FINAL
PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

Florida's Turnpike Enterprise

Project Development and Environment (PD&E) Study to
Widen Western Beltway (SR 429)
from North of I-4/SR 429 Interchange to Seidel Road
Orange and Osceola Counties, Florida

Financial Management Number: 446164-1
ETDM Number: 14446

August 2023

PROFESSIONAL ENGINEER CERTIFICATION
PRELIMINARY ENGINEERING REPORT

Project: Widen Western Beltway (SR 429)
from North of I-4/SR 429 Interchange to Seidel Road (MP 1 to 11)
ETDM Number: 14446
Financial Project ID: 446164-1-22-01
Federal Aid Project Number: TBD

This Final Preliminary Engineering Report contains engineering information that fulfills the purpose and need for the Project Development & Environment Study to Widen Western Beltway (SR 429) from north of I-4 to Seidel Road (MP 1 to 11) in Osceola and Orange Counties, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with RS&H, Inc., and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice for this project.

Frederick C Langlass

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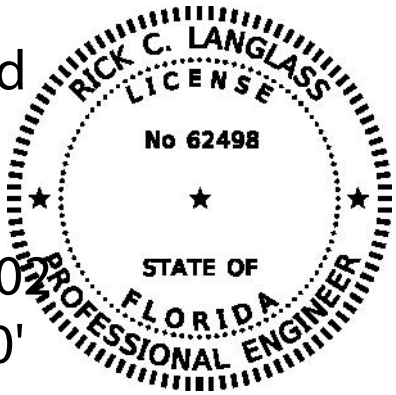

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1 Project Summary

1.1 Project Description

The Florida Department of Transportation (FDOT), Florida's Turnpike Enterprise (FTE) is evaluating improvements to the Western Beltway/State Road (SR) 429 from north of Interstate 4 (I-4) in Osceola County (Milepost 1) to the Seidel Road interchange (Milepost 11) in Orange County, a distance of approximately 10 miles. The Western Beltway (SR 429) is part of a limited-access, tolled beltway around Orlando, and is part of the overall Florida's Turnpike system of tolled expressways. The existing typical section for SR 429 from I-4 to Seidel Road is a four-lane divided expressway located within approximately 300 feet of right of way (ROW). The typical section includes 10-foot paved outside shoulders and four-foot inside paved shoulders on the mainline as well as guardrail in the median. Improvements being evaluated include widening from two to four lanes in each direction, incorporating interchange modifications and safety improvements along SR 429, adding, or upgrading Intelligent Transportation Systems (ITS), and adding a potential new interchange location at Livingston Road. An adjacent project, the Poinciana Parkway Extension Connector PD&E Study (Financial Project Identification Number [FPID] 446581-1) from County Road (CR) 532 to north of the I-4/SR 429 interchange will also evaluate improvements along SR 429 from the I-4 interchange to north of Sinclair Road. If Poinciana Parkway Extension Connector moves forward, the widening of Western Beltway (SR 429) will match that project north of Sinclair Road. However, in order to maintain independent utility, should the Poinciana Parkway Extension Connector not move forward, the Western Beltway widening would continue south of Sinclair Road to the I-4 interchange. Figure 1-1 shows the Project Location Map and study limits.

1.2 Purpose & Need

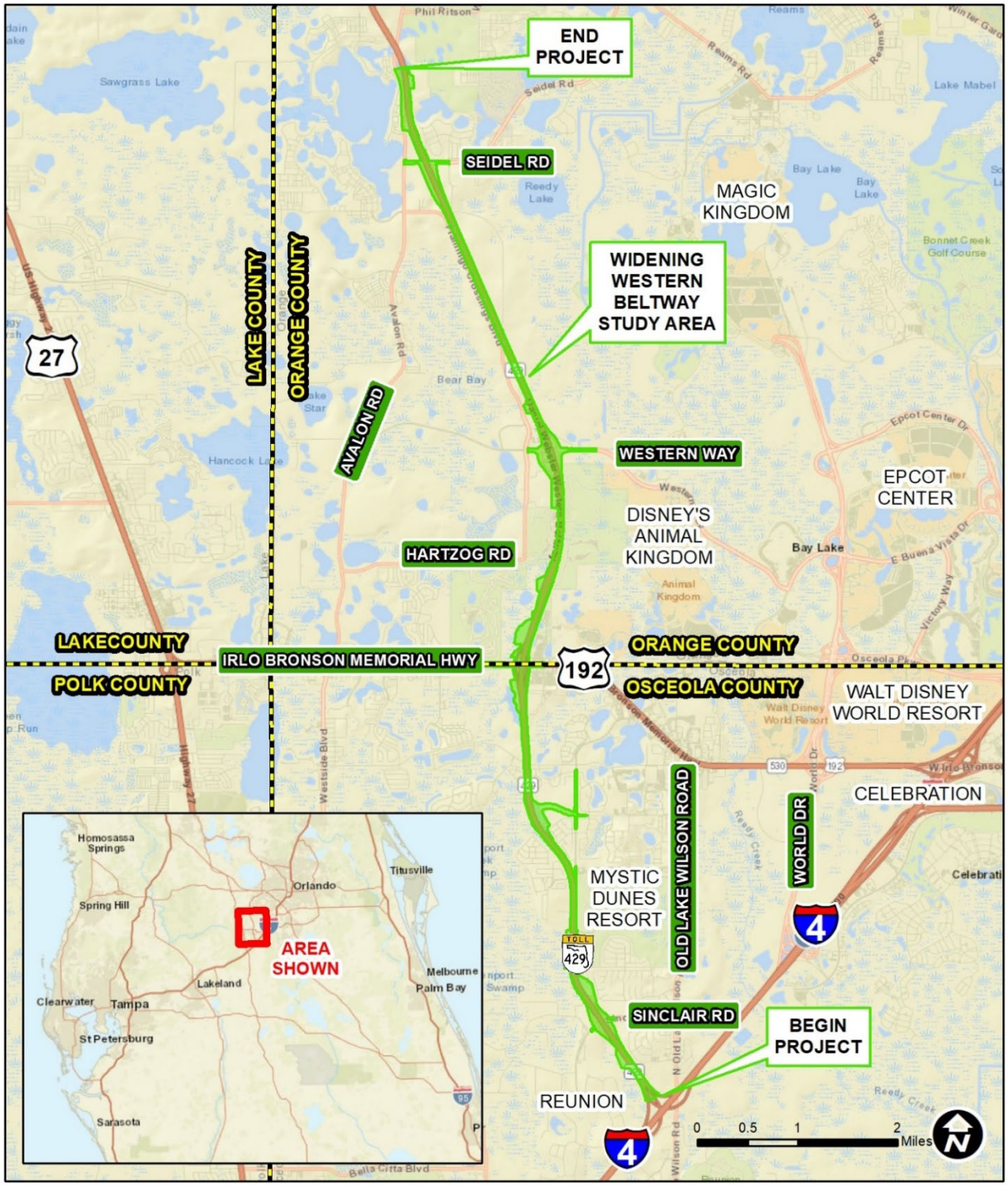
The purpose of the project is to increase capacity on SR 429 from north of I-4 to Seidel Road and at the interchanges within the study limits to accommodate future traffic demand, enhance safety, improve travel time reliability, and enhance emergency evacuation.

The need for this project is to improve future traffic operations. The proposed improvements will improve the travel time reliability, enhance safety, and improve emergency response and evacuation times.

1.2.1 Project Status

The MetroPlan Orlando 2045 Metropolitan Transportation Plan (MTP) Cost Feasible Plan (CFP) includes the widening of SR 429 from I-4 to Seidel Road (MTP ID# 1019) as a partially funded

Figure 1-1: Project Location Map



FLORIDA'S TURNPIKE

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY
TO WIDEN THE WESTERN BELTWAY
from I-4 to Seidel Road
Orange and Osceola Counties
FPID No.: 446164-1-22-01

PROJECT LOCATION MAP

project. Future phases of the project are not currently included in the MetroPlan Orlando Transportation Improvement Program (TIP) or the FDOT State Transportation Improvement Program (STIP). No federal funding is being used to complete this project. Additional coordination will take place during the PD&E Study to ensure consistency.

1.2.2 Capacity

The No-Build traffic analysis indicates that SR 429 will not meet the level of service (LOS) target (LOS D) by 2030 within the project limits. The traffic analysis shows a need for three travel lanes in each direction throughout the project limits by 2030. By Design Year 2050, Annual Average Daily Traffic (AADT) on the segment of SR 429 from north of I-4 to Seidel Road will increase substantially and ranges from 96,400 to 128,800 daily trips leading to additional congestion and degradation of LOS. North of US 192, eight travel lanes are needed by 2045. South of US 192, eight lanes are needed by 2050.

The US 192 interchange also has operational deficiencies. Long queues have been observed at the southbound off-ramp during the evening commute. The queues sporadically extend to the SR 429 mainline, impacting traffic flow and creating a safety concern. The intersections on US 192 adjacent to the SR 429 interchange operate at LOS F in the Design Year. The LOS failure along US 192 impacts the interchange operations and increases the ramp queues. To relieve congestion at the US 192 interchange, a new interchange is proposed at an extension of Livingston Road. The proposed Livingston Road interchange will reduce traffic demand along US 192 and the interchange ramps. The traffic volume on the US 192 ramps is anticipated to decrease by 22 percent with a reliever interchange at Livingston Road. With the addition of the Livingston Road interchange, traffic operations along US 192 are expected to improve.

1.2.3 Transportation Demand

The Florida's Turnpike Enterprise Florida Traffic Trends Report, July 2019, indicates that traffic volumes on the segment of SR 429 from I-4 to Seidel Road has experienced a 12.5% annual growth rate between 2008 and 2018. Travel forecasts show that traffic on SR 429 is expected to increase at an average yearly rate of about six percent between 2020 and 2030 and four percent between 2030 and 2050. As a result, the existing four lane capacity on SR 429 will soon be exceeded (in 2035), triggering a need for additional capacity.

1.2.4 Social Demand and Economic Development

SR 429 serves north-south trips on the west side of the Orlando metro area and provides access to Disney World attractions around the study area. Currently, traffic backs up on SR 429 in the southbound direction towards I-4 during the evening commute. The extensive residential and commercial development in the corridor is expected to continue, and congestion on SR 429 is

expected to increase. In order to support the projected economic development and viability in the region, capacity improvements to SR 429 are needed.

1.2.5 Safety

Between 2014 and 2018, there were 161 crashes on SR 429 between the I-4 ramps and Seidel Road interchanges. Another 41 crashes were reported on the SR 429 ramps in the five-year analysis period. A higher concentration of crashes was reported in the merge/diverge areas, particularly at US 192 and I-4 interchanges.

Actual crash rates were computed and compared with average crash rates for similar facilities within Orange and Osceola Counties to assess the safety condition within the study area. Critical crash rates and safety ratios were also estimated. The critical crash rate is based on the average crash rate for a similar facility adjusted by vehicle exposure and a probability constant. The safety ratio represents the actual crash rate divided by the critical crash rate. If a segment has an actual crash rate higher than the critical crash rate (i.e., safety ratio > 1.0), it may have a safety deficiency. The analysis shows that the SR 429 mainline, interchange ramps, and intersections within the study area had actual crash rates lower than the critical crash rates (i.e., safety ratio < 1.0), from 2014 through 2018. Even though the safety ratios are below 1.0 and do not reveal a safety deficiency in the study area, it is important to note that some of the locations had a significantly high number of crashes, such as the US 192 ramps, the ramp terminal, and adjacent intersections. This interchange and the arterial experience severe congestion during peak periods, primarily in the evening. The highest safety ratio (0.46) is reported for the SR 429 mainline, followed by the US 192 ramps (0.40), and the US 192 and SR 429 ramp terminal intersections (0.37).

The SR 429 corridor is a major transportation facility within the region and a primary emergency evacuation route. Improving capacity of the mainline and interchanges will reduce congestion in the corridor. Capacity improvements would reduce emergency response times, as well as evacuation and recovery times.

1.3 Commitments

To minimize the impacts of this project to the social, cultural, natural, and physical environment, the FTE has identified the following commitments:

1. The FTE will conduct design-phase coverboard surveys in accordance with the most recent U.S. Fish and Wildlife Service (USFWS) guidelines to verify activity and occupancy status of the blue-tailed mole skink and sand skink.
2. The most recent version of the USFWS Standard Protection Measures for the Eastern Indigo Snake will be adhered to during construction of the proposed project.

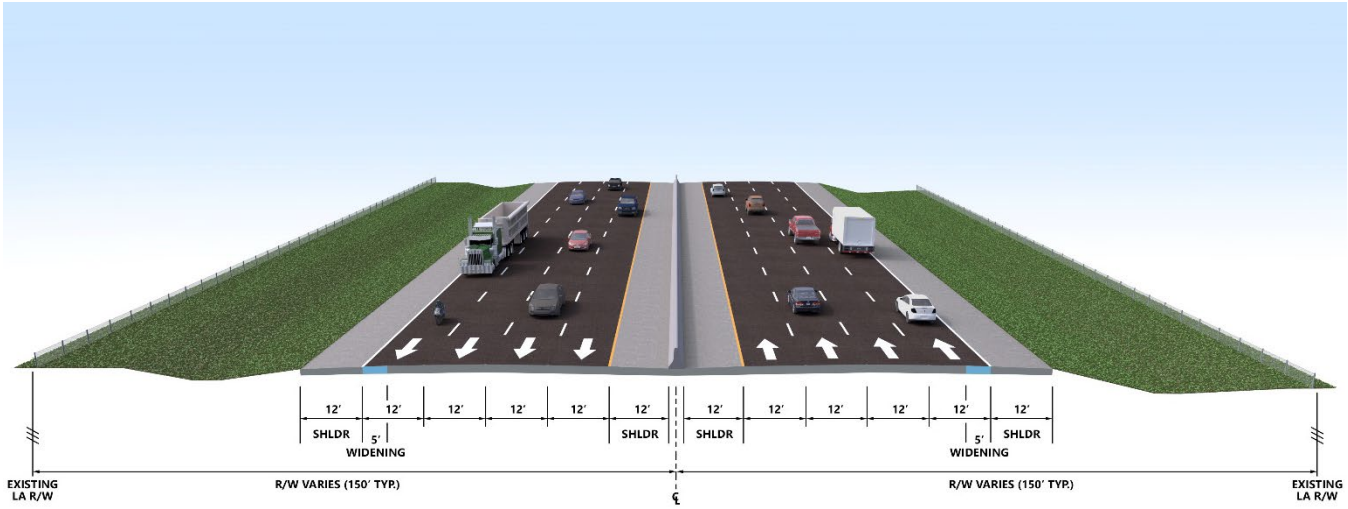
3. FTE is committed to the construction of feasible and reasonable noise abatement measures. Potentially feasible and reasonable noise barrier systems have been identified for this project contingent upon the following conditions:
   - Final recommendations on the construction of abatement measures are determined during the project's final design and through the public involvement process.
   - Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement.
   - Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion.
   - Community input supporting types, heights, and locations of the noise barrier(s) is provided to FTE.
   - Safety and engineering aspects have been reviewed and any conflicts or issues resolved.

1.4 Alternatives Analysis Summary

For the purpose of defining the Build Alternatives, the project is separated into the SR 429 mainline and the five interchanges.

The only build alternative for the widening of SR 429 includes adding two lanes in each direction for a total of four lanes in each direction. Figure 1-2 shows the preferred typical section for the SR 429 mainline.

Figure 1-2 Proposed SR 429 Typical Section



Early phases of alternative development consisted of performing a Capacity Analysis at Junctions (CAP-X) alternative screening for each interchange. The screened alternatives were ranked based on traffic performance. The alternatives were then evaluated for functionality, safety, cost and ROW requirements. The screened alternatives were narrowed down to alternatives that were

developed in Build Alternatives. These Build Alternatives were evaluated and presented at the Alternative Public Information Meeting in February 2022. Further description of this evaluation is in Section 4.6.3. Preliminary concept plans for the viable Build Alternatives are included in Appendix A.

Sinclair Road Interchange

Two Build Alternatives were considered for this interchange. Alternative 1: Traffic Signal and Alternative 2: Roundabout.

For both alternatives, additional turn lanes will be provided for the northbound and southbound off-ramps at the intersection with Sinclair Road.

Alternative 1 would add a new traffic signal to the intersection of the northbound on-ramp with Collector Road. In addition, a northbound left turn lane and a southbound right turn lane would be added to the intersection to improve traffic operations. The northbound through movement would have a continuous green at the signal.

Alternative 2 would add a roundabout at the intersection instead of the traffic signal. The roundabout would be a single lane, with a northbound through lane that bypasses the roundabout.

Livingston Road Interchange

Two Build Alternatives were considered for this proposed new interchange. Alternative 1: Partial Cloverleaf (Par-Clo) interchange and Alternative 2: T-Ramp interchange.

Alternative 1 would add a Partial Cloverleaf (Par-Clo) interchange (Type AB2) with loop ramps for the northbound on-ramp and southbound off-ramp, and diamond ramps for the northbound off-ramp and southbound on-ramp. Ramps to and from the south would be tolled electronically. The limited access ramps would add a fourth leg to the existing intersection of Livingston Road and Formosa Gardens Boulevard.

Alternative 2 is a minimization alternative that would add a T-Ramp interchange. A four-lane divided interchange access roadway would provide a limited access connection between SR 429 and the intersection of Livingston Road with Formosa Gardens Boulevard, adding a fourth leg to the local intersection. Lanes to and from the southbound ramps would cross over SR 429 to connect to the ramps at a stop-controlled T-intersection. The northbound on-ramp and off-ramp would merge and diverge with the access roadway approximately 1,600 feet west of Formosa Garden Boulevard. There are no plans for new connections to or from the west side of SR 429. The ramps to and from the south would be electronically tolled.

For both alternatives, the new interchange will create a fourth leg of the existing Livingston Road intersection with Formosa Gardens Boulevard. A traffic signal would be added, as well as dual left turn lanes for northbound to westbound traffic entering the interchange. A new left turn lane will be added for westbound Livingston Road to southbound Formosa Gardens Boulevard traffic, as well as a westbound through lane to enter the interchange. The southbound approach will include a new exclusive left turn lane onto Livingston Road, an exclusive right turn lane into the interchange, and a second southbound through lane. The eastbound approach to Formosa Gardens Boulevard from the interchange will include dual left turn lanes, a through lane, and an exclusive right turn lane. As part of the interchange, the half-mile two-lane section of Formosa Gardens Boulevard will be widened to four lanes to match the four-lane sections to the south and north of Livingston Road.

US 192 Interchange

One Build Alternative was considered for this interchange.

Operational improvements will be made to the ramp terminals and US 192. An additional eastbound through lane will be added to US 192 west of the interchange. An additional westbound through lane will be added from East Orange Lane Boulevard through the interchange. An additional northbound left and northbound right turn lane will be added to the northbound off-ramp. An additional eastbound left turn lane will be added for traffic entering the northbound on-ramp. An additional left and two additional right-turn lanes will be added to the southbound off-ramp for traffic turning onto US 192. The existing toll sites on the ramps to and from the south would be converted to electronic toll gantries.

Western Way Interchange

One Build Alternative was considered for this interchange.

The existing Par-Clo interchange configuration will be retained. Both ramp terminal intersections will be signalized. An additional lane will be added to the southbound loop off-ramp. One left turn lane and two right turn lanes will be added to the northbound off-ramp. One through lane and one right turn lane will be added to westbound Western Way at the northbound ramp terminal intersection. Two through lanes and one left turn lane will be added to eastbound Western Way at the northbound ramp terminal intersection. One left turn lane will be added to westbound Western Way at the southbound on-ramp intersection.

Seidel Road Interchange

Two Build Alternatives were considered for this interchange.

Alternative 1 would add traffic signals at the ramp terminals. No other changes on Seidel Road would be needed.

Alternative 2 would add a Double Roundabout at the interchange. The double roundabout would connect to the two ramp intersections together as part of one larger roundabout. The double roundabout would be two lanes and allow the traffic to access between Seidel Road and the ramps to and from the south.

Both alternatives will add a second westbound left turn lane approaching Avalon Road by restriping pavement recently constructed by Osceola County.

1.5 Description of Preferred Alternative

The Preferred Alternative will widen SR 429 from four to eight lanes. Figure 1-2 shows the proposed typical section for the SR 429 widening. The preferred interchange alternatives are described below.

The Sinclair Road interchange will maintain the current configuration. Additional turn lanes will be provided for the northbound and southbound off-ramps at the intersection with Sinclair Road. A new traffic signal will be added to the intersection of the northbound on-ramp with Collector Road. In addition, a northbound left turn lane and a southbound right turn lane would be added to the intersection to improve traffic operations. The northbound through movement would have a continuous green at the signal.

The Livingston Road interchange will be a T-Ramp interchange. A four-lane divided interchange access roadway would provide a limited access connection between SR 429 and the intersection of Livingston Road with Formosa Gardens Boulevard, adding a fourth leg to the local intersection. Lanes to and from the southbound ramps would cross over SR 429 to connect to the ramps at a stop-controlled T-intersection. The northbound on-ramp and off-ramp would merge and diverge with the access roadway approximately 1,600 feet west of Formosa Garden Boulevard. There are no plans for new connections to or from the west side of SR 429. The ramps to and from the south would be electronically tolled.

In addition, the Livingston Road interchange will create a fourth leg of the existing Livingston Road intersection with Formosa Gardens Boulevard. A traffic signal would be added, as well as dual left turn lanes for northbound to westbound traffic entering the interchange. A new left turn lane will be added for westbound Livingston Road to southbound Formosa Gardens Boulevard traffic, as well as a westbound through lane to enter the interchange. The southbound approach will include a new exclusive left turn lane onto Livingston Road, an exclusive right turn lane into the interchange, and a second southbound through lane. The eastbound approach to

Formosa Gardens Boulevard from the interchange will include dual left turn lanes, a through lane, and an exclusive right turn lane. As part of the interchange, the half-mile two-lane section of Formosa Gardens Boulevard will be widened to four lanes to match the four-lane sections to the south and north of Livingston Road.

The US 192 interchange will improve traffic operations at the ramp terminals and US 192. An additional eastbound through lane will be added to US 192 west of the interchange. An additional westbound through lane will be added from East Orange Lane Boulevard through the interchange. An additional northbound left turn lane will be added to the northbound off-ramp. An additional eastbound left turn lane will be added for traffic entering the northbound on-ramp. An additional left and one additional right-turn lane will be added to the southbound off-ramp for traffic turning onto US 192.

The existing Par-Clo interchange configuration at Western Way will be retained. Both ramp terminal intersections will be signalized. An additional lane will be added to the southbound loop off-ramp. One left turn lane and two right turn lanes will be added to the northbound off-ramp. One through lane and one right turn lane will be added to westbound Western Way at the northbound ramp terminal intersection. Two through lanes and one left turn lane will be added to eastbound Western Way at the northbound ramp terminal intersection. One left turn lane will be added to westbound Western Way at the southbound on-ramp intersection.

The Seidel Road interchange will add traffic signals at the ramp terminals. A second left turn lane will be added to the northbound off-ramp. Additionally, a second westbound left turn lane approaching Avalon Road will be added by restriping pavement recently constructed by Osceola County.

See Section 6.1 for a more detailed description of each of the disciplines for the preferred alternative.

1.6 List of Technical Documents

Below is a list of all technical documents that were prepared as part of this PD&E Study.

- Location Hydraulics Report
- Pond Siting Report
- Geotechnical Report
- Bridge Analysis Technical Memorandum
- Utilities Assessment Report
- Preliminary Toll Siting Technical Memorandum
- Air Quality Technical Memorandum
- Contamination Screening Evaluation Report
- Cultural Resource Assessment Survey
- Natural Resource Evaluation
- Noise Study Report
- Sociocultural Effects Evaluation
- State Environmental Impact Report
- Systems Interchange Justification Report

2 Existing Conditions

2.1 Roadway

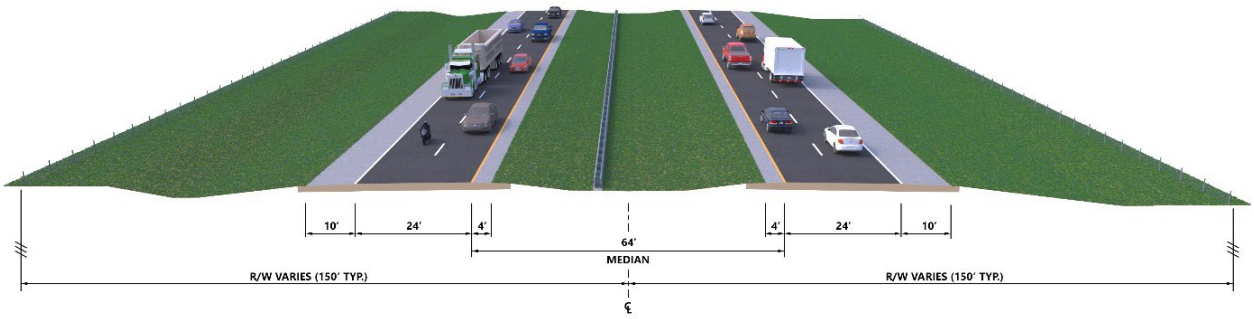
2.1.1 Typical Section

The following paragraphs discuss the existing typical sections of the major roadways located in the study area.

SR 429

The typical section for SR 429 from I-4 to Seidel Road is a four-lane divided expressway located within approximately 300 feet of ROW. The typical section includes 10-foot paved outside shoulders and 4-foot inside paved shoulders on the mainline as well as guardrail in the 64-foot median. The existing typical section is shown in Figure 2-1.

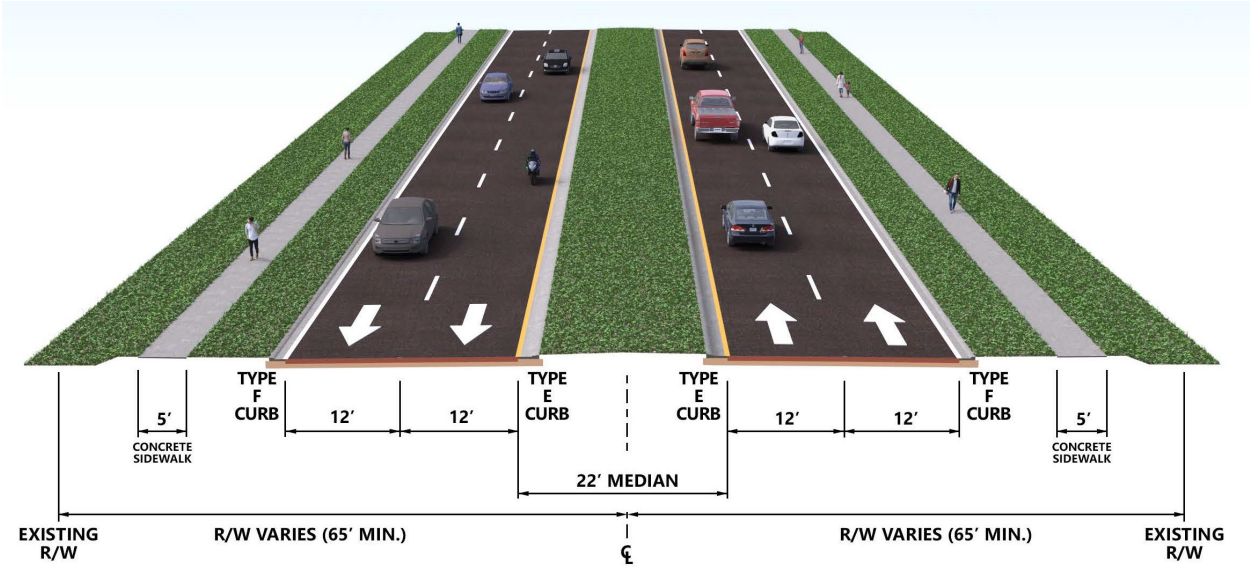
Figure 2-1 SR 429 Existing Typical Section



Sinclair Road

The typical section for Sinclair Road is a four-lane divided highway with 12-foot lanes and a 22-foot raised median. The roadway has Type E curb on the inside of the roadway and Type F curb on the outside of the roadway. There are five-foot sidewalks in each direction. There are no bicycle facilities along the roadway within the study area. The existing typical section is shown in Figure 2-2.

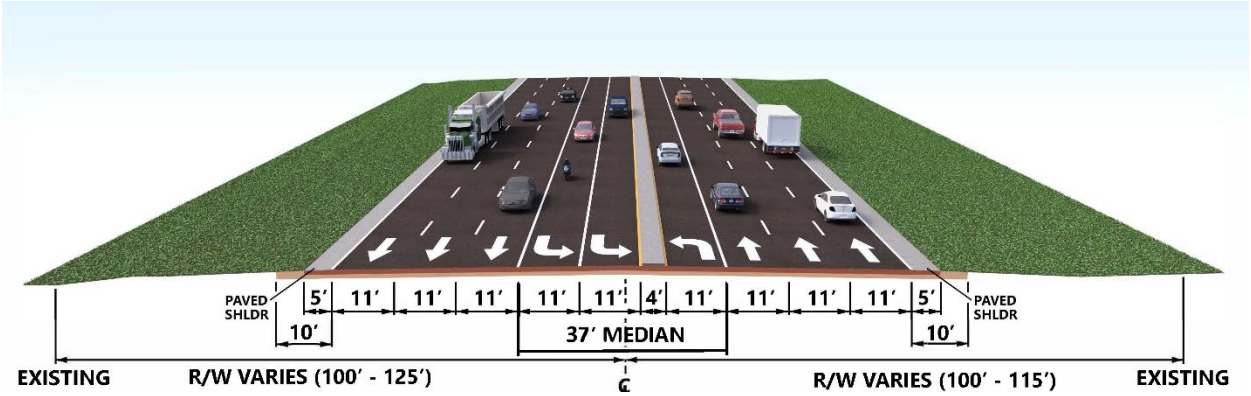
Figure 2-2 Sinclair Road Existing Typical Section



US 192

The typical section for SR 530 (US 192) is a six-lane divided highway with 11-foot lanes with a 37-foot median. Turn lanes are provided at signalized intersections. The roadway has five-foot paved shoulders on the outside and Type E curb and gutter on the inside. There are no pedestrian facilities west of SR 429 in the study area. East of the northbound off-ramp intersection there is a five-foot sidewalk on the south side of US 192. There are no bicycle facilities along the roadway within the study area. The existing typical section is shown in Figure 2-3.

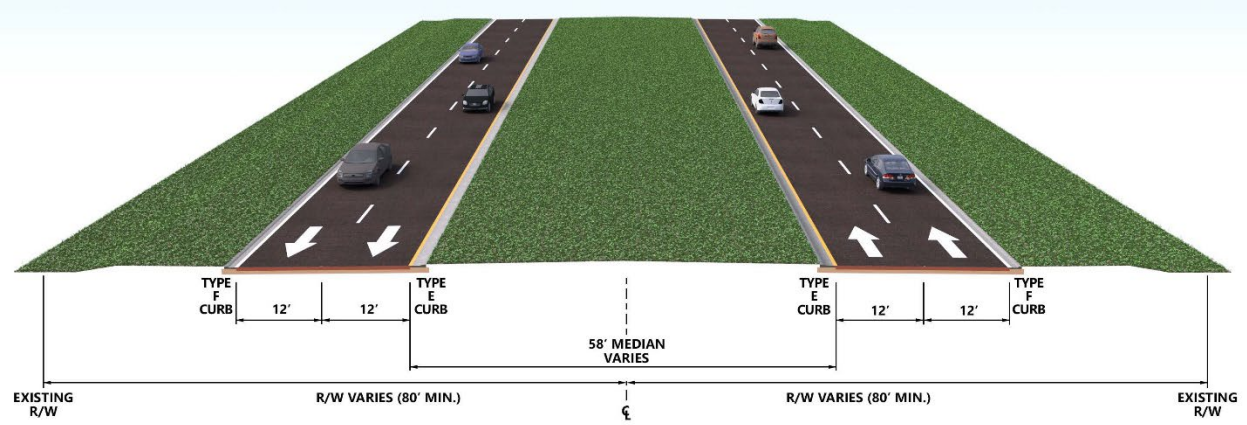
Figure 2-3 US 192 Existing Typical Section



Western Way

The typical section for Western Way is a four-lane divided highway with 12-foot lanes and a 58-foot raised median. The roadway has Type E curb on the inside of the roadway and Type F curb on the outside of the roadway. There are no pedestrian or bicycle facilities along the roadway within the study area. The existing typical section is shown in Figure 2-4.

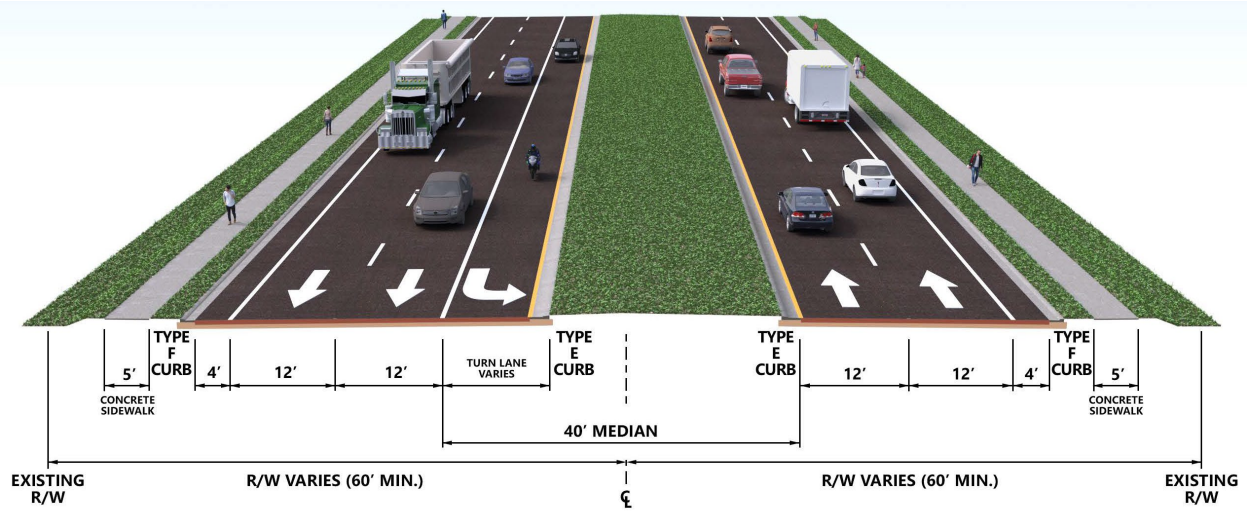
Figure 2-4 Western Way Existing Typical Section



Seidel Road

The typical section for Seidel Road is a four-lane divided highway with 12-foot lanes and a 40-foot raised median. The roadway has Type E curb on the inside of the roadway and Type F curb on the outside of the roadway. There are five-foot sidewalks in each direction as well as four-foot bicycle lanes. The existing typical section is shown in Figure 2-5.

Figure 2-5 Seidel Road Existing Typical Section



2.2 Right of Way

The existing ROW widths for the study area are summarized in Table 2-1

Table 2-1 Roadway Right of Way

Roadway	From	To	ROW Width (feet)
SR 429	I-4	Sand Hill Road	Varies (300' Standard)
SR 429	Sand Hill Road	South of Canary Island Drive	250'
SR 429	South of Canary Island Drive	North of US 192	Varies (300' Standard)
SR 429	North of US 192	South of Western Way	Varies (300-490')
SR 429	South of Western Way	Seidel Road	Varies (300' Standard)
Sinclair Road	Happy Trail	East of Connector Road	130'
US 192	W. Orange Lake Boulevard	E. Orange Lake Boulevard	Varies (213-235')
Western Way	Hartzog Road	East of NB Ramps	180'
Seidel Road	Avalon Road	Lakeshore Pointe Drive	Varies (144-147')
Livingston Road	Formosa Garden Boulevard	N. Old Lake Wilson Road	Varies (45-60')

2.3 Roadway Classification and Context Classification

SR 429 between Seidel Road and Sinclair Road is a four-lane divided expressway classified as an urban principal arterial expressway and is part of the Strategic Intermodal System (SIS) and State Highway System (SHS). Sinclair Road is a four-lane divided roadway classified as a minor collector. US 192 (SR 530) is a six-lane divided roadway classified as an urban principal arterial and is part of the SHS. Western Way is a four-lane divided roadway classified as a major collector. Seidel Road is also a four-lane divided roadway classified as a local roadway.

FDOT's context classification system describes the general characteristics of the land use, development patterns, and roadway connectivity, providing cues as to the types of uses and user groups that will likely utilize the roadway. FDOT will apply criteria and standards based on the context classification. In the case of interstates and limited-access facilities, the function of the roadway is considered complete. Consequently, no context classification is assigned for SR 429. US 192 has been assigned a preliminary context classification of C3C-Suburban Commercial. Other roads in the study area, including Sinclair Road, Livingston Road, Western Way, and Seidel Road, are non-state facilities and the maintaining agencies (Osceola and Orange Counties) have not established a context classification for these roadways.

2.4 Adjacent Land Use

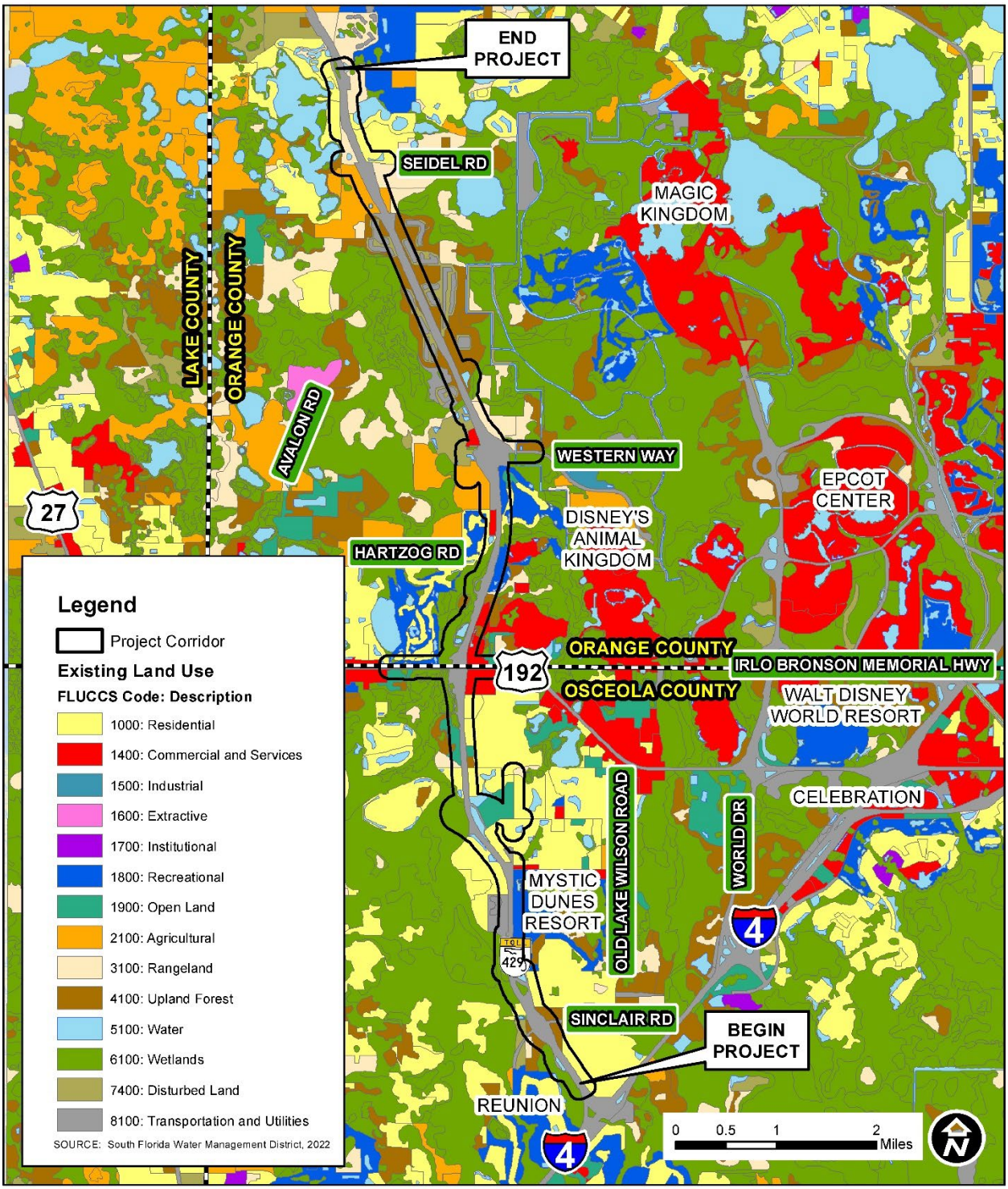
The corridor spans Osceola and Orange Counties passing west of the Walt Disney World theme parks. The existing land use in the corridor is composed predominantly of residential communities (23%) with high-density residential as the predominant residential use. The residential land is concentrated primarily in Osceola County, especially on the east side of SR 429. Wetlands comprise 20% of the adjacent land use, with large areas located west of SR 429. Recreation and open space compose 13% of the adjacent land, mostly as private golf courses adjacent to SR 429 associated with neighborhood communities. Forested land accounts for 11% of the adjacent land use, followed by rangeland (7%). Agricultural, commercial, and disturbed lands each account for about 5% of the corridor's adjacent land, with utilities comprising approximately 4%. Commercial land along the corridor is concentrated at the interchanges, especially east of SR 429 at US 192. An Existing Land Use Map is included as Figure 2-6, and Table 2-2 shows the adjacent land use composition of the SR 429 corridor.

Table 2-2: Adjacent Land Use Composition

Land Use	Percentage
Residential	23.06%
Wetlands	20.17%
Recreation/Open Space	13.40%
Forested Land	11.09%
Rangeland	6.96%
Agricultural	5.88%
Commercial	5.65%
Disturbed Lands	4.89%
Water	4.87%
Utilities	4.02%
Total	99.99%*

*Total does not add up to 100% due to rounding.

Figure 2-6: Existing Land Use Map



2.5 Access Management Classification

The Access Management Classifications for the study area roadways are identified in Table 2-3. FDOT establishes the classification for SR 429 and US 192. Osceola County establishes the classification for Sinclair Road and Livingston Road. Orange County establishes the classification for Western Way and Seidel Road.

Table 2-3: Roadway Access Management Classification

Roadway	Access Management Classification	Responsible Agency
SR 429	1	FDOT
Sinclair Road	N/A (similar to 7)	Osceola County
Livingston Road	N/A (similar to 4)	Osceola County
Formosa Gardens Boulevard	N/A (similar to 4)	Osceola County
US 192	5	FDOT
Western Way	N/A (similar to 5)	Orange County
Seidel Road	N/A (similar to 4)	Orange County

2.6 Design and Posted Speeds

The design and posted speeds for the major roadways in the study area are shown in Table 2-4.

Table 2-4: Design and Posted Speed Limits

Roadway	Design Speed	Posted Speed
SR 429	70 mph	70 mph
Sinclair Road	40 mph	35 mph
Livingston Road	40 mph	35 mph
Formosa Gardens Boulevard	40 mph	35 mph
US 192	50 mph	50-55 mph*
Western Way	45 mph	45 mph
Seidel Road	40 mph	35 mph

- Note: In April 2022, FDOT D5 completed a Target Speed Evaluation for US 192 near SR 429. They have identified a target speed of 45 mph.

2.7 Vertical and Horizontal Alignments

2.7.1 Vertical Alignment

Table 2-5 summarizes the existing vertical alignment of the Western Beltway mainline. This information was extracted from available as-built plans and existing survey.

Table 2-5: SR 429 Existing Vertical Alignment

PVI* Station	Design Speed (MPH)	Existing Vertical Curve						Curve Length Criteria	K-Value Criteria		As-Built Plan Source of Data (FPID No.)
		Type	G1 %	G2 %	A %	Length (feet)	K-Value		FDM	AASHTO	
67+50.00	70	Sag	-5	0.470	5.47	1,100	201	800	206	181	403497-2-52-01
91+00.00	70	Crest	0.47	-0.791	1.261	700	555	1,000	506	247	403497-2-52-01
98+00.00	70	Sag	-0.791	0.401	1.192	600	503	800	206	181	403497-2-52-01
105+00.00	70	Crest	0.401	-0.582	0.983	500	509	1,000	506	247	403497-2-52-01
124+00.00	70	Sag	-0.582	2.273	2.855	600	210	800	206	181	403497-2-52-01
141+00.00	70	Crest	2.273	-2.103	4.376	2190	500	1,000	506	247	403497-2-52-01
156+00.00	70	Sag	-2.103	1.388	3.491	700	201	800	206	181	403497-2-52-01
167+00.00	70	Crest	1.386	-1.386	2.772	1,400	505	1,000	506	247	403497-2-52-01
194+00.00	70	Sag	-1.386	0.227	1.613	800	496	800	206	181	403497-3-52-01
210+50.00	70	Crest	0.227	-0.779	1.006	1,300	1,291	1,000	506	247	403497-3-52-01
221+10.00	70	Sag	-0.779	0.501	1.28	800	625	800	206	181	403497-3-52-01
240+00.00	70	Crest	0.336	-0.305	0.641	1,000	1,559	1,000	506	247	403497-3-52-01
249+50.00	70	Sag	-0.305	2.786	3.091	800	259	800	206	181	403497-3-52-01
267+18.69	70	Crest	2.786	-2.687	5.473	2,737.38	500	1,000	506	247	403497-3-52-01
285+76.00	70	Sag	-2.687	-0.300	2.387	800	335	800	206	181	403497-3-52-01
293+75.00	70	Sag	-0.300	0.300	0.6	800	1,333	800	206	181	403497-3-52-01
302+00.00	70	Sag	0.300	2.352	2.052	800	390	800	206	181	403497-3-52-01
320+50.00	70	Crest	2.352	-2.530	4.882	2,500	512	1,000	506	247	403498-2-52-01
1339+00.00	70	Sag	-2.530	-0.034	2.496	800	321	800	206	181	403498-2-52-01
1360+00.00	70	Sag	-0.034	0.240	0.274	800	2,915	800	206	181	403498-2-52-01
1379+49.46	70	Sag	0.240	1.452	1.212	800	660	800	206	181	403498-2-52-01
419+00.00	70	Crest	1.452	-1.600	3.052	1,500	524	1,000	506	247	403498-3-52-01
432+00.00	70	Sag	-1.600	0.680	2.28	800	351	800	206	181	403498-3-52-01
458+00.00	70	Crest	0.680	-1.120	1.8	1,800	1,000	1,000	506	247	403498-3-52-01
481+00.00	70	Sag	-1.120	-0.360	0.76	1000	1,316	800	206	181	403498-3-52-01
490+00.00	70	Sag	-0.360	0.200	0.56	800	1,429	800	206	181	403498-3-52-01
517+00.00	70	Sag	0.200	0.662	0.462	800	500	800	206	181	403498-3-52-01
542+00.00	70	Crest	0.782	0.200	0.582	1,000	N/A	1,000	506	247	403498-3-52-01
542+00.00	70	Crest	0.662	0.200	0.462	1,000	N/A	1,000	506	247	403498-3-52-01
577+00.00	70	Crest	0.200	-0.960	1.16	1,000	N/A	1,000	506	247	403498-3-52-01
577+00.00	70	Crest	0.200	-0.746	0.946	1,000	N/A	1,000	506	247	403498-3-52-01
591+00.00	70	Sag	-0.960	0.380	1.34	800	N/A	800	206	181	403498-3-52-01
591+00.00	70	Sag	-0.746	0.380	1.126	800	N/A	800	206	181	403498-3-52-01
622+00.00	70	Crest	0.380	-1.233	1.613	1,800	N/A	1,000	506	247	403498-3-52-01
592+00.00	70	Sag	-1.233	0.906	2.139	800	N/A	800	206	181	403498-3-52-01

*Stations are taken from as-builts and may differ from those shown in the Conceptual Design plan sheets

2.7.2 Horizontal Alignment

Table 2-6 summarizes the existing horizontal alignment of the Western Beltway mainline. This information was extracted from available as-built plans and existing survey.

Table 2-6: SR 429 Existing Horizontal Alignment

PI Station*	PC Station*	PT Station*	Design Speed (MPH)	Existing Horizontal Curve		
				Radius (feet)	Length (feet)	SE
135+87.13	126+85.39	144+32.62	70	2865.00	1,747.23	0.07
205+67.78	192+69.65	217+55.81	70	3,500.00	2,486.16	0.060
240+58.10	229+09.46	251+29.23	70	3,500.01	2,219.77	0.060
320+14.90	309+12.43	330+90.75	70	5,729.58	2,178.32	0.037
321+11.47	309+12.43	332+76.41	70	5,729.58	2,363.98	0.037
1362+39.34	1358+67.99	1366+10.62	70	22,918.31	742.63	NC
372+75.39	365+48.57	380+00.00	70	10,742.96	1,451.43	0.022
434+70.84	400+00.00	467+14.23	70	10,742.96	6,714.23	0.022
1376+90.46	1373+86.33	1379+94.22	70	7,161.97	607.89	0.037
1405+41.53	1400+00.46	1410+80.56	70	7,161.97	1,080.10	0.037
439+63.77	410+80.56	467+14.23	70	10,742.95	5,633.68	0.02

*Stations are taken from as-builts and may differ from those shown in the Conceptual Design plan sheets

2.8 Pedestrian Accommodations

SR 429 is a limited-access roadway, thus, there are no pedestrian facilities located on the expressway. Pedestrian facilities can be found on the cross streets within the study area. Table 2-7 summarizes the pedestrian facilities on the cross streets.

Table 2-7: SR 429 Existing Pedestrian Facilities

CROSS STREET	PEDESTRIAN FACILITY TYPE
Sinclair Road	5’ sidewalks, both sides
Connector Road	None (Limited Access)
Livingston Road	5’ sidewalks, both sides
Formosa Gardens Boulevard	5’ sidewalk on west side, south of Livingston Road. 10’ shared use path on east side.
US 192	5’ sidewalk on south side east of SR 429 interchange
Western Way	None
Seidel Road	5’ sidewalks, both sides

2.9 Bicycle Facilities

SR 429 is a limited-access roadway, thus, there are no bicycle facilities located on the expressway. Bicycle facilities can be found on some of the cross streets within the study area. Table 2-8 summarizes the bicycle facilities on the cross streets.

Table 2-8: SR 429 Existing Bicycle Facilities

CROSS STREET	BICYCLE FACILITY TYPE
Sinclair Road	None
Connector Road	None
Livingston Road	None
Formosa Gardens Boulevard	10’ shared use path on east side.
US 192	None
Western Way	None
Seidel Road	4’ bicycle lane, both sides

2.10 Transit Facilities

There are no transit routes that exist on SR 429. However, LYNX, a transportation system providing bus service in the City of Orlando as well as Orange, Seminole, and Osceola Counties and parts of Polk County and Volusia County, provides service along US 192. Bus route 55 runs along US 192 starting at US 92 and continues west of SR 429. There are LYNX signs indicating bus stops at the intersection with West Orange Lake Boulevard as well as just east of the intersection with East Orange Lake Boulevard. There are no transit benches or shelters at these locations. In addition, a planned high-frequency premium transit route is planned to run along US 192 by 2040.

2.11 Pavement Conditions

Pavement condition surveys for 2021 for the Western Beltway (SR 429) were reviewed to assess the condition of these facilities. A scale of one to ten is used to rate the pavement conditions for cracking and ride, where “one” is the worst condition and “ten” is the best, and any rating less than six is considered deficient. Last evaluated in 2020, the Western Beltway pavement condition survey within Osceola County indicated that the portion within the study limits ranged from 6.5 to 7.5 for cracking and were 7.7 for ride. Last evaluated in 2021, the Western Beltway pavement condition survey within Orange County indicated that the portion within the study limits ranged from 3.5 to 5.5 for cracking and from 6.8 to 8.0 for ride. The portion of SR 429 within Orange County had a deficient rating of 4.5 for cracking within the study limits. The deficient pavement

conditions will be addressed with the SR 429 Milling and Resurfacing from I-4 to Seidel Road (FPID Nos. 440289-1 and 440290-1, currently under design.

2.12 Traffic Volumes and Operational Conditions

A summary of the existing traffic data and traffic operational analyses is provided in this section. More detailed information is included in the Systems Interchange Justification Report provided under separate cover.

To calculate the 2020 existing AADT and peak hour volumes, an analysis was conducted for the daily counts and the four highest consecutive 15-minute periods in the morning and evening. Seasonal and axle adjustment factors were applied to the data where necessary. Growth rates estimated from historical data were used where applicable. The data were then aggregated and balanced for continuity of flow and consistency. The final 2020 AADT volumes are summarized in Table 2-9 and in Figure 2-7. The data show that daily traffic on the SR 429 mainline peaks in the southbound direction within the study limits. The directional split increases from north to south; it ranges from 53 percent south of Seidel Road to 57 percent south of US 192. Typically, the daily traffic split is close to 50/50 for most roadways. The uneven directional split in daily traffic, especially close to I-4, reveals the unique travel characteristics on this portion of SR 429. The total traffic ranges from 33,300 south of US 192 to 49,700 between Western Way and Seidel Road.

Table 2-9: 2020 Annual Average Daily Traffic (AADT)

MP-Location	Western Beltway	Southbound (vpd)	Northbound (vpd)	Total
		24,200	**20,900**	**45,100**
11-Seidel Road		2,300	2,300	4,600
		26,500	**23,200**	**49,700**
8-Western Way		6,900	6,900	13,800
		3,700	1,500	5,200
7-Toll Plaza		**23,300**	**17,800**	**41,100**
6-US 192		7,200	5,900	13,100
		3,000	2,300	5,300
		19,100	**14,200**	**33,300**
1-Sinclair Road		3,700	3,100	6,800
		3,000	2,300	5,300
		18,400	**13,400**	**31,800**

X,XXX = Mainline volume *X,XXX = Ramp volume*

Figure 2-7: 2020 (Existing) One-Way AADTs

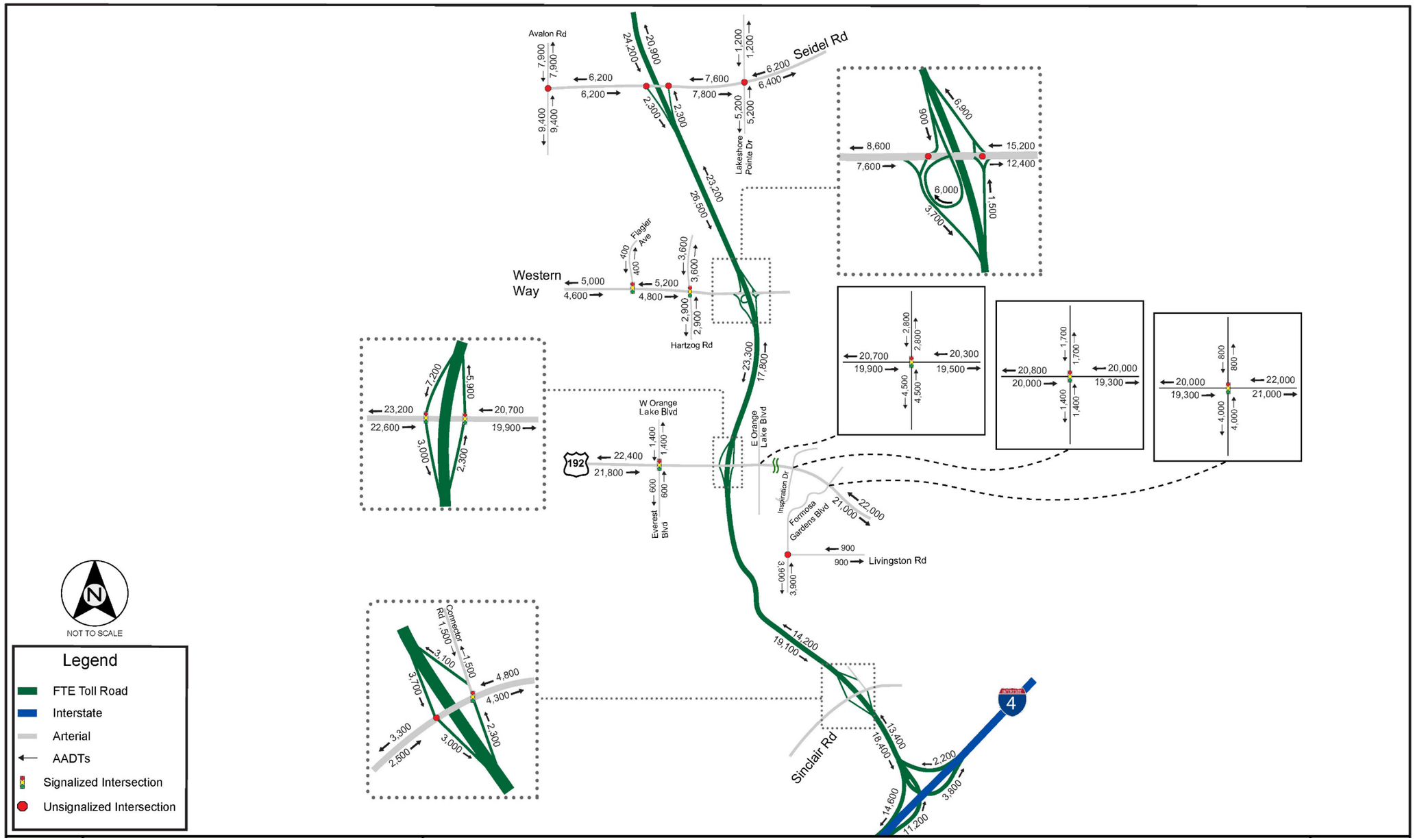


Figure 2-8 summarizes the final 2020 AM and PM peak hour volumes. The volumes show a southbound peak in the AM throughout the SR 429 mainline within the study limits. In the PM, traffic also peaks in the southbound direction south of the toll plaza but there is slightly more traffic in the northbound direction to the north of the toll plaza. Field observations and high-resolution aerial maps were used to verify the lane geometry. The existing lane geometry is depicted in Figure 2-9.

Freeway Segment Analysis

The SR 429 mainline segments (basic, merge/diverge, and weave) within the study limits were evaluated using HCS software Version 7.9. HCS software does not analyze junctions with Lane-add, Lane-drop, Major Merge, and Major Diverge. For those cases, the HCM methodology recommends calculating the volumes to capacity ratios on the segments upstream and downstream of the junction to determine whether they are over or under capacity. For diverge junctions, densities and LOS can be determined where all the entry and exit segments are not over capacity. Customized spreadsheets were used to calculate the volume to capacity ratios. Weaving volumes were calculated utilizing the existing proportion of traffic that exits the downstream off-ramp and the traffic that travels through the downstream freeway segment. The origin of the exiting traffic volume was calculated by applying the calculated ratio to the entrance ramp volume and the upstream freeway volume, considering a lesser portion of traffic executing the on-ramp to off-ramp movement.

As shown in Table 2-10, the freeway segments currently operate at an acceptable LOS C or better during both the AM and PM peak hours. Queue backups have been observed at the southbound off-ramp to US 192 due to congestion along the arterial and adjacent intersections. The HCS software does not report congestion effects resulting from upstream/downstream queue backups due to its isolate location.

