Link-Specific Service Volumes; Lee County Department of Transportation; Ft. Myers, FL; September 2003.
6. Quality/Level of Service Handbook; Florida Department of Transportation; Tallahassee, FL; 2002.
7. Burnt Store Area Plan; VanasseDaylor, Fort Myers, FL; June 2005.



SECTION 4.0 CONCEPTUAL DESIGN AND ANALYSIS

Typical sections were developed for the project corridor based on the anticipated growth and traffic forecasts discussed previously. Conceptual designs and corridor alignment alternatives were developed considering design criteria and access management standards. Impacts, project cost, and ROW needs were evaluated. This section describes the findings of the analysis.

4.1 DESIGN CRITERIA

The design criteria used to develop typical sections and alternative alignments are shown in Table 4-1 and Table 4-2, respectively. The tables depict minimum design criteria based on the following design guidelines:

- The Lee Plan 2003 Codification¹
- Charlotte County Comprehensive Plans²
- Florida Department of Transportation (FDOT) Plans Preparation Manual, 2003³ (PPM) and latest updates
- Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways⁴, 2002 (also known as "Florida Green Book")
- American Association of State Highway and Transportation Officials⁵, 2004 (AASHTO)

4.2 ACCESS MANAGEMENT

This section addresses the issues concerning proposed access management standards along Jones Loop Road, Tuckers Grade/Notre Dame Boulevard, Burnt Store Road, Veterans Parkway, and Colonial Boulevard in Charlotte and Lee Counties. Access management standards were developed by the FDOT to help achieve safer and more efficient traffic flow on the SHS. Even though the majority of the roadways within the project limits are not a component of the SHS, minimum standards were applied to the corridor as a whole to ensure that functional integrity is preserved.

The proposed roadway concepts along Jones Loop Road, Tuckers Grade, and Burnt Store Road were developed based on Access Class 3 standards. This classification is distinguished by existing or planned restrictive medians and maximum distance between signals and driveway connections. Access Class 3 is used in areas where existing land use and roadway sections have not been built out to the maximum land use or roadway capacity or where the probability of significant land use change in the near future is high. The minimum standards for Access Class 3 are shown in Table 4-3.

The portion of the Burnt Store Road corridor in Lee County was developed considering Access Class 2 standards. Veterans Parkway from Pine Island Road to Del Prado Boulevard and the portion of the Midpoint Memorial Bridge from Del Prado Boulevard to the Caloosahatchee River was developed based on the Lee County's existing limited access resolution.

Colonial Boulevard from McGregor Boulevard to east of I-75 was developed based on Access Class 2 standards. This classification is distinguished by a system of frontage roads, a highly controlled limited number of connections, median openings, and infrequent traffic signals. Access Class 2 is used in areas where the facility has the ability to carry high speed, high volume traffic over long distances in a safe and efficient manner. The minimum standards for Access Class 2 are shown in Table 4-3.

Table 4-1
Jones Loop Road/Burnt Store Road/Veterans Parkway
From I-75 (Charlotte County) to Cleveland Avenue (Lee County)
Proposed Design Criteria

Criteria	Value/Designation Mainline Divided Urban	Value/Designation Mainline Divided Suburban ⁽¹⁾	Value/Designation Mainline Divided Rural	Value/Designation Frontage Road Undivided Urban	Documentation
Functional Classification	Minor Urban/Rural Arterial				Lee & Charlotte County Comprehensive Plans
Access Classification	Class 2 and 3				FDOT PPM Access Management Rule 14-97
Design Speed ⁽²⁾	35 to 50 mph	55 mph	55 mph	45 mph	Florida Green Book Section 3, Table 3 – 1
Travel Lane Width	11 ft	11 ft	11 ft	11 ft	Florida Green Book Section 3, Table 3 – 7
Median Width	15.5 ft	30 ft	40 ft	N/A	Florida Green Book Section 3, Table 3 – 11
Shoulder Width Roadway	N/A	10 ft Outside	10 ft Outside 6 ft Inside	N/A	Florida Green Book Section 3, Table 3 – 9 (Based on 2 lanes each direction)
Bridge	N/A	10 ft Outside	10 ft Outside 6 ft Inside	N/A	
Border Width	8 ft	15 ft	15 ft	8 ft	AASHTO, Page 467 and 483
Bicycle Lane Width	4 ft	5 ft paved shoulder	5 ft paved shoulder	4 ft	Florida Green Book Section 3C.10.b
Sidewalk Width Standard	5 ft	5 ft	5 ft	5 ft	Florida Green Book Section 3C.7.d
Adjacent to Curb	6 ft	N/A	N/A	6 ft	
Clear Zone Width	4 ft	24 ft	24 ft	4 ft	Florida Green Book Section 3, Table 3 – 12
Horizontal Alignment Maximum Curvature	14° 15' 00"	6° 30' 00"	6° 30' 00"	8° 15' 00"	Florida Green Book Section 3, Table 3 – 3 (Based on minimum design speed)
Max. Rate Superelevation	0.05	0.10	0.10	0.05	

Table 4-1 (Cont.)
Jones Loop Road/Burnt Store Road/Veterans Parkway
From I-75 (Charlotte County) to Cleveland Avenue (Lee County)
Proposed Design Criteria

Criteria	Value/Designation Mainline Divided Urban	Value/Designation Mainline Divided Suburban ⁽¹⁾	Value/Designation Mainline Divided Rural	Value/Designation Frontage Road Undivided Urban	Documentation
Max. Deflection w/o Horizontal Curve	2° 00' 00"	1° 00' 00"	0° 45' 00"	1° 00' 00"	FDOT <u>PPM</u> Table 2.8.1a
Vertical Alignment					
Maximum Grade	5 %	4 %	4 %	6 %	
Max. Grade Algebraic Diff. w/o Vertical Curve	0.9 %	0.5 %	0.5 %	0.7 %	
Crest Vertical Curve "K" Value	40	150	150	80	Florida Green Book Section 3, Tables 3 – 4, 3 – 5, and 3 – 6 (Based on minimum design speed)
Sag Vertical Curve "K" Value	50	100	100	70	
Stopping Sight Distance for grades of 2% or less	225 ft	450 ft	450 ft	325 ft	Florida Green Book Section 3, Table 3 – 6 (Based on minimum design speed)

(1) Green Book does not address Suburban standards. FDOT PPM standards used where appropriate.

(2) Proposed design speed varies from segment to segment. The design speed shown is the minimum design speed proposed within the project limits.

Table 4-2
Colonial Boulevard
From Cleveland Avenue (Lee County) to I-75 (Lee County)
Proposed Design Criteria

Criteria	Value/Designation Mainline Divided Urban	Value/Designation Frontage Road Undivided Urban	Documentation
Functional Classification	Minor Urban/Rural Arterial		FDOT Straight Line Diagram
Access Classification	Class 2 and 3		FDOT PPM Access Management Rule 14-97
Design Speed	60 mph	45 mph	FDOT PPM Section 1.9, Table 1.9.1
Travel Lane Width	12 ft	12 ft	FDOT PPM Section 2.1, Table 2.1.1
Median Width	26 ft ⁽¹⁾	N/A	FDOT PPM Section 2.2, Table 2.2.1
Shoulder Width			
Full Width	8 ft Inside 12 ft Outside	N/A	FDOT PPM Section 2.3, Table 2.3.2 (Based on High Volume, 4-Lane Roadway)
Paved Width ⁽²⁾	8 ft Inside 12 ft Outside	N/A	
Border Width	40 ft	12 ft (Bike or Aux. Lane at Curb)	FDOT PPM Section 2.5, Table 2.5.1 & 2.5.2
Bicycle Lane Width	4 ft	4 ft	FDOT PPM Section 2.1, Table 2.1.2
Sidewalk Width			
Standard	N/A	5 ft	FDOT PPM
Adjacent to Curb/Gutter	N/A	6 ft	Section 8.3.1
Clear Zone Width	36 ft	N/A ⁽³⁾	FDOT PPM Section 2.11, Table 2.11.10
Horizontal Alignment			
Maximum Curvature	5° 15' 00"	8° 15' 00"	FDOT PPM Section 2.8, Table 2.8.3
Max. Rate Superelevation	0.10	0.05	FDOT PPM Section 2.8, 2.8.3
Max. Deflection w/o Horizontal Curve	0° 45' 00"	1° 00' 00"	FDOT PPM Section 2.8, Table 2.8.1a

Table 4-2 (Cont.)
Colonial Boulevard
From Cleveland Avenue (Lee County) to I-75 (Lee County)
Proposed Design Criteria

Criteria	Value/Designation Mainline Divided Urban	Value/Designation Frontage Road Undivided Urban	Documentation
Vertical Alignment			
Maximum Grade	5 %	6 %	FDOT PPM Section 2.6, Table 2.6.1
Maximum Grade Algebraic Difference w/o Vertical Curve	0.4%	0.7%	FDOT PPM Section 2.6, Table 2.6.2
Crest Vertical Curve "K" Value	245	98	FDOT PPM Section 2.8, Table 2.8.5
Sag Vertical Curve "K" Value	136	79	FDOT PPM Section 2.8, Table 2.8.6
Stopping Sight Distance for grades of 2% or less	570 ft	360 ft	FDOT PPM Section 2.7, Table 2.7.1

(1) Based on 2 ft median barrier and 12 ft shoulder.

(2) Shoulders are paved full width since barrier wall is located adjacent to shoulders

(3) Clear Zone width does not apply when curb and gutter is adjacent to the traveled way (Page 2-15, FDOT PPM). See Tables 2.11.1 through 2.11.8 for horizontal clearance criteria.

Table 4-3
Proposed Access Classification Criteria

Access Classification	Facility Design Features	Connection Spacing (Ft) ⁽¹⁾	Median Opening Spacing Directional (Ft)	Median Opening Spacing Full (Ft)	Signal Spacing (Ft)
Class 2	Restrictive w/ Service Roads	1320/660	1320	2640	2640
Class 3	Restrictive	660/440	1320	2640	2640

(1) Greater than 45 mph posted speed/less than or equal to 45 mph posted speed

Since some of the proposed access classifications utilized for the project corridor are the most restrictive, several access points along Jones Loop Road, Tuckers Grade, Burnt Store Road, Veterans Parkway, and Colonial Boulevard were modified or eliminated. Refer to the concept plans (on CD) and schematics in the Appendix section of this report for the location of proposed side street connections, median openings, overpasses, and slip ramps for each alternative.

4.3 TYPICAL SECTIONS

The typical sections were developed based on the future travel demand and number of lanes needed. As described previously in Section 3.0, the travel demand forecasts consider adopted land uses in the comprehensive plan. However, further land use changes and new developments in this vicinity will increase traffic on Burnt Store Road.

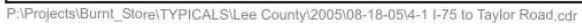
4.3.1 Jones Loop Road: I-75 to Taylor Road

The proposed typical section for Jones Loop Road from I-75 to Taylor Road consists of widening the existing roadway 12 ft on the outside in both directions, resulting in a six-lane suburban roadway. The proposed typical section is illustrated in Figure 4-1 and described as follows:

- Three 12-foot (ft) travel lanes in each direction
- 10-ft shoulders, of which 5 ft is paved, on the outside to accommodate bicyclists
- 22-ft raised median with curb and gutter
- Open roadside ditches on the outside for conveyance of storm water runoff
- Sidewalks, 6 ft in width, along both sides of the roadway, adjacent to the ROW lines
- Accommodated within existing ROW width of 200 ft
- Proposed design speed of 50 mph

4.3.2 Jones Loop Road: Taylor Road to Tamiami Trail

The existing four-lane roadway along Jones Loop Road from Taylor Road to Tamiami Trail will accommodate the projected 2030 traffic volumes, therefore, no improvements to the existing typical section are proposed. The existing typical section is illustrated in Figure 4-2 and described in Section 2.1.4.





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4.3.3 Burnt Store Road: Tamiami Trail to Notre Dame Boulevard

Two typical sections were evaluated for Burnt Store Road from Tamiami Trail to Notre Dame Boulevard and subsequently labeled Option A and Option B. The proposed typical section for Option A consists of new construction of a four-lane divided urban roadway. The proposed typical section is illustrated in Figure 4-3 and described as follows:

Option A

- Two travel lanes with a minimum width of 11 ft in each direction
- Raised median (16 ft to 20 ft)
- 4-ft bike lane in each direction
- Curb and gutter with a closed drainage system
- Sidewalks, 5 ft in width, along both sides of the roadway, separated from the curb by a grass buffer strip
- Proposed minimum ROW width of 90 ft
- Proposed design speed varies from 35 mph to 50 mph

The proposed typical section for Option B consists of new construction of a four-lane divided urban roadway. The proposed typical section is illustrated in Figure 4-4a and described as follows:

Option B

- Two 12-ft travel lanes in each direction
- 44-ft raised median (accommodates **optional** widening to a six-lane facility with the addition of one 12-ft travel lane in each direction, see Figure 4-4b)
- 4-ft bike lane in each direction
- Curb and gutter with a closed drainage system
- Sidewalks, 5 ft in width, along both sides of the roadway, separated from the curb by a grass buffer strip
- Proposed minimum ROW width of 124 ft
- Proposed design speed of 50 mph

The four-lane divided urban typical section (Option A), without expansion to six-lanes, is recommended to provide low design speed and to minimize impacts to the residential parcels in this area. This four-lane option is consistent with the Charlotte MPO LRTP. Public comments from the public information workshop also supported Option A.



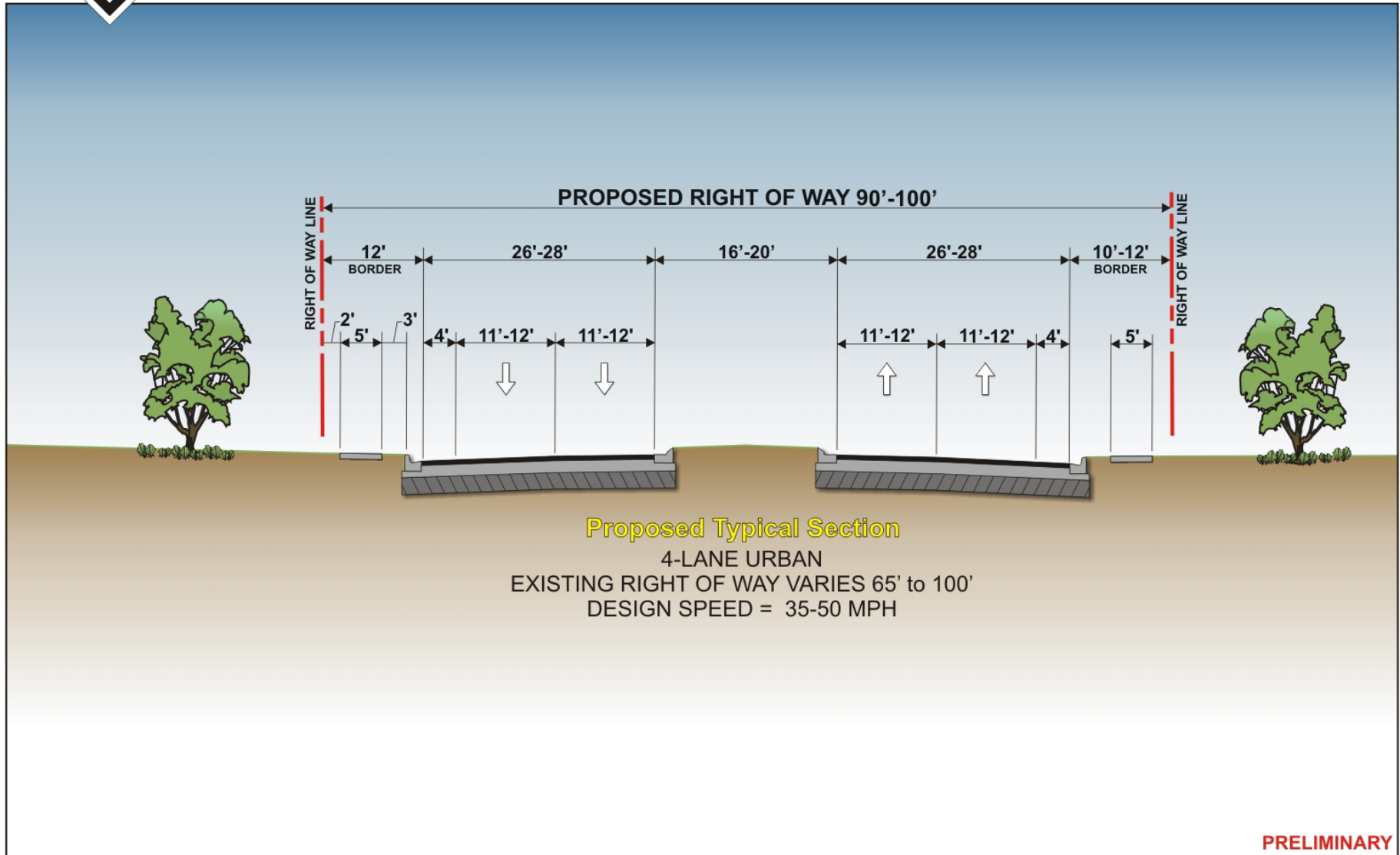
Burnt Store Road

From Tamiami Trail to Notre Dame Boulevard

Option A

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05

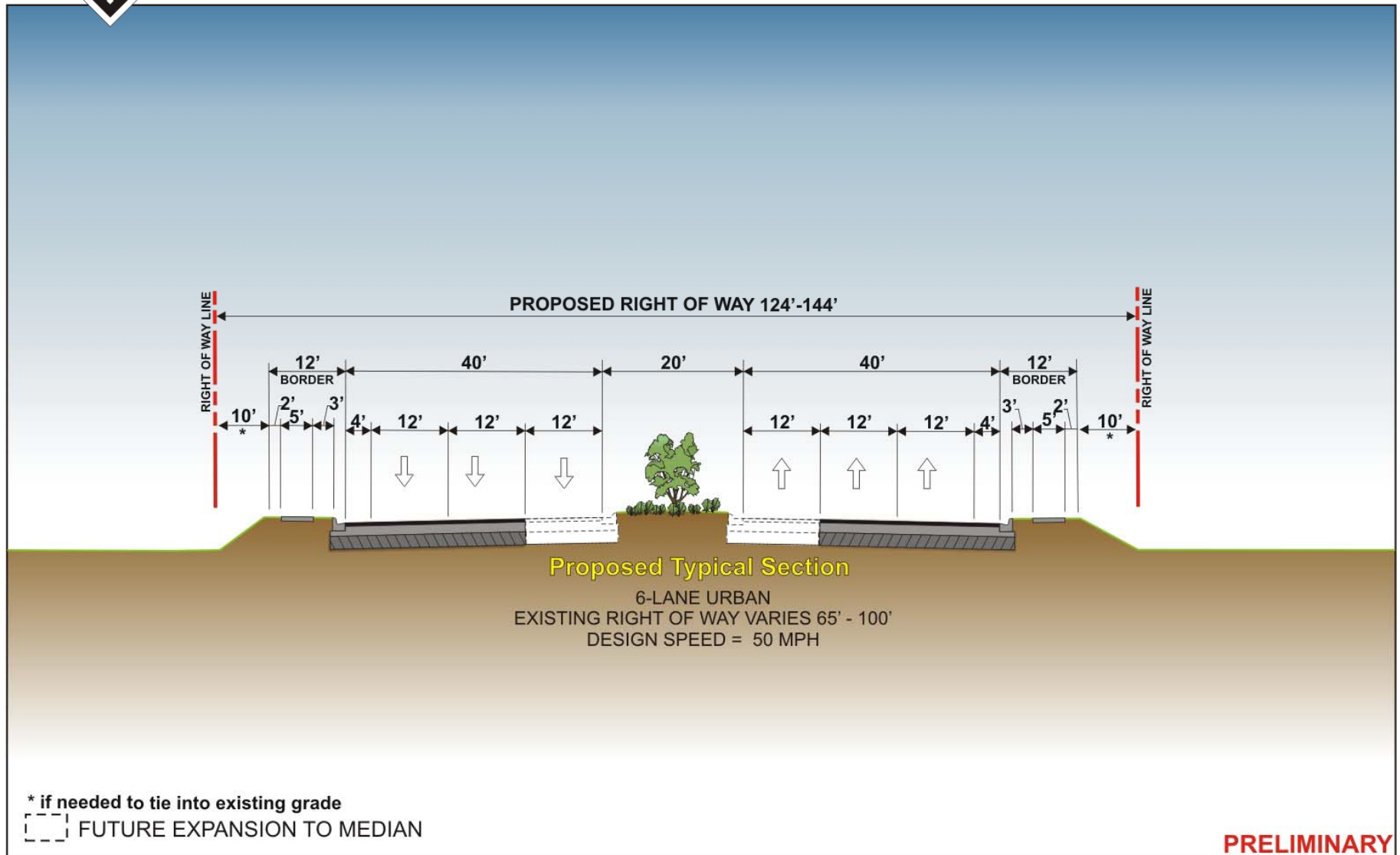




Burnt Store Road From Tamiami Trail to Notre Dame Boulevard Option B - With Six-Lane Expansion

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05



PRELIMINARY

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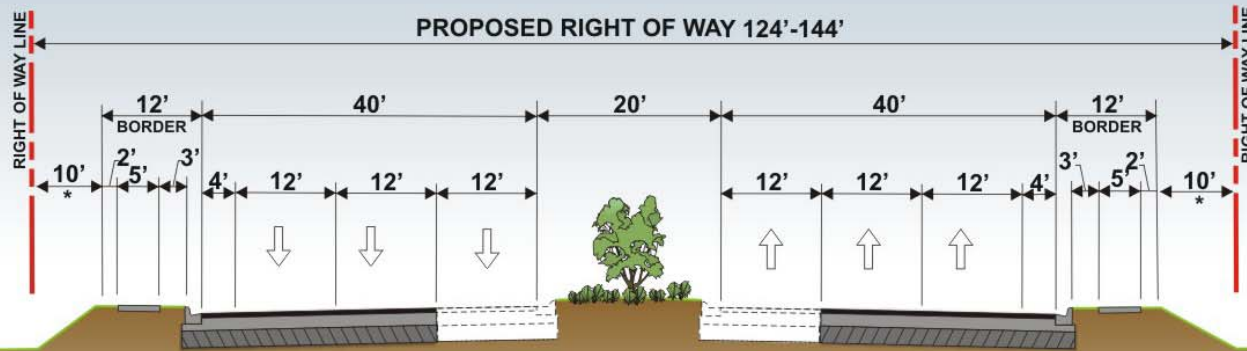
Burnt Store Road

From Tamiami Trail to Notre Dame Boulevard

Option B - With Six-Lane Expansion

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05



Proposed Typical Section

6-LANE URBAN
EXISTING RIGHT OF WAY VARIES 65' - 100'
DESIGN SPEED = 50 MPH

* if needed to tie into existing grade

[] FUTURE EXPANSION TO MEDIAN

PRELIMINARY

P:\Projects\Burnt_Store\TYPICALS\Charlotte County\2005\08-18-05\4-4 US 41 to Notre Dame Blvd C.cdr

4.3.4 Tuckers Grade Extension: Burnt Store Road to Tamiami Trail

The proposed typical section for the Tuckers Grade extension from Burnt Store Road to Tamiami Trail consists of new construction of a four-lane divided rural roadway. The proposed typical section is illustrated in Figure 4-5 and described as follows:

