

## **4.0 COORDINATION WITH LOCAL AND REGIONAL AGENCIES**

### **4.1 Metropolitan Planning Organization**

The study team held an informal teleconference with the Broward County Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP) Project Manager, Mr. Ossama Al-Aschkar. Discussion topics included a brief project description, a summary of the needs assessment, and the recommended procedure to get this project on the LRTP. In general, Mr. Al-Aschkar agreed that the projects goals are compatible with those of the MPO. He suggested for the Town's MPO representative to initiate the evaluation process for inclusion of the project into the LRTP. Requests for LRTP amendments may be submitted in April and October for MPO consideration during June and December, respectively. Based on Mr. Al-Aschkar's recommendation, an Action Plan was developed and included in Section 8.1 of this report to help guide the Town through the process of getting this project on the LRTP.

### **4.2 Florida Department of Transportation District Four**

Preliminary discussions held with FDOT District Four indicate that since the road connects to SR-7, a drainage permit and access permit would be required during the design phase of the project. Designers would have to submit the appropriate permit documentation to demonstrate that proposed improvements will not interfere with the traffic operations or drainage of SR-7. Routine effort is anticipated in obtaining the required permits from FDOT since improvements recommended to the study corridor near SR-7 are minimal.

### **4.3 Florida's Turnpike Enterprise**

The study team held an informal teleconference with the Florida Turnpike Enterprise (FTE). Preliminary discussions indicated that the crossing will require a permit from FTE. Once the project gets on the LRTP, additional coordination will be required.



#### **4.4 Coordination with Town Planning Department**

The study team met with The Town of Davie Planning Department midway through the course of this study. A Roadway Typical Section handout and a 36" x 72" Base map were used to discuss the various challenges of the project. In general, Town staff agreed with the methodology used to collect data for this study. Notes of the meeting are located in Appendix E.

#### **4.5 Public Awareness**

The study corridor falls within the Regional Activity Center (RAC) designated by the Town. Development within the RAC is influenced by the RAC Steering Committee, which consists of local business and community leaders. The study team met with the RAC Steering Committee to present preliminary findings and recommendations of this study. In general, the Steering Committee agreed with the proposed improvements to Oakes Road. Notes of the meeting are located in Appendix E.

### **5.0 CONCEPTUAL ROADWAY GEOMETRY**

A preliminary analysis of roadway geometry was performed for the study corridor. The analysis consisted of determining applicable design criteria, identifying the existing roadway typical section, and determining a feasible alignment that will be compatible with the ultimate typical section of the corridor based on the Town's redevelopment plan. Findings of the preliminary analysis are summarized in the following subsections.

#### **5.1 Design Criteria**

The Broward County Administrative Code (BCAC) was reviewed to determine applicable design criteria. Exhibit 25A, of the BCAC, provides minimum standards applicable to public right-of-way under Broward County, Florida Jurisdiction. Section 6-1.1 of the Broward County Minimum Design Criteria states the following:

"At a minimum, roads designated as arterial or collector roads and related facilities shall be designed in substantial accordance with the: 'The Green Book,' 'Design Standards,' and the 'Utility Accommodation Guide Manual,' all as published by FDOT."



As such these manuals were used to establish design criteria for this preliminary evaluation.

The Manual of Uniform Minimum Standards, issued by the FDOT in May 2007, for design, construction and maintenance for streets and highways (Commonly known as the "Florida Greenbook") was used to establish the following design criteria.

**DESIGN ELEMENTS:**

- **Roadway Classification:** Urban Collector
- **Posted Speed:** 30 mph
- **Design Speed:** 40 mph (Table 3-1)
- **Design Vehicle:** Interstate Semitrailer WB-62 FL (Table 3-2)
- **Minimum Stopping Sight Distance:** 305-ft based on 40 mph (Table 3-6).
- **Minimum Passing Sight Distance:** 1470-ft based on 40 mph (Table 3-6).
- **Horizontal Alignment:** Curves should be at least 900-ft long for a central angle of 1 degree or 500-ft long for a central angle of 5 degrees.
- **Superelevation:** Maximum rate of 0.05 foot per foot of roadway width.
- **Vertical Curves:** required when the algebraic difference of intersecting grades exceeds 4% (Table 3-5)
- **Minimum Length of Vertical Curve on a Crest:** 300-ft based on 4% difference in grade (Figure 3-4)
- **Number of Lanes:** 4 lanes based on Town’s RAC Master Plan Page 17
- **Minimum Lane Width:** 11-ft based on roadway classification (Table 3-7)
- **Minimum Median Width:** 15.5-ft (Table 3-11)
- **Pavement Cross Slope:** 0.02 foot per foot (Section C.7.b.1)
- **Minimum Sidewalk Width:** 6-ft (Section C.7.d) 10-ft preferred by Town’s RAC Master Plan Page 17
- **Minimum Width of Clear Zone:** 4-ft from face of curb (Table 3-12)
- **Vertical Clearance:** 16.5-ft (Section C.7.j.4.b)

**5.2 Existing Typical Section**

Under present conditions, Oakes Road begins adjacent to the Florida Turnpike and runs east to connect with State Road 7. Oakes Road is non-existent west of the Florida Turnpike. The East Segment of the study corridor has three distinct



typical sections. They do not necessarily coincide with available Right-of-Way (R/W). Limits of the existing typical sections are described below in Table 5-1.

FROM	TO	LENGTH (ft)	LANES*	CURB & GUTTER
SR 7	Burris Road	1,580	5 Lanes (2 E/Way & TWLTL)	Yes
Burris Road	SW 47 <sup>th</sup> Ave	520	4 Lanes (2 EB & 1WB & TWLTL)	No
SW 47 <sup>th</sup> Ave	SW 50 <sup>th</sup> Ave	1,600	3 Lanes (1 E/Way & TWLTL)	No

\*TWLTL = Two Way Left Turn Lane

**Table 5-1; Existing Typical Sections in East Segment**

### 5.3 Proposed Typical Section

The proposed typical section consists of a 4 lane urban collector (2 lanes each way) with a divided median and left turn bays, as required at the intersections. In addition, it has provisions for bicycle and pedestrian usage through a 4-ft bicycle lane adjacent to a 2-ft curb & gutter and 8-ft sidewalks along both sides of the corridor. This typical section requires 90-ft of R/W. The proposed roadway features are in accordance with the Town’s Regional Activity Center (RAC) master plan. A note is made that a traffic study for the corridor was not available at the time this study was conducted. As such, the typical section is based on the recommendations from the RAC master plan rather than on a traffic study.