Figure 2-8: 2020 (Existing) Peak Hour Volumes

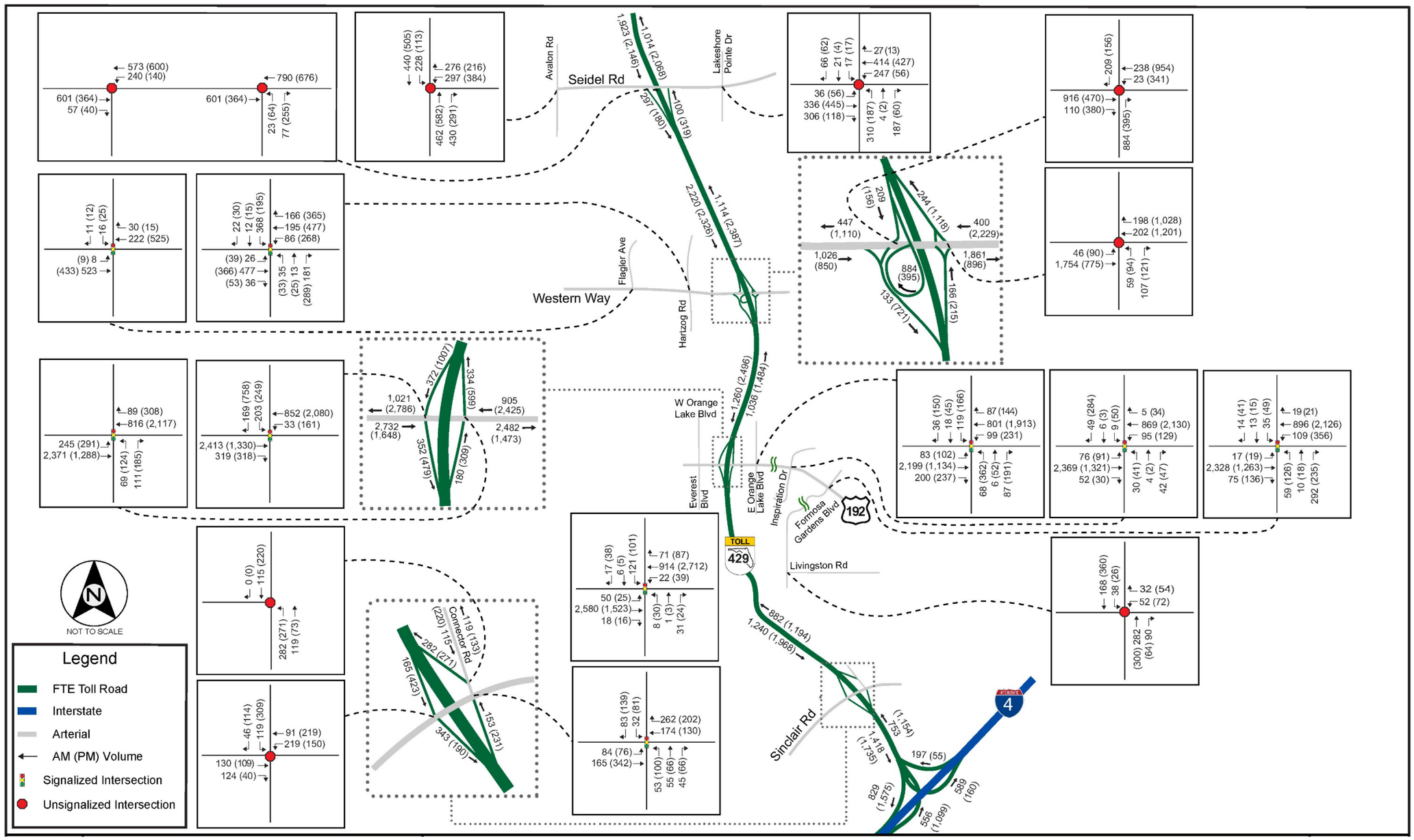


Figure 2-9: 2020 (Existing) Lane Geometry

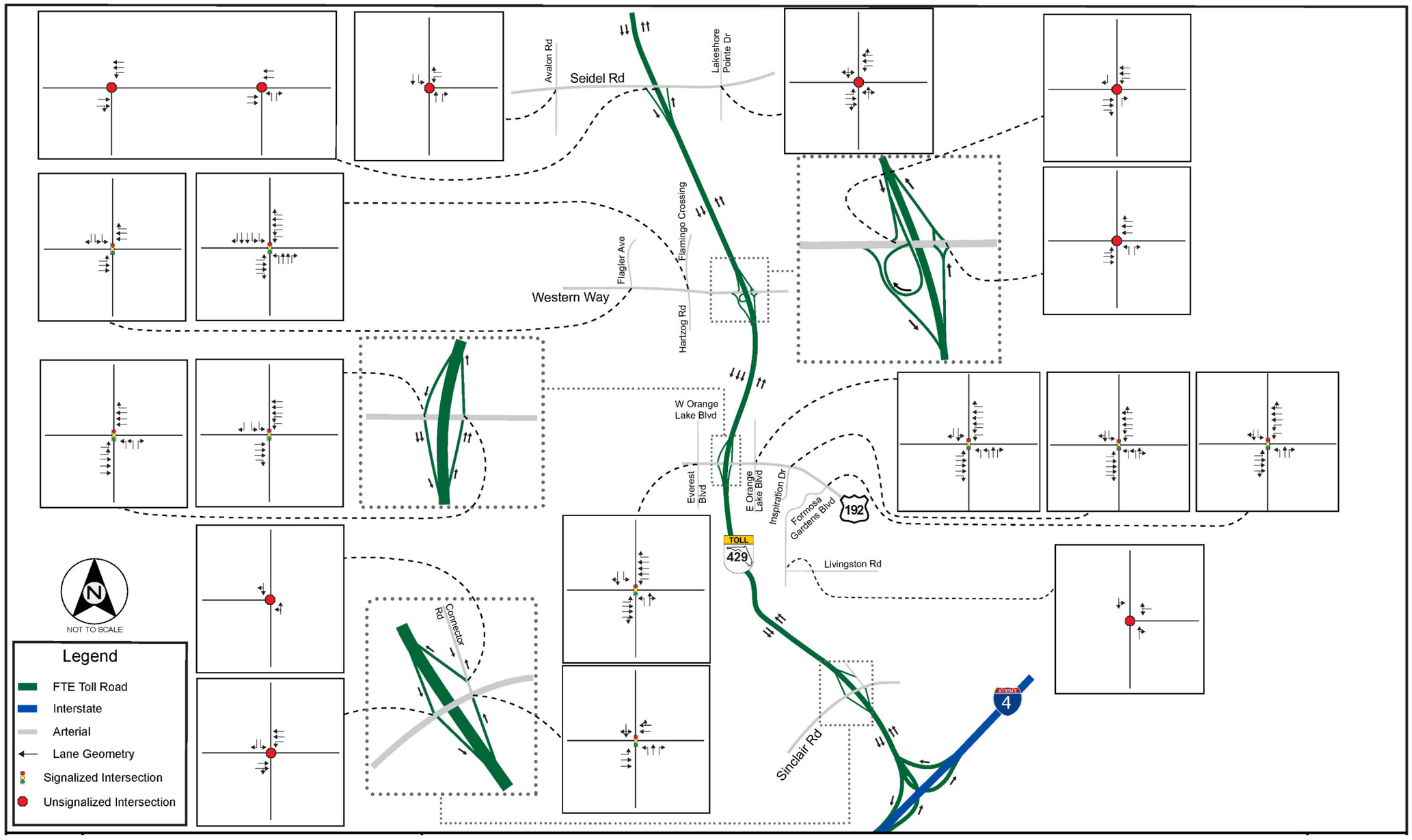


Table 2-10: 2020 (Existing) Peak Hour Freeway Mainline Segment Operations

Segment	Segment Type	Lanes	Volume (vph)		LOS/Density	
			AM	PM	AM	PM
SR 429 Southbound						
Upstream of Seidel Road On-ramp	Basic	2	1,923	2,146	B/15.3	B/17.2
Seidel Road On-ramp to Western Way Off-ramp	Merge	2	2,220	2,326	C/21.7	C/22.8
Seidel Road On-ramp to Western Way Off-ramp	Basic	2	2,220	2,326	B/17.8	C/18.8
Seidel Road On-ramp to Western Way Off-ramp	Diverge	2	2,220	2,326	C/23.7	C/24.8
Western Way Off-ramp to On-ramp	Basic	2	1,127	1,775	A/8.9	B/14.1
Western Way On-ramp to US 192 Off-ramp	Merge	2	1,260	2,496	A/6.6	B/13.0
Western Way On-ramp to US 192 Off-ramp	Basic	2	1,260	2,496	A/6.7	C/13.2
Western Way On-ramp to US 192 Off-ramp	Diverge	2	1,260	2,496	A/6.7	B/13.2
US 192 Off-ramp to On-ramp	Basic	2	888	1,489	A/7.0	B/11.8
US 192 On-ramp to Sinclair Road Off-ramp	Merge	2	1,240	1,968	A/6.8	B/13.0
US 192 On-ramp to Sinclair Road Off-ramp	Basic	2	1,240	1,968	A/9.8	B/15.6
US 192 On-ramp to Sinclair Road Off-ramp	Diverge	2	1,240	1,968	B/14.6	C/22.0
Sinclair Road Off-ramp to On-ramp	Basic	2	1,075	1,545	A/8.5	B/12.2
Sinclair Road On-ramp to I-4 Off-ramp	Merge	2	1,418	1,735	B/16.1	B/19.2
Sinclair Road On-ramp to I-4 Off-ramp	Basic	2	1,418	1,735	B/11.2	B/13.7
Sinclair Road On-ramp to I-4 Off-ramp	Major Diverge	2	1,418	1,735	B/13.2	B/16.4
Additional Weaving Analysis between Sinclair Road On-ramp and I-4 Off-ramp	Weaving	2	1,418	1,735	B/12.0	B/14.8
SR 429 Northbound						
Additional Weaving Analysis between I-4 On-ramp and Sinclair Road Off-ramp	Weaving	2	753	1,154	A/6.2	A/9.7
I-4 On-ramp to Sinclair Off-ramp	Major Merge	2	753	1,154	U/C	U/C
I-4 On-ramp to Sinclair Off-ramp	Basic	2	753	1,154	A/6.0	A/8.8
I-4 On-ramp to Sinclair Off-ramp	Diverge	2	753	1,154	A/10.0	B/13.7
Sinclair Road Off-ramp to On-ramp	Basic	2	600	923	A/4.7	A/7.1
Sinclair Road On-ramp to US 192 Off-ramp	Merge	2	882	1,194	A/8.9	B/11.5
Sinclair Road On-ramp to US 192 Off-ramp	Basic	2	882	1,194	A/7.0	A/9.2
Sinclair Road On-ramp to US 192 Off-ramp	Diverge	2	882	1,194	B/10.9	B/13.7
US 192 Off-ramp to On-ramp	Basic	2	702	1,006	A/5.6	A/6.8
US 192 On-ramp to Western Way Off-ramp	Merge	2	1,036	1,484	A/5.3	A/8.7
US 192 On-ramp to Western Way Off-ramp	Basic	2	1,036	1,484	A/8.2	B/11.4
US 192 On-ramp to Western Way Off-ramp	Diverge	2	1,036	1,484	B/12.4	B/16.4
Western Way Off-ramp to On-ramp	Basic	2	870	1,269	A/6.9	A/9.7
Western Way On-ramp to Seidel Road Off-ramp	Merge	2	1,114	2,387	B/12.6	C/22.9
Western Way On-ramp to Seidel Road Off-ramp	Basic	2	1,114	2,387	A/8.8	C/18.7
Western Way On-ramp to Seidel Road Off-ramp	Diverge	2	1,114	2,387	B/12.5	C/24.6
Downstream of Seidel Road Off-ramp	Basic	2	1,014	2,068	A/8.0	B/15.9

Density –passenger cars/mile/lane; The results are based on the HCS 7.9; Truck = 7%; U/C = Under Capacity; NB on-ramp is connected to SR 429 from Sinclair Rd by Connector Rd.

Ramp Roadway Capacity Analysis

Capacity on the ramp roadways was assessed by comparing it with existing demand. The ramp Volume to Capacity (V/C) analysis is summarized in Table 2-11. Results show that the highest V/C is 0.6, indicating that the ramps have a considerable amount of unused capacity during both the 2020 AM and PM peak hours.

Table 2-11: 2020 (Existing) Peak Hour Ramp Roadway Capacity Analysis

Interchange	Ramp	Lanes	Volume (vph)		Capacity (vph)	V/C	
			AM	PM		AM	PM
I-4 and SR 429 system-to-system ramps	Eastbound off-ramp	1	556	1,099	1,850	0.30	0.59
	Westbound on-ramp	1	829	1,575	1,850	0.45	0.85
	Eastbound on-ramp	1	589	160	1,850	0.32	0.09
	Westbound off-ramp	1	55	197	1,850	0.03	0.11
Sinclair Road	Southbound off-ramp	1	165	423	1,850	0.1	0.2
	Northbound on-ramp	1	282	271	1,850	0.2	0.1
	Southbound on-ramp	1	343	190	1,850	0.2	0.1
	Northbound off-ramp	1	153	231	1,850	0.1	0.1
US 192	Southbound off-ramp	1	372	1,007	1,850	0.2	0.5
	Northbound on-ramp	1	334	599	1,850	0.2	0.3
	Southbound on-ramp	1	352	479	1,850	0.2	0.3
	Northbound off-ramp	1	180	309	1,850	0.1	0.2
Western Way	Southbound off-ramp	1	1,093	551	1,850	0.6	0.3
	Northbound on-ramp	1	244	1,118	1,850	0.1	0.6
	Southbound on-ramp	1	133	721	1,850	0.1	0.4
	Northbound off-ramp	1	166	215	1,850	0.1	0.1
Seidel Road	Southbound on-ramp	1	297	180	1,850	0.2	0.1
	Northbound off-ramp	1	100	319	1,850	0.1	0.2

Intersection Analysis

Signalized intersections were analyzed using Synchro Version 11 and unsignalized intersections were analyzed using HCS Version 7.9. The analysis output summary for AM and PM peak hours are presented in Table 2-12. For the unsignalized intersections, output is reported for the worst movement. Several intersections within the Area of Influence (AOI) are operating at LOS E or F in one or both AM and PM peak hours in year 2020. These intersections include:

- US 192 and West Orange Lake Boulevard
- Western Way and SR 429 northbound ramps terminal
- Seidel Road and Avalon Road*
- Seidel Road and Lakeshore Point Drive

*(Note that intersection has been signalized recently and are anticipated to experience reduced delays. Future No-Build Alternative has been analyzed with traffic signal.)

Several turning movements at the intersections along US 192 exhibit unacceptable LOS F due to the heavy through traffic volumes on US 192 during the peak hours.

Table 2-12: 2020 (Existing) AM and PM Peak Hour Synchro Intersection Level of Service/Delay (s/veh)

Intersections	Measure of Effectiveness (MOE)	Location	AM Movement/Approach LOS (Delay)												Intersection
			Eastbound			Westbound			Northbound			Southbound			AM LOS (Delay)
			Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
*Sinclair Road & SR 429 Southbound	Volume			130	124	219	91					120		46	C (16.1)
	LOS (Delay)	Movement		A (0.0)		A (8.4)	A (0.0)					C (18.9)		A (8.9)	
		Approach		A (0.0)			A (6.0)						C (16.1)		
	Queue Length 95th (ft)	Movement		0	0	25	0					50		25	
Sinclair Road & SR 429 Northbound	Volume		84	165	0	0	174	262	53	55	45	32	0	83	A (7.6)
	LOS (Delay)	Movement	B (12.1)	A (9.6)			A (4.9)		A (9.5)	A (9.3)	A (3.7)		B (11.2)		
		Approach		B (10.5)			A (4.9)			A (7.7)			B (11.2)		
	Queue Length 95th (ft)	Movement	47	37			47		23	24	13		44		
*SR 429 Northbound Ramp & Connector Road	Volume								282	119			115		A (8.1)
	LOS (Delay)	Movement							A (8.1)				A (0.0)		
		Approach								A (8.1)			A (0.0)		
	Queue Length 95th (ft)	Movement							25				0		
US 192 & West Orange Lake Boulevard	Volume		50	2580	18	22	914	71	8	1	31	121	6	17	C (33.6)
	LOS (Delay)	Movement	F (92.2)	C (31.6)		F (155.8)	B (12.6)	A (0.2)		F (270.6)		F (130.8)	C (28.9)		
		Approach		C (32.8)			B (14.8)			F (270.6)			F (114.1)		
	Queue Length 95th (ft)	Movement	125	1313		75	113	0		#135		0	38	0	
US 192 & SR 429 Southbound	Volume			2413	319	33	851	0	0	0	0	203	0	169	B (15.8)
	LOS (Delay)	Movement		B (14.1)	A (0.2)	F (144.1)	A (8.8)					E (75.1)		A (9.6)	
		Approach		B (12.5)			B (13.9)						D (45.3)		
	Queue Length 95th (ft)	*Movement*		*m131*	*m0*	*44*	*48*					*190*		*75*	
US 192 & SR 429 Northbound	Volume		245	2371	0	0	816	89	69	0	111	0	0	0	B (13.1)
	LOS (Delay)	Movement	C (22.5)	A (1.7)			C (26.4)	A (5.5)	F (107.3)		F (86.7)				
		Approach		A (3.6)			C (24.3)			F (94.6)					
	Queue Length 95th (ft)	Movement	142	85			232	48	87		178				
US 192 & East Orange Lake Boulevard	Volume		83	2199	200	99	801	87	68	6	87	119	18	36	C (22.9)
	LOS (Delay)	Movement	E (66.9)	B (14.6)	A (1.8)	F (121.3)	B (14.1)	A (1.0)	F (121.8)	F (109.2)	A (8.0)		F (117.0)	A (0.8)	
		Approach		B (15.3)			C (23.6)			E (59.6)			F (93.1)		
	Queue Length 95th (ft)	Movement	183	671	29	108	90	2	92	31	0	0	291	0	
US 192 & Inspiration Drive	Volume		76	2369	52	95	869	5	30	4	42	9	6	49	C (28.0)
	LOS (Delay)	Movement	F (89.2)	C (24.6)	A (0.5)	F (123.8)	B (18.4)		F (131.6)	C (27.9)		F (120.3)	C (31.9)		
		Approach		C (26.1)			C (28.8)			E (68.6)			D (43.9)		
	Queue Length 95th (ft)	Movement	*m139*	*827*	*m0*	*123*	*264*		*48*	*54*		*39*	*59*		
US 192 & Formosa Gardens Boulevard	Volume		17	2328	75	109	896	19	59	10	292	35	13	14	C (34.0)
	LOS (Delay)	Movement	F (106.7)	C (29.1)		F (116.1)	B (11.5)		F (89.6)	E (79.7)	F (90.5)	F (84.9)	D (45.6)		
		Approach		C (29.6)			C (22.6)			F (90.0)			E (67.4)		
	Queue Length 95th (ft)	Movement	*m42*	*665*		*128*	*247*		*134*	*34*	*412*	*87*	*53*		
*Livingstone Road & Formosa Gardens Boulevrad	Volume					52		32		282	90	38	168		B (13.5)
	LOS (Delay)	Movement					B (13.5)			A (0.0)		A (9.4)	A (0.0)		
		Approach					B (13.5)			A (0.0)			A (9.4)		
	Queue Length 95th (ft)	Movement					*25*			*0*		*25*	*0*		
Western Way & Flager Avenue	Volume		8	523			222	30				16		11	A (4.6)
	LOS (Delay)	Movement	A (1.8)	A (1.2)			A (8.5)	A (9.4)				E (56.6)		A (2.4)	
		Approach		A (1.2)			A (8.6)						C (34.5)		
	Queue Length 95th (ft)	Movement	*3*	*48*			*113*	*36*				*19*		*6*	
Western Way & Flamingo Crossing Boulevard	Volume		26	476	37	86	195	166	35	13	181	368	12	22	C (32.5)
	LOS (Delay)	Movement	E (59.0)	C (26.6)	A (0.4)	E (59.7)	C (20.4)	A (3.1)	D (54.1)	D (51.7)	C (21.2)	E (59.0)	D (40.6)	A (0.4)	
		Approach		C (26.4)			C (21.6)			C (28.0)			E (55.2)		
	Queue Length 95th (ft)	Movement	*53*	*224*	*0*	*64*	*92*	*34*	*64*	*16*	*66*	*204*	*13*	*0*	
*Western Way & SR 429 Southbound	Volume			916	110	23	238							209	B (10.3)
	LOS (Delay)	Movement		A (0.0)	A (0.0)	B (10.3)	A (0.0)							B (10.3)	
		Approach		A (0.0)			A (0.9)						B (10.3)		
	Queue Length 95th (ft)	Movement		0	0	*25*	*0*							*25*	
*Western Way & SR 429 Northbound	Volume		46	1754			202	198	59		107				F (258.9)
	LOS (Delay)	Movement	A (7.8)	A (0.0)			A (0.0)	A (0.0)	F (258.9)		D (27.3)				
		Approach		A (0.2)			0			F (258.9)					
	Queue Length 95th (ft)	Movement	*25*	*0*			*0*	*0*	*150*		*50*				
*Seidel Road & Avalon Road	Volume					296		276		462	430	228	440		F (>999)
	LOS (Delay)	Movement				F (>999)		C (21.4)		A (0.0)	A (0.0)	F (69.1)	A (0.0)		
		Approach					F (>999)			A (0.0)			F (69.1)		
	Queue Length 95th (ft)	Movement				*1125*		*100*		*0*	*0*	*225*	*0*		
*Seidel Road & SR 429 Southbound	Volume			601	57	240	573								B (10.6)
	LOS (Delay)	Movement		A (0.0)	A (0.0)	B (10.6)									
		Approach		A (0.0)			B (10.6)								
	Queue Length 95th (ft)	Movement		0		50									
*Seidel Road & SR 429 Northbound	Volume			601			790		23		77				B (12.2)
	LOS (Delay)	Movement		A (0.0)			A (0.0)		C (16.1)		B (11.1)				
		Approach		A (0.0)			A (0.0)			B (12.2)					
	Queue Length 95th (ft)	Movement		0			0		25		25				
*Seidel Road & Lakeshore Point Drive	Volume		36	336	306	247	414	27	310	4	187	17	21	66	F (>999)
	LOS (Delay)	Movement	A (8.9)	A (0.0)	A (0.0)	B (13.2)	A (0.0)	A (0.0)		F (>999)			F (>999)		
		Approach		A (8.9)			B (13.2)			F (>999)			F (>999)		
	Queue Length 95th (ft)	Movement	25	*0*	*0*	75	*0*	*0*		N/A			N/A		

Synchro Version 11 Build 168; *Unsignalized intersection analyzed using HCS v7.9; N/A - queue not reported

LOS notes:

Delay is in sec/veh units

:Level Of Service (LOS) E reflecting at capacity operations

:Level Of Service (LOS) F reflecting over capacity operations

Queue notes:

#: 95th percentile volume exceeds capacity

m: Upstream metering is in effect

Table 2-12: 2020 (Existing) AM and PM Peak Hour Synchro Intersection Level of Service/Delay (s/veh) (continued)

Intersections	Measure of Effectiveness (MOE)	Location	PM Movement/Approach LOS (Delay)												Intersection
			Eastbound			Westbound			Northbound			Southbound			PM LOS (Delay)
			Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right	
*Sinclair Road & SR 429 Southbound	Volume			110	40	150	219					309		114	D (29.6)
	LOS (Delay)	Movement		A (0.0)	A (0.0)	A (7.9)	A (0.0)					E (37.0)		A (9.6)	
		Approach		A (0.0)			A (3.2)						D (29.6)		
	Queue Length 95th (ft)	Movement		0	0	25	0					175		25	
Sinclair Road & SR 429 Northbound	Volume		76	342			130	202	100	66	66	81	0	139	B (13.4)
	LOS (Delay)	Movement	C (20.1)	B (17.4)			A (8.1)		A (7.7)	A (7.0)	A (2.4)		C (20.6)		
		Approach		B (17.9)			A (8.1)			A (6.0)			C (20.6)		
	Queue Length 95th (ft)	Movement	55	98			52		37	26	14		110		
*SR 429 Northbound Ramp & Connector Road	Volume								271	73			220		A (7.1)
	LOS (Delay)	Movement							A (8.5)	A (0.0)			A (0.0)		
		Approach								A (7.1)			A (0.0)		
	Queue Length 95th (ft)	Movement							25	0			0		
US 192 & West Orange Lake Boulevard	Volume		25	1583	16	39	2712	87	30	3	24	101	5	38	E (56.1)
	LOS (Delay)	Movement	F (132.3)	C (30.2)		F (130.2)	C (28.3)	A (3.9)		F (1943.8)		F (142.1)	B (18.0)		
		Approach		C (31.8)			C (29.0)			F (1943.8)			F (105.2)		
	Queue Length 95th (ft)	Movement	84	610		m72	m1077	m14		#273		#243	45		
US 192 & SR 429 Southbound	Volume			1330	318	161	2080					249		758	D (49.6)
	LOS (Delay)	Movement		C (28.4)	A (0.3)	F (152.2)	B (11.9)					D (50.6)		F (189.0)	
		Approach		C (22.9)			C (22.0)						F (154.8)		
	Queue Length 95th (ft)	*Movement*		*m241*	*m0*	*171*	*287*					*183*		*#1758*	
US 192 & SR 429 Northbound	Volume		291	1288			2117	308	124		185		0		B (12.6)
	LOS (Delay)	Movement	E (65.3)	A (1.3)			A (2.2)	A (0.8)	F (101.8)		F (88.2)				
		Approach		B (13.1)			A (2.0)			F (93.7)					
	Queue Length 95th (ft)	Movement	308	52			52	m1	132		266				
US 192 & East Orange Lake Boulevard	Volume		102	1134	237	231	1913	144	362	52	191	166	45	150	D (53.1)
	LOS (Delay)	Movement	F (102.0)	C (26.8)	A (2.3)	F (124.3)	D (53.0)	B (13.2)	F (117.3)	F (93.7)	B (14.6)		F (122.2)	B (13.9)	
		Approach		C (28.0)			E (57.7)			F (82.8)			E (76.3)		
	Queue Length 95th (ft)	Movement	244	246	17	#265	1061	101	#370	130	93		419	81	
US 192 & Inspiration Drive	Volume		91	1321	30	129	2130	35	41	2	47	50	3	284	D (37.1)
	LOS (Delay)	Movement	F (146.6)	C (23.2)	A (0.1)	F (120.4)	C (26.7)		F (144.9)	C (28.8)		F (100.2)	F (86.6)		
		Approach		C (30.5)			C (32.0)			F (81.9)			F (88.6)		
	Queue Length 95th (ft)	Movement	*#265*	*504*	*0*	*155*	*668*		*#67*	*53*		*142*	*402*		
US 192 & Formosa Gardens Boulevard	Volume		19	1263	136	356	2126	21	126	18	235	49	15	41	C (31.8)
	LOS (Delay)	Movement	F (105.6)	C (28.6)		F (103.8)	B (15.6)		F (129.1)	F (86.9)	B (14.0)	F (94.9)	C (32.1)		
		Approach		C (29.7)			C (28.2)			E (55.7)			E (61.2)		
	Queue Length 95th (ft)	Movement	*0*	*560*		*355*	*767*		*278*	*56*	*94*	*120*	*72*		
*Livingstone Road & Formosa Gardens Boulevrad	Volume					72		54		300	64	26	360		C (16.6)
	LOS (Delay)	Movement					C (16.6)			A (0.0)		A (9.3)	A (0.0)		
		Approach					C (16.6)			A (0.0)			A (9.3)		
	Queue Length 95th (ft)	Movement					*50*			*0*	*0*	*25*	*0*		
Western Way & Flager Avenue	Volume		9	433			525	15				25		12	B (12.6)
	LOS (Delay)	Movement	A (2.0)	A (1.6)			B (19.4)	B (14.9)				E (57.1)		C (24.5)	
		Approach		A (1.6)			B (19.3)						D (46.5)		
	Queue Length 95th (ft)	Movement	*4*	*40*			*276*	*27*				*26*		*21*	
Western Way & Flamingo Crossing Boulevard	Volume		39	366	53	268	477	365	33	25	289	195	15	30	C (27.2)
	LOS (Delay)	Movement	E (59.8)	C (28.5)	A (0.5)	D (50.5)	B (19.8)	A (3.6)	E (62.5)	D (51.1)	C (20.1)	E (60.0)	D (45.2)	A (0.6)	
		Approach		C (27.9)			C (21.9)			C (26.4)			D (51.7)		
	Queue Length 95th (ft)	Movement	*68*	*173*	*1*	*152*	*198*	*64*	*60*	*24*	*87*	*117*	*16*	*0*	
*Western Way & SR 429 Southbound	Volume			470	380	341	954							156	C (15.2)
	LOS (Delay)	Movement		A (0.0)	A (0.0)	B (10.1)	A (0.0)							C (15.2)	
		Approach		A (0.0)			A (2.7)						C (15.2)		
	Queue Length 95th (ft)	Movement		*0*	*0*	*50*	*0*							*50*	
*Western Way & SR 429 Northbound	Volume		90	775			1201	1028	94		121				F (71.8)
	LOS (Delay)	Movement	B (13.0)	A (0.0)			A (0.0)	A (0.0)	F (71.8)		B (12.7)				
		Approach		A (1.4)			A (0.0)			F (71.8)					
	Queue Length 95th (ft)	Movement	*25*	*0*			*0*	*0*	*100*		*25*				
*Seidel Road & Avalon Road	Volume					384		216		582	291	113	505		F (>999)
	LOS (Delay)	Movement				F (>999)		C (20.4)		A (0.0)	A (0.0)	C (21.8)	A (0.0)		
		Approach					F (>999)			A (0.0)			C (21.8)		
	Queue Length 95th (ft)	Movement				*1150*		*75*		*0*	*0*	*50*	*0*		
*Seidel Road & SR 429 Southbound	Volume			364	40	140	600								A (8.8)
	LOS (Delay)	Movement		A (0.0)	A (0.0)	A (8.8)	A (0.0)								
		Approach		A (0.0)			A (8.8)								
	Queue Length 95th (ft)	Movement		*0*	*0*	*25*	*0*								
*Seidel Road & SR 429 Northbound	Volume			364			676		64		255				B (12.4)
	LOS (Delay)	Movement		A (0.0)			A (0.0)		B (14.5)		B (11.9)				
		Approach		A (0.0)			A (0.0)			B (12.4)					
	Queue Length 95th (ft)	Movement		*0*			*0*		25		50				
*Seidel Road & Lakeshore Point Drive	Volume		56	445	118	56	427	13	187	2	60	17	4	62	F (223.3)
	LOS (Delay)	Movement	A (8.9)	A (0.0)	A (0.0)	A (9.5)	A (0.0)	A (0.0)		F (223.3)			C (17.3)		
		Approach		A (8.9)			A (9.5)			F (223.3)			C (17.3)		
	Queue Length 95th (ft)	Movement	*25*	*0*	*0*	*25*	*0*	*0*		*450*			*50*		

Synchro Version 11 Build 168; *Unsignalized intersection analyzed using HCS v7.9; N/A - queue not reported

LOS notes:

Delay is in sec/veh units

:Level Of Service (LOS) E reflecting at capacity operations

:Level Of Service (LOS) F reflecting over capacity operations

Queue notes:

#: 95th percentile volume exceeds capacity

m: Upstream metering is in effect

2.13 Intersection Layout

Since SR 429 is a limited-access roadway, there are no signalized intersections located along it. However, there are intersections with the ramp terminals at each interchange cross street. The ramp terminal intersections at US 192 and the northbound ramp terminal intersection at Sinclair Road are signalized. The ramp terminal intersections at Western Way and Seidel Road, as well as the southbound ramp terminal for Sinclair Road, are stop controlled.

Sinclair Road

Sinclair Road is a four-lane divided urban section at the interchange with SR 429. The SR 429 northbound off-ramp intersection is signal-controlled. The off-ramp has one left turn lane, one through lane (to Connector Road), and one right turn lane. Eastbound Sinclair Road has one left turn lane to Connector Road. The southbound off-ramp is stop controlled at the intersection with Sinclair Road. The off-ramp has one left turn/through lane and one right turn lane. Westbound Sinclair Road has one left turn lane to the southbound on-ramp to SR 429.

US 192

US 192 is a six-lane divided urban section at the interchange with SR 429. The SR 429 northbound off-ramp intersection is signal-controlled. The off-ramp has two left turn lanes and one right turn lane. Eastbound US 192 has two left turn lanes to the northbound on-ramp. Westbound US 192 has one right turn lane to the northbound on-ramp. The southbound off-ramp intersection is signal-controlled. The off-ramp has two left turn lanes and one right turn lane. Westbound US 192 has two left turn lanes to the southbound on-ramp to SR 429. Eastbound US 192 has one right turn lane to the southbound on-ramp.

Western Way

Western Way is a four-lane divided urban section at the interchange with SR 429. The SR 429 northbound off-ramp is stop-controlled. The off-ramp has one left turn lane that is stop controlled and a dedicated right turn lane that is yield controlled. Eastbound Western Way has one left turn lane to the northbound on-ramp and is yield controlled. Westbound Western Way has one right turn lane to the northbound on-ramp and is yield controlled. The southbound off-ramp to westbound Western Way intersection is one lane and yield controlled. The southbound off-ramp to eastbound Western Way intersection is one lane and yield controlled. Westbound Western Way has one left turn lane to the southbound on-ramp to SR 429 that is stop controlled. Eastbound Western Way has one right turn lane to the southbound on-ramp.

Seidel Road

Seidel Road is a four-lane divided urban section at the interchange with SR 429. The interchange is a half diamond interchange. The SR 429 northbound off-ramp intersection has one left turn

lane that is stop-controlled, while the right turn lane is yield controlled. Westbound Seidel Road has one left turn lane to the southbound on-ramp to SR 429 that is yield controlled.

2.14 Railroad Crossings

No railroad crossings are located within the study area.

2.15 Crash Data and Safety Analysis

A summary of the crash data and safety analysis is provided in this section. More detailed information is included in the Systems Interchange Justification Report provided under separate cover.

2.15.1 Overall Crash Data Analysis

Crash data for state roads within the project AOI were processed using the most recent five-year data from FDOT's Crash Analysis Reporting System (CARS), from 2014 through 2018. Crash data for non-state roads were obtained from the Signal Four Analytics tool, an FDOT-funded database developed in coordination with the state's CARS. Signal Four data were processed for the same time period as the CARS data. Detailed crash reports (long/short forms) were reviewed to verify the accuracy of the information obtained from the database.

A total of 647 crashes were reported within the AOI during the five-year study period from 2014 through 2018, as presented in Table 2-13. The number of crashes in the study area increased each year except 2018. Most of the crashes resulted in injury and property damage only. Seven fatal crashes were reported during the five-year analysis period.

Table 2-13: Number of Crashes and Crash Severity by Year

Crash Severity	2014	2015	2016	2017	2018	*Total*	Proportion
Fatality	1	2	0	2	2	7	1.1%
Incapacitating Injury	2	6	5	3	5	21	3.2%
Non-Incapacitating Injury	5	14	19	16	10	64	9.9%
Possible Injury	16	24	28	38	28	134	20.6%
Property Damage Only	72	68	71	114	99	424	65.2%
Total	**96**	**114**	**123**	**173**	**144**	**650**	**100.0%**

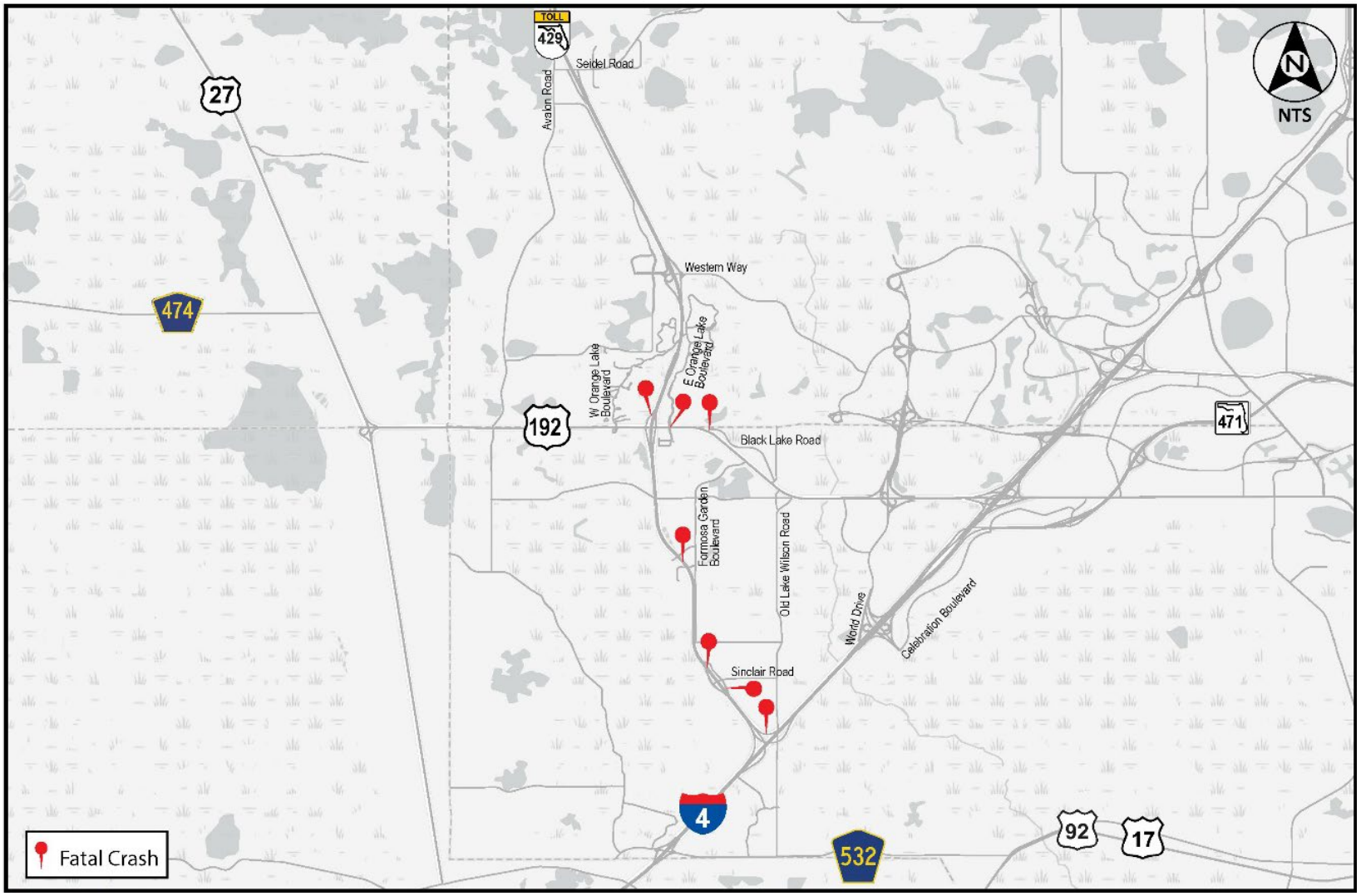
Table 2-14 summarizes the crashes based on location. Forty-one percent of the crashes occurred at the intersections, 24.0 percent along the SR 429 mainline, 8.3 percent along the SR 429 ramps, and 26.8 percent at the midblock along the arterials within the project limits.

Table 2-14: Number of Crashes by Location and Year

Roadway Segment	2014	2015	2016	2017	2018	*Total*	Proportion
SR 429 Mainline	10	17	32	51	46	156	24.0%
SR 429 Ramps	10	9	8	14	13	54	8.3%
Intersections	48	48	54	60	56	266	40.9%
Midblock	28	40	29	48	29	174	26.8%
Total	**96**	**114**	**123**	**173**	**144**	**650**	**100.0%**

Figure 2-10 shows all fatal crashes within the study area. A total number of seven fatal crashes were reported, two (2) occurred along SR 429 mainline between Sinclair Road and US 192 interchanges, three (3) along the SR 429 ramps, and two (2) at the intersection of US 192 at East Orange Lake Boulevard and Blake Lake Road/Inspiration Drive. Four out of seven fatal crashes occurred due to vehicles running off the road.

Figure 2-10: Fatal Crash Location Map (2014-2018)



SR 429 Mainline from I-4 to Seidel Road Crashes

A total of 156 crashes were reported along the SR 429 mainline from I-4 to the Seidel Road interchange during the five-year analysis period from 2014 through 2018. The mainline crashes were mostly off-road (49 percent) and rear-end (25 percent), as illustrated in Figure 2-11. Most of the crashes resulted in property damage only and occurred on dry pavement conditions during the day. Two fatal crashes were reported within the five-year study period, which one of them was caused by a rear-end and the other one by an off-road crash, both during the day.

Figure 2-11: SR 429 Mainline Crash Data Summary from I-4 to Seidel Road (2014-2018)

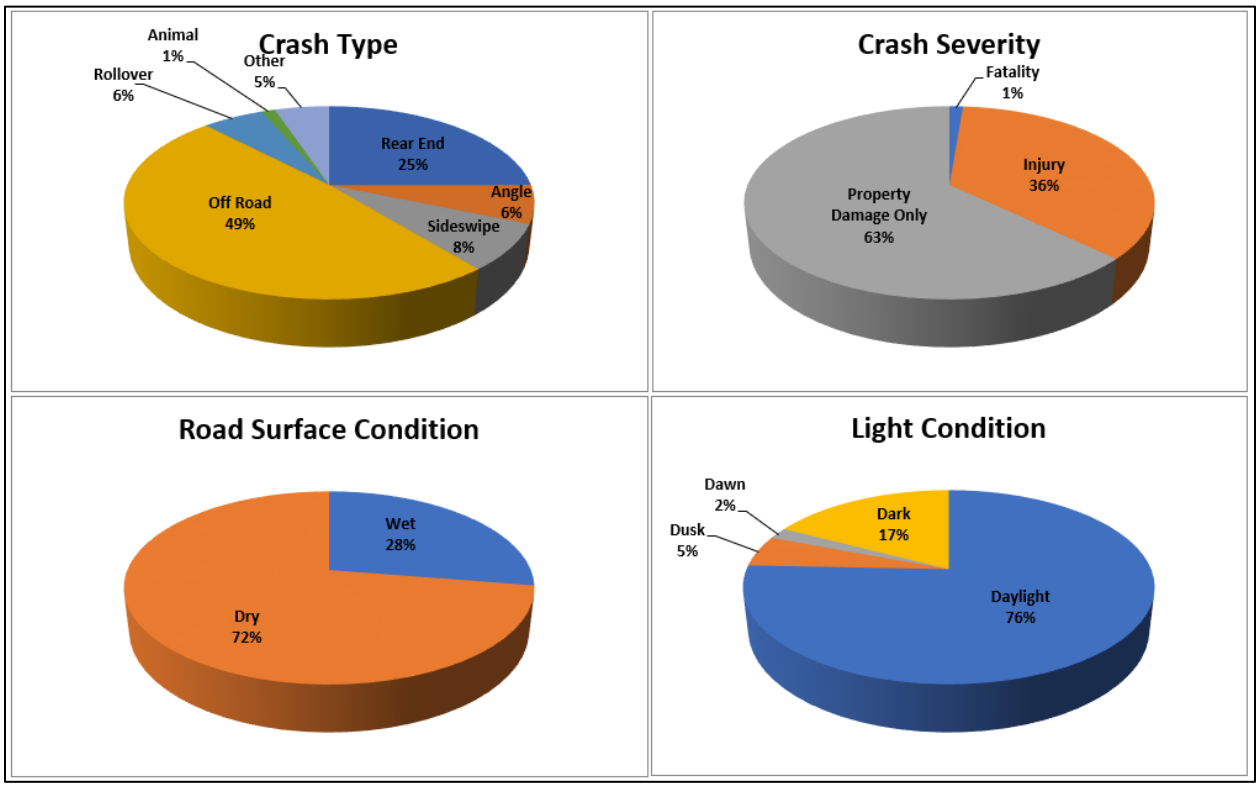
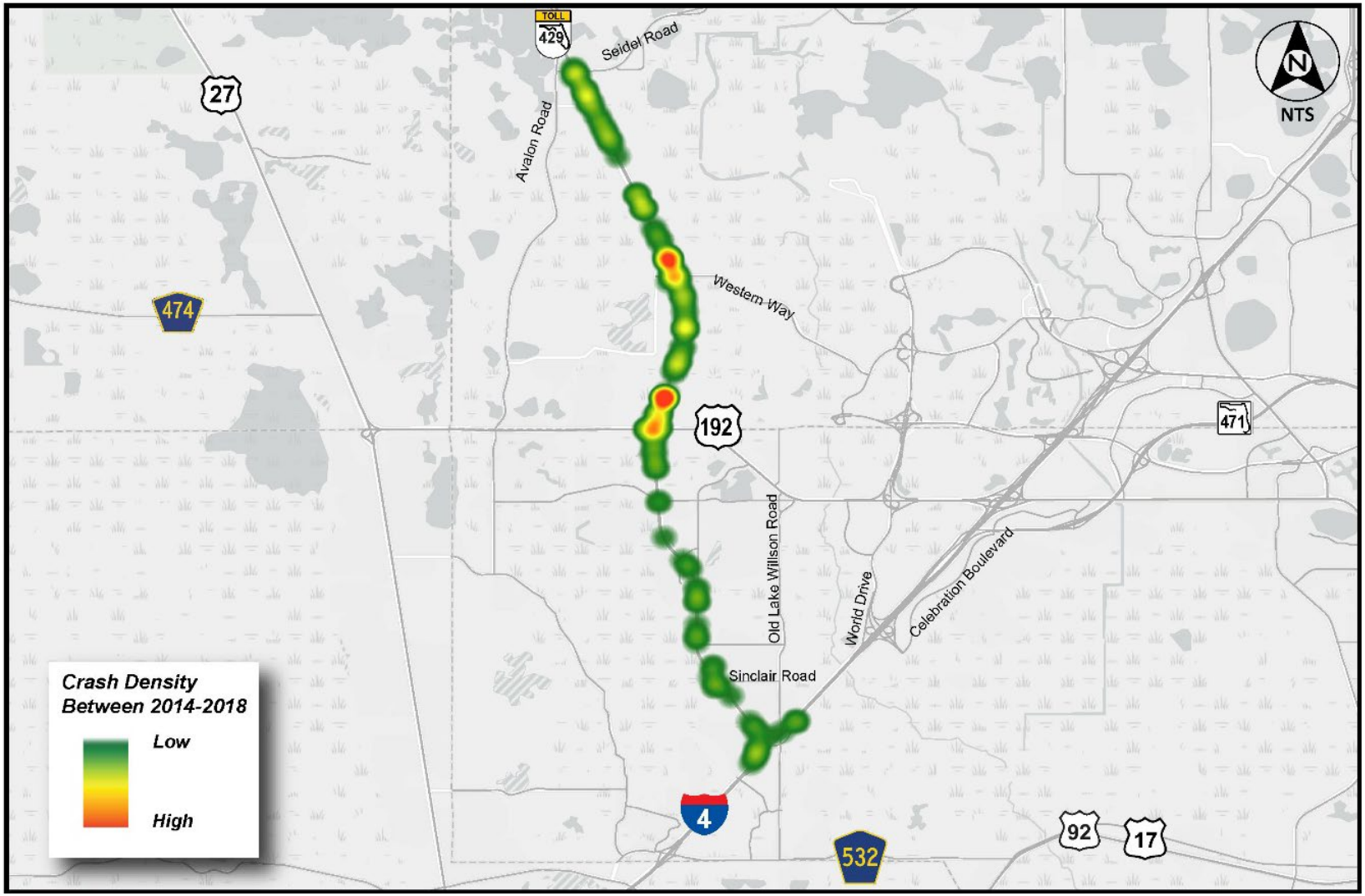


Figure 2-12 shows crash locations heat diagram along the SR 429 mainline and ramps. There is a higher concentration of crashes at the merge/diverge areas of the interchanges. The highest number of crashes is reported close to the US 192 and Western Way interchanges. There is congestion at these two locations during the evening commute.

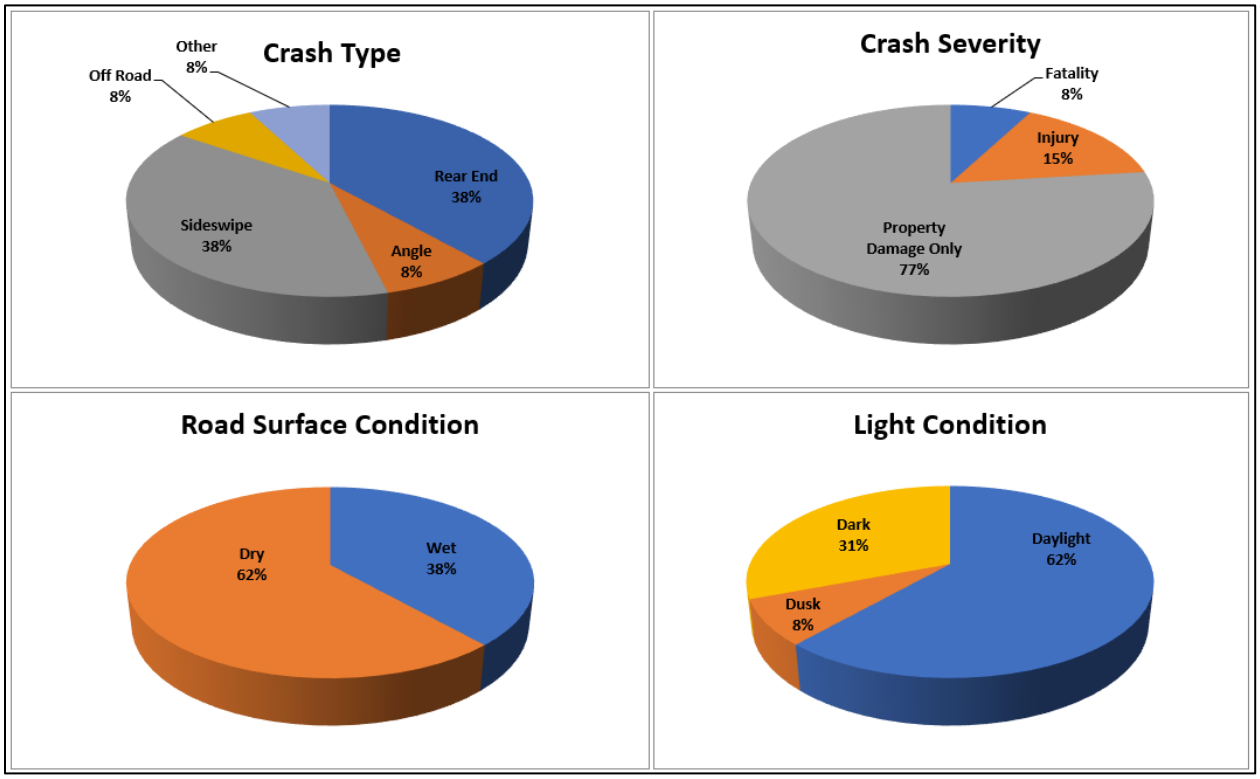
Figure 2-12: SR 429 Mainline and Ramps Historical Crash Heat Map (2014-2018)



I-4 and SR 429, System-to-System Interchange Ramps Crashes

A total of 13 crashes were reported along the I-4 ramps during the five-year analysis period. Sideswipe and rear end crash type have the most percentage with 38 percent for each of them. The remaining three were angle, off-road, and other. One fatality was reported on dry surface and dark lighting conditions, which caused an off-road crash at 3:25 AM on a Sunday. The other two (2) crashes resulted in injury and the rest of them resulted in property damage only. 62 percent of crashes occurred under dry road surface conditions, mostly during the day, as shown in Figure 2-13.

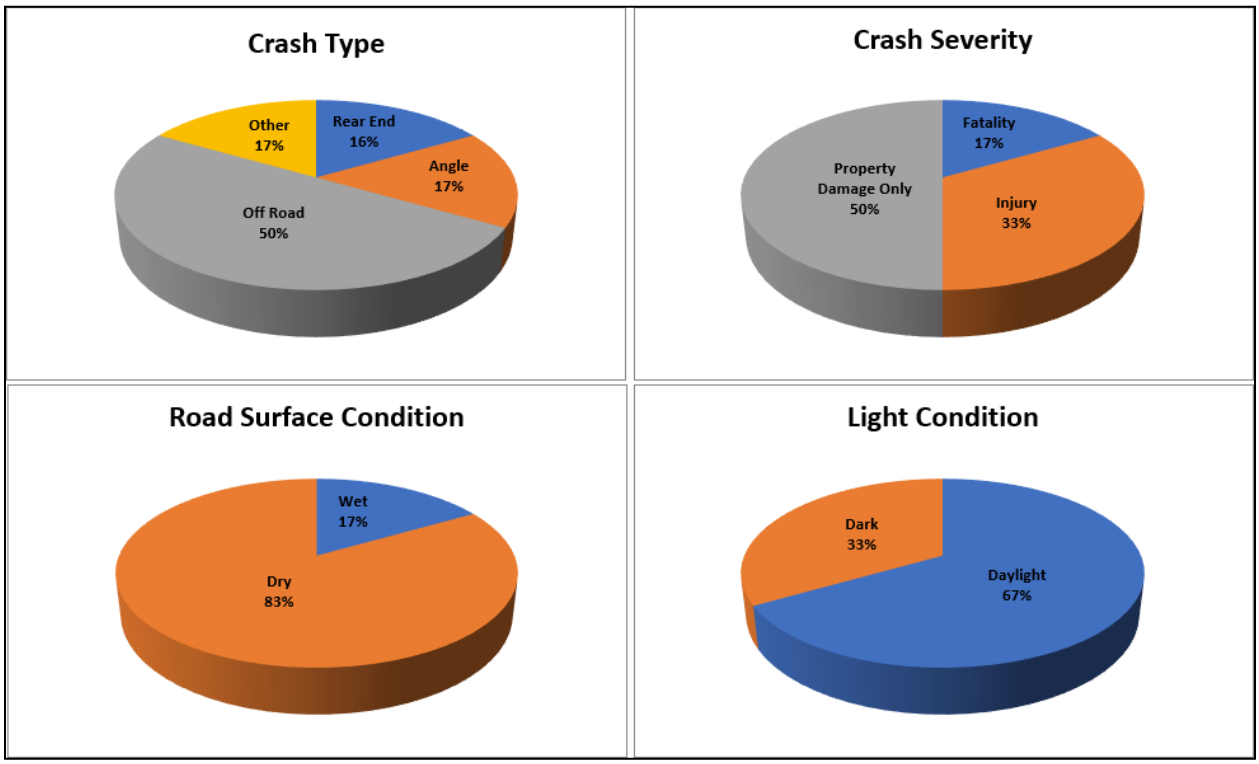
Figure 2-13: I-4 and SR 429, System-to-System Interchange Ramps Crash Data Summary (2014-2018)



Sinclair Road and SR 429 Interchange Ramps (MP 1) Crashes

A total of six (6) crashes were reported along the Sinclair Road interchange ramps during the five-year analysis period. Three out of six crashes were off-road and the remaining three were angle, rear end, and other. One fatality was reported, which was caused by an off-road motorcycle crash at 5:40 PM on a Saturday. The crash forms show that the motorcycle was travelling in the wrong direction on the northbound off-ramp. The rest of the crashes resulted in injury and occurred on either a Thursday or a Friday. The crashes occurred under dry road surface conditions, mostly during the day, as shown in Figure 2-14.

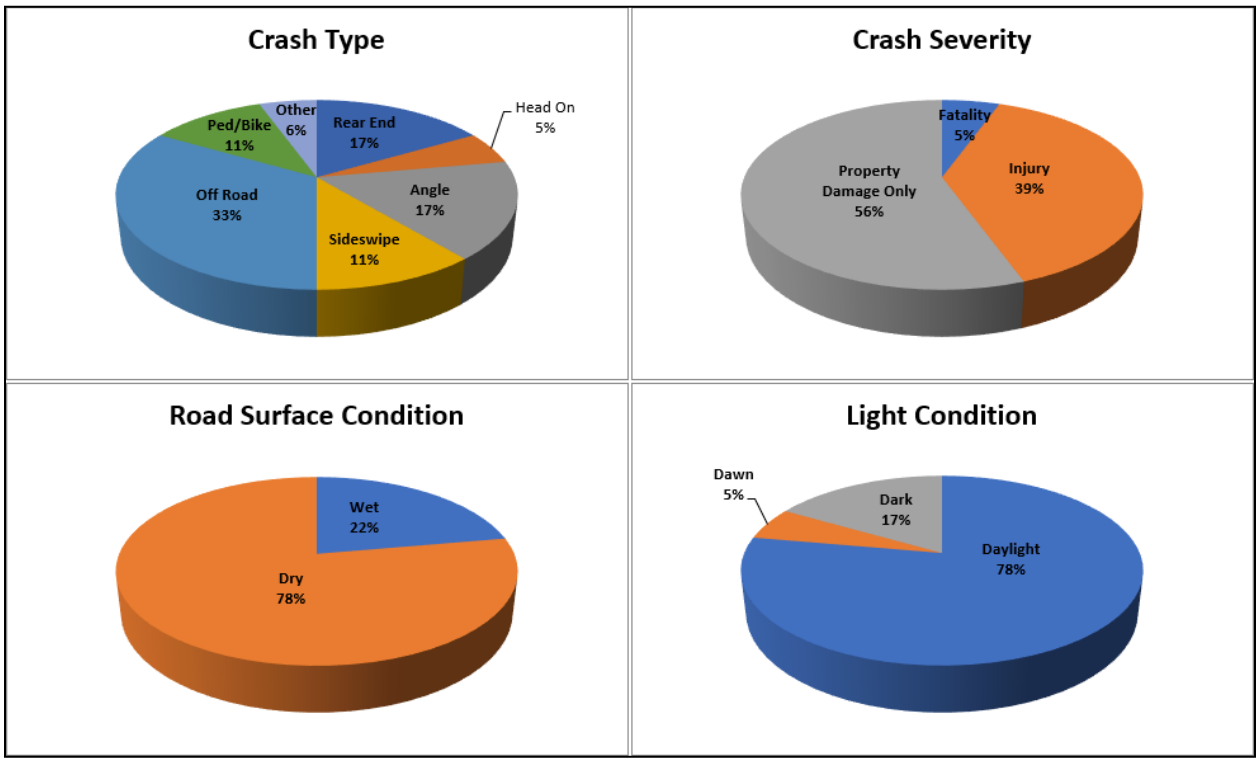
Figure 2-14: Sinclair Road and SR 429 Interchange Ramps Crash Data Summary (2014-2018)



US 192 and SR 429 Interchange Ramps (MP 6) Crashes

A total of 18 crashes were reported along the US 192 interchange ramps during the five-year analysis period. As shown in Figure 2-15, most of the crashes were off-road, resulted in property damage only, and occurred on a dry road surface during the day. One fatal crash was reported within the five-year study period, which was caused by an off-road crash. It is noted in the long forms that the vehicle failed to negotiate the right-hand curve on the southbound off-ramp as the roadway was wet. The crash occurred during the day at 1:30 PM on a Thursday. Most of the crashes occurred during the PM peak period and were evenly spread through the days of week.

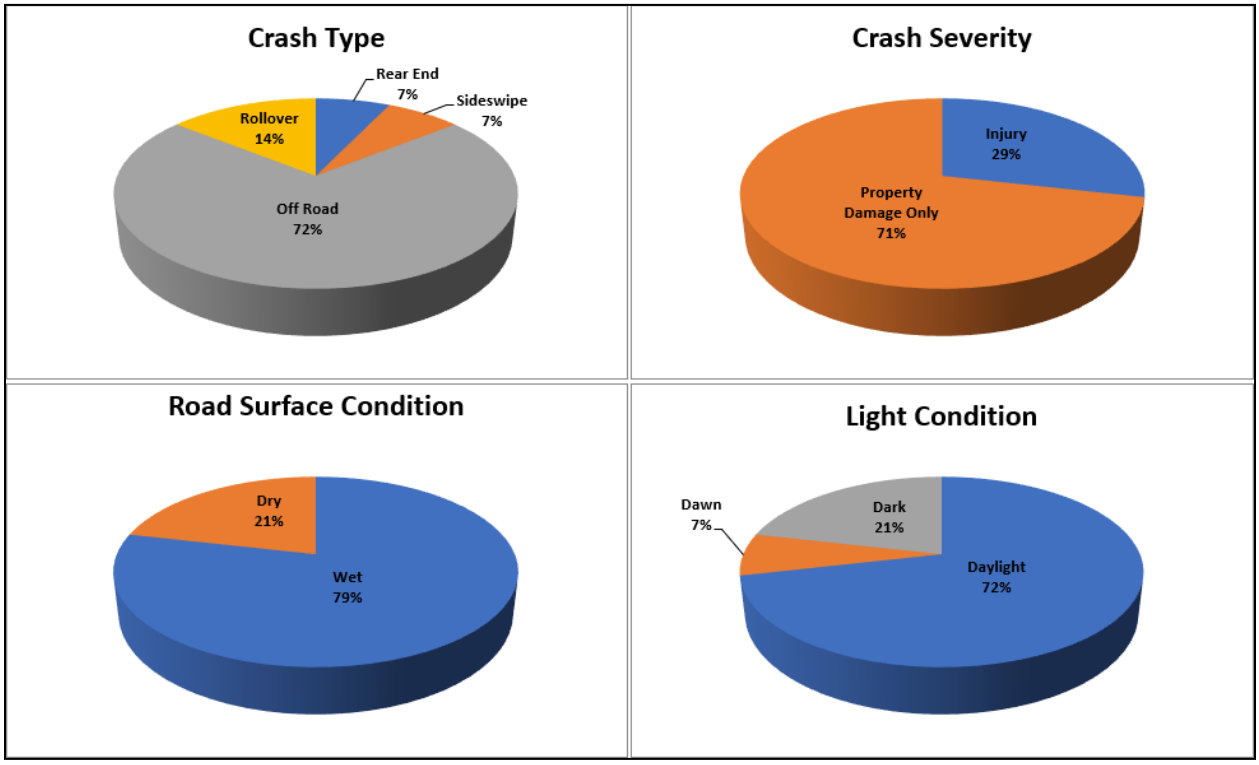
Figure 2-15: US 192 and SR 429 Interchange Ramps Crash Data Summary (2014-2018)



Western Way and SR 429 Interchange Ramps (MP 8) Crashes

A total of 14 crashes were reported along the Western Way interchange ramps from 2014 through 2018. As shown in Figure 2-16, most of the crashes were off-road, resulted in property damage only, and occurred on a wet road surface during the day. Most of the crashes occurred between Wednesday and Sunday during the AM peak period. Crash occurrence was more frequent along the ramps to and from the south.

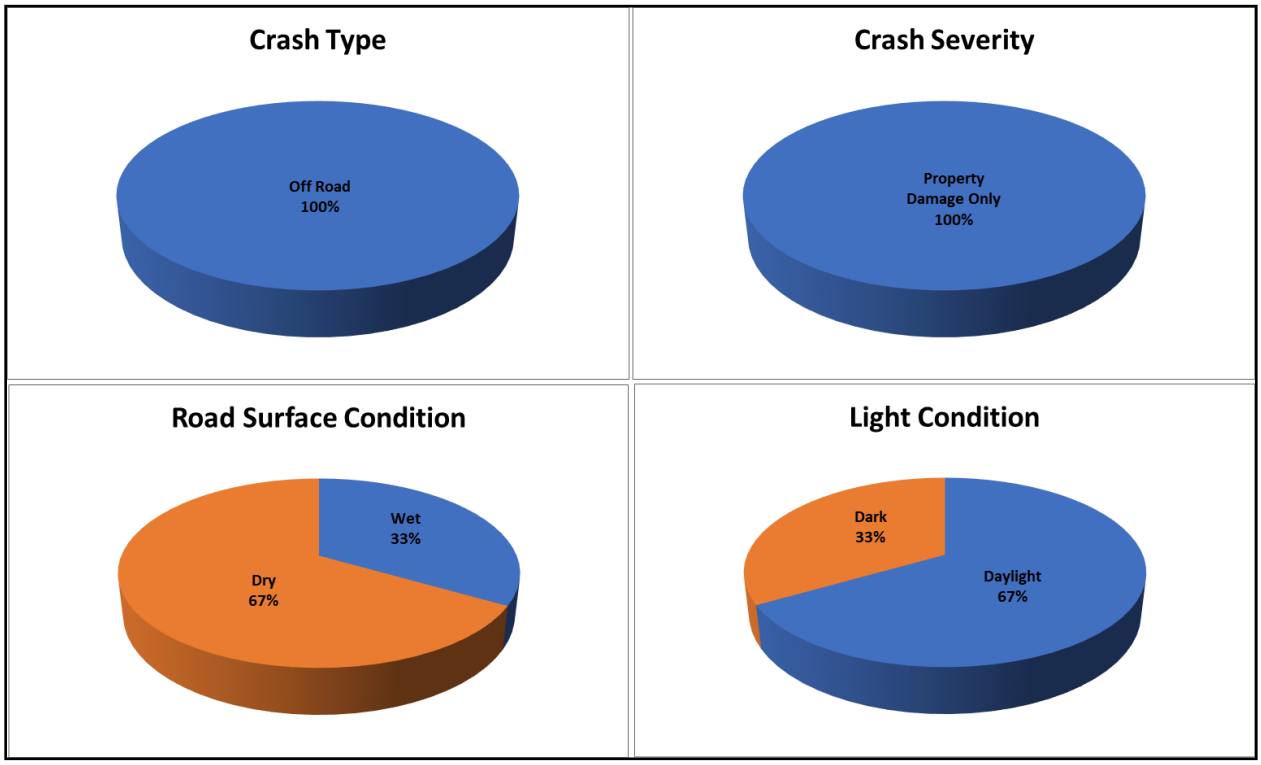
Figure 2-16: Western Way and SR 429 Interchange Ramps Crash Data Summary (2014-2018)



Seidel Road and SR 429 Interchange Ramps (MP 11) Crashes

Three off-road crashes were reported along the Seidel Road interchange ramps during the five-year analysis period. As shown in Figure 2-17, the crashes resulted in property damage only, under dry road surface conditions.