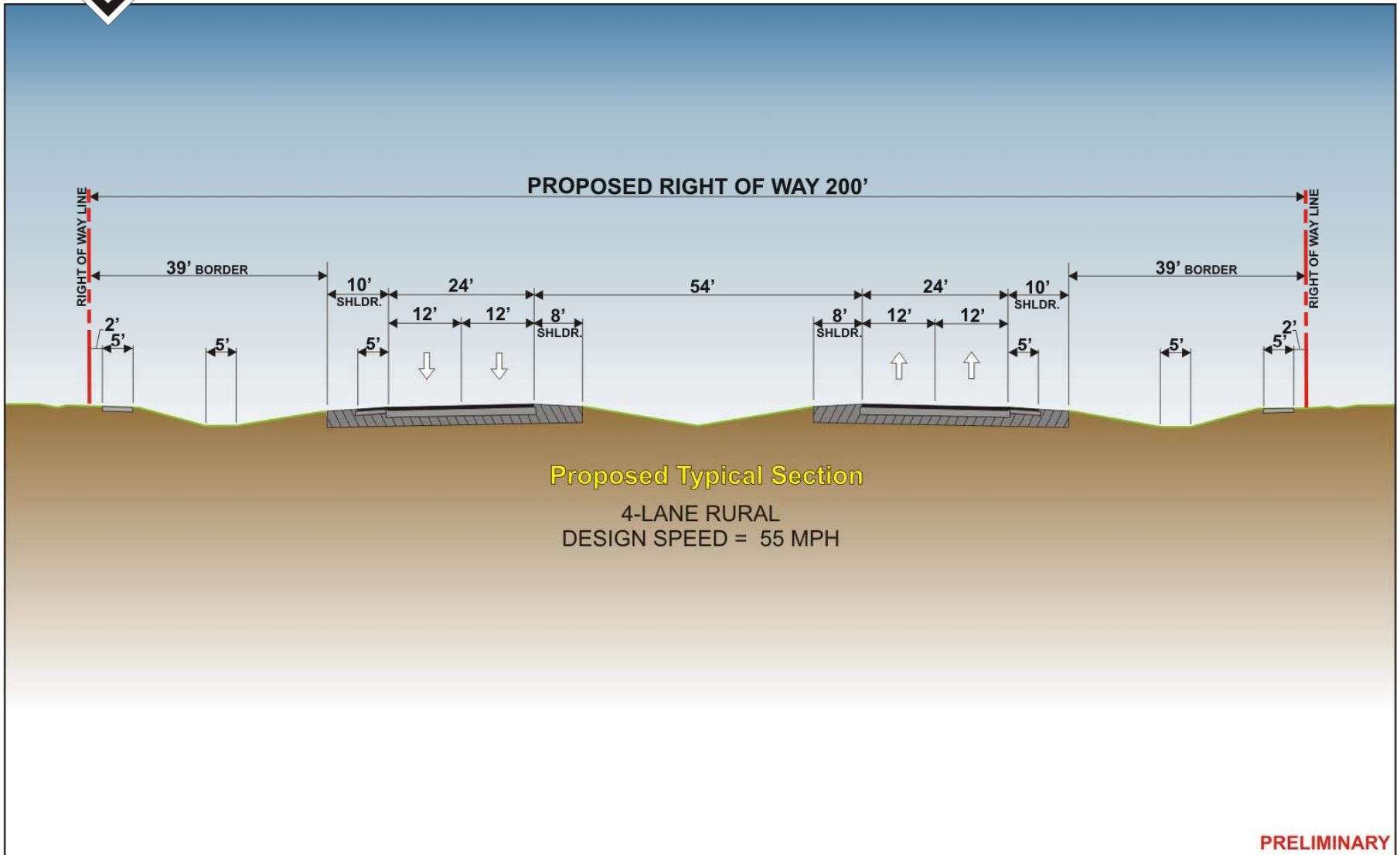
- Two 12-ft travel lanes in each direction
- 54-ft depressed median (accommodates future widening to a six-lane facility with the addition of one 12-ft travel lane, a 4-ft paved shoulder, and curb and gutter in each direction)
- 8-ft grass shoulders in the median and 10-ft outside shoulders, of which 5 ft are paved, to accommodate bicyclists
- Open roadside ditches on the outside for conveyance of storm water runoff
- Sidewalks, 5 ft in width, along both sides of the roadway, adjacent to the ROW lines
- Proposed ROW width of 200 ft
- Proposed design speed of 55 mph



Tuckers Grade Extension From Tamiami Trail to Burnt Store Road

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05



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4.3.5 Burnt Store Road: Notre Dame Boulevard to Lee County Line

The proposed typical section for Burnt Store Road from Notre Dame Boulevard to the Lee County Line consists of new construction of a four-lane divided rural roadway. The proposed typical section is illustrated in Figure 4-6a and described as follows:

- Two 12-ft travel lanes in each direction
- 54-ft depressed median (accommodates **optional** widening to a six-lane facility with the addition of one 12-ft travel lane, a 4-ft paved shoulder, and curb and gutter in each direction, see Figure 4-6b)
- 8-ft grass shoulders in the median and 10-ft outside shoulders, of which 5 ft are paved, to accommodate bicyclists
- Open roadside ditches on the outside for conveyance of storm water runoff
- Sidewalks, 5 ft in width, along both sides of the roadway, adjacent to the ROW lines
- Proposed ROW width of 200 ft
- Proposed design speed of 55 mph

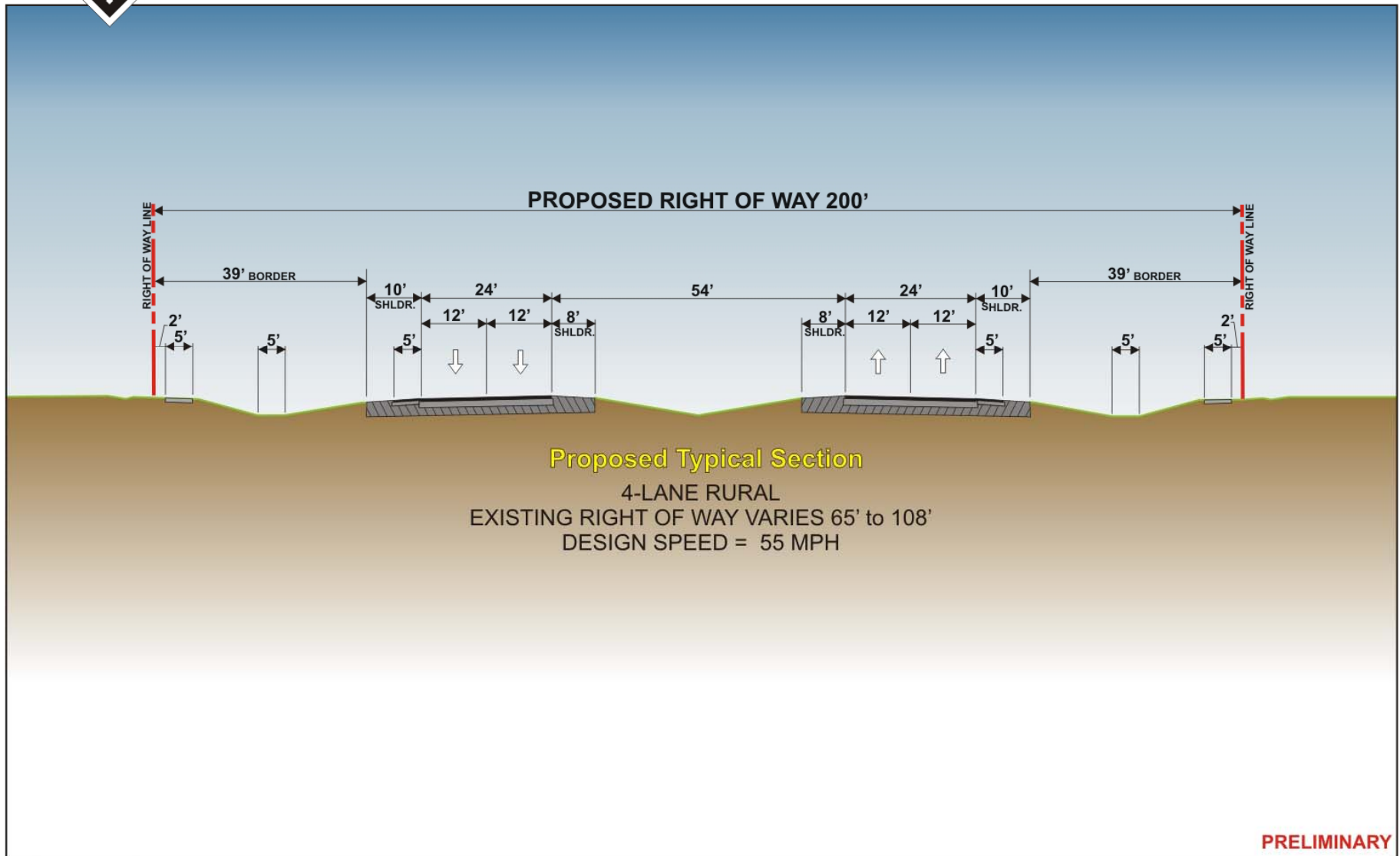


Burnt Store Road

From Notre Dame Boulevard to Lee County Line

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05



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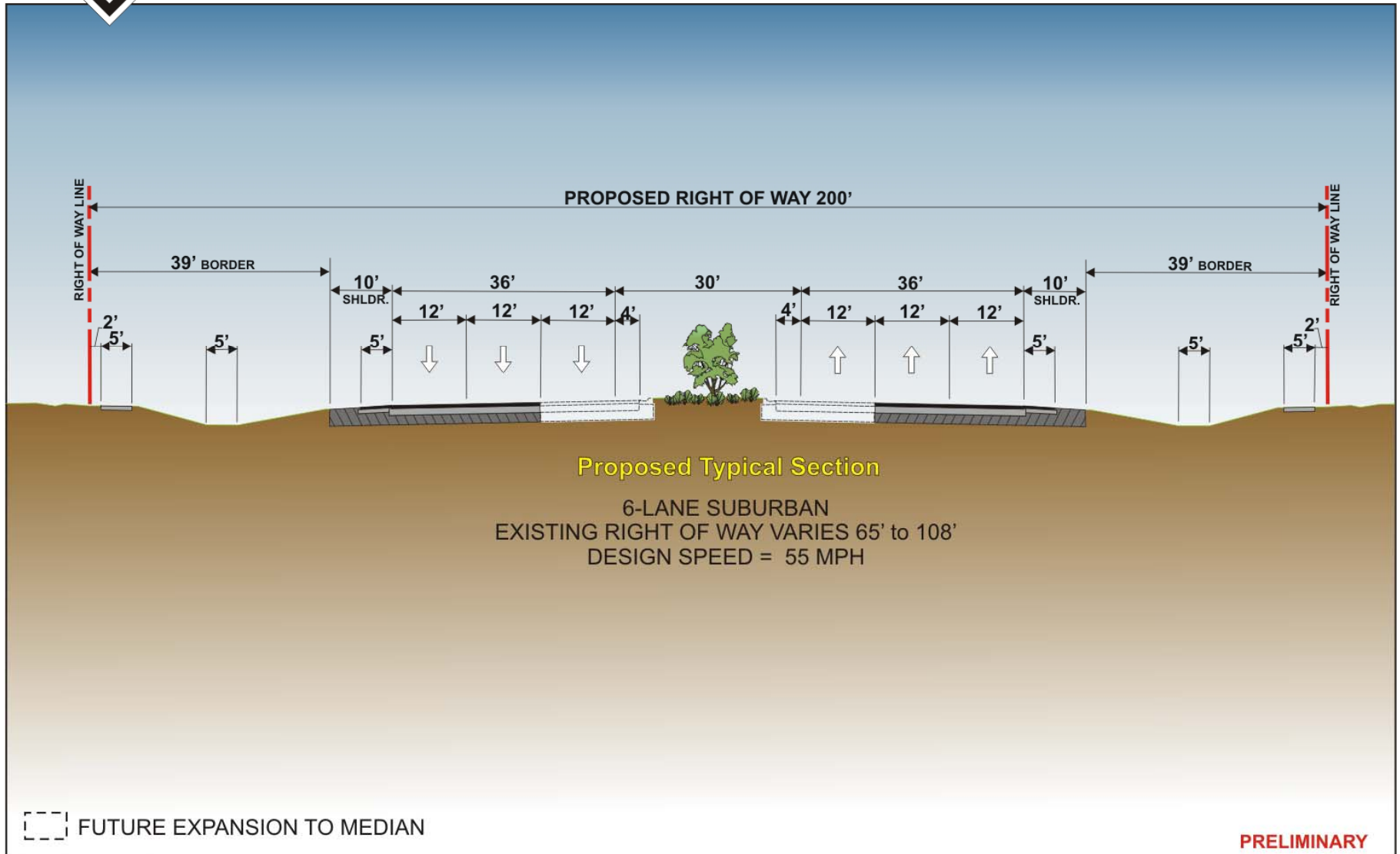


Burnt Store Road

From Notre Dame Boulevard to Lee County Line
With Six-Lane Expansion

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

08-18-05



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4.3.6 Burnt Store Road: Charlotte County Line to Van Buren Parkway

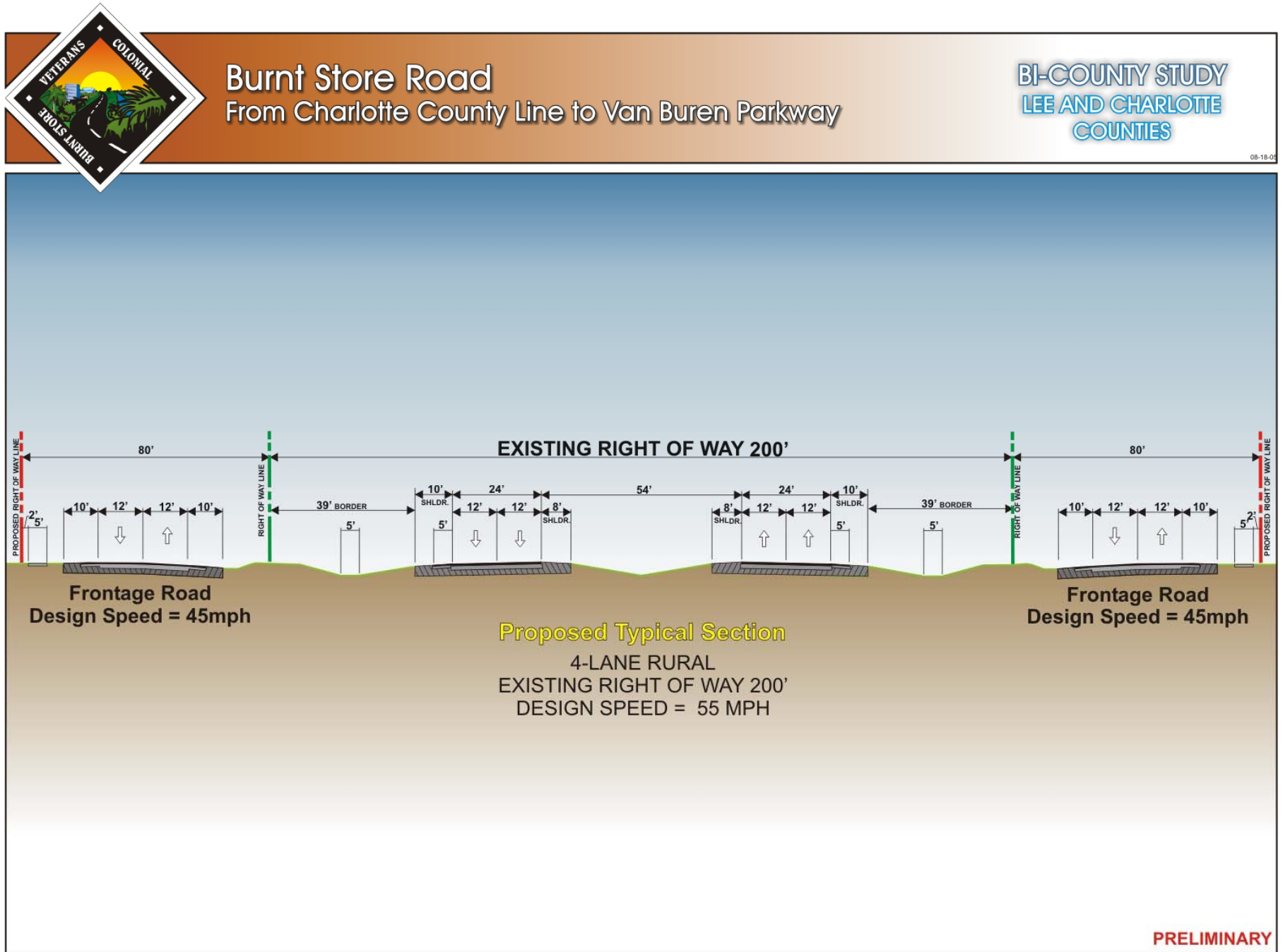
The proposed typical section for Burnt Store Road from Charlotte County Line to Van Buren Parkway consists of new construction of a four-lane divided rural roadway with a two-lane two-way frontage road system on both sides. The proposed typical section is illustrated in Figure 4-7a and described as follows:

Mainline

- Two 12-ft travel lanes in each direction
- 54-ft depressed median (accommodates future widening to a six-lane facility with the addition of one 12-ft travel lane, a 4-ft paved shoulder, and curb and gutter in each direction, see Figure 4-7b)
- 8-ft grass shoulders in the median and 10-ft outside shoulders, of which 5 ft are paved
- Open roadside ditches between mainline and frontage roads for conveyance of storm water runoff
- Accommodated within existing ROW width of 200 ft
- Proposed design speed of 55 mph

Frontage Roads

- One 12-ft travel lane in each direction
- 10-ft shoulders, of which 5 ft are paved, on both sides to accommodate bicyclists
- Sidewalks, 5 ft in width, adjacent to the proposed ROW lines
- Additional ROW width of 80 ft required on both sides
- Proposed design speed of 45 mph



PRELIMINARY

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4.3.7 Burnt Store Road: Van Buren Parkway to Pine Island Road

Three typical sections were evaluated for Burnt Store Road from Van Buren Parkway to Pine Island Road and subsequently labeled Option A1, Option A2, and Option B. Option A1 and A2 require that the 155 ft deep parcels adjacent to the east ROW line be acquired. Option B would not require acquisition of the full 155 ft parcel; however, the 30-ft roadway and drainage easements on each side of the ROW would be utilized.

The proposed typical section for Option A1 consists of a four-lane divided urban roadway with a two-lane, two-way residential access road on the west side. The proposed typical section is illustrated in Figure 4-8a and described as follows:

Option A1 (Mainline)

- Two 12-ft travel lanes in each direction
- 46-ft depressed median (accommodates future widening to a six-lane facility with the addition of one 12-ft travel lane and curb and gutter in each direction, see Figure 4-8b)
- 8-ft grass shoulders in the median
- Curb and gutter with a closed drainage system on the outside
- Berm, 11 ft in height, on both sides
- Multi-use path, 12 ft in width, on the east side to accommodate bicyclists and pedestrians
- Proposed ROW width of 355 ft (includes residential access road)
- Proposed design speed of 45 mph

Option A1 (Residential Access Road)

- One 12-ft travel lane in each direction
- Curb and gutter with a closed drainage system
- Sidewalk, 5 ft in width, separated from the curb by a grass buffer strip
- Requires full acquisition of the 155 ft deep parcels on the east side
- Proposed design speed of 45 mph



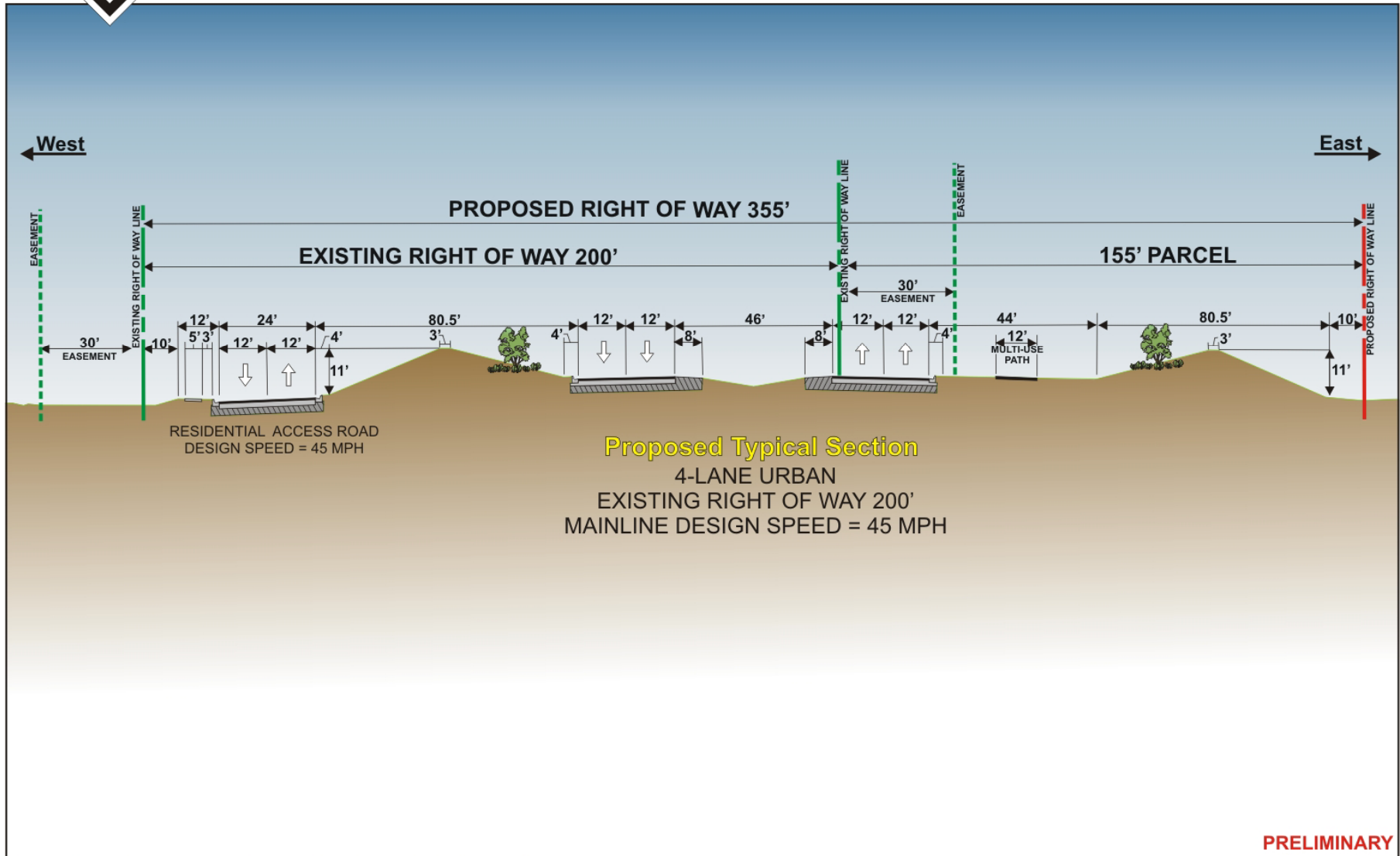
Burnt Store Road

From Van Buren Parkway to Pine Island Road

Option A1

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PRELIMINARY

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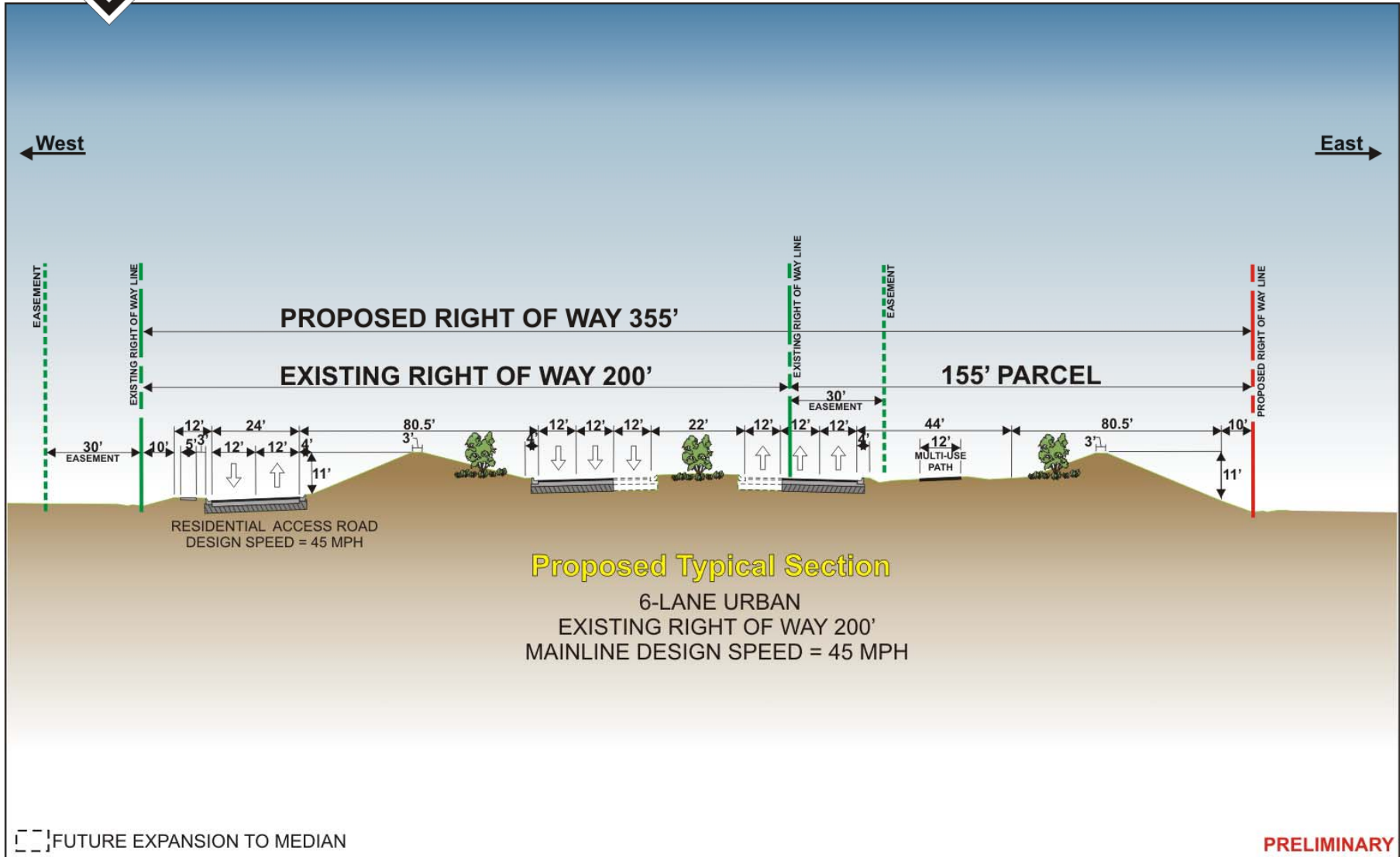