While the proposed cross-section of the roadway is consistent throughout the study corridor, the existing R/W varies throughout as described in Table 5-2. The location of the typical section within the existing R/W is illustrated in Figures 5-1 through 5-8. Acquisition of R/W is recommended on the northern edge of the existing R/W to avoid impacting the existing Florida Power and Light (FPL) transmission poles located on the southern edge of the R/W. Section 6.1 of this report further discusses R/W acquisition along the study corridor.

FROM	TO	LENGTH (ft)	EXIST R/W (ft)	PROPOSED ROADWAY
SR7	Burris Road	1580	75'	4 Lanes (2 E/Way & Median)
Burris Road	SW 49th Way	1430	60'	4 Lanes (2 E/Way & Median)
SW 49 Way	SW 50th Ave	690	60'	4 Lane Bridge Approach
TPK	SW 50 Ter	800	40'	4 Lane Bridge Approach
SW 50 Ter	SW 52 Ave	540	40'	4 Lanes (2 E/Way & Median)
SW 52 Ave	SW 56 Ave	1260	70'	4 Lanes (2 E/Way & Median)
SW 56 Ave	Davie Road	2500	20'	4 Lanes (2 E/Way & Median)

**Table 5-2; Existing Right-of-Way along Study Corridor**



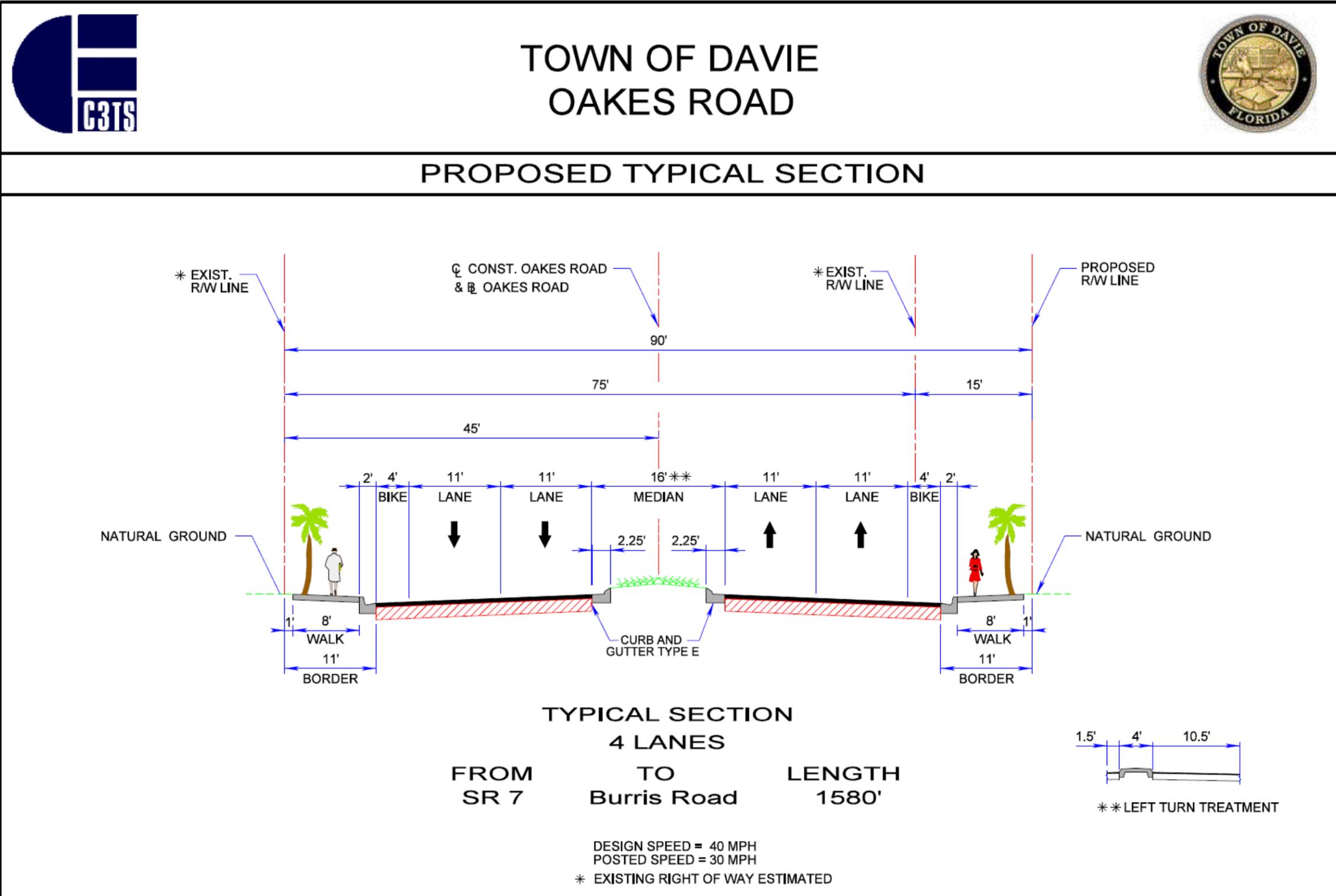
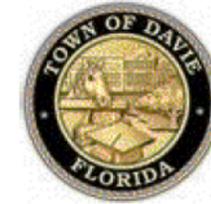