Figure 2-17: Seidel Road and SR 429 Interchange Ramps Crash Data Summary (2014-2018)



Actual crash rates were computed and compared with average crash rates for similar facilities within Orange and Osceola Counties to assess the safety condition within the study area. Critical crash rates and safety ratios were also estimated. Crash rates for the freeway mainline and ramps were estimated as crashes per Million Vehicle Miles Traveled (MVMT) and for the intersections as crashes per Million Entering Vehicles (MEV). The critical crash rate is based on the average crash rate for a similar facility adjusted by vehicle exposure and a probability constant. The safety ratio represents the actual crash rate divided by the critical crash rate. If a segment has an actual crash rate higher than the critical crash rate (i.e., safety ratio > 1.0), it may have a safety deficiency. The crash rates are listed in Table 2-15.

Table 2-15: Mainline and Ramp Crash Rates and Safety Ratios (2014-2018)

Description	Total Crashes	Actual Crash Rate	Average Crash Rate*	Critical Crash Rate	Safety Ratio
Freeway Mainline or Ramps					
SR 429 Mainline	156	0.22	0.65	0.81	0.27
I-4 System-to-System Interchange Ramps**	13	0.11	0.76	1.20	0.09
Sinclair Road Ramps**	6	0.80	0.65	2.52	0.32
US 192 Ramps**	18	0.68	0.65	1.55	0.43
Western Way Ramps**	14	0.32	0.65	1.33	0.24
Seidel Road Ramps**	3	0.36	0.65	2.41	0.15

** FDOT CAR Osceola and Orange Counties, 5-year Average Crash Rate*
Western Beltway Mainline: Toll Road Urban; I-4 Mainline Urban Interstate
*** I-4 and SR 429 Ramps: Ramp Urban Crash Rate not available, used rate for mainline*

2.15.2 Intersection Crashes

Signal Four Analytics, a FDOT funded database developed in coordination with the state's CARS, was used to obtain crash data for side streets that are not included in the FDOT crash database. Intersection crashes were extracted by providing a 250-foot influence area. A brief discussion of the crash analysis for the intersections are provided below.

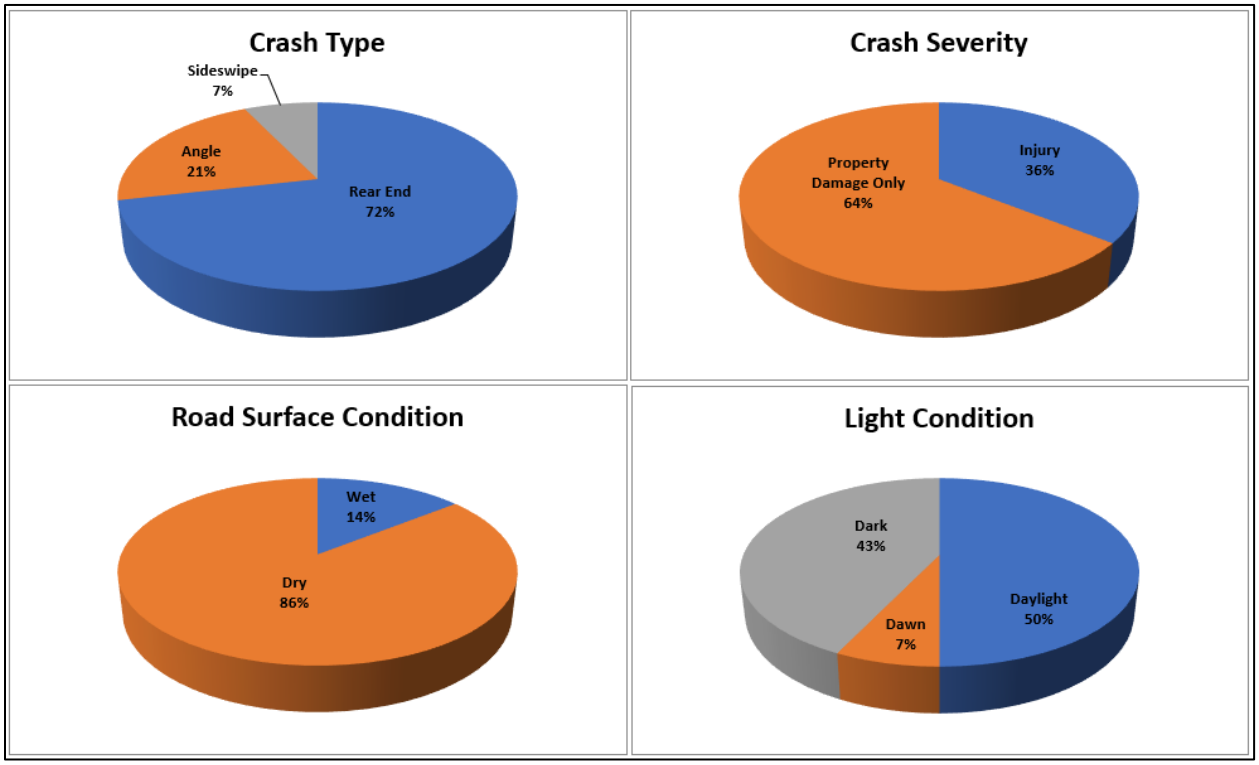
Seidel Road and Ramp Terminal Intersections

At the Sinclair Road and SR 429 ramp terminal intersections, one crash was reported from 2014 through 2018, which was caused by an angle crash. It resulted in injury and occurred under dry road surface conditions.

US 192 and West Orange Lake Boulevard Intersection

At the US 192 and West Orange Lake Boulevard intersection, 14 crashes were reported during the five-year analysis period. As shown in Figure 2-18, most of the crashes were rear-end collisions. Property damage only was the most common severity types. No fatal crash was reported in the five-year period. Most of the crashes occurred under dry road surface conditions during the daylight conditions. Crash occurrence was more frequent during the weekdays.

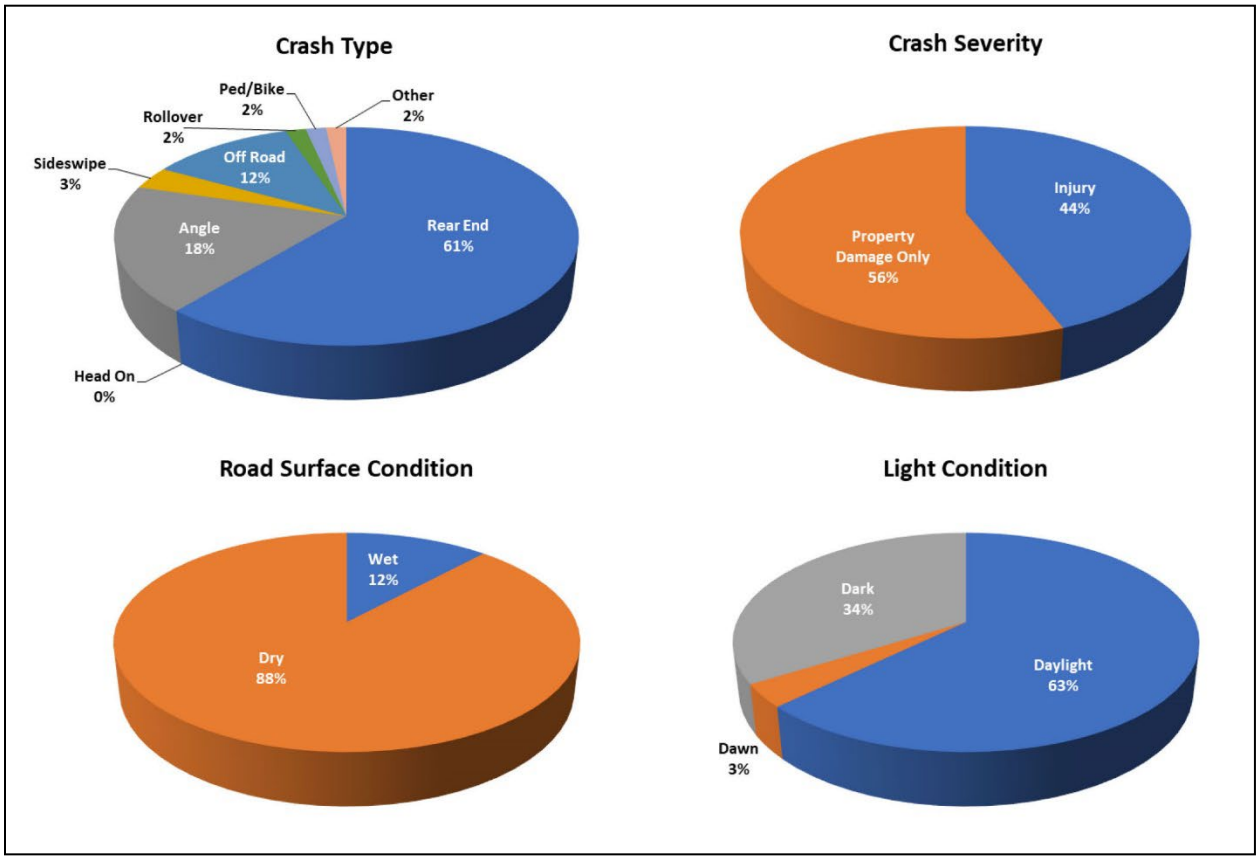
Figure 2-18: US 192 and West Orange Lake Boulevard Intersections Crash Data Summary (2014-2018)



US 192 and SR 429 Ramp Terminal Intersections

A total of 59 crashes were reported at the US 192 and SR 429 ramp terminal intersections during the five-year analysis period. This intersection experiences congestion during the evening commute. As illustrated in Figure 2-19, most of the crashes were rear-end collisions. Property damage only was the most common severity types. Most of the crashes occurred under dry road surface conditions during the day. Crash occurrence was somewhat evenly distributed throughout the week.

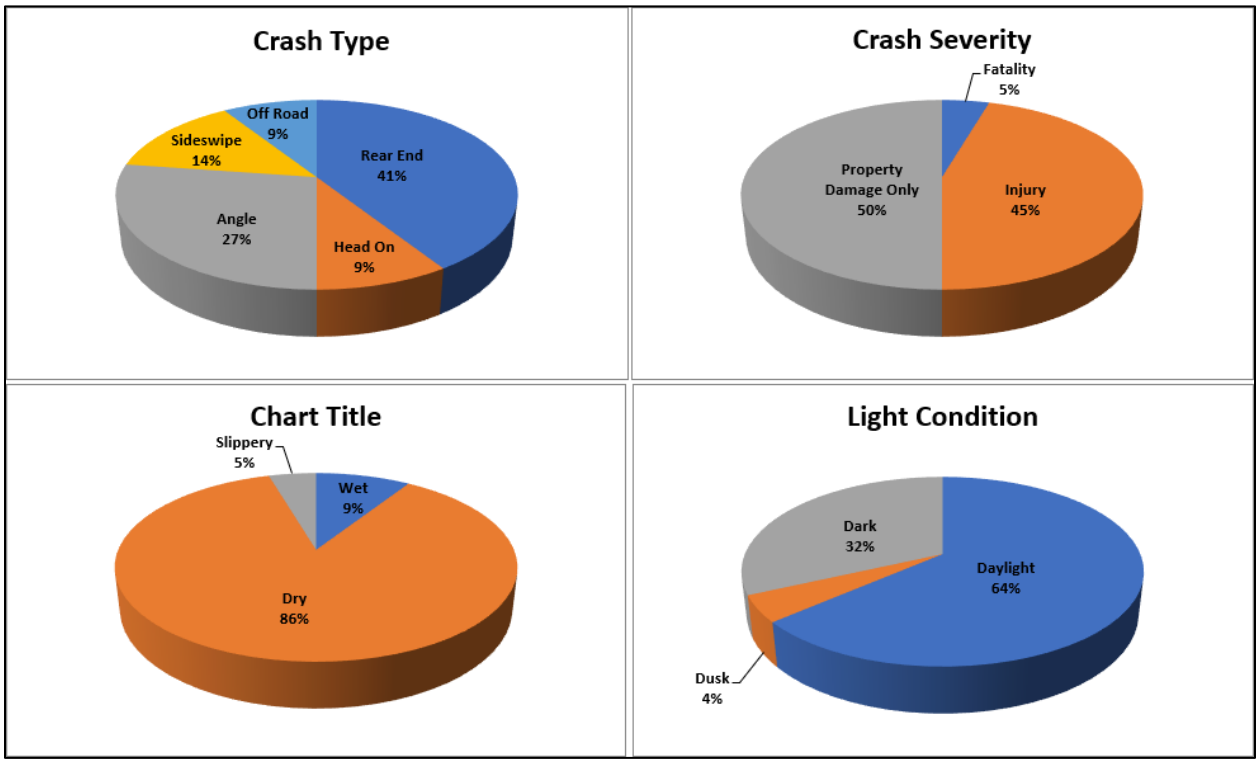
Figure 2-19: US 192 and SR 429 Intersections Crash Data Summary (2014-2018)



US 192 and East Orange Lake Boulevard Intersection

A total of 22 crashes were reported at the US 192 and East Orange Boulevard intersection during the five-year analysis period. One fatal crash was reported during the study period. At least 45 percent of the total crashes resulted in injuries. As shown in Figure 2-20, rear-end crashes (approximately 41 percent) and angle crashes (approximately 27 percent) were the prominent crash types at the intersection. Reports indicated that 86 percent of the crashes occurred during dry roadway conditions and 64 percent of the crashes occurred during daylight conditions.

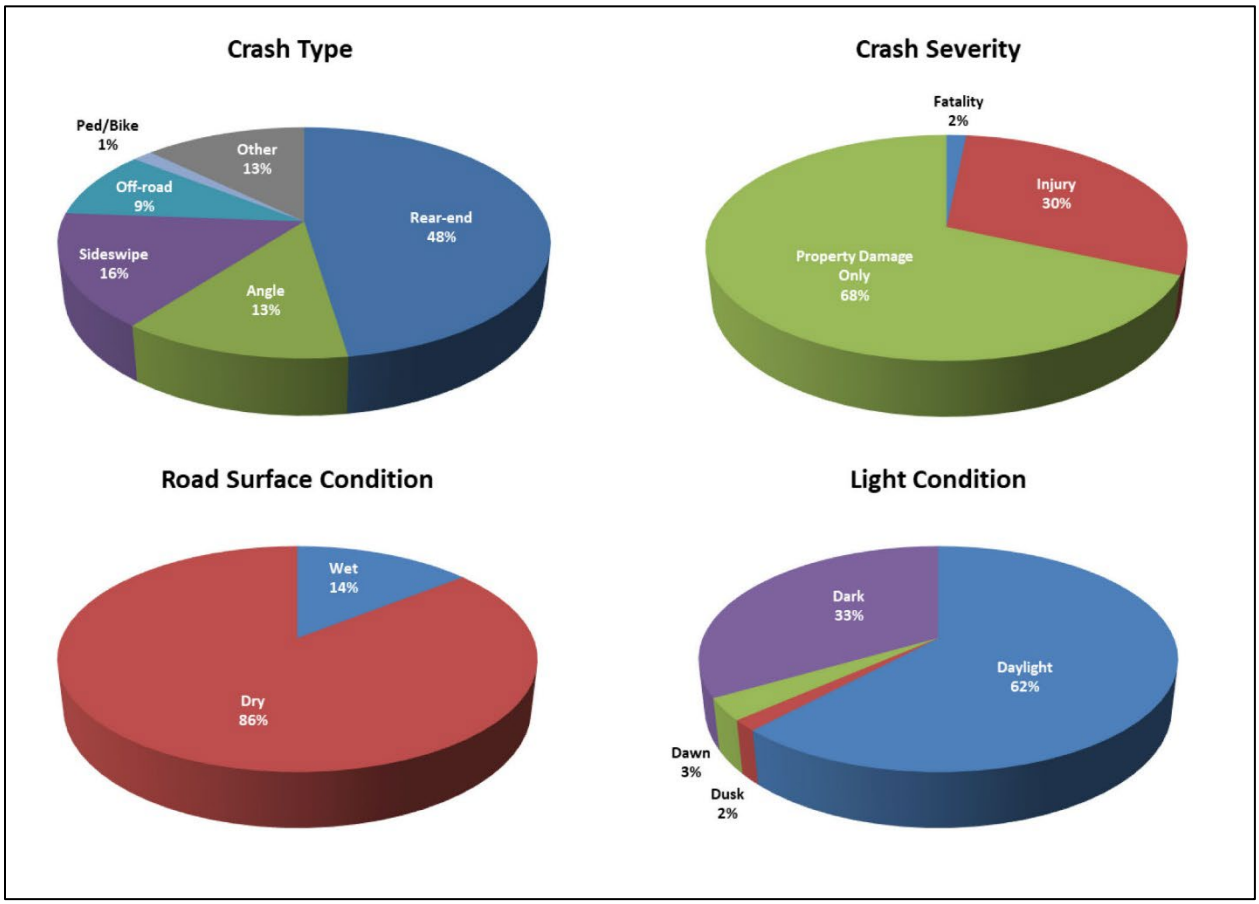
Figure 2-20: US 192 and East Orange Lake Boulevard Intersection Crash Data Summary (2014-2018)



US 192 and Inspiration Road Intersection

A total of 63 crashes were reported at the US 192 and Inspiration Road intersection during the five-year analysis period. One fatal crash was reported during the study period. At least 30 percent of the total crashes resulted in injuries. As shown in Figure 2-21, rear-end crashes (approximately 48 percent) and sideswipe crashes (approximately 16 percent) were the prominent crash types at the intersection. Reports indicated that 86 percent of the crashes occurred during dry roadway conditions and 62 percent of the crashes occurred during daylight conditions.

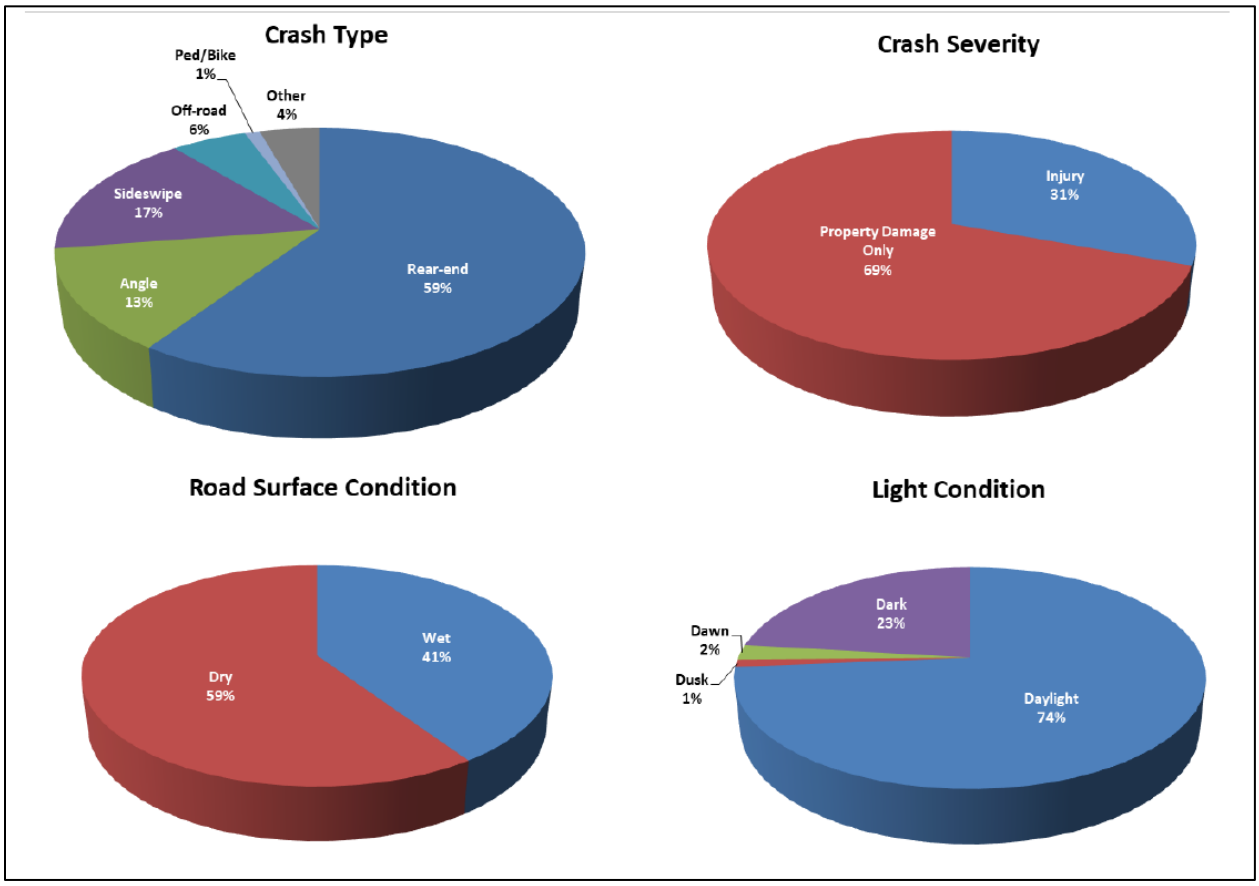
Figure 2-21: US 192 and Inspiration Road Intersection Crash Data Summary (2014-2018)



US 192 and Formosa Gardens Boulevard Intersection

At the US 192 and Formosa Gardens Boulevard intersection, 91 crashes were reported during the five-year analysis period. As shown on Figure 2-22, most of the crashes were rear-end collisions (approximately 59 percent). One pedestrian crash was reported during the study period. At least 31 percent of the total crashes resulted in injuries and no fatal crashes were reported in the five-year period. Reports indicated that 59 percent of the crashes occurred during dry roadway conditions and 74 percent of the crashes occurred during daylight conditions. Crash occurrence was more frequent during the weekdays.

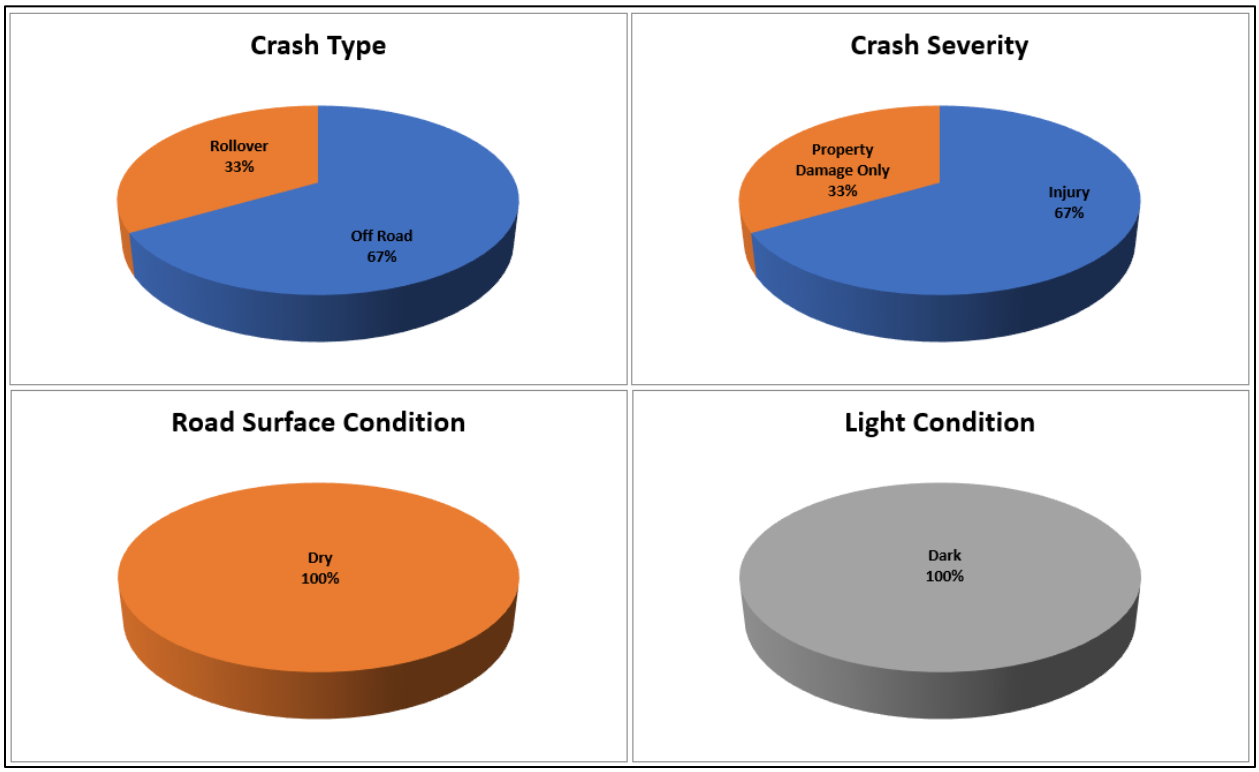
Figure 2-22: US 192 and Formosa Gardens Boulevard Intersection Crash Data Summary (2014-2018)



Western Way and Flamingo Road Intersection

A total of three crashes were reported at the Western Way and Flamingo Road intersection during the five-year analysis period. No fatal crashes were reported during the study period. At least 67 percent of the total crashes resulted in injuries. As shown in Figure 2-23, off-road crashes (approximately 67 percent) and rollover crashes (approximately 33 percent) were the prominent crash types at the intersection. Reports indicated that all of the crashes occurred during dry and dark roadway conditions. Given the low frequency of crashes, a specific crash pattern cannot be confirmed, but rather the atypical crash types are due to chance.

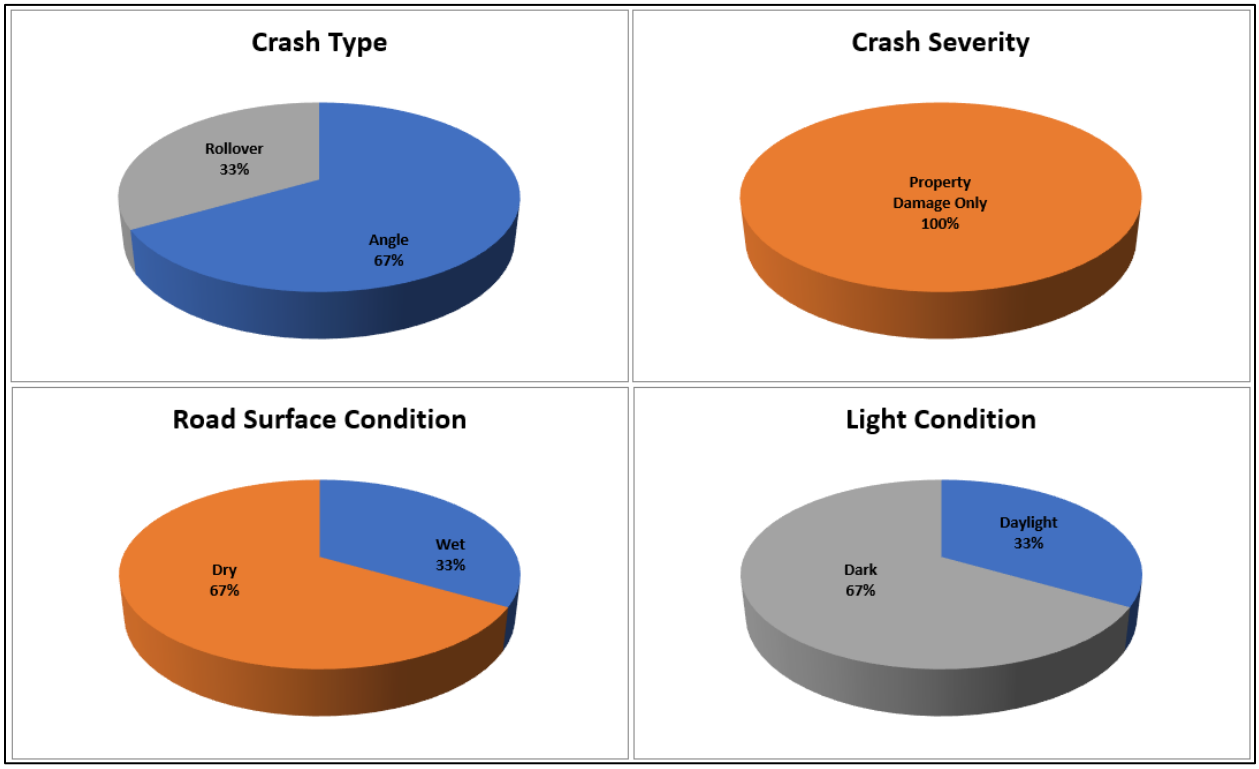
Figure 2-23: Western Way and Flamingo Road Intersection Crash Data Summary (2014-2018)



Western Way and SR 429 Ramp Terminal Intersections

A total of three crashes were reported at the Western Way and the SR 429 ramp terminal intersections during the five-year analysis period. All crashes resulted in property damage only. As shown in Figure 2-24, angle crashes (approximately 67 percent) and rollover crashes (approximately 33 percent) were the prominent crash types at the intersections. Reports indicated that 67 percent of the crashes occurred during dry and dark roadway conditions.

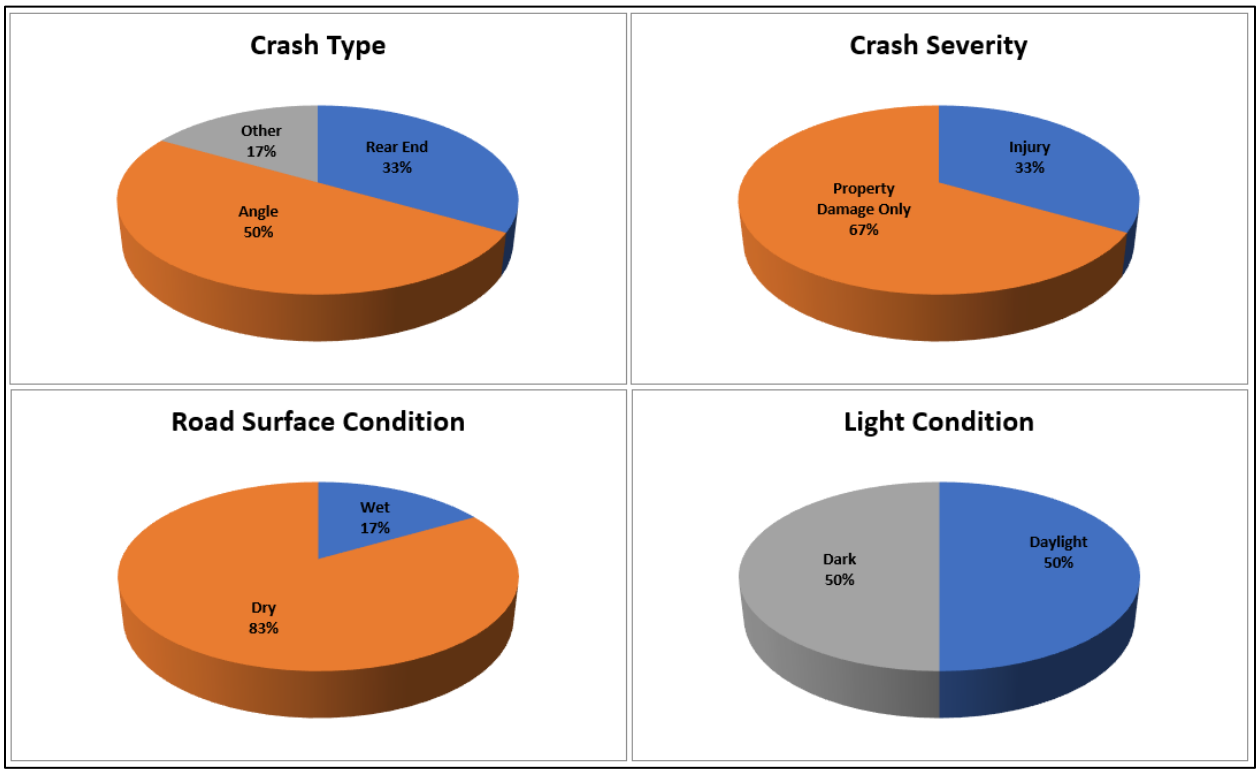
Figure 2-24: Western Way and SR 429 Ramp Terminal Intersections Crash Data Summary (2014-2018)



Seidel Road and Avalon Road Intersection

A total of six crashes were reported at the Seidel Road and Avalon Road intersection during the five-year analysis period. No fatal crashes were reported during the study period. At least 33 percent of the total crashes resulted in injuries. As shown in Figure 2-25, angle crashes (approximately 50 percent) and rear-end crashes (approximately 33 percent) were the prominent crash types at the intersection. Reports indicated that 83 percent of the crashes occurred during dry roadway conditions and 50 percent of the crashes occurred during dark conditions.

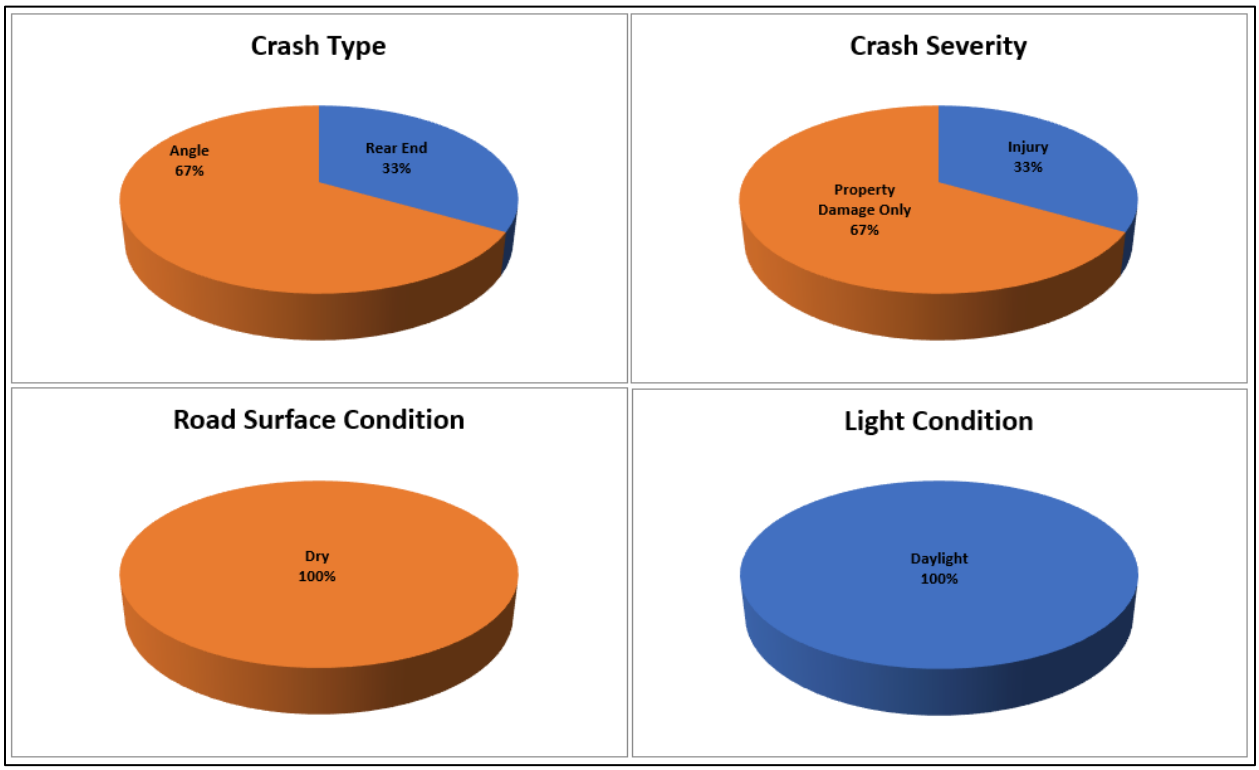
Figure 2-25: Seidel Road and Avalon Road Intersection Crash Data Summary (2014-2018)



Seidel Road and SR 429 Ramp Terminal Intersections

Three crashes were reported at the Seidel Road and SR 429 ramp terminal intersections during the five-year analysis period. No fatal crashes were reported during the study period. At least 33 percent of the total crashes resulted in injuries. As shown in Figure 2-26, angle crashes (approximately 67 percent) and rear-end crashes (approximately 33 percent) were the prominent crash types at the intersection. Reports indicated that all of the crashes occurred during dry and daylight roadway conditions.

Figure 2-26: Seidel Road and SR 429 Ramp terminal Intersections Crash Data Summary (2014-2018)



Actual crash rates at the intersections were computed and compared with average crash rates for similar facilities across the State utilizing the Statewide five-year average crash rate (2014 – 2018). Critical crash rates and safety ratios were also estimated. Crash rates for the intersections were estimated as crashes per Million Entering Vehicles (MEV). The critical crash rate is based on the average crash rate for a similar facility adjusted by vehicle exposure and a probability constant. The safety ratio represents the actual crash rate divided by the critical crash rate. If an intersection has an actual crash rate higher than the critical crash rate (i.e., safety ratio > 1.0), it may have a safety deficiency. The crash rates are presented in Table 2-16.

Table 2-16: Crash Rates and Safety Ratios for 2014 through 2018

Description	Total Crashes	Actual Crash Rate	Average Crash Rate*	Critical Crash Rate	Safety Ratio
Intersections					
Sinclair Road and SR 429 Ramp Terminal Intersections	1	0.04	0.27	0.92	0.04
US 192 and W. Orange Lake Road	14	0.17	0.37	0.75	0.23
US 192 and SR 429 Ramp Terminal Intersections	59	0.66	0.37	0.73	0.90
US 192 and E. Orange Lake Road	22	0.47	0.21	0.62	0.76
US 192 and Inspiration Drive	63	1.49	0.37	0.92	1.63
US 192 and Formosa Gardens Boulevard	91	1.37	0.37	0.80	1.72
Western Way and Flamingo Crossings Boulevard	3	0.08	0.99	1.89	0.04
Western Way and SR 429 Ramp Terminal Intersections	3	0.05	0.37	0.83	0.06
Seidel Road and Avalon Road	6	0.14	0.99	1.84	0.08
Seidel Road and SR 429 Ramp Terminal Intersections	3	0.04	0.37	0.77	0.05
Seidel Road and Lakeshore Pointe Drive	1	0.03	0.99	1.91	0.01

* FDOT Osceola and Orange Counties, 5-year Average Crash Rate
Sinclair Road, Western Way, Seidel Road and SR 429 intersections: Suburban 4-5 Ln 2WY Divided Raised (3-legged/4-legged intersection)
US 192 and SR 429 intersections: Urban 6+LN 2-WY Divided Raised (3-legged/4-legged intersection)
Flagler Avenue and Western Way intersection was under construction from 2014-2018. No crash data available.
Note: CAR Online average crash rates for intersections include a 250 ft radius influence area

2.15.3 Crash Analysis Summary

The analysis shows that the SR 429 mainline and interchange ramps within the study area had actual crash rates lower than the critical crash rates (i.e., safety ratio < 1.0), from 2014 through 2018. Even though the safety ratios are below 1.0 and do not reveal a safety deficiency in the study area, it is important to note that some of the locations had a significantly high number of crashes, such as the US 192 ramps, the ramp terminal, and adjacent intersections. This interchange and the arterial experience severe congestion during peak periods, primarily in the evening. The highest safety ratio (0.43) is reported for the US 192 and SR 429 ramps, followed by the Sinclair Road (0.32).

The analysis shows that rear-end crashes were prominent at the intersections listed in Table 2-16, with two intersections exhibiting safety ratios > 1.0. Congestion and long queues contributed to the high number of crashes at those locations. The highest safety ratio (1.72) is

reported for the US 192 and Formosa Gardens Boulevard, followed by the US 192 and Inspiration Drive (1.63).

2.16 Drainage

The project is located in the northwest corner of Osceola County and the southwest corner of Orange County. The project lays within the Reedy Creek watershed and the overall flow pattern within the watershed in the vicinity of the project corridor is from west to east towards Reedy Creek. The existing corridor is comprised of open conveyance ditches and closed collection systems to convey runoff to stormwater management systems. Most of the corridor was constructed along a ridge with wetlands located on the west side, therefore there is minimal offsite flow discharging directly into the existing right of way. Offsite area is conveyed through the corridor through a series of cross drains. Two major waterways traverse the project corridor: Boggy Creek and Whittenhorse Creek (a Reedy Creek Tributary).

The Hydrologic Soil Group (HSG) for the soils within the project area are predominately A/D. This dual classification means the soils tend to be well drained during the dry season and poorly drained as the soil becomes saturated during the wet season. Furthermore, using the Drainage Class of the soils within the project limits vary greatly between “Excessively drained” to “Very poorly drained”. The soils identified as very poorly drained are typically associated with the low-lying swampy areas adjacent to the corridor. The upland areas surrounding the project are typically well to excessively drained.

Twenty basins have been identified with the limits of the study area as shown in Table 2-17. These basins consist of open and closed basins. Basins have been defined to corelate with currently permitted conditions within the project limits. Basin divides have been developed from existing permit information which has been supplemented with LIDAR data.

Table 2-17: Project Basin Summary

Name	Type	Receiving Waterbody
BASIN F-4	Open	Davenport Tributary
BASIN B-2	Open	Davenport Tributary
BASIN B-3	Open	Davenport Creek
BASIN B-4	Open	Davenport Creek
BASIN B-5	Open	Davenport Creek
BASIN B-6	Open	Davenport Creek
BASIN 2A-2	Open	Davenport Creek
BASIN 2A-3	Open	Boggy Creek
BASIN 2B-1	Open	Boggy Creek
BASIN 2B-2	Open	Boggy Creek
BASIN 10	Closed	-
BASIN 11	Open	RCID Perimeter Canal
BASIN 12	Open	Whittenhorse Creek
BASIN 13	Open	Whittenhorse Creek
BASIN 14	Open	Bear Bay / Whittenhorse Creek
BASIN 15	Closed	-
BASIN 1	Open	Panther Lake
BASIN 2	Open	Wetland
BASIN B (FGB)	Open	Davenport Creek
BASIN FL 530	Open	Boggy Creek

The existing roadway was permitted by the Florida Department of Environmental Protection (FDEP) in 2001. Additionally, the Reedy Creek Improvement District (RCID) entered into a drainage agreement with FTE for discharges outside the right of way. The Environmental Resource Permit (ERP) No. 49-187636001 was issued for a six-lane roadway, four lanes to be initially constructed and additional future two lanes. FDEP will be responsible for permitting the proposed improvements. The entire project corridor is located within the Reedy Creek Watershed, which is managed by RCID. Therefore, it is recommended that permitting efforts be coordinated with RCID prior to submitting to FDEP for concurrence. FDEP will be responsible for Section 404 reviews and permitting. A National Pollutant Discharge Elimination System (NPDES) permit will also be required from FDEP.

The land use along the corridor is predominately residential from the I-4 Interchange to Western Way. From Western Way to Seidel Road the adjacent land is comprised of solar farms and rapid infiltration basins (ribs) owned by RCID. SR 429 just north of the I-4 Interchange to Seidel Road has stormwater management facilities located within the infields of the interchanges, as well as "offsite" ponds located adjacent to the roadway corridor. A combination of roadside ditches and closed collection systems convey runoff to the stormwater management facilities for treatment

and attenuation (ERP Permit No. 49-187636001). Additional information regarding the existing stormwater management facilities can be found in the Pond Siting Report provided under separate cover.

The project contains six cross drains which convey offsite flows, including those associated with Boggy Creek and Whittenhorse Creek, through the project corridor. Further information can be found in the Location Hydraulic Report (LHR), available under separate cover. Additionally, these two main waterways have floodplains associated with them. The following Flood Insurance Rate Map (FIRM) are associated with this project: 12097C0040G dated June 18, 2013, 12097C0030G dated June 18, 2013, 12095C0580F dated September 25, 2009, 12095C0390F dated September 25, 2009, and 12095C0375F dated September 25, 2009.

Although project improvements will not discharge directly to any Outstanding Florida Waters (OFW's), the project is located within the Lake Okeechobee BMAP. Phosphorus is the nutrient of concern for this BMAP. The FDEP has defined four Water Body Identification numbers (WBIDs) that encompass the study area. Of the four WBIDs, WBID 3170K is impaired for Bacteria (Fecal Coliform) and WBID 3170F4 is impaired for Dissolved Oxygen.

There are four drainage connection permits within the project corridor. They are as follows: TP-92-DC-180-18 Sinclair Road Apartments located at MP 1.5, TP-75-DC-130-18 Flamingo Crossings PD located at MP 7.5, TP-75-DC-010-08 Flamingo Crossings Phase I located at MP 7, and TP-75-DC-181-20 Horizon High School located at MP 11.

2.17 Soils and Geotechnical Data

Based on the Soil Survey of Orange County, Florida (NRCS, 1989) and the Soil Survey of Osceola County Area, Florida (NRCS, 1979), the project study area is comprised of 26 soil types. According to the Hydric Soils of Florida Handbook (Hurt, 2007), eight (8) of the soil types reported within the project study area are classified as hydric, 18 are non-hydric. Of the 18 non-hydric soils, ten (10) are reported as having hydric soil inclusions. Mapped hydric soils comprise 106.07 acres (11.67 percent) and non-hydric soils cover 801.37 acres (88.20 percent) of the project study area.

Table 2-18 lists the soil types reported within the project study area, their corresponding NRCS reference numbers reported in the Soil Survey of Orange County, Florida and Soil Survey of Osceola County Area, their hydric classification, and the approximate acreage and percentage of each soil type within the project study area.

Table 2-18: Soil Types and Coverage within the SR 429 Widening Project Study Area

Map Unit Symbol	Soil Type	Hydric Y/N	Acres in Study Area	Percent of Study Area
1A	Adamsville Sand, 0 To 2 Percent Slopes*	N	1.29	0.14
1B	Arents, Nearly Level	N	0.03	0.00
5A	Basinger Fine Sand, 0 To 2 Percent Slopes	Y	3.01	0.33
6A	Basinger Fine Sand, Depressional, 0 To 1 Percent Slopes	Y	0.06	0.01
3	Basinger Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes	Y	7.62	0.84
4	Candler Fine Sand, 0 To 5 Percent Slopes	N	189.86	20.90
5B	Candler Fine Sand, 5 To 12 Percent Slopes	N	32.83	3.61
7	Candler Sand, 0 To 5 Percent Slopes	N	262.98	28.94
8	Candler Sand, 5 To 12 Percent Slopes*	N	73.96	8.14
6B	Candler-Apopka Fine Sands, 5 To 12 Percent Slopes	N	0.23	0.03
15	Hontoon Muck, Frequently Ponded, 0 To 1 Percent Slopes	Y	62.65	6.90
20	Immokalee Fine Sand*	N	50.37	5.54
16	Immokalee Fine Sand, 0 To 2 Percent Slopes*	N	18.92	2.08
22	Myakka Fine Sand, 0 To 2 Percent Slopes*	N	16.20	1.78
32	Placid Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes	Y	3.81	0.42
33	Pits*	NA	0.59	0.07
34	Pomello Fine Sand, 0 To 5 Percent Slopes	N	36.06	3.97
37	Pompano Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes	Y	13.46	1.48
41	Samsula-Hontoon-Basinger Association, Depressional	Y	3.43	0.38
42A	Sanibel Muck	Y	12.02	1.32
42B	Smyrna Fine Sand, 0 To 2 Percent Slopes*	N	8.22	0.90
44A	Smyrna-Smyrna, Wet, Fine Sand, 0 To 2 Percent Slopes	N	2.41	0.26
44B	Tavares Fine Sand, 0 To 5 Percent Slopes	N	23.79	2.62
46	Tavares Fine Sand, 0 To 5 Percent Slopes	N	30.18	3.32
47	Tavares-Millhopper Complex, 0 To 5 Percent Slopes*	N	35.83	3.94
54	Zolfo Fine Sand, 0 To 2 Percent Slopes*	N	17.63	1.94
		Total Hydric Soils	106.07	11.67
		Total Non-Hydric Soils	801.37	88.20
		Total Water	1.15	0.13
		Totals for Project Study Area	908.59	100.00

* May have hydric soil inclusions

2.18 Utilities

A Utility Assessment Report was prepared for this project and provides relevant information regarding the location, size, type, and characteristics of public and private utilities located within and adjacent to the project corridor. As part of the PD&E study, the utility agencies / owners (UAOs) were contacted to acquire this information

2.18.1 Utility Coordination

The preliminary utility coordination and investigation effort was conducted through written and verbal communications with the existing utility owners. A Sunshine State 811 of the Florida Design Ticket System listing of existing utility owners was acquired on May 29th, 2020.

Initially, verbal communication was made to all utility's owners outlining the investigation effort along with the project limits. The list of UAOs known to operate utilities within the project corridor are shown in Table 2-19.

Utility owners were provided aerial based utility plans depicting SR 429 between the I-4 / SR 429 interchange and Seidel Road. Using these aerial plans as a base map, each utility owner was asked to indicate their existing and proposed utilities as well as any easements that may affect their reimbursement rights for potential relocations of their facilities. In response, most utility owners replied via written communications. The utility owners provided the requested information concerning their facilities using either the utility plans or reference documentation (i.e., "As Built" or GIS maps). "Marked" Plans or reference documentation was received from the Utility Agency Owners and are provided in Appendix A of the Utility Assessment Report under a separate cover.

Table 2-19: Utility Contact Information

Utility Agency	Utility Contact Name	Utility Contact Phone	Utility Contact Email
Bright House Networks	Jonathan McLeroy	407-532-8517	jonathan.mcleroy@charter.com
CenturyLink	Ty Leslie	407-814-5293	michel.t.leslie@centurylink.com
CenturyLink fka Level 3	Xan Rypkema	720-888-1089	xan.rypkema@lumen.com
ComCast	Scott Osebold	352-315-8527	scott_osebold@comcast.com
Duke Energy Distribution	Thomas Macias	407-938-6619	thomas.macias@duke-energy.com
Duke Energy Transmission	Scott Vanvelzor	813-909-1241	svanvelzor@pike.com
Enterprise Community Development	Gregory Kolb	404-423-8398	g.kolb@gaiconsultants.com
Florida Gas Transmission	Joseph Sanchez	407-838-7171	joseph.e.sanchez@energytransfer.com
Gulfstream Natural Gas	Shawn Deutsher	941-723-7191	Shawn.deutsher@williams.com
Kinder Morgan	Joe Pedraza	713-420-6250	Jose_pedraza2@kindermorgan.com
Kissimmee Utility Authority	Felix Escobar	407-933-7777 ext.6600	fescobar@kua.com
Kissimmee Utility Authority/Transtate Industrial Pipeline	Tom Ulmer	772-778-2255	tulmerjr@transtate.us
Orange County Public Works	Roger Smith	407-836-7804	Roger.smith@ocfl.net
Osceola County Traffic	Jack Lott	407-742-0662	Joshua.devries@osceola.org
Orlando Utilities Commission	Robert Schuerle	407-434-2107	rschuerle@ouc.com
Spectra Energy-Sabal Trail	Peter Kerrigen	407-966-2928	Peter.kerrigen@enbridge.com
Summit Broadband	Michelle Daniel	407-996-1183	mdaniel@summit-broadband.com
TECO Peoples Gas	Shawn Winsor	407-420-6663	swinsor@tecoenergy.com
TOHO Water Authority	Robert Pelham	407-944-5132	rpelham@tohowater.com
Transtate Industrial Pipeline	Tom Ulmer	772-778-2255	tulmerjr@transtate.us
Uniti Fiber	James Mosley	251-645-8216	James.mosley@uniti.com
Zayo	Bruce Herrington	813-386-2927 x 2927	bruce.herrington@kci.com

2.18.2 Existing Utility Facilities

Bright House Networks
Non-Responsive

CenturyLink
Non-Responsive

CenturyLink fka Level 3
Non-Responsive

ComCast
Greenline markups were received from Scott Osebold on 8/11/2022 via e-mail. Comcast has an existing fiber optic cable that comes from the west side of SR 429 at approximately sta. 200+46 and crosses SR 429 and then turn and goes north along Formosa Gardens Boulevard. They also have a fiber optic cable that crosses SR 429 along the south side of Funie Steed Road.

Duke Energy Distribution
Duke Energy Distribution has overhead facilities that come from the east along Sand Hill Road and turn to the north and continue along the east side of Formosa Gardens Boulevard where they continue along Formosa Gardens Boulevard with crossings at approximately STA. 165+35 and at STA. 180+ 80.

At Indian Creek Boulevard, they have six underground circuits on the south side.

At Funie Steed Road and Seidel Road, Duke has underground 7.2/12.47kv on the south side.

At US 192, Duke Energy has overhead and underground facilities 7.2/12.47kv. They are underground under the bridge on both sides of the road. On the south side of the bridge their facilities feed both toll plazas located along both the on and off ramps of SR 429. To the east Duke Distribution has both underground and overhead facilities along US 192.

They also have 7.2/12.47kv underground facilities a West Orange Lake Boulevard.

At approximately STA. 510+90, Duke Energy comes from the west and goes north along SR 429. Then at approximately STA. 540+80, they go underbuilt on Duke Energy Transmission poles.

Duke Energy Transmission
Duke Energy has overhead Transmission both 69KV and 230kv lines that run on the west side of SR 429 to the north at approximately STA. 225+80 and cross SR 429 and then go along the back of ponds and continue north and go back west to cross SR 429 back on the west side. Then they continue north along SR 429 and cross US 192 and continue north and cross SR 429. Duke Energy facilities appear to go in and out of a 30-foot easement along the project area.

At US 192, Duke Energy has 69kv overhead facilities that run along the south side crossing just before Inspiration Drive.

Enterprise Community Development
Non-Responsive

Florida Gas Transmission
Non-Responsive

Gulfstream Natural Gas
Non-Responsive

Kinder Morgan
Non-Responsive

Kissimmee Utility Authority
Non-Responsive

Orange County Public Works
Non-Responsive

Osceola County Traffic
Osceola County Traffic has two 2-inch directional bore conduits with a 72ct fiber optic cable that runs along US 192 on the north side with a pull box on the east side of the off ramp of SR 429 then cross US 192 to the south and goes along the LA ROW to an existing Turnpike splice vault with 200 LF of slack.

Orlando Utilities Commission
Non-Responsive

Spectra Energy-Sabal Trail Transmission

Sabal Trail Transmission has an existing 36-inch High-Pressure Natural Gas Pipeline that is in an easement to the west of Sand Hill Road and turns and goes west away from SR 429 at approximately STA. 160+10.

Summit Broadband

Summit Broadband has an existing underground 48ct fiber optic cable in conduit that comes from the west at Wyndham Palms and crosses SR 429 at approximately STA. 200+55 and goes into a hand hole located at approximately STA. 200+55 on the east side of Formosa Gardens Boulevard. Then the fiber continues east away from project. There is a 144ct fiber in conduit that comes out of the same hand hole and continues north along the east side of Formosa Gardens Boulevard and at Livingston Road into handhole and continues east along Livingston Road.

Summit Broadband also has an existing underground 48ct fiber optic cable in conduit that runs from the west along the south side of Funie Steed Road. This 48ct fiber goes aerial on the east side of the bridge and continues east on Duke Energy's pole line.

At US 192, Summit Broadband has an existing 144ct fiber in conduit that runs on the south side. Summit Broadband also has a 144ct fiber along Flamingo Crossing Boulevard running along the west side into a handhole located on the northwest corner of Flamingo Crossing Boulevard and Western Way, then continues to the south.

TECO Peoples Gas

TECO Peoples Gas has an existing 2" gas main that runs along the east side of Indian Creek Boulevard

At US 192 TECO Peoples Gas has a 4" coated steel gas main on the north side. With a few crossings.

TECO also has a 2" coated steel gas main the runs east west along W Orange Lake Boulevard and crosses SR 429 at approximately STA. 410+43 and continues east.

At Seidel Road, they have an existing 4" PE gas main that runs along the north side.

On Sand Hill Road, TECO has a 2" PE gas main that comes from the north at Water Oak Ct. and crosses and serves a home on the south side of road.

At Flamingo Crossings Boulevard, TECO has a 2" coated steel that runs north and south along the west side and crosses Western Way.

TOHO Water Authority
Non-Responsive

Transtate Industrial Pipeline
No Facilities e-mail received 3/9/2022 from Tom Ulmer.

Uniti Fiber
No Facilities e-mail received 8/16/2022 from James Mosley.

Zayo
Zayo has existing 3 1-1/4" HDPE ducts with 288, 144 count fiber along the south side of US 192 throughout project limits. They also have an existing 30"X 48"X 36" handhole at Inspiration Drive.

2.19 Lighting

Conventional roadway lighting is provided on both sides of SR 429. Along SR 429, lighting poles are located at a distance of between 200 to 220 feet apart between I-4 and Sinclair Road, 220 feet apart between Sinclair Road and Western Way, and 230 feet apart between Western Way and Seidel Road. Conventional roadway lighting is also provided on the on ramps from Sinclair Road, US 192, Western Way, and Seidel Road as well as the off ramps to these four roadways.

Conventional lighting is provided on Sinclair Road, US 192, and Western Way within the vicinity of the interchange. There is no lighting provided along Seidel Road.

2.20 Signs

Within the project limits, existing signing includes overhead and ground-mounted guide signs, including regulatory signs, warning signs, information signs, toll road signs, enhanced reference signs, general service signs, object marker signs, and other single post, and multi-column ground mounted signs. Currently, existing guide signs are located along Sinclair Road, US 192, Western Way and Seidel Road approaching SR 429.

2.21 Aesthetic Features

The SR 429 Western Beltway widening will encompass five interchanges within the corridor (I-4, Sinclair Rd, US 192, Western Way, and Seidel Rd). The interchanges all have received a high level of landscape plantings consisting of mainly of different species of palm trees and canopy trees such as Sabal Palms, Bismarck Palms, Date Palms, Ribbon Palms, Mule Palms, Oak Trees, Pine Trees, Red Cedar Trees, Bald Cypress Trees, Maple Trees, Crape Myrtle Trees, and other native species. Shrubs and shorter accent vegetation include the use of Saw Palmetto, native shrubs, and native grasses to enhance the understory and to provide slope coverage. Many of the shrub

beds were in poor conditions with old plantings and sections have died out leaving large bare areas. The mainline planting consists of Sabal Palms, Oaks, Pines, Cypress, and Red Cedars planted along the right of way and swales providing some visual buffer to surrounding properties. Additional buffering is needed due to the close proximity of the adjacent residential developments (both single family and multifamily) and the lack of sound walls along the corridor. The age of the landscape varied greatly and many of the interchange and mainline plants were in need of improvements to enhance the aesthetics within the corridor. Other areas had been installed within the last few years. Figure 2-27 shows examples of the landscaping in the project corridor.

Figure 2-27: Landscaping in the Project Study Limits

The bridges, overpasses, and MSE walls in the project corridor are Category 1 Structures. They have received enhanced aesthetic treatments and class 5 coatings, particularly at US 192.

Figure 2-28 shows examples of the bridge aesthetics in the project corridor.

Figure 2-28: Bridges within the Project Corridor

Figure 2-29 shows the MSE walls at the US 192 interchange.

Figure 2-29: MSE Walls at the US 192 Interchange

The sign structures in the project corridor consist of multi-column ground signs, cantilever sign structures and span sign structures. The span sign structures are used for ITS and guide signs. Figure 2-30 shows examples of the sign structure aesthetics in the project corridor.

Figure 2-30: Sign Structures within the Project Corridor

The lighting for the project corridor consists of conventional cobra head lighting. Lighting is provided at the interchanges and mainline toll plaza. Figure 2-31 shows examples of the lighting along the project corridor.

Figure 2-31: Lighting within the Project Corridor

2.22 Bridges and Structures

There are 16 existing bridges and three culverts within the project limits. Bridge and culvert information pertinent to the study was compiled from as-built construction plans, inspection reports, and load ratings.

The following two (2) overpass bridges were reviewed to ensure that the proposed widening would have no adverse effects to the existing structure:

- Bridge No. 920607 Sinclair Road over SR 429
- Bridge No. 924178 Indian Creek Boulevard over SR 429

The following fourteen (14) bridges are anticipated to be affected by the widening of the mainline SR 429. The existing typical sections are described below.

SR 429 Southbound over Sand Hill Road (Bridge No. 920603)

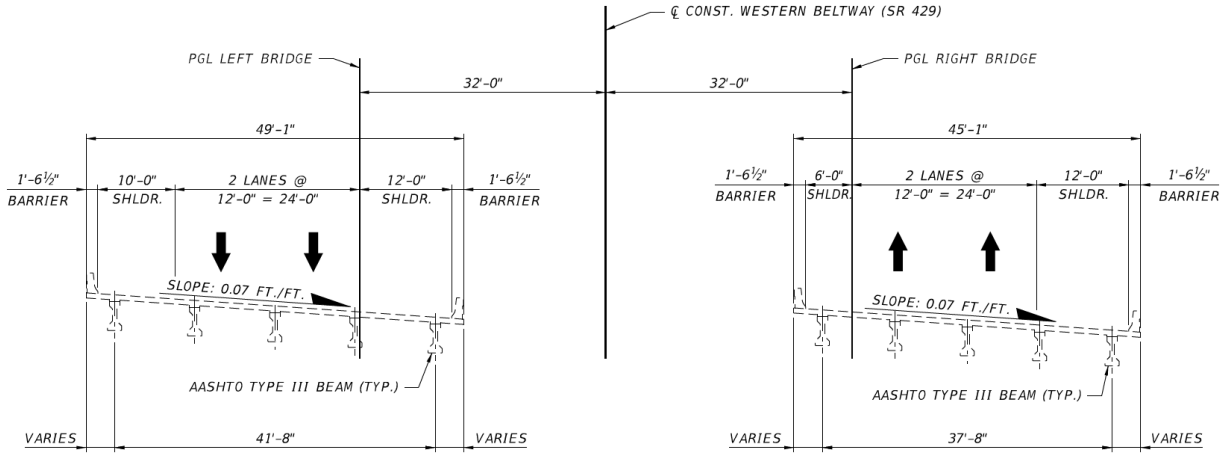
The existing bridge (No. 920603) was constructed in 2006. The bridge consists of prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 70'-8 3/16" and has a width of 49'-1" based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 19'-1". The minimum horizontal clearances to the retaining wall coping based on the existing bridge plans are 16'-0" and 18'-0" for the eastbound and westbound directions, respectively. Figure 2-32 shows the existing typical section of the bridge. The typical section consists of two 12'-0" travel lanes, a 12'-0" inside shoulder, and a 10'-0" outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of

0.07 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/04/2021, states the bridge has a sufficiency rating of 99.4 and a health index of 99.73. The inspection report indicates that the substructure has an overall NBI rating of 7 (Good). It also indicates an overall NBI rating of 8 (Very Good) for both the deck and superstructure. The inventory and operating bridge load ratings are 1.01 and 1.75, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920603.