Burnt Store Road

From Van Buren Parkway to Pine Island Road
Option A1 - With Six-Lane Expansion

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The proposed typical section for Option A2 consists of a four-lane divided rural roadway with a two-lane two-way residential access road on the west side. The proposed typical section is illustrated in Figure 4-9a and described as follows:

Option A2 (Mainline)

- Two 12-ft travel lanes in each direction
- 54-ft depressed median (accommodates future widening to a six-lane facility with the addition of one 12-ft travel lane, a 4-ft paved shoulder, and curb and gutter in each direction, see Figure 4-9b)
- 8-ft grass shoulders in the median and 10-ft outside shoulders, of which 5 ft are paved
- Open roadside ditches on the outside for conveyance of storm water runoff
- Berm, 6 ft in height, on both sides
- Multi-use path, 12 ft in width, on the east side to accommodate bicyclists and pedestrians
- Proposed ROW width of 355 ft (includes residential access road)
- Proposed design speed of 55 mph



Typical 6-ft Berm

Option A2 (Residential Access Road)

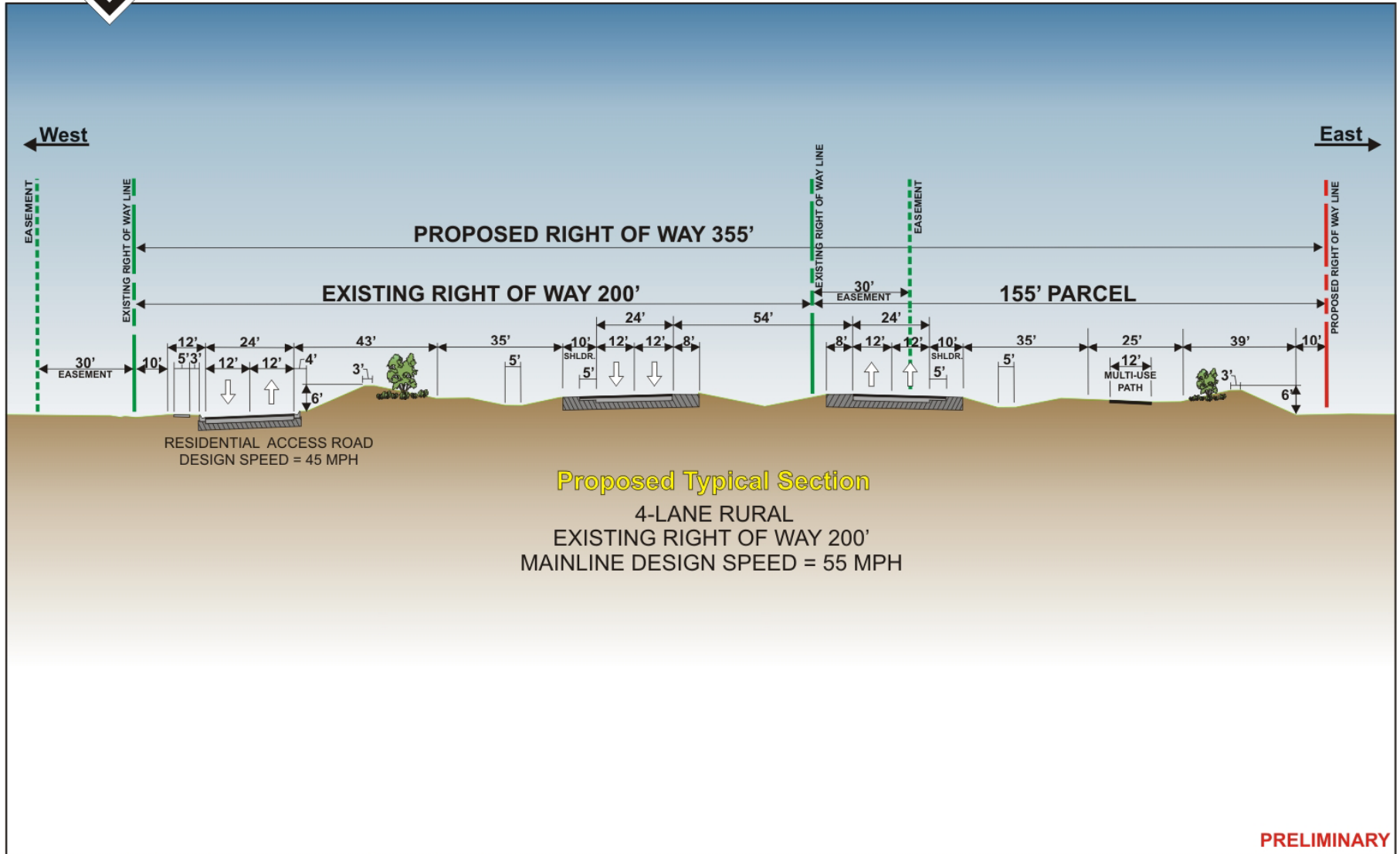
- One 12-ft travel lane in each direction
- Curb and gutter with a closed drainage system
- Sidewalk, 5 ft in width, separated from the curb by a grass buffer strip
- Requires full acquisition of the 155 ft deep parcels on the east side
- Proposed design speed of 45 mph



Burnt Store Road From Van Buren Parkway to Pine Island Road Option A2

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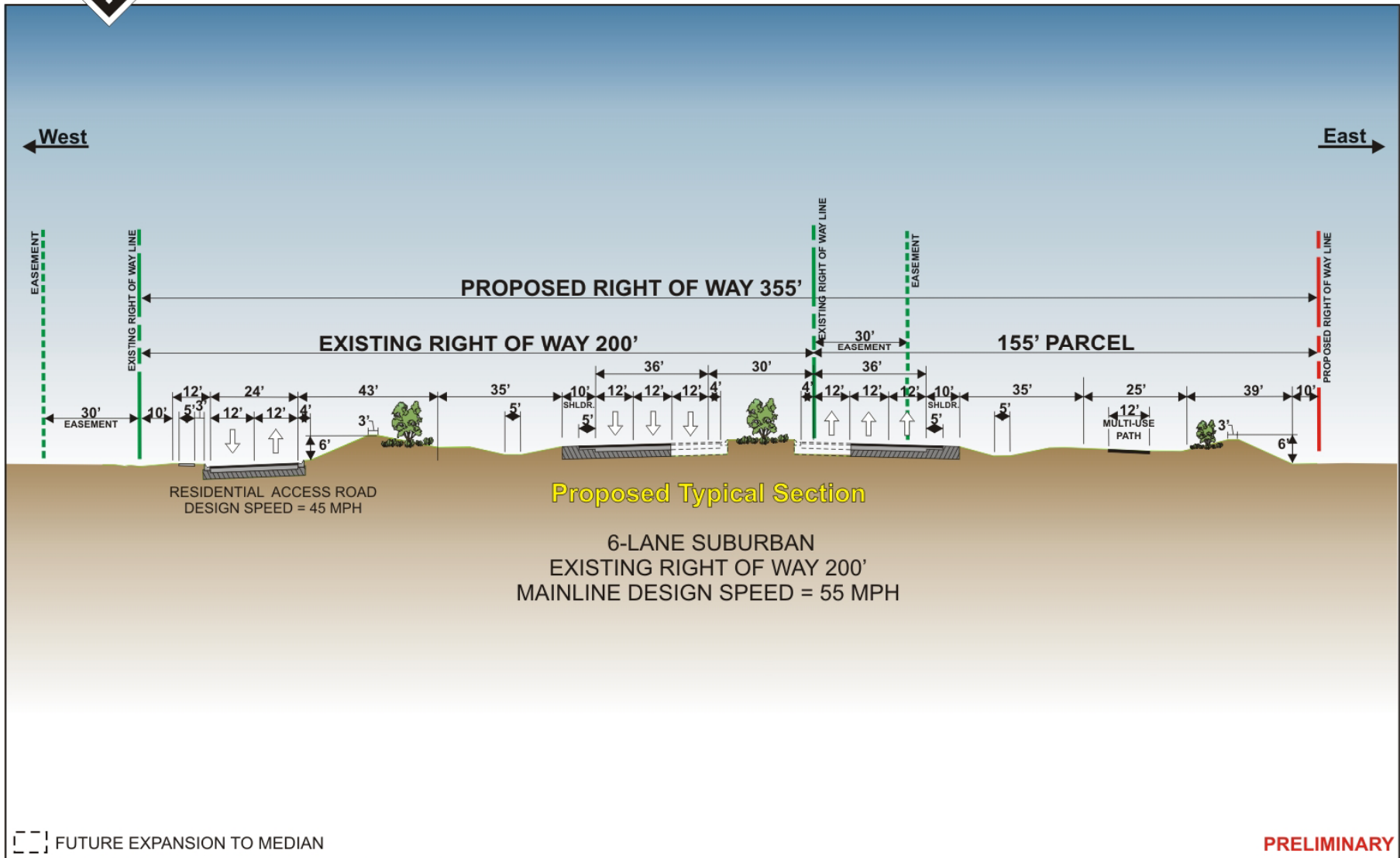
Burnt Store Road

From Van Buren Parkway to Pine Island Road

Option A2 - With Six-Lane Expansion

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The proposed typical section for Option B consists of a four-lane divided urban roadway with a two-lane two-way residential access road on both sides. The proposed typical section is illustrated in Figure 4-10a and described as follows:

Option B (Mainline)

- Two 12-ft travel lanes in each direction
- 46-ft depressed median (accommodates future widening to a six-lane facility with the addition of one 12-ft travel lane and curb and gutter in each direction, see Figure 4-10b)
- 4-ft bicycle lanes in each direction
- 8-ft grass shoulders in the median
- Curb and gutter with a closed drainage system on the outside
- Berm, 5 ft in height, on both sides
- Accommodated within proposed ROW width of 260 ft with utilization of 30-ft roadway and drainage easements on both sides
- Proposed design speed of 45 mph

Option B (Residential Access Road)

- One 12-ft travel lane in each direction
- Curb and gutter with a closed drainage system
- Sidewalk, 5 ft in width, separated from the curb by a grass buffer strip
- 30-ft roadway and drainage easement required on both sides
- Proposed design speed of 45 mph

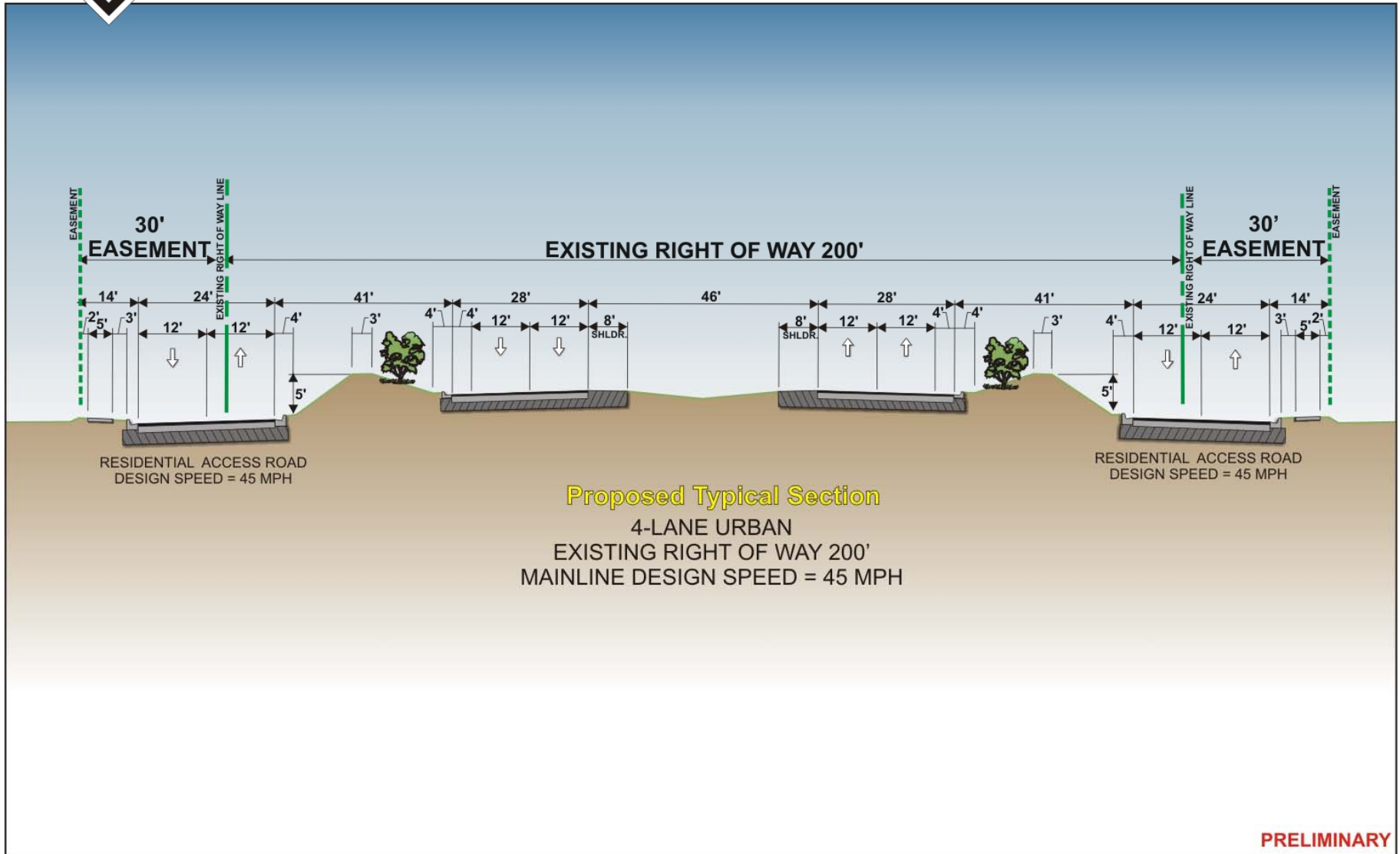
The four-lane divided rural typical section with a residential access road (Option A2) was recommended. This option is recommended to provide a consistent design speed and to minimize ROW acquisition on both sides of the corridor. This option is expandable to six-lanes. Public comments from the Public Information Workshop also supported Option A2.



Burnt Store Road From Van Buren Parkway to Pine Island Road Option B

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PRELIMINARY

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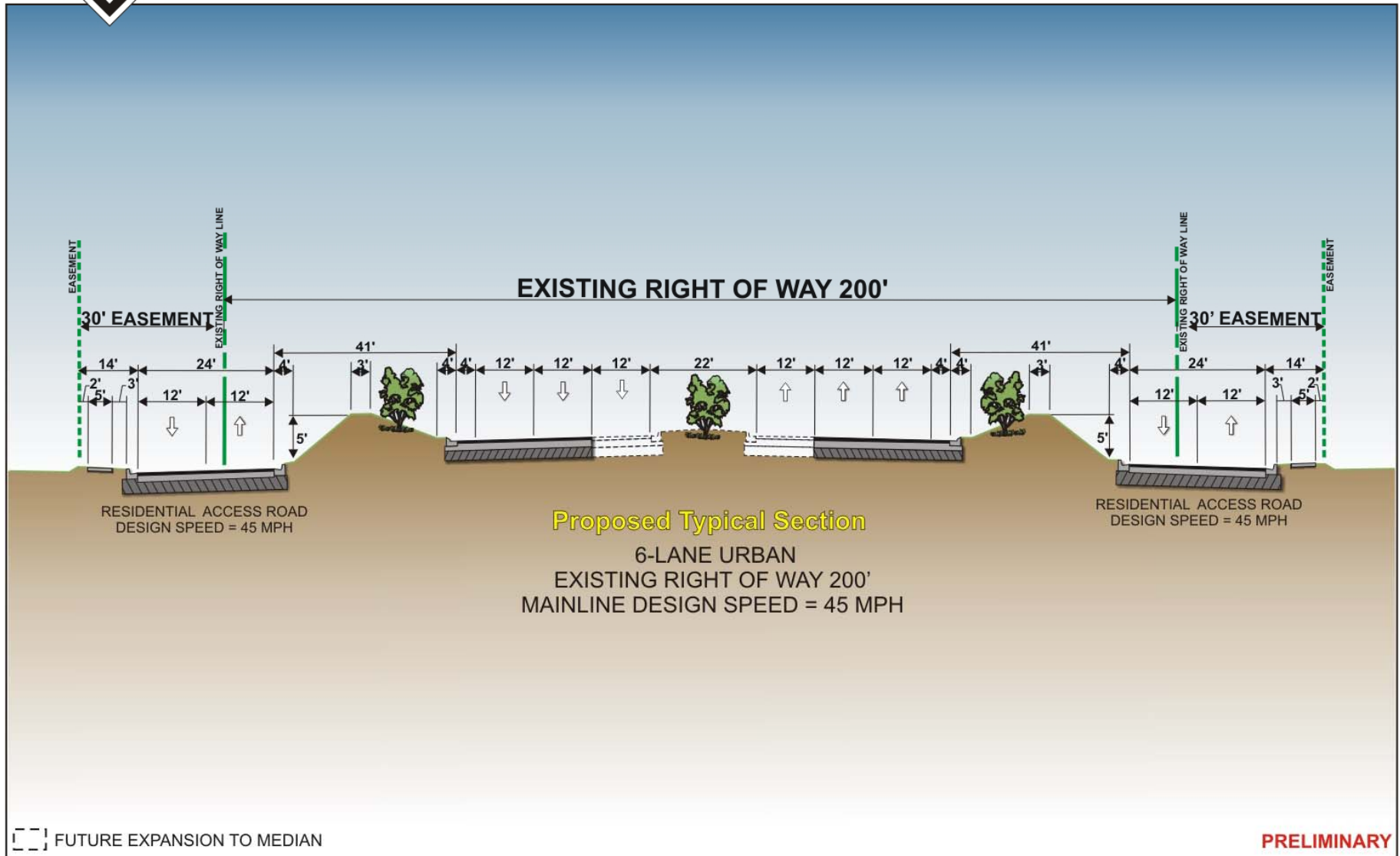


Burnt Store Road

From Van Buren Parkway to Pine Island Road
Option B - With Six-Lane Expansion

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LEE AND CHARLOTTE
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PRELIMINARY

4.3.8 Veterans Parkway: Pine Island Road to Del Prado Boulevard

The existing four-lane roadway along Veterans Parkway from Pine Island Road to Skyline Boulevard, and six-lane roadway from Skyline Boulevard to Del Prado Boulevard will accommodate the projected 2030 traffic volumes. Therefore, no improvements to the existing typical section are proposed. The existing typical sections are illustrated in Figures 4-11 and 4-12; they are described in Section 2.1.4. However, urban interchanges are proposed for Chiquita Boulevard, Skyline Boulevard, Santa Barbara Boulevard, and Country Club Boulevard. The proposed typical section for the interchanges is illustrated in Figure 4-13 and described as follows:

- 14-ft median (6-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- Two 11-ft travel lanes in each direction
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders in areas of high fill
- Multiuse path, 8 ft in width
- Existing minimum ROW width of 250 ft
- Proposed design speed of 55 mph
- Interchanges including ramps with turn lanes in each quadrant