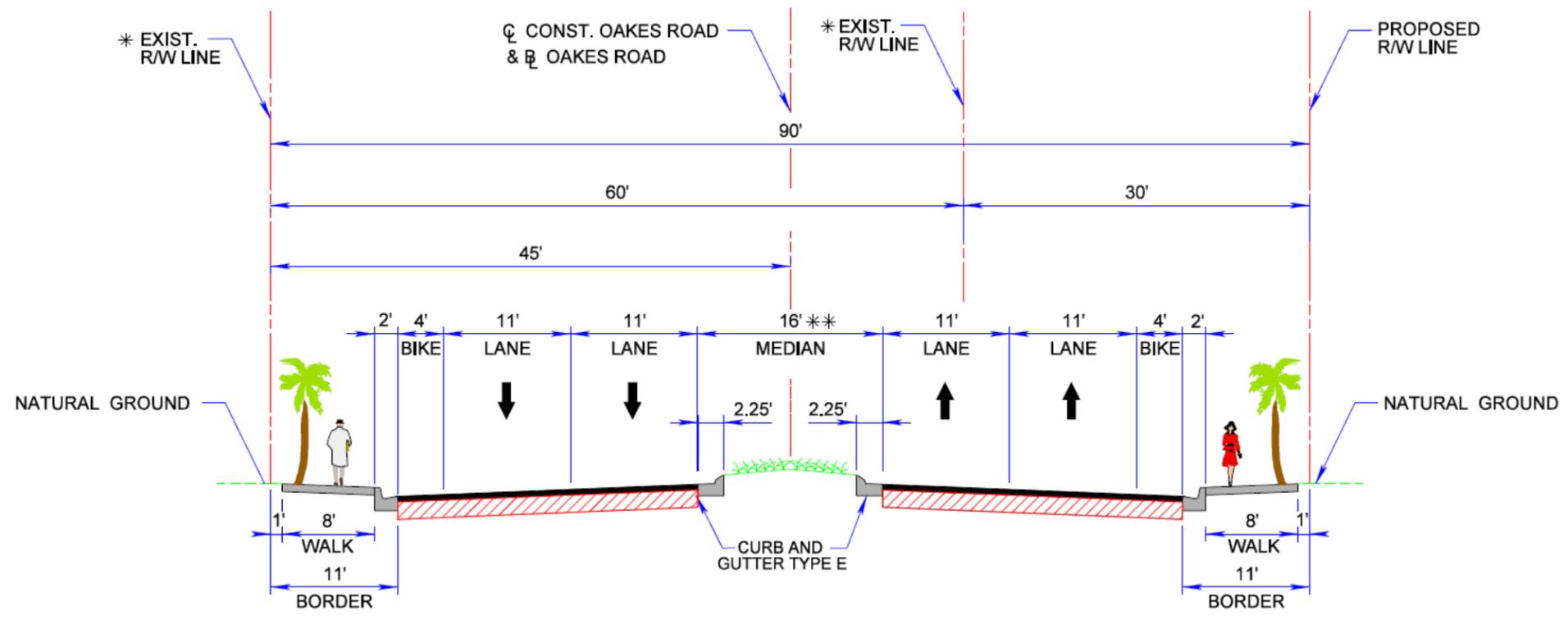
Figure 5-1; Oakes Road Typical Section From SR 7 To Burris Road



# TOWN OF DAVIE OAKES ROAD



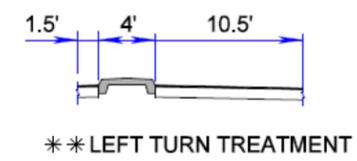
## PROPOSED TYPICAL SECTION



**TYPICAL SECTION  
4 LANES**

**FROM Burris Road TO S.W. 49 Way**

**LENGTH 1430'**



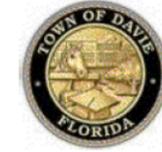
DESIGN SPEED = 40 MPH  
POSTED SPEED = 30 MPH  
\* EXISTING RIGHT OF WAY ESTIMATED

Figure 5-2; Oakes Road Typical Section From Burris Road To SW 49 Way

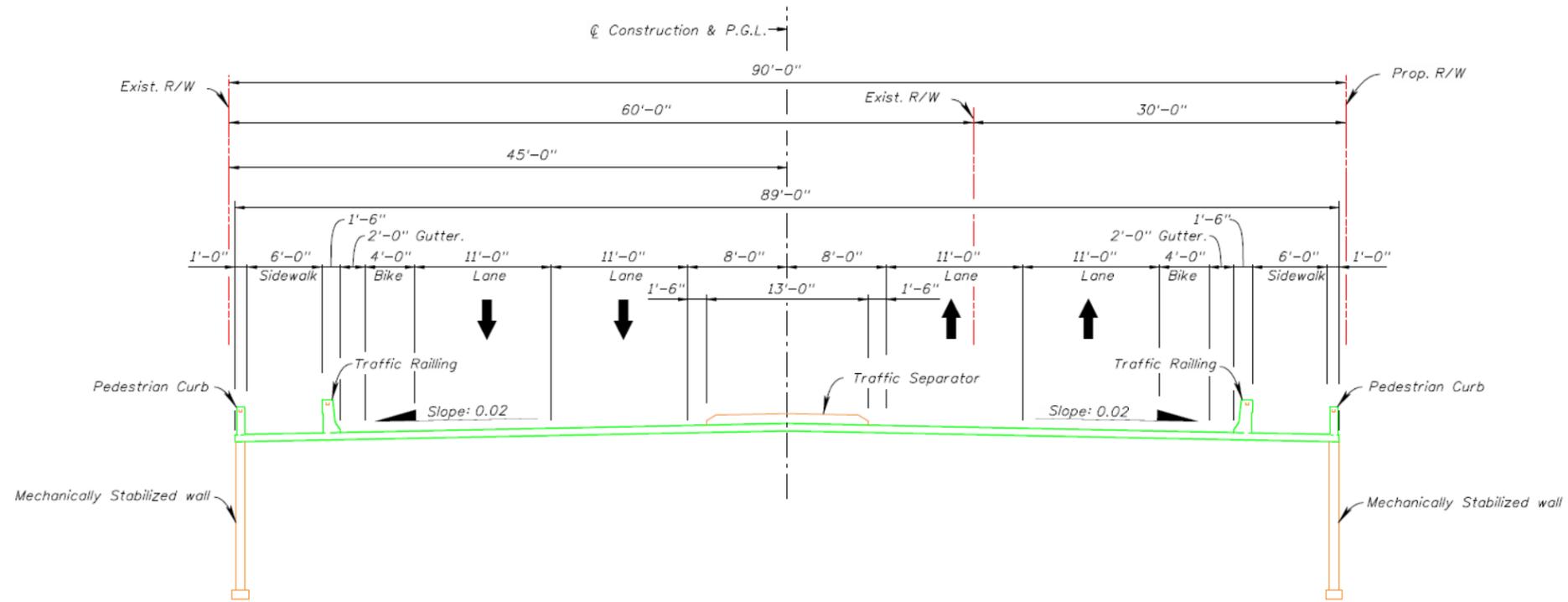




# TOWN OF DAVIE OAKES ROAD



## PROPOSED MSE WALL TYPICAL SECTION



TYPICAL SECTION  
 4 LANES  
 FROM S.W. 49 WAY TO S.W. 50 Ave. LENGTH 690'