SR 429 Northbound over Sand Hill Road (Bridge No. 920604)

The existing bridge was constructed in 2006 under FPID 403497-2-52-01. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 70′-8 3/16″ and has a width of 45′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 16′-7″. The minimum horizontal clearances to the retaining wall coping based on the existing bridge plans are 16′-0″ and 18′-0″ for the eastbound and westbound directions, respectively. Figure 2-32 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 12′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.07 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/04/2021, has a sufficiency rating of 98.4 and a health index of 99.82. The inspection report indicates that the substructure has an overall NBI rating of 7 (Good). It also indicates an overall NBI rating of 8 (Very Good) for both the deck and superstructure. The inventory and operating bridge load ratings are 1.13 and 1.88, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920604.

Figure 2-32: SR 429 Over Sand Hill Road Existing Typical Section (Bridge Nos. 920603 and 920604)



EXISTING TYPICAL SECTION
BRIDGE NOS. 920603 & 920604
WESTERN BELTWAY (SR 429) OVER SAND HILL ROAD

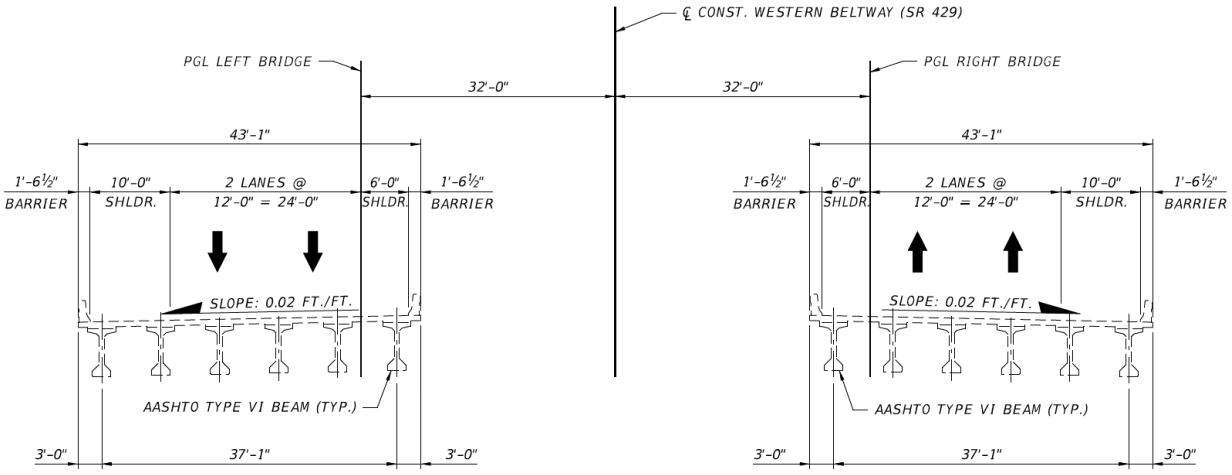
SR 429 Southbound over Funie Steed Road (Bridge No. 920605)

The existing bridge, Bridge No. 920605, was constructed in 2006. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 142′-6 3/16″ and has a width of 43′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18′-3 13/16″ according to existing plans, but 17′-5″ per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the existing bridge plans are 16′-0″ and 25′-0″ for the eastbound and westbound directions, respectively. However, the 22′-0″ median shown in the existing bridge plans does not exist in the current condition. Based on survey, the actual minimum horizontal clearances were estimated to be greater than 30′-0″ for the eastbound and westbound directions. Figure 2-33 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/4/2021, has a sufficiency rating of 98.4 and a health index of 98.76. The inspection report indicates that the substructure, deck, and superstructure have overall NBI ratings of 7 (good). The inventory and operating bridge load ratings are 1.514 and 1.691, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920605.

SR 429 Northbound over Funie Steed Road (Bridge No. 920606)

The existing bridge, Bridge No. 920606, was constructed in 2006. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 142′-6 3/16″ and has a width of 43′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18′-9 1/2″ according to existing plans, but 18′-0″ per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the existing bridge plans are 16′-0″ and 25′-0″ for the eastbound and westbound directions, respectively. However, the 22′-0″ median shown in the existing bridge plans does not exist in the current condition. Based on survey, the actual minimum horizontal clearances were estimated to be greater than 30′-0″ for the eastbound and westbound directions. Figure 2-33 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/04/2021, has a sufficiency rating of 99.5 and a health index of 98.7. The inspection report indicates that the substructure, superstructure, and deck have overall NBI ratings of 7 (good). The inventory and operating load ratings for the bridge are 1.514 and 1.691, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920606.

Figure 2-33: SR 429 Over Funie Steed Road Existing Typical Section (Bridge Nos. 920605 and 920606)



EXISTING TYPICAL SECTION
BRIDGE NOS. 920605 & 920606
WESTERN BELTWAY (SR 429) OVER FUNIE STEED ROAD

SR 429 Southbound over SR 530 (US 192) (Bridge No. 920609)

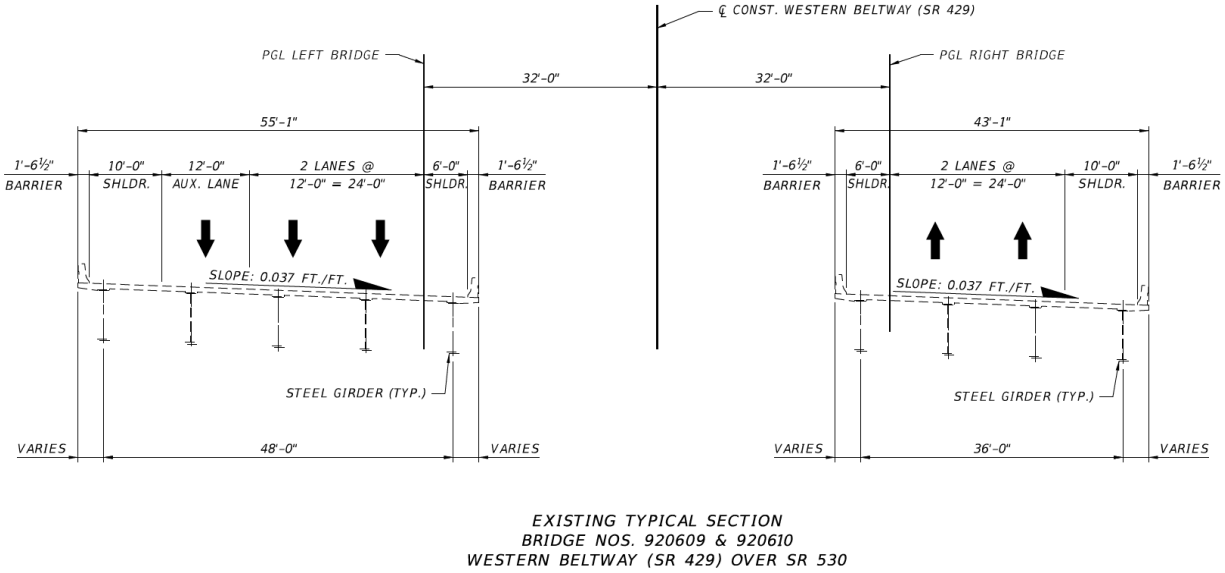
The existing bridge, Bridge No. 920609 (formerly 750614), was constructed in 2006. The bridge consists of steel plate girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 174'-5 1/8" and has a width of 55'-1" based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 19'-4 3/16" according to existing plans, but 18'-9" per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the as-built plans are 36'-0" and 24'-0" for the eastbound and westbound directions, respectively. Figure 2-34 shows the existing typical section of the bridge. The typical section consists of three 12'-0" travel lanes, a 6'-0" inside shoulder, and a 10'-0" outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.037 ft/ft. The existing approach slabs have asphalt overlays and are 30'-0" in length. The latest inspection report, dated 11/03/2021, has a sufficiency rating of 98.4 and a health index of 99.48. The inspection report indicates that the substructure, deck, and superstructure all have NBI ratings of 7 (good). The inventory and operating load ratings for the bridge are 1.53 and 2.56, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920609.

SR 429 Northbound over SR 530 (US 192) (Bridge No. 920610)

The existing bridge, Bridge No. 920610 (formerly 750615), was constructed in 2006. The bridge has steel plate girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 174'-5 1/8" and has a width of 43'-1" based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 16'-11 1/8" according to existing plans, but 16'-

7″ per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the as-built plans are 36′-0″ and 24′-0″ for the eastbound and westbound directions, respectively. Figure 2-34 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.037 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/03/2021, has a sufficiency rating of 99.5 and a health index of 99.71. The inspection report indicates that the substructure has an overall NBI rating of 7 (good). It also indicates an overall NBI rating of 7 (good) and 8 (very good) for the deck and superstructure, respectively. The inventory and operating load ratings for the bridge are 1.54 and 2.56, respectively. For these reasons, a bridge widening is feasible for Bridge No. 920610.

Figure 2-34: SR 429 Over SR 530 (US 192) Existing Typical Section (Bridge Nos. 920609 and 920610)



EXISTING TYPICAL SECTION
BRIDGE NOS. 920609 & 920610
WESTERN BELTWAY (SR 429) OVER SR 530

SR 429 Southbound over West Orange Lake Boulevard (Bridge No. 750616)

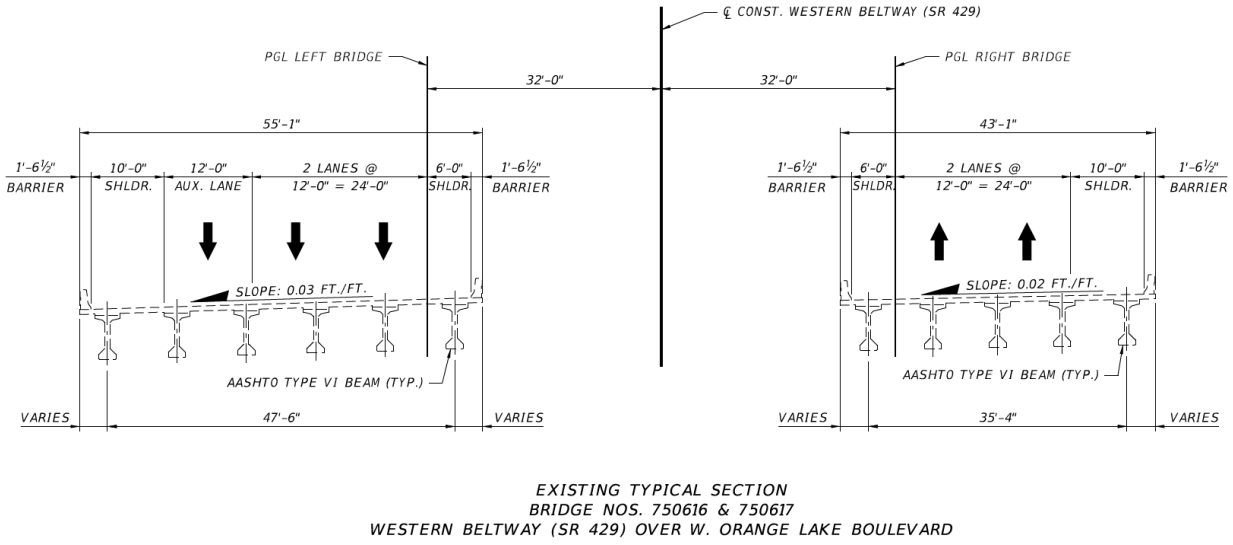
The existing bridge, Bridge No. 750616, was constructed in 2006. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 134′-6″ and has a width of 55′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18′-7 3/4″ according to existing plans, but 18′-2″ per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the existing plans are 16′-9 1/2″ and 17′-9 1/2″ for the eastbound and westbound directions, respectively. Figure 2-35 shows the existing typical section of the bridge. The typical section consists of three 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.03 ft/ft. The existing

approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/03/2021, has a sufficiency rating of 98.6 and a health index of 98.62. The inspection report indicates that the substructure has an overall NBI rating of 8 (very good). It also indicates an overall NBI rating of 8 (very good) and 7 (good) for the deck and superstructure, respectively. The inventory and operating load ratings for the bridge are 1.197 and 2.536, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750616.

SR 429 Northbound over West Orange Lake Boulevard (Bridge No. 750617)

The existing bridge, Bridge No. 750617, was constructed in 2006. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 134′-6″ and has a width of 43′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18′-7 3/4″. The minimum horizontal clearances to the retaining wall coping based on the existing plans are 16′-9 1/2″ and 17′-9 1/2″ for the eastbound and westbound directions, respectively. Figure 2-35 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/03/2021, has a sufficiency rating of 99.3 and a health index of 99.43. The inspection report indicates overall NBI ratings of 7 (good) substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.519 and 2.868, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750617

Figure 2-35: SR 429 Over West Orange Lake Boulevard Existing Typical Section (Bridge Nos. 750616 and 750617)

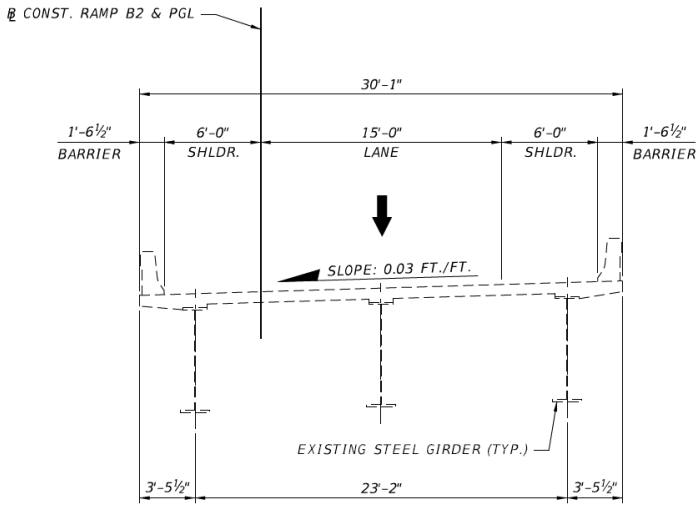


EXISTING TYPICAL SECTION
BRIDGE NOS. 750616 & 750617
WESTERN BELTWAY (SR 429) OVER W. ORANGE LAKE BOULEVARD

SR 429 Southbound Off-Ramp over Western Way (Bridge No. 750618)

The existing bridge, Bridge No. 750618, was constructed in 2006. The bridge has steel plate girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 174′-6″ and has a width of 30′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 17′-3″. The minimum horizontal clearances to the retaining wall coping based on the existing plans are 16′-10″ and 16′-6 3/4″ for the eastbound and westbound directions, respectively. Figure 2-36 shows the existing typical section of the bridge. The typical section consists of one 15′-0″ travel lane, a 6′-0″ inside shoulder, and a 6′-0″ outside shoulder. The bridge is superelevated with a cross slope of 0.03 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/02/2021, has a sufficiency rating of 98.5 and a health index of 99.69. The inspection report indicates overall NBI ratings of 7 (good) for the substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.114 and 2.813, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750618.

Figure 2-36: SR 429 SB Off-Ramp Over Western Way Existing Typical Section (Bridge No. 750618)



EXISTING TYPICAL SECTION
BRIDGE NO. 750618
WESTERN BELTWAY (SR 429) RAMP B2 OVER WESTERN WAY

SR 429 Southbound over Western Way (Bridge No. 750619)

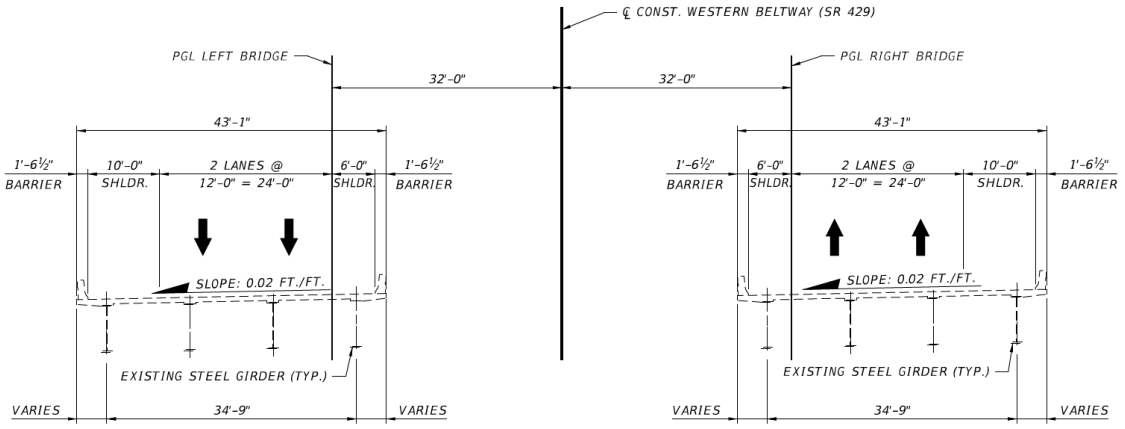
The existing bridge, Bridge No. 750619, was constructed in 2006. The bridge has steel plate girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 172′-0″ and has a width of 43′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 16′-11 1/4″. The minimum horizontal clearances to the retaining wall coping

based on the existing plans are 16′-10″ and 16′-6 3/4″ for the eastbound and westbound directions, respectively. Figure 2-37 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/02/2021, has a sufficiency rating of 99.3 and a health index of 99.71. The inspection report indicates overall NBI ratings of 8 (very good) for the substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.108 and 2.056, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750619.

SR 429 Northbound over Western Way (Bridge No. 750620)

The existing bridge, Bridge No. 750620, was constructed in 2006. The bridge has steel plate girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 172′-0″ and has a width of 43′-1″ based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 16′-11 1/4″. The minimum horizontal clearances to the retaining wall coping based on the existing plans are 16′-10″ and 16′-6 3/4″ for the eastbound and westbound directions, respectively. Figure 2-37 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated through the horizontal curve with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 11/02/2021, has a sufficiency rating of 99.3 and a health index of 99.7. The inspection report indicates overall NBI ratings of 7 (good) for the substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.108 and 2.056, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750620.

Figure 2-37: SR 429 Over Western Way Existing Typical Section (Bridge Nos. 750619 and 750620)



EXISTING TYPICAL SECTION
BRIDGE NOS. 750619 & 750620
WESTERN BELTWAY (SR 429) OVER WESTERN WAY

SR 429 Southbound over Seidel Road (Bridge No. 750621)

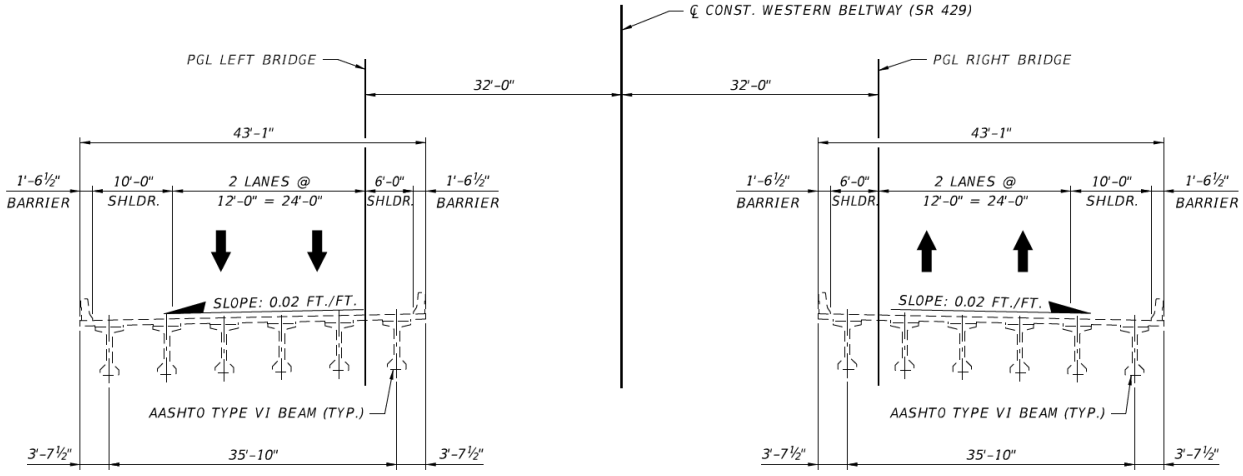
The existing bridge, Bridge No. 750621, was constructed in 2005. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 143'-6" and has a width of 43'-1" based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18'-3 3/4" according to existing plans, but 18'-2 1/2" per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based on the existing plans are 16'-0 3/4" and 16'-4" for the eastbound and westbound directions, respectively. Figure 2-38 shows the existing typical section of the bridge. The typical section consists of two 12'-0" travel lanes, a 6'-0" inside shoulder, and a 10'-0" outside shoulder. The bridge is superelevated with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30'-0" in length. The latest inspection report, dated 10/04/2021, has a sufficiency rating of 97.2 and a health index of 99.08. The inspection report indicates overall NBI ratings of 7 (good) for the substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.184 and 1.309, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750621.

SR 429 Northbound over Seidel Road (Bridge No. 750622)

The existing bridge, Bridge No. 750622, was constructed in 2005. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations. The total bridge length of the single span bridge is 143'-6" and has a width of 43'-1" based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 18'-3 3/4" according to existing plans, but 18'-0" per the latest Bridge Inspection Report. The minimum horizontal clearances to the retaining wall coping based

on the existing plans are 16′-0 3/4″ and 16′-4″ for the eastbound and westbound directions, respectively. Figure 2-38 shows the existing typical section of the bridge. The typical section consists of two 12′-0″ travel lanes, a 6′-0″ inside shoulder, and a 10′-0″ outside shoulder. The bridge is superelevated with a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30′-0″ in length. The latest inspection report, dated 10/04/2021, has a sufficiency rating of 97.2 and a health index of 99.52. The inspection report indicates overall NBI ratings of 7 (good) for the substructure, deck, and superstructure. The inventory and operating load ratings for the bridge are 1.184 and 1.309, respectively. For these reasons, a bridge widening is feasible for Bridge No. 750622.

Figure 2-38: SR 429 Over Seidel Road Existing Typical Section (Bridge Nos. 750621 and 750622)



Canary Island Drive over SR 429 (Bridge No. 920608)

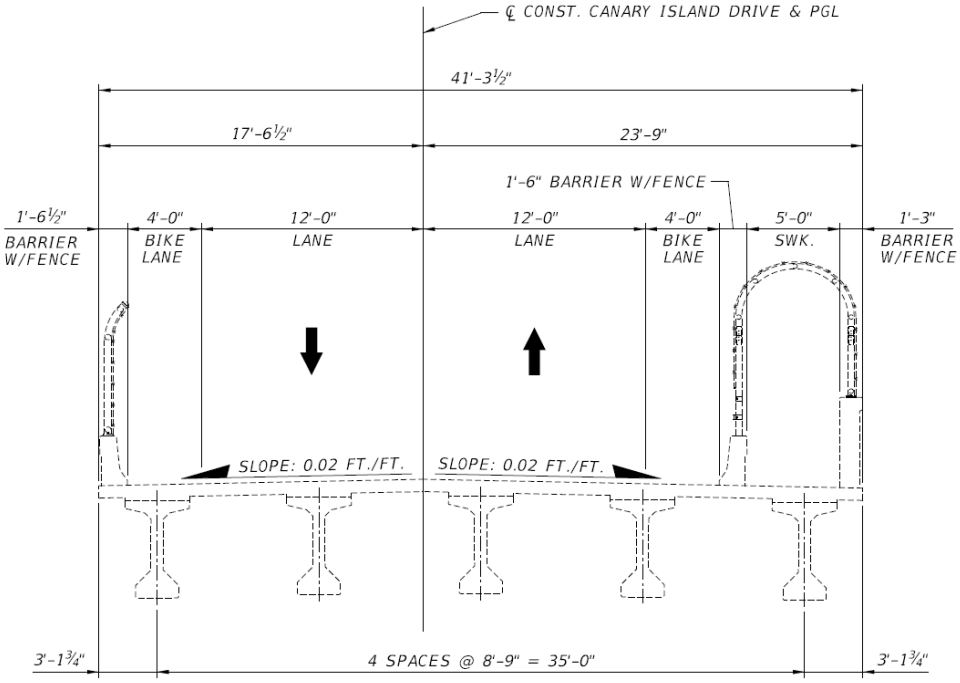
The Canary Island Drive bridge over SR 429, constructed in 2006, is a two-span bridge that provides two travel lanes and a barrier separated sidewalk on the south side. The bridge is located on a curve of SR 429; therefore SR 429 is in superelevation. From the as-built plans, the superelevation slope for both directions of travel is 0.06 ft./ft. The total bridge length of the two-span bridge is 222′-9 3/4″. Figure 2-39 shows the existing typical section of the bridge. The existing bridge typical section for this bridge consists of one (1) 12′-0″ eastbound travel lane, one (1) 12′-0″ westbound travel lane, a 4-ft wide shoulder in the eastbound and westbound directions, and a 5′-0″ sidewalk protected by a traffic railing in the eastbound direction. The as-built plans also state the minimum vertical clearance for the bridge is 16.95 feet. The approximate location of the minimum vertical clearance is the outside edge of travel lane in the

northbound direction of SR 429. The minimum horizontal clearances to the retaining wall coping based on the as-built plans are 36′-0″ and 46′-0″ for the eastbound and westbound directions, respectively. The vertical curve of the bridge shows the longitudinal grade of the bridge is (-)0.547% to the east side of SR 429. The inventory and operating load ratings for the bridge are 1.406 and 1.543, respectively.

A survey of the bridge shows that the minimum vertical clearance of the bridge is less than that shown in the as-built plans. Information provided from a field review by FTE Structures Maintenance shows the minimum vertical clearance is 16.14 feet at the outside edge of the paved shoulder at the south edge of beam 2-5.

An analysis of the proposed widening under the existing bridge indicates that the existing substandard minimum vertical clearance for the northbound lanes would be reduced further. At STA 210+46.00, the proposed vertical clearance for the northbound proposed outside edge of travel lane would be approximately 14.9 feet. Therefore, it is recommended that the existing bridge be replaced with a similar structure just to the north of the existing alignment that will provide the required minimum vertical clearance for the bridge.

Figure 2-39: Canary Island Drive over SR 429 Existing Typical Section (Bridge No. 920608)



EXISTING TYPICAL SECTION
BRIDGE NO. 920608
CANARY ISLAND DRIVE OVER SR 429

Indian Creek Boulevard over SR 429 (Bridge No. 924178)

The existing bridge, Bridge No. 924178, was constructed in 2001. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations and by a multi-column pier on prestressed concrete pile foundations. The total bridge length of the two-span bridge is 230'-0" ± with a bridge width of 45'-0" ± based on the existing bridge plans. Further, the provided minimum vertical clearance below the bridge is 16'-8" according to existing bridge plans. The typical section consists of two 12'-0" travel lanes, a 6'-6" sidewalk on the south side, a 2'-11" shoulder and 8'-5 ½" shoulder in the south side and north side, respectively. The bridge has a cross slope of 0.02 ft/ft. The existing approach slabs have asphalt overlays and are 30'-0" in length. The latest inspection report, dated 11/5/2021, has a sufficiency rating of 89.4 and a health index of 98.99. The inspection report indicates that the substructure and deck have overall NBI ratings of 7 (good), and the superstructure has an overall NBI rating of 6 (satisfactory). The inventory and operating load ratings for the bridge are 0.808 and 1.047, respectively. No deficiencies are noted. For these reasons, this bridge can remain after widening of SR 429.

Pier shielding for Bridge No. 924178 currently exists along SR 429 in the form of concrete median barrier. However, this pier shielding will be removed when SR 429 is widened. Pier protection will be evaluated and installed as necessary along SR 429 to protect the bridge when SR 429 is widened. At a minimum, additional pier shielding will be required. For the purposes of this study, pier protection is assumed to be warranted. Design Exceptions or Variations are not anticipated at this time.

Sinclair Road over SR 429 (Bridge No. 920607)

The existing bridge, Bridge No. 920607 (Osceola County facility) was constructed in 2004. The existing bridge plans and the latest bridge inspection report is not available for this bridge. The 2017 bridge inspection report, dated 09/22/2017, is used as a reference to determine the existing conditions of the bridge. The bridge has prestressed concrete girders with a concrete deck superstructure supported by end bents on prestressed concrete pile foundations and by a multi-column pier on prestressed concrete pile foundations. The total bridge length of the two-span bridge is 198'-0" ± and a width of 93'-9" ±. The existing bridge typical section for this bridge consists of two (2) 12'-0" eastbound travel lanes, a 12'-0" eastbound turn lane, two (2) westbound travel lanes, a 12'-0" westbound turn lane, an approximately 2-ft wide shoulder in the eastbound and westbound directions, two 5'-0" sidewalks protected by traffic railings and a variable width raised median. Further, the provided minimum vertical clearance below the bridge is 16'-8". The 2017 inspection report has a sufficiency rating of 100 and a health index of 99.98. The inspection report indicates that the substructure, deck, and superstructure have overall NBI ratings of 8 (very good). The inventory and operating bridge load ratings are 1.37 and 2.29, respectively.

SR 429 over Boggy Creek Culvert (Bridge No. 750623)

The existing bridge culvert, Bridge No. 750623, was constructed in 2006. It is a triple 8′ X 6′ box culvert, approximately 393′ long. The latest inspection report, provided in Appendix B, dated 11/16/2021 has a sufficiency rating of 85 and a health index of 66.23. The inspection report indicated a load rating analysis was not necessary due to the depth of fill over the structure, greater than 8 feet and exceeds span length. The overall condition of the culvert is "Good" with minor deterioration of the culvert itself. For these reasons, an extension of the box culvert is possible on Bridge No. 750623. The hydraulic capacity of this structure is sufficient.

SR 429 over Whittenhorse Creek Culvert (Bridge No. 750637)

The existing bridge culvert, Bridge No. 750637, was constructed in 2006. It is a double 9′ X 4′ box culvert, approximately 180′ long. The latest inspection report, provided in Appendix B, dated 11/2/2021 has a sufficiency rating of 85 and a health index of 66.76. The inspection report indicates the culvert has an inventory load rating of 1.187, inventory load rating of 42.7 tons, and an operating load rating of 71.2 tons. The overall condition of the culvert is "Good" with minor deterioration of the culvert itself. For these reasons, an extension of the box culvert is possible on Bridge No. 750637. The hydraulic capacity of this structure is sufficient.

SR 429 over Golf Cart Path (Bridge No. 75Q016)

The existing box culvert, Bridge No. 75Q016, was constructed in 2006. It is a 15.0′ X 10.0′ box culvert, approximately 174′ long. The inspection report dated 2/3/2021 has a sufficiency rating of 85 and a health index of 98.29. The overall condition of the culvert is "Good" with minor deterioration of the culvert itself. For these reasons, an extension of the box culvert is possible on Bridge No. 75Q016.

3 Project Design Controls & Criteria

3.1 Roadway Context Classification

FDOT's context classification system describes the general characteristics of the land use, development patterns, and roadway connectivity, providing cues as to the types of uses and user groups that will likely utilize the roadway. FDOT will apply criteria and standards based on the context classification. In the case of interstates and limited-access facilities, the function of the roadway is considered complete. Consequently, no context classification is assigned for SR 429. US 192 has been assigned a preliminary context classification of C3C-Suburban Commercial. Other roads in the study area, including Sinclair Road, Livingston Road, Western Way, and Seidel Road, are non-state facilities and the maintaining agencies (Osceola and Orange Counties) have not established a context classification for these roadways.

3.2 Design Control and Criteria

The design criteria and standards are based on design parameters outlined in A Policy on Geometric Design of Highways and Streets (AASHTO, 2018), FDOT Design Manual (FDM) (FDOT, 2023), Load Rating Manual (FDOT, 2022), Roadside Design Guide (AASHTO, 2011), Load and Resistance Factor Design (LRFD) Bridge Design Specifications (AASHTO, Ninth Edition), Turnpike Supplemental to the FDOT Structures Manual (FTE, 2022), Turnpike Supplemental to the FDOT Drainage Manual (FTE, 2022) and General Tolling Requirements (GTR) (FTE 2023). The criteria are summarized in Table 3-1.

Table 3-1: Roadway Design Criteria

Design Element	Design Standard	Source
General Criteria		
Functional Classification	Principal Arterial Expressway, Strategic Intermodal System	FDOT Straight-Line Diagrams (SLDs)
Design Speed Mainline Ramps • Loop and Semi-Direct • Outer Cloverleaf • Intermediate Portions of Long Ramps • Direct Connections	 70 mph 30 mph 35 mph 40 mph 50 mph	 FDOT Design Manual (FDM) Table 201.5.2
Horizontal Geometry Criteria		
Lane Width Mainline Ramps • One-lane • Two-lane	 12 feet (mainline) 15 feet (one-lane ramp) 24 feet (two-lane ramp)	 FDM Section 211.2 FDM Section 211.2.1 FDM Section 211.2.1
Shoulder Width Mainline Ramps • One-lane • Two-lane	 12 feet inside and outside 6 feet inside and outside 4 feet inside / 10 feet outside	 FDM Section 211.4
Median Width Mainline Sinclair Road Livingston Road Formosa gardens Boulevard US 192 Western Way Seidel Road	 26 feet (with barrier) 60 feet (w/o barrier, D.S. ≥ 60 mph) 22 feet (C3 Suburban, D.S. = 40 mph) 22 feet (C3 Suburban, D.S. = 40 mph) 22 feet (C3 Suburban, D.S. = 40 mph) 30 feet (C3 Suburban, D.S. = 50 mph) 22 feet (C3 Suburban, D.S. = 45 mph) 22 feet (C3 Suburban, D.S. = 40 mph)	 FDM Table 211.3.1 FDM Table 210.3.1
Sidewalk Width (not applicable for SR 429) **Cross Roads**	6-feet (minimum)	FDM Table 222.1.1
Shared-Use Path Width		FDM, Section 224.4

Design Element	Design Standard	Source
(not applicable for SR 429) • US 192 (C3C) • Western Way • Seidel Road	12 feet (standard) 10 feet (with limited ROW) 8 feet minimum (if constrained)	
Bicycle Lane Width (not applicable for SR 429) • US 192 (C3C) • Western Way • Seidel Road	7 feet (buffered)	FDM, Section 223.2.1.1
Border Width	94 feet (new construction) 10 feet (minimum for maintenance in conjunction with roadside barriers)	FDM Sections 211.6 and 211.6.1
Clear Zone Width	Design Speed ≥ 60 mph • 36 feet (travel lanes and multilane ramps) • 24 feet (auxiliary lanes and single lane ramps) Design Speed = 55 mph • 30 feet (travel lanes and multilane ramps) • 18 feet (auxiliary lanes and single lane ramps) Design Speed = 45-50 mph • 24 feet (travel lanes and multilane ramps) • 14 feet (auxiliary lanes and single lane ramps) Design Speed = 40 mph • 18 feet (travel lanes and multilane ramps) • 10 feet (auxiliary lanes and single lane ramps) Design Speed = 35 mph • 14 feet (travel lanes and multilane ramps) • 10 feet (auxiliary lanes and single lane ramps)	FDM Table 215.2.1
Rate of Superelevation	0.10 (maximum)	FDM Section 210.9
Minimum Curve Radius	Mainline (70 mph D.S.) 1,637 feet	FDM Table 210.9.1

Design Element	Design Standard	Source
Length of Horizontal Curve	Mainline (70 mph D.S.) • 2,100 feet (desirable) • 1,050 feet (minimum) Ramp (≤ 45mph D.S.) 400 feet (minimum)	FDM Table 211.7.1
Maximum Deflection without Curve	2° 00' 00" (D.S. ≤ 40 mph) 0° 45' 00" (D.S ≥ 45 mph)	FDM Section 211.7.1
Maximum Deflection through Intersection	16° 00' (D.S. ≤ 20 mph) 11° 00' (D.S = 25 mph) 8° 00' (D.S = 30 mph) 6° 00' (D.S = 35 mph) 5° 00' (D.S = 40 mph) 3° 00' (D.S = 45 mph)	FDM Table 212.7.1
Vertical Geometry Criteria		
Stopping Sight Distance SR 429 Ramps	 861 ft (D.S = 70 mph, 3% Down) 780 ft (D.S. = 70 mph, 3% Up) 218 ft (D.S = 30 mph, 7% Down) 182 ft (D.S. = 30 mph, 7% Up) 271-333 ft (D.S = 35-40 mph, 6% Down) 229-278 ft (D.S. = 35-40 mph, 6% Up) 392-464 ft (D.S = 45-50 mph, 5% Down) 335-393 ft (D.S. = 45-50 mph, 5% Up)	 FDM Table 211.10.1 FDM Table 211.10.2
Maximum Profile Grade SR 429 Ramps	 3% (D.S. = 70 mph) 7% (D.S = 30 mph) 6% (D.S = 35-40 mph) 5% (D.S. = 45-50 mph)	FDM Table 211.9.1
Minimum Length of Vertical Curve	Sag = 800 feet Crest (open highway) = 1,000 feet Crest (within interchanges) = 1,800 feet	FDM Table 211.9.3
Crest Vertical Curve (K- Value) SR 429 Ramps	 506 (D.S. = 70 mph, new construction) 31 (D.S. = 30 mph, new construction) 47 (D.S. = 35 mph, new construction)	FDM Table 211.9.2

Design Element	Design Standard	Source
	70 (D.S. = 40 mph, new construction) 98 (D.S. = 45 mph, new construction) 136 (D.S. = 50 mph, new construction)	
Sag Vertical Curve (K- Value) SR 429 Ramps	 206 (D.S. = 70 mph) 37 (D.S. = 30 mph) 49 (D.S. = 35 mph) 64 (D.S. = 40 mph) 79 (D.S. = 45 mph) 96 (D.S. = 50 mph)	 FDM Table 211.9.2
Maximum Change in Grade without Vertical Curve SR 429 Ramps	 0.20% (D.S. = 70 mph) 1.00% (D.S. = 30 mph) 0.90% (D.S. = 35 mph) 0.80% (D.S. = 40 mph) 0.70% (D.S. = 45 mph) 0.60% (D.S. = 50 mph)	 FDM Table 210.10.2
Vertical Clearance	16.5 feet (new bridges) 16.0 feet (existing bridges)	FDM Table 260.6.1
Base Clearance	3 feet min. from bottom of roadway base to water elevation	FDM Section 210.10.3
	Linear Treatment Swale: base clearance water elevation = weir elevation. Ponds: base clearance water elevation = 24-hr design high water elevation. No ponds or linear swales = base clearance water elevation = seasonal high-water table.	Turnpike Supplement to FDOT Drainage Manual, Section 5.41.1
Stormwater Management Criteria		
Water Quantity	Wet detention: First 1-inch of total runoff from developed project or 2.5-inches of runoff from impervious area, whichever is greater. Dry Retention: 50 percent of wet detention.	SFWMD Handbook Vol. II
Water Quality*	Open Basins: Post development flow must	SFWMD Handbook

Design Element	Design Standard	Source
***- RCID has more stringent requirements, see Pond Siting Report for detailed information.**	not exceed pre-development peak discharge for the 25-yr/72-hr storm. RCID design event is the 50-yr/72-hr storm. Closed Basin: Post development flow must not exceed pre-development peak discharge for the 100-yr/72-hr storm.	Vol. II

4 Alternatives Analysis

4.1 Previous Planning Studies

There are no previous planning studies for the SR 429 corridor. There are five Developments of Regional Impacts (DRI) within the project area. Four of the DRIs are in Osceola County and one is located in Orange County. Three of the four DRIs in Osceola County have been rescinded. The Osceola County DRIs include:

- Mystic Dunes – Rescinded
- Fantasy Heights – Fully built out
- Formosa Gardens – Rescinded
- Rolling Oaks – Rescinded

Also in Osceola County is a development called Everest Place located on the west side of SR 429, south of US 192. It is a master planned community that will include a retail town center, medical center, offices, resorts and residential homes.

The Orange County DRI is the Orange Lake Resort and Country Club which is still current. A new 324 multi-family unit residential development called Elysian Apartments is planned at the intersection of Seidel Road and Avalon Road.

4.2 No-Build (No Action) Alternative

For capacity improvements to SR 429 between I-4 and Seidel Road, two alternatives were evaluated: the No-Build Alternative and the Build Alternative. The No-Build Alternative would not make any capacity improvements in the SR 429 corridor beyond any that are currently planned. The only planned roadway improvements to this segment of SR 429 and Seidel Road is a project to mill and resurface SR 429 from I-4 to Seidel Road, but this project would not add any capacity.

The No-Build Alternative assumes that the existing four mainline lanes would remain on SR 429 through the Design Year 2050. The No-Build traffic analysis indicates that by the Year 2030, a four-lane SR 429 will operate below the acceptable level of Service C.

Certain advantages would be associated with the implementation of the No-Build Alternative, including:

- No acquisition of right of way
- No design, right of way or construction costs
- No inconvenience to the traveling public and property owners during construction
- No impacts to utilities
- Reduced impacts to the adjacent natural, physical and human environment

The potential disadvantages of the No-Build Alternative include:

- Increase in traffic congestion and user costs due to increased travel times along SR 429 and through the existing interchanges at Sinclair Road, US 192, Western Way, and Seidel Road
- Increase in crash potential due to congestion
- Increase in travel times and reduced reliability of travel times
- Increase in emergency vehicle response time
- Increase in vehicle emission pollutants due to increased traffic congestion
- Does not meet the project's Purpose and Need

The No-Build Alternative will remain under consideration throughout the alternatives analysis and evaluation process.

4.3 Transportation Systems Management and Operational Alternatives (TSM&O)

The Transportation System Management and Operations (TSM&O) Alternative includes strategies with the operational objective of preserving the capacity and improving the security, safety, and reliability of the transportation system, while minimizing all environmental impacts. These strategies may include upgrades or additions to the existing facility, such as:

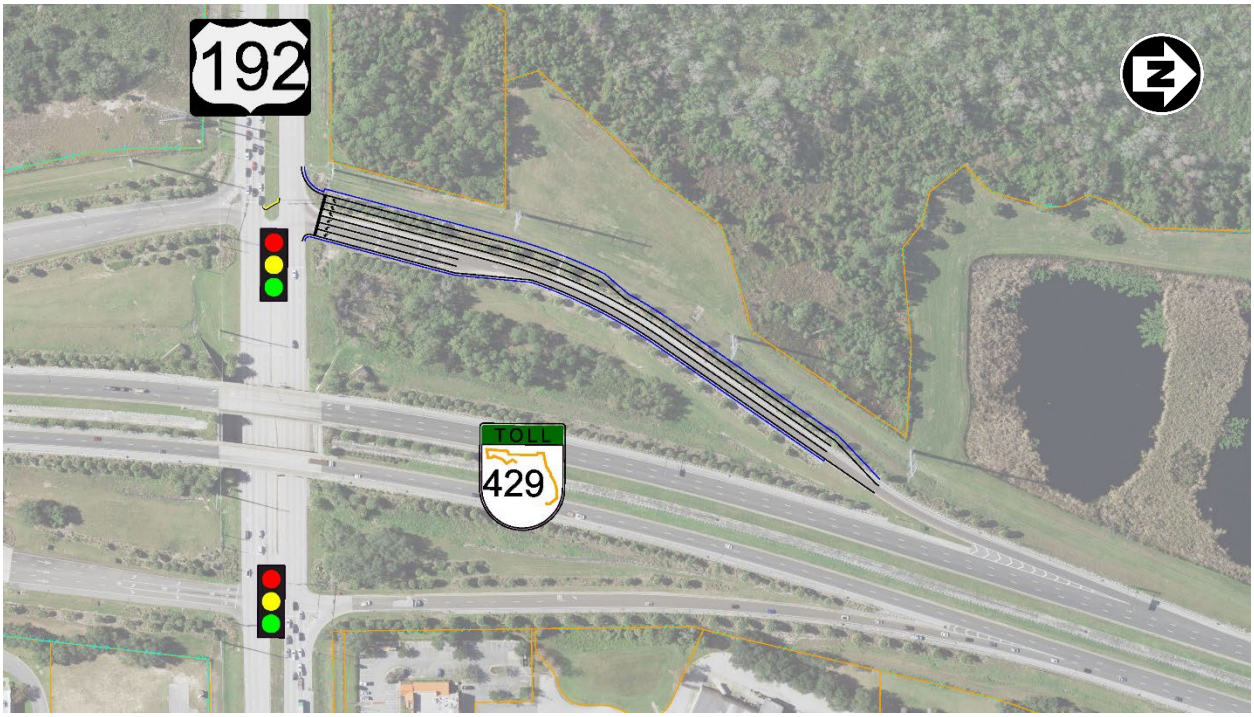
- Ramp signals
- Arterial traffic management systems
- Traffic incident management
- Work zone traffic management
- Road weather management
- Traveler information services
- Congestion pricing
- Parking management
- Traffic control
- Commercial vehicle operations
- Transit priority signals systems
- Freight management

TSM&O improvements alone do not sufficiently address the purpose and need, and the disadvantages of the No-Build Alternative will remain.

Due to traffic queues from the SR 429 southbound off-ramp to US 192 backing up onto the mainline, several TSM&O alternatives were evaluated for implementation in advance of the ultimate preferred improvement project. The traffic analysis indicates some improvement is needed today due to the high p.m. peak hour volumes exiting SR 429 to travel both eastbound and westbound on US 192.

Option 1 would reconfigure the ramp terminal intersection with US 192 to include three right turn lanes and three left turn lanes as shown in Figure 4-1 and Appendix A. Modifications to the number of lanes on the off-ramp would also be required in order to maximize vehicle storage on the ramp. The estimated construction cost for this alternative is $4.47 million. The total cost including design, construction and project unknowns is approximately $6.46 million. There is no anticipated throw away work with this alternative. The LRE estimate is provided in Appendix H. Option 1 was eliminated from further consideration since it does not adequately address the queuing issue on the ramp.

Figure 4-1: US 192 Southbound Off-ramp TSM&O Option 1



Option 2 would route the southbound US 192 off-ramp traffic through the existing southbound cash toll plaza. AET conversion of SR 429 is planned for mid-2023. At that point, all mainline traffic will use the existing mainline electronic Toll Gantries. The on ramp between the southbound Toll Plaza and southbound SR 429 will be removed since cash will no longer be collected. A two-lane ramp would be constructed between the toll plaza and the widened southbound off-ramp. SB SR 429 traffic heading to US 192 will exit at the existing Toll Plaza. They will utilize the existing cash lanes which will be converted to SunPass and Toll by Plate. Traffic will continue on new two-lane ramp between Toll Plaza and US 192. This option is provided in Appendix A. The estimate construction cost for Option 2 is $13.49 million. The total cost including design, construction and project unknowns is approximately $19.56 million. There

is approximately $4.79 million associated with throw away work with this option. The LRE estimate is provided in Appendix H.

Option 3 would extend a southbound auxiliary lane between Western Way and US 192 ramps. AET conversion of SR 429 is planned for mid-2023. At that point, all mainline traffic will use the existing mainline electronic Toll Gantries. The on ramp between the southbound Toll Plaza and southbound SR 429 will be removed since cash will no longer be collected. The existing southbound Toll Gantry can accommodate three lanes. The mainline would be widened to the inside. The new SR 429 southbound off-ramp exit gore will be shifted north, approximately 1,550 feet, from existing location. At the new SR 429 SB off-ramp, the three mainline lanes will split to two lanes to US 192 and two lanes would continue on SR 429. The existing SR 429 SB auxiliary lane south of the exit to US 192 will be striped out as only two lanes will be needed south of the ramp with the new ramp configuration. This option is provided in Appendix A. The estimate construction cost for this option is $18.5 million. The total cost including design, construction and project unknowns is approximately $26.82 million. There is approximately $2.98 million associated with throw way work with this option. The LRE estimate is provided in Appendix H. Option 3 was eliminated from further consideration due to the higher costs and not addressing the queue backup as well as Option 2.

The implementation of a Hard Shoulder Running (HSR) concept, similar to the system currently being constructed by the Central Florida Expressway (CFX) Authority along SR 429 to the north of this project segment is a longer-term TSM&O option that was considered during this PD&E study. The preliminary analysis concluded the implementation of a HSR system onto the existing four-lane Western Beltway configuration would not be reasonable or feasible given the current and projected traffic volumes and characteristics. However, it was agreed that a HSR system should be reconsidered during final design to determine if features such as full-depth shoulders, wider shoulder widths (i.e., 16 feet), infrastructure for overhead supplemental signage, etc., should be implemented.

4.4 Future Conditions

The Future Land Use (FLU) in Osceola County is dominated by tourist, commercial and residential land uses, with some institutional and conservation areas. The FLU in Orange County is commercial, part of the Village of Horizon West, or part of incorporated Bay Lake. The City of Bay Lake is governed by the Central Florida Tourism Oversight District Comprehensive Plan. The FLU within the Bay Lake area of Orange County includes public facility and mixed use.

Future traffic conditions information is included in the Systems Interchange Justification Report provided under a separate cover.

4.5 Build Alternatives

4.5.1 SR 429 Mainline Widening Typical Section

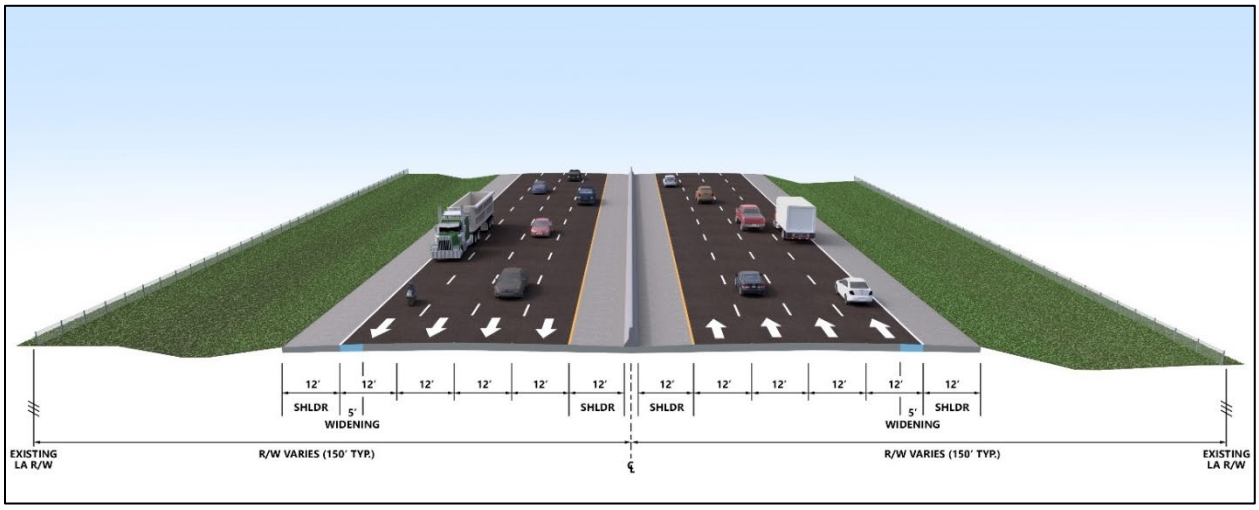
One Build Alternative was evaluated for improving the SR 429 mainline; widening from four lanes (two lanes in each direction) to eight lanes (four lanes in each direction). The proposed mainline typical section is shown in Figure 4-2. Both inside and outside widening will be required. Reconstruction of the inside 13 feet of existing pavement will allow the roadway crown to be located at the center of the four-lane pavement. Widening to the inside will be 11 feet for the roadway and also include a 26-foot median with two 12-foot paved shoulders and a two-foot concrete barrier wall. The outside of the roadway will be widened five feet. The mainline widening occurs entirely within the existing ROW.

The median width varies in two locations through curves where a wider median is needed to meet sight distance requirements. This will result in a variable median width on one side of the median barrier wall through the curves. The first location is between Sinclair Road and Sand Hill Road in the southbound direction. The maximum paved width between the barrier wall and the southbound edge of travel lane is 23.5 feet. The second location is near the Canary Island Drive overpass in the northbound direction. The maximum paved width between the barrier wall and the northbound edge of travel lane is 29.5 feet.

In addition, the curve through the Livingston Road interchange was flattened to accommodate the required sight distance, but the median width will remain a consistent 26 feet. The revised mainline alignment remains within the existing ROW.

The Concept Plans for the SR 429 widening alternative is provided in Appendix A

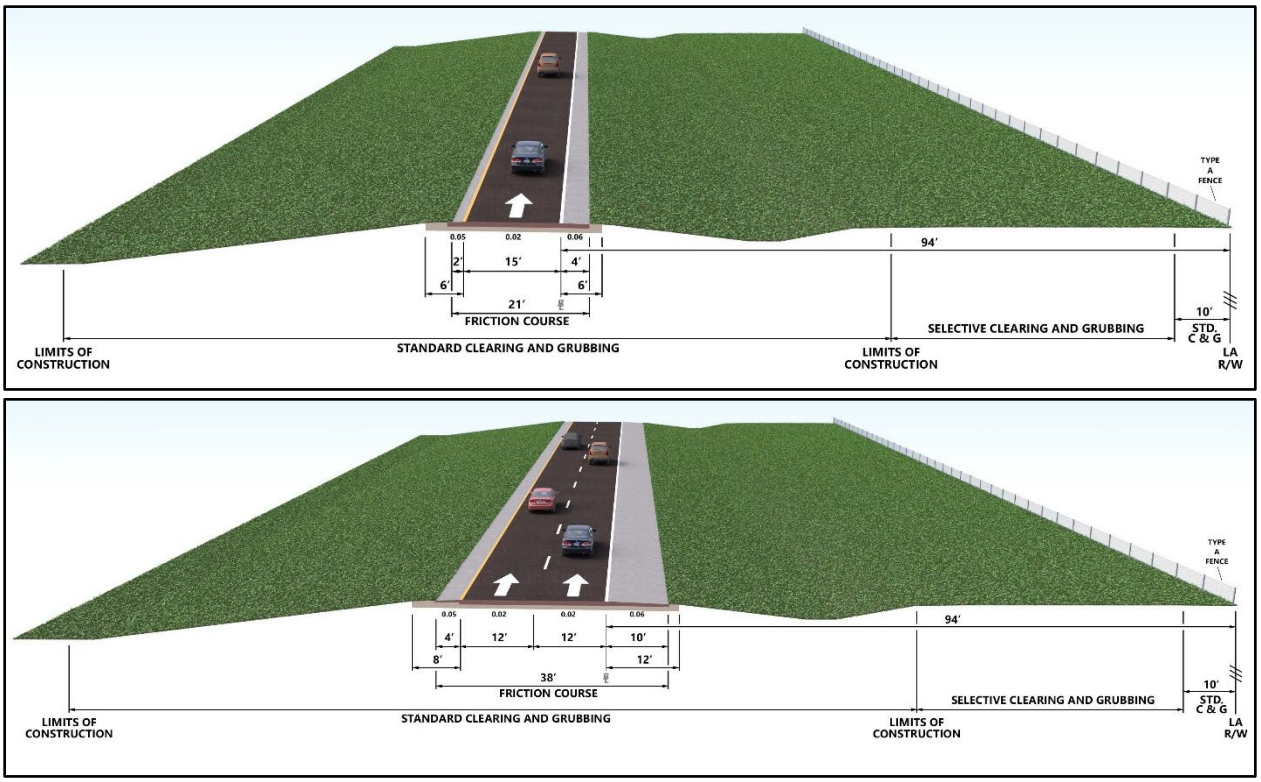
Figure 4-2: Proposed SR 429 Mainline Typical Section



Ramp Typical Sections

Proposed single- and double-lane ramp typical sections are shown in Figure 4-3.

Figure 4-3: Proposed SR 429 Ramp Typical Sections



4.5.2 SR 429 at Canary Island Drive Overpass

The proposed widening of SR 429 from four lanes to eight lanes creates a substandard vertical clearance issue under the Canary Island Drive bridge (FDOT bridge #920608). This bridge is relatively new and in excellent condition (Sufficiency Rating of 98.9 and a Health Index of 99.6). The existing vertical clearance in the northbound direction is 16.14 feet. It is located in an area where SR 429 is in a superelevated curve. To address insufficient stopping sight distance with the inside widening, the SR 429 median width is proposed to be increased. With the widening of SR 429 to the outside through the curve, the vertical clearance would be reduced to less than 14 feet at the northbound edge of paved shoulder.

A preliminary analysis of five alternatives was performed to address the issue:

- Alternative 1 - Realignment of SR 429
- Alternative 2 - Lowering the profile of northbound SR 429
- Alternative 3 - Replacing the superstructure of the Canary Island Drive bridge
- Alternative 4 - Jacking the superstructure of the Canary Island Drive bridge
- Alternative 5 - Replacement of the Canary Island Drive bridge

Alternative 1 evaluated shifting the SR 429 northbound lanes towards the median to address the vertical clearance issue. It was eliminated as not viable due to conflicts with the existing median pier of the Canary Island Drive bridge.

Alternative 2 evaluated lowering the northbound SR 429 profile to achieve the required minimum vertical clearance without impacting the Canary Island Drive bridge. A preliminary drainage analysis was performed to determine the impacts to drainage. The analysis identified multiple options that would address the drainage with a lowered mainline profile. The estimated construction cost for this alternative is approximately $5.5 million.

Alternative 3 evaluated replacing the superstructure of the Canary Island Drive bridge. The existing AASHTO Type VI beams are 6 feet tall. Replacing them with Florida I-Beams (FIB) 54 reduces the height of the beams by 1.5 feet. This distance did not address the vertical clearance issue. Therefore, the alternative was eliminated.

Alternative 4 evaluated jacking the superstructure to achieve the required minimum clearance. This alternative would require modifications to the substructure, MSE walls, approach slab as well as reconstruction of the roadway approaches. The maintenance of traffic would require a detour during the construction. The Windsor Palms neighborhood would need to use the Indian Creek Road bridge to cross SR 429. This would require a detour through the Indian Creek subdivision to access the bridge. The existing connection between the neighborhoods would need to be reconstructed to allow for the traffic to travel between the two neighborhoods. The

detour would be disruptive to the Indian Creek neighborhood with all traffic for Windsor Palm required to travel through a portion of the Indian Creek neighborhood. The estimated construction cost for this alternative is approximately $1.4 million.

Alternative 5 evaluated replacing the entire Canary Island Drive bridge. The new bridge would be constructed just north of the existing bridge. The roadway approaches would be reconstructed and would eliminate the reverse curves in the roadway alignment. The existing bridge would be removed after construction of the new bridge. This alternative would require maintenance of traffic coordination with SR 429 widening during construction. The estimated construction cost for this alternative is approximately $3.8 million.

The alternatives in the evaluation matrix in Table 4-10 included Alternative 2, lowering the northbound SR 429 profile.

4.5.3 SR 429 Interchanges

All of the existing interchanges were evaluated for Design Year 2050 traffic. Several sketch-level concepts were developed for each location, and projected traffic volumes were modeled to determine operational performance of each configuration using the Capacity Analysis for Planning of Junctions (Cap-X) Tool, a simple and cost-effective sketch-planning tool that helps users focus on more effective intersection and interchange designs prior to conducting more demanding traffic simulations. Then geometry was preliminarily evaluated for relative cost, and potential impacts to the local residential developments, utilities, and the environment. In general, if the existing interchange configurations can accommodate Design Year 2050 traffic with an acceptable LOS, it was selected for further evaluation since costs and impacts would be minimized.

4.5.3.1 Sinclair Road Interchange

The Poinciana Parkway Extension Connector (FPID: 446581-1), from CR 532 to north of I-4, includes an evaluation of improvements at the Sinclair Road interchange. However, should the No-Build Alternative be selected for the Poinciana Parkway Extension Connector, improvements at the Sinclair Road interchange will be included with the Widen Western Beltway PD&E Study.

Full Diamond

The existing Full Diamond configuration will operate adequately for Design Year 2050 traffic with minor operational improvements at the ramp termini, including adding a northbound left turn lane on the northbound off-ramp, a westbound right turn lane onto Collector Road, a southbound right turn lane from Collector Road, a southbound left turn lane from the southbound off-ramp, and an eastbound right turn lane onto the southbound on-ramp. A new traffic signal will also be added to the southbound ramp terminal intersection with Sinclair Road.

The two existing toll sites on the ramps to and from the south will be converted to electronic toll gantries. No bicycle lanes are present along Sinclair Road, east and west of the interchange, so no bicycle lanes are proposed. Adding bicycle lanes would require widening of the Sinclair Road bridge.

Two alternatives were evaluated at the northbound on-ramp from Collector Road, including adding a roundabout or a signal. For Alternative 1, a new traffic signal would be added to the intersection of the northbound on-ramp with Collector Road. In addition, a northbound left turn lane and a southbound right turn lane would be added to the intersection to improve traffic operations. The concept for Alternative 1 is shown in Figure 4-4. The northbound through movement would have a continuous green at the signal. Alternative 2 would add a roundabout at the intersection instead of the traffic signal. The roundabout would be a single lane, with a northbound through lane that bypasses the roundabout. The concept for Alternative 2 is shown in Figure 4-5. The Concept Plans for the Sinclair Road interchange Alternatives are also provided in Appendix A.