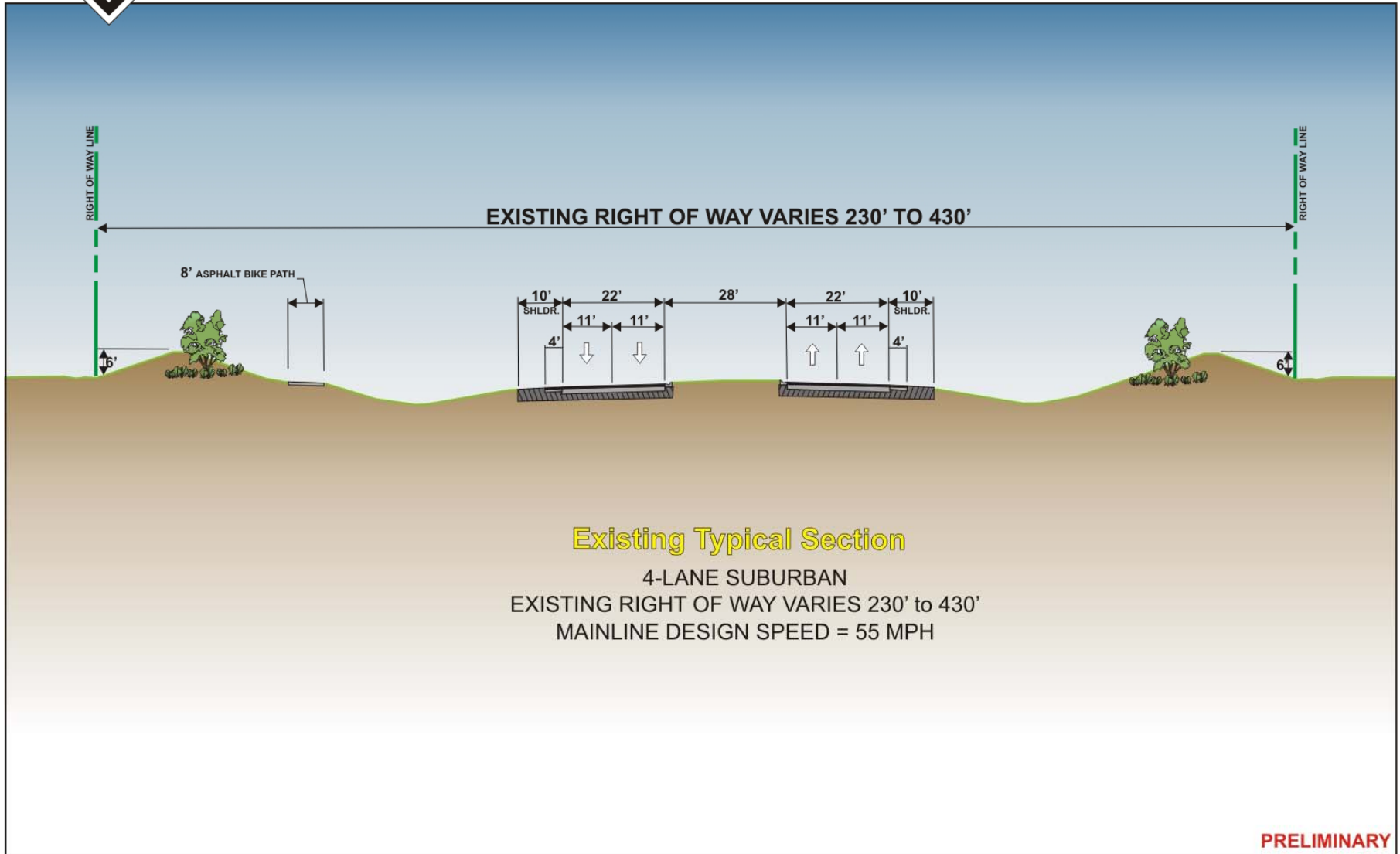


Veterans Parkway

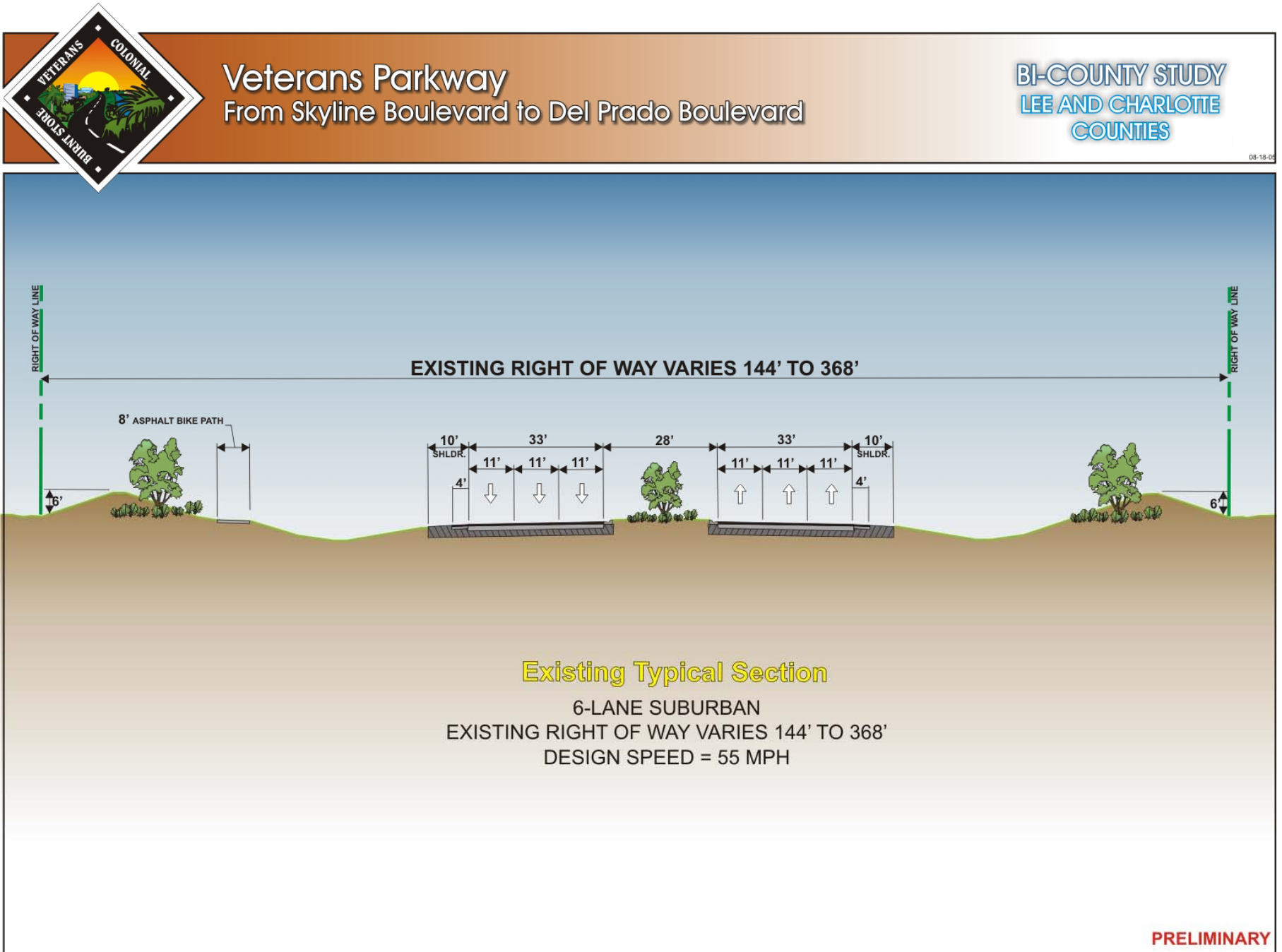
From Pine Island Road to Skyline Boulevard

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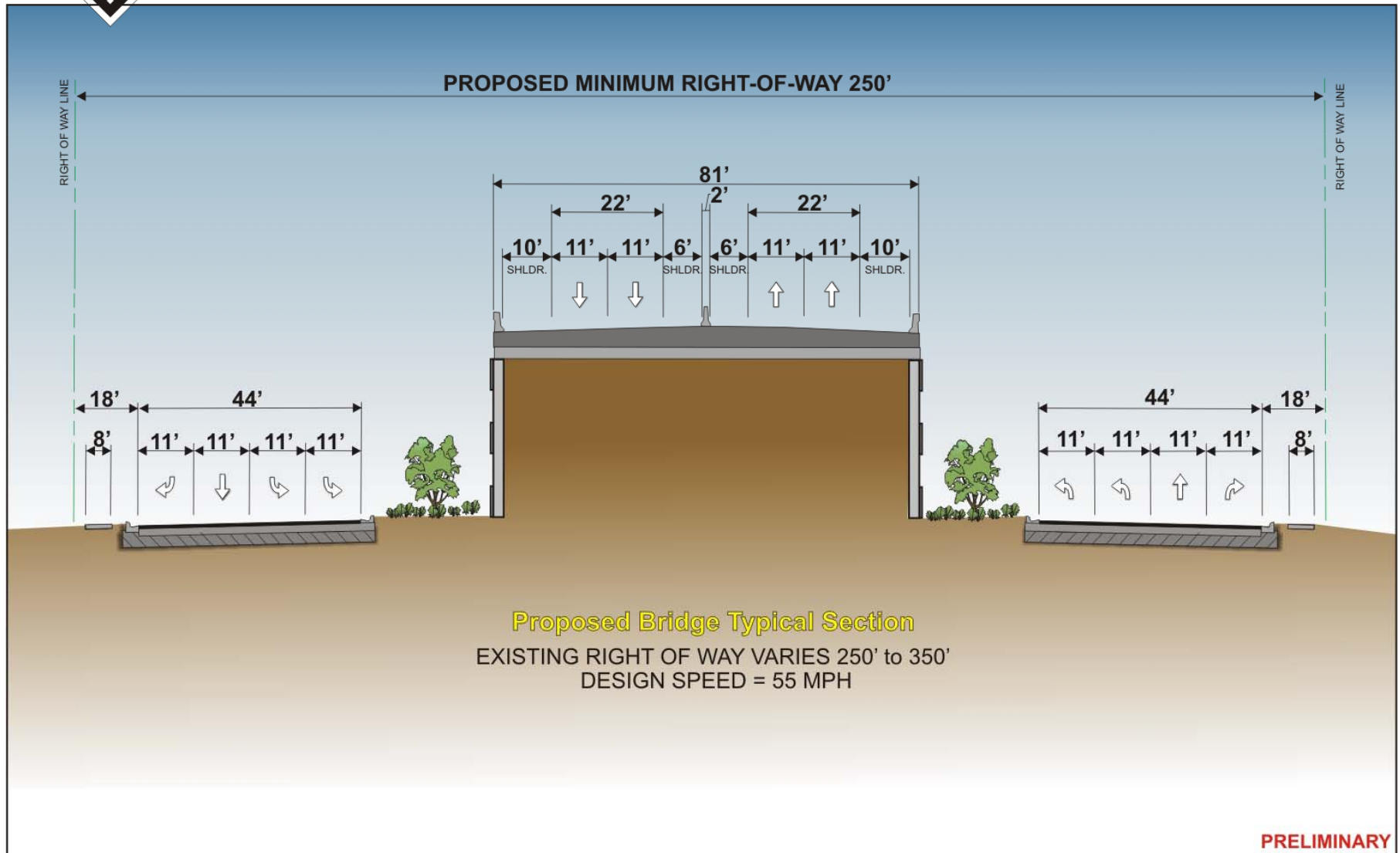


Veterans Parkway

Interchanges at Chiquita Boulevard, Skyline Boulevard,
Santa Barbara Boulevard, and Country Club Boulevard

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PRELIMINARY

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4.3.9 Midpoint Memorial Bridge: Del Prado Boulevard to McGregor Boulevard

The existing four-lane roadway for the Midpoint Memorial Bridge from Del Prado Boulevard to McGregor Boulevard will accommodate the project traffic volumes, until such time express lanes are implemented from McGregor Boulevard to I-75. The implementation of the express lanes is recommended for completion by 2030. However, based on the current deficit of project funding, it is likely that the recommended implementation may be extended beyond 2030. The existing typical section is described in Section 2.1.4.

4.3.10 Colonial Boulevard: McGregor Boulevard to East of Cleveland Avenue

The proposed typical section for Colonial Boulevard from McGregor Boulevard to east of Cleveland Avenue consists of a four-lane divided urban expressway fully elevated on embankment with a three-lane one-way frontage road system on both sides. The proposed typical section is illustrated in Figure 4-14 and described as follows:

Mainline

- Two 11-ft travel lanes in each direction
- 14-ft median (6-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders in areas of high fill
- Proposed ROW width of 225 ft (including frontage roads)
- Proposed design speed of 60 mph

Frontage Roads

- Three 11-ft travel lanes in each direction
- 4-ft bike lanes
- Curb and gutter with a closed drainage system
- Sidewalks, 5 ft in width, separated from the curb by a grass buffer strip
- Proposed design speed of 45 mph

An overpass currently exists at McGregor Boulevard and an urban interchange exists at Cleveland Avenue. Additional overpasses are proposed for Summerlin Road and DeLeon Street. Slip ramps are proposed east and west of Summerlin Road.

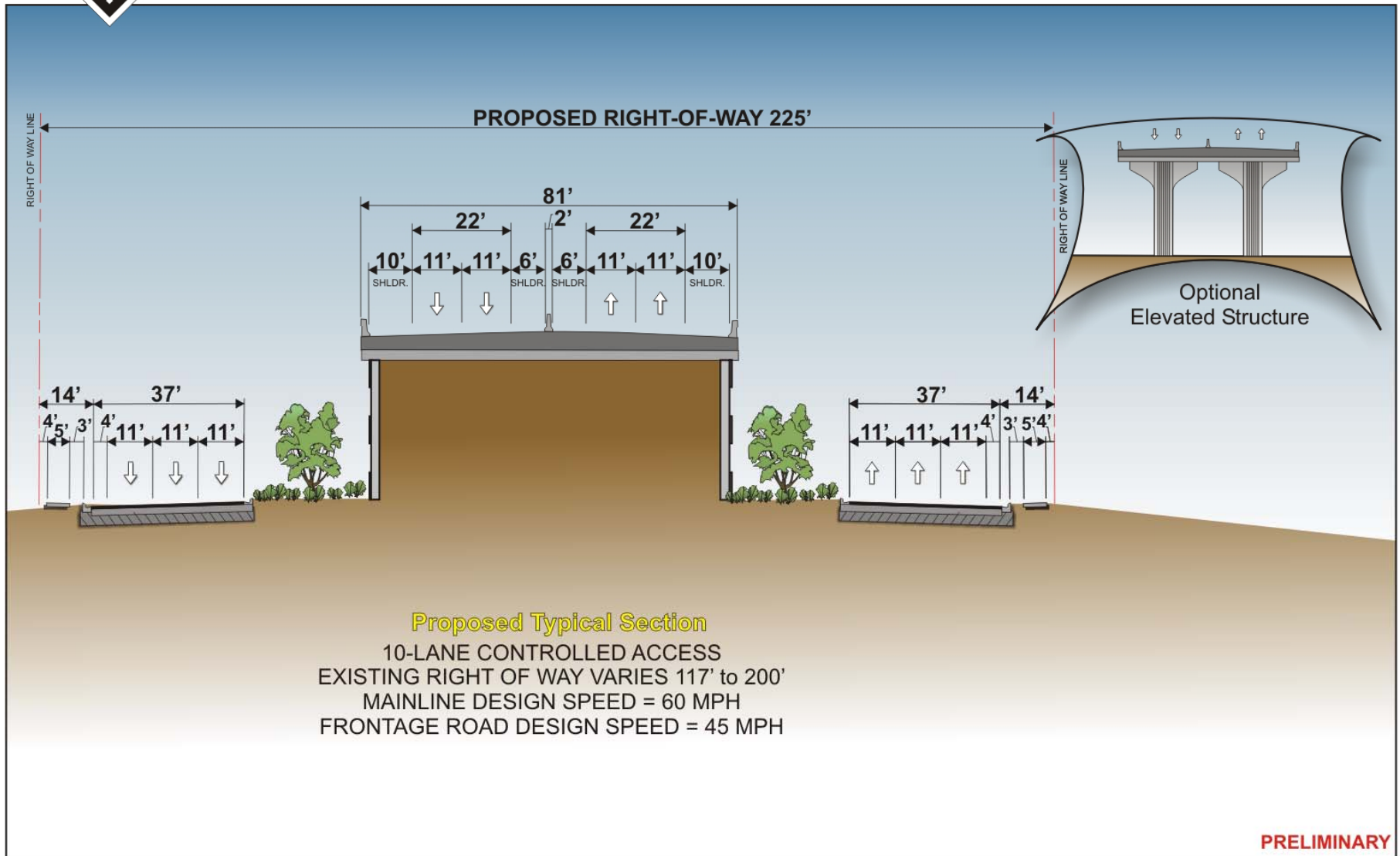


Colonial Boulevard

From East of McGregor Boulevard to East of Cleveland Avenue

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PRELIMINARY

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4.3.11 Colonial Boulevard: East of Cleveland Avenue to East of Metro Parkway

The proposed typical section for Colonial Boulevard from east of Cleveland Avenue to east of Metro Parkway consists of a four-lane divided urban expressway fully elevated on embankment with a three-lane one-way frontage road system on both sides. Since Colonial Boulevard east of Cleveland Avenue is a state road, FDOT PPM design criteria was used. The proposed typical section is illustrated in Figure 4-15 and described as follows:

Mainline

- Two 12-ft travel lanes in each direction
- 14-ft median (6-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders in areas of high fill
- Proposed ROW width of 235 ft (including frontage roads)
- Proposed design speed of 60 mph

Frontage Roads

- Three 12-ft travel lanes in each direction
- 4-ft bike lanes
- Curb and gutter with a closed drainage system
- Sidewalks, 5 ft in width, separated from the curb by a grass buffer strip
- Proposed design speed of 45 mph

Overpasses are proposed at Fowler Street, the railroad crossing/10-mile canal, and Metro Parkway. Slip ramps are proposed east and west of Fowler Street, and east of Metro Parkway.

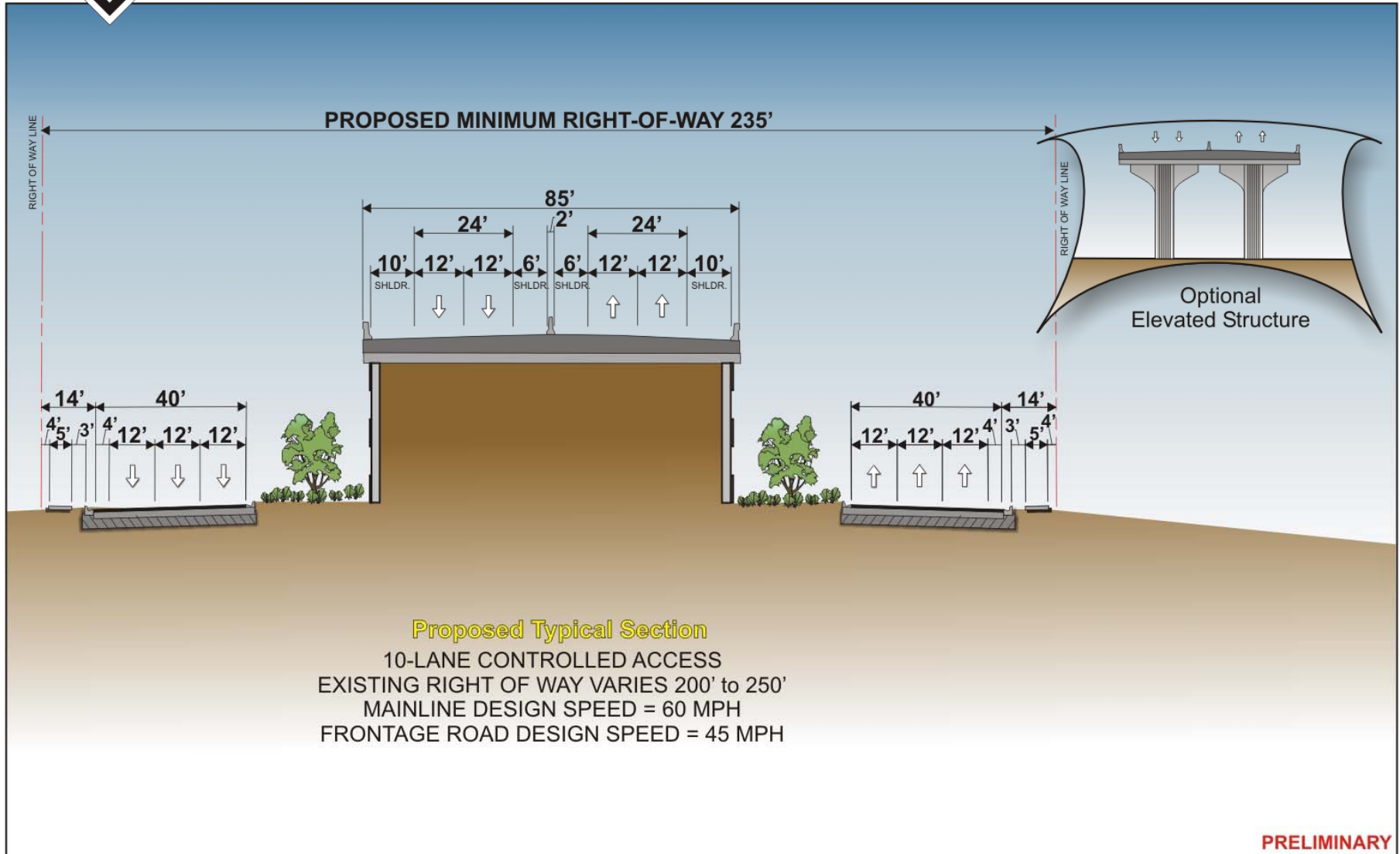


Colonial Boulevard

From East of Cleveland Avenue to East of Metro Parkway

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4.3.12 Colonial Boulevard: East of Metro Parkway to West of Winkler Avenue

The proposed typical section evaluated for Colonial Boulevard from east of Metro Parkway to west of Winkler Avenue consists of a six-lane divided urban expressway with a two-lane one-way frontage road system on both sides. The proposed typical sections are illustrated in Figure 4-16a and 4-16b, which are described as follows:

Mainline

- Three 12-ft travel lanes in each direction
- 22-ft median (10-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders in areas of high fill
- Accommodated within existing ROW width of 250 ft (including frontage roads)
- Proposed design speed of 60 mph

Frontage Roads

- Two 12-ft travel lanes in each direction
- Curb and gutter with a closed drainage system
- Sidewalks, 8 ft in width, separated from the curb by a grass buffer strip to accommodate bicyclists and pedestrians
- Proposed design speed of 45 mph

An overpass is proposed at Veronica Shoemaker Boulevard.

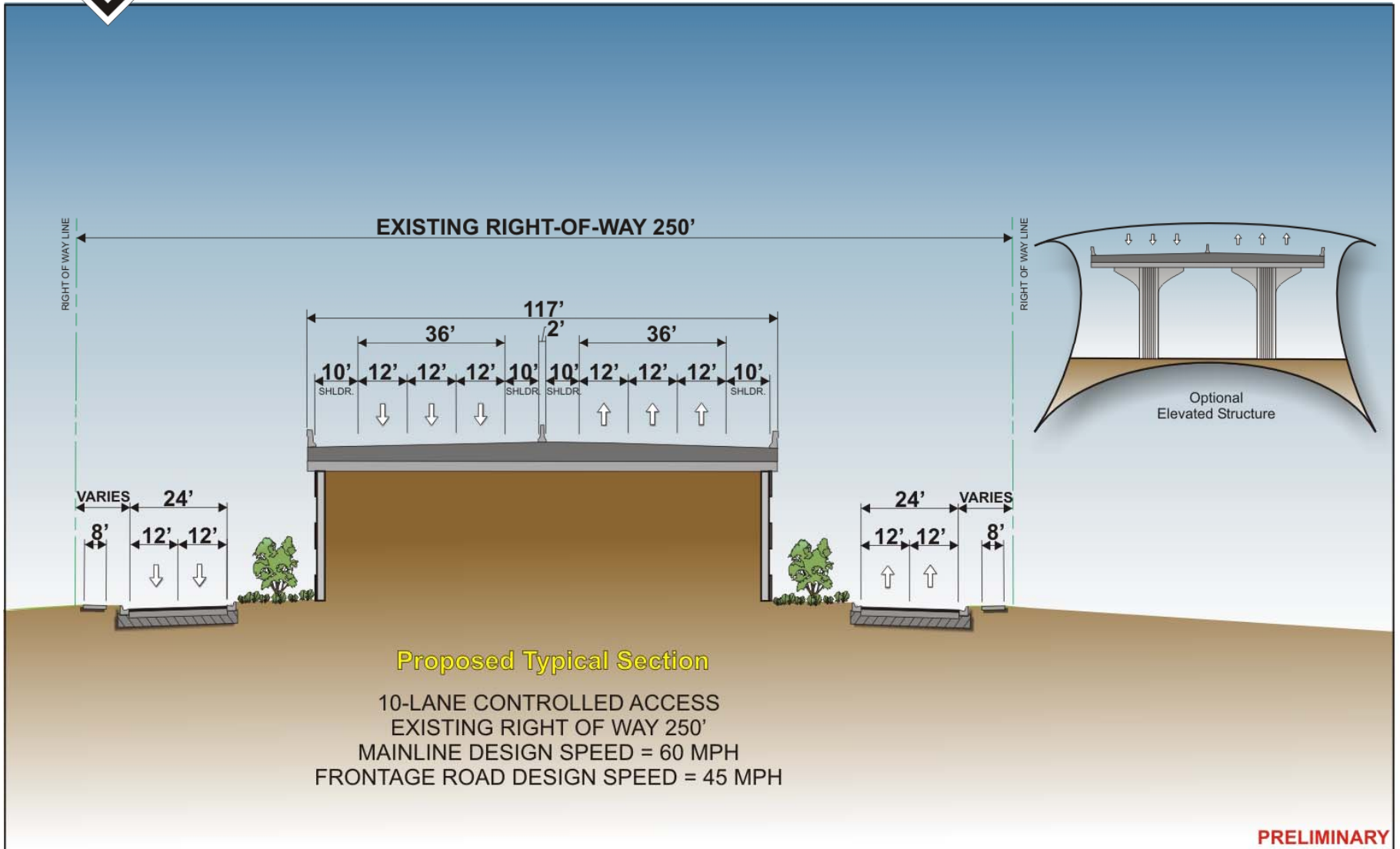


Colonial Boulevard

From East of Metro Parkway to
East of Veronica Shoemaker Boulevard

BI-COUNTY STUDY
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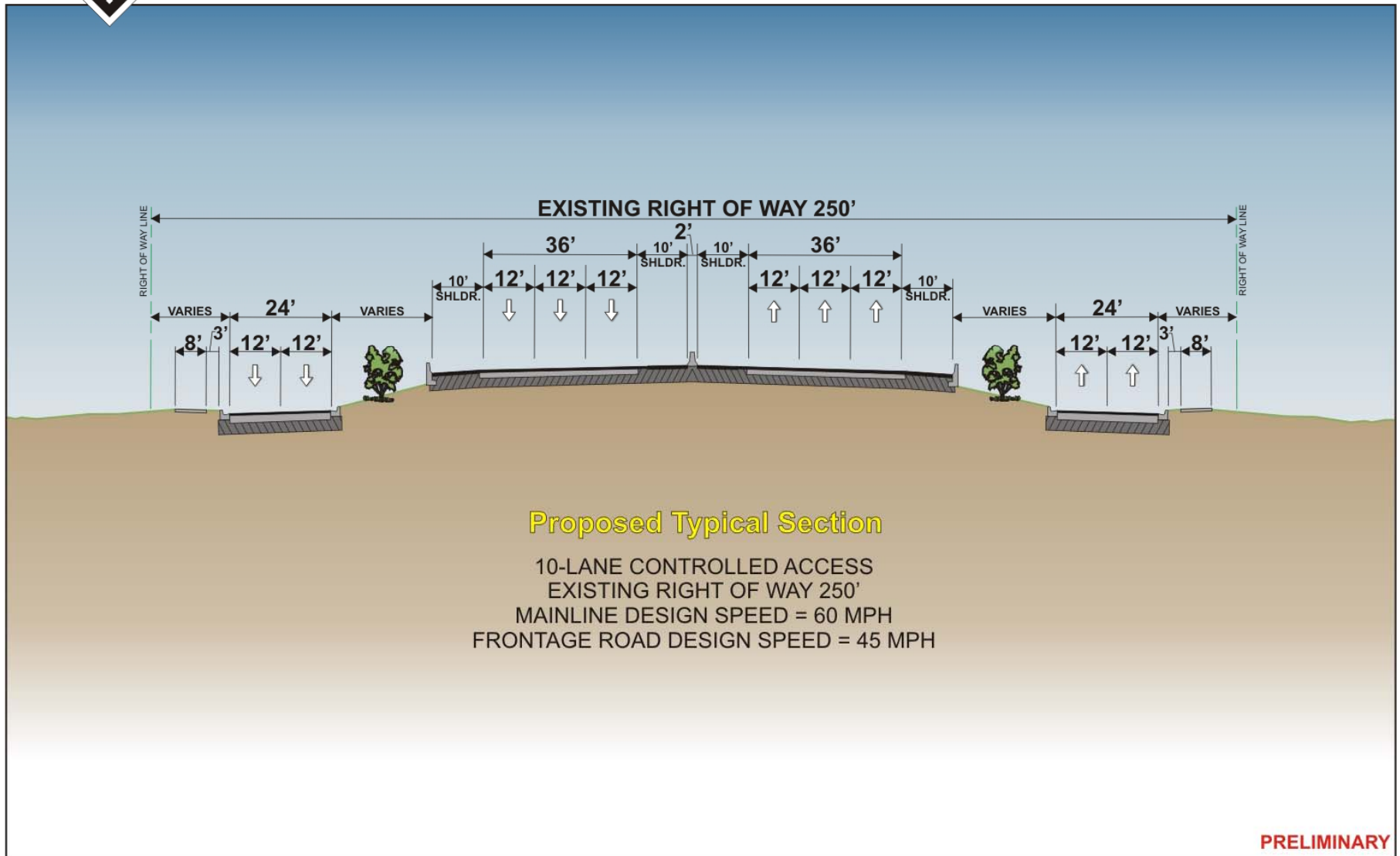


Colonial Boulevard

From East of Veronica Shoemaker Boulevard
to West of Winkler Avenue

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4.3.13 Colonial Boulevard: West of Winkler Avenue to West of Ortiz Avenue

The proposed typical section for Colonial Boulevard from west of Winkler Avenue to west of Ortiz Avenue consists of a four-lane divided urban expressway fully elevated on embankment with a three-lane one-way frontage road system on both sides. The proposed typical section is illustrated in Figure 4-17 and described as follows:

Mainline

- Two 12-ft travel lanes in each direction
- 14-ft median (6-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders in areas of high fill
- Accommodated within existing ROW width of 250 ft (including frontage roads)
- Proposed design speed of 60 mph

Frontage Roads

- Three 12-ft travel lanes in each direction
- Curb and gutter with a closed drainage system
- Sidewalks, 8 ft in width, adjacent to the proposed ROW lines to accommodate bicyclists and pedestrians
- Proposed design speed of 45 mph

An overpass is proposed at Winkler Avenue. Slip ramps are proposed east and west of Winkler Avenue.