Figure 5-3; Oakes Road Bridge Approach (East Side)

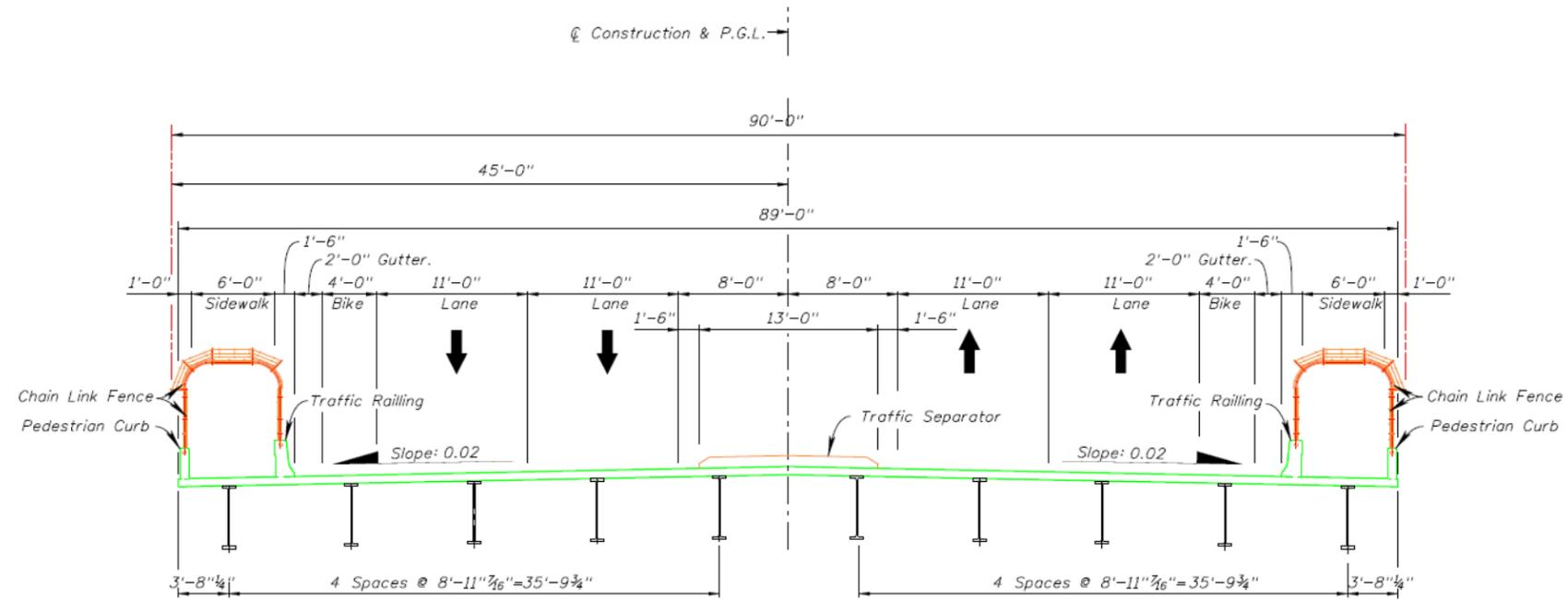




# TOWN OF DAVIE OAKES ROAD



## PROPOSED BRIDGE TYPICAL SECTION



TYPICAL SECTION  
4 LANES  
BRIDGE OVER TURNPIKE

Figure 5-4; Oakes Road Bridge Over Turnpike.