Additional traffic analysis of the roundabout intersection indicated a southbound bypass lane was needed to accommodate the traffic accessing the northbound on-ramp. Two additional alternatives were evaluated to accommodate this additional improvement to the intersection.

Alternative 2A includes a southbound bypass lane which requires shifting the roundabout south and east to provide the required minimum curve radius for that movement. This shift in the location of the roundabout caused a realignment of Connector Road which pushed the roundabout intersection and approaches into the residential community along Connector Road, resulting in impacts to seven parcels and four residential relocations.

Figure 4-4: Sinclair Road Alternative 1 Traffic Signal

Figure 4-5: Sinclair Road Alternative 2 Roundabout

Alternative 2B includes a southbound bypass lane which requires shifting the roundabout north to provide the required minimum curve radius for that movement. This shift in the location of the roundabout caused a realignment of Connector Road which pushed the roundabout intersection and approaches into a wetland located north of the existing intersection. In addition, shifting the intersection north will require raising the elevation of the northbound on-

ramp as well as raising the roundabout intersection in order to tie into the profile of the northbound mainline as it approaches the bridge over Sand Hill Road.

4.5.3.2 Livingston Road Interchange

A new interchange location was evaluated near the existing two-lane Livingston Road. The purpose of the new interchange is to improve connectivity and relieve congestion at the US 192 interchange. The adjacent intersections along US 192 east and west of the interchange operate at LOS F conditions in both the No-Build and Build conditions. The LOS failure along US 192 will impact the interchange operations and increase ramp queues. The proposed Livingston Road interchange will reduce traffic demand along US 192 and the interchange ramps. The traffic volume on the US 192 ramps is anticipated to decrease by 22 percent with a reliever interchange at Livingston Road. With the addition of the Livingston Road interchange, traffic operations along US 192 are expected to improve. This new interchange can allow the US 192 improvements to be scaled back with an approximate savings of $1 million for construction.

A four-lane divided interchange access roadway would provide a limited access connection between SR 429 and the intersection of Livingston Road with Formosa Gardens Boulevard, adding a fourth leg to the local intersection. This interchange would be located approximately 2.25 miles north of Sinclair Road, and 1.5 miles south of US 192 interchange. Four interchange configurations were considered.

Full Diamond Interchange Option

A full Diamond interchange configuration was dismissed due to the proximity of the northbound on-ramp and the southbound off ramp to the US 192 ramps not allowing adequate weaving distance.

Split Diamond Interchange Option

A Split Diamond interchange was evaluated with southbound on- and northbound off-ramps terminating at Livingston Road, and the southbound off and northbound on-ramps terminating at Sand Hill Road. One benefit of this configuration is that it could allow the existing Sinclair Road interchange to be removed, which would extend the northbound weaving section for traffic coming from I-4. The Split Diamond interchange configuration was also dismissed for two reasons: 1) Sand Hill Road cannot be widened from two to four lanes without significant impacts to existing homes along Sand Hill Road, 2) Osceola County has plans to extend Sinclair Road to the west, providing a connection to US 27, and c) the additional weaving distance south of Sinclair Road is not needed; so, removing the interchange does not provide critical benefits.

Partial Cloverleaf

A Partial Cloverleaf (Par-Clo) interchange (Type AB2) was evaluated with loop ramps for the northbound on-ramp and southbound off-ramp, and diamond ramps for the northbound off-ramp and southbound on-ramp. All of the ramps would be located south of the Livingston Road, as shown in Figure 4-6, providing adequate weaving between the Livingston Road and US 192 interchanges while avoiding impacts to the Oak Island Cove residential development south of US 192. Ramps to and from the south would be tolled electronically. The Par-Clo was selected for further evaluation to be evaluated against the No-Build option at this interchange. This alternative was identified as Alternative 1.

As part of the interchange, the half-mile two-lane section of Formosa Gardens Boulevard will be widened to four lanes to match the four-lane sections to the south and north of Livingston Road.

The new interchange will create a fourth leg of the existing Livingston Road intersection with Formosa Gardens Boulevard. A traffic signal would be added, as well as dual left turn lanes for northbound to westbound traffic entering the interchange. A new left turn lane will be added for westbound Livingston Road to southbound Formosa Gardens Boulevard traffic, as well as a westbound through lane to enter the interchange. The southbound approach will include a new exclusive left turn lane onto Livingston Road, an exclusive right turn lane into the interchange, and a second southbound through lane. The eastbound approach to Formosa Gardens Boulevard from the interchange will include dual left turn lanes, a through lane, and an exclusive right turn lane.

T-Ramp Interchange

A minimization alternative was evaluated for this proposed interchange. This alternative changed the partial cloverleaf interchange to a T-Ramp interchange, see Figure 4-7. The ramps for Livingston Road would cross over SR 429 with a new bridge and form a T-intersection with the southbound on-ramp and off-ramps. The northbound off-ramp and on-ramp would directly tie into the Livingston Road intersection. Portions of the existing stormwater pond on the east side of SR 429 would need to be filled in. The drainage analysis is identifying alternative pond locations to compensate for the lost volume as well as for the additional impervious area of the interchange. The ramps to and from the south would be electronically tolled. This alternative reduced impacts to wetlands and conservation easements on the west side of SR 429. This alternative was identified as Alternative 2.

As part of the interchange, the half-mile two-lane section of Formosa Gardens Boulevard will be widened to four lanes to match the four-lane sections to the south and north of Livingston Road.

The new interchange will create a fourth leg of the existing Livingston Road intersection with Formosa Gardens Boulevard. A traffic signal would be added, as well as dual left turn lanes for northbound to westbound traffic entering the interchange. A new left turn lane will be added for westbound Livingston Road to southbound Formosa Gardens Boulevard traffic, as well as a westbound through lane to enter the interchange. The southbound approach will include a new exclusive left turn lane onto Livingston Road, an exclusive right turn lane into the interchange, and a second southbound through lane. The eastbound approach to Formosa Gardens Boulevard from the interchange will include dual left turn lanes, a through lane, and an exclusive right turn lane.

The Concept Plans for the Livingston Road interchange Alternatives are also provided in Appendix A.

Figure 4-6: Livingston Road Interchange Alternative 1 Partial Cloverleaf

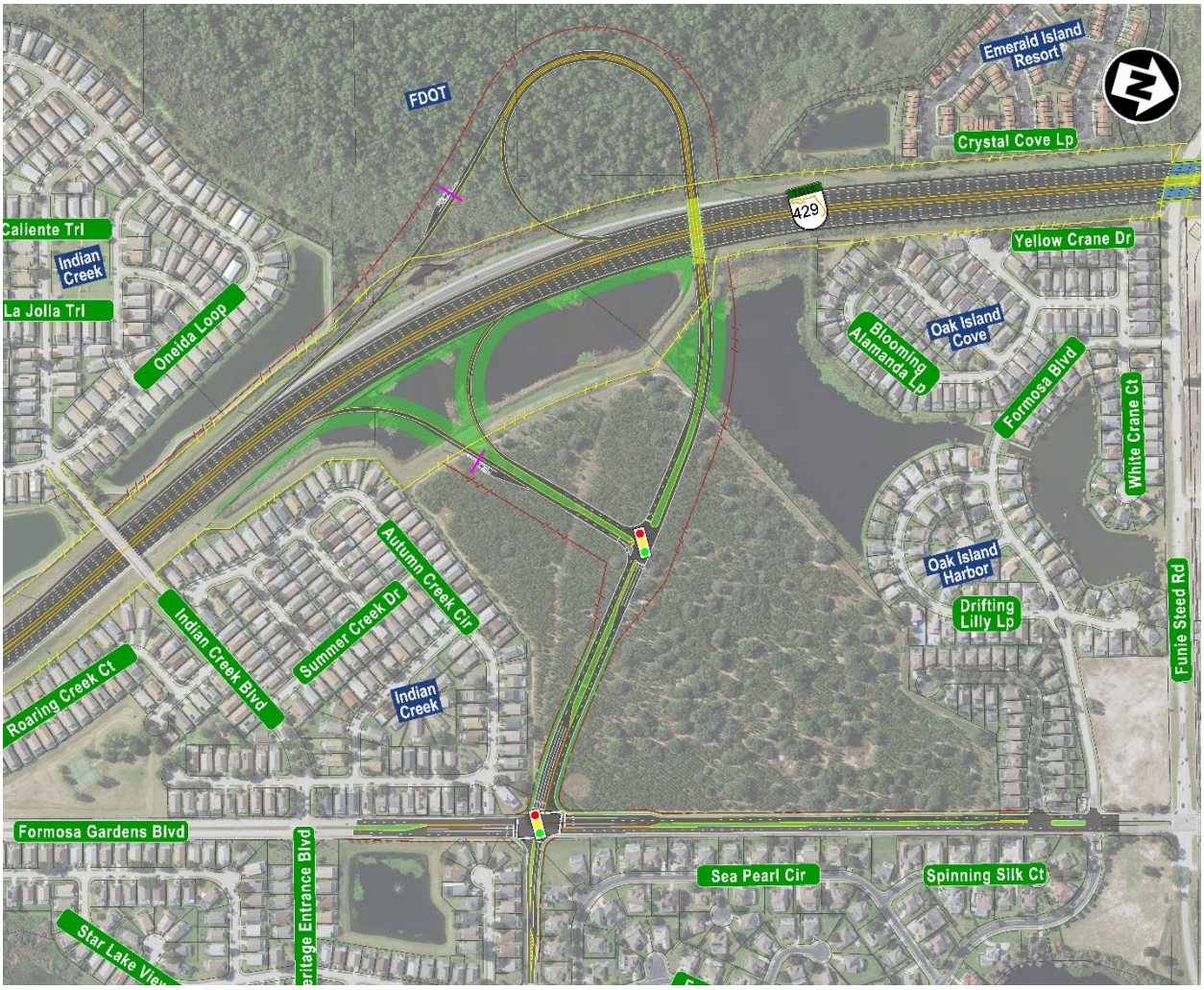
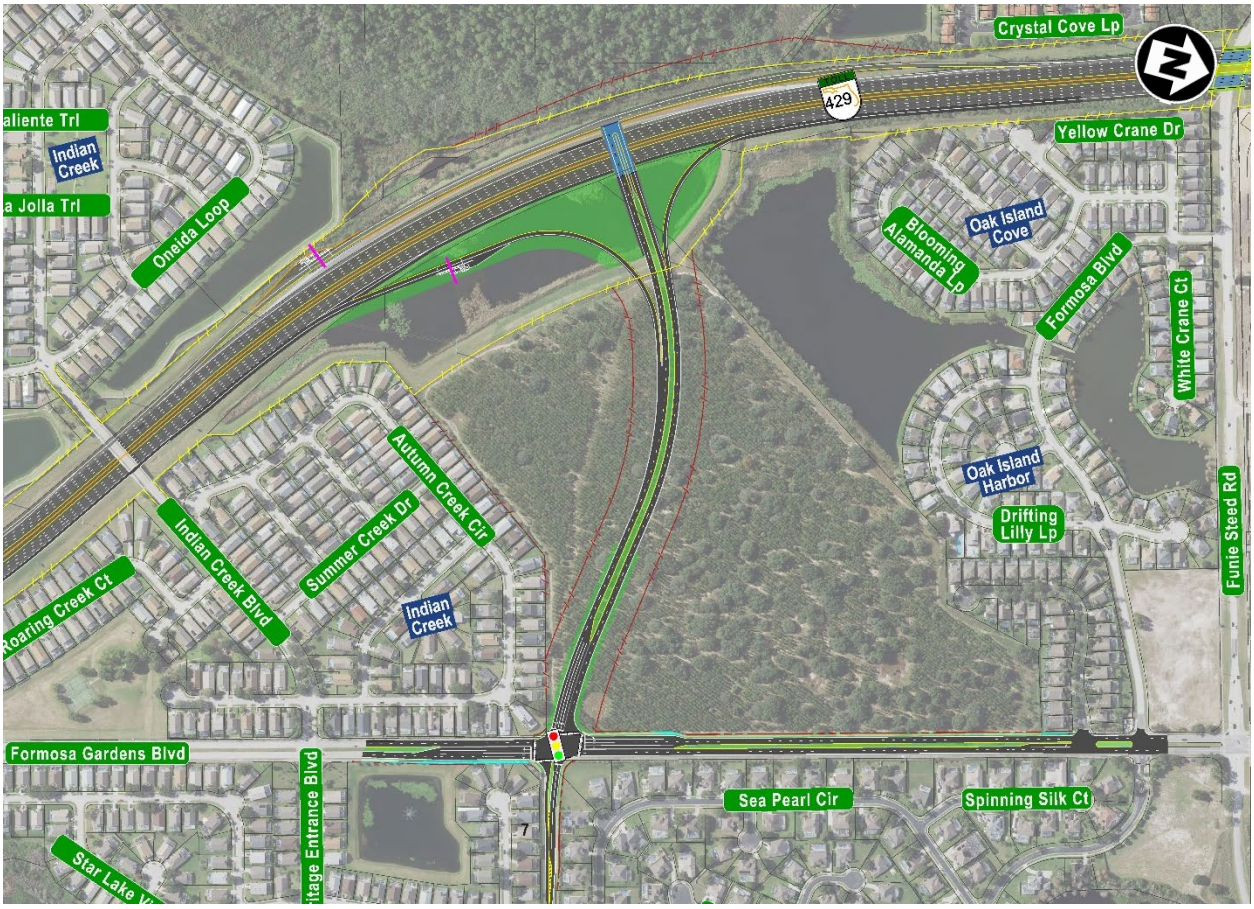


Figure 4-7: Livingston Road Interchange Alternative 2 T-Ramp Interchange



4.5.3.3 US 192 Interchange

Six interchange configurations were considered at the sketch level. A CAP-X screening matrix is shown in Table 4-1. A description of each location and the decision whether or not to carry each alternative forward for further evaluation follows.

Table 4-1: US 192 CAP-X Screening Matrix

Interchange Type	V/C Ratio		Conflict Points	Preliminary Rank	Comments
	AM	PM			
Diamond*	0.90	0.99	26	1	- Widening roadway under bridge may impact the retaining wall - Utility Impact - power poles on S. and W. side of interchange - **Required geometry 2 NB right lanes, 2 SB right lanes, 4 EB through lanes and 4 WB through lanes**
Diverging Diamond Interchange	0.90	0.93	14	2	- Widening roadway under bridge may impact the retaining wall - Utility Impact - power poles on south side and west side of interchange - **Proximity of intersection on east might impact operations as queue spill over is common for closely spaced intersections** - **Required geometry - 2 SB right lanes, 4 EB through lanes and 4 WB through lanes**
Single Point Urban Interchange	0.97	0.93	26	3	- Widening roadway under bridge may impact the retaining wall - Utility Impact - power poles on south side and west side of interchange - **Required geometry - 3 SB left lanes, 2 SB right lanes, 4 EB through lanes and 4 WB through lanes**

Displaced Left Turn	0.87	0.96	16	4	- Widening roadway under bridge may impact the retaining wall - Utility Impact - power poles on south side and west side of interchange - **East crossover intersection potentially be placed between 2 closely spaced intersections (NB Ramps and E Orange Lake Blvd)** - **Required geometry - 3 SB right lanes and 4 EB through lanes**
Partial Cloverleaf B (Exit Ramps)	**1.11**	0.88	12	5	- Utility Impact - power poles on south side and west side of interchange - Impacts the development in NE quadrant. Potential configuration with SW loop only. SBL demand is 700 vph/350 vph during AM/PM peak hours - **Required geometry - 2 SB right lanes and 4 EB through lanes**
Partial Cloverleaf A (Entry Ramps)	0.85	0.82	12	6	- Utility Impact - power poles on south side and west side of interchange - Impacts the development in SE quadrant. WBL demand is low 90 vph/250 vph during AM/PM peak hours - **Required geometry - 3 SB left lanes, 4 EB through lanes and 4 WB through lanes**

*Existing configuration
Base Condition - Existing geometry -
- SB Ramp intersection – 3 lane EB through & WB through, 1 channelized EB right, 2 lane WB left, 1 SB right and 2 lane SB left
- NB Ramp intersection – 3 lane EB through & WB through, 2 lane EB left, 1 lane WB right, 2 lane NB left & 1 lane NB right

Diverging Diamond

While the Diverging Diamond can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange, adding cost and potential impacts. In addition, even after reconfiguring the interchange, the proximity of intersection on the east side could impact operations as queues could spill over from the East Orange Lake Boulevard/Rolling Oats Boulevard intersection, which 750 feet from the northbound ramp terminals. In addition, widening US 192 under the SR 429 bridges may impact the retaining wall structure. Therefore, it was dismissed from further consideration.

Single Point Urban Interchange

While the Single Point Urban Interchange (SPUI) can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange, adding cost and potential impacts. In addition, widening US 192 under the SR 429 bridges may impact the retaining wall structure. Therefore, it was dismissed from further consideration.

Displaced Left Turn

While the Displaced Left Turn interchange (DLT) can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange. Widening US 192 under the SR 429 bridge would impact the retaining wall structure and the SR 429 bridges over US 192, adding cost and potential impacts. In addition, the proximity of intersection on the east side could impact operations since the crossover intersection would be too close to the East Orange Lake Boulevard/Rolling Oats Boulevard intersection, which is closely spaced 750 feet from the northbound ramp terminals. Therefore, it was dismissed from further consideration.

Partial Cloverleaf (Type B)

The Vehicle to Capacity (V/C) ratio of the Par-Clo (Type B) interchange configuration exceeds 1.0 in the AM peak hour. In addition, this configuration could impact the development in the northeast quadrant. Therefore, it was dismissed from further consideration.

Partial Cloverleaf (Type A)

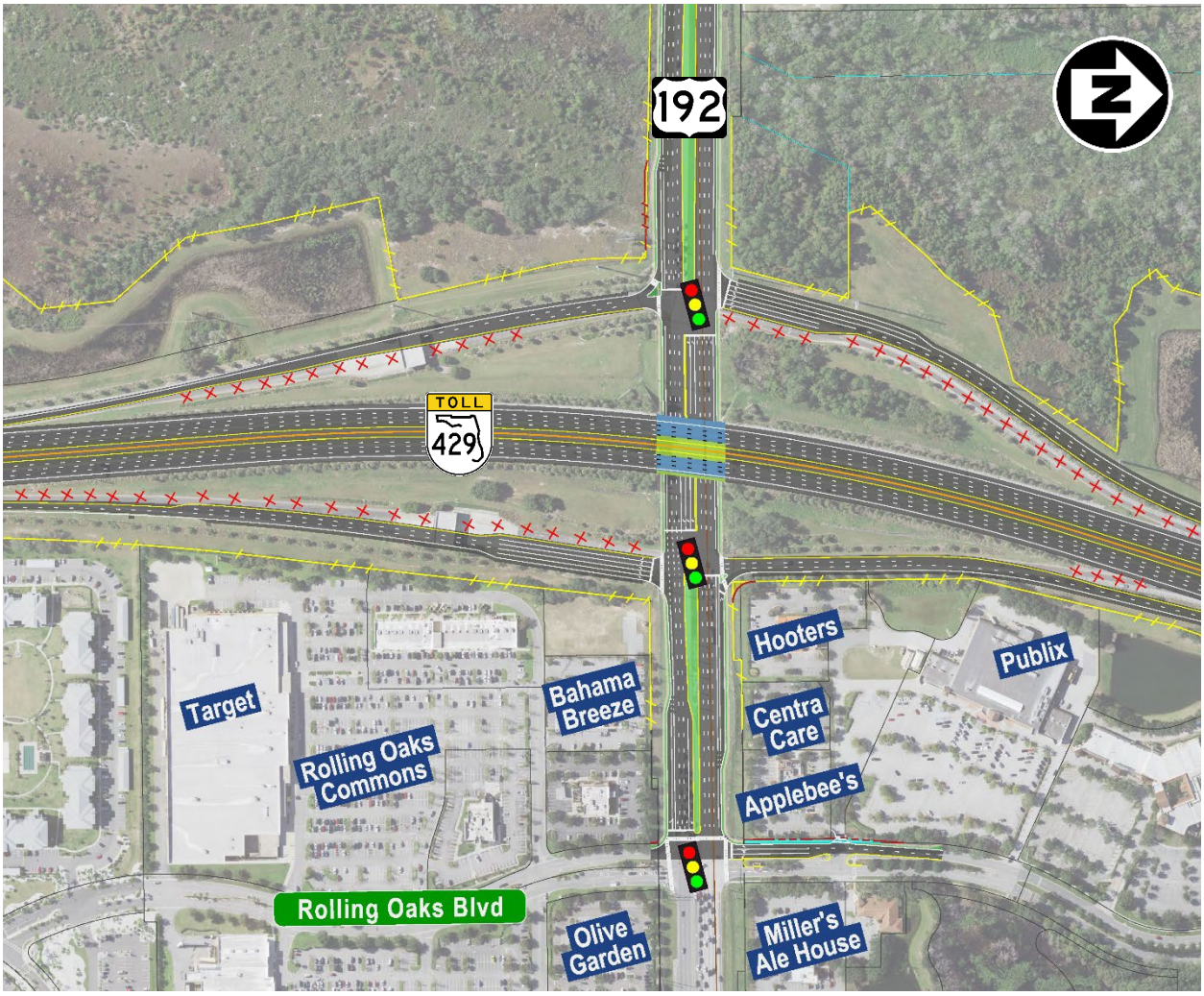
While the Par-Clo (Type A) interchange configuration generally accommodates Design Year 2050 traffic, it would require reconstruction of the interchange and potentially impact the development in the southeast quadrant. Therefore, it was dismissed from further consideration.

Existing Diamond

Since the existing full Diamond interchange configuration (with added turn lanes) can accommodate the Design Year 2050 traffic at an acceptable LOS without requiring full reconstruction of the interchange or the SR 429 bridges over US 192, it was selected for further evaluation. However, some queuing may result due to the proximity of the East Orange Lake

Boulevard/Rolling Oats Boulevard intersection, which is 750 feet from the northbound ramp terminals. In addition, an evaluation of widening US 192 under the SR 429 bridge was done to determine that the retaining wall structure would not be impacted for this option. Operational improvements will be made to the ramp terminals and US 192. An additional eastbound through lane will be added to US 192 west of the interchange. An additional westbound through lane will be added from East Orange Lane Boulevard through the interchange. An additional northbound left and northbound right turn lane will be added to the northbound off-ramp. An additional eastbound left turn lane will be added for traffic entering the northbound on-ramp. An additional left and two additional right-turn lanes will be added to the southbound off-ramp for traffic turning onto US 192. The existing toll sites on the ramps to and from the south would be converted to electronic toll gantries. The Build Alternative for US 192 is shown in Figure 4-8. The Concept Plans for the US 192 interchange alternative is provided in Appendix A.

Figure 4-8: US 192 Interchange Build Alternative



4.5.3.4 Western Way Interchange

Eight interchange configurations were considered at the sketch level for Western Way. A CAP-X screening matrix is shown in Table 4-2. A description of each location and the decision whether or not to carry each alternative forward for further evaluation follows.

Table 4-2: Western Way CAP-X Screening Matrix

Type	V/C Ratio		Conflict Points	Preliminary Rank	Comments
	AM	PM			
Partial Cloverleaf (Type B) *	0.60	0.90	12	1	- Existing number of turn lanes sufficient with NB left loop ramp (NE quadrant) - Add 1 lane to loop ramp
Single Point	0.93	0.84	26	2	- Potential Impact to bridge retaining wall - **Required geometry - 2 NB right lanes, 3 SB left lanes, 3 EB through lanes, 2 WB left lanes**
Diamond	0.89	0.85	26	3	- Potential Impact to bridge retaining wall **- Required geometry - 2 NB right lanes, 3 SB left lanes, 4 EB through lanes and 2 WB left lanes**
Displaced Left Turn	0.91	0.88	16	4	**- Signalized intersection on the west side is very close to the interchange** - Utility poles on the west side of interchange - Potential Impact to bridge retaining wall **- Required geometry - 2 NB right lanes, 3 SB left lanes, 3 EB through lanes**
Partial Cloverleaf (Type A)	0.76	0.64	12	5	- Utility poles on west side of the interchange - Impact to development on NW and SE quadrants - Potential Impact to bridge retaining wall **- Required geometry - 3 SB left lanes and 3 EB through lanes**
Diverging Diamond Interchange	0.93	0.90	14	6	**- Signalized intersection on the west side is very close to the interchange.** - Utility poles on the west side of interchange - Potential Impact to bridge retaining wall **- Required geometry - 2 NB right lanes, 3**

					SB left lanes, 3 EB through lanes

*Existing configuration
Base Condition - Existing geometry

- SB Ramp intersection – 2 lane EB through & WB through, 1 channelized EB right, 1 lane WB left, 1 SB right and 1 loop ramp SB left which merges on EB Western Way as lane add
- NB Ramp intersection – 2 lane EB through & WB through, 1 lane EB left & WB right, 1 lane NB left & NB right

CAP-X Analysis assumes ramp terminal intersections to be signalized

Partial Cloverleaf (Type B)

The existing Par-Clo interchange configuration can accommodate the Design Year 2050 traffic at an acceptable LOS while only requiring the addition of one lane to the existing single-lane loop ramp. The existing turn lanes are adequate. This alternative would not require full reconstruction of the SR 429 bridges over Western Way and would minimize impacts to existing utilities. Therefore, it was selected for further evaluation. The Build Alternative for Western Way is shown in Figure 4-9. The Concept Plans for the Western Way interchange alternative is provided in Appendix A.

Single Point Urban Interchange

While the Single Point Urban Interchange (SPUI) can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange, adding cost and potential impacts. In addition, widening Western Way under the SR 429 bridges may impact the retaining wall structure. Therefore, it was dismissed from further consideration.

Diamond

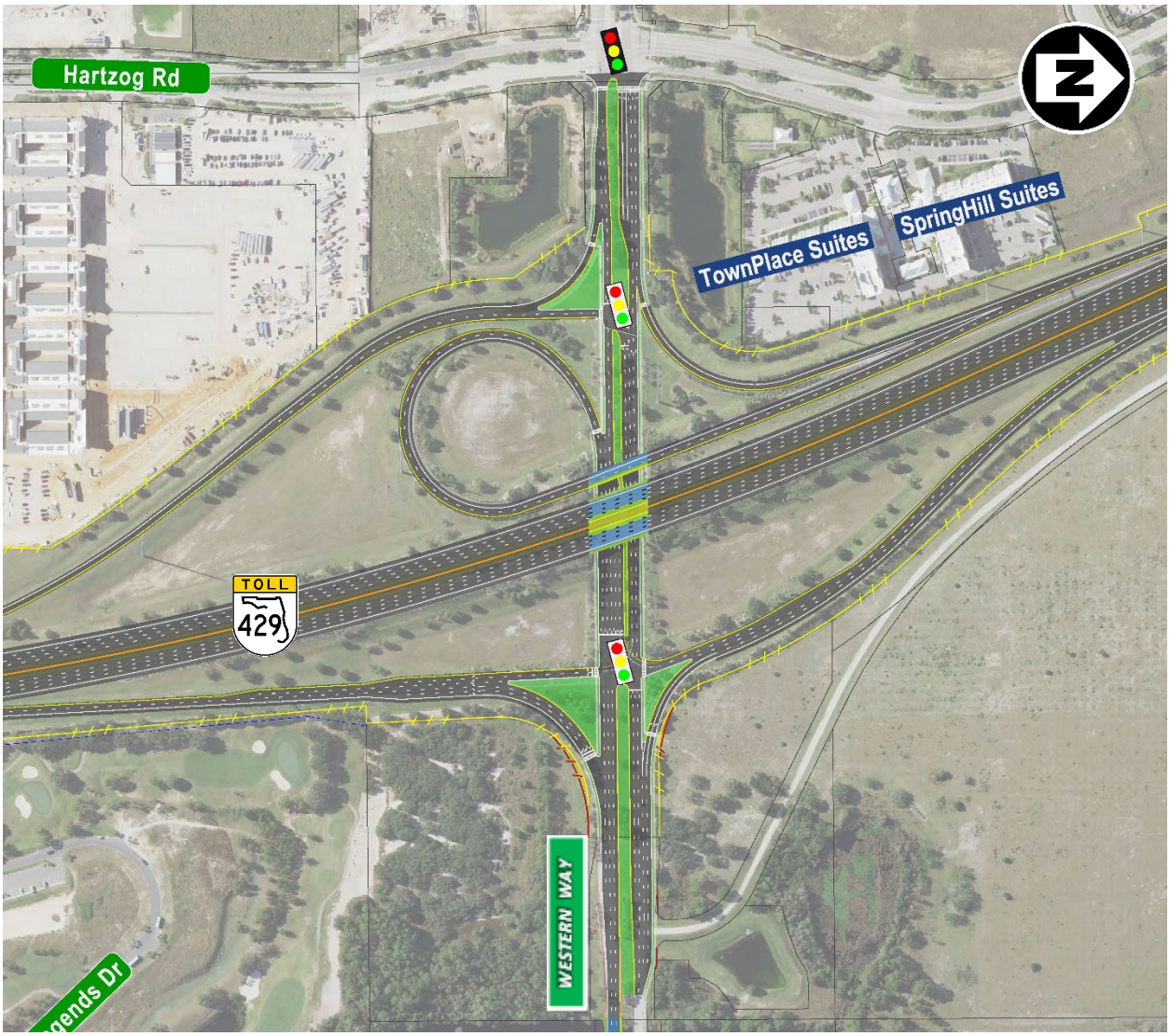
While the Diamond can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange, adding cost and potential impacts. In addition, widening Western Way under the SR 429 bridges may impact the retaining wall structure. Triple left turn lane were considered for the southbound off-ramp, but operational performance did not meet acceptable LOS. Therefore, the Diamond was dismissed from further consideration

Displaced Left Turn

While the DLT interchange can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange. Widening Western Way under the SR 429 bridges would impact the retaining wall structure and the SR 429 bridges, adding cost and potential impacts. In

addition, the proximity of the Hartog Road intersection on the west side could impact operations since the crossover intersection would be too close to the side road intersection, which is closely spaced 550 feet from the southbound ramp terminals. Therefore, it was dismissed from further consideration.

Figure 4-9: Western Way Interchange Build Alternative



Partial Cloverleaf (Type A)

While the Par-Clo (Type A) interchange configuration generally accommodates Design Year 2050 traffic, it would require reconstruction of the interchange, impact utility poles on west side of the interchange, impact the development in the northwest and southeast quadrants, and potentially impact the SR 429 bridge retaining wall. Therefore, it was dismissed from further consideration.

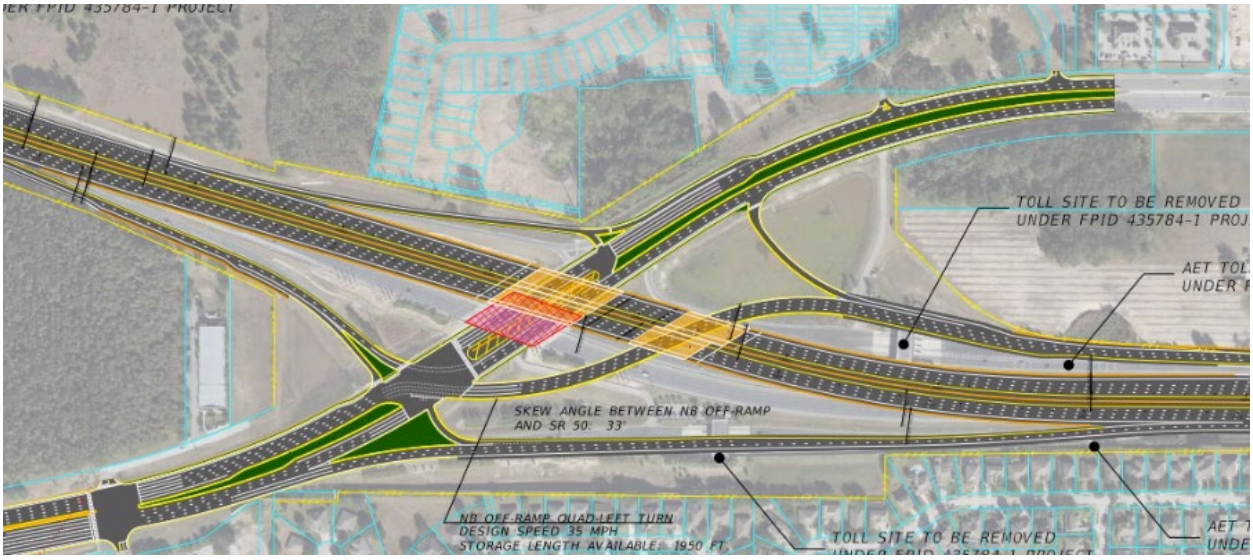
Diverging Diamond

While the Diverging Diamond can accommodate Design Year 2050 traffic, it would require reconstruction of the interchange, adding cost and potential impacts. It would impact utility poles on west side of the interchange, and potentially impact the SR 429 bridge retaining wall. In addition, the proximity of the Hartog Road intersection on the west side could impact operations since the crossover intersection would be too close to the side road intersection, which is closely spaced 550 feet from the southbound ramp terminals. Therefore, it was dismissed from further consideration.

Partial Parallel Flow Interchange

Another configuration called a Partial Parallel Flow Intersection (PPFI) was investigated. This concept would convert the interchange to a modified diamond configuration but would pull one off ramp to the opposite side to terminate across from the off-ramp in the opposite direction. An example is shown in Figure 4-10, below. This concept would require reconstruction of the interchange but was shown to provide only minimal benefit to operations. Therefore, it was dismissed from further consideration.

Figure 4-10: Example of Partial Parallel Flow Interchange



Southbound to Eastbound Flyover

This alternative would remove the loop ramp and add a southbound to eastbound flyover in its place. While operations would be adequate, it requires the additional cost of construction the flyover. In addition, a flyover could have potential impacts to the Duke Energy transmission line,

environmental impacts in the southeast quadrant, and could impact the Disney property east of the interchange. Since adding a lane to the existing loop is less costly and performs adequately, the flyover alternative was dismissed from further consideration.

4.5.3.5 Seidel Road Interchange

Six interchange configurations were considered at the sketch level for Seidel Road. A CAP-X screening matrix is shown in Table 4-3

Table 4-3. A description of each location and the decision whether or not to carry each alternative forward for further evaluation follows.

Table 4-3: Seidel Road CAP-X Screening Matrix

Type	V/C Ratio		Conflict Points	Preliminary Rank	Comments
	AM	PM			
Half Diamond *	0.85	0.88	12	1	- Existing geometry with signal control at both ramp terminals
Single Point Urban Interchange	0.82	0.71	11	2	- Widening the roadway under bridge may impact the retaining wall structure - Utility Impact - power poles on south side and west side of interchange
Diverging Diamond Interchange	0.71	0.71	8	3	- Widening the roadway under bridge may impact the retaining wall structure - Utility Impact - power poles on south side and west side of interchange - Proximity of intersection on east and west might impact operations as queue spill over is common for closely spaced intersections
Displaced Left Turn Interchange	0.63	0.66	9	4	- Widening the roadway under bridge may impact the retaining wall structure - Utility Impact - power poles on south side and west side of interchange - Crossover intersections potentially be placed between 2 closely spaced intersections
Partial Cloverleaf (Type A)	0.58	0.44	6	5	- Utility Impact - power poles on south side and west side of interchange - Potential configuration with NW loop only. WBL demand is 680 vph/440 vph

					during AM/PM peak hours
Partial Cloverleaf (Type B)	0.63	0.51	6	6	- Utility Impact - power poles on south side and west side of interchange - Impacts the development on NE quadrant.

*Existing configuration

Base Condition - Existing geometry

- SB Ramp intersection – 2 lane EB through & WB through, EB right shared with EB through, 1 lane WB left
- NB Ramp intersection – 2 lane EB through & WB through, 1 lane NB left & NB right

CAP-X Analysis assumes ramp terminal intersections to be signalized

Half Diamond

Since SR 429 is a CFX facility north of Seidel Road, and since CFX has no plans to add ramps to and from the north side of Seidel Road, the existing Half Diamond interchange with ramps to and from the south only, was evaluated at the sketch-level. The existing Half-Diamond interchange configuration and lane geometry performs adequately in Design Year 2050 and requires minimal modifications, including adding traffic signals at the ramp terminals. Therefore, it was selected for further analysis. The existing toll sites on the ramps to and from the south would be converted to electronic toll gantries.

Three alternatives were initially considered for the half diamond interchange: 1) signal control with a westbound Turbo Lane (signal bypass lane), 2) roundabouts at each ramp terminal, and 3) a "Peanut" or Double Roundabout. The Turbo Lane portion was dismissed from further consideration since the westbound traffic using the Turbo Lane would immediately encounter the recently constructed traffic signal at Avalon Road, diminishing the benefits of the Turbo Lane. The roundabout at each ramp terminal alternative was dismissed since full roundabouts were not necessary for a Half Diamond interchange. Alternative 1, Traffic Signals at the ramp terminals (without a Turbo Lane), was developed and the concept is shown in Figure 4-11. Alternative 2, Double Roundabout at the interchange, was developed and the concept is shown in Figure 4-12. The Concept Plans for the Seidel Road interchange alternatives are provided in Appendix A.

Single Point Urban Interchange

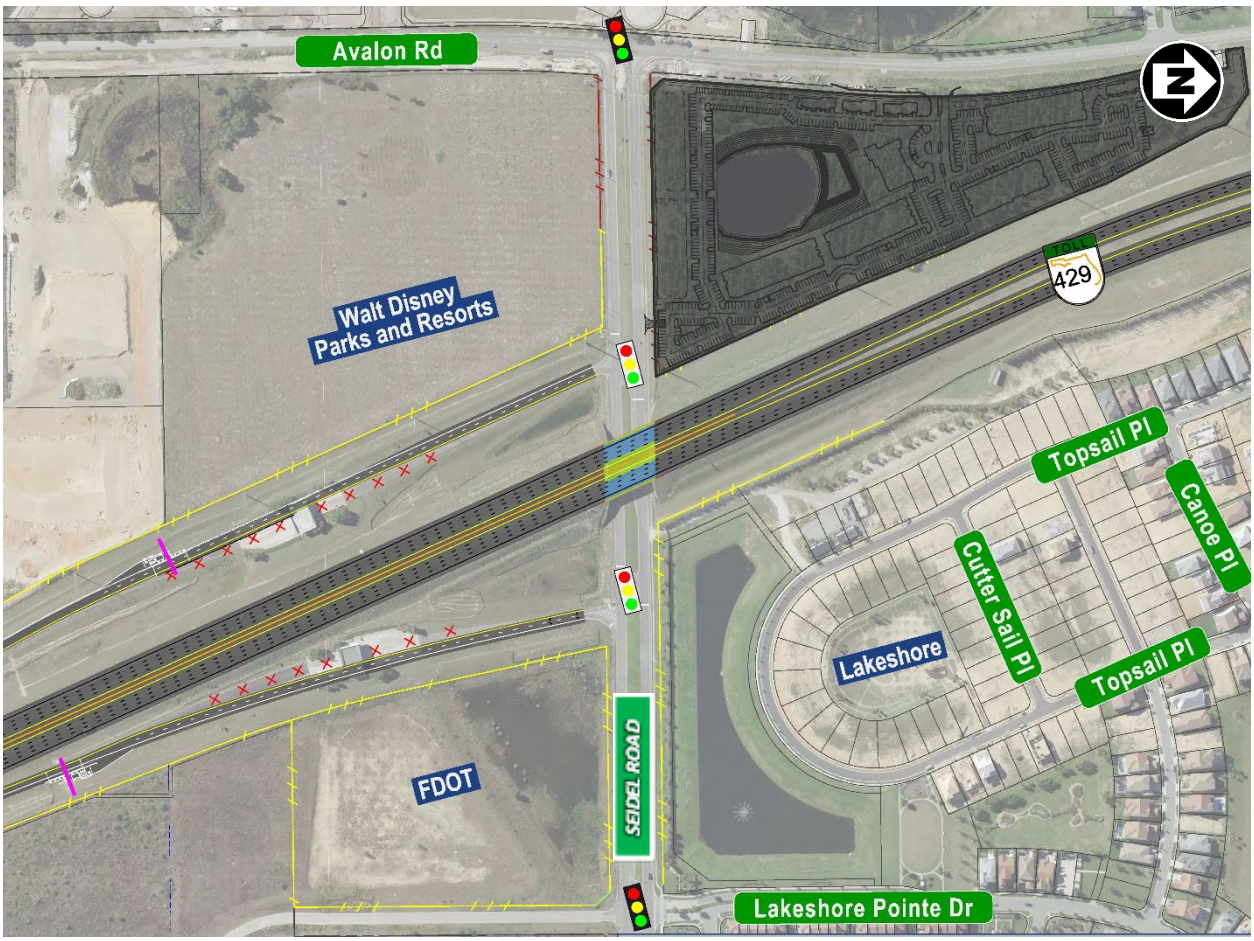
The SPUI would require reconstruction of the interchange. Widening Seidel Road under the SR 429 bridge may impact the retaining wall structure. In addition, the power poles on south side

and west side of interchange could be impacted. Since the existing Half diamond performs adequately ant a lower cost, the SPUI was dismissed from further consideration.

Diverging Diamond

The Diverging Diamond would require reconstruction of the interchange. Widening Seidel Road under the SR 429 bridge may impact the retaining wall structure. In addition, the power poles on the south side and west side of interchange could be impacted. The proximity of the Avalon Road and Lakeshore Point Drive intersections on the west and east sides, respectively, might impact operations as queues could spill over with the closely spaced intersections. Therefore, the Diverging Diamond was dismissed from further consideration.

Figure 4-11: Seidel Road – Alternative 1 Traffic Signals



Displaced Left Turn

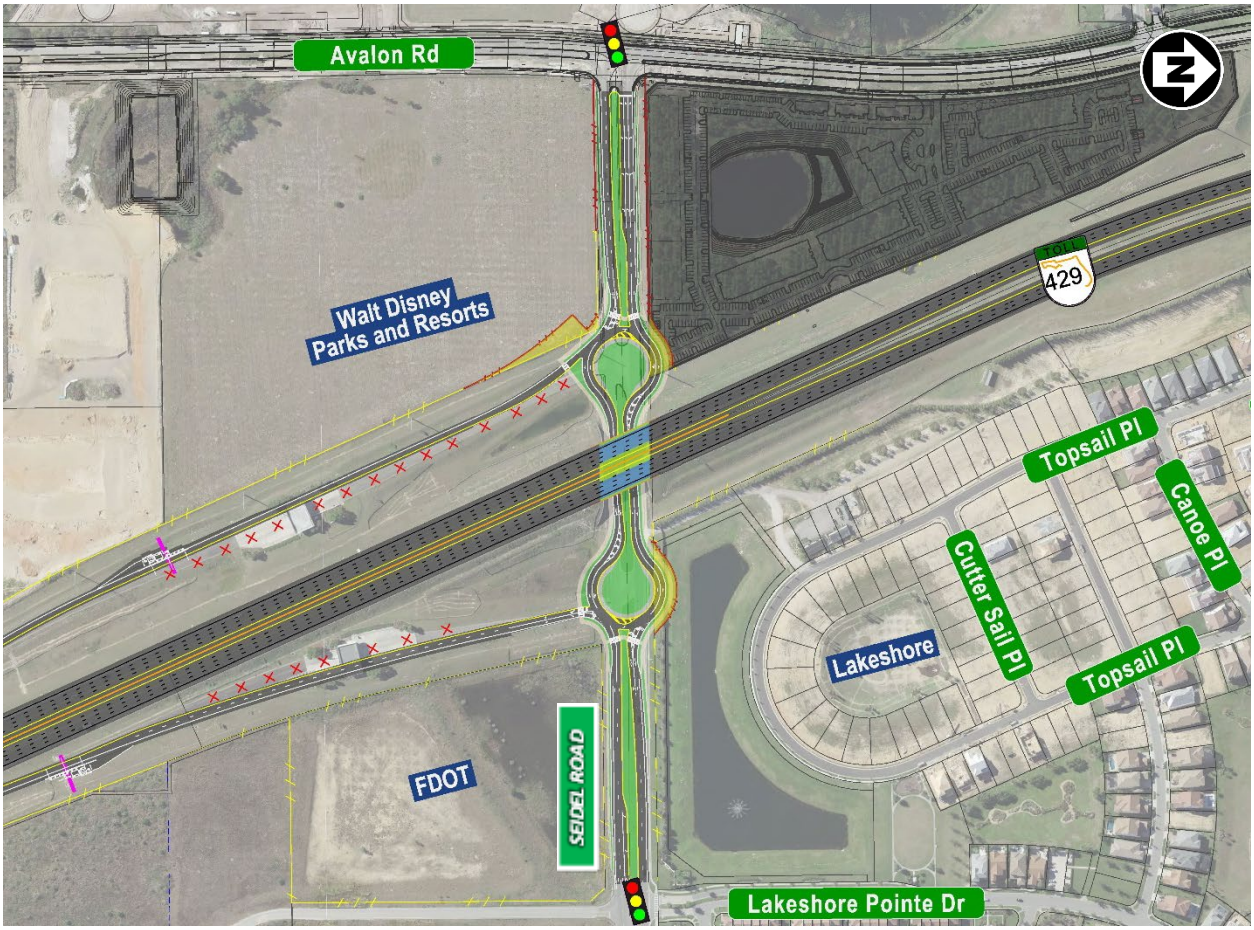
The DLT would require reconstruction of the interchange. Widening Seidel Road under the SR 429 bridge may impact the retaining wall structure. In addition, the power poles on the south side and west side of interchange could be impacted. In addition, the proximity of the

intersection on the east side could impact operations since the crossover intersection would be placed between the two closely spaced ramp terminal intersections. Therefore, the DLT was dismissed from further consideration.

Partial Cloverleaf (Types A and B)

While the Par-Clo (Type A) interchange configuration performs well with Design Year 2050 traffic, it would require reconstruction of the interchange, potentially impact utility poles on the south and west sides of the interchange and impact the existing residential development in the northeast quadrant. Therefore, it was dismissed from further consideration.

Figure 4-12: Seidel Road – Alternative 2 Double Roundabouts



4.5.3.6 Ramp Toll Sites and Mainline Toll Plaza

All Electronic Tolling (AET) will be incorporated into the concepts. Eight dedicated AET lanes are needed by 2046.

The existing ramp toll plazas for the Sinclair Road, US 192 and Seidel Road interchanges will be replaced with all electronic toll gantries.

The SR 429 mainline toll plaza and toll gantries will need to be replaced due to the widening of SR 429. The existing toll gantries cannot accommodate an eight-lane typical section.

4.5.4 Proposed Structures

The following describes the proposed bridge structures and provides typical sections for each bridge.

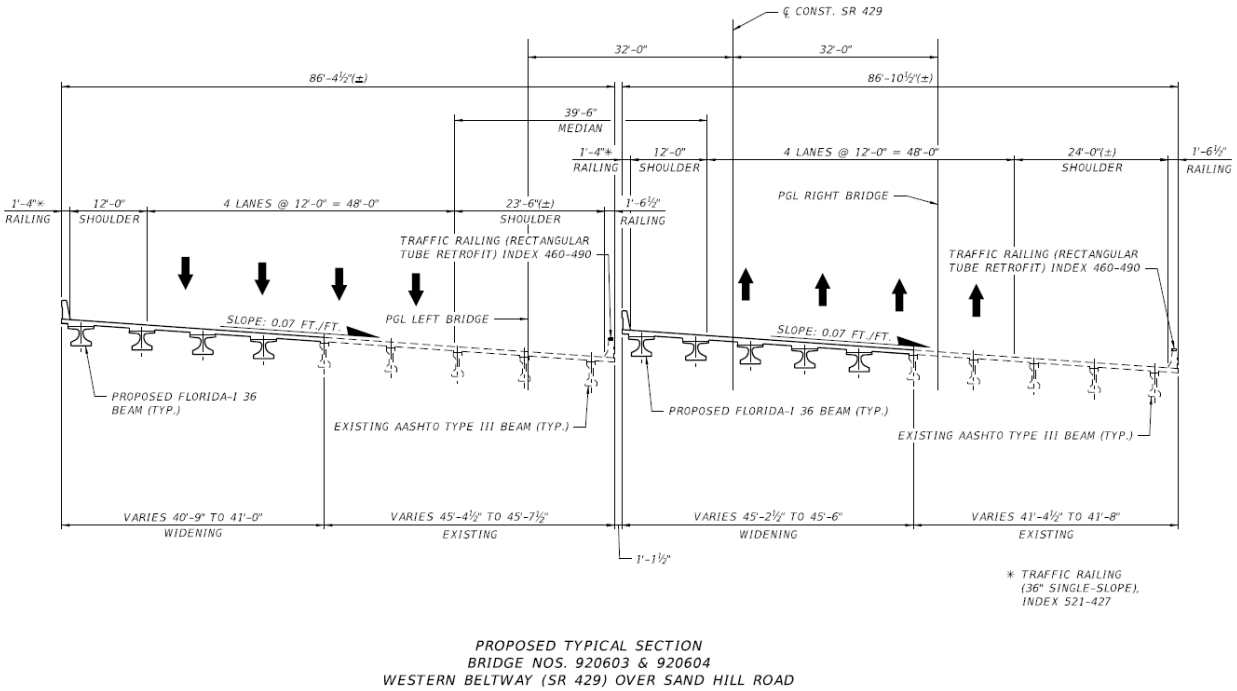
SR 429 over Sand Hill Road (Bridge No. 920603 and 920604)

As shown in Figure 4-13, the proposed improvements for Bridge No. 920603 are to widen the existing bridge to the outside. Improvements require partial removal of the existing bridge (saw-cut at exterior beam) and new inside traffic trailing doweled into the bridge deck to meet barrier setback criteria. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes, a 12′-0″ outside shoulder, and a 23′-6″ (striped out to 12′-0″) inside shoulder for this southbound bridge. The 23′-6″ inside shoulder is provided to meet sight distance requirements. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-13, the proposed improvements for Bridge No. 930604 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes, a 12′-0″ inside shoulder, and an outside shoulder of 24′-0″ (Striped out to 12′-0″) width along this northbound bridge. The wider outside shoulder is to achieve the required sight distance on the mainline curve. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920604 and Bridge No. 920603 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-13: SR 429 over Sand Hill Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 920603 & 920604
WESTERN BELTWAY (SR 429) OVER SAND HILL ROAD

SR 429 over Funie Steed Road (Bridge No. 920605 and 920606)

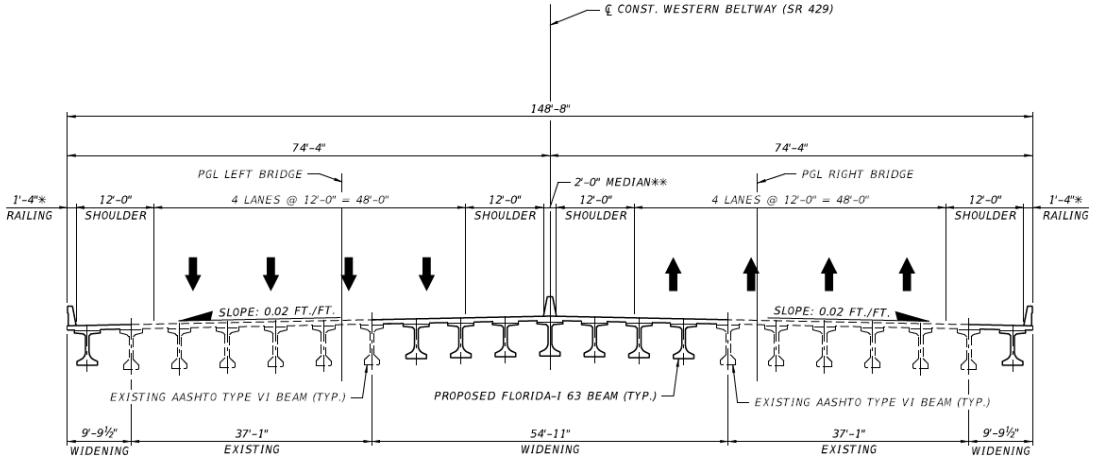
As shown in Figure 4-14, the proposed improvements for Bridge No. 920605 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this southbound bridge. A similar widening will happen to the northbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-14, the proposed improvements for Bridge No. 920606 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this northbound bridge. A similar widening will happen to the southbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920605 and Bridge No. 920606 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists

of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-14: SR 429 over Funie Steed Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 920605 & 920606
WESTERN BELTWAY (SR 429) OVER FUNIE STEED ROAD

* TRAFFIC RAILING (36" SINGLE-SLOPE), INDEX 521-427

** TRAFFIC RAILING (MEDIAN 36" SINGLE-SLOPE), INDEX 521-426

SR 429 over SR 530 (US 192) (Bridge No. 920609 and 920610)

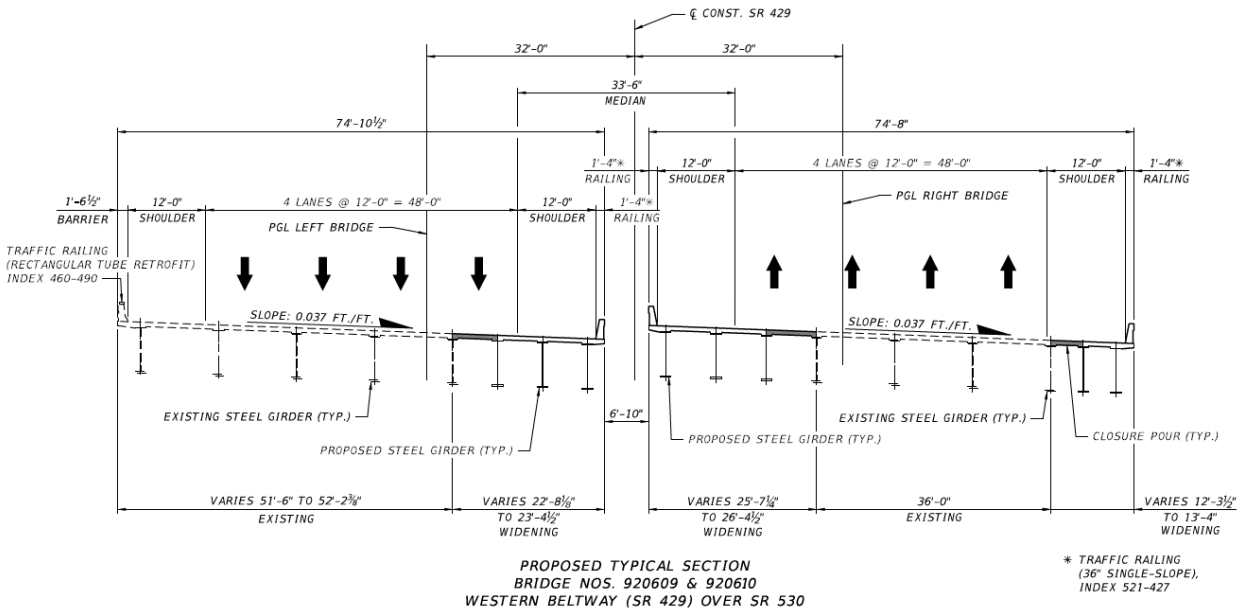
As shown in Figure 4-15, the proposed improvements for Bridge No. 960609 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this southbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-15, the proposed improvements for Bridge No. 960610 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this northbound bridge.