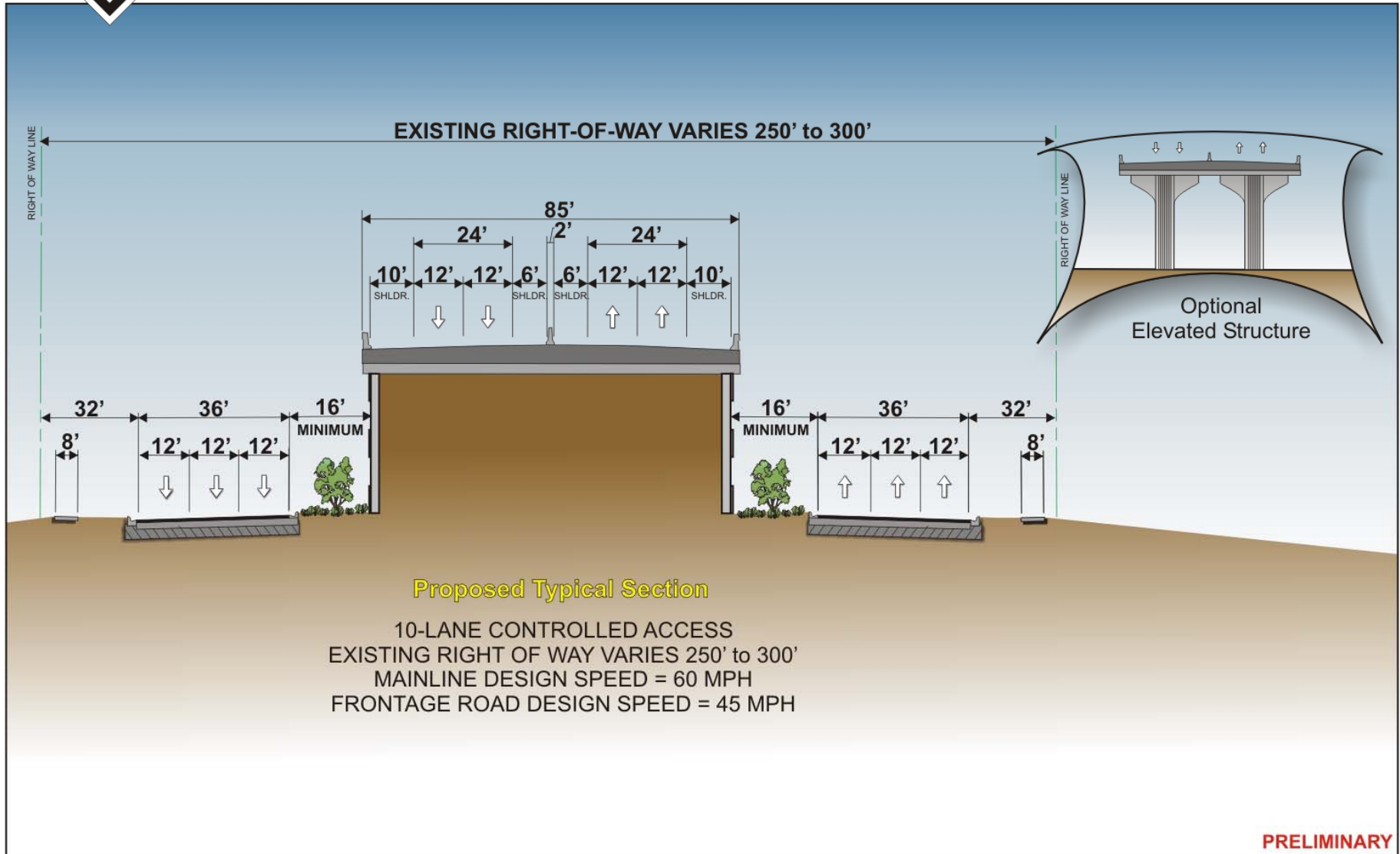


Colonial Boulevard

From West of Winkler Avenue to East of Ortiz Avenue

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PRELIMINARY

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4.3.14 Colonial Boulevard: West of Ortiz Avenue to East of I-75

The proposed typical section for Colonial Boulevard from west of Ortiz Avenue to east of I-75 consists of a four-lane divided urban expressway with a three-lane one-way frontage road system on both sides. The proposed typical section is illustrated in Figure 4-18 and described as follows:

Mainline

- Two 12-ft travel lanes in each direction
- 14-ft median (6-ft paved shoulders in each direction separated by a 2-ft double-faced barrier wall)
- 10-ft paved shoulders on the outside
- Barrier wall adjacent to the outside shoulders
- Accommodated within existing ROW width of 300 ft (including frontage roads)
- Proposed design speed of 60 mph

Frontage Roads

- Three 12-ft travel lanes in each direction
- 12-ft shoulders, of which 10 ft are paved, on both sides
- Open roadside ditches for conveyance of storm water runoff
- Sidewalks, 8 ft in width, adjacent to the proposed ROW lines to accommodate bicyclists and pedestrians
- Proposed design speed of 45 mph

Overpasses are proposed at Ortiz Avenue and Forum Boulevard. A third-level flyover is proposed for the mainline over the future I-75 interchange, touching down west of the existing Six-Mile Cypress Slough bridge. Slip ramps east of Forum Boulevard will require construction of new bridges over the slough.

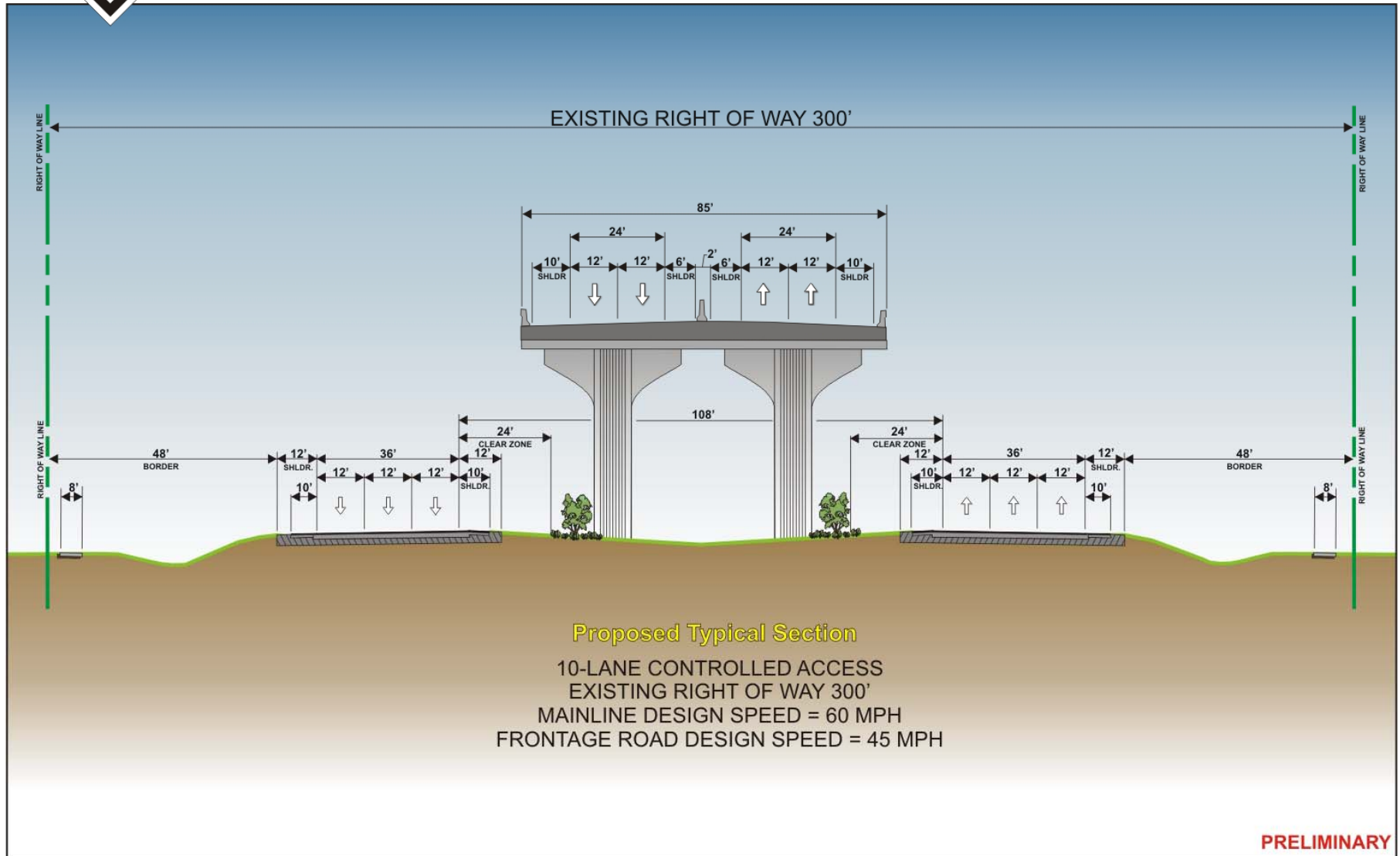


Colonial Boulevard

From East of Ortiz Avenue to East of I-75

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LEE AND CHARLOTTE
COUNTIES

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4.4 CORRIDOR ALIGNMENT ALTERNATIVES

Access plans were developed for the corridor alignment alternatives. The access plans recommended full median openings and directional median openings considering the proposed access classification criteria in Table 4-3. The recommended access plan schematics are provided in the Appendix section of this report.

The corridor alignment alternatives described below will need drainage ponds. This corridor study did not include a pond siting analysis. Additional land needed for drainage ponds will be determined during the design phase.

4.4.1 Jones Loop Road: I-75 to Tamiami Trail

Since Jones Loop Road can be widened within existing ROW from I-75 to Taylor Road, no alternative alignments were evaluated for this segment. However, additional ROW acquisition is required along Taylor Road to accommodate the needed improvements at the intersection (triple left-turn lanes southbound to eastbound and dual right-turn lanes westbound to northbound). Taylor Road is proposed to be widened to a four-lane facility in the future, further impacting the adjacent ROW.

In addition to the impacts along Taylor Road, an access road is proposed on the north side of Jones Loop Road, connecting Springwater Road with Knights Drive. The access road will allow for traffic to turn east along Jones Loop Road via Knights Drive since a directional median opening is proposed for Springwater Road. The proposed access road will require additional ROW acquisition.

The only proposed improvements from Taylor Road to Tamiami Trail pertain to access management since the existing four-lane roadway will accommodate the projected 2030 traffic volumes.

4.4.2 Burnt Store Road: Tamiami Trail to Notre Dame Boulevard

An eastern alignment was evaluated along Burnt Store Road from Tamiami Trail to Notre Dame Boulevard for Option A and Option B1. The eastern alignment avoids impacts to the Charlotte Harbor State Buffer Preserve, currently located along the western ROW line. As a result, the proposed alignment impacts several residential developments and a church. Option A has less of an impact to the adjacent land use due to its narrower typical section.

A western alignment was evaluated along Burnt Store Road for Option B2. The alignment impacts the Charlotte Harbor State Buffer Preserve while avoiding the residential developments located on the east side. The Burnt Store Presbyterian Church will be impacted since the alignment is transitioning to the east at this location.

4.4.3 Tuckers Grade Extension: Burnt Store Road to Tamiami Trail

A Tuckers Grade extension alignment from Burnt Store Road to Tamiami Trail was developed. The alignment was proposed south of Notre Dame Boulevard and north of Green Gulf Boulevard. It was not desirable to recommend the existing Notre Dame Boulevard as the connection to Tuckers Grade, due to platted residential parcels and numerous intersecting streets along Notre Dame Boulevard.

The proposed Tuckers Grade extension begins south of Scham Road with a 0° 30' curve turning the alignment to the left in a northeasterly direction. A 0° 30' curve to the right immediately follows as

the alignment approaches the northern edge of existing residential development on Green Gulf Boulevard. East of the development, the alignment transitions to the south using a pair of reverse 0° 30' curves as it approaches Tamiami Trail. The proposed alignment will partially impact the residential development on the east and west ends. As shown in the concept plans, access to Tamiami Trail from Green Gulf Boulevard is proposed by way of the proposed Tuckers Grade extension.

Between Tamiami Trail and I-75, there are no recommendations to the alignment.

4.4.4 Burnt Store Road: Notre Dame Boulevard to Lee County Line

As a continuation from the previous segment of Burnt Store Road, an eastern alignment was evaluated from Notre Dame Boulevard to south of the Charlotte Harbor State Buffer Preserve. The proposed alignment avoids impacting the Preserve located along the west side, thereby resulting in ROW acquisition along the east. The east side is made up primarily of farmland with few residential lots.

South of the Charlotte Harbor State Buffer Preserve the alignment transitions to the west to avoid impacting the FFWCC state owned land. The western alignment continues south until reaching Cabana Road. At Cabana Road, the alignment transitions to a centered alignment matching the existing ROW in Lee County.

4.4.5 Burnt Store Road: Charlotte County Line to Van Buren Parkway

A centered alignment was utilized for the Burnt Store Road from Charlotte County Line to Van Buren Parkway. The proposed typical section can be constructed within existing ROW. However, in order for the corridor to function as a controlled access facility, access points were minimized. As a result, residential access roads were provided adjacent to Burnt Store Road. The access roads are located outside the existing ROW along both sides of the corridor, impacting primarily vacant lands. Refer to concept plans provided in the Appendix section for the location of the access roads.

4.4.6 Burnt Store Road: Van Buren Parkway to Pine Island Road

From Van Buren Parkway to Pine Island Road, an eastern alignment was utilized along Burnt Store Road for Options A1 and A2. The eastern alignment allows for construction of the western residential access roads within existing ROW, thereby minimizing acquisition along the west side. There are some areas where ROW acquisition is required on the west side for access road connections to side streets. There is a 30 ft roadway and drainage easement on the west side that may be used. The land use in this area consists primarily of residential developments along both sides of the corridor.

A centered alignment was evaluated along Burnt Store Road for Option B. The proposed typical section for Burnt Store Road can be constructed using the roadway and drainage easements on both sides. Some ROW may be needed on both sides for connections to Burnt Store Road. Refer to concept plans provided in the Appendix section for the location of the residential access roads.

4.4.7 Veterans Parkway: Pine Island Road to Del Prado Boulevard

As previously stated, the existing four-lane roadway along Veterans Parkway from Pine Island Road to Del Prado Boulevard will accommodate the projected 2030 traffic volumes, therefore, no modifications to the existing alignment are proposed. However, urban interchanges are proposed for Chiquita Boulevard, Skyline Boulevard, Santa Barbara Boulevard, and Country Club Boulevard. Refer to the concept plans and recommended access plan schematics provided in the Appendix section for the location of the urban interchanges.



Typical Urban Interchange Overpass

4.4.8 Colonial Boulevard: McGregor Boulevard to East of Cleveland Avenue

A southern alignment was evaluated along Colonial Boulevard from McGregor Boulevard to east of Summerlin Road. The southern alignment avoids impacting the Memorial Gardens Funeral Home and Cemetery located on the northeast corner of the Summerlin Road intersection. Directly east of the cemetery the alignment transitions to the north, aligning the mainline with the existing Cleveland Avenue bridge overpass.

An overpass currently exists at McGregor Boulevard and an urban interchange exists at Cleveland Avenue. Additional overpasses are proposed for Summerlin Road and DeLeon Street. Ingress and egress ramps are proposed for Colonial Boulevard east and west of Summerlin Road. The single lane ramps provide access to and from the one-way frontage roads and the mainline. The western most ingress ramp requires widening of the McGregor overpass to accommodate an acceleration lane. Refer to the concept plans and recommended access plan schematics provided in the Appendix section for the location of proposed overpasses and slip ramps.

4.4.9 Colonial Boulevard: East of Cleveland Avenue to East of Metro Parkway

East of Cleveland Avenue, in order to minimize ROW needs, an alignment was evaluated for Colonial Boulevard that transitions from the existing Cleveland Avenue bridge overpass to the north until matching the existing ROW west of Metro Parkway. ROW acquisition is required along both sides of the corridor for the majority of this segment. The two-lane queue jump currently under design by Lee County at Metro Parkway must be expandable in order to accommodate the proposed four-lane overpass.

Overpasses are proposed at Fowler Street, the railroad crossing/10-mile canal, and Metro Parkway. Ingress and egress ramps are proposed for Colonial Boulevard east and west of Fowler Street and east of Metro Parkway. Refer to concept plans and recommended access plan schematics provided in the Appendix section for the location of proposed overpasses and slip ramps.

4.4.10 Colonial Boulevard: East of Metro Parkway to West of Winkler Avenue

East of Metro Parkway, a centered alignment was evaluated for Colonial Boulevard. The proposed improvements can generally be accommodated within existing ROW. However, ROW acquisition is required for storm water retention ponds, corner clips, and exclusive right turn lanes.

An overpass is proposed at Veronica Shoemaker Boulevard. Refer to concept plans and recommended access plan schematics provided in the Appendix section for the location of proposed overpasses.



Typical Overpass with MSE

4.4.11 Colonial Boulevard: West of Winkler Avenue to East of I-75

A centered alignment was evaluated west of Winkler Avenue to east of I-75 since the reconstruction of Colonial Boulevard can generally be accommodated within existing ROW. However, ROW acquisition is required for storm water retention ponds, corner clips, and exclusive right turn lanes.

Separate overpasses are proposed at Winkler Avenue, Ortiz Avenue, and Forum Boulevard. Ingress and egress ramps are proposed for Colonial Boulevard east and west of Winkler Avenue. In addition, the ramps east of Forum Boulevard will require construction of new bridges over the Six-Mile Cypress Slough. As identified in a separate Project Development and Environment (PD&E) Study, the I-75/Colonial Boulevard interchange is proposed to be reconstructed as a single point urban interchange (SPUI). Therefore, a third-level flyover is proposed for Colonial Boulevard express lanes over I-75. Connections to the I-75 ingress and egress ramps will occur at-grade with the one-way frontage roads. Refer to concept plans and recommended access plan schematics provided in the Appendix section for the location of proposed overpasses and slip ramps.

4.5 PROJECT COSTS

In order to evaluate the study alternatives, project costs were estimated for each alternative and summarized by segment in Table 4-4. The ROW costs were generated by Charlotte County Real Property Division and Lee County Division of County Lands. The costs do not include estimates of ROW acquisition for storm water retention ponds.

The construction costs are summarized by segment. The construction costs were estimated using historical unit costs provided by Charlotte County Public Works, Lee DOT, and the FDOT District One Long Range Estimates (LRE) system. The estimates include construction costs for storm water retention ponds that are anticipated for the proposed roadway improvements. The cost for engineering (final design) and construction engineering and inspection (CEI) are estimated at 15% of the total construction costs.

Table 4-4
Project Cost Summary Matrix (in Million \$)

Segments	Limits	Evaluation Factors				Total Project Cost
		Design ⁽¹⁾	ROW Acquisition ⁽²⁾	Construction	CEI ⁽³⁾	
Jones Loop	I-75 to Taylor	\$0.27	\$1.47	\$1.82	\$0.27	\$3.83
	Taylor to Tamiami Trail	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Tuckers Grade	Burnt Store to Tamiami Trail	\$1.19	\$47.88	\$7.95	\$1.19	\$58.21
Burnt Store Road	Tamiami Trail to Notre Dame					
	Option A	\$1.44	\$5.71	\$9.58	\$1.44	\$18.17
	Option B1	\$1.34	\$11.15	\$8.92	\$1.34	\$22.75
	Option B2	\$1.34	\$11.09	\$8.92	\$1.34	\$22.69
	Notre Dame to County Line	\$3.51	\$72.60	\$23.42	\$3.51	\$103.04
	County Line to Van Buren	\$3.69	\$5.5	\$24.60	\$3.69	\$37.48
	Van Buren to Pine Island					
	Option A1	\$4.11	\$17.50	\$34.24	\$5.14	\$60.99
	Option A2	\$3.26	\$17.50	\$27.18	\$4.08	\$52.02
	Option B	\$3.95	\$11.50	\$32.93	\$4.94	\$53.32
Veterans Parkway	Pine Island to Del Prado	\$14.35	\$0.00	\$95.66	\$14.35	\$124.36
Colonial Boulevard	McGregor to Cleveland Avenue	\$6.15	\$50.00	\$41.01	\$6.15	\$103.31
	Cleveland Avenue to Metro	\$9.30	\$50.00	\$62.02	\$9.30	\$130.62
	Metro to Winkler	\$6.71	\$0.00	\$44.76	\$6.71	\$58.18
	Winkler to Ortiz	\$4.92	\$0.00	\$32.79	\$4.92	\$42.63
	Ortiz to I-75	\$13.45	\$0.00	\$89.66	\$13.45	\$116.56

- (1) Design estimate assumed 15% of construction estimate with exception to Burnt Store Road from Van Buren to Pine Island. A staff hour estimate was prepared for this segment of roadway, resulting in 12% of construction costs.
- (2) Does not include storm water retention pond areas. Estimate is not an appraisal.
- (3) CEI estimate assumed 15% of construction estimate.

4.6 ENVIRONMENTAL IMPACTS

The conceptual designs were evaluated considering the environmental characteristics collected from the literature search discussed in Section 2.3. Environmental characteristics were collected from local, state, and federal agencies to identify potential impacts associated with the conceptual designs. Limited field observations were conducted to verify potential impacts along the project corridor.