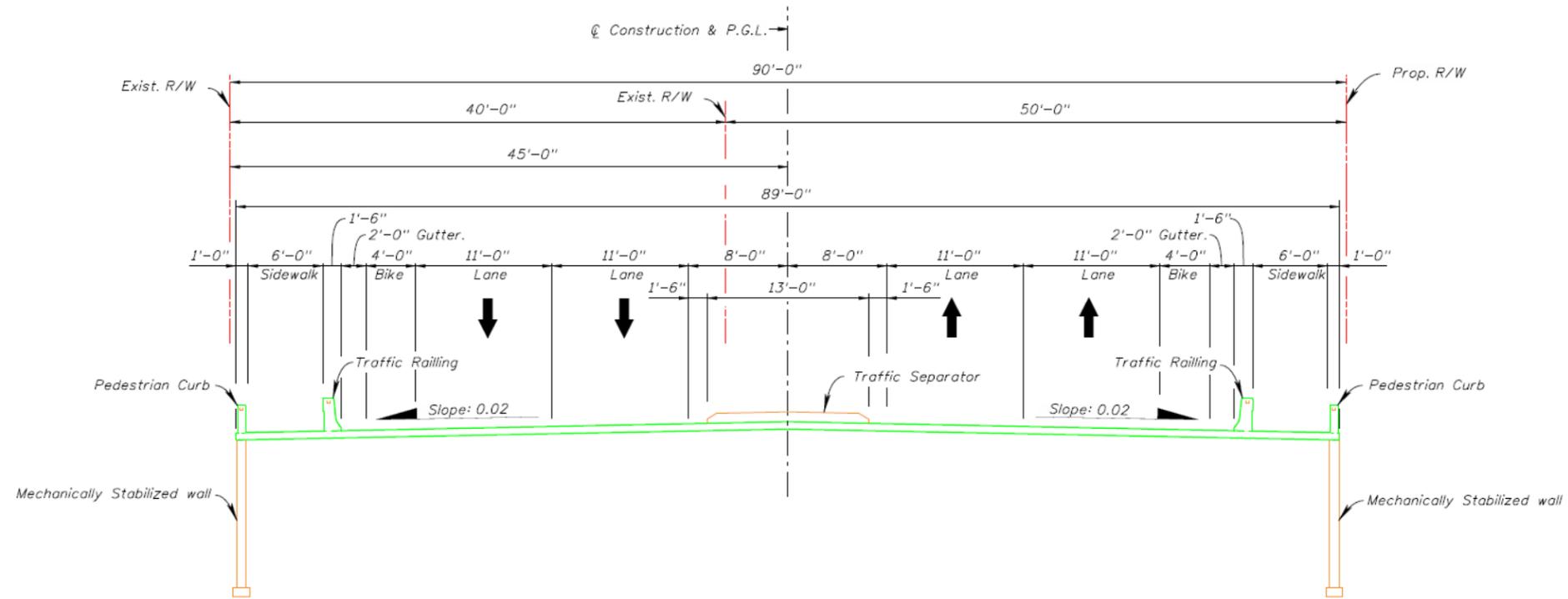




# TOWN OF DAVIE OAKES ROAD



## PROPOSED MSE WALL TYPICAL SECTION



TYPICAL SECTION  
4 LANES  
FROM TO LENGTH  
TPK S.W. 50 Ter. 800'

Figure 5-5; Oakes Road Bridge Approach (West Side).