The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920609 and Bridge No. 920610 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-15: SR 429 over SR 530 (US 192) Proposed Typical Section



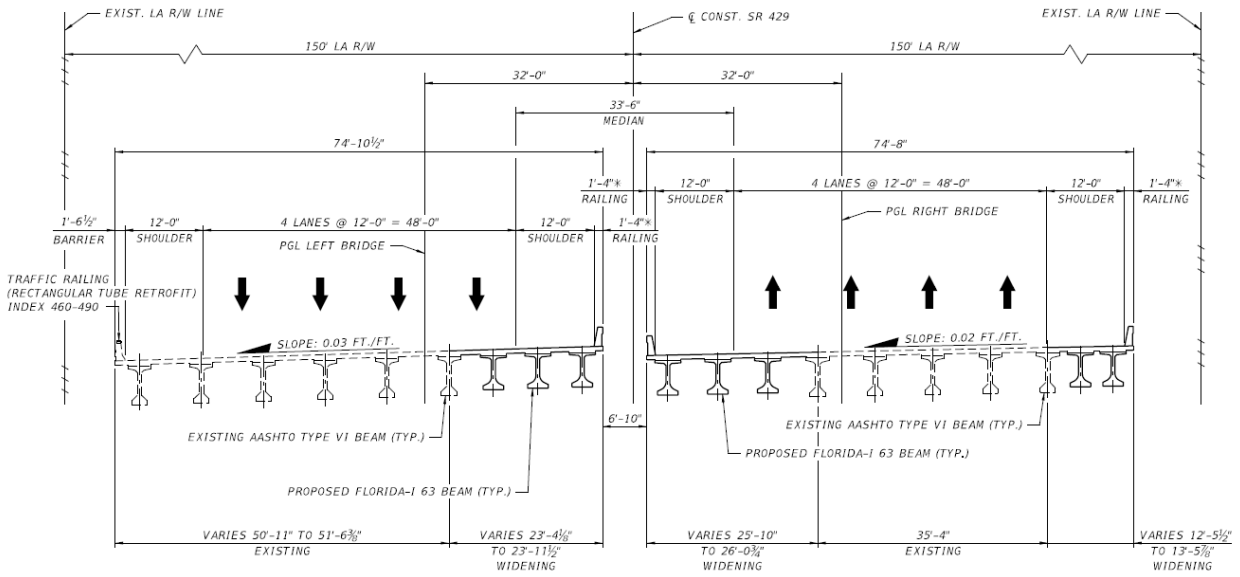
SR 429 over West Orange Lake Boulevard (Bridge No. 750616 and 750617)

As shown in Figure 4-16, the proposed improvements for Bridge No. 750616 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this southbound bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-16, the proposed improvements for Bridge No. 750617 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this northbound bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750616 and Bridge No. 750617 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-16: SR 429 over West Orange Lake Boulevard Proposed Typical Section



SR 429 over Western Way (Bridge No. 750619 and 750620)

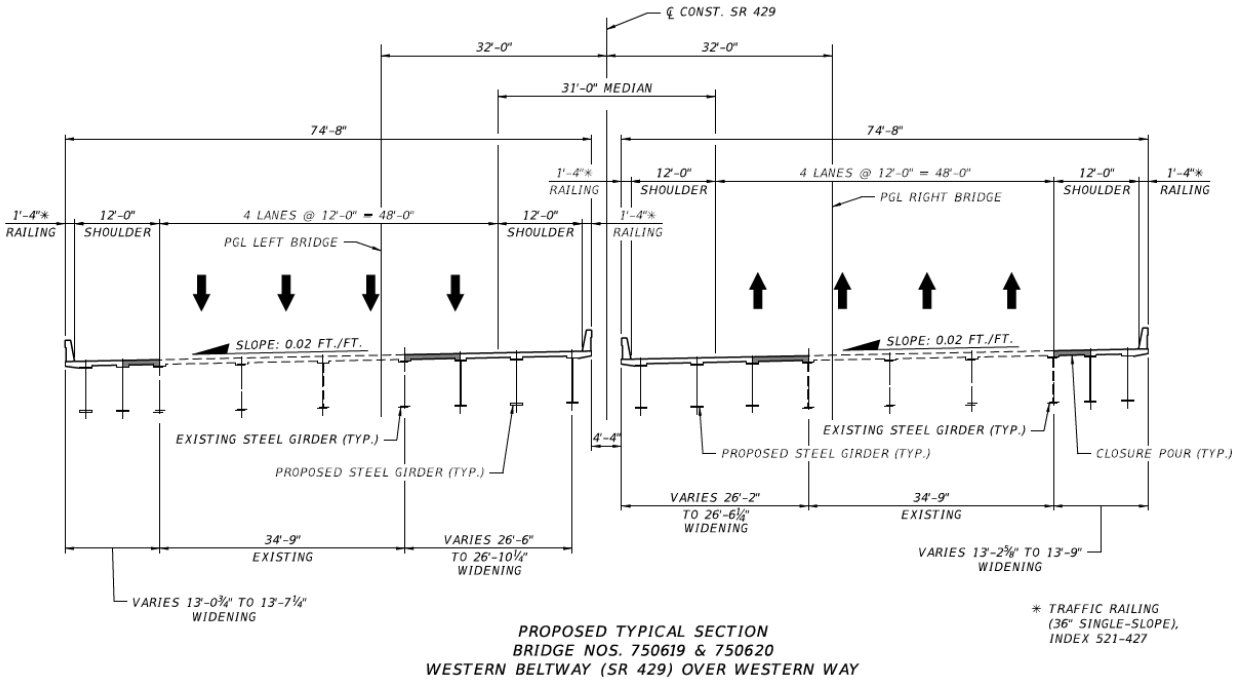
As shown in Figure 4-17, the proposed improvements for Bridge No. 750619 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes

four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this southbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-17, the proposed improvements for Bridge No. 750620 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this northbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750619 and Bridge No. 750620 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-17: SR 429 over Western Way Proposed Typical Section

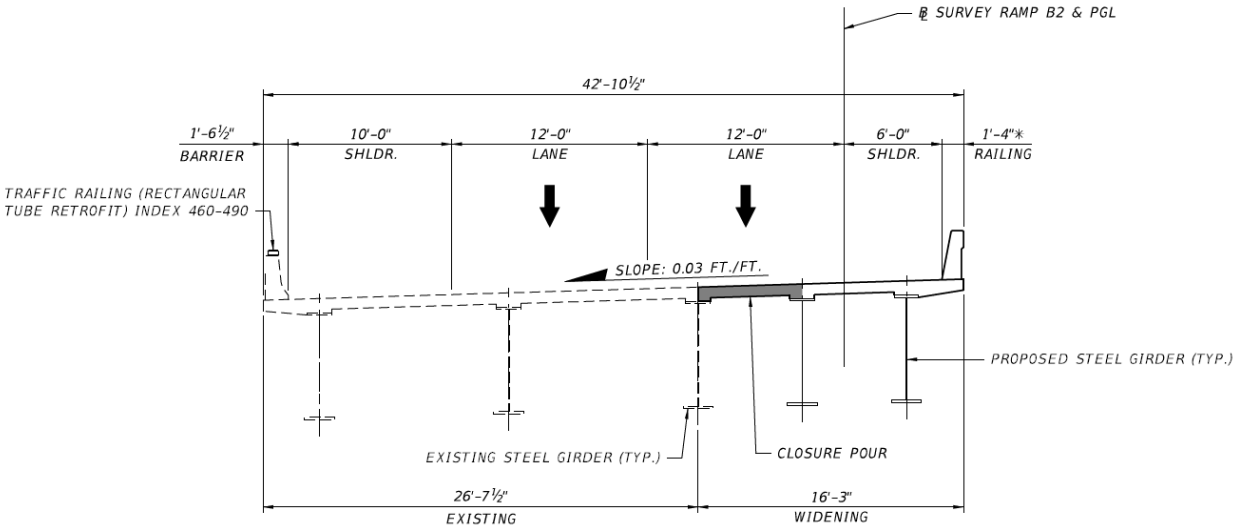


SR 429 Southbound Off-Ramp over Western Way (Bridge No. 750618)

As shown in Figure 4-18, the proposed improvements for Bridge No. 750618 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes two (2) 12'-0" travel lanes, a 6'-0" inside shoulder, and a 10'-0" outside shoulder for this southbound ramp bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750618 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-18: SR 429 Southbound Off-Ramp over Western Way Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NO. 750618
WESTERN BELTWAY (SR 429) RAMP B2 OVER WESTERN WAY

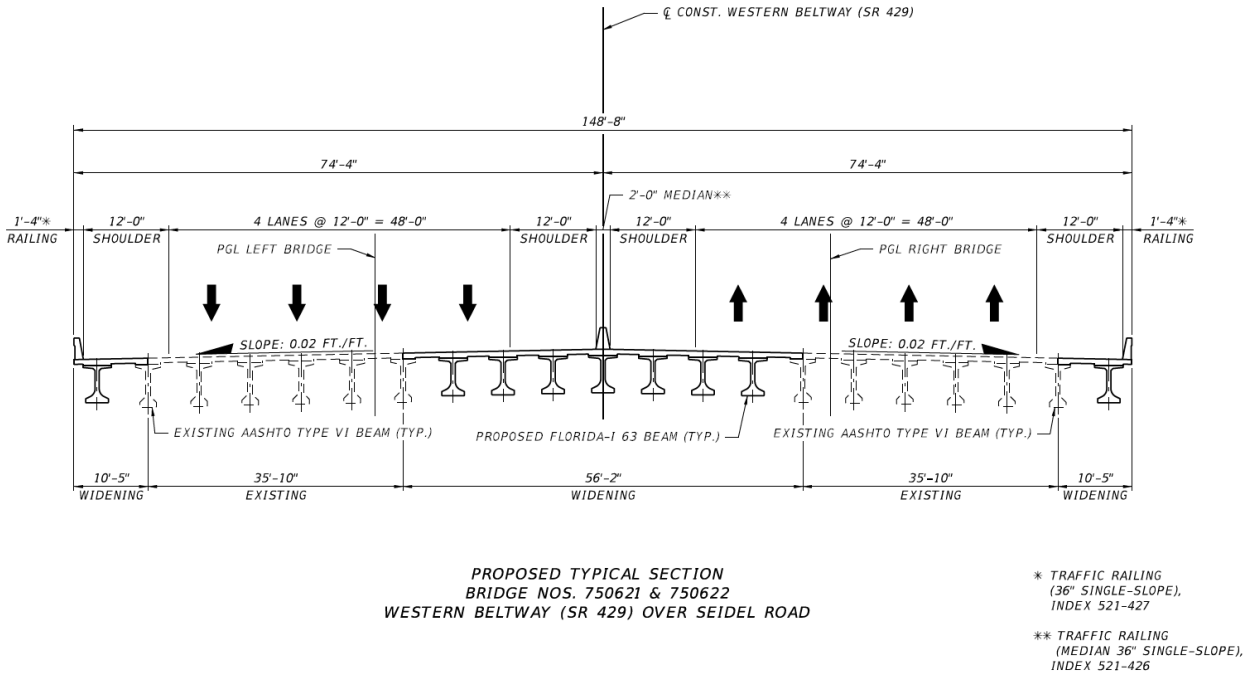
SR 429 over Seidel Road (Bridge No. 750621 and 750622)

As shown in Figure 4-19, the proposed improvements for Bridge No. 750621 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this southbound bridge. A similar widening will happen to the northbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 4-19, the proposed improvements for Bridge No. 750622 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this northbound bridge. A similar widening will happen to the southbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750621 and Bridge No. 750622 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-19: SR 429 over Seidel Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 750621 & 750622
WESTERN BELTWAY (SR 429) OVER SEIDEL ROAD

* TRAFFIC RAILING (36" SINGLE-SLOPE), INDEX 521-427

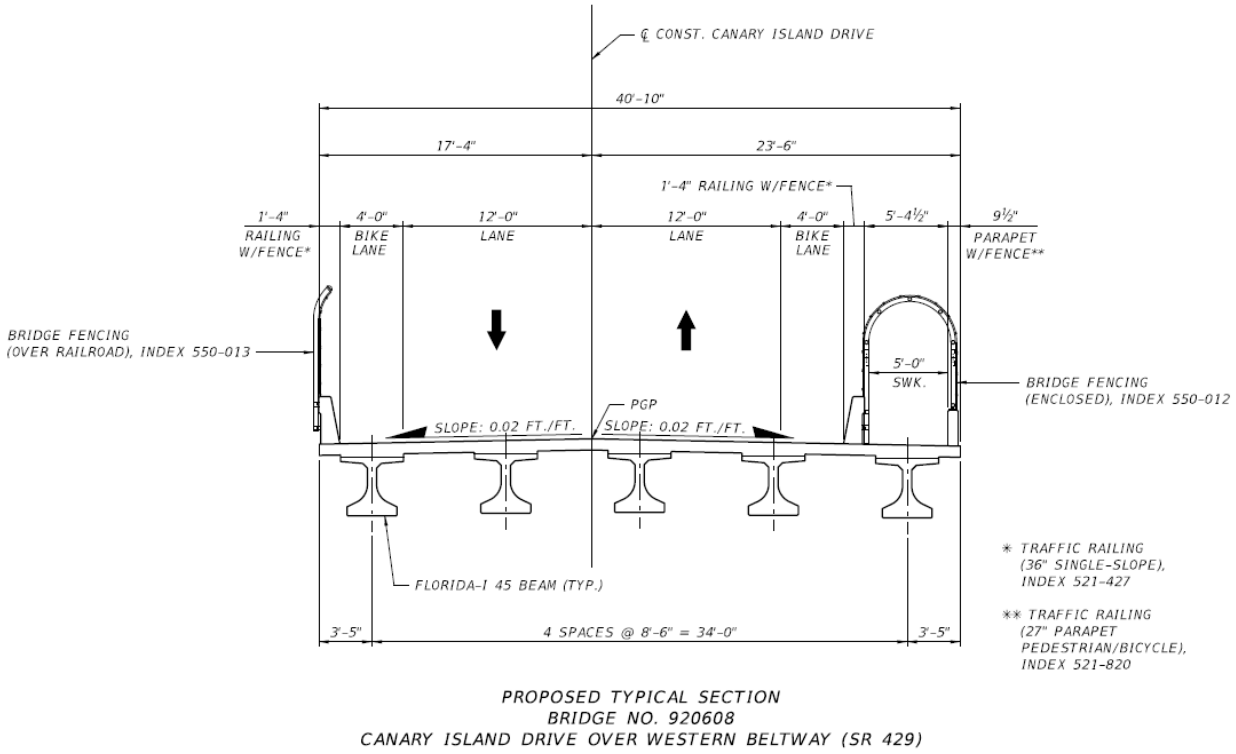
** TRAFFIC RAILING (MEDIAN 36" SINGLE-SLOPE), INDEX 521-426

Canary Island Dr over SR 429 (Bridge No. 920608)

Figure 4-20 shows the proposed typical section of the new Canary Island Dr. bridge over SR 429. The proposed bridge typical section for this bridge consists of one (1) 12'-0" eastbound travel lane, a 4'-0" eastbound bike lane, one (1) westbound travel lane, a 4'-0" westbound bike lane, and a 5'-0" sidewalk protected by a traffic railing. The vertical clearance will meet the minimum vertical clearance of 16'-6" per FDM Table 260.6.1. The minimum horizontal clearance to the retaining wall coping will meet the clear zone requirements per FDM Table 215.2.1. A concrete barrier will be provided for pier shielding at the median. A new bridge number will be requested during the Design Phase.

The aesthetic treatment for Bridge No. 920608 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-20: Canary Island Drive over SR 429 Proposed Typical Section



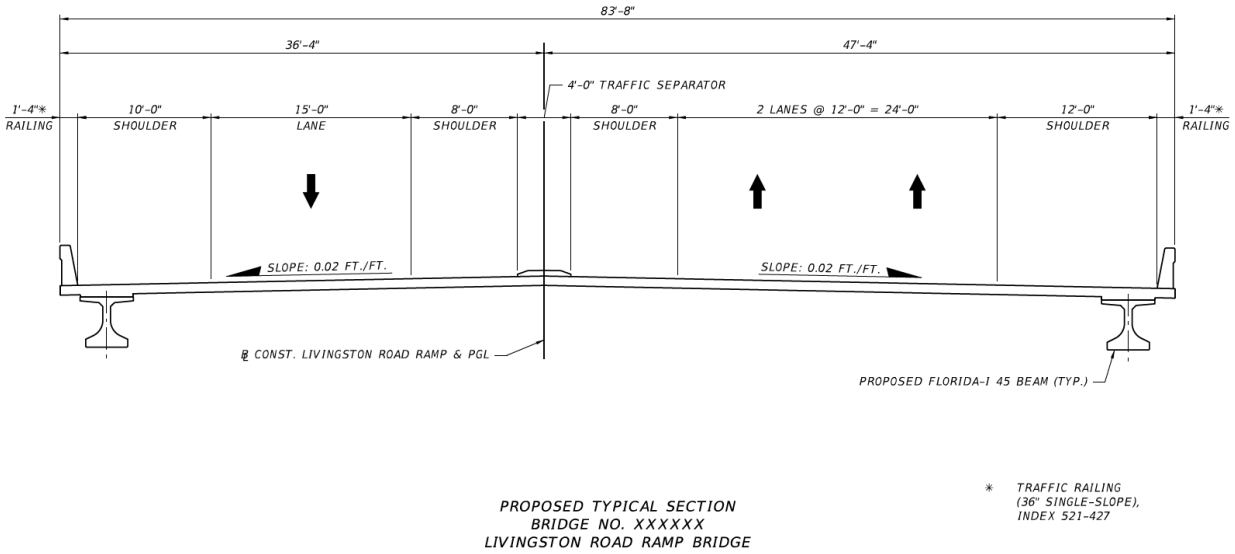
PROPOSED TYPICAL SECTION
BRIDGE NO. 920608
CANARY ISLAND DRIVE OVER WESTERN BELTWAY (SR 429)

Livingston Road Ramp over SR 429 (Bridge No. TBD)

Figure 4-21 shows the proposed typical section of the new Livingston Rd. bridge over SR 429. The proposed bridge typical section for this bridge is two (2) 12′-0″ eastbound travel lanes, a 12′-0″ outside shoulder, 8′-0″ inside shoulder, one (1) 15′-0″ westbound travel lane, a 10′-0″ outside shoulder, and 8′-0″ inside shoulder. The wider inside and outside shoulder widths are provided to meet design vehicle turning path requirements. The vertical clearance will meet the minimum vertical clearance of 16′-6″ per FDM Table 260.6.1. A bridge number will be requested during the Design Phase.

The aesthetic treatment for this bridge should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 4-21: Livingston Road Ramp over SR 429 Proposed Typical Section



Indian Creek Boulevard over SR 429 (Bridge No. 924178)

Pier shielding currently exists along SR 429 in the form of concrete median barrier. However, this pier shielding will be modified when SR 429 is widened. Pier protection will be evaluated and installed as necessary along SR429 to protect the bridge when SR 429 is widened. At a minimum, additional pier shielding will be required.

Sinclair Road over SR 429 (Bridge No. 920607)

Pier shielding currently exists along SR 429 in the form of guardrail. However, this shielding will be removed when SR 429 is widened. Pier protection will be evaluated and installed as necessary along SR429 to protect the bridge when SR 429 is widened. At a minimum, additional pier shielding will be required.

SR 429 over Boggy Creek Culvert (Bridge No. 750623)

The existing culvert over Boggy Creek will not require an extension to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and can be extended.

SR 429 over Whittenhorse Creek Culvert (Bridge No. 750637)

The existing culvert over Whittenhorse Creek will need to be extended to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and can be extended.

SR 429 over Golf Cart Path (Bridge No. 75Q016)

The existing culvert over the golf cart path Creek will need to be extended to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and can be extended.

4.6 Comparative Alternatives Evaluation

The subsequent sections compare the alternatives described above in terms of engineering, socioeconomic, environmental, physical, traffic, and safety impacts, as well as cost estimates for each of the Build Alternatives. Table 4-4 through Table 4-9 show the evaluation matrix for SR 429 mainline, Sinclair Road interchange, Livingston Road interchange, US 192 interchange, Western Way interchange, and Seidel Road interchange. Table 4-10 shows the complete evaluation matrix for all the alternatives.

Table 4-4: SR 429 Mainline Evaluation Matrix

SR 429 Mainline	Alternative 1	No-Build
Additional Right of Way Required (acres)	0.0	0
Total Parcels Impacted	0	0
Total Relocations	0	0
Wetland Impacts (acres)	0	0
Conservation Easement Impacts (acres)	0	0
Meets Project Purpose and Need	✓	✗
Meets Future 2050 Traffic Operation Needs	✓	✗
Estimated Construction Cost ($ millions)	$190.77	$0.00
Estimated ROW Cost ($ millions)	$0.00	$0.00

Table 4-5: Sinclair Road Interchange Evaluation Matrix

Sinclair Road Interchange	Alternative 1 Traffic Signal	Alternative 2 Roundabout	Alternative 2A Roundabout	Alternative 2B Roundabout	No-Build
Additional Right of Way Required (acres)	0.00	0.00	0.74	0.00	0.00
Total Parcels Impacted	0	0	7	0	0
Total Relocations	0	0	4	0	0
Wetland Impacts (acres)	0.00	0.00	0.00	1.72	0.00
Conservation Easement Impacts (acres)	0.00	0.00	0.00	0.00	0.00
Meets Project Purpose and Need	✓	✗	✓	✓	✗
Meets Future Traffic Operation Needs	✓	✗	✓	✓	✗
Reduces Vehicle Conflicts	✓	✓	✓	✓	✗
Estimated Construction Cost ($ millions)	$11.93	$13.47	>$13.47*	>>$13.47*	$0.00
Estimated ROW Cost ($ millions)	$0.00	$0.00	**	$0.00	$0.00

*Construction cost expected to exceed $13.47 million.

** Not calculated. Impacts to seven parcels with up to four residential relocations is more impactful than the other alternatives.

Table 4-6: Livingston Road Interchange Evaluation Matrix

Livingston Road Interchange	Alternative 1 Par-Clo	Alternative 2 T-Ramp	No-Build
Additional Right of Way Required (acres)	38.14	15.80	0.00
Total Parcels Impacted	19	18	0
Total Relocations	1	1	0
Primary Wetland Impacts (acres)	7.27	5.19	0.00
Secondary Wetland Impacts (acres)	14.29	6.82	0.00
Conservation Easement Impacts (acres)	9.46	1.91	0.00
Sand Skink Habitat Impacts (acres)	12.67	8.46	0.00
Meets Project Purpose and Need	✓	✓	✗
Meets Future Traffic Operation Needs	✓	✓	✗
Relieves US 192 Traffic	✓	✓	✗
Construction Cost ($ million)	$50.24	$46.32	$0.00
Reduction in US 192 Interchange Construction Cost ($ millions)	-$1.00	-$1.00	$0.00
Estimated ROW Cost ($ millions)	$8.44	$8.89	$0.00

Table 4-7: US 192 Interchange Evaluation Matrix

US 192 Interchange	Build Alternative	No-Build
Additional Right of Way Required (acres)	0.11	0.00
Total Parcels Impacted	7	0
Total Relocations	0	0
Wetland Impacts (acres)	0.00	0.00
Conservation Easement Impacts (acres)	0.00	0.00
Meets Project Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Construction Cost ($ millions)	$21.04	$0.00
Estimated ROW Cost ($ millions)	$1.43	$0.00

Table 4-8: Western Way Interchange Evaluation Matrix

Western Way Interchange	Build Alternative	No-Build
Additional Right of Way Required (acres)	0.09	0.00
Total Parcels Impacted	4	0
Total Relocations	0	0
Wetland Impacts (acres)	0.00	0.00
Conservation Easement Impacts (acres)	0.00	0.00
Meets Project Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Reduces Future Vehicle Conflicts	✓	✗
Construction Cost ($ millions)	$12.71	$0.00
Estimated ROW Cost ($ millions)	$0.50	$0.00

Table 4-9: Seidel Road Interchange Evaluation Matrix

Seidel Road Interchange	Alternative 1 Traffic Signals	Alternative 2 Roundabouts	No-Build
Additional Right of Way Required (acres)	0.00	0.59	0.00
Total Parcels Impacted	0	5	0
Total Relocations	0	0	0
Wetland Impacts (acres)	0.00	0.00	0.00
Conservation Easement Impacts (acres)	0.00	0.00	0.00
Meets Project Purpose and Need	✓	✓	✗
Meets Future Traffic Operation Needs	✓	✓	✗
Reduces Future Vehicle Conflicts	✓	✓	✗
Construction Cost ($ millions)	$8.77	$9.75	$0.00
Estimated ROW Cost ($ millions)	$0.25	$1.16	$0.00

Table 4-10: Overall SR 429 Evaluation Matrix

Evaluation Parameters	Mainline SR 429 Widening					No-Build Alternative
	Livingston Road ParClo Ramp Interchange Sinclair Road Signals/ Seidel Road Signals	Livingston Road ParClo Ramp Interchange Sinclair Road Roundabout/ Seidel Road Signals	Livingston Road ParClo Ramp Interchange Sinclair Road Signals/ Seidel Road Roundabout	Livingston Road ParClo Ramp Interchange Sinclair Road Roundabout/ Seidel Road Roundabout	Livingston Road T-Ramp Interchange Sinclair Road Signals/ Seidel Road Signals	
Purpose and Need						
Meets Purpose and Need	✓	✓	✓	✓	✓	✗
Traffic Effectiveness						
Meets Future Traffic Operation Needs	✓	✓	✓	✓	✓	✗
Improves Regional Connectivity	✓	✓	✓	✓	✓	✗
Improves Travel Times & Reliability	✓	✓	✓	✓	✓	✗
Improves Safety by Reducing Congestion	✓	✓	✓	✓	✓	✗
Reduces Vehicle Conflicts at Intersections	✓	✓	✓	✓	✓	✗
Improves Emergency Response Time and Evacuation	✓	✓	✓	✓	✓	✗
Potential Right of Way Impacts						
Right of Way Required (acres)	38.51	38.51	39.10	39.10	16.01	0.00
Number of Parcels Impacted	31	31	36	36	29	0
Number of Potential Residential Relocations	1	1	1	1	1	0
Pedestrian and Bicycle Accommodations						
Improves Pedestrian Facilities	✓	✓	✓	✓	✓	✗
Improves Bicycle Facilities	✓	✓	✓	✓	✓	✗
Natural/Cultural/Physical Environmental Effects						
Known Previously Recorded National Register Eligible Archaeological Sites Effected	0	0	0	0	0	0
Known Previously Recorded National Register Eligible Historic Sites Effected	0	0	0	0	0	0
Potential Noise Impacts	TBD	TBD	TBD	TBD	TBD	0
Primary Wetland/Surface Water Impacts (acres)	7.27	7.27	7.27	7.27	5.19	0.00
Secondary Wetland/Surface Water Impacts (acres)	14.29	14.29	14.29	14.29	6.82	0.00
Floodplain Impacts (acres)	24.35	24.38	24.35	24.38	21.63	0.00

Evaluation Parameters	Mainline SR 429 Widening					No-Build Alternative
	Livingston Road ParClo Ramp Interchange Sinclair Road Signals/ Seidel Road Signals	Livingston Road ParClo Ramp Interchange Sinclair Road Roundabout/ Seidel Road Signals	Livingston Road ParClo Ramp Interchange Sinclair Road Signals/ Seidel Road Roundabout	Livingston Road ParClo Ramp Interchange Sinclair Road Roundabout/ Seidel Road Roundabout	Livingston Road T-Ramp Interchange Sinclair Road Signals/ Seidel Road Signals	
Protected Species and Habitat Impacts	Low	Low	Low	Low	Low	N/A
Sand Skink Habitat Impacts (acres)	12.67	12.67	12.67	12.67	8.46	0.00
Conservation Easement Impacts (acres)	9.46	9.46	9.46	9.46	1.91	0.00
Potential Utility Impacts	Yes	Yes	Yes	Yes	Yes	No
Potential Contamination Sites (medium or high)	1	1	1	1	1	0
Estimates in 2022 Present Day Costs ($ millions)						
Construction	$295.61	$296.91	$296.58	$297.88	$291.63	$0.00
Right of Way	$13.69	$14.59	$14.59	$13.69	$12.81	$0.00
Final Design (10%)	$29.56	$29.69	$29.66	$29.79	$29.16	$0.00
Construction Engineering and Inspection (10%)	$29.56	$29.69	$29.66	$29.79	$29.16	$0.00
Wetland Mitigation	$1.19	$1.19	$1.19	$1.19	$0.74	$0.00
Sand Skink Habitat Mitigation	$0.38	$0.38	$0.38	$0.38	$0.25	$0.00
Total Costs ($ millions)	$369.99	$372.44	$372.06	$372.72	$363.75	$0.00

4.6.1 Social and Economic Impacts

A sociocultural effects evaluation was prepared as a separate document to support this section's assertions. A demographic analysis of the corridor indicated the study corridor has a lower percentage of minority residents and a lower percentage of low-income residents as compared to the rest of Orange and Osceola Counties. The study corridor also has a lower percentage of populations with limited English proficiency (LEP) as compared to Orange and Osceola Counties with the exception of one Census block group (408.06) in Osceola County with an LEP percentage at or above the County average. The corridor also has a higher elderly population percentage as compared to the County averages.

Because the proposed widening of the SR 429 occurs within the existing ROW, no social or economic impacts to the community are anticipated from the mainline widening. SR 429 already separates the corridor's existing neighborhoods, and no changes in existing connections between neighborhoods is anticipated.

The proposed new interchange at Livingston Road will convert approximately 15.8 acres of land currently designated as timberland to a transportation use, removing this land from the Osceola County tax base. The change in land use could also potentially increase the development potential of the remaining acreage. The new interchange offers a new connection for the community to SR 429 and is also anticipated to draw traffic currently accessing SR 429 from Sinclair Road and from US 192. This change in traffic patterns is expected to increase traffic on roadway segments that connect to the Livingston Road interchange, including Formosa Gardens Boulevard, Funie Steed Road, and Livingston Road.

4.6.2 Right of Way Impacts and Relocation Potential

The ROW impacts for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from 38.51 to 39.10 acres. The number of parcels impacted ranged from 31 to 36. There are nine residential properties impacted by the improvements.

The alternative with the T-Ramp interchange at Livingston Road requires 16.01 acres of ROW, with 29 parcels impacted. The same nine residential properties are impacted by this alternative's improvements.

Livingston Road Interchange

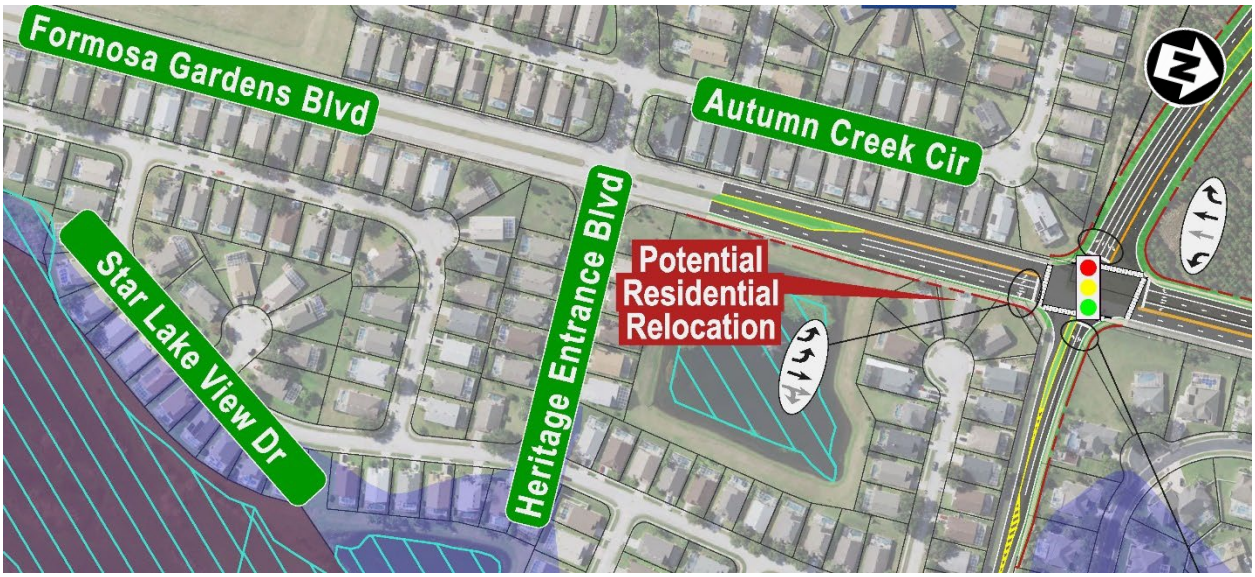
At the Livingston Road interchange, Alternative 1 improvements would require approximately 38.14 acres of additional ROW, impacting a total of 19 parcels. On the east side of the interchange, there are 14 properties impacted with nine being residential properties. There is one potential residential relocation. On the west side of the interchange, there are five

properties impacted, none of which require relocation. There are no residential properties impacted on the west side.

At the Livingston Road interchange, Alternative 2 improvements would require approximately 15.80 acres of additional ROW, impacting a total of 18 parcels. On the east side of the interchange, there are 14 properties impacted with nine being residential properties. There is one potential residential relocation. On the west side of the interchange, there are four properties impacted, none of which require relocation. There are no residential properties impacted on the west side.

Both alternatives for the Livingston Road interchange will potentially require one residential relocation. It is the same property for both alternatives. The potential relocation is due to improvements at Livingston Road and Formosa Gardens Boulevard for the Livingston Road interchange, as shown in Figure 4-22. The addition of a 2nd northbound left turn lane shifts the northbound lanes of Formosa Gardens to the east. The widening impacts four residential properties east of Formosa Gardens Boulevard and one residential property on the west side of Formosa Gardens Boulevard. The property at 7966 Golden Pond Court may require relocation due to impacts to the property.

Figure 4-22: Potential Residential Relocation



US 192 Interchange

At the US 192 interchange, the Build Alternative improvements would require approximately 0.11 acres of additional ROW, impacting a total of seven parcels. On the east side of the interchange, there are six commercial properties impacted, none of which require relocation. On

the west side of the interchange, there is one undeveloped property impacted, which does not require relocation.

Western Way Interchange

At the Western Way interchange, the Build Alternative improvements would require approximately 0.09 acres of additional ROW, impacting a total of four parcels. On the east side of the interchange, all four impacted parcels are undeveloped properties, none of which require relocation.

Seidel Road Interchange

At the Seidel Road interchange, the Alternative 1 improvements do not require any additional ROW. However, the ROW on both sides of Seidel Road will be converted from non-limited access ROW to limited access ROW between SR 429 and Avalon Road. Two parcels will be impacted by this conversion of ROW.

The Alternative 2 improvements would require approximately 0.59 acres of additional ROW. This would impact five parcels. On the east side of the interchange, there are three undeveloped properties impacted, none of which require relocation. On the west side of the interchange, there is one undeveloped parcel in the southwest quadrant impacted, which does not require relocation. There is one undeveloped parcel in the northwest quadrant impacted. However, a new apartment complex, Elysian Apartments, is planned to be constructed in this undeveloped parcel. The preliminary site plan indicates the ROW impacts would impact 13 parking spaces as well as circulation of the parking lot for the complex. Additionally, the existing non-limited access ROW along both sides of Seidel Road between SR 429 and Avalon Road would need to be converted to limited access ROW.

4.6.3 Environmental Impacts

This section summarizes the results of the natural resources analysis for the project area. The No-Build Alternative would have no impacts to natural resources.

Wetlands

For the Build Alternatives, potential direct and secondary impacts to wetlands and surface waters were assessed. Direct impacts included the area of wetlands within the proposed ROW. Secondary impacts included wetland areas directly adjacent to the direct impacts, extending outside the proposed ROW up to 150 feet.

The four alternatives with the Par-Clo interchange at Livingston Road would have 7.27 acres of direct wetland impacts and 14.29 acres of secondary impacts.

The alternative with the T-Ramp interchange at Livingston Road would have 5.19 acres of direct wetland impacts and 6.82 acres of secondary impacts.

Conservation Easements

Conservation easements are located within the project study area, west of SR 429 at the proposed Livingston Road interchange. Impacts to these conservation easements are proposed in all of the alternatives.

The four alternatives with the Par-Clo interchange at Livingston Road would have 9.46 acres of conservation easement impacts.

The alternative with the T-Ramp interchange at Livingston Road would have 1.91 acres of conservation easement impacts.

Floodplains

Floodplain impacts are anticipated for all the Build alternatives.

The four alternatives with the Par-Clo interchange at Livingston Road would have between 24.35 and 24.38 acres of floodplain impacts.

The alternative with the T-Ramp interchange at Livingston Road would have 21.63 acres of floodplain impacts.

Protected Species and Habitat

The Build Alternatives were evaluated for impacts to protected species and habitats. All of the Build Alternatives are anticipated to have low impacts. The impacts to sand skink habitat were calculated for the Build Alternatives.

The four alternatives with the Par-Clo interchange at Livingston Road would have 12.67 acres of impacts to sand skink habitat.

The alternative with the T-Ramp interchange at Livingston Road would have 8.46 acres of impacts to sand skink habitat.

Archaeological and Historic Sites

The Build Alternatives were evaluated for impacts to previously recorded National Register Eligible Archaeological and Historic sites.

All Build Alternatives will have no impacts to previously recorded National Register Eligible Archaeological and Historic sites.

4.6.4 Physical Impacts

This section summarizes the results of the physical resources analysis for the project area. The No-Build Alternative would have no impacts to physical resources.

Noise

Noise levels were predicted at 970 receptor points, representing 3,493 residences (Noise Abatement Criteria, NAC, Category B), and 203 special use receptor points (NAC Categories C and E). Noise levels at 1,697 residences and 74 special use sites, are predicted to approach or exceed the NAC for the Preferred Alternative. No noise sensitive sites are expected to experience a substantial increase (15 dB(A)) in traffic noise compared to existing conditions.

Air Quality

An air quality screening has been conducted for the build alternative. Based on the results from the screening model, the highest project-related CO one- and eight-hour levels are not predicted to meet or exceed the one- or eight-hour National Ambient Air Quality Standards for this pollutant with either the Build or No Build Alternatives. As such, the project "passes" the screening model.

Contamination Sites

The Build Alternatives were evaluated for potential impacts to medium or high contamination sites. The initial high-level evaluation of the corridor identified one potential medium contamination site. This was reflected in the evaluation matrix shown in Table 4-10. A more detailed analysis indicated there are six potential contamination sites (medium) located along the corridor associated with the Build Alternatives. There are two potential contamination sites (medium) associated with potential drainage sites. The sites included previous agricultural land use, a former landfill, a former railroad and an ethylene dibromide (EDB) groundwater contamination zone. Additional information can be found in the Contamination Screening Evaluation Report.

Railroad

There are no railroads within the project area, so the Build Alternative will have no impacts.

4.6.5 Drainage Impacts

With the exception of the new Livingston Road Interchange and the Formosa Garden Boulevard improvements, it is anticipated that treatment and attenuation of the new impervious pavement can be provided within existing stormwater management facilities.

For the Livingston Road interchange, Alternative 1 (Partial Cloverleaf) will have a greater impact to existing drainage features, floodplains, and wetlands/conservation area than Alternative 2 (T-Ramp). Existing drainage feature impacts include the northeast corner of the existing stormwater management pond (SMA #3) located within the Indian Creek at Fantasy Heights subdivision. In addition to impacting the pond itself, the outfall swale which services the Indian Creek at Fantasy Heights subdivision's stormwater management facilities SMA #2 and SMA #3 will be impacted as well. The partial cloverleaf ramp will also impact an existing floodplain compensation site located north of Indian Creek at Fantasy Heights subdivision. It is estimated the proposed ramp will have approximately 2.50 ac-ft of encroachment into the Boggy Creek Swamp floodplain. A benefit of this alternative is that stormwater management facilities can be placed within the infield of the ramp, thus providing treatment for the new impervious area with little drainage infrastructure.

The Alternative 2 (T-Ramp) interchange does not impact offsite drainage facilities to the extent as Alternative 1 (Partial Cloverleaf). Only the existing outfall swale that services SMA #2 and SMA #3 would need to be realigned or enclosed in a closed storm sewer system to the outfall of Boggy Creek Swamp. This alternative does not significantly impact the existing floodplain compensation site, nor does it encroach into the floodplain associated with Boggy Creek Swamp. This configuration does require more drainage infrastructure to convey runoff from the roadway into a stormwater management facility. Three new pond site alternatives are being evaluated for the interchange. Two are located west of SR 429 and one is located adjacent to the interchange within the remnant of the vacant parcel east of SR 429.

Formosa Garden Boulevard was originally permitted in 1991 as part of the Formosa Gardens subdivision development (ERP No. 49-00507-S). The existing roadway discharges into a pond within the subdivision where the runoff is treated and attenuated. The proposed widening of Formosa Garden Boulevard will require the new impervious area to be treated and attenuated. As part of the drainage analysis three pond alternatives were identified for these improvements. One of the alternatives is located within the vacant parcel associated with the Livingston Road Interchange, located in the northwest quadrant of the Livingston Road and Formosa Gardens Boulevard intersection. The other two alternatives are existing off-site ponds.

4.6.6 Traffic and Safety

Traffic and safety criteria for the evaluation matrix were based on qualitative measurements that focused on driver expectations/vehicle movements, conflict points, and bicycle/pedestrian safety, where applicable. Additional information is provided in the Systems Interchange Justification Report, under a separate cover.

4.6.7 Stakeholder Input

Stakeholder input included 47 questions/comments submitted in advance of the Alternatives Public Information Meeting held in February 2022. Of these, 33 were questions received about the project related to noise, property value concerns, ROW impacts, and environmental impacts. Twelve (12) comments were received in opposition to the project, citing concerns over air and noise pollution, quality of life impacts, property value concerns, and environmental impacts. Two (2) comments were received in support of the project. A complete record of all public comments, questions, and responses can be found in the Comments and Coordination Report prepared under a separate cover.

4.6.8 Cost Estimates

The construction costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from $295.61 to $297.88 million. The cost estimate for the alternative with the T-Ramp interchange at Livingston Road is $291.63 million.

ROW costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from $13.69 to $14.59 million. The ROW cost for the alternative with the T-Ramp interchange at Livingston Road is $12.81 million.

Final Design (estimated at 10% of construction costs) costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from $29.56 to $29.79 million. The Final Design cost for the alternative with the T-Ramp interchange at Livingston Road is $29.16 million.

Construction Engineering and Inspection (estimated at 10% of construction costs) for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from $29.56 to $29.79 million. The Construction Engineering and Inspection cost for the alternative with the T-Ramp interchange at Livingston Road is $29.16 million.

The wetland mitigation costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road are $1.19 million. The wetland mitigation cost for the alternative with the T-Ramp interchange at Livingston Road is $0.74 million.

The sand skink habitat mitigation costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road are $0.38 million. The wetland mitigation cost for the alternative with the T-Ramp interchange at Livingston Road is $0.25 million.

The total costs for the four alternatives with the Partial Cloverleaf interchange at Livingston Road ranged from $369.99 to $372.44 million. The total cost estimate for the alternative with the T-Ramp interchange at Livingston Road is $363.75 million.

For construction cost estimates, after selection of the Preferred Alternative the LRE was revised to reflect a change in the Structural Course from Traffic E for SR 429 mainline to Traffic Level E. This along with increases in unit costs from the previous LREs (done in December 2021) resulted in a higher construction cost for the Preferred Alternative as compared to the construction costs for the alternatives evaluated in Table 4-10.

4.7 Selection of the Preferred Alternative

Each of the alternatives have distinct advantages and disadvantages. Below is a summary of the Preferred Alternative based on the engineering and environmental analysis results. The Concept Plans for the Preferred Alternative is provided in Appendix C.

4.7.1 SR 429 Mainline Widening

Since widening to eight lanes meets the Purpose and Need and future year 2050 traffic operational needs, requires no additional ROW, and has minimal environmental impacts, it is recommended as the Preferred Alternative.

4.7.2 Sinclair Road Interchange Improvements

Alternative 1 (Traffic Signal) is recommended as the Preferred Alternative for this location. Alternative 1 meets the Purpose and Need as well as the future year 2050 traffic demands with minimal impacts and a lower construction cost. Alternative 2 does not meet the future traffic demands without the additional southbound bypass lane. The two additional alternatives, 2A and 2B, that included the additional southbound bypass lane created ROW impacts to a residential community, or wetland impacts along with a higher construction cost.

4.7.3 Canary Island Drive Overpass

The Value Engineering (VE) Study recommended to retain the northbound SR 429 profile. They evaluated the same alternatives as described in Section 4.5.2. The VE study recommended Alternative 4, jacking the bridge and constructing a detour road for traffic during construction. However, the decision was made to select Alternative 5, replacement of the Canary Island Drive bridge, as the recommended alternative for the overall Preferred Alternative. This alternative is cheaper than lowering the northbound SR 429 profile. While more expensive than jacking the bridge, this alternative allows the existing bridge to remain operational while constructing the replacement bridge. A detour for the existing traffic using the bridge would not be required.

4.7.4 Proposed Livingston Road Interchange

Both Alternatives 1 and 2 meet the project Purpose and Need and the future traffic demands. Alternative 2 has fewer acres of ROW impacts than Alternative 1 as well as fewer acres of wetlands, sand skink habitat, and conservation easements impacted. Alternative 2 also has lower

construction costs and overall costs than Alternative 1. Therefore, Alternative 2 is recommended as the Preferred Alternative.

A revision to Alternative 2 was made to eliminate the potential residential relocation associated with the interchange improvements. The width of the widened portion of Formosa Gardens Boulevard just south of Livingston Road was reduced. This was accomplished by reducing the width of the through lanes to 11 feet. In addition, the width of the existing 10-foot shared use path on the east side of Formosa Gardens Boulevard was reduced to 8 feet for a length of approximately 350 feet.

4.7.5 US 192 Interchange Improvements

The Build Alternative meets the project Purpose and Need as well as the future traffic demands with minimal environmental impacts. Therefore, it is recommended as the Preferred Alternative.

A TSM&O project is proposed at the SR 429 southbound exit ramp to US 192 for implementation in advance of the ultimate Preferred Alternative. The traffic analysis indicates this improvement is needed today due to the high p.m. peak hour volumes exiting SR 429 to travel both eastbound and westbound on US 192. The recommended option, Option 2, would reconfigure the ramp terminal intersection with US 192 to include three right turn lanes and three left turn lanes. In addition, it would route the southbound US 192 off-ramp traffic through the existing southbound cash toll plaza. AET conversion of SR 429 is planned for mid-2023. At that point, all mainline traffic will use the existing mainline electronic Toll Gantries. The on ramp between the southbound Toll Plaza and southbound SR 429 will be removed since cash will no longer be collected. A two-lane ramp would be constructed between the toll plaza and the widened southbound off-ramp. SB SR 429 traffic heading to US 192 will exit at the existing Toll Plaza. They will utilize the existing cash lanes which will be converted to SunPass and Toll by Plate. Traffic will continue on new two-lane ramp between Toll Plaza and US 192.

4.7.6 Western Way Interchange Improvements

The Build Alternative meets the project Purpose and Need as well as the future traffic demands with minimal environmental impacts. Therefore, it is recommended as the Preferred Alternative.

4.7.7 Seidel Road Interchange Improvements

Alternative 1 is recommended as the Preferred Alternative since it meets the 2050 traffic demands with no ROW impacts, no roadway construction along Seidel Road, no decrease in safety and lower construction cost.

4.7.8 Preferred Alternative Evaluation Matrix

Table 4-11 provides the evaluation matrix for the No-Build Alternative and the Preferred Alternative. This evaluation matrix will be provided at the Public Hearing.

Table 4-11: Preferred Alternative Evaluation Matrix

Evaluation Parameters	Preferred Alternative	No-Build Alternative
Purpose and Need		
Meets Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Improves Regional Connectivity	✓	✗
Improves Travel Times & Reliability	✓	✗
Improves Safety by Reducing Congestion	✓	✗
Reduces Vehicle Conflicts at Intersections	✓	✗
Improves Emergency Response Time and Evacuation	✓	✗
Right of Way Required (acres)	15.88	0.00
Number of Parcels Impacted	29	0
Number of Potential Residential Relocations	0	0
Improves Pedestrian Facilities	✓	✗
Improves Bicycle Facilities	✓	✗
Natural/Cultural/Physical Environmental Effects		
Known Previously Recorded National Register Eligible Archaeological Sites Effected	0	0
Known Previously Recorded National Register Eligible Historic Sites Effected	0	0
Potential Noise Impacts	TBD	0
Wetland (acres)	5.19	0.00
Surface Water Impacts (acres)	6.73	0.00
Floodplain Impacts (acre-ft)	3.99	0.00
Protected Species and Habitat Impacts	Low	N/A
Sand Skink Habitat Impacts (acres)	8.46	0.00
Conservation Easement Impacts (acres)	1.91	0.00
Potential Utility Impacts	Yes	No
Potential Contamination Sites (medium/high)	8/0	0/0

Estimates in 2022 Present Day Costs ($ millions)		
Construction	$321.70	$0.00
Right of way	$11.21	$0.00
Final Design (10%)	$32.17	$0.00
Construction Engineering and Inspection (10%)	$32.17	$0.00
Wetland Mitigation	$0.74	$0.00
Sand Skink Habitat Mitigation	$0.25	$0.00
Total Costs ($ millions)	$398.24	$0.00

5 Project Coordination & Public Involvement

5.1 Agency Coordination

5.1.1 Efficient Transportation Decision Making

The Efficient Transportation Decision Making (ETDM) process is the FDOT's procedure for reviewing qualifying transportation projects to consider potential environmental effects in the Planning phase. This process provides stakeholders the opportunity for early input, involvement, and coordination, provides for the early identification of potential project effects, and informs the development of scopes for projects advancing to the PD&E phase.

Stakeholders involved in the ETDM process generally include Transportation Planning Organizations (TPOs), county and municipal governments, federal and state agencies, Native American tribes, and the public. To facilitate intergovernmental interaction, each of the seven geographic FDOT Districts has an Environmental Technical Advisory Team (ETAT). ETAT members and the public have the opportunity to provide input to the FDOT regarding a project's potential effects on the natural, physical, cultural, and community resources throughout the planning phase of project delivery. These comments help to determine the feasibility of a proposed project, focus the issues to be addressed during the PD&E phase, allow for early identification of potential avoidance, minimization, and mitigation opportunities, and promote efficiency and consistency during project development.

For this study, ETAT members included:

- U.S. Environmental Protection Agency;
- South Florida Water Management District (SFWMD);
- Florida Department of State;
- U.S. Army Corps of Engineers;
- National Park Service;
- Seminole Tribe of Florida;
- Florida Department of Agriculture and Consumer Services;
- FDOT Office of Environmental Management;
- Saint Johns River Water Management District (SJRWMD);
- Southwest Florida Water Management District;
- Florida Department of Environmental Protection;
- Florida Fish and Wildlife Conservation Commission;
- U.S. Coast Guard;
- National Marine Fisheries Service;
- Natural Resources Conservation Service;
- US Fish and Wildlife Service;

- Florida Department of Economic Opportunity; and
- US Forest Service.

The ETDM Summary Report is provided in Appendix D

5.2 Public Involvement

Two public meetings will be conducted for this study: an Alternatives Public Information Meeting and a Public Hearing. The following sections provide summaries of these meetings. The Comments and Coordination Report, available under a separate cover, contains a more detailed summary of each meeting and includes the public comments from each meeting.

5.2.1 Alternatives Public Information Meeting

A Hybrid Alternatives Public Information Meeting was held in February 2022 and was composed of a Virtual Meeting and an In-Person Meeting. The virtual component was held on Tuesday, February 23, 2022, from 5:30 p.m. until 6:00 p.m., while the in-person component was held on Thursday, February 24, from 5:30 p.m. until 7:30 p.m. at the AdventHealth Nicholson Center.

Public meeting invitation letters were sent by e-mail to 47 elected officials and 77 appointed officials, and 17 interested parties/organizations. Letters were mailed to 1,918 property owners and tenants adjacent to the study area. The Alternatives Public Information Meeting was advertised in the Orlando Sentinel on Sunday, February 6, 2022, and the El Sentinel Spanish newspaper on Saturday, February 5, 2022. An advertisement was published in The Florida Administrative Register (FAR) on February 8, 2022. FTE distributed a press release on February 10, 2022, to local media, and notices were posted on the project website at www.SR429I-4toSeidel.com and the FDOT public notices website.

The public was invited to attend the Virtual Public Information Meeting at 5:30 p.m. Attendees had the opportunity to listen to the FTE project manager introduce the project and team members before watching the Project Video Presentation which described project and proposed alternatives. A "Question" feature was open for the duration of the meeting which allowed the viewers to write questions in to be submitted to the public record. At the conclusion of the meeting, the consultant project manager answered questions submitted by participants during registration.

A total of 53 people signed into the virtual meeting (16 FTE and consultant employees), and 45 questions and comments were received.

The public was invited to attend the In-Person Alternatives Public Information Meeting at any time between 5:30 p.m. and 7:30 p.m. Attendees had an opportunity to view a continuous

looping presentation that provided a general overview of the project. Attendees also had an opportunity to view several project displays, including concepts, information about the study process, and information about current conditions and future traffic projections. Interactive Smart Boards also were used to allow community members to focus on a specific area of the project, ask questions and provide feedback. A Turnpike Traffic Noise video and an FDOT ROW video were also available for viewing. Members of the project team, including engineers and experts on traffic and noise, were available to discuss the project with attendees and answer questions.

A total of 49 people attended the In-Person Alternatives Public Information Meeting (19 FTE and consultant employees), and two questions and comments were received. More information on the Alternatives Public Information Meeting is provided in the Comments and Coordination Report, under a separate cover.

5.2.2 Public Hearing

A Hybrid Public Hearing was held in December 2022 and was composed of a Virtual Meeting and an In-Person Meeting. The virtual component was held on Tuesday, December 6, 2022, from 5:30 p.m. until 6:00 p.m., while the in-person component was held on Wednesday, December 7, from 5:30 p.m. until 7:30 p.m. at the AdventHealth Nicholson Center.

Public meeting invitation letters were sent by e-mail to 47 elected officials and 76 appointed officials, and 71 interested parties/organizations. Letters were mailed to 1,955 property owners and tenants adjacent to the study area. The Public Hearing was advertised twice in the Orlando Sentinel on Sunday, November 20, 2022 and Sunday, November 27, 2022. The Public Hearing was advertised in the El Sentinel Spanish newspaper on Saturday, November 19, 2022 and Saturday, November 26, 2022. An advertisement was published in The Florida Administrative Register (FAR) on Tuesday, November 22, 2022. FTE distributed a press release on November 28, 2022, to local media, and notices were posted on the project website at www.SR429I-4toSeidel.com and the FDOT public notices website.

The public was invited to attend the Virtual Public Hearing at 5:30 p.m. The FTE project manager opened the public hearing, and then introduced the project and team members before playing the Project Video Presentation which described the project and proposed improvements. Following the Project Video Presentation, the FTE project manager explained how to provide public comments, and then opened the verbal comment period. A total of 58 people signed into the virtual hearing (17 FTE and consultant employees).

The public was invited to attend the In-Person Public Hearing's informal open house at 5:30 p.m. with the formal hearing presentation starting at 6:00 p.m. During the open house portion,

attendees had an opportunity to view project displays, including conceptual designs of the proposed improvements, information about the study process, and information about current conditions and future traffic projections. Interactive Smart Boards also were used to allow community members to focus on a specific area of the project, ask questions and provide feedback. A Turnpike Traffic Noise video and an FDOT ROW video were also available for viewing. Members of the project team, including engineers and experts on traffic, drainage, noise, and environmental resources, were available to discuss the project with attendees and answer questions. A total of 32 people attended the In-Person Alternatives Public Hearing (19 FTE and consultant employees).

One hundred and sixty (160) comments were received by the end of the Public Hearing comment period, which ended December 21, 2022. Of these comments, 87 comments were received as part of a petition, 25 were submitted by email, 20 were submitted through meeting registration, 4 were submitted during the virtual Public Hearing presentation via the chat box, 13 were submitted during the verbal comment period of the virtual (12) or in-person (1) meeting, 6 were submitted via the website, 4 comments were made by phone, and 1 written comment was submitted using the comment form at the in-person meeting. Public comments and questions received were regarding noise, traffic, property values, and right-of-way impacts. More information on the Public Hearing is provided in the Comments and Coordination Report, under a separate cover.

5.2.3 Stakeholder Meeting

Throughout the duration of this PD&E Study, meetings were held with stakeholders that had interest in the project. At the meetings, stakeholders were updated on project developments and were asked to share information that could assist the project team in the development of the alternatives. A list of the meetings as of May 19, 2022, is shown below in Table 5-1.

Table 5-1: Stakeholder Meetings

Stakeholder	Meeting Description	Date(s)
FDOT, District 5	Coordination Meeting	3/11/2021 9/30/2021 1/28/2022 3/7/2022
CFX	Coordination Meeting	3/30/2021
Osceola County	Coordination Meeting	4/20/2021 3/07/2022
Orange County	Coordination Meeting	3/11/2022
Central Florida Tourism Oversight District	Coordination Meeting	5/19/2021 3/3/2022
Mattamy Homes	Coordination Meeting	8/18/2021
Walt Disney Company	Coordination Meeting	8/18/2021 3/3/2022
Reunion Community Development District, East and West	Coordination Meeting	3/10/2022
Osceola County Schools	Coordination Meeting	3/24/2022
City of Bay Lake	Coordination Meeting	3/03/2022
Florida Department of Environmental Protection (FDEP)	Pre-Application Meeting	4/11/2022

6 Design Features and Preferred Alternatives

6.1 Engineering Details of the Preferred Alternative

As discussed at the end of Chapter 4, the Preferred Alternative consists of an eight-lane widening of SR 429, Sinclair Road interchange – Alternative 1, Canary Island Dr bridge – Alternative 5, Livingston Road interchange – Alternative 2, US 192 interchange – Build Alternative, Western Way interchange – Build Alternative, and Seidel Road interchange – Alternative 1, as described in the subsequent sections.

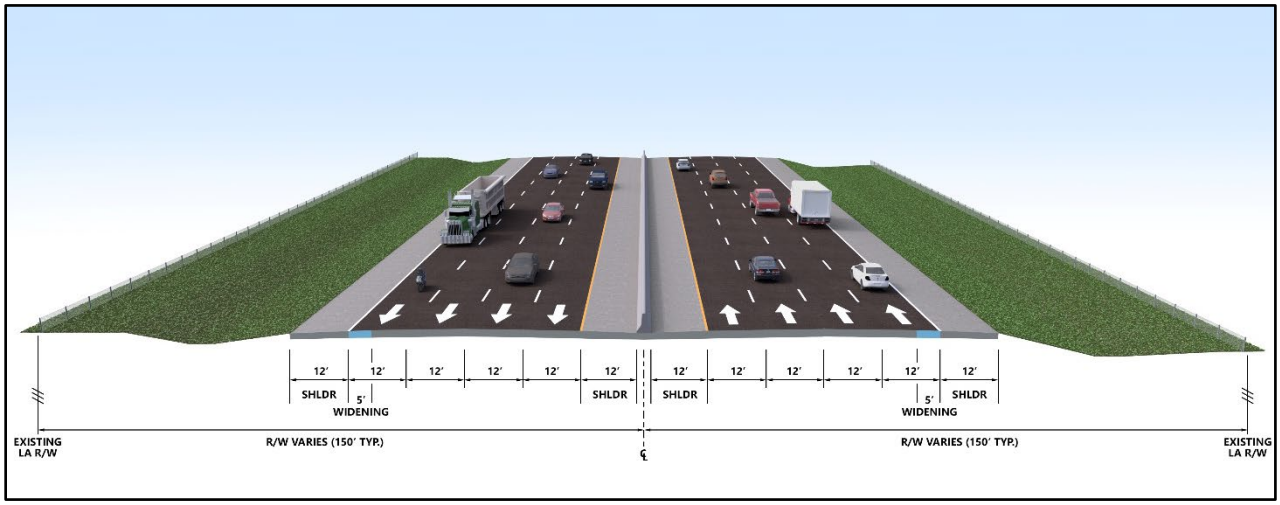
6.1.1 Typical Sections

The Preferred Alternative for improving the SR 429 mainline widens SR 429 from four lanes (two lanes in each direction) to eight lanes (four lanes in each direction). The proposed mainline typical section is shown in Figure 6-1. Both inside and outside widening will be required. Reconstruction of the inside 13 feet of existing pavement will allow the roadway crown to be located at the center of the four-lane pavement. Widening to the inside will be 11 feet for the roadway and also include a 26-foot median with two 12-foot paved shoulders and a two-foot concrete barrier wall. The outside of the roadway will be widened five feet. The mainline widening occurs entirely within the existing ROW.

The median width varies in two locations through curves where a wider median is needed to meet sight distance requirements. This will result in a variable median width on one side of the median barrier wall through the curves. The first location is between Sinclair Road and Sand Hill Road in the southbound direction. The maximum paved width between the barrier wall and the southbound edge of travel lane is 23.5 feet. The second location is near the Canary Island Drive overpass in the northbound direction. The maximum paved width between the barrier wall and the northbound edge of travel lane is 29.5 feet.

In addition, the curve through the Livingston Road interchange was flattened to accommodate the required sight distance, but the median width will remain a consistent 26 feet. The revised mainline alignment remains within the existing ROW.

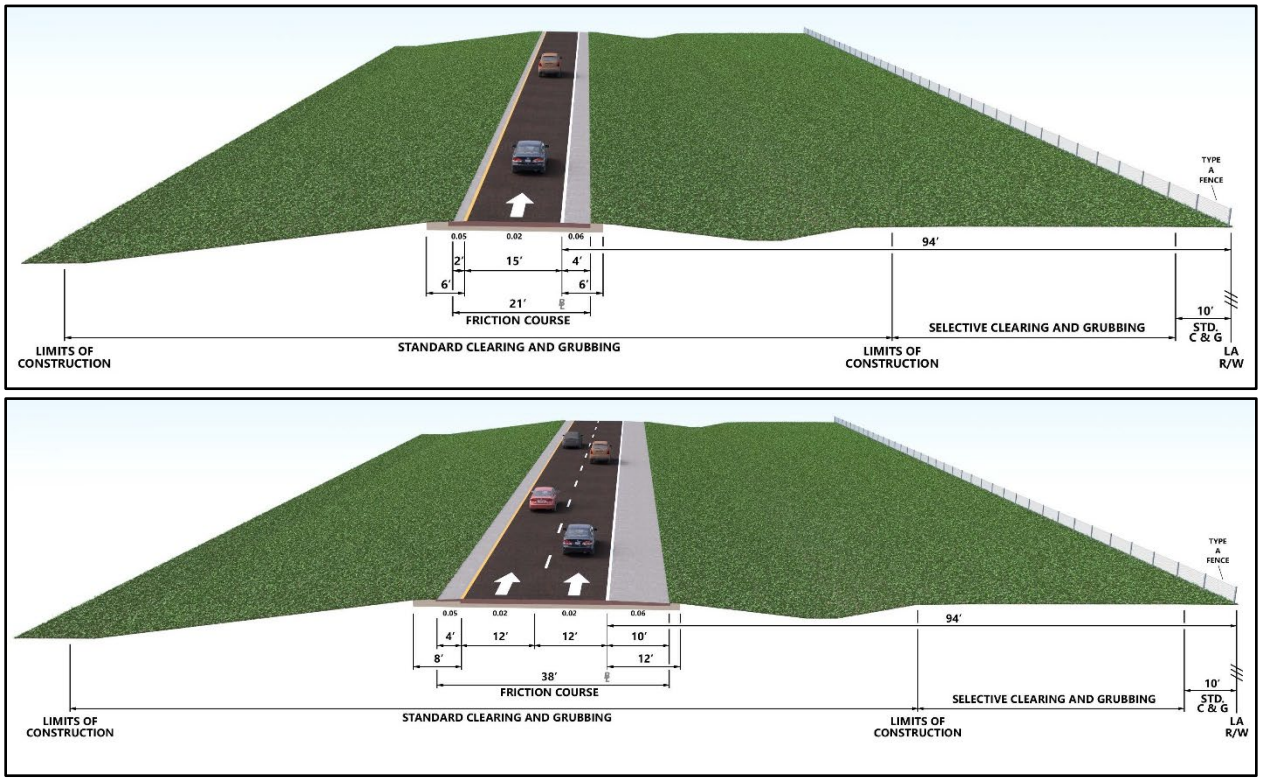
Figure 6-1: Proposed SR 429 Mainline Typical Section



Ramp Typical Sections

Proposed single-lane and double-lane ramp typical sections are shown in Figure 6-2.

Figure 6-2: Proposed SR 429 Ramp Typical Sections



6.1.2 Bridge and Structures

The following describes the proposed bridge structures and provides typical sections for each bridge for the Preferred Alternative.