4.6.1 Cultural Impacts

Available literature for cultural features was evaluated for the proposed conceptual designs. Limited field observations were conducted to verify features along the project corridor. A summary of the cultural impacts are below.

Jones Loop Road

Along the Jones Loop Road corridor, limited ROW acquisition is required. However, there are no cultural impacts anticipated.

Tuckers Grade Extension

Along the Tuckers Grade Extension corridor, ROW acquisition is required. However, there are no cultural impacts anticipated.

Burnt Store Road

Option B2 between Tamiami Trail and Notre Dame Boulevard proposes to widen Burnt Store Road to the west side. This option would impact the Charlotte Harbor Environmental Center (CHEC) as well as the Charlotte Harbor State Buffer Preserve. Informal coordination was held with CHEC and correspondence was sent to the Florida Department of Environmental Protection (FDEP) advising of the corridor study. The need for additional ROW was mentioned; however, it was not determined whether ROW could be acquired from the FDEP for the roadway improvements or ponds. Additionally within this segment, the Burnt Store Presbyterian Church property frontage would be impacted by ROW acquisition.

The Charlotte Harbor Flatwoods Project crosses the project corridor north of Zemel Road. The Yucca Pen unit, managed by the FFWCC, crosses the project corridor near the county line. These cultural features will be impacted by the project widening.

A public boat ramp is located north of Pine Island Road on the west side. Access to the boat ramp will be impacted and is proposed to be relocated to SW 3rd Terrace.

Veterans Parkway

Along the Veterans Parkway corridor, there are no impacts anticipated to the Matlacha Aquatic Preserve or the Four Mile Cove Ecological Park. Additionally, there are no impacts anticipated to the churches, parks, or school.

Colonial Boulevard

The conceptual design between McGregor Boulevard and Cleveland Avenue requires the acquisition of ROW. Impacts are anticipated to the property frontage of St. Hillary's Episcopal Church, Southwest Florida Historical Society, and Alliance for the Arts all located east of McGregor Boulevard. East of Summerlin Road, the Fort Myers Christian School located at the First Assembly of God will be impacted. The cemetery located on the north side of Colonial Boulevard is not expected to be impacted.

The other cultural features along Colonial Boulevard are not anticipated to be impacted. The cultural features along the project corridor should be reevaluated during the design phase.

4.6.2 Archeological and Historical Features

A literature search was conducted for historic structures and archeological sites. There were no sites previously recorded, listed, or determined eligible for listing in the NRHP.

4.6.3 Wetlands

Wetland communities will be impacted due to the proposed conceptual designs along the project corridor. These impacts are primarily at water crossings. Permits that may be necessary include:

- Environmental Resource Permit from the SFWMD
- Individual Permit from the ACOE
- Generic Permit for stormwater discharge from small and large construction activities from FDEP

A summary of the wetland impacts are provided below.

Tuckers Grade Extension

Potential impacts are scrub shrubs, open water, permanently flooded and emergents, seasonally flooded, and other surface waters.

Burnt Store Road

The south fork of Alligator Creek located south of Tamiami Trail, identified as an aquatic preserve, will be impacted by the proposed widening. Gator Slough located north of Van Buren Parkway, as well as four canals located south of Van Buren Parkway will be impacted by the corridor widening.

Other potential impacts are open water, permanently flooded and emergents, seasonally flooded, and other surface waters.

Veterans Parkway

The proposed conceptual design includes interchanges at the major intersections. There are open surface waters, herbaceous, and forested wetlands located adjacent to the project corridor. These wetlands are unlikely to be impacted except for canal crossings.

Colonial Boulevard

The proposed conceptual design includes widening Colonial Boulevard. The Ten Mile Canal located west of Metro Parkway will be impacted by the proposed widening.

Colonial Boulevard east of I-75 crosses the Six Mile Cypress Slough. The conceptual design proposes utilizing the existing bridge crossing and providing additional ramp bridges within the existing ROW. This concept will impact the slough.

4.6.4 Wildlife and Habitat

Available literature of wildlife and habitat was evaluated for the proposed conceptual designs. Discussions were held with local agency staff regarding protected species and critical habitat along the project corridor. Due to the hurricane that impacted this area in 2004, it will be necessary to re-confirm species and habitat. A summary of the potential impacts are below.

Jones Loop Road/Tuckers Grade Extension/Burnt Store Road

The Florida Scrub Jay inhabited the area surrounding the project prior to the hurricane in 2004. It is unknown at this time the extent of the changes in territories for these scrub jay families.

The project corridor is located within the Core Foraging Area for the Wood Stork. It is unknown at this time the extent of the changes in territories for these families.

The Burnt Store Road project corridor is located within the primary zone (750 ft) of an eagle's nest, south of Acline Road and west of the corridor. A second eagle's nest is located northwest of the Zemel Road intersection. The Burnt Store Road project corridor is located within the secondary zone (1,500 ft) of the nest. Two other eagle's nests are located northeast of the Pine Island Road intersection. The project corridor is located within the primary zone (750 ft) of one nest, and the secondary zone (1,500 ft) of the other nest. The FFWCC's Eagle Nest Locator Database indicated that these nests have been active since 2002. The project corridor is also located within the City's management zone for these two nests. Due to the hurricane that impacted this area in 2004, it will be necessary to re-confirm habitat.

Gopher tortoise burrows have been identified by local agency staff along the project corridor. It will be necessary to conduct a gopher tortoise burrow survey prior to construction.

The project corridor between the Charlotte County Line and Pine Island Road is located within critical habitat for the Florida Panther. It is unknown at this time the extent of the changes in territory for this species. It will be necessary to conduct a survey prior to construction.



Typical Wildlife Habitat near the Yucca Pen Unit

Veterans Parkway

The project corridor is located within the secondary zone (1,500 ft) of an eagle's nest, south of Pine Island Road and west of the corridor. A second eagle's nest is located west of Surfside Boulevard and north of the corridor. The project corridor is located within the primary zone (750 ft) of the nest. The FFWCC's Eagle Nest Locator Database indicated that these nests have been active since 2002.

The project corridor is also located within the City's management zone for these two nests. Due to the hurricane that impacted this area in 2004, it will be necessary to re-confirm habitat.

It will be necessary to conduct a gopher tortoise burrow survey prior to construction.

Colonial Boulevard

The project corridor is located within the Core Foraging Area for the Wood Stork. It is unknown at this time the extent of the changes in territories for these families.

It will be necessary to conduct a gopher tortoise burrow survey prior to construction.

4.6.5 Potential Contamination

A search of available regulatory files from state and federal databases was performed for the project corridor. A summary of potential contamination sites are summarized below:

Jones Loop Road

Three sites were identified between I-75 and Taylor Road during the regulatory file review. Two sites were assigned an initial risk ranking of Medium:

- Citgo-On-The-Go, located on the north side of the project corridor
- Rally, located on the north side of the project corridor

The remaining site was assigned an initial risk ranking of Low:

- Pilot Travel Center, located on the south side of the project corridor

Further investigation of these three sites should be performed prior to construction.

Burnt Store Road

Four sites were identified between Tamiami Trail and Notre Dame Boulevard during the regulatory file review. Three sites were assigned an initial risk ranking of Medium:

- Burnt Store Dry Cleaners, previously operated west of the project corridor
- BP Amoco, located west of the project corridor
- Citgo-On-The-Go, located east of the project corridor

The remaining site was assigned an initial risk ranking of Low:

- River Haven Mobile Home Park, located on Alligator Creek east of the project corridor

One site was identified between Notre Dame Boulevard and the Lee County Line during the regulatory file review. This site was assigned an initial risk ranking of Low.

- The County Store, located north of Zemel Road east of the project corridor

One site was identified between the Lee County Line and Pine Island Road during the regulatory file review. This site was assigned an initial risk ranking of Medium:

- The Twin City Plaza, located on Pine Island Road east of the project corridor

Further investigation of these six sites should be performed prior to construction.

Veterans Parkway

Five sites were identified between Pine Island Road and Del Prado Boulevard during the regulatory file review. Three sites were assigned an initial risk ranking of Medium:

- Circle K #4729, located on Santa Barbara Boulevard north of the project corridor
- David & Sons Auto Repair, located on SE 25th Lane south of the project corridor and west of Del Prado Boulevard
- Cape Coral Fleet Management, located on Everest Parkway south of the project corridor and east of Del Prado Boulevard

The remaining two sites were assigned an initial risk ranking of Low:

- Mobil #19502, located on Santa Barbara Boulevard north of the project corridor
- USA #167, located on Del Prado Boulevard north of the project corridor

Further investigation of these five sites should be performed prior to construction.

Colonial Boulevard

Nine sites were identified between McGregor Boulevard and Metro Parkway during the regulatory file review. Two sites (currently closed) were assigned an initial risk ranking of Medium:

- Colonial Chevron, previously operated on the north side of Colonial Boulevard east of McGregor Boulevard
- Fina #7040, previously operated on the north side of Colonial Boulevard west of Cleveland Avenue

The remaining seven sites were assigned an initial risk ranking of Low:

- 7-Eleven #32209, located on the south side of Colonial Boulevard east of DeLeon Street
- Gallentine Exxon, previously operated on the north side of Colonial Boulevard east of Cleveland Avenue
- Sam Galloway Ford, previously operated on the south side of Colonial Boulevard west of Cleveland Avenue
- Sunoco #0611, located on the south side of Colonial Boulevard east of Fowler Street
- Shell, located on the north side of Colonial Boulevard east of Evans Avenue
- Mobil #10021, located on the north side of Colonial Boulevard west of Metro Parkway
- 7-Eleven #32312, located on the south side of Colonial Boulevard west of Metro Parkway

Five sites were identified between Metro Parkway and I-75 during the regulatory file review. One site was assigned an initial risk ranking of Medium:

- Hess #09341, located on the south side of Colonial Boulevard east of Metro Parkway

The remaining four sites were assigned an initial risk ranking of Low:

- 7-Eleven #32599, located on the north side of Colonial Boulevard west of Winkler Avenue
- BP Colonial, located on the north side of Colonial Boulevard east of Winkler Avenue
- Murphy USA #6920, located on the south side of Colonial Boulevard west of Ortiz Avenue
- Shell, located on the south side of Colonial Boulevard east of Ortiz Avenue

Further investigation of these 14 sites on Colonial Boulevard should be performed prior to construction.

4.7 REFERENCES

1. The Lee Plan 2003 Codification; Department of Community Development, Division of Planning; Fort Myers, FL; June 2003.
2. Charlotte County Comprehensive Plan; Community Development Department; Port Charlotte, FL; 2004.
3. Plans Preparation Manual (English); Florida Department of Transportation; Tallahassee, FL; January 2003 (Revised January 2005).
4. Manual on Uniform Traffic Control Devices for Street and Highways; US Department of Transportation Federal Highway Administration; Washington, DC; 2003.
5. American Association of State Highway and Transportation Officials; A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials; Washington, DC; 2004.



SECTION 5.0 RECOMMENDED IMPLEMENTATION PLAN

A recommended implementation plan was developed for the project corridor. The plan summarizes the roadway improvements and cost, as well as proposed timing of design, ROW, and construction projects. The construction staging plan considers project cost in addition to location and proximity of other construction projects proposed.

The implementation plan depends heavily on the project financing. Project priorities may vary depending on the source and timing of funding. The proposed construction staging and project financing are described in the sections to follow.

5.1 CONSTRUCTION STAGING

Jones Loop Road

- *By 2030: I-75 to Taylor Road - Widen to 6-lanes Suburban*

Design, Limited ROW Acquisition and Construction

Project Cost \$3.8 Million (2004 Dollars)

Burnt Store Road – Charlotte County

- *By 2015: Tamiami Trail to Notre Dame Boulevard - Widen to 4-lanes Urban (Option A)*

Design, ROW Acquisition, and Construction

Project Cost \$18.2 Million (2004 Dollars)

- *By 2015: Notre Dame Boulevard to Lee County Line - Widen to 4-lanes Rural*

Design, ROW Acquisition, and Construction

Project Cost \$103 Million (2004 Dollars)

Tuckers Grade Extension

- *By 2040: Tamiami Trail to Burnt Store Road - New 4-lanes Rural (Conditional if Burnt Store Road between Tamiami Trail and Notre Dame Boulevard infeasible for 6-lane widening by 2040)*

Design, ROW Acquisition, and Construction

Project Cost \$58.2 Million (2004 Dollars)

Burnt Store Road – Lee County

- *By 2015: Charlotte County line to Van Buren Parkway - Widen to 4-lanes Rural with Limited Frontage Roads*

Design, ROW Acquisition, and Construction

Project Cost \$37.5 Million (2004 Dollars)

- *By 2015: Van Buren Parkway to Pine Island Road - Widen to 4-lanes Rural with Frontage Roads (Option A2)*

Design, ROW Acquisition, and Construction

Project Cost \$52.1 Million (2004 Dollars)

Veterans Parkway

- *By 2020: Urban Interchange over Santa Barbara Boulevard*

Design and Construction

Project Cost \$31.1 Million (2004 Dollars)

- *By 2025: Urban Interchange over Country Club Boulevard*

Design and Construction

Project Cost \$31.1 Million (2004 Dollars)

- *By 2025: Urban Interchange over Chiquita Boulevard*

Design and Construction

Project Cost \$31.1 Million (2004 Dollars)

- *By 2030: Urban Interchange over Skyline Boulevard*

Design and Construction

Project Cost \$31.1 Million (2004 Dollars)

Colonial Boulevard

- *By 2020: McGregor Boulevard to Cleveland Avenue – Construct 4 Express Lanes with 6-lane Frontage Roads; Overpass at Summerlin Road; Overpass at DeLeon Street; Ingress and Egress (Slip) Ramps*

Design, ROW Acquisition, and Construction

Project Cost \$103.3 Million (2004 Dollars)

RECOMMENDED IMPLEMENTATION PLAN

- *By 2025: Cleveland Avenue to Metro Parkway – Construct 4 Express Lanes with 6-lane Frontage Roads; Overpass at Fowler Street; Overpass at Railroad Crossing/10-Mile Canal; Overpass at Metro Parkway; Slip Ramps*

Design, ROW Acquisition, and Construction

Project Cost \$130.6 Million (2004 Dollars)

- *By 2030: Winkler Avenue to I-75 – Construct 4 Express Lanes with 6-lane Frontage Roads; Overpass at Winkler Avenue; Overpass at Ortiz Avenue/Six Mile Cypress Parkway; Third-Level Flyover I-75; Overpass at Forum Boulevard; Slip Ramps*

Design and Construction

Project Cost \$159.2 Million (2004 Dollars)

- *2030: Metro Parkway to Winkler Avenue – Construct 6 Express Lanes with 4-lane Frontage Roads ; Overpass at Veronica Shoemaker Boulevard*

Design and Construction

Project Cost \$58.2 Million (2004 Dollars)

A summary of the recommended construction staging for Charlotte County – Punta Gorda, Lee County – Cape Coral, and Lee County – Fort Myers is provided in Figure 5-1, Figure 5-2, and Figure 5-3, respectively. The estimated project cost does not include landscaping nor major utility relocation.

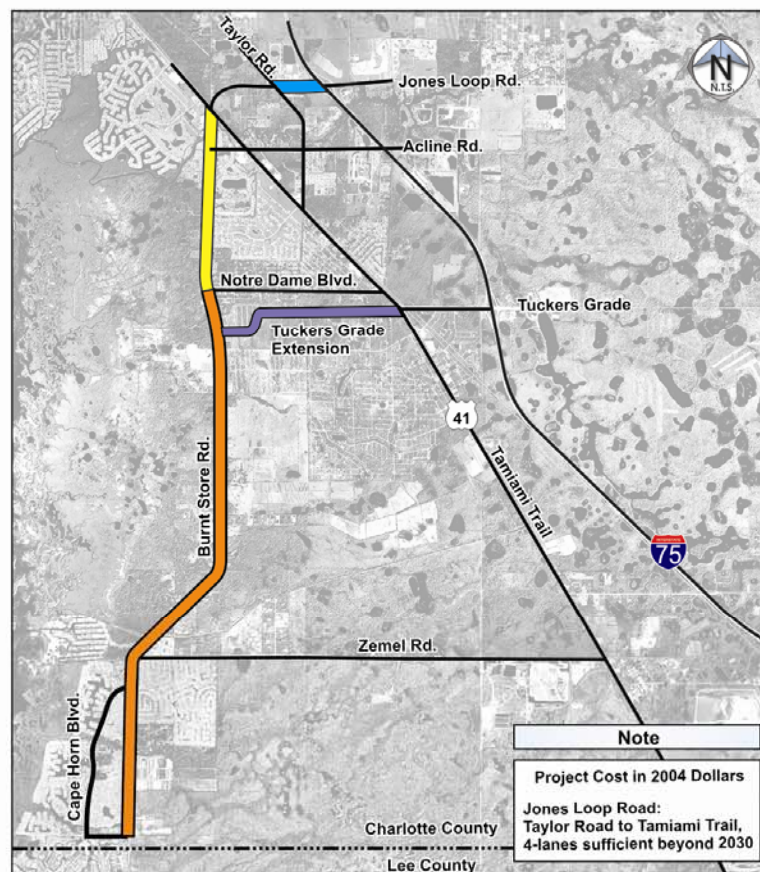


Recommended Construction Staging Charlotte County - Punta Gorda

PRELIMINARY

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

4-20-08



Flight Date: September 2002

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Legend

Burnt Store Road Tamiami Trail to Notre Dame Blvd.

By 2015	Widen to 4 lanes Urban Design, ROW & Construction Project Cost \$18.2 Million
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Burnt Store Road Notre Dame Blvd. to County Line

By 2015	Widen to 4 lanes Rural Design, ROW & Construction Project Cost \$103 Million
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Jones Loop Road I-75 to Taylor Rd.

By 2030	Widen to 6 lanes Suburban Design, ROW & Construction Project Cost \$3.8 Million
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Tuckers Grade Extension Tamiami Trail to Burnt Store Rd.

By 2040	New 4 lanes Rural Design, ROW & Construction Project Cost \$58.2 Million
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Recommended Construction Staging Lee County - Cape Coral

PRELIMINARY

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

4-20-08



Legend

**Burnt Store Road
Van Buren Pkwy. to Pine Island Rd.**

By 2015 Widen to 4 lanes Rural with Access Roads
Design, ROW & Construction
Project Cost \$52.1 Million

**Burnt Store Road
County Line to Van Buren Pkwy.**

By 2015 Widen to 4 lanes Rural with Frontage Roads
Design, ROW & Construction
Project Cost \$37.5 Million

**Veterans Parkway
Santa Barbara Blvd.**

By 2020 Urban Interchange over Santa Barbara Blvd.
Design & Construction
Project Cost \$31.1 Million

**Veterans Parkway
Country Club Blvd.**

By 2025 Urban Interchange over Country Club Blvd.
Design & Construction
Project Cost \$31.1 Million

**Veterans Parkway
Chiquita Blvd.**

By 2025 Urban Interchange over Chiquita Blvd.
Design & Construction
Project Cost \$31.1 Million

**Veterans Parkway
Skyline Blvd.**

By 2030 Urban Interchange over Skyline Blvd.
Design & Construction
Project Cost \$31.1 Million

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Flight Date: April 2002

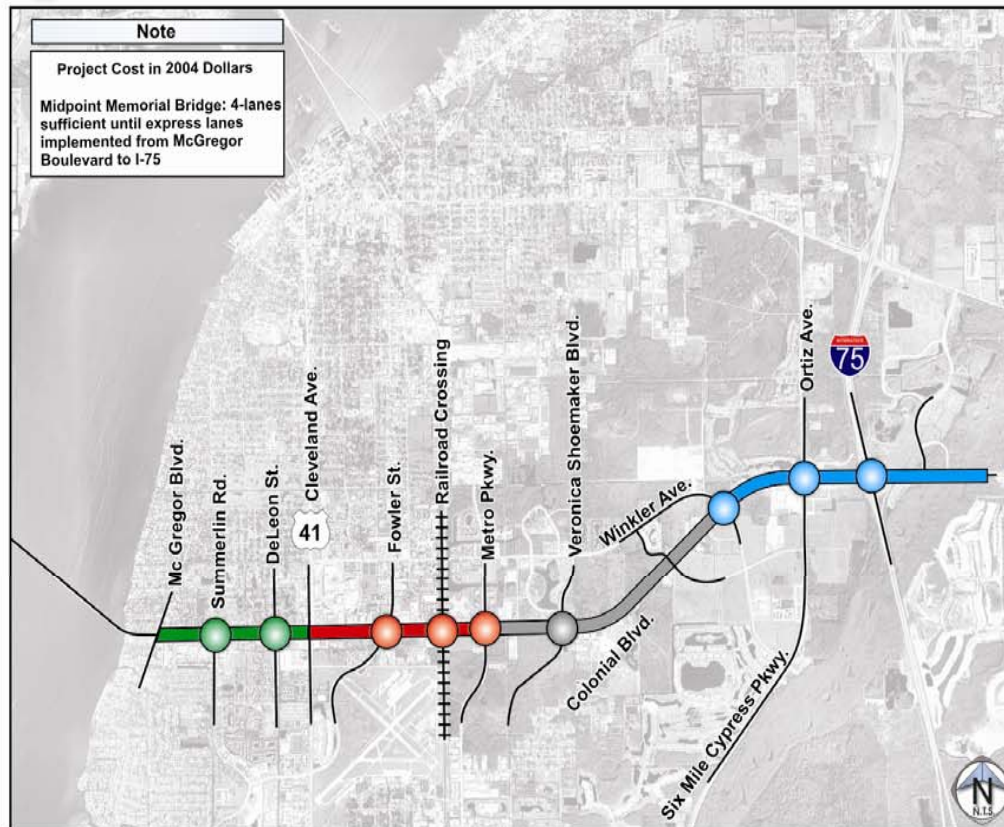


Recommended Construction Staging Lee County - Fort Myers

PRELIMINARY

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

5-2-05



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Flight Date: April 2002

Legend

**Colonial Boulevard
McGregor Blvd. to Cleveland Ave.**

By 2020 Express Lanes, Overpasses, & Ramps
Design, ROW & Construction
Project Cost \$103.3 Million

**Colonial Boulevard
Cleveland Ave. to Metro Pkwy.**

By 2025 Express Lanes, Overpasses, & Ramps
Design, ROW & Construction
Project Cost \$130.6 Million

**Colonial Boulevard
Winkler Ave. to I-75**

By 2030 Express Lanes, Overpass, Ramps & Flyover
Design & Construction
Project Cost \$159.2 Million

**Colonial Boulevard
Metro Pkwy. to Winkler Ave.**

2030 Express Lanes, Overpasses & Ramps
Design & Construction
Project Cost \$58.2 Million

5.2 PROJECT FINANCING

The project cost for Charlotte County – Punta Gorda was estimated at \$183.2 Million (2004 Dollars). The improvement cost is predominantly for Burnt Store Road. This facility is not on the SHS and does not meet eligibility requirements for funding, like similar facilities on the SHS. Non-SHS facilities can be eligible for Federal funding, subject to availability, after a Project Development and Environment (PD&E) Study is completed. Possible local financing could be through the Charlotte County capital improvement program (CIP), which includes road impact fees and gas taxes. Currently, the capital improvement program would not be sufficient to finance these improvements consistent with the recommended implementation plan. A new funding program was created by the FDOT to fund regional multi-modal transportation systems, like Burnt-Store Road. Furthermore, the CIP funds could be used for a matching contribution. Commitments from future developments in the area could possibly assist with project financing as well.

The project cost for Lee County – Cape Coral was estimated at \$214 Million (2004 Dollars). The improvement cost is shared between Burnt Store Road and Veterans Parkway. These facilities are not on the SHS and do not meet eligibility requirements for funding, like similar facilities on the SHS. Non-SHS facilities can be eligible for federal funding, subject to availability, after a PD&E Study is completed. Possible local financing could be through the Lee County CIP, which includes road impact fees, gas taxes, and surplus toll revenues. However, surplus toll revenues based on current toll pricing would not be sufficient to finance these improvements. A new funding program was created by the FDOT to fund regional multi-modal transportation systems, like Burnt-Store Road. Furthermore, the CIP funds could be used for a matching contribution. Commitments from future developments in the area could possibly assist with project financing as well.