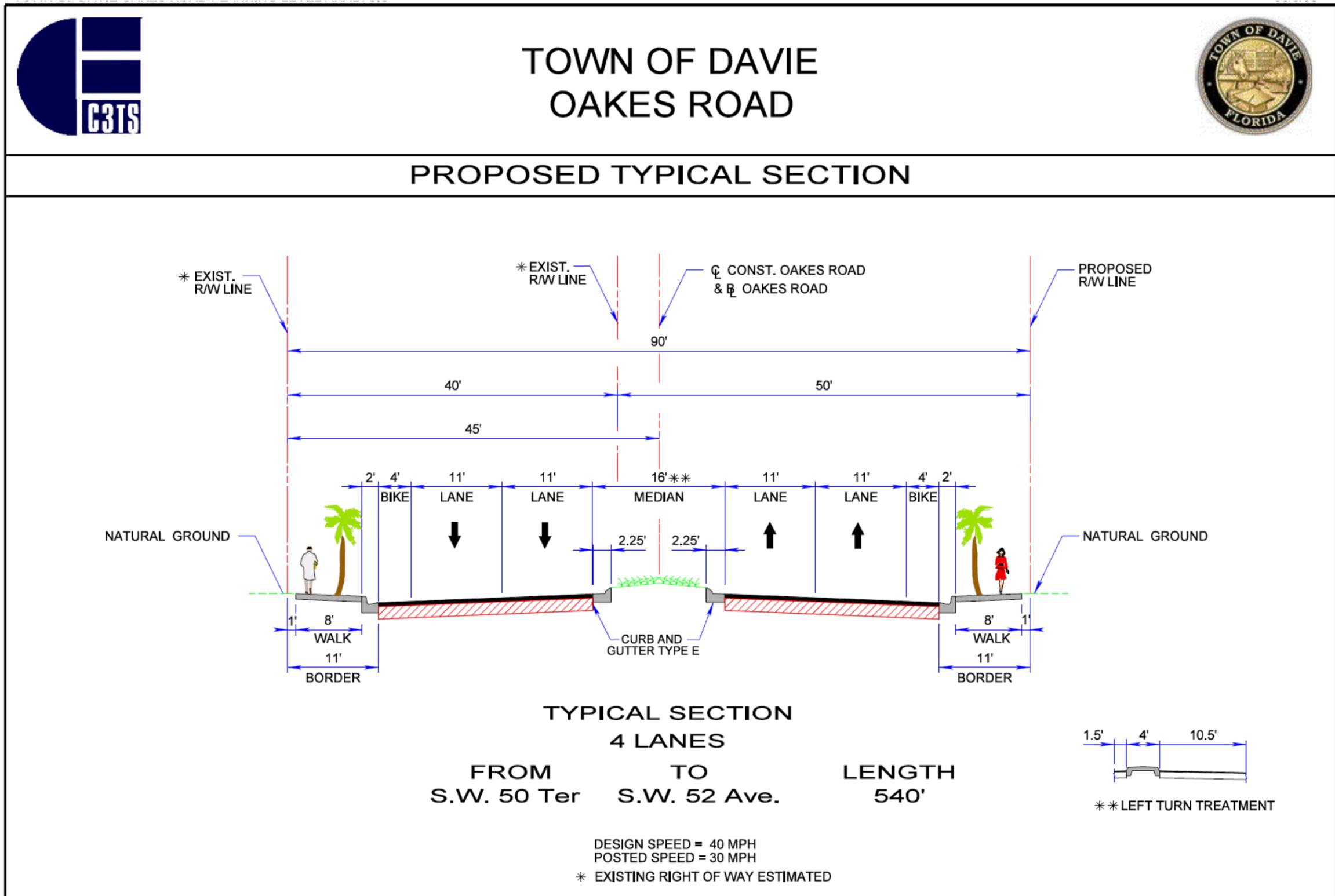


Figure 5-6; Oakes Road Typical Section From SW 50 Ter. To SW 52 Ave



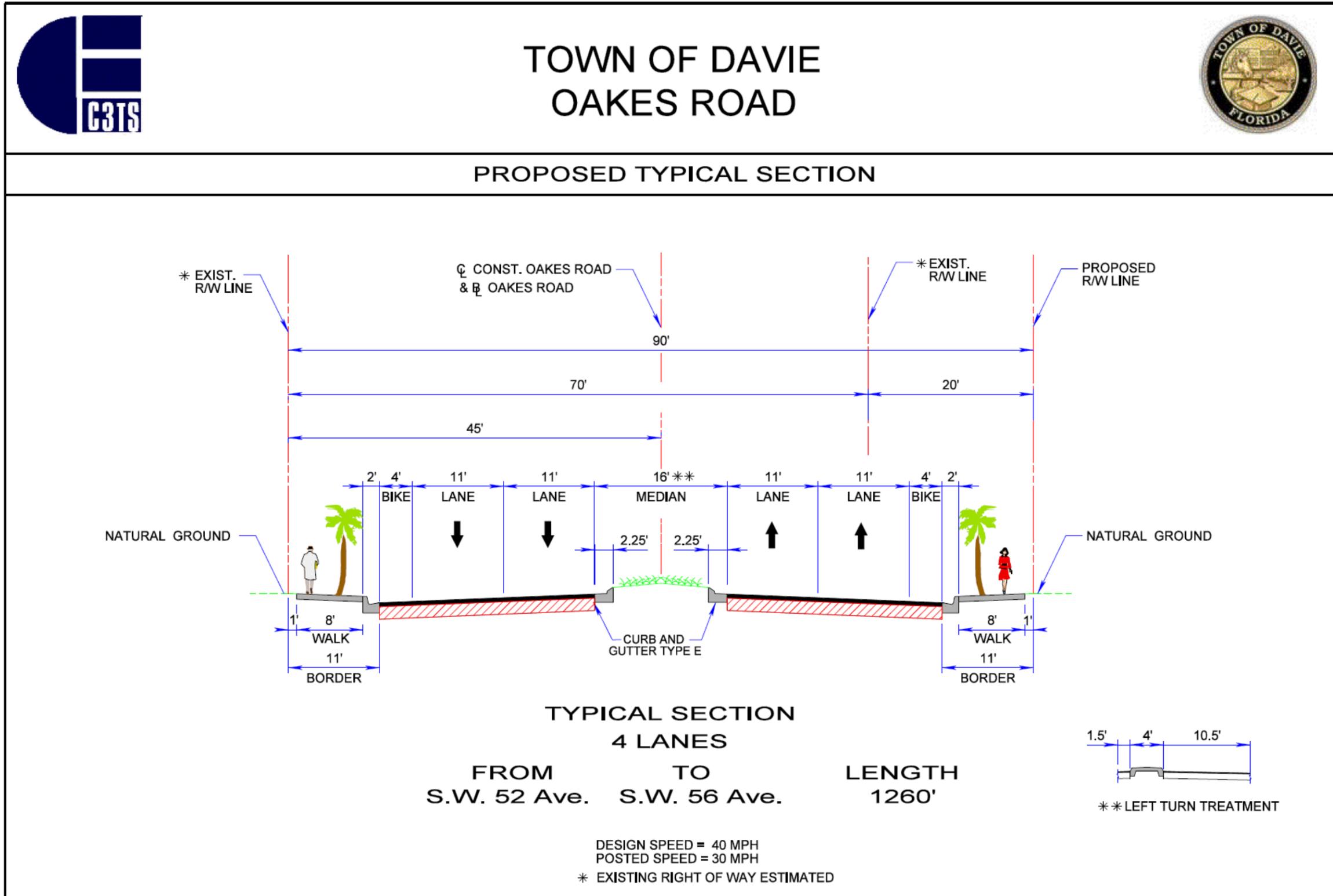


Figure 5-7; Oakes Road Typical Section From SW 52 Ave To 56 Ave



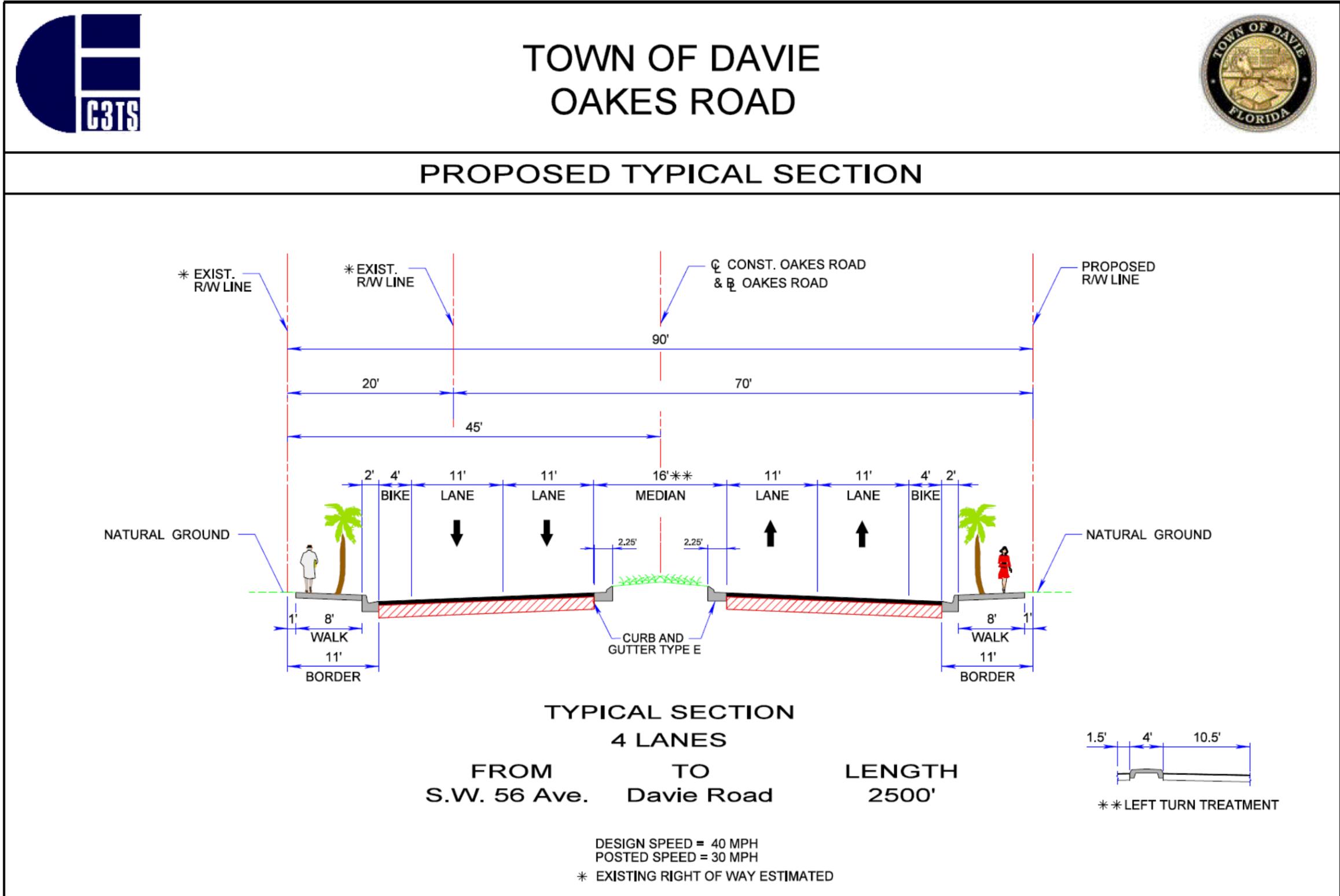


Figure 5-8; Oakes Road Typical Section From SW 56 Ave To Davie Road



#### 5.4 Turnpike Crossing

In order to connect Oakes Road to Davie Road, it must cross over the Florida Turnpike, which has a Right-of-Way (R/W) width of 300-ft at this location. A preliminary roadway profile evaluation, shown in Figure 5-9, was performed to determine the approximate vertical alignment of the bridge crossing. See Appendix B for Preliminary Vertical Alignment Calculations. A survey of the project area was not available at the time this study was conducted. Elevations from nearby projects were used. An elevation of 9.6-ft NAVD (11.2-ft NGVD), at station 4749+00, was obtained from construction plans for proposed improvements to the Turnpike under Financial Project Identification (FPID) 406094-4-52-01. This elevation is expected to be the highest point that will be spanned by the bridge, within the R/W, since it corresponds with the proposed elevation for the Turnpike's Profile Grade Line (PGL) near the estimated location of the crossing. An elevation of 4.8-ft NAVD (6.0-ft NGVD), at station 10+00, was obtained from construction plans for improvements to Oakes Road, which were prepared in 1988 under project number 86-084. A note is made that the conversion from NAVD to NGVD is +1.6-ft for this location.

Profile calculations were based on providing a minimum clearance of 16.5-ft between the lowest member of the proposed bridge and the Turnpike's roadway. Preliminary calculations were performed to provide characteristics of a bridge with sufficient structural capacity to span the required 300-ft segment. The proposed bridge consists of a two span steel plate girder structure. To reduce the required R/W, it may be supported on both ends by Mechanically Stabilized Earth (MSE) and by a pier in the middle. The resulting bridge would have a 314' long deck with a superstructure depth of 6.20' and approaches approximately 845' long.

According to this preliminary evaluation, the tie-in point would obstruct SW 49<sup>th</sup> Ave since the bridge would touch-down approximately 90-ft east of the intersection. It is anticipated that this issue can be resolved in future studies by either refining the bridge design or elevating the intersection.