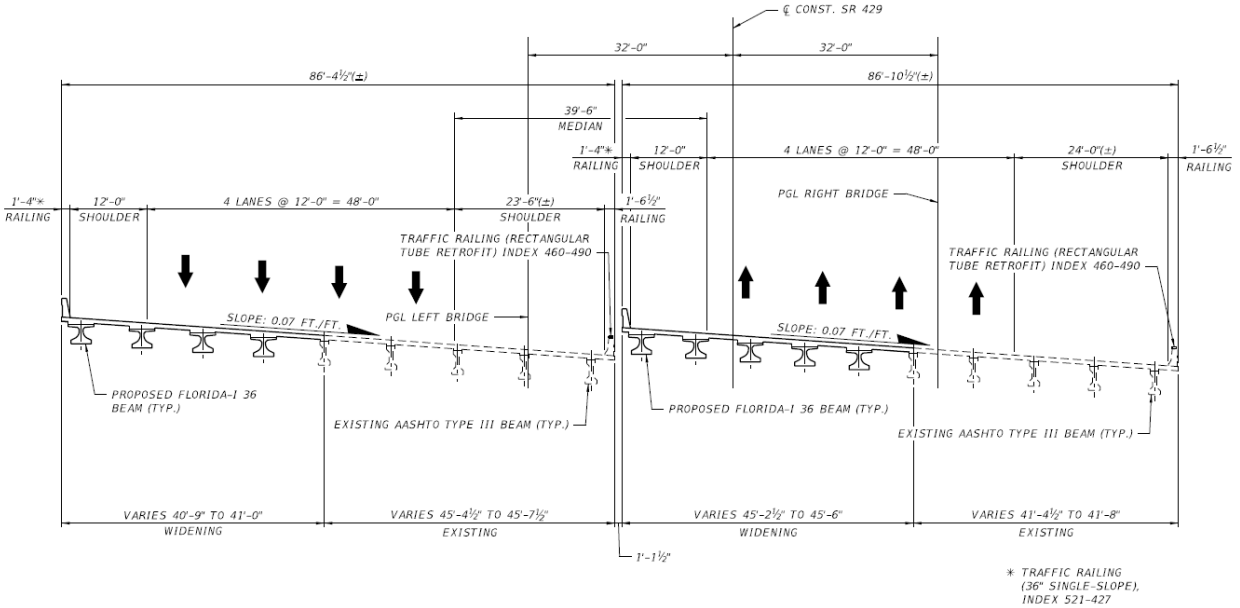
SR 429 over Sand Hill Road (Bridge No. 920603 and 920604)

As shown in Figure 6-3, the proposed improvements for Bridge No. 920603 are to widen the existing bridge to the outside. Improvements require partial removal of the existing bridge (saw-cut at exterior beam) and new inside traffic trailing doweled into the bridge deck to meet barrier setback criteria. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes, a 12′-0″ outside shoulder, and a 23′-6″ (striped out to 12′-0″) inside shoulder for this southbound bridge. The 23′-6″ inside shoulder is provided to meet sight distance requirements. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-3, the proposed improvements for Bridge No. 930604 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes, a 12′-0″ inside shoulder, and an outside shoulder of 24′-0″ (Striped out to 12′-0″) width along this northbound bridge. The wider outside shoulder is to achieve the required sight distance on the mainline curve. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920604 and Bridge No. 920603 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-3: SR 429 over Sand Hill Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 920603 & 920604
WESTERN BELTWAY (SR 429) OVER SAND HILL ROAD

SR 429 over Funie Steed Road (Bridge No. 920605 and 920606)

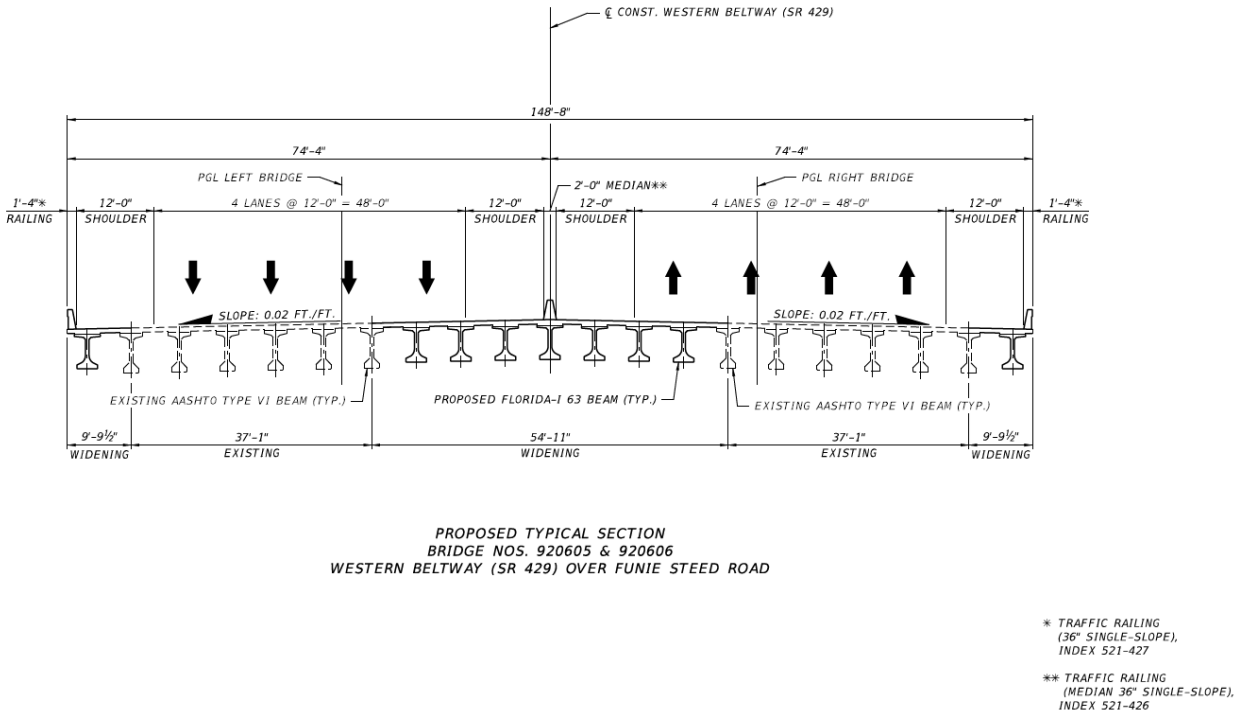
As shown in Figure 6-4, the proposed improvements for Bridge No. 920605 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this southbound bridge. A similar widening will happen to the northbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-4, the proposed improvements for Bridge No. 920606 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this northbound bridge. A similar widening will happen to the southbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920605 and Bridge No. 920606 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns

and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-4: SR 429 over Funie Steed Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 920605 & 920606
WESTERN BELTWAY (SR 429) OVER FUNIE STEED ROAD

* TRAFFIC RAILING (36" SINGLE-SLOPE), INDEX 521-427

** TRAFFIC RAILING (MEDIAN 36" SINGLE-SLOPE), INDEX 521-426

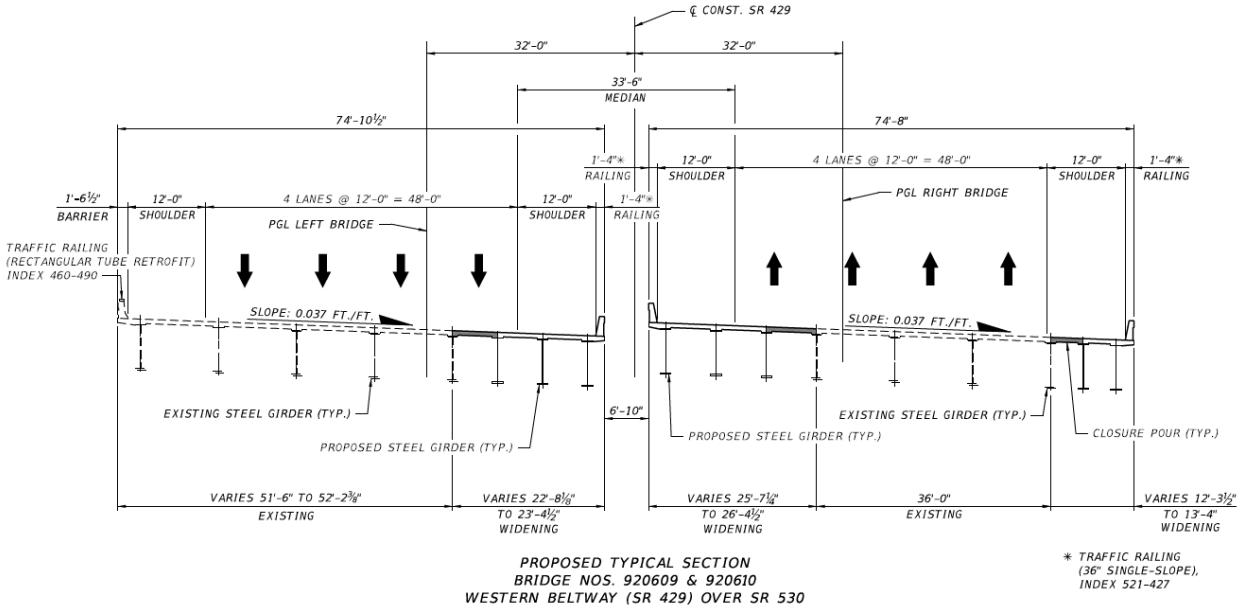
SR 429 over SR 530 (US 192) (Bridge No. 920609 and 920610)

As shown in Figure 6-5, the proposed improvements for Bridge No. 960609 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this southbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-5, the proposed improvements for Bridge No. 960610 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this northbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 920609 and Bridge No. 920610 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-5: SR 429 over SR 530 (US 192) Proposed Typical Section



SR 429 over West Orange Lake Boulevard (Bridge No. 750616 and 750617)

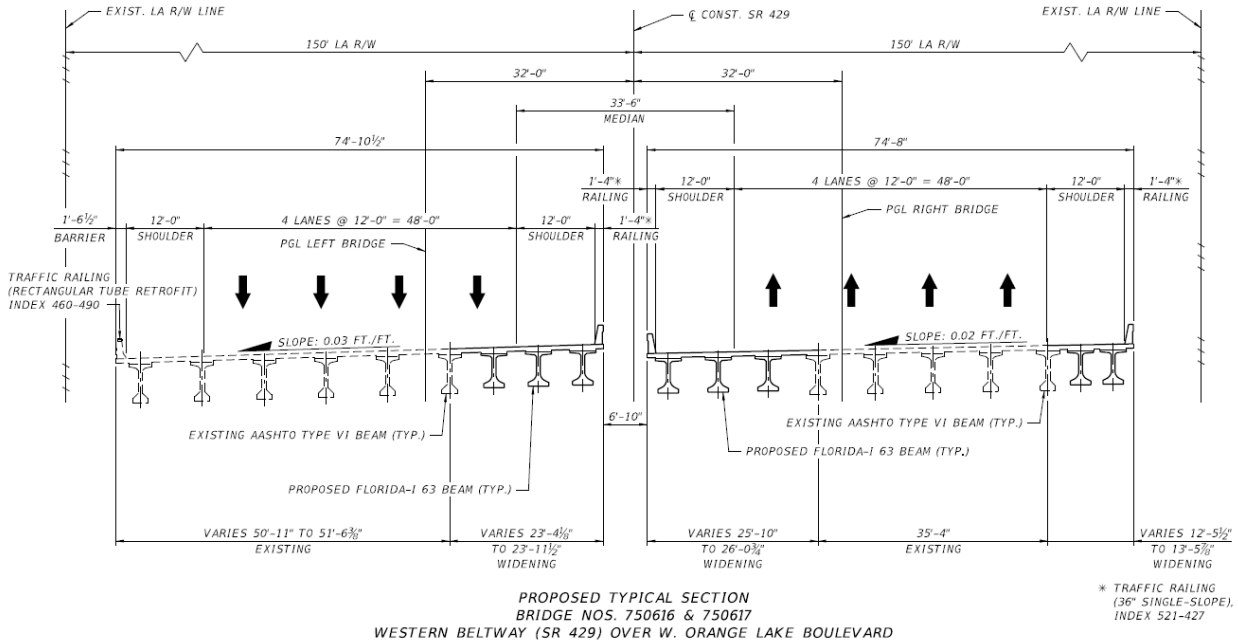
As shown in Figure 6-6, the proposed improvements for Bridge No. 750616 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this southbound bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-6, the proposed improvements for Bridge No. 750617 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this northbound bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical

clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750616 and Bridge No. 750617 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-6: SR 429 over West Orange Lake Boulevard Proposed Typical Section



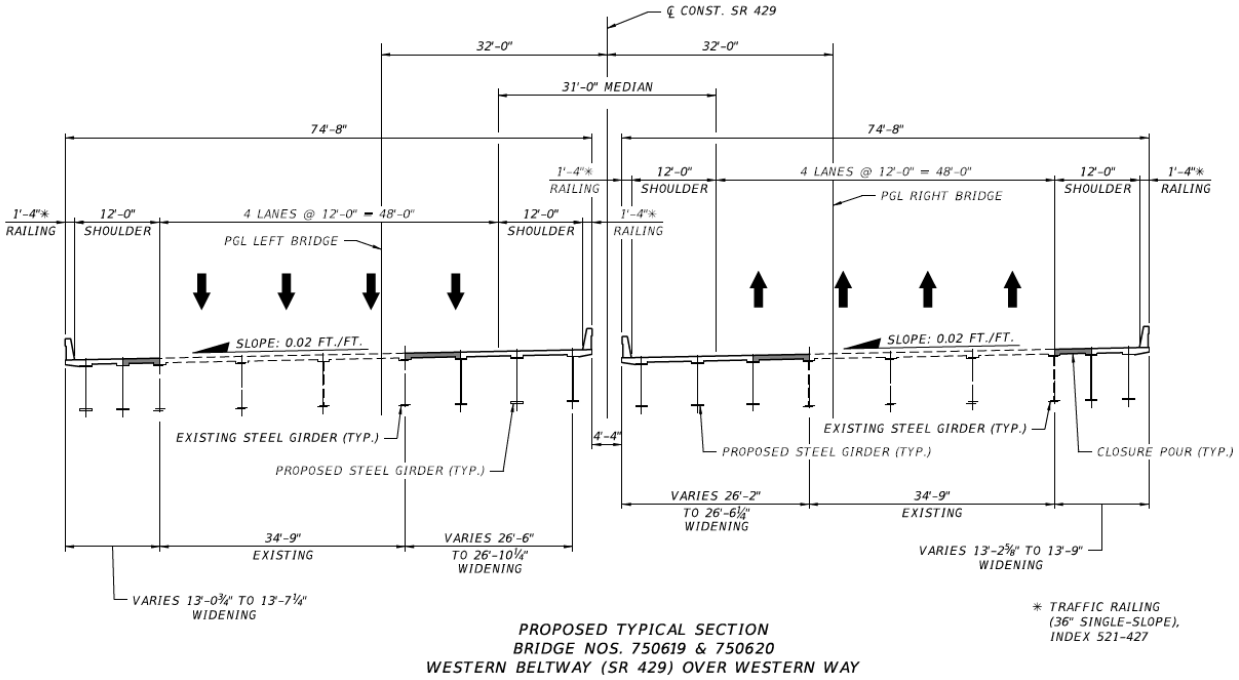
SR 429 over Western Way (Bridge No. 750619 and 750620)

As shown in Figure 6-7, the proposed improvements for Bridge No. 750619 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this southbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-7, the proposed improvements for Bridge No. 750620 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12′-0″ travel lanes and 12′-0″ inside and outside shoulders for this northbound bridge. The vertical clearance will not be below the minimum vertical clearance of 16′-0″ per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750619 and Bridge No. 750620 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-7: SR 429 over Western Way Proposed Typical Section



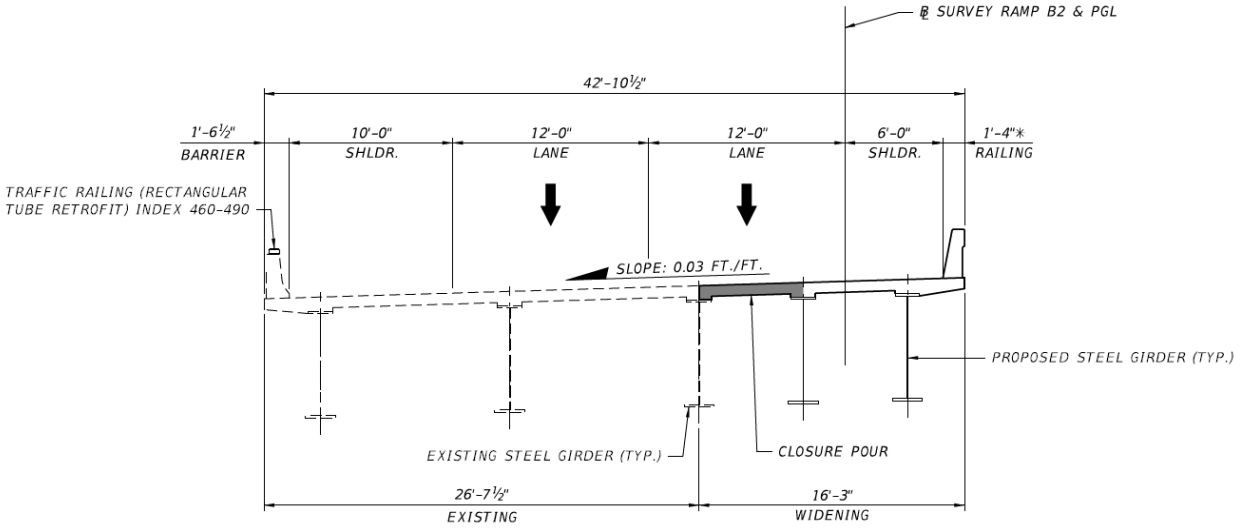
SR 429 Southbound Off-Ramp over Western Way (Bridge No. 750618)

As shown in Figure 6-8, the proposed improvements for Bridge No. 750618 are to widen the existing bridge to the inside. The proposed widened bridge typical section includes two (2) 12′-

0" travel lanes, a 6'-0" inside shoulder, and a 10'-0" outside shoulder for this southbound ramp bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16'-0" per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750618 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-8: SR 429 Southbound Off-Ramp over Western Way Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NO. 750618
WESTERN BELTWAY (SR 429) RAMP B2 OVER WESTERN WAY

SR 429 over Seidel Road (Bridge No. 750621 and 750622)

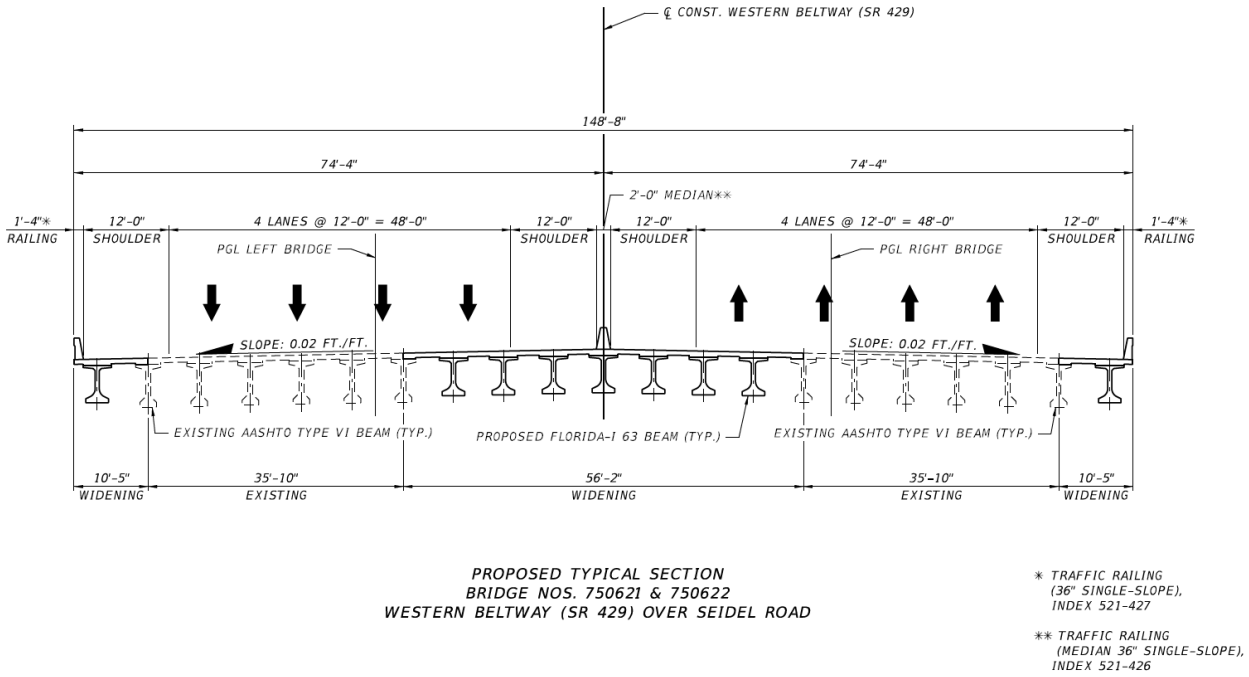
As shown in Figure 6-9, the proposed improvements for Bridge No. 750621 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12'-0" travel lanes and 12'-0" inside and outside shoulders for this southbound bridge. A similar widening will happen to the northbound bridge and the two structures will be connected

to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16’-0” per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

As shown in Figure 6-9, the proposed improvements for Bridge No. 750622 are to widen the existing bridge to the inside and outside. The proposed widened bridge typical section includes four (4) 12’-0” travel lanes and 12’-0” inside and outside shoulders for this northbound bridge. A similar widening will happen to the southbound bridge and the two structures will be connected to become one bridge. The vertical clearance will remain unchanged and will not be below the minimum vertical clearance of 16’-0” per FDM Table 260.6.1. Design exceptions or variations are not anticipated at this time.

The aesthetic treatment for Bridge No. 750621 and Bridge No. 750622 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-9: SR 429 over Seidel Road Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NOS. 750621 & 750622
WESTERN BELTWAY (SR 429) OVER SEIDEL ROAD

* TRAFFIC RAILING (36" SINGLE-SLOPE), INDEX 521-427

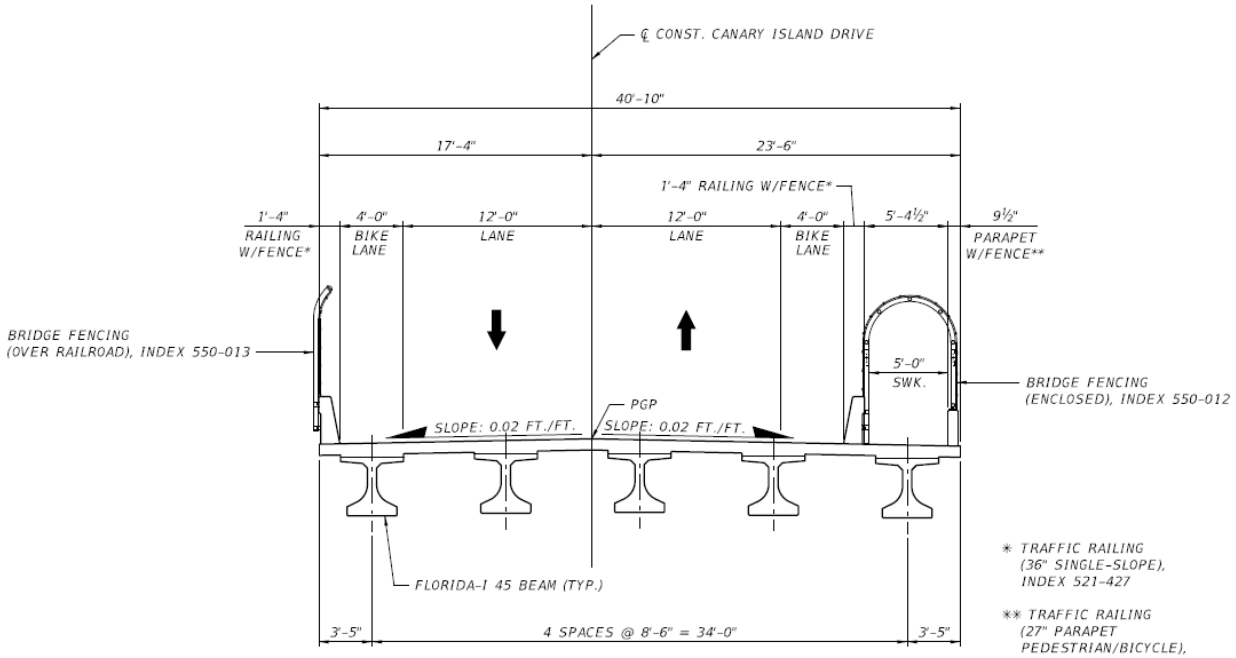
** TRAFFIC RAILING (MEDIAN 36" SINGLE-SLOPE), INDEX 521-426

Canary Island Dr over SR 429 (Bridge No. 920608)

Figure 6-10Figure 4-20 shows the proposed typical section of the new Canary Island Dr. bridge over SR 429. The proposed bridge typical section for this bridge consists of one (1) 12'-0" eastbound travel lane, a 4'-0" eastbound bike lane, one (1) westbound travel lane, a 4'-0" westbound bike lane, and a 5'-0" sidewalk protected by a traffic railing. The vertical clearance will meet the minimum vertical clearance of 16'-6" per FDM Table 260.6.1. The minimum horizontal clearance to the retaining wall coping will meet the clear zone requirements per FDM Table 215.2.1. A concrete barrier will be provided for pier shielding at the median. A new bridge number will be requested during the Design Phase.

The aesthetic treatment for Bridge No. 920608 should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Figure 6-10: Canary Island Drive over SR 429 Proposed Typical Section



PROPOSED TYPICAL SECTION
BRIDGE NO. 920608
CANARY ISLAND DRIVE OVER WESTERN BELTWAY (SR 429)

Livingston Road Ramp over SR 429 (Bridge No. TBD)

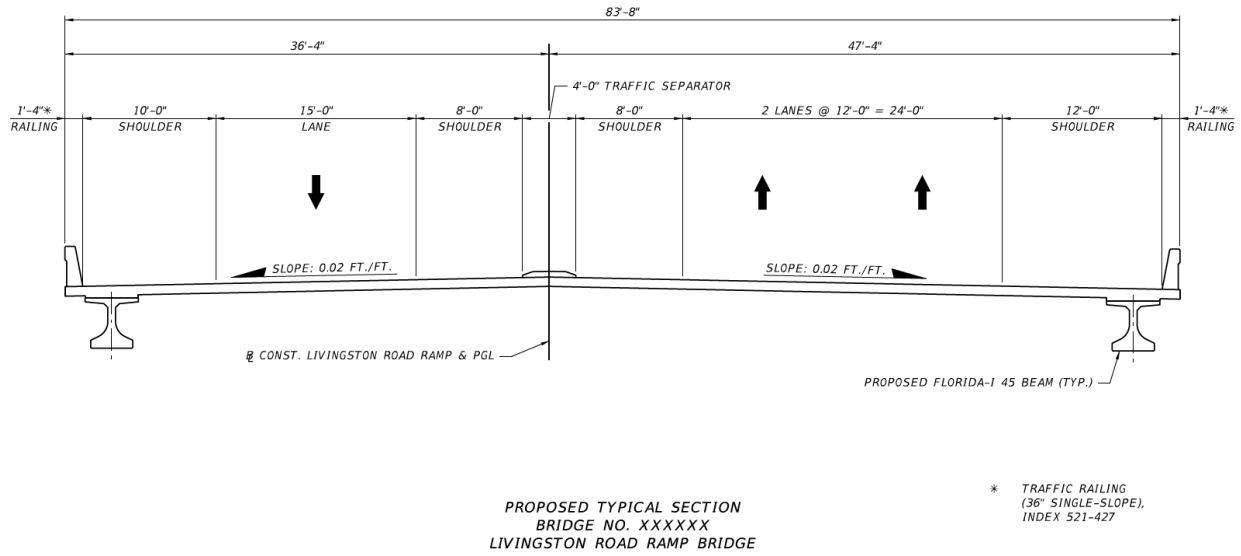
Figure 6-11 shows the proposed typical section of the new Livingston Rd. bridge over SR 429. The proposed bridge typical section for this bridge is two (2) 12′-0″ eastbound travel lanes, a 12′-0″ outside shoulder, 8′-0″ inside shoulder, one (1) 15′-0″ westbound travel lane, a 10′-0″ outside shoulder, and 8′-0″ inside shoulder. The wider inside and outside shoulder widths are provided to meet design vehicle turning path requirements. The vertical clearance will meet the minimum vertical clearance of 16′-6″ per FDM Table 260.6.1. A bridge number will be requested during the Design Phase.

The aesthetic treatment for this bridge should conform to Level One as indicated in the FDOT Design Manual (FDM), Chapter 121. Level One aesthetics consists of cosmetic improvements such as the use of color pigments in the concrete, texturing the surfaces, modifications to fascia walls, beams, and surfaces, or more pleasing shapes for columns and caps. Based on the Turnpike Design Memorandum issued on 1/26/2022, the Turnpike has revised its policy for applying colored Class 5 coating on certain concrete surfaces. Table 1, Section 1.4.5 of the 2022 Turnpike Supplement to the FDOT Structures Manual provides instruction for applying surface treatments and the process for which the treatment is to be approved. The process for determining these treatments will be done during the Design Phase of the project.

Alternatives to minimize the shoulder widths on the bridge were evaluated, see Appendix E. The alternatives included adding wedges to the ramp to allow for round corners where the bridge

meets the ramp MSE walls. The 2nd alternative was to construct a flared bridge between SR 429 median and the ramp MSE wall. This alternative created variable width outside shoulders that exceeded the FDM minimums. The preliminary analysis recommended keeping the original bridge typical section. Further detailed evaluation is recommended during design to optimize the bridge typical section.

Figure 6-11: Livingston Road Ramp over SR 429 Proposed Typical Section



Indian Creek Boulevard over SR 429 (Bridge No. 924178)

Pier shielding currently exists along SR 429 in the form of concrete median barrier. However, this pier shielding will be modified when SR 429 is widened. Pier protection will be evaluated and installed as necessary along SR429 to protect the bridge when SR 429 is widened. At a minimum, additional pier shielding will be required.

Sinclair Road over SR 429 (Bridge No. 920607)

Pier shielding currently exists along SR 429 in the form of guardrail. However, this shielding will be removed when SR 429 is widened. Pier protection will be evaluated and installed as necessary along SR429 to protect the bridge when SR 429 is widened. At a minimum, additional pier shielding will be required.

SR 429 over Boggy Creek Culvert (Bridge No. 750623)

The existing culvert over Boggy Creek will not require an extension to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and has sufficient hydraulic capacity for the proposed condition.

SR 429 over Whittenhorse Creek Culvert (Bridge No. 750637)
The existing culvert over Whittenhorse Creek will need to be extended to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and can be extended. This culvert has sufficient hydraulic capacity for the proposed condition.

SR 429 over Golf Cart Path (Bridge No. 75Q016)
The existing culvert over the golf cart path Creek will need to be extended to accommodate the outside widening of SR 429. As noted in Section 2.22, this culvert is in "good" condition and can be extended.

6.1.3 Right of Way Relocations

The Preferred Alternative does require additional ROW from 29 parcels. The total area required is 16.01 acres. There are no commercial or residential relocations.

6.1.4 Horizontal and Vertical Geometry

The Preferred Alternative is widening the existing SR 429 mainline. Therefore, the horizontal and vertical geometry of SR 429 will generally remain the same as the existing alignment and profile. The intent is to match the existing profile grade line, except in the three areas where SR 429 has a new alignment due to adjustments in the horizontal curves. In some locations, the longitudinal grade is less than 0.3%, shoulder rocking will be required at some point in the future if shoulder barrier wall is added to the typical section. The profile will be re-evaluated during the Design Phase.

The three horizontal curves on SR 429 that will be adjusted to address horizontal sight distance issues in the ultimate condition are located:

- Between Sinclair Road and Sand Hill Road
- Canary Island Dr overpass
- Proposed Livingston Road interchange

The geometry data for the SR 429 mainline curves are provided in Appendix C.

The existing alignment of the cross streets at the existing interchanges will remain the same. The alignments of the ramps will change to accommodate the additional travel lanes and to maintain toll plaza operations during construction. The proposed alignments of the ramps are provided in the geometry sheets provided in Appendix C.

The Livingston Road interchange is a new interchange. The ramps to and from SR 429 will be new alignment between Formosa Gardens Boulevard and SR 429. At the proposed interchange, SR 429 will remain at-grade and the ramps will be elevated over SR 429. The geometry data for the interchange ramp curves are provided in Appendix C.

The new bridge for Canary Island Drive will require new alignment of the roadway. The geometry data for the Canary Island Drive bridge are provided in Appendix C.

6.1.5 Bicycle and Pedestrian Accommodations

SR 429 is a limited-access roadway, thus, the Preferred Alternative for improvements along SR 429 does not include pedestrian or bicycle facilities located on the expressway.

At the Sinclair Road interchange, there are five-foot sidewalks located on both sides of the roadway. No bicycle lanes are currently present along Sinclair Road, east and west of the interchange, so no bicycle lanes are proposed. Adding bicycle lanes would require widening of the Sinclair Road bridge.

At the proposed Livingston Road interchange, there are no existing pedestrian or bicycle facilities. There are no pedestrian or bicycle facilities proposed for the section of Livingston Road between Formosa Gardens Boulevard and SR 429. This section of Livingston Road connects to SR 429 a limited access facility. Therefore, there is no need for any pedestrian or bicycle facilities on this section of Livingston Road. However, the widening of Formosa Gardens Boulevard north of Livingston Road will add a six-foot sidewalk along the west side of the roadway for the length of the widening. Formosa Gardens Boulevard has a 10-foot shared use path on the east side of the roadway, so no additional bicycle facilities are proposed. A small section of the existing shared use path just south of Livingston Road will be reduced to eight feet for a short distance (approximately 350 feet) in order to accommodate the widening of Formosa Gardens Boulevard and to avoid a potential residential relocation.

At the US 192 interchange, six-foot sidewalks on both sides of the roadway will be added as part of the improvements to US 192. In addition, seven-foot bicycle lanes will also be added along both sides of US 192 for the length of the improvements.

At the Western Way interchange, based on coordination with Disney and RCID staff, bicycle and pedestrian accommodations are not included along Western Way due to safety issues with the free flow movements of the loop ramp as well as the southbound to westbound ramp. Disney stated they are transporting employees through the interchange using shuttle buses.

Finally, at the Seidel Road interchange, no changes are proposed to the existing sidewalks and bicycle lanes along Seidel Road.

6.1.6 Transit Accommodations

There are no transit routes on SR 429. So, no transit accommodations are planned for SR 429. Along US 192, the existing transit accommodation for stops on bus route 55 will be maintained. No additional transit accommodations are planned as part of this project.

6.1.7 Access Management

For SR 429, the only access management change planned is the addition of the Livingston Road interchange connecting Livingston Road to SR 429. The interchange will provide full access to SR 429. The proposed interchange is more than two miles from the Sinclair Road interchange and approximately 1.25 miles south of US 192 interchange.

The widening of Formosa Gardens Boulevard from two lanes to four lanes will change the roadway from undivided to divided. This will restrict left turns along this segment of the roadway. However, currently, there are no driveways along Formosa Garden Boulevard in this section of roadway. The Public Hearing for this PD&E study will meet the requirement for Florida Statute 335.199 for public notification of property owners of the change in access.

There are no planned access management changes proposed at the other interchanges.

6.1.8 Intersection and Interchange Concepts

This section will describe the interchange concepts and the traffic control types for the intersections. The Preferred Alternative Concept Plans are provided in Appendix C.

6.1.8.1 Sinclair Road Interchange

The existing configuration of the Sinclair Road interchange will be retained with the Preferred Alternative.

The signalized intersection of Sinclair Road and the northbound off-ramp/Connector Road, already signalized, will provide one through lane, two left turn lanes, and one right turn lane for the northbound off-ramp. Westbound Sinclair Road will provide two through lanes and one right turn lane. Southbound Connector Road will provide one left turn lane and one right turn lane.

The intersection of Sinclair Road and the southbound ramps will be signalized. The southbound off-ramp will provide two left turn lanes and one right turn lane. Eastbound Sinclair Road will provide two through lanes and one right turn lane.

The intersection of Connector Road and the northbound on-ramp will be signalized. Northbound Connector Road will provide one through lane and one left turn lane. Southbound

Connector Road will one through lane and one right turn lane. The northbound through lane for Connector Road will have a continuous green signal. The northbound left turn lane and the southbound lanes will be controlled by the traffic signal.

6.1.8.2 Livingston Road Interchange

A four-lane divided interchange access roadway would provide a limited access connection between SR 429 and the intersection of Livingston Road with Formosa Gardens Boulevard, adding a fourth leg to the local intersection. Lanes to and from the southbound ramps would cross over SR 429 to connect to the ramps at a stop-controlled T-intersection. The northbound on-ramp and off-ramp would merge and diverge with the access roadway approximately 1,600 feet west of Formosa Garden Boulevard. There are no plans for new connections to or from the west side of SR 429. The ramps to and from the south would be electronically tolled.

The new interchange will create a fourth leg of the existing Livingston Road intersection with Formosa Gardens Boulevard. A traffic signal would be added, as well as dual left turn lanes for northbound to westbound traffic entering the interchange. A new left turn lane will be added for westbound Livingston Road to southbound Formosa Gardens Boulevard traffic, as well as a westbound through lane to enter the interchange. The southbound approach will include a new exclusive left turn lane onto Livingston Road, an exclusive right turn lane into the interchange, and a second southbound through lane. The eastbound approach to Formosa Gardens Boulevard from the interchange will include dual left turn lanes, a through lane, and an exclusive right turn lane. As part of the interchange, the half-mile two-lane section of Formosa Gardens Boulevard will be widened to four lanes to match the four-lane sections to the south and north of Livingston Road.

6.1.8.3 US 192 Interchange

The existing configuration of the US 192 interchange will be retained with the Preferred Alternative.

The signalized intersection of US 192 and the northbound ramps will provide two left turn lanes and three right turn lanes for the northbound off-ramp, four through lanes and one right turn lane for westbound US 192, and three through lanes and three left turn lanes for eastbound US 192.

The signalized intersection of US 192 and the southbound ramps will provide three through lanes, two left turn lanes, and one right turn lane for westbound US 192, three trough lanes, one left turn lane, and one right turn lane for eastbound US 192, and four through lanes and one right turn lane for eastbound US 192.

The signalized intersection of US 192 and E. Orange Lake Boulevard will provide three left turn lanes and three right turn lanes for the southbound off-ramp, four through lanes and two left turn lane for westbound US 192, and four through lanes and one right turn lane for eastbound US 192. For E. Orange Lake Boulevard, one through lane, two left turn lanes, and one right turn lane for northbound traffic and one left turn lane, one through/shared left turn lane, and one right turn lane for southbound traffic.

6.1.8.4 Western Way Interchange

The existing configuration of the Western Way interchange will be retained with the Preferred Alternative.

The intersection of Western Way and the northbound ramps will be signalized. The northbound off-ramp will provide two left turn lanes and three right turn lanes. Westbound Western Way will provide three through lanes and two right turn lanes. Eastbound Western Way will provide four through lanes and two left turn lanes.

The intersection of Western Way and the southbound on-ramp will be signalized. Westbound Western Way will provide two through lanes and two left turn lanes. Eastbound Western Way will provide two through lanes. The southbound off-ramps (eastbound and westbound) will be free flow.

The intersection of Western Way and Hartzog Road will retain the same number of turn lanes.

6.1.8.5 Seidel Road Interchange

The existing configuration of the Seidel Road interchange will be retained with the Preferred Alternative.

The intersection of Seidel Road and the northbound off-ramp will be signalized. The northbound off-ramp will maintain the one left turn lane and one right turn lane configuration at the intersection.

The intersection of Seidel Road and the southbound on-ramp will be signalized. Westbound Seidel Road will maintain the two through lanes and one left turn configuration at the intersection. Eastbound Seidel Road will maintain the one through lane and one through/shared right turn lane configuration at the intersection.

6.1.9 Intelligent Transportation Systems and TSM&O Strategies

The existing ITS system for SR 429 will be modified to accommodate the widening of SR 429 from four to eight lanes, improvements to the existing interchanges, and the construction of the

new interchange at Livingston Road. The modifications will be in accordance with the Florida Design Manual.

The recommended TSM&O option for the SR 429 southbound off-ramp at US 192 is Option 2. This option is provided in Appendix A. The estimate construction cost for this option is $13.49 million. The total cost including design, construction and project unknowns is approximately $19.56 million. There is approximately $4.79 million associated with throw away work with this option. The LRE estimate is provided in Appendix H. The traffic analysis indicates that this option mitigates queuing on the ramp until 2040. A benefit/cost (B/C) analysis was performed on this option. The B/C ratio is approximately 5.1.

The implementation of a Hard Shoulder Running (HSR) concept, similar to the system currently being constructed by the Central Florida Expressway (CFX) Authority along SR 429 to the north of this project segment is a longer term TSM&O option that was considered during this PD&E study. The preliminary analysis concluded the implementation of a HSR system onto the existing four-lane Western Beltway configuration would not be reasonable or feasible given the current and projected traffic volumes and characteristics. However, it was agreed that a HSR system should be reconsidered during final design to determine if features such as full-depth shoulders, wider shoulder widths (i.e. 16 feet), infrastructure for overhead supplemental signage, etc. should be implemented.

The intersection of Sinclair Road and Happy Trails is currently an unsignalized intersection with a full median opening. It is approximately 450 feet from the proposed signalized intersection of Sinclair Road and the southbound SR 429 ramps. Due to the proximity of the intersections, changes to the Happy Trails intersection may be needed. TSM&O improvements at this intersection will be further evaluated during design.

6.1.10 Utilities

A Utility Assessment Package Report, January 2023, was prepared to document the existing or planned utilities in accordance with FDOT PD&E Manual, Part 2, Chapter 21 (FDOT 2019). Twenty-two (22) Utility Agencies/Owners (UAOs) were initially identified as potentially having facilities within the project study limits through a Sunshine 811 design ticket. Follow-up information provided by the identified UAOs resulted in eight UAOs providing information on facilities within the project area. Two UAOs indicated that they had no facilities in the project area. Twelve UAOs provided no responses to requests for information. The eight confirmed UAOs with facilities along the project are summarized in Table 6-1.

Table 6-1: Utility Facilities Along SR 429

Utility Agency/Owner	Utility Type	General Location
Comcast	Buried fiber optic cable	Crossing of SR 429 just south of Canary Island Drive and at Funie Steed Road
Duke Energy Distribution	7.2/1.47 kV overhead and underground distribution	Multiple locations: Formosa Gardens Boulevard, Sand Hill Rd, Indian Creek Boulevard, Funie Steed Road, US 192, Mainline Toll Plaza, W Orange Lake Boulevard, Hartzog Road, Seidel Road
Duke Energy Transmission	230 kV overhead transmission 69 kV overhead transmission	SR 429 – west side US 192 – south side
Osceola County Traffic	Buried fiber optic cable	US 192
Sabal Trail Transmission	36” high pressure natural gas pipeline	West side of Sand Hill Rd
Summit Broadband	Buried fiber optic cable	Multiple locations: Crossing of SR 429 just south of Canary Island Drive, Funie Steed Road, and US 192. Along Formosa Garden Boulevard and Livingston Road.
TECO Peoples Gas	2” and 4” gas mains	Multiple Locations: Indian Creek Boulevard, US 192, W Orange Lake Boulevard, Seidel Road, Snad Hill Rd, and Flamingo Crossings Boulevard
Zayo	Buried fiber optic cable	Along south side of US 192.

As reflected in Table 6-1, most of the utilities cross over or under Florida's Turnpike mainline or interchange ramps. Actual utility impacts will be verified during the Design Phase, when a detailed survey and subsurface utility information is available. The proposed project is expected to have no significant utility impacts.

6.1.11 Drainage and Stormwater Management Facilities

Project improvements will be designed to meet the regulatory requirements of the applicable water management districts, RCID, the requirements outlined in the FDOT Drainage Manual, and the requirements of FTE. The project is located within the SFWMD jurisdiction, however FDEP reviewed and issued the original Environmental Resource Permit (ERP) in 2001. FDEP has indicated they will be responsible for issuing a permit for the proposed improvements

associated with this study. In addition, the project is within the Reedy Creek Watershed, therefore approval from RCID will be required as well. The FDEP ERP application should be submitted to RCID for approval prior to submitting to FDEP. FDEP will be responsible for Section 404 reviews and permitting. A National Pollutant Discharge Elimination System (NPDES) permit will also be required from FDEP.

Meetings were held with RCID, FDEP, SFWMD, Osceola County, and Orange County as part of the coordination efforts of this project. During these meetings the potential opportunities for implementing a joint use or regional stormwater facility were discussed. FDEP and SFWMD stated they were open to the use of regional ponds, but no specific opportunities were identified during or after these meetings for any of the agencies and municipalities. Appendix F provides meeting minutes of these coordination meetings.

20 basins have been identified within the limits of the study area, which have been outlined on the proposed drainage maps included in *Pond Siting Report* provided under separate cover. It is anticipated that only minor changes to the basin divides will occur in the proposed condition, with the vast majority of the changes controlled by the layout of the conveyance system which will occur during the Design Phase. When this project was originally constructed the surrounding area was primarily rural with wetlands, wooded areas, and pastures. Over the years residential and commercial development has occurred adjacent to the corridor. This development has changed some of the offsite areas that previously discharged in the Turnpike's right-of-way. These changes are reflected in the offsite basins shown within the proposed drainage maps and within each of the basin descriptions that follow.

The original Western Beltway (SR 429) corridor was designed and permitted for a 6-lane configuration, with 4-lanes constructed and 2 "future lanes" to be added within the median. This analysis takes the existing 6-lane permitted condition and analyzes the treatment and attenuation requirements for an 8-lane corridor with a new interchange at Livingston Road. For the purposes of this document, the term new impervious area will only refer to the amount of impervious area that is beyond the permitted value for "future pavement". Additional analysis will be required during the Design Phase once the design of the conveyance system has been incorporated into the project.

Turnpike entered into an agreement with RCID for the construction of the Western Beltway in 2001. As such, RCID will accept 297.64 cfs of discharge from the corridor. For the purposes of this design analysis, attenuation volumes will be based on the FDOT Design Storm of 50-year, 3-day (11.40-inches) for existing facilities. The rationale being the fee will be less than the cost of new right-of-way and construction of new stormwater management facilities. Please note this fee does not eliminate the pre vs post development water quantity requirement. No discharge

over the pre-condition rate will be accepted. This is the reason for using the 50-year, 3-day instead of the 25-year, 3-day. In areas where new stormwater management facilities are required, the RCID Design Storm of 50-year, 3-day (12.91-inches) will be utilized. The intent is to provide attenuation within Turnpike right-of-way as to not discharge more runoff into RCID than necessary for new facilities.

In addition to the discharge fee posed by RCID, they also have a $750 administration fee for permit review and an impact fee of $200 per acre. An impact fee was paid by the Turnpike for the original Western Beltway improvements. This should be interpreted as the area within the existing right-of-way. Any new right-of-way will be subject to a fee at the rate previously described.

As previously noted, the corridor was originally designed to accommodate a 6-lane configuration. Additionally, the majority of the existing ponds were sized to treat one inch over the basin, not the impervious area only. This has allowed new impervious area beyond the existing 6-lanes to be accounted for since treatment is based on the greater of the two scenarios; one inch over the basin or 2.5-inches over the impervious area. Three pond alternatives have only been provided for Basin 2A-2 and Basin FGB due to the impacts to the existing Pond 2A-2 and the new Livingston Road interchange. Seasonal high-water elevations were determined from the best available information which was typically either as-built information or permit documentation. Where feasible existing FDOT parcels were considered for pond alternatives. The preferred alternative interchange alignment was utilized for determining storage requirements. Impacts to existing ponds was also factored into the analysis. No joint use or regional opportunities were identified as part of the environmental look around process.

The analysis identified potential pond sites based on recent aerials and other preliminary data. Once the potential pond sites were narrowed down to three alternatives, a more detailed analysis was conducted utilizing the following parameters: ROW requirements, easement requirements, atypical construction costs for a given pond site, hazardous materials, threatened endangered & significant species, maintenance, cultural resources, wetland impacts, floodplain impacts and impacts to other relevant features as noted in the pond site evaluation matrix provided in the *Pond Siting Report*. In conjunction with this analysis, a *Contamination Screening Evaluation Report*, *Natural Resource Evaluation*, and a *Cultural Resource Assessment Survey* were prepared and are provided under separate cover with this submittal. The preferred alternative for each basin and anticipated ROW needs associated with the preferred alternatives are outlined in Table 6-2. The evaluation matrix which contains the details of the analysis has been provided in the *Pond Siting Report*.

Table 6-2: Preferred Pond Alternatives and Anticipated Right of Way

Basin	Preferred Alternative	Anticipated Right of Way Requirements (acres)
2A-2	1	12.42[1, 2]
FGB (Basin B)	3	4.80[1]

1. Pond to be placed within remnant parcel of land being purchased for proposed roadway alignment.
2. A portion of proposed Pond 2A-2 will be located within the existing ROW.

6.1.12 Floodplain Analysis

The proposed widening of SR 429 from 4-lanes to 8-lanes from MP 0.5 to MP 11.5 and associated interchange improvements will result in minor impacts to the adjacent FEMA floodplains. The anticipated floodplain encroachments due to the proposed roadway widening were calculated and mitigation alternatives were identified. The floodplain impact calculations are conservative and should be revised during design when survey, geotechnical data, and proposed cross sections are available. Floodplain compensation should be provided in stormwater management facilities to the maximum extent possible.

Replacement drainage structures for this project are limited to hydraulically equivalent structures which are not expected to increase the backwater surface elevations. The limitations to the hydraulic equivalency proposed are due to restrictions imposed by the geometrics of design, existing development, cost feasibility, or practicability. An alternative encroachment location is not considered since it does not meet the project's purpose and need or is economically unfeasible.

Furthermore, the project will not affect existing floodplain elevations or extents. There will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes as the result of construction of this project. Therefore, it has been determined that these encroachments are not significant.

6.1.13 Transportation Management Plan

Maintaining traffic flow throughout construction is vital given that any disruption to the traffic flow can impact a primary Florida transportation artery, SR 429, as well as key arterials such as US 192. Efficient construction of bridge structures, bridge flyovers, on/off ramps, and overall coordination with the affected stakeholders will be crucial for the project's success. A Transportation Management Plan (TMP) will be prepared for each stand-alone project consisting of strategies to manage the work zone impacts of the project. The scope, content, and degree of detail will vary based upon the expected work zone impacts of the project. The TMP shall consist of three major components (1) Temporary Traffic Control Plan, (2) Transportation Operations Plan and (3) Public Information Plan, reference; FDOT Design Manual, Section 240.1.2.

A specific detailed Temporary Traffic Control Plan will be analyzed for each project in the Design Phases. Traffic control will enable the number of existing travel lanes to remain open during construction while reconstruction and widening is completed. Maintaining toll operations at all toll plazas is also critical for the traffic control plan. Construction will be staged to allow temporary and permanent pavement and bridges from early phases to be available for lane shifts to allow for subsequent construction. Construction will also be staged to prevent long term ramp closures, and bridge widening will be coordinated with roadway lane shifts. Lane widths may be reduced to 11 feet. However, a single 12-foot lane must be provided in either direction to accommodate truck traffic. Temporary night-time detours will be required along crossroads and ramps while overhead work is being performed to construct the recommended bridges, bridge widening, and overhead sign structures over the roadways below.

It is also recommended to integrate smart work zones in the overall maintenance of traffic (MOT). Smart work zones utilize the existing Intelligent Transportation System (ITS) infrastructure to increase work zone safety. These smart work zones can include automated queue warning technologies, portable traffic sensors and navigation application sensors.

6.1.14 Special Features

The Preferred Alternative will provide noise barriers to address increased traffic noise due to the increase in traffic volumes. Aesthetics of the noise barriers will be determined in the Design Phase.

The Preferred Alternative will require new mechanically stabilized earth (MSE) walls for the southbound ramps at the proposed Livingston Road interchange. The MSE walls will reduce the amount of additional ROW required on the west side of SR 429 at the interchange. Aesthetics of the MSE walls will be determined in the Design Phase.

Design elements of the ancillary structures (i.e., light poles, sign structures, etc.) should consider a consistent aesthetic throughout the corridor. The proposed aesthetics for ancillary structures will be determined in the Design Phase.

6.1.15 Design Variations and Design Exceptions

If deemed necessary, two specific deviations may occur: (1) Design Exception or (2) Design Variation. A Design Exception is required when the design criteria applied falls below the minimums established by AASHTO. A Design Variation is required when design criteria applied falls below FDOT established criteria and the deviation is not covered by the Design Exception. While the recommended alternative includes reconstruction of the vast majority of the corridor within the PD&E limits, some infrastructure will remain, and deficiencies will have to be documented during future Design Phases. Table 6-3 summarizes the 10 critical design elements and specifies whether AASHTO or FDOT design criteria are satisfied, or if a design

exception/variation is required for the specific design element of the proposed improvements or existing conditions. No impacts to nine of the 10 critical design elements are anticipated. However, a Design Variation for stopping sight distance (SSD) will be required for SR 429 near the Sand Hill Road bridge. Based on the horizontal and vertical curve at this location, the SSD used for the design will be from FDOT FDM Table 211.10.2 Minimum Stopping Sight Distance for Freeways, Expressway, and Ramps. Further details on this SSD condition can be found in a Tech Memo provided in Appendix G. In addition, based on the preliminary design performed as part of the PD&E study, it is anticipated that a border width variation will need to be prepared. The border width variations are anticipated for the realigned ramps as well as short portions of SR 429 due to the widening.

Table 6-3: Design Exceptions and Variations – 10 Controlling Elements

Design Element	Design Variation < FDOT and > AASHTO	Design Exception < AASHTO
1. Design Speed	Satisfied	Satisfied
2. Lane Width	Satisfied	Satisfied
3. Shoulder Width	Satisfied	Satisfied
4. Horizontal Curve Radius	Satisfied	Satisfied
5. Superelevation Rate	Satisfied	Satisfied
6. Stopping Sight Distance	Required	Satisfied
7. Maximum Grade	Satisfied	Satisfied
8. Cross Slope	Satisfied	Satisfied
9. Vertical Clearance	Satisfied	Satisfied
10. Design Loading Structural Capacity	Satisfied	Satisfied

6.1.16 Cost Estimates

The total estimated cost for the Preferred Alternative is $398.24 million. The LRE cost estimate is included in Appendix H. A breakdown of the costs associated with the Preferred Alternative is as follows:

- Construction Cost: $321.70 million
- Final Design Costs: $32.17 million
- CEI Costs: $32.17 million
- Right of Way Costs: $11.21 million
- Wetland Mitigation Costs: $0.74 million
- Sand Skink Mitigation Costs: $0.25 million

The Engineering and CEI costs are estimated based on 10% and 10% of construction costs, respectively. The costs do not include the cost to relocate utilities. Determination of which

utilities will require relocation will be determined with detailed survey information during the preliminary Design Phase of the project.

6.1.17 Project Phasing

An evaluation was performed to separate portions of the Western Beltway (SR 429) widening into phases to be implemented as funding becomes available.

The future traffic analysis indicates that the entire project will need to be widened to six lanes by 2030. The section of SR 429 between US 192 and Seidel Road will need to be widened to eight lanes by 2045. The section between I-4 and US 192 will need to be widened to eight lanes by 2050. The US 192 interchange is located at approximately mile marker 5.5, which is about half the length of the corridor.

Currently, there are operational issues associated with the SR 429 southbound off-ramp intersection with US 192. In the afternoons, delays at the signalized intersection cause traffic to back up from the ramp onto the mainline. Short-term TSM&O improvements to improve the operation of the signalized intersection and add storage on the off-ramp are being considered, as discussed in Section 6.1.9.

Most of the ROW required for the proposed Livingston Road interchange and the associated stormwater ponds are located on a single vacant parcel. Development of this parcel would negatively impact the likelihood of FTE acquiring the parcel and building the proposed interchange. Therefore, it is important to acquire the ROW for the interchange as soon as possible.

Based on the current and future traffic needs, the location of US 192 in the project corridor and the need for a new interchange at Livingston Road, it is recommended to separate the corridor into eight phases. The eight phases are shown in Figure 6-12.

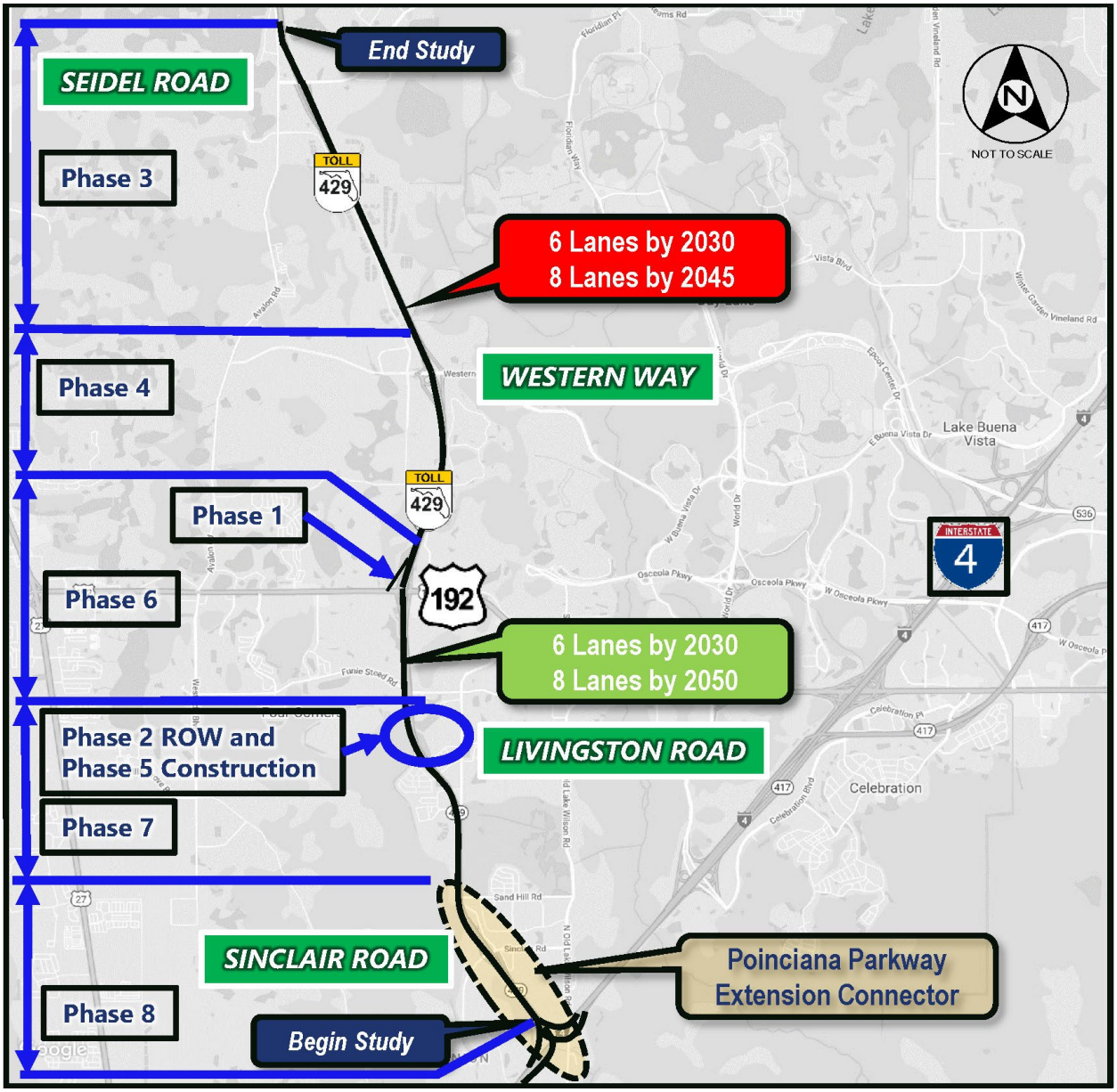
The 1st phase would construct improvements to the SR 429 southbound off-ramp. The additional turn lanes at the intersection along with adding lanes to the off-ramp to increase storage would address the current issues. The existing ramp gore would remain to allow the south bound toll plaza to remain operational.

The 2nd phase would be to purchase the required ROW for the Livingston Road interchange. Actual construction of the interchange would occur at a later phase. As mentioned above, acquiring the necessary ROW early is necessary to reduce the possibility of the development of the vacant parcel that contains most of the interchange improvements.

The 3rd phase would construct the segment of SR 429 from north of Western Way to north of Seidel Road, including the Seidel Road interchange improvements.

The 4th phase would construct the segment of SR 429 from north of US 192 to Western Way, including the Western Way interchange. This section would also include the conversion of the mainline toll plaza to all electronic tolling.

Figure 6-12: SR 429 Project Phasing Segments



The 5th phase would construct is the Livingston Road interchange. This segment will relieve the congestion on US 192 as well at the US 192 interchange.

The 6th phase would construct the segment of SR 429 from north of Livingston Road to US 192, including the US 192 interchange. This construction project will connect the improved southbound ramp from segment #1 to the ultimate conditions, shifting the exit gore point north to increase queue storage.

The 7th phase would construct the segment of SR 429 from north of Sand Hill Road to north of Livingston Road.

The 8th phase would construct the segment of SR 429 from I-4 to north of Sand Hill Road. This would include the improvements to the Sinclair Road interchange. It should be noted that this section overlaps with the improvements for the Poinciana Parkway Extension Connector PD&E (FPID 446581-1). That project has been prioritized by FTE for design and construction. Therefore, this last phase may be constructed by the Poinciana Parkway Extension Connector project.

6.2 Summary of Environmental Impacts

6.2.1 Future Land Use

The Future Land Use (FLU) in Osceola County is dominated by tourist, commercial and residential land uses, with some institutional and conservation areas. The FLU in Orange County is commercial, part of the Village of Horizon West, or part of incorporated Bay Lake.

The City of Bay Lake is governed by the RCID Comprehensive Plan.1 The FLU within the Bay Lake area of Orange County includes public facility and mixed use. The Resort Areas Map identifies the study area as part of the Flamingo Crossings/SR 429 Resort Area. Although mixed use is not specifically defined for this area, existing developments have included commercial businesses, resorts, restaurants, and campus style apartments.

The Preferred Alternative is not anticipated to affect the existing character or use of the surrounding area, except at the proposed new interchange with Livingston Road and the Seidel Road interchange. At the Livingston Road interchange, the Preferred Alternative is not consistent with the future land use plans. The vacant land with a low-density residential land use would need to be changed to transportation use with the Preferred Alternative. There will not be changes to existing or planned recreational space, nor will changes to adopted land use plans or growth management policies be required.

At the Seidel Road interchange, the Preferred Alternative will change the ROW along Seidel Road between SR 429 and Avalon Road to limited access ROW. Therefore, the two parcels on the either side of Seidel Road will not have access to their property from Seidel Road. However, they will retain access to their property from Avalon Road. This will impact the planned 324 multi-family unit residential development called Elysian Apartments in the northeast quadrant of the intersection of Seidel Road and Avalon Road.

6.2.2 Section 4(f)

There are no Section 4(f) sites in this project area.

6.2.3 Cultural Resources

A Cultural Resources Assessment Survey (CRAS) was conducted within the study area to locate, identify, and aerially delimit any archaeological sites and historic resources (e.g. structures, buildings, bridges, cemeteries, linear resources, historic districts) within the project's Area of Potential Effect (APE). As defined in 36 CFR Part 800.16(d), and recognized by Chapter 267, F.S., the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." The CRAS was prepared in accordance with Part 2, Chapter 8 of the FDOT PD&E Manual and the Cultural Resource Management Standards and Operational Manual: Module 3 (Florida Division of Historical Resources [FDHR] 2003). Principal Investigators meet the Secretary of the Interior's Professional Qualification Standards (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. The CRAS documents resources' significance in terms of eligibility criteria for listing in the National Register of Historic Places (NRHP). Surveys were completed in accordance with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655, as amended), as implemented by 36 CFR 800 (Protection of Historic Properties, effective August 2004), as well as Chapters 267 and 373, Florida Statues (F.S.), Chapter 1A-46, Florida Administrative Code (FAC), and Florida's Coastal Management Program. The results of the CRAS are summarized below.

The archaeological APE consisted of the footprint of the existing and proposed ROW containing the proposed improvements. To account for the proposed widening of the existing SR 429 facility, as well as the potential for elevated ramps and bridges, the historic resources APE consisted of the footprint of all existing and proposed ROW, as well as a buffer of 250 feet out from the footprint of the existing and proposed ROW. A search of the Florida Master Site File Search (FMSF) identified 24 previously conducted cultural resource surveys that contain or partially contain the project APE. Only ten of the 58 previously recorded sites in the FMSF are located within or adjacent to the archaeological APE as summarized in Table 6-4.

Table 6-4: Previously Recorded Archaeological Resources Within or Adjacent to the Archaeological APE

FMSF No.	Site Name	Site Type	SHPO National Register Evaluation
8OR3219	Whittenhorse Creek 2	Precontact Artifact Scatter and Habitation Site	Ineligible
8OR4300	Hognose Snake	Precontact Artifact Scatter Consisting of One Lithic Waste Flake and One St. Johns Plain Pottery Sherd	Ineligible
8OR9986	Reddy Creek III	Precontact Lithic Scatter	Ineligible
8OR10241	North of RIBS #1	Precontact Lithic Scatter	Ineligible
8OS49	Davenport Swamp	Reported General Vicinity Location of Lithic Surface Scatter on Interface of Swamp and Former Grove	Not Evaluated
8OS139	World Golf and Tennis V	Precontact Lithic Scatter Consisting of One Lithic Waste Flake and One Biface Fragment (Likely Would Have Been Considered Two Archaeological Occurrences Today)	Ineligible
8OS1777	North Point	Precontact Artifact Scatter with St. Johns Plain Pottery Sherds	Ineligible
8OS1778	Boggy Swamp	Single St. Johns Plain Pottery Sherd	Ineligible
8OS1780	Wetland Site	Precontact Artifact Scatter	Ineligible
8OS1937	Fowler 2	Precontact Artifact Scatter with a St. Johns Plain Pottery Sherd	Ineligible

* As recorded in the FMSF, may require re-evaluation within the project APE; Due to COVID-19 safety protocols, the FMSF data may not be current

No archaeological sites were newly identified within the archaeological APE during the current CRAS. The majority of the archaeological APE is located within areas of existing road ROW that have been previously surveyed for archaeological resources during the 1996 CRAS of the Western Beltway (SR 429) (ACI 1996: FMSF Manuscript No. 4578) or areas of existing road ROW that have been previously disturbed during the construction of the Western Beltway (SR 429), Sinclair Road, Connector Road, Formosa Gardens Boulevard, W. Irlo Bronson Memorial Highway (US 192), Western Way, and Seidel Road and their co-located drainage facilities and underground facilities.