The project cost for Lee County – Fort Myers was estimated at \$451.3 Million (2004 Dollars). The improvement cost is shared east and west of Metro Parkway. A completed PD&E Study for Colonial Boulevard from McGregor Boulevard to Cleveland Avenue could make this segment eligible for state or federal funding. However, since it is not on the SHS, or Florida's Strategic Intermodal System (SIS) Plan¹, the likelihood of receiving any state or federal funding is uncertain.

Possible project financing from McGregor Boulevard to Cleveland Avenue could be from the Lee County CIP, which includes road impact fees, gas taxes, and surplus toll revenues. However, surplus toll revenues based on current toll pricing would not be sufficient to finance the improvements for this segment.

Since the project corridor east of Cleveland Avenue is on the SHS, this facility has a better chance of meeting eligibility requirements for state or federal funding upon completion of a PD&E Study. It should be noted that Colonial Boulevard was not identified as a corridor nor connector in the SIS Plan. The SIS strategic plan described that a greater amount (75 percent) of the state's discretionary transportation capacity funding will be allocated to SIS facilities by 2015, up from approximately 62 percent currently.

A separate report addressing additional financing options for Lee County is being prepared. This report will be available at the LC DOT.

5.3 REFERENCES

1. Florida's Strategic Intermodal System (SIS) Plan; Office of Policy Planning; Florida Department of Transportation; Tallahassee, Florida; January 2005.



SECTION 6.0

AGENCY & COMMUNITY INVOLVEMENT

A community involvement program was developed to inform the community members about the study. The objective of this program was to provide information about the study's progress as well as to receive public input and consensus. The community involvement program is described below.

6.1 PROJECT WEBSITE

The project website (www.bicountystudy.com) was developed to provide the community with news about the project and the study process. The website included several web pages as follows:

- Project Description
- Community Involvement
- Project Process & Schedule
- Questions & Answers
- Talk to Us

6.2 TASK FORCE MEETINGS

As previously indicated, the study corridor travels through the municipalities of Fort Myers, Cape Coral, and Punta Gorda in Lee and Charlotte counties. A task force consisting of elected representatives from each municipality was created to provide consensus regarding the needed improvements, schedule, and implementation of projects along this critical transportation corridor. The project team met periodically with the task force as the project progressed. The time and location of the Elected Officials Tasks Force (EOTF) meetings were advertised in the local newspapers, and were open for the community to attend.

The elected officials who served on the task force are listed as follows:

City of Cape Coral

The Honorable Arnold Kempe, Mayor



City of Fort Myers

The Honorable James Humphrey, Mayor



City of Punta Gorda

The Honorable Stephen Fabian, Mayor



Charlotte County

The Honorable Adam Cummings, Commissioner

Lee County

The Honorable Tammy Hall, Commissioner

The Honorable Andrew Coy, Commissioner (Nov. 2003 – Dec. 2004)



A second task force consisting of staff representatives from participating agencies was created to discuss technical elements of the project. The project team met periodically with the STTF throughout the project.

6.3 FOCUS GROUP MEETINGS

Focus Group Meetings were held during November 2004 to obtain public opinion on congestion alternatives along Veterans Parkway and along Colonial Boulevard. Three small groups were recruited randomly and consisted of the following composition:

- Cape Coral Full-Time Residents
- Fort Myers Full-Time Residents
- Business Representatives in Lee County

Participants completed a short survey prior to the focus group discussion. The survey was intended to provide the project team with a better understanding of the participants' point of view. Furthermore, the survey was used to test that the participants were screened appropriately to participate in the focus group.

Discussion topics were as follows:

- Project Overview
- Express Lane Concept
- Project Funding
- Pricing

Express Lane Concept

The three focus groups viewed the express lane concept as a favorable transportation concept. The express lane concept was described as a separate continuous facility that bypassed a series of congested intersections. Most participants believed that a concept such as this is urgently needed.

Suggested Project Areas

- Colonial Boulevard from the Midpoint Memorial Bridge to Metro Parkway
- Veterans Parkway in the vicinity of Santa Barbara Boulevard
- The entire Veterans – Colonial corridor

Project Funding

The three focus groups provided opinions on how the County should fund congestion improvements. Most participants favored tolls as the preferred method to pay for the express lanes, as long as the toll was reasonable. Furthermore, the participants suggested that a free route be provided if the express route was tolled.

Suggested Funding Options

- Impact Fees
- Existing Government Funds
- Gas Taxes
- New Tolls (with a sunset date)
- Federal Funds
- Privatize the Project

The focus groups' opinion was that a tolled express lane facility would provide a savings in travel time and a reliable travel route. Furthermore, the focus groups supported using tolls to finance the project if it meant construction could begin sooner than if other funding sources were used.

Pricing Opinions

Some focus group participants preferred to pay a proportional toll based on distance traveled, instead of a flat rate regardless of distance traveled. Variable toll pricing received mixed responses. The electronic toll collection system was viewed as an easy way to pay for tolls on an express lane facility.

Suggested Pricing Options (Four Mile Express Segment)

- \$0.05 to \$0.06 per Mile per Trip
- \$0.25 to \$2.00 Flat Rate per Trip

Additional information from the focus groups meetings is available on the project website www.bicountystudy.com.

6.4 BUSINESS OWNER/TENANT MEETINGS

Open house meetings were held in December 2004 with business owners and tenants having property or businesses along Colonial Boulevard between McGregor Boulevard and I-75.

Preliminary corridor concepts and estimated ROW needs were presented. Typical sections being evaluated along Colonial Boulevard were presented and discussed. Two typical sections showed the elevation and physical separation between the express lanes and the frontage roads. One typical section showed the mainline elevated on retaining wall (less expensive) while the other showed the mainline elevated on columns (more expensive). In general, the business owners and tenants preferred the typical section with the express lanes elevated on columns since the elevated structures would be open below and provide visibility, although obscured, from one side to the other.



Fort Myers Business
Owner/Tenant Meeting

McGregor Boulevard to Cleveland Avenue

Two conceptual plans were presented to the business owners and tenants. One plan, referred to as the **Partially At-Grade** concept, proposed an overpass at Summerlin Road. Slip ramps between the express lanes and the frontage roads were proposed between McGregor Boulevard and Summerlin Road, as well as between Summerlin Road and Cleveland Avenue. The express lanes would connect with the existing overpass at McGregor Boulevard and Cleveland Avenue. The median opening at DeLeon Street would be closed, as well as the signal removed.

The other plan, referred to as the **Fully Elevated** concept, proposed an overpass at Summerlin Road and at DeLeon Street. Slip ramps between the express lanes and the frontage roads were the same as in the partially at-grade concept. The express lanes would connect with the existing overpass at McGregor Boulevard and Cleveland Avenue.

The business owners and tenants preferred the **Fully Elevated** concept since it provided access to DeLeon Street. Additionally, the opening at DeLeon Street in this concept provided a location for u-turns since the other median openings would be closed. In general, the business owners and tenants preferred the typical section with the express lanes elevated on columns since the elevated structures would be open below and provide visibility, although obscured, from one side to the other.

Cleveland Avenue to Metro Parkway

Two conceptual plans were presented to the business owners and tenants. One plan, referred to as the **Partially At Grade** concept, proposed an overpass at Fowler Street, the railroad crossing/10-mile canal, and Metro Parkway. Slip ramps between the express lanes and the frontage roads were proposed between Cleveland Avenue and Fowler Street, between Fowler Street and Metro Parkway, and east of Metro Parkway. The express lanes would connect to the existing overpass at Cleveland Avenue. The median opening at Solomon Boulevard and at Evans Avenue would be closed, as well as the signals removed.

The other plan, referred to as the **Fully Elevated** concept, proposed an overpasses at Solomon Boulevard, Fowler Street, Evans Avenue, the railroad crossing/10-mile canal, and Metro Parkway. Slip ramps between the express lanes and the frontage roads were the same as in the partially at grade concept. The express lanes would connect with the existing overpass at Cleveland Avenue.

The business owners and tenants preferred the **Fully Elevated** concept since it provided access to Solomon Boulevard. During the evaluation and conceptual design of this segment, the interchange at Solomon Boulevard had to be eliminated in order to accommodate the on/off ramps between Cleveland Avenue and Fowler Street.

Metro Parkway to I-75

The express lane conceptual plans were presented to the business owners and tenants. The concept plan proposed an overpass at Veronica Shoemaker Boulevard, Winkler Avenue, and Ortiz Avenue/Six Mile Cypress Parkway. Slip ramps between the express lanes and the frontage roads were proposed west of Winkler Avenue and east of Winkler Avenue. The median openings along Colonial Boulevard between Veronica Shoemaker Boulevard and Winkler Avenue would be closed, as well as the signals removed.

Some business owners and tenants were concerned about the closure of medians. Additionally, they were concerned about business patrons having to make u-turns before getting to their establishment.

Subsequent evaluation and conceptual design resulted in the addition of a third-level flyover I-75 and an overpass at Forum Boulevard.

6.5 PUBLIC WORKSHOPS

Public information workshops were held with the community during the month of May 2005. The workshops included a slide presentation, typical sections, and roadway concepts for the future year 2030. Also on display were right-of-way needs, recommended construction staging, and estimated project cost in 2004 dollars. An information handout was distributed to attendees. For the convenience of the community, workshops were held in Fort Myers, Cape Coral, and Punta Gorda. The times and locations were advertised in the local newspapers, as well on portable roadside variable message signs.

Fort Myers

There were 59 attendees who signed in at the public information workshop. However, 69 written comments were received. The Colonial Boulevard segment between McGregor Boulevard and Metro Parkway received the highest support as being the first project priority. The segment between Winkler Avenue and I-75 was supported as the second project priority.

Cape Coral

There were 193 attendees who signed in at the public information workshop. However, 128 written comments were received. The Burnt Store Road four-laning received the highest support as being the first project priority. A wide right-of-way and berms were features between Van Buren Parkway and Pine Island Road which received high support, followed by access control. Veterans Parkway interchanges were supported as the second project priority.

Punta Gorda

There were 180 attendees who signed in at the public information workshop. However, 36 written comments were received. The Burnt Store Road four-laning received the highest support as being the first project priority. The Tuckers Grade extension was supported as the second project priority.

A separate report with additional information on the public information workshops were prepared by Cella & Associates, Inc. and is available at LC DOT.



Recommended Access Plan Schematic

Jones Loop Road: I-75 to Tamiami Trail

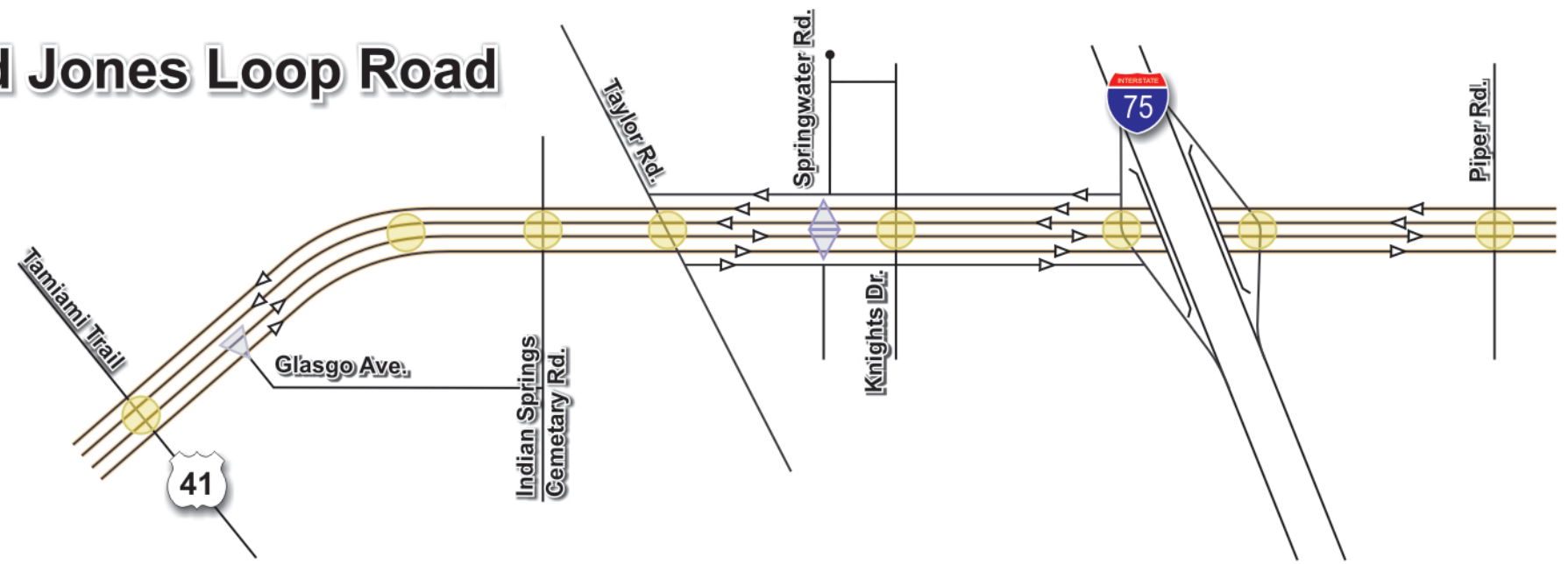
BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

2-17-05

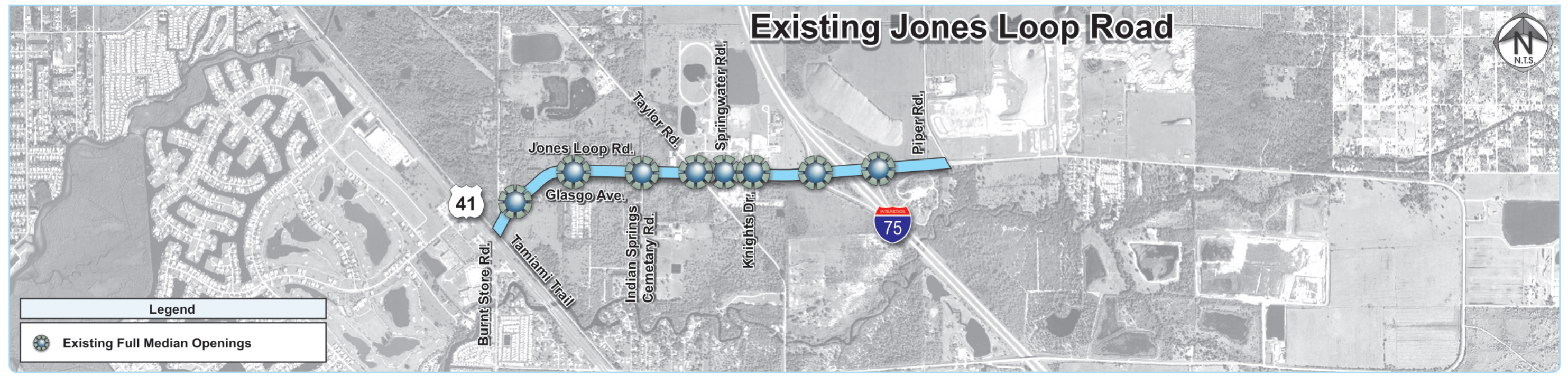
Proposed Jones Loop Road

Full Median Opening Locations
Piper Road
I-75 Ramps
Knights Drive
Taylor Road
Indian Spring Cemetery Road
Tamiami Trail
Other Access

Legend
Arterial Lanes
Local Road with Cul-De-Sac
Proposed Full Median Opening
Proposed Directional Median Opening



Existing Jones Loop Road



Legend
Existing Full Median Openings



Recommended Access Plan Schematic Burnt Store Road: Tamiami Trail to Notre Dame Boulevard

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

2-17-05

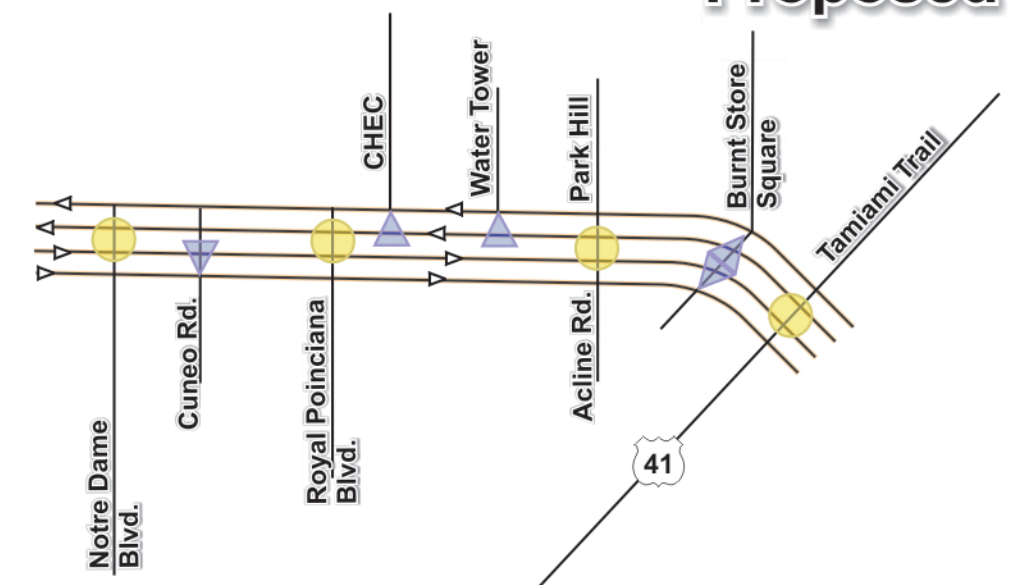
Proposed Burnt Store Road

Full Median Opening Locations

Tamiami Trail
Acline Road/Park Hill
Royal Poinciana Boulevard
Notre Dame Boulevard

Legend

Arterial Lanes
 Proposed Full Median Opening
 Proposed Directional Median Opening



Existing Burnt Store Road





Recommended Access Plan Schematic Tuckers Grade Extension

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

2-17-05

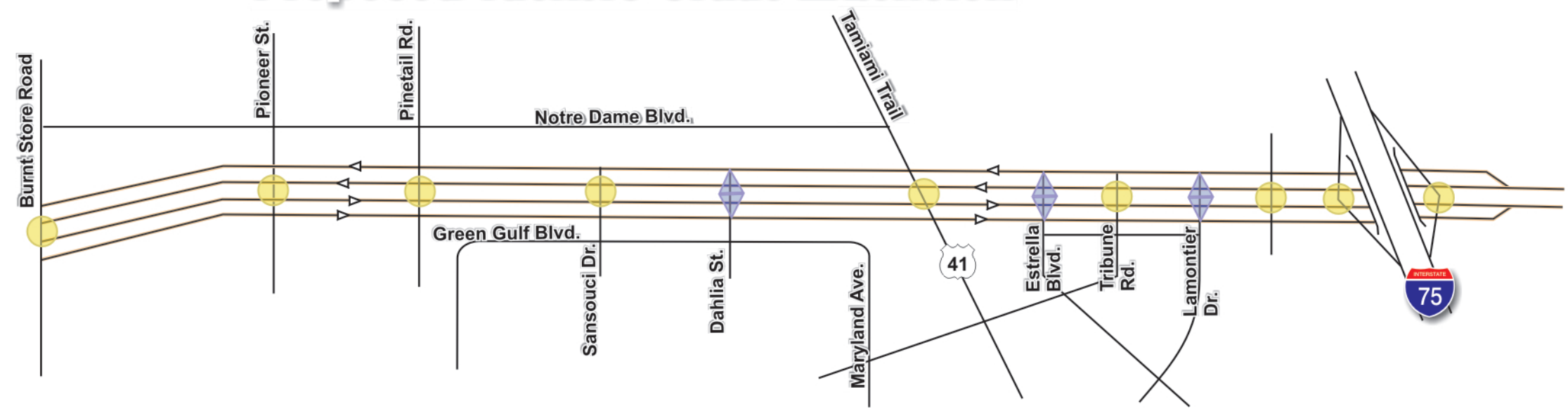
Proposed Tuckers Grade Extension

Full Median Opening Locations

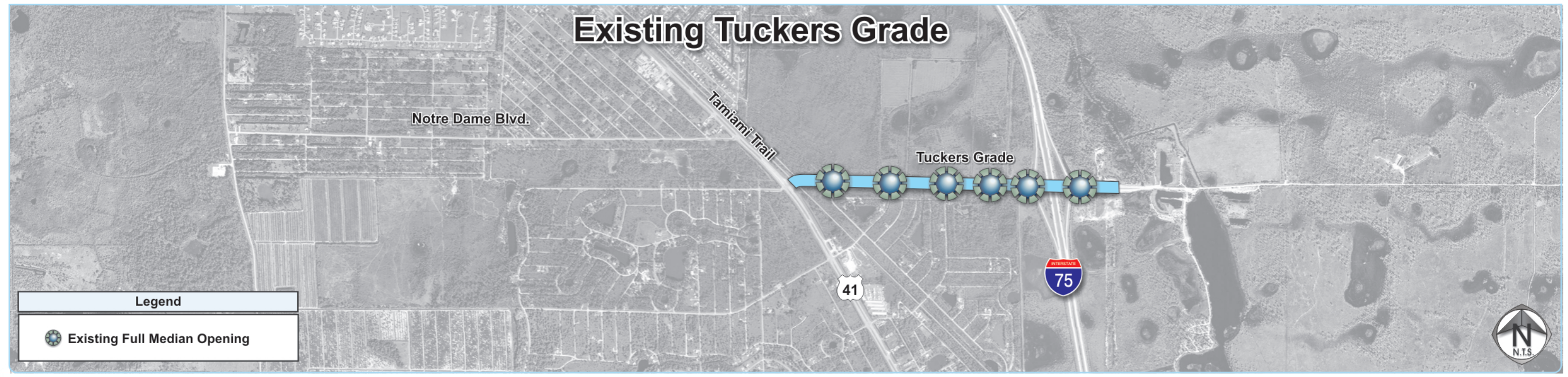
- I-75 Ramps
- Tribune Road
- Tamiami Trail
- Sansouci Drive
- Pinetail Road
- Pioneer Street
- Burnt Store Road
- Other Access

Legend

- Arterial Lanes
- Proposed Full Median Opening
- Proposed Directional Median Opening



Existing Tuckers Grade



Legend

- Existing Full Median Opening



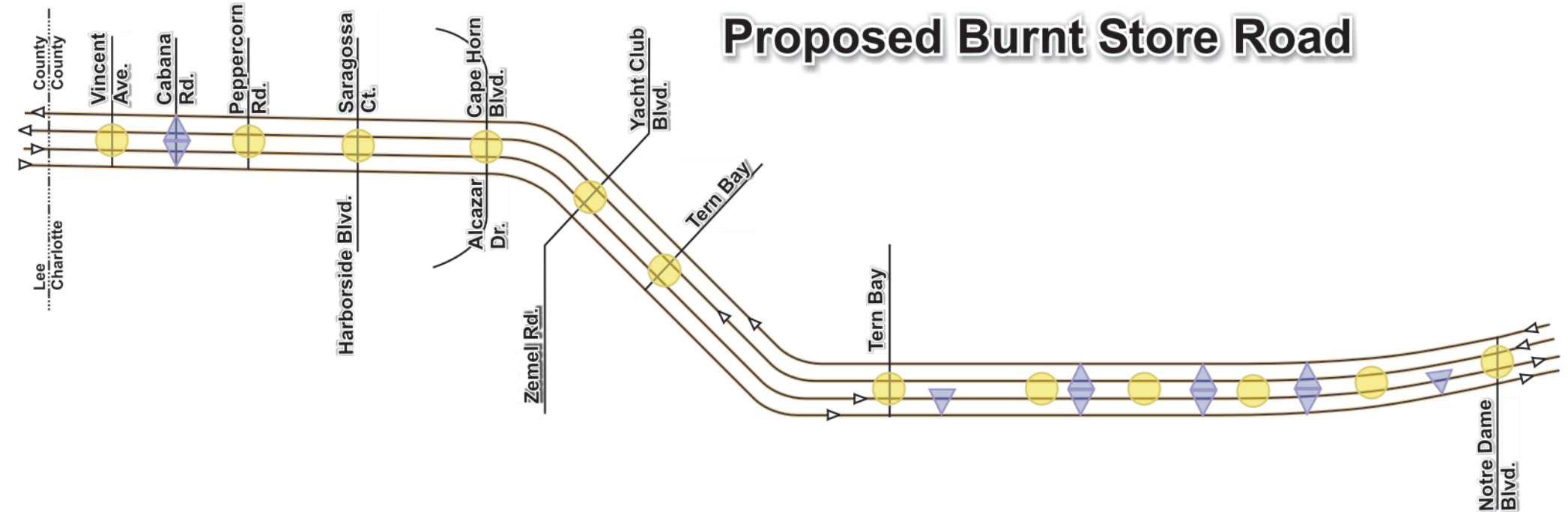
Recommended Access Plan Schematic Burnt Store Road: Notre Dame Boulevard to County Line