# TOWN OF DAVIE OAKES ROAD



## PROFILE FOR OAKES ROAD BRIDGE OVER FLORIDA'S TURNPIKE

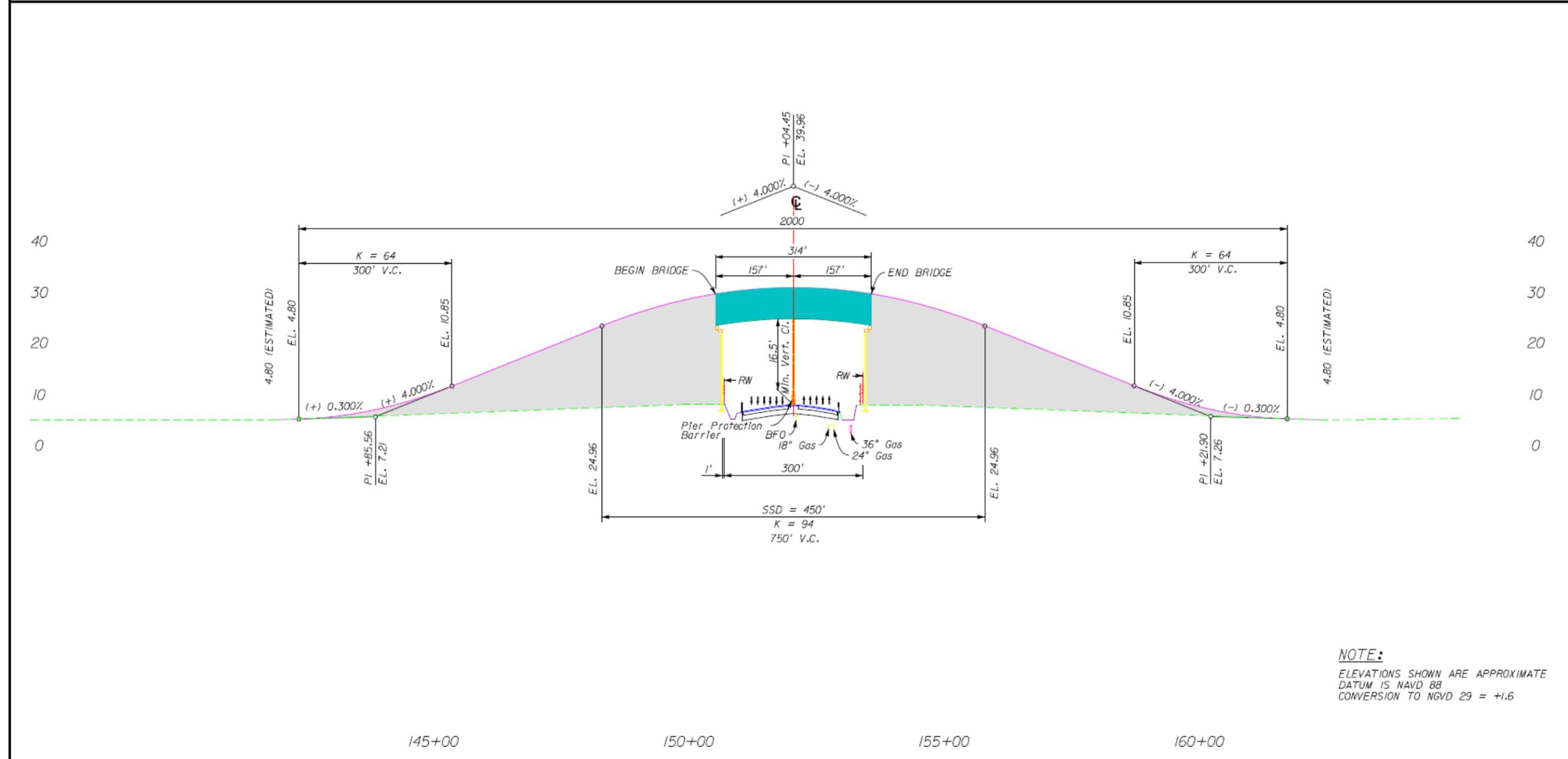


Figure 5-9; Profile For Oakes Road Bridge



### 5.5 Proposed Roadway Footprint

Improvements proposed for Oakes Road will increase the footprint of the roadway. In general the roadway footprint will be increased towards the northern edge of the existing R/W, to minimize the impact on the FPL transmission lines located along the southern edge of the existing R/W. An offset, approximately 41' wide, exists between the centerlines of the East and West Segment of Oakes Road, as shown in Figure 5-10.

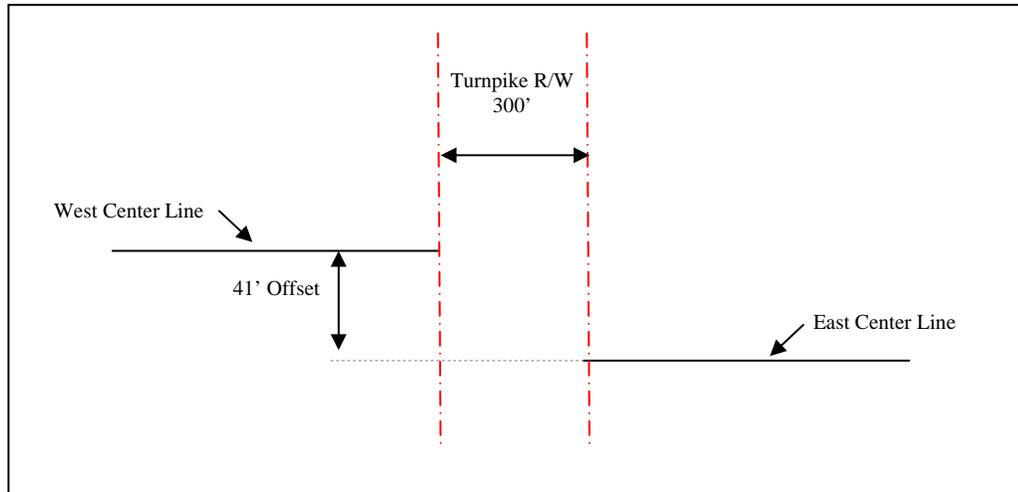


Figure 5-10; Plan View, Offset Roadway Centerlines for Oakes Road

Preliminary calculations indicate that it is possible to connect the West and East centerlines of the roadway using criteria from the Florida Green Book and a simple horizontal curve to match alignments. The straight segment of roadway, between Points of Tangent (PT) of both curves, is approximately 428-ft, as shown in Figure 5-11. See Appendix C for calculations of the analysis.

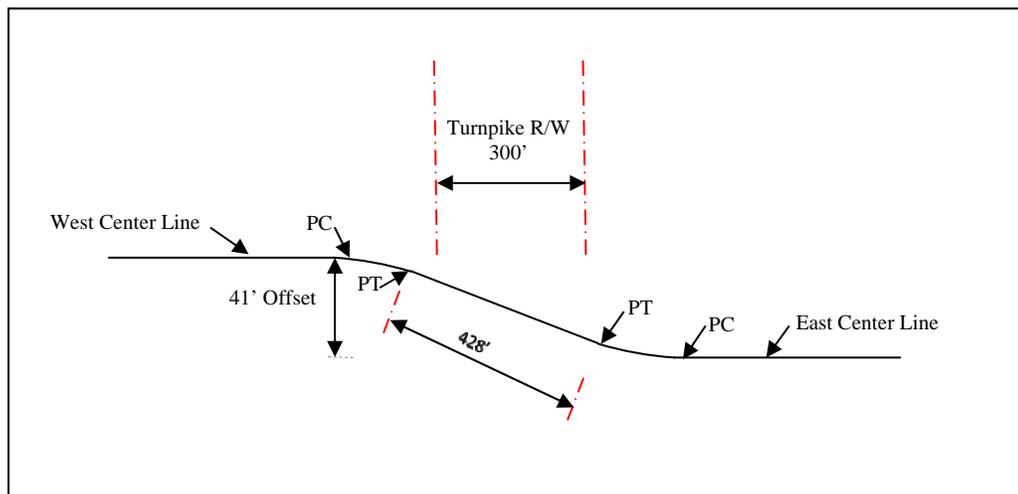


Figure 5-11; Plan View, Preliminary Horizontal Alignment



### 5.6 Connection to State Road 7

Under existing conditions, Oakes Road turns south before connecting to State Road 7, as shown in Figure 5-12. The Town expressed a desire to remove the bend in Oakes Road and have it connect directly to State Road 7. Preliminary research indicates the bend in Oakes Road was added by FDOT to provide sufficient distance between the I-595 off-ramp and the Oakes Road intersection to address operational concerns with I-595. Due to the severe curvature of the roadway, pavement was added to accommodate semi-tractor trailer truck turning radius throughout the curved alignment. Minor improvements, to tie in with the proposed typical section, are recommended for this intersection.



Figure 5-12; Study Corridor

### 5.7 Connection to Davie Road

A signalized intersection will be required at this connection. The extension of Oakes Road to the west and its eventual connection with Davie Road will require modifications to the internal roads of the Fern Crest Village Trailer Park community. This area has been designated for redevelopment by the Town, as reflected in the RAC master plan.