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

2-17-05

Full Median Opening Locations
Notre Dame Boulevard
Tern Bay Entrances
Zemel Road/Yacht Club Boulevard
Cape Horn Boulevard/Alcazar Drive
Saragossa Court/Harborside Boulevard
Peppercorn Road
Vincent Avenue
Other Access

Legend
Arterial Lanes
Proposed Full Median Opening
Proposed Directional Median Opening





Recommended Access Plan Schematic Burnt Store Road: County Line to Van Buren Parkway

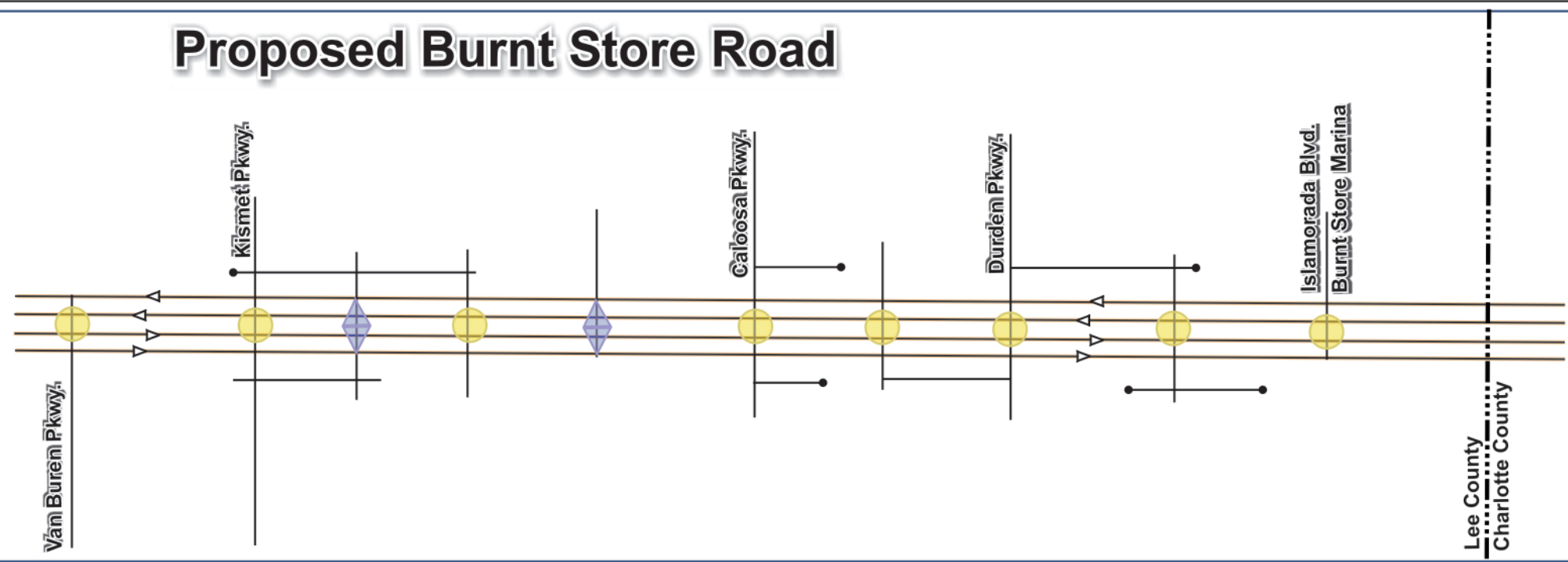
BI-COUNTY STUDY
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COUNTIES

2-17-05

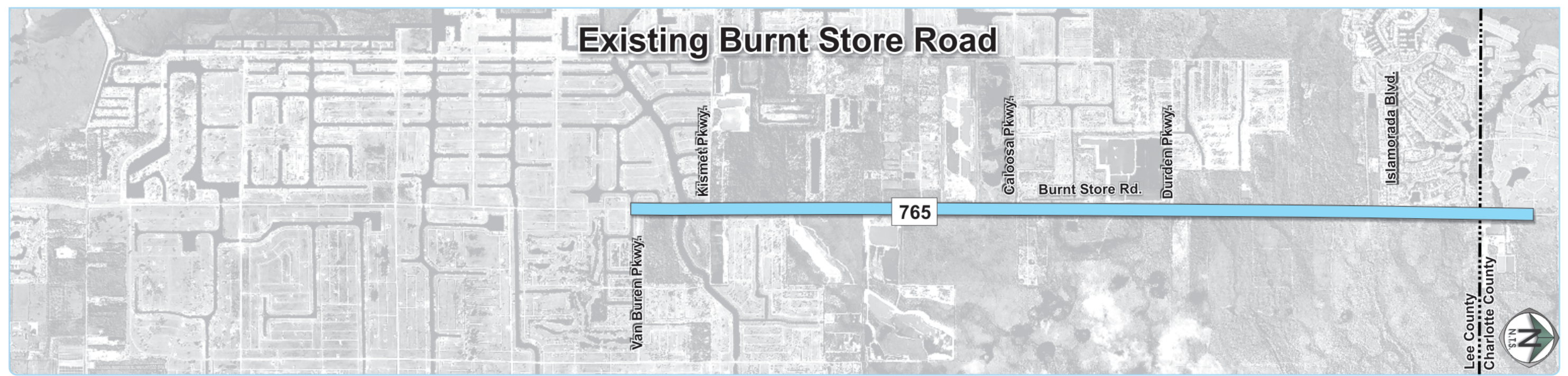
Proposed Burnt Store Road

- Full Median Opening Locations**
- Islamorada Boulevard
 - Durden Parkway
 - Caloosa Parkway
 - Kismet Parkway
 - Van Buren Parkway
 - Other Access

- Legend**
- Arterial Lanes
 - Local Road with Cul-De-Sac
 - Proposed Full Median Opening
 - Proposed Directional Median Opening



Existing Burnt Store Road





Recommended Access Plan Schematic Burnt Store Road: - Option A Van Buren Parkway to Pine Island Road

BI-COUNTY STUDY
LEE AND CHARLOTTE
COUNTIES

2-17-05

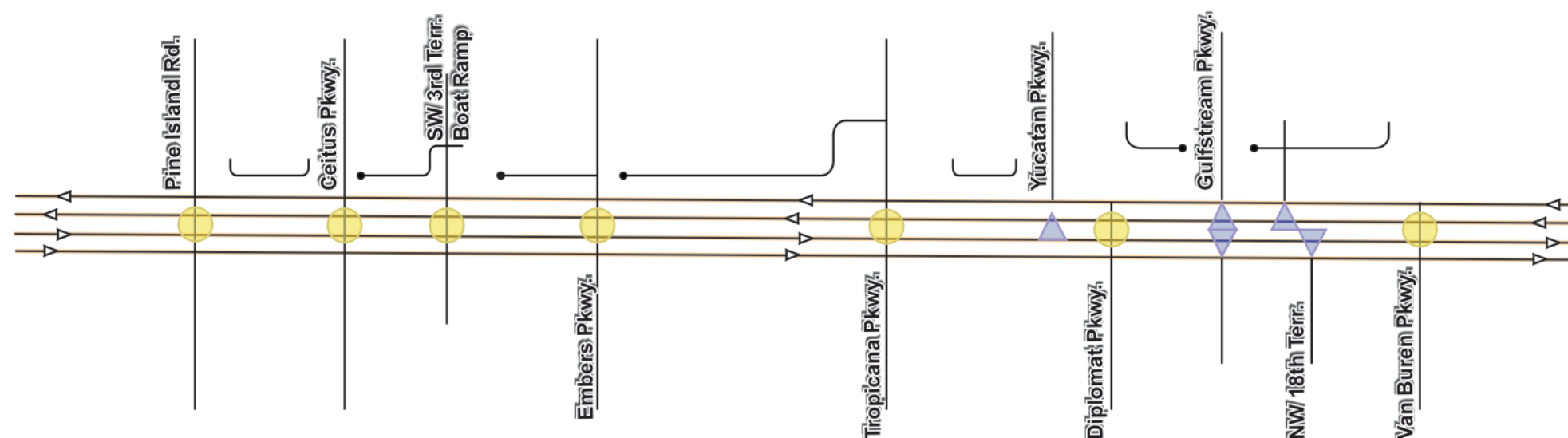
Proposed Burnt Store Road

Full Median Opening Locations

Van Buren Parkway
Diplomat Parkway
Tropicana Parkway
Embers Parkway
SW 3rd Terrace
Ceitus Parkway
Pine Island Road
Other Access

Legend

- Arterial Lanes
- Local Road with Cul-De-Sac
- Proposed Full Median Opening
- Proposed Directional Median Opening



Existing Burnt Store Road



Lee County
Charlotte County





Recommended Access Plan Schematic Burnt Store Road: - Option B Van Buren Parkway to Pine Island Road

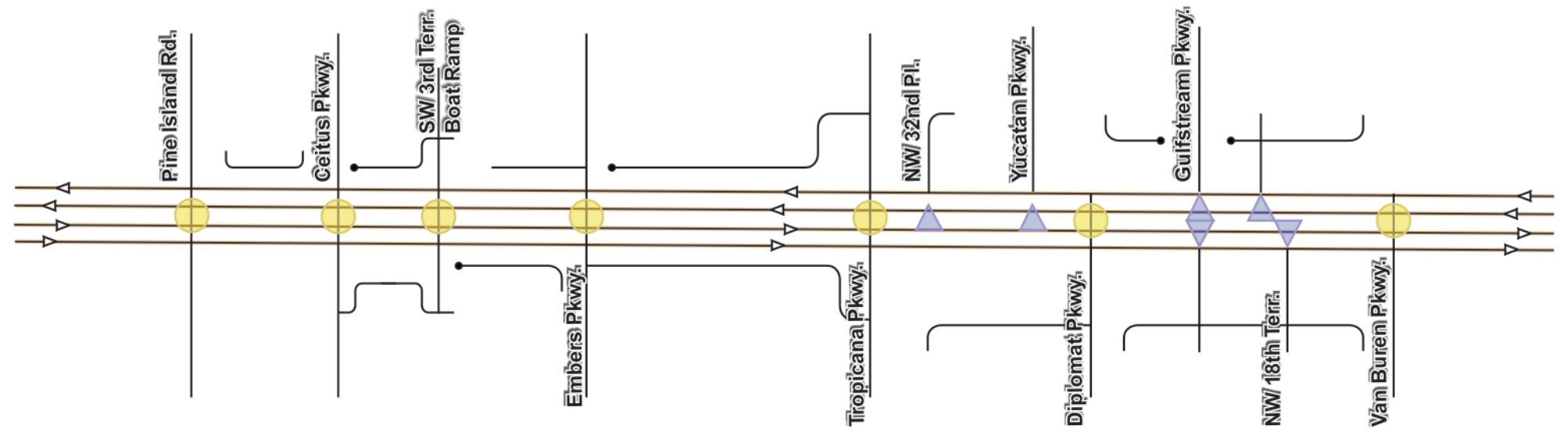
BI-COUNTY STUDY
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2-17-05

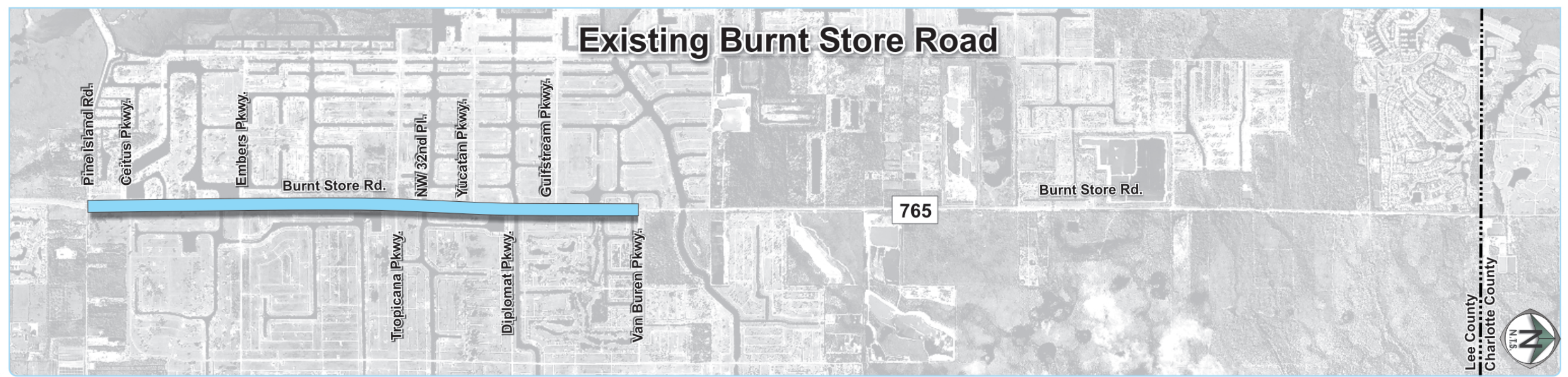
Proposed Burnt Store Road

Full Median Opening Locations
VanBuren Parkway
Diplomat Parkway
Tropicana Parkway
Embers Parkway
SW 3rd Terrace
Ceitus Parkway
Pine Island Road

Legend
Arterial Lanes
Local Road with Cul-De-Sac
Proposed Full Median Opening
Proposed Directional Median Opening



Existing Burnt Store Road





Recommended Access Plan Schematic Veterans Parkway: Pine Island Road to Del Prado Boulevard

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COUNTIES

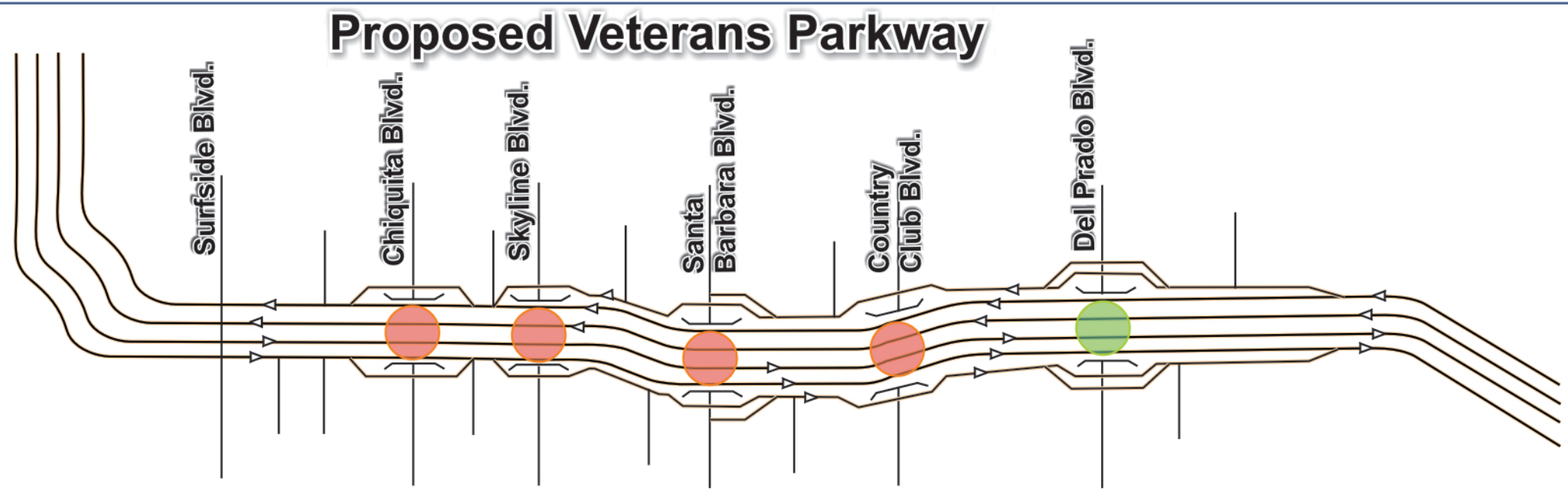
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Interchange Locations

Chiquita Boulevard
Skyline Boulevard
Santa Barbara Boulevard
Country Club Boulevard
Del Prado Boulevard

Legend

Arterial Lanes
 Existing Interchange
 Proposed Interchange

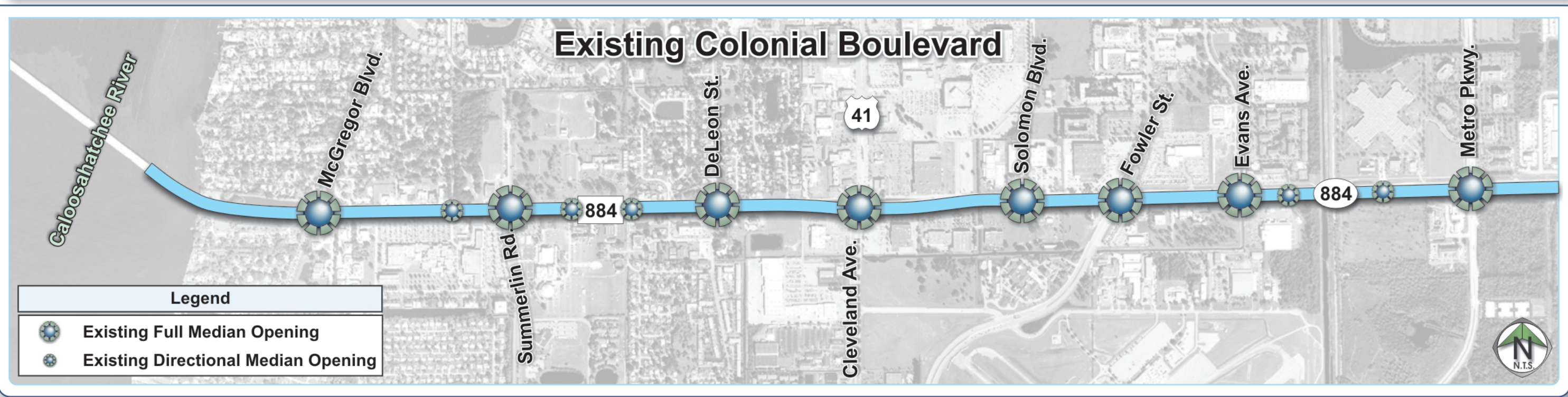
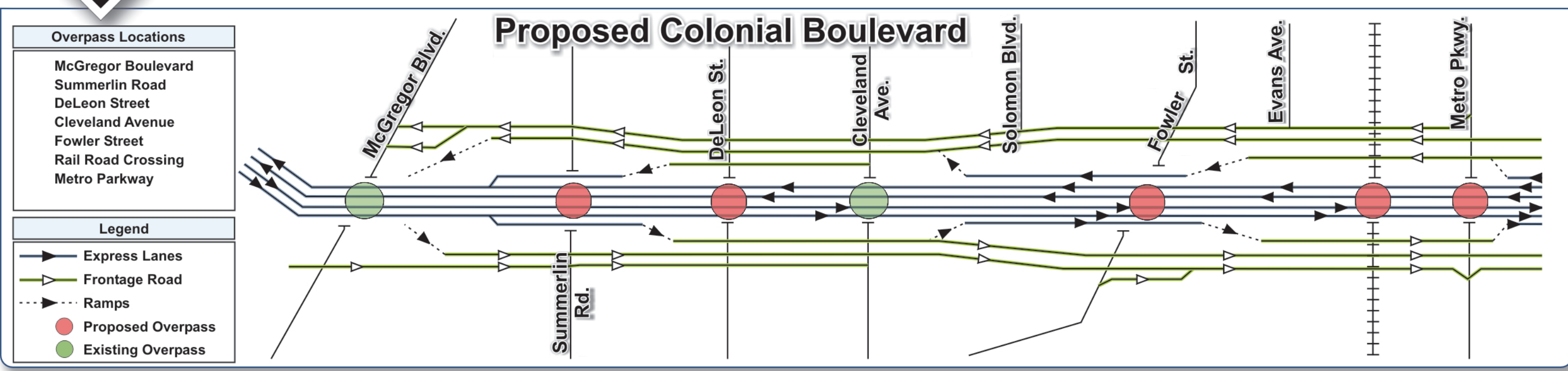




Recommended Access Plan Schematic McGregor Boulevard to Metro Parkway

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COUNTIES

3-14-05



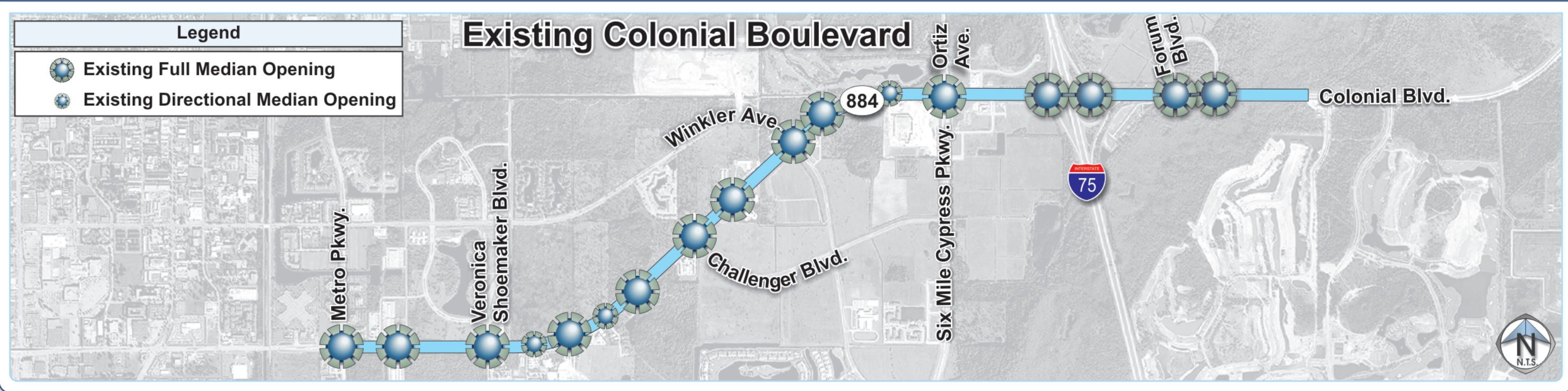
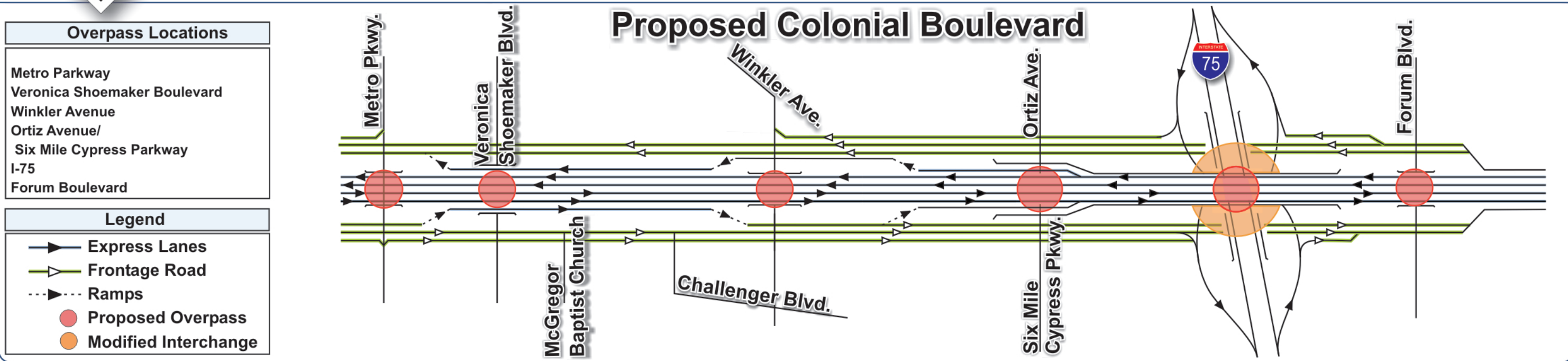


Recommended Access Plan Schematic

Colonial Boulevard: Metro Parkway to I-75

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LEE AND CHARLOTTE
COUNTIES

3-14-05





Bi - County Study

Phase II: Concept Report

FINAL

**Burnt Store Road -
Veterans Parkway -
Colonial Boulevard**
Lee and Charlotte Counties

**Project No.
4085**

Prepared by:

PBS&I

May 2005

(Revised August 2005)