While subsurface testing was not feasible within much of the APE due to the presence of hardscape, underground utilities, drainage ditches, excavated ponds, wetlands, and standing water, 51 shovel tests were excavated where feasible within newly proposed ROW. One archaeological occurrence, A.O. #1, was identified as a result of subsurface testing. This occurrence consisted of a lone non-diagnostic, utilized, lithic flake recovered from a single shovel test. A.O. #1 was bounded by sets of two shovel tests, all devoid of cultural material, at 12.5 m intervals in each of the four cardinal directions. No diagnostic artifacts were identified and finds of these type do not meet the minimum criteria for listing in the National Register. The results of the current survey, as well as past testing conducted within the current APE during previous survey efforts, indicate a low potential for encountering intact archaeological deposits or significant archaeological sites within the archaeological APE. No extant historic resources were identified within the project APE during the background research or historic resources field survey efforts.

Additional information regarding historical and cultural resources is provided in a separate report, titled Cultural Resource Assessment Survey for Widen Western Beltway (SR 429), from North of the I-4/SR 429 Interchange to Seidel Road, dated January 2023, under separate cover. Coordination with the State Historic Preservation Office (SHPO) is ongoing regarding concurrence with these findings.

6.2.4 Wetlands

Although unavoidable wetland impacts will occur as a result of the proposed build alternatives, these wetlands are located adjacent to, and/or within, the existing roadway ROW and were previously disturbed by urban development, roadway construction, maintenance activities, and the invasion of nuisance and exotic species. Wetlands to be impacted by the proposed improvements include mixed forested wetlands and freshwater marshes located at the proposed Livingston Road traffic interchange and surface waters impacted consist of reservoirs. Conservation easements are also present within the Preferred Alternative. Impacts resulting from the Preferred Alternative include 5.19 acres of wetlands and 6.73 acres of surface waters. There are 1.89 acres of wetland conservation easements within the Preferred Alternative. A description of land use, dominant vegetation, soil types, and other pertinent remarks regarding these communities is provided in the Natural Resource Evaluation Report provided under a separate cover. The Uniform Mitigation Assessment Methodology (UMAM) analysis was performed on representative wetland impact areas. Construction of the Preferred Alternative results in an estimated loss of 3.84 functional units.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344. Compensatory mitigation for this project will be completed

through the use available credits at a private mitigation bank and any other mitigation options that satisfy state and federal requirements.

Final determination of jurisdictional boundaries, in addition to mitigation requirements, will be coordinated between FTE and permitting agencies during the final Design Phase of the project. The results of this PD&E Study indicate there are no practicable alternatives to the proposed impacts due to the need for a roadway widening to reduce traffic congestion and safety considerations. In accordance with Presidential Executive Order 11990, the FTE has undertaken all actions to minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. The FTE has determined that there is no practicable alternative to construction impacts occurring in wetlands. The proposed project will have no significant short-term or long-term adverse impacts to wetlands because any unavoidable impacts to wetlands will be mitigated to achieve no net loss of wetland function. Furthermore, all wetland impacts have been avoided and minimized to the greatest extent possible and have been limited to those areas which are required to meet minimum safety requirements.

6.2.5 Protected Species and Habitat

The project study area was evaluated for potential occurrences of federal- and state-listed plant and animal species in accordance with Section 7 of the ESA of 1973, as amended, and Chapters 5B-40 and 68A-27 of the F.A.C. The evaluation included coordination with the Florida Natural Areas Inventory (FNAI) literature review, database searches, and field assessments of the project study area to identify the potential occurrence of protected species and/or presence of federal-designated critical habitat. Field evaluations of the project study area and adjacent habitats and general wildlife surveys were conducted by project biologists on September 27, 2021 and January 12, 2022.

Per the Protected Species and Habitat Assessment, 32 federally-listed species and 25 state-listed species have been reviewed for the potential to occur within the Western Beltway (SR 429) study area. The project is not within any US Fish and Wildlife Service (USFWS) designated critical habitat. An effect determination was made for each of these federal- and state-listed species based on an analysis of the potential impacts of the proposed project on each species. Based on evaluation of collected data and field reviews, the federal- and state-listed species have been reviewed for the potential to occur within or adjacent to the project study area.

For Federally Protected Species, it has been determined that the project will have "may affect, but is not likely to adversely affect" on the American Alligator (Alligator mississippiensis), Blue-tailed Mole Skink (Plestiodon egregius lividus), Eastern Indigo Snake (Drymarchon couperi), Sand Skink (Plestiodon reynoldsi), and Wood Stork (Mycteria americana). For the Eastern Indigo

Snake, it is reasonable to expect that this species could utilize suitable habitat within the project study area. To minimize potential adverse impacts to the eastern indigo snake, FTE will implement the USFWS Standard Protection Measures for the Eastern Indigo Snake (updated August 2013) during construction.

For State Protected Species, it has been determined that the project will have "no effect anticipated" or "no adverse effect anticipated" to the species.

The Bald Eagle (Haliaeetus leucocephalus) is an "other species of concern". This species has been federally de-listed by the USFWS. However, it remains federally protected under the Bald and Golden Eagle Protection Act (BGEPA) in accordance with the 16 United States Code 668 and the Migratory Bird Treaty Act of 1918. In addition, the FWC has implemented a bald eagle management plan (FWC 2008). The bald eagle tends to utilize riparian habitat associated with coastal areas, lake shorelines, and river banks. Nests are generally located near water bodies that provide a dependable food source. The Florida Audubon closely monitors nests within Florida and maintains a website of known bald eagle nest locations, which was last updated in 2021. According to this database, one (1) active bald eagle nest is located within one (1) mile of the project study area. Bald eagle nest OS193 is located approximately 0.8 miles (4,118 feet) west of Western Beltway (SR 429). The project is located outside of the primary (330 feet) and secondary (660 feet) nest buffer zones. Nest OS193 was last surveyed and determined active in 2021. No bald eagle nests were observed within 660 feet of the project study area during field reviews. During design and permitting, FTE will survey the project study area for eagle nests. If a nest is observed within 660 feet of the project limits, FTE will coordinate with the USFWS to secure all necessary permits.

6.2.6 Essential Fish Habitat

The proposed project is not located within or near any coastal resources and will not involve Essential Fish Habitat as none exists within the project study area. This was confirmed by the National Marine Fisheries Service (NMFS) in the ETDM comments.

6.2.7 Highway Traffic Noise

A noise analysis has been conducted for the Preferred Alternative. The noise barrier analysis performed to date indicates that noise barriers could potentially provide reasonable and feasible noise abatement for 1,346 of the impacted residences, as well as providing a benefit to 517 non-impacted residences. The special use analysis determined that noise abatement was not feasible and reasonable for any of the 74 impacted special use sites; however, some of the special use locations will receive incidental benefits from noise barriers for the residential areas. Table 6-5 presents a summary of the potentially feasible and reasonable noise barriers evaluation along the northbound lanes. Table 6-6 presents a summary of the potentially feasible and reasonable

noise barriers evaluation along the southbound lanes. The preliminary locations of the noise barriers are shown in Appendix C.

The PD&E study phase analysis indicates that noise barriers are potentially feasible and reasonable at 12 Noise Study Areas (NSAs). These noise barriers may benefit 1,346 residences with predicted noise levels that approach or exceed the NAC. Table 6-5 and Table 6-6 show the 12 NSAs where preliminary noise barriers were determined to be potentially feasible and reasonable. The potentially feasible and reasonable noise barriers meet the FDOT's cost per benefit criteria with a preliminary cost of under the $42,000 per benefited receptor criterion. Noise barriers are a potentially viable abatement measure at 12 locations along the project limits and will be given further consideration during the Design Phase of this project. Further information can be found in the *Noise Study Report* provided under a separate cover.

Table 6-5: Potentially Feasible and Reasonable Noise Barrier Evaluation Summary (Northbound Lanes)

Noise Sensitive Area	Number of Impacted Residences	Noise Barrier Approx. Begin Station	Noise Barrier Approx. End Station	Preliminary Noise Barrier Height (ft.)	Preliminary Noise Barrier Length (ft.)[1]	Preliminary Noise Barrier Location	Preliminary Noise Barrier Cost[2]	Number of Residences Potentially Benefited by a Noise Barrier[3]		Cost per Benefited Residence
								Impacted	Total	
NOISE BARRIERS EAST OF SR 429 (NORTHBOUND LANES)										
NB12	191	61+00	106+40	22	4,622	ROW	$3,050,520	161	184	$16,579
NB09 and 10		143+90	208+40	22	5,032	ROW	$3,321,120			
		142+20	144+20	14	250	Shoulder	$84,0000			
		141+70	142+20	8	50	Shoulder/Structure	$12,000			
	111						$3,417,120	103	168	$20,340
NB08		211+20	220+50	20	977	ROW	$586,200			
		221+00	231+00	20	1,390	ROW	$834,000			
		231+00	241+00	16	1,349	ROW	$647,520			
	43						$2,067720	41	67	$30,861
NB07 and 06		286+00	308+00	22	2,200	ROW	$1,452,000			
		251+50	266+80	14	2,107	Shoulder	$884,940			
		266+80	268+50	8	168	Shoulder/Structure	$40,320			
		268+50	289+50	14	1,525	Shoulder	$640,500			
	504						$3,017,760	449	686	$4,339
NB01		631+40	649+00	22	1,759	ROW	$1,160,940			
		615+20	621+50	14	656	Shoulder	$275,520			
		621+50	623+00	8	157	Shoulder/Structure	$37,680			
		623+00	639+00	14	1,587	Shoulder	$666,540			
	41						$2,140,680	39	53	$40,390

1 Full height is for length indicated. The length for any required taper in height at a shoulder noise barrier termination would be in addition to the length indicated.

2 Unit cost of $30/ft2 for all non-shoulder noise barriers.

3 Total includes impacted/benefited residences and residences with a predicted noise level that does not approach or exceed 67 dBA but are incidentally benefited.

Table 6-6: Potentially Feasible and Reasonable Noise Barrier Evaluation Summary (Southbound Lanes)

Noise Sensitive Area	Number of Impacted Residences	Noise Barrier Approx. Begin Station	Noise Barrier Approx. End Station	Preliminary Noise Barrier Height (ft.)	Preliminary Noise Barrier Length (ft.)[1]	Preliminary Noise Barrier Location	Preliminary Noise Barrier Cost[2]	Number of Residences Potentially Benefited by a Noise Barrier[3]		Cost per Benefited Residence
								Impacted	Total	
NOISE BARRIERS WEST OF SR 429 (SOUTHBOUND LANES)										
SB07		213+30	220+60	20	700	ROW	$420,000			
		221+10	235+00	20	1,399	ROW	$839,400			
	47						$1,259,400	29	30	$41,980
SB06		253+50	267+70	14	1,422	Shoulder	$597,240			
		267+70	269+30	8	155	Shoulder/Structure	$37,200			
		269+30	273+50	14	422	Shoulder	$177,240			
	67						$811,680	61	78	$10,406
SB04 and 05		426+60	450+00	22	2,696	ROW	$1,799,360			
		1388+10	1391+80	14	330	Shoulder	$138,600			
		411+66	413+08	8	169	Shoulder/Structure	$40,560			
		413+08	428+20	14	1,465	Shoulder	$615,300			
	466						$2,573,820	275	381	$6,755
SB02		591+00	612+50	22	2,150	ROW	$1,419,000			
		600+00	604+00	14	399	Shoulder	$167,580			
	212						$1,586,580	188	216	$7,345

1 Full height is for length indicated. The length for any required taper in height at a shoulder noise barrier termination would be in addition to the length indicated.

2 Unit cost of $30/ft2 for all non-shoulder noise barriers.

3 Total includes impacted/benefited residences and residences with a predicted noise level that does not approach or exceed 67 dBA but are incidentally benefited.

6.2.8 Contamination

Based on this contamination screening evaluation, a total of 23 contamination sites were identified within the project limits. Table 6-7 presents a summary of the risk ratings assigned for each contamination site/facility:

Table 6-7: Summary of Risk Ratings – Mainline Sites

High	Medium	Low	No
0	6	12	5

Table 6-8 presents a summary of the risk ratings assigned for drainage sites:

Table 6-8: Summary of Risk Ratings – Drainage Sites

High	Medium	Low	No
0	2	0	2

Based on the conclusions of this study and the risk ratings noted above, the following recommendations are made.

- Additional information may become available or site-specific conditions may change from the time this report was prepared and should be considered prior to acquiring (if required) and/or proceeding with roadway construction. If the preferred alignment or drainage location changes, and/or new potential contamination sites have been constructed, this report should be revised and updated to reflect those changes.
- For the locations rated "No" or "Low" for contamination, no further action is required. These locations have been determined not to have a contamination risk level which warrants further assessment at this time.
- Level II testing is recommended for the six mainline sites rated Medium (none were rated High), and one of the two drainage sites rated Medium. Although the Alt 3 (Formosa Gardens Boulevard) drainage site was assigned a risk rating of Medium, no testing is recommended since it was not selected as the preferred drainage site. A site specific Level II scope of services should be developed for each of these sites to be reviewed and approved by the District Contamination Impact Coordinator (DCIC). The scope of services should include a boring location plan depicting the soil and groundwater testing locations, including the contamination source (i.e. tanks, stained soil, etc.), sample depth intervals, and analytical parameters. The Level II can include hazardous material surveys, land boundary surveys, soil borings, monitor well installation, soil and groundwater sampling, laboratory testing, mounding analysis, the use of an Organic Vapor Analyzer (OVA), and Ground Penetrating Radar (GPR). Level II testing is performed by the

Contamination Assessment and Remediation Contractor (CAR) and coordinated with the Florida Turnpike Enterprise DCIC and the Project Manager. Further evaluation and Level II testing, if deemed appropriate by the DCIC, is recommended for the following:

- Groves/Row Crops/Planted Pine Trees (Site 1 and Alt 1 Preferred) – Level II testing should include the collection of soil samples for laboratory analysis. Laboratory analysis of soil samples may include the following: Arsenic by United States Environmental Protection Agency (EPA) Method 6010, Organochlorine Pesticides by EPA Method 8081, Organophosphorus Pesticides by EPA Method 8141, and Chlorinated Herbicides by EPA Method 8151. Detections in the soil above the regulatory standard may require additional soil samples for delineation purposes and groundwater samples. Level II testing costs are estimated at $5,000 to $10,000 per site. If Level III support is needed for National Pollution Discharge Elimination System permitting and treatment, costs can reach up to $100,000 per site.
- Landfill (Site 7) – Level II testing for soil and groundwater should include Volatile Organic Compounds (VOCs) by EPA Method 8260, PAHs by EPA Method 8270, TRPH by FL PRO, including fractionation when applicable. OVA screening is also recommended. Based on a review of historical aerial photographs, and regulatory file information, buried debris does not appear to be an issue within the ROW. Soil gas monitoring for combustible gases (i.e. methane) may also be warranted. Level II testing costs are estimated at $5,000 to $10,000 per site. If Level III support is needed for National Pollution Discharge Elimination System permitting and treatment, costs can reach up to $100,000 per site.
- Former Railroad (Site 13) – Level II testing should include the collection of soil samples for laboratory analysis. Laboratory analysis may include the following: Arsenic by EPA Method 6010, PAHs by EPA Method 8270, Organochlorine Herbicides by EPA Method 8081, Organophosphorus Herbicides by EPA Method 8141, and Chlorinated Herbicides by EPA Method 8151. Detections in the soil above the regulatory standard may require additional soil samples for delineation purposes and groundwater samples. Level II testing costs are estimated at $5,000 per site.
- Fischer Parcel 3 (Site 15) – Level II testing should include the collection of soil samples for laboratory analysis. For the former pump island/UST area, laboratory analysis of soil samples may include the following: VOCs by EPA Method 8260, PAHs by EPA Method 8270, TRPH by FL PRO (including fractionation when applicable). OVA screening is also recommended. For the former groves and agrichemical storage/use/mix/load areas, laboratory analysis of soil samples may include the following: Arsenic by EPA Method 6010, Organochlorine Pesticides by EPA Method 8081, Organophosphorus Pesticides by EPA Method 8141, and Chlorinated Herbicides by EPA Method 8151. Detections in the soil above the regulatory standard may require additional soil samples for delineation purposes and groundwater samples. Level II testing costs are estimated at $5,000 to $10,000 per site. If Level III support is needed for National Pollution Discharge Elimination System permitting and treatment, costs can reach up to $100,000 per site.
- Fischer Parcel A (Site 16) – Level II testing should include the collection of soil samples for laboratory analysis. For the former grove heater storage buildings, laboratory analysis of

soil samples may include the following: VOCs by EPA Method 8260, PAHs by EPA Method 8270, TRPH by FL PRO (including fractionation when applicable). OVA screening is also recommended. For the former groves and agrichemical storage/use/mix/load areas, laboratory analysis of soil samples may include the following: Arsenic by EPA Method 6010, Organochlorine Pesticides by EPA Method 8081, Organophosphorus Pesticides by EPA Method 8141, and Chlorinated Herbicides by EPA Method 8151. Detections in the soil above the regulatory standard may require additional soil samples for delineation purposes and groundwater samples. Level II testing costs are estimated at $5,000 to $10,000 per site. If Level III support is needed for National Pollution Discharge Elimination System permitting and treatment, costs can reach up to$100,000 per site.

  - EDB (Site 21) – Level II testing should include the collection of soil samples for laboratory analysis of Ethylene Dibromide by EPA Method 8011. Detections in the soil above the regulatory standard may require additional soil samples for delineation purposes and groundwater samples. Level II testing costs are estimated at $5,000 per site.

- Once final design plans are available, additional review is recommended in consideration of dewatering operations that may be necessary under the National Pollutant Discharge Elimination System Generic Permit for Stormwater Discharges from Large and Small Construction Activities. Verification testing may be warranted for contamination issues within 500 feet of the dewatering area.
- During construction, if abnormal conditions are encountered or exposed indicating the presence of contaminated materials, cease operations immediately in the vicinity and notify the FTE's DCIC. The presence of tanks or barrels; discolored earth, metal, wood, ground water, etc.; visible fumes; abnormal odors; excessively hot earth; smoke; or other conditions that appear abnormal may indicate the presence of contaminated materials and must be treated with extreme caution. These unidentified contamination areas should be managed in accordance with FDOT Specification 120-1.2 Unidentified Areas of Contamination.
- Additional Considerations: For this project, there are a total of eighteen bridges which may require widening; and six toll plazas, and two toll gantries were identified to be removed. In accordance with PD&E Manual, Part 2, Chapter 20, Section 20.2.2.2, projects which involve existing bridges, building structures, and possibly existing or abandoned utilities which will be moved or demolished may need surveys or screenings for Asbestos Containing Materials, Lead-Based Paint, and/or other Metal Base Coatings. Those structures which have not already been tested for asbestos and metals-based coatings may require evaluation. Structures which have already been evaluated may require additional testing for new coatings, and other additions/modifications since the testing was performed.

Further information can be found in the *Contamination Screening Evaluation Report* provided under a separate cover.

7 Appendix

Appendix A
Build Alternatives Considered

Project Development and Environment (PD&E) Study
to Widen Western Beltway (SR 429)
FPID: 446164-1-22-01
Osceola and Orange Counties

US 192 TSM&O Option 1

N

Scale: 1" = 200'

0 200' 400'

192

TOLL
429

Bahama Breeze

Publix

W Irlo Bronson Memorial Hwy

Project Development and Environment (PD&E) Study
to Widen Western Beltway (SR 429)
FPID: 446164-1-22-01
Osceola and Orange Counties

US 192 TSM&O Option 2

N

Scale: 1" = 200'

0 200' 400'

192

429

Bahama Breeze

Publix

W Irlo Bronson Memorial Hwy

Preferred Alternative ramp improvements

Relocate Guide Sign Truss

Project Development and Environment (PD&E) Study
to Widen Western Beltway (SR 429)
FPID: 446164-1-22-01
Osceola and Orange Counties

US 192 TSM&O Option 3

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Sinclair Road Interchange

Sinclair Road Evaluation Matrix

Sinclair Road Interchange	Option 1 Traffic Signal	Option 2 Roundabout	No-Build
Additional Right of Way Required (acres)	0	0	0
Total Parcels Impacted	0	0	0
Total Relocations	0	0	0
Wetland Impacts (acres)	0	0	0
Conservation Easement Impacts (acres)	0	0	0
Meets Project Purpose and Need	✓	✓	✗
Meets Future Traffic Operation Needs	✓	✓	✗
Reduces Future Vehicle Conflicts	✓	✓	✗
Estimated Construction Cost ($ million)	$11.94	$13.47	$0.00

Option 2 Roundabout

Option 1 Signalized Intersection

Scale: 1" = 200'
0 200' 400'

Begin Project
Connect to I-4 BTU (FDOT D5)
FPID: 431465-1

Begin Project
Connect to I-4 BTU (FDOT D5)
FPID: 431465-1

Remove Existing Toll Plaza

Remove Existing Toll Plaza

Sinclair Rd Property

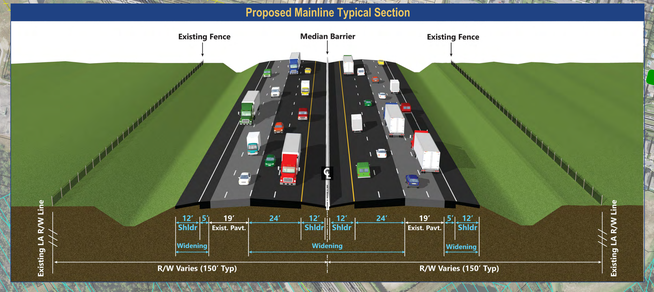
Reunion at 400

Illuminate Church

Reunion Encore Resort

Sand Hill Waste Water Treatment Plant

Proposed Mainline Typical Section



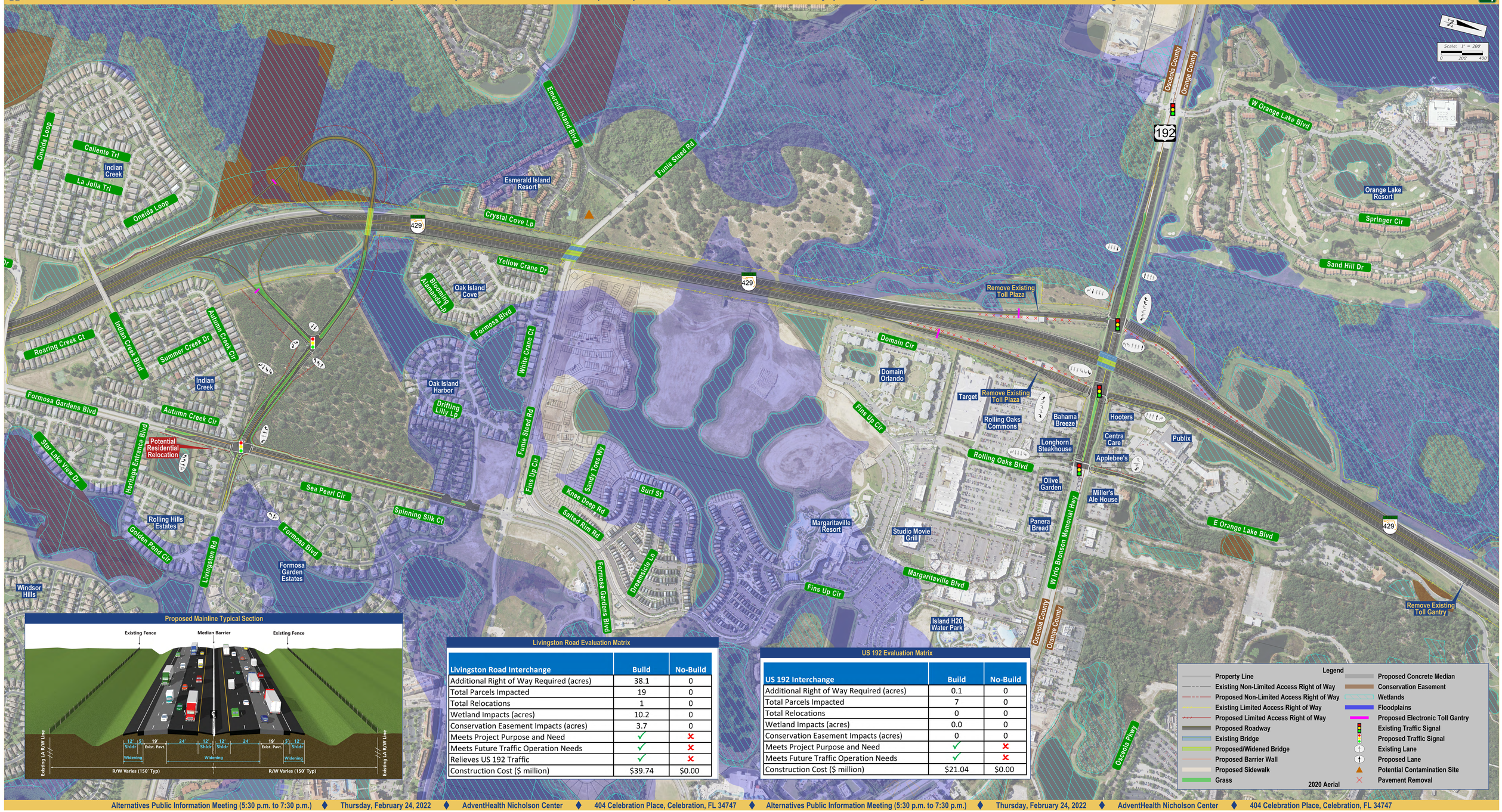
Legend

- Property Line
- Existing Non-Limited Access Right of Way
- Proposed Non-Limited Access Right of Way
- Existing Limited Access Right of Way
- Proposed Limited Access Right of Way
- Proposed Roadway
- Existing Bridge
- Proposed/Widened Bridge
- Proposed Barrier Wall
- Proposed Sidewalk
- Grass
- Proposed Concrete Median
- Conservation Easement
- Wetlands
- Floodplains
- Proposed Electronic Toll Gantry
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Lane
- Proposed Lane
- Potential Contamination Site
- Pavement Removal

2020 Aerial

Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747
Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Livingston Road and US 192 Interchanges



Proposed Mainline Typical Section

Livingston Road Evaluation Matrix

Livingston Road Interchange	Build	No-Build
Additional Right of Way Required (acres)	38.1	0
Total Parcels Impacted	19	0
Total Relocations	1	0
Wetland Impacts (acres)	10.2	0
Conservation Easement Impacts (acres)	3.7	0
Meets Project Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Relieves US 192 Traffic	✓	✗
Construction Cost ($ million)	$39.74	$0.00

US 192 Evaluation Matrix

US 192 Interchange	Build	No-Build
Additional Right of Way Required (acres)	0.1	0
Total Parcels Impacted	7	0
Total Relocations	0	0
Wetland Impacts (acres)	0.0	0
Conservation Easement Impacts (acres)	0	0
Meets Project Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Construction Cost ($ million)	$21.04	$0.00

Legend

- Property Line
- Existing Non-Limited Access Right of Way
- Proposed Non-Limited Access Right of Way
- Existing Limited Access Right of Way
- Proposed Limited Access Right of Way
- Proposed Roadway
- Existing Bridge
- Proposed/Widened Bridge
- Proposed Barrier Wall
- Proposed Sidewalk
- Grass
- Proposed Concrete Median
- Conservation Easement
- Wetlands
- Floodplains
- Proposed Electronic Toll Gantry
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Lane
- Proposed Lane
- Potential Contamination Site
- Pavement Removal

2020 Aerial

Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747

Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Western Way Interchange

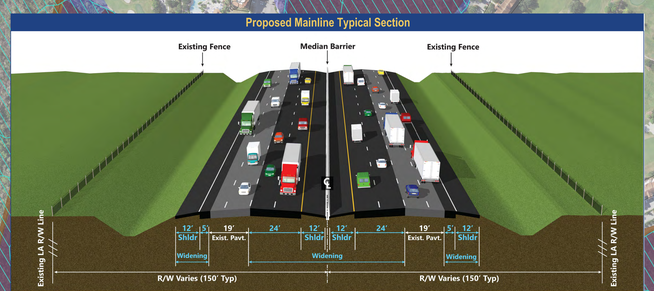
Western Way Evaluation Matrix

Western Way Interchange	Build	No-Build
Additional Right of Way Required (acres)	0.1	0
Total Parcels Impacted	4	0
Total Relocations	0	0
Wetland Impacts (acres)	0	0
Conservation Easement Impacts (acres)	0	0
Meets Project Purpose and Need	✓	✗
Meets Future Traffic Operation Needs	✓	✗
Reduces Future Vehicle Conflicts	✓	✗
Construction Cost ($ million)	$12.71	$0.00

Scale: 1" = 200'
0 200' 400'

Remove Existing Toll Plaza
Remove Existing Toll Gantry
W Orange Lake Blvd
E Orange Lake Blvd
Orange Lake Resort North Village
N Village Dr
N Village Cir
Orange Lake Resort River Island
Boggy Creek
Flamingo Crossings
Flamingo Crossings Village
Westerly Dr
The Westerly
Hartzog Rd
Sandpiper Landing Way
Western Way
Residence Inn
Fairfield Inn
Homewood Suites
Home2 Suites
Fiddler Ave
TownPlace Suites
SpringHill Suites
Duke Energy
Reedy Creek Improvement District
Reedy Creek Improvement District Solar Farm
Whitehorse Creek
Orange Lake Country Club
Legends Dr
Walt Disney Parks and Resort
429

Proposed Mainline Typical Section



Legend

- Property Line
- Existing Non-Limited Access Right of Way
- Proposed Non-Limited Access Right of Way
- Existing Limited Access Right of Way
- Proposed Limited Access Right of Way
- Proposed Roadway
- Existing Bridge
- Proposed/Widened Bridge
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- Grass
- Proposed Concrete Median
- Conservation Easement
- Wetlands
- Floodplains
- Proposed Electronic Toll Gantry
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Lane
- Proposed Lane
- Potential Contamination Site
- Pavement Removal

2019/2020 Aerials

Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Seidel Road Interchange

Seidel Road Evaluation Matrix

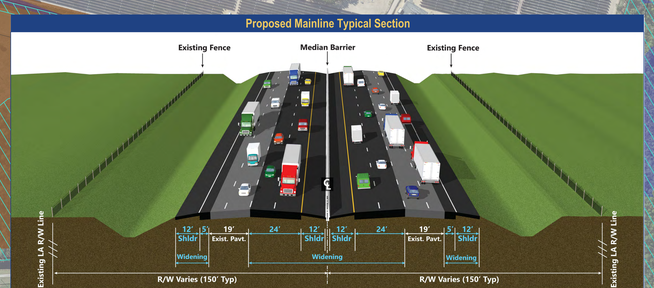
Seidel Road Interchange	Option 1 Traffic Signals	Option 2 Roundabouts	No-Build
Additional Right of Way Required (acres)	0	0.6	0
Total Parcels Impacted	0	5	0
Total Relocations	0	0	0
Wetland Impacts (acres)	0	0	0
Conservation Easement Impacts (acres)	0	0	0
Meets Project Purpose and Need	✓	✓	✗
Meets Future Traffic Operation Needs	✓	✓	✗
Reduces Future Vehicle Conflicts	✓	✓	✗
Construction Cost ($ million)	$8.71	$9.75	$0.00

Scale: 1" = 200'
0 200' 400'

Option 1
Signalized Intersections

Option 2
Double Roundabout

Proposed Mainline Typical Section



Legend

- Property Line
- Existing Non-Limited Access Right of Way
- Proposed Non-Limited Access Right of Way
- Existing Limited Access Right of Way
- Proposed Limited Access Right of Way
- Proposed Roadway
- Existing Bridge
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- Grass
- Proposed Concrete Median
- Conservation Easement
- Wetlands
- Floodplains
- Proposed Electronic Toll Gantry
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Lane
- Proposed Lane
- Potential Contamination Site
- Pavement Removal

2019/2020 Aerials

Alternatives Public Information Meeting (5:30 p.m. to 7:30 p.m.) ♦ Thursday, February 24, 2022 ♦ AdventHealth Nicholson Center ♦ 404 Celebration Place, Celebration, FL 34747

Project Development and Environment (PD&E) Study
to Widen Western Beltway (SR 429)
FPID: 446164-1-22-01
Osceola and Orange Counties

Livingston Road Interchange
Alternative 2: T-Ramp

FDOT

Scale: 1" = 200'
0 200' 400'

Legend

- Property Line
- Existing Non-Limited Access Right of Way
- Proposed Non-Limited Access Right of Way
- Existing Limited Access Right of Way
- Proposed Limited Access Right of Way
- Proposed Roadway
- Existing Bridge
- Proposed/Widened Bridge
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- Floodplains
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- Pavement Removal

2020 Aerial

Appendix B
Bridge Culvert Inspection Reports

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

BY:	CONSOR Engineers, LLC	STRUCTURE NAME:	SR 429 OVER BOGGY CREEK
OWNER:	33 Turnpike	YEAR BUILT:	2006
MAINTAINED BY:	33 Turnpike	SECTION NO.:	75 473 000
STRUCTURE TYPE:	1 Reinforced Concrete - 19 Culvert	MP:	1.251
LOCATION:	1.7MI N OF SR 530	ROUTE:	00429
SERV. TYPE ON:	1 Highway	FACILITY CARRIED:	SR 429 6.813
SERV. TYPE UNDER:	5 Waterway	FEATURE INTERSECTED:	BOGGY CREEK

☐ FUNCTIONALLY OBSOLETE ☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/16/2021 UNDERWATER: N/A

SUFFICIENCY RATING: 85
HEALTH INDEX: 66.23

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

BY:	CONSOR Engineers, LLC	STRUCTURE NAME:	SR 429 OVER BOGGY CREEK
OWNER:	33 Turnpike	YEAR BUILT:	2006
MAINTAINED BY:	33 Turnpike	SECTION NO.:	75 473 000
STRUCTURE TYPE:	1 Reinforced Concrete - 19 Culvert	MP:	1.251
LOCATION:	1.7MI N OF SR 530	ROUTE:	00429
SERV. TYPE ON:	1 Highway	FACILITY CARRIED:	SR 429 6.813
SERV. TYPE UNDER:	5 Waterway	FEATURE INTERSECTED:	BOGGY CREEK

☐ THIS BRIDGE CONTAINS FRACTURE CRITICAL COMPONENTS

☐ THIS BRIDGE IS SCOUR CRITICAL

☐ THIS REPORT IDENTIFIES DEFICIENCIES WHICH REQUIRE PROMPT CORRECTIVE ACTION

☐ FUNCTIONALLY OBSOLETE ☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/16/2021 UNDERWATER: N/A

OVERALL NBI RATINGS:

DECK:	N N/A (NBI)	CHANNEL:	6 Bank Slumping
SUPERSTRUCTURE:	N N/A (NBI)	CULVERT:	6 Deterioration
SUBSTRUCTURE:	N N/A (NBI)	SUFF. RATING:	85
PERF. RATING:	Good	HEALTH INDEX:	66.23

FIELD PERSONNEL / TITLE / NUMBER:	**INITIALS**
Daniels, Wade - Bridge Inspector (CBI#00636) (lead)	WD
Geden, Daniel - Assistant Bridge Inspector	

REVIEWING BRIDGE INSPECTION SUPERVISOR:

Toussaint, Benjamin - Bridge Inspector (CBI#00537) BT

CONFIRMING REGISTERED PROFESSIONAL ENGINEER:

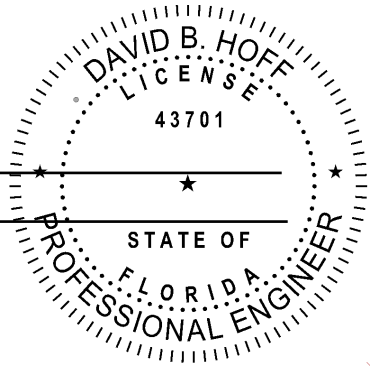
Hoff, David B. - Professional Engineer (PE #43701) CONSOR Engineers, LLC
2121 Old Hickory Tree Road
Registry No. 6876
St. Cloud Florida 34772

This item has been digitally signed and sealed by:

SIGNATURE:

DATE:

on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



The official record of this document is the electronic file digitally signed and sealed under Rule 61G15-23.004, F.A.C.

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

All Elements

MISCELLANEOUS : Channel

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	8290 / 3	Channel	0	.	0	.	1	100	0	.	1 (EA)
0	9140 / 3	Debris	0	.	0	.	1	100	0	.	1 (EA)

Element Inspection Notes:

8290/3 Note: There is no defined channel. The culvert appears to be a relief for overflow.

CS3: (9140) There is a heavy accumulation of vegetation at both ends of all three barrels, slightly restricting flow (INCREASE). See Photo 3. REPAIR (1 EA)

CS2: (9120) The east toe is intermittently exposed up to 3in high, starting at Wall 1, extending to the north, and buried at Wall 4 (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (quantified above)

(9120) The west toe is intermittently exposed, up to 3in H, starting at Wall 1, extending to the north, and is buried at mid cell, Cell 2. There is small riprap and gravel 3in to 5in diameter that armors this toe wall (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (quantified above)

For channel measurements, profiles, and photos, refer to the attached Bridge Profile Report and Photos 4 and 5.

9140/3 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	8475 / 3	R/Conc Walls	154	98.72	0	.	2	1.28	0	.	156 ft
0	1080 / 3	Delamination/Spall/Patched Area	0	.	0	.	2	100	0	.	2 ft

Element Inspection Notes:

8475/3 Note: This element includes all four wingwalls.

CS3: (1080) The northeast wing wall/east headwall interface has a spall/impending spall, 2ft-6in H x 3in W x 2in D, extending 4ft from the bottom slab (previously two defects, combined to one-same location) (NO CHANGE). See Photo 6. NO CORRECTIVE ACTION REQUIRED. (1 FT)

(1080) The southwest headwall/wing wall joint has a spall, 1ft-9in H x 1in W x 3/4in D, with no exposed reinforced steel, 10in below the top of the wall (NO CHANGE). See Photo 7. NO CORRECTIVE ACTION REQUIRED. (1 FT)

CS1: The headwall/wing wall joints have vertical cracks, up to 1/32in wide, at all four corners (NO CHANGE). NO CORRECTIVE ACTION REQUIRED.

Cleanliness (considered incidental to this element):
All wing walls are overgrown with vegetation (NEW). See Photo 8. REPAIR

1080/3 Refer to Parent Element

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

SUBSTRUCTURE : Culvert

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	241 / 3	Re Conc Culvert	0	.	1152	97.71	27	2.29	0	.	1179 ft
0	1080 / 3	Delamination/Spall/Patched Area	0	.	0	.	6	100	0	.	6 ft
0	1120 / 3	Efflorescence/Rust Staining	0	.	2	8.7	21	91.3	0	.	23 ft
0	1190 / 3	Abrasion(PSC/RC)	0	.	1150	100	0	.	0	.	1150 ft

Element Inspection Notes:

241/3 Note: There are bats residing in all cells of the culvert.

CS3: (1080) There are edge spalls, up to 6in H x 2in W x 3/4in D, at the joints (NO CHANGE). See Photo 9. NO CORRECTIVE ACTION REQUIRED. (6 FT)

(1120) Some grouted joints have cracks, full circumference x up to 1/16in W, with efflorescence and corrosion bleedout and some with active water leakage (NEW). See Photo 10. NO CORRECTIVE ACTION REQUIRED. (21 FT)

CS2: (1190) Cells 1 through 3 have scaling, typically 1/16in deep, with areas up to 1/8in deep, from the floor slab, extending up 2ft high on the sidewalls (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (1150 FT) (quantity adjusted to better reflect current conditions)

(1120) Both headwalls have vertical cracks, full height x up to 1/32in W, with efflorescence extending across the top of the headwall throughout (INCREASE). See Photo 11. NO CORRECTIVE ACTION REQUIRED. (2 FT)

There are minor offsets up to 3/4in between the precast sections at the joints throughout. This appears to be an as-built condition (NO CHANGE). NO CORRECTIVE ACTION REQUIRED.

Several of the joints are open throughout all three cells. Some of the joints have been intermittently sealed with grout, primarily at the sidewalls and some full circumference of joint (INCREASE). See Photo 12. NO CORRECTIVE ACTION REQUIRED.

The sidewalls have isolated vertical cracks up to 3ft H x 1/64in W, some with minor mineral staining (NO CHANGE). NO CORRECTIVE ACTION REQUIRED.

Cleanliness (considered incidental to this element):
The headwalls are overgrown with vegetation (NEW). See Photo 13. REPAIR

1080/3 Refer to Parent Element

1120/3 Refer to Parent Element

1190/3 Refer to Parent Element

Total Number of Elements*: 3
*excluding defects/protective systems

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Inspector Recommendations

UNIT: 0 **MISCELLANEOUS**

ELEMENT/ENV: 8290 / 3 Channel **ELEM CATEGORY: Channel**

CONDITION STATE		PRIORITY
3	MMS Quantity: 4 mh Element Estimated Quantity: 1 (EA)	3

WORK ORDER RECOMMENDATION:

Remove vegetation at both ends of all three cells. (4MH) Photo 3

ELEMENT/ENV: 8475 / 3 R/Conc Walls **ELEM CATEGORY: Other Elements**

CONDITION STATE		PRIORITY
1 , 3	MMS Quantity: 2 mh Element Estimated Quantity: 1 ft	3

WORK ORDER RECOMMENDATION:

Remove the vegetation overgrown the wing walls. (2MH) Photo 8

UNIT: 0 **SUBSTRUCTURE**

ELEMENT/ENV: 241 / 3 Re Conc Culvert **ELEM CATEGORY: Culvert**

CONDITION STATE		PRIORITY
2 , 3	MMS Quantity: 4 mh Element Estimated Quantity: 1 ft	3

WORK ORDER RECOMMENDATION:

Remove the vegetation overgrowing the headwalls. (4MH) Photo 13

Structure Notes

This structure is inventoried from south to north.

Type: Triple Cell Reinforced Concrete
Material: Precast Concrete
Box Height: 6ft
Box Width: 12ft
Length: 393ft
Culvert Width at Centerline of Roadway: 39ft-3in
Year Built: 2006
Embankment Depth: 21ft-2in
Water Depth: 2.9ft
Pipe Diameter: N/A
Clear Zone: 52ft 9in

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

INSPECTION NOTES: YCVP 11/16/2021

Sufficiency Rating Calculation Accepted by knieivd at 12/27/2021 7:07:39 PM

LOAD RATING: The structure is currently not posted. A load rating analysis is deemed not necessary due to the depth of fill over the structure. As stated in AASHTO 6.4.2, the effect of live load may be neglected for single spans when the depth of fill exceeds 8' and exceeds the span length.

The NBI rating for items 61 Channel and 62 Culvert were lowered to 6 to better reflect current conditions.

Note: There are bats living in all three cells of the culvert, a respirator should be worn while in the cells.

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Bridge No. 750623: Photo 1 - ID Number on Structure

Bridge No. 750632: Photo 2 - West Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 8290: Photo 3 - Typical Heavy Accumulation of Vegetation at Ends of Cell

Element 8290: Photo 4 - Channel Looking East from Culvert

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 8290: Photo 5 - Channel Looking West from Culvert

Element 8475: Photo 6 - Spall/Impending Spall in the Northeast Wing Wall/Headwall Interface

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 8475: Photo 7 - Spall in the Southwest Headwall/Wing Wall Joint

Element 8475: Photo 8 - Wing Wall Overgrown with Vegetation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 241: Photo 9 - Typical Edge Spall at the Joints

Element 241: Photo 10 - Typical Crack in Grouted Joint with Effloresence, Corrosion Bleedout and Water Leakage

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 241: Photo 11 - Typical Vertical Crack with Efflorescence in Headwall

Element 241: Photo 12 - Typical Grout Coat in Joint Full Circumference

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750623

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/16/2021 YCVP**

Element 241: Photo 13 - Typical Headwall Overgrown with Vegetation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report

REPORT ID: INSP005 | **CIDR** | **DATE PRINTED: 1/16/2022**

Structure ID: 750623

Description

Structure Unit Identification

Bridge/Unit Key: 750623 1
Structure Name: SR 429 OVER BOGGY CREEK
Description: MAIN SPAN 1
Type: M - Main

Roadway Identification

NBI Structure No (8): 750623
Position/Prefix (5): 1 - Route On Structure
Kind Hwy (Rte Prefix): 3 State Hwy
Design Level of Service: 1 Mainline
Route Number/Suffix: 00429 / 0 N/A (NBI)
Feature Intersect (6): BOGGY CREEK
Critical Facility: Not Defense-crit
Facility Carried (7): SR 429 6.813 ✓
Mile Point (11): 1.251
Latitude (16): 028d21'52.6" Long (17): 081d36'36.5"

Roadway Traffic and Accidents

Lanes (28): 5 Medians: 1 Speed: 65 mph
ADT Class: 4 ADT Class 4
Recent ADT (29): 28500 ✓ Year (30): 2020 ✓
Future ADT (114): 49448 ✓ Year (115): 2042 ✓
Truck % ADT (109): 12 ✓
Detour Length (19): 0 mi
Detour Speed: 65 mph
Accident Count: -1 Rate: -1

Roadway Classification

Nat. Hwy Sys (104): 1 On the NHS
National base Net (12): 1 - On Base Network
LRS Inventory Rte (13a): 75 473 000 Sub Rte (13b): 00
Functional Class (26): 12 Urban Fwy/Expwy
Federal Aid System: ON
Defense Hwy (100): 0 Not a STRAHNET hwy
Direction of Traffic (102): 2 2-way traffic
Emergency: ☐

Roadway Clearances

Vertical (10): 99.99 ft Appr. Road (32): 76 ft
Horiz. (47): 48 ft Roadway (51): 0 ft
Truck Network (110): 0 Not part of natl netwo
Toll Facility (20): 2 On toll road
Fed. Lands Hwy (105): 0 N/A (NBI)
School Bus Route: ☐
Transit Route: ☐

NBI Project Data

Proposed Work (075A): Not Applicable (P)
Work To Be Done By (075B): Not Applicable (P)
Improvement Length (076): 0 ft

Improvement Cost (094): $ 0.00
Roadway Improvement Cost (095): $ 0.00
Total Cost (096): $ 0.00
Year of Estimate (097):

NBI Rating

Channel (61): 6 Bank Slumping ✓
Deck (58): N N/A (NBI)
Superstructure (59): N N/A (NBI)
Substructure (60): N N/A (NBI)

Culvert (62): 6 Deterioration ✓
Waterway (71): 8 Equal Desirable
Unrepaired Spalls: -1 sq.ft.
Review Required: X

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report

REPORT ID: INSP005 | **CIDR** | **DATE PRINTED: 1/16/2022**

Structure ID: 750623

Structure Identification

Admin Area: METROPLAN Orlando
District (2): D8 - Turnpike
County (3): (75)Orange
Place Code (4): Lake Buena Vista
Location (9): 1.7MI N OF SR 530
Border Br St/Reg (98): Not Applicable (P) Share: 0 %
Border Struct No (99):
FIPS State/Region (1): 12 Florida Region 4-Atlanta
NBIS Bridge Len (112): Y - Meets NBI Length

Parallel Structure (101): No || bridge exists
Temp. Structure (103): Not Applicable (P)
Maint. Resp. (21): 33 Turnpike
Owner (22): 33 Turnpike
Historic Signif. (37): 5 Not eligible for NRHP

Geometrics

Spans in Main Unit (45): 3
Approach Spans (46): 0
Length of Max Span (48): 12 ft
Structure Length (49): 39.3 ft
Total Length: 41.3 ft
Deck Area: 0 sqft
Structure Flared (35): 0 No flare

Age and Service

Year Built (27): 2006
Year Reconstructed (106):
Type of Service On (42a): 1 Highway
Under (42b): 5 Waterway
Fracture Critical Details: Not Applicable

Structure Type and Material

Curb/Sidewalk (50): Left: 0 ft Right: 0 ft
Bridge Median (33): 1 Open median
Main Span Material (43A): 1 Reinforced Concrete
Appr Span Material (44A): Not Applicable (P)
Main Span Design (43B): 19 Culvert
Appr Span Design (44B): Not Applicable (P)

Deck Type and Material

Deck Width (52): 0 ft
Skew (34): 48 deg
Deck Type (107): N N/A (NBI)
Surface (108): N N/A (no deck (NBI))
Membrane: N N/A (no deck (NBI))
Deck Protection: N N/A (no deck (NBI))

Appraisal

Structure Appraisal

Open/Posted/Closed (41): A Open, no restriction
Deck Geometry (68): N Not applicable (NBI)
Underclearances (69): N Not applicable (NBI)
Approach Alignment (72): 8-No Speed Red thru Curv
Bridge Railings (36a): N N/A or not required
Transitions (36b): N N/A or not required

Approach Guardrail (36c): 1 Meets Standards
Approach Guardrail Ends (36d): 1 Meets Standards
Scour Critical (113): 8 Stable Above Footing

Navigation Data

Navigation Control (38): Permit Not Required
Nav Vertical Clr (39): 0 ft
Nav Horizontal Clr (40): 0 ft
Min Vert Lift Clr (116): 0 ft
Pier Protection (111): Not Applicable (P)

NBI Condition Rating

Sufficiency Rating: * 85
Health Index: 66.23
Structural Eval (67): 6 Equal Min Criteria
Deficiency: Not Deficient

Minimum Vertical Clearance

Over Structure (53): 99.9 ft
Under (reference) (54a): N Feature not hwy or RR
Under (54b): 0 ft

Minimum Lateral Underclearance

Reference (55a): N Feature not hwy or RR
Right Side (55b): 0 ft
Left Side (56): 0 ft

Schedule

Current Inspection

Inspection Date: 11/16/2021 ✓
Inspector: KNIEIWD - Wade Daniels ✓
Bridge Group: CA542
Alt. Bridge Group:
Primary Type: Regular NBI
Review Required: [X]

Next Inspection Date Scheduled

NBI: 11/16/2023 ✓
Element: 11/16/2023 ✓
Fracture Critical:
Underwater:
Other/Special:
Inventory Photo Update Due: 11/14/2023

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
CIDR

REPORT ID: INSP005
Structure ID: 750623
DATE PRINTED: 1/16/2022

Schedule Cont.

Inspection Types Performed NBI [X] Element [X] Fracture Critical [ ] Underwater [ ] Other Special [ ]

Inspection Intervals	Required (92)	Frequency (92)	Last Date (93)
Fracture Critical	[ ]	mos	
Underwater	[ ]	mos	
Other Special	[ ]	mos	
NBI		24 mos (91)	11/16/2021 ✓ (90)

Inspection Resources

Crew Hours:	4
Flagger Hours:	0
Helper Hours:	0
Snooper Hours:	0
Special Crew Hours:	0
Special Equip Hours:	0

Bridge Related

General Bridge Information

Parallel Bridge Seq:		Bridge Rail 1:	Not applicable-No rail
Channel Depth:	2.9 ft ✓	Bridge Rail 2:	Not applicable-No rail
Radio Frequency:		Electrical Devices:	No electric service
Phone Number:		Culvert Type:	Precast concrete box
Exception Date:		Maintenance Yard:	803-TPK 237-308&BLine&EW
Exception Type:		FIHS ON / OFF:	On-Route Only on FIHS
Accepted By Maint:		Previous Structure:	
Warranty Expiration:	00/00/0000	2nd Previous Structure:	
Performance Rating:	Good	Replacement Structure:	

Permitted Utilities: Power [ ] Water [ ] Gas [ ] Fiber Optic [ ] Sewage [ ] Other [ ]

Bridge Load Rating Information

Inventory Type (065):	Field Eval & Engr Judge	Inventory Rating (066):	99.0 tons
Operating Type (063):	Field Eval & Engr Judge	Operating Rating (064):	99.0 tons
Original Design Load (031):	HL 93	FL120 Permit Rating:	-1.0 tons
Date:	07/14/2006	HS20/FL120 Max Span Rating:	99.0 tons
Initials:	GD	Dynamic Impact in Percent:	0 %
Load Rating Rev. Recom.:	No	Governing Span Length:	12.1 ft
Load Rating Plans Status:	Built	Minimum Span Length:	
		Distribution Method:	AASHTO formula

Load Rating Notes: TRAFFIC RESTRICTIONS: The structure is currently not posted. A load rating analysis is de...

LEGAL LOADS

SU2:	99.0 tons
SU3:	99.0 tons
SU4:	99.0 tons
C3:	99.0 tons
C4:	99.0 tons
C5:	99.0 tons
ST5:	99.0 tons
Posting (070):	5 At/Above Legal Loads
Open/Posted/Closed (041):	A Open, no restriction

POSTING

Recom. SU Posting:	99 tons
Recom. C Posting:	99 tons
Recom. ST5 Posting:	99 tons
Actual SU Posting:	99 tons
Actual C Posting:	99 tons
Actual ST5 Posting:	99 tons
Actual Blanket Posting:	99 tons
Emergency Vehicle:	1 EV inapplicable

FLOOR BEAM (FB) FB Present: No

FB Span Length, Gov:	0.0 ft
FB Spacing, Gov:	0.0 ft
FB OPR Rating:	0.0 tons
FB SU4 OPR Rating:	0.0 tons
FB FL120 Rating:	0.0 tons

SEGMENTAL (SEG)

SEG Wing-Span:	-1.0 ft
SEG Web-to-Web Span:	-1.0 ft
SEG Transverse HL93 Operating:	-1.00 RF

Bridge Scour and Storm Information

Pile Driving Record:	Not Applicable	Scour Recommended I:	Not Applicable ✓
Foundation Type:	Unknown	Scour Recommended II:	Not Applicable ✓
Mode of Flow:	Riverine	Scour Recommended III:	Not Applicable ✓
Rating Scour Eval:	Not Applicable ✓	Scour Elevation:	999 ft
Highest Scour Eval:	Not Applicable ✓	Action Elevation:	999 ft
Scour Evaluation Method:		Storm Frequency:	999

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005 **Inspection/CIDR/Bridge Profile Report**

Structure ID: 750623 **CIDR** **DATE PRINTED: 1/16/2022**

Elements

Inspection Date: 11/16/2021 **YCVP**

MISCELLANEOUS : Channel

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	8290 / 3	Channel	0	.	0	.	1	100	0	.	1 (EA)
0	9140 / 3	Debris	0	.	0	.	1	100	0	.	1 (EA)

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	8475 / 3	R/Conc Walls	154	98.72	0	.	2	1.28	0	.	156 ft
0	1080 / 3	Delamination/Spall/Patched Area	0	.	0	.	2	100	0	.	2 ft

SUBSTRUCTURE : Culvert

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
0	241 / 3	Re Conc Culvert	0	.	1152	97.71	27	2.29	0	.	1179 ft
0	1080 / 3	Delamination/Spall/Patched Area	0	.	0	.	6	100	0	.	6 ft
0	1120 / 3	Efflorescence/Rust Staining	0	.	2	8.7	21	91.3	0	.	23 ft
0	1190 / 3	Abrasion(PSC/RC)	0	.	1150	100	0	.	0	.	1150 ft

Total Number of Elements*: 3
*excluding defects/protective systems

Inspection Information

Inspection Date: 11/16/2021 **Type:** Regular NBI

Inspector: KNIEIWD - Wade Daniels

Inspection Notes: Sufficiency Rating Calculation Accepted by knieivd at 12/27/2021 7:07:39 PM

LOAD RATING: The structure is currently not posted. A load rating analysis is deemed not necessary due to the depth of fill over the structure. As stated in AASHTO 6.4.2, the effect of live load may be neglected for single spans when the depth of fill exceeds 8' and exceeds the span length.

The NBI rating for items 61 Channel and 62 Culvert were lowered to 6 to better reflect current conditions.

Note: There are bats living in all three cells of the culvert, a respirator should be worn while in the cells.

Structure Notes

This structure is inventoried from south to north.

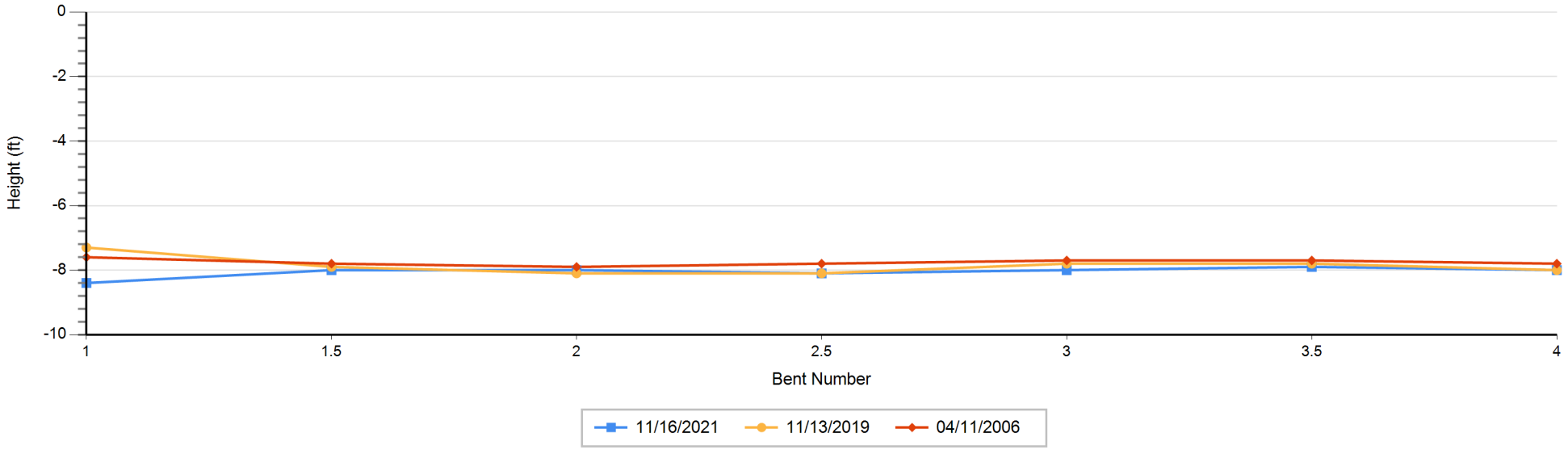
Type: Triple Cell Reinforced Concrete
Material: Precast Concrete
Box Height: 6ft
Box Width: 12ft
Length: 393ft
Culvert Width at Centerline of Roadway: 39ft-3in
Year Built: 2006
Embankment Depth: 21ft-2in
Water Depth: 2.9ft
Pipe Diameter: N/A
Clear Zone: 52ft 9in

Schedule Notes

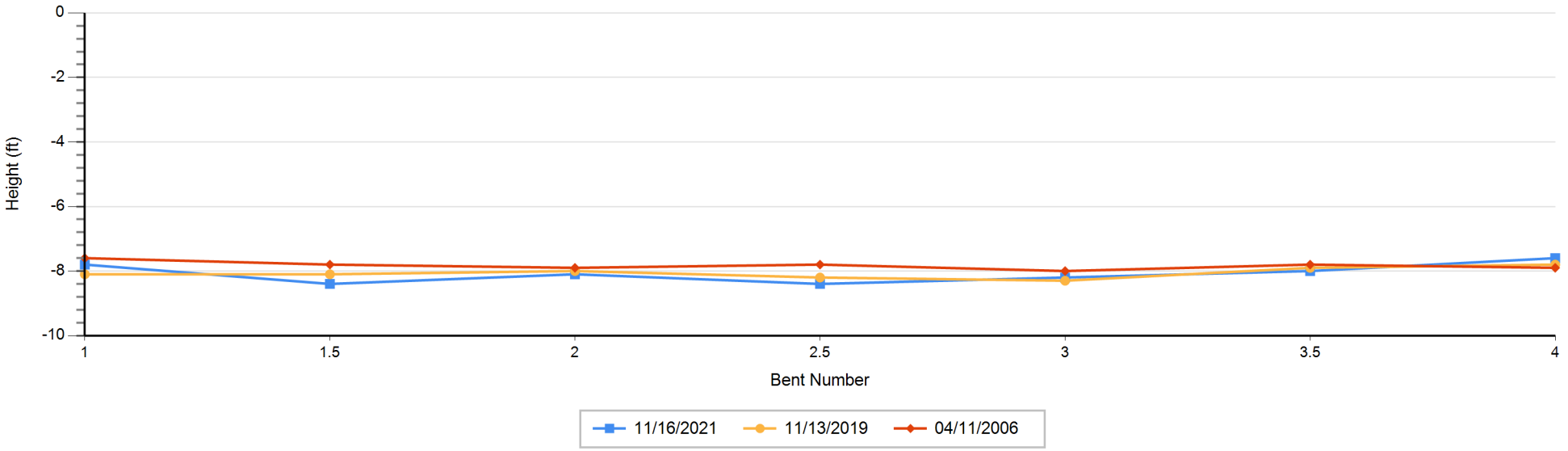
FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Bridge Profile

DATE PRINTED: 1/16/2022 5:27:40 PM

Left Profile by Inspection



Right Profile by Inspection



Profile Data - Numerical Summary

Inspection Date and Key: 11/16/2021 YCVP

Bent #	Left Height	Right Height
1	8.40	7.80
1.5	8.00	8.40
2	8.00	8.10
2.5	8.10	8.40
3	8.00	8.20
3.5	7.90	8.00
4	8.00	7.60

(All Heights are in Feet)

Air Temp: 72

Profile Notes:

Waterline = at Cell 2, Midspan, Right Side=5.5ft, Left Side=5.7ft.
All measurements were taken from the top of the headwall.

Inspection Date and Key: 11/13/2019 WIBE

Bent #	Left Height	Right Height
1	7.30	8.10
1.5	7.90	8.10
2	8.10	8.00
2.5	8.10	8.20
3	7.80	8.30
3.5	7.80	7.90
4	8.00	7.80

Air Temp: 78

Profile Notes:

Waterline = at Cell 2, Midspan, Right Side=5.4ft, Left Side=5.7ft.
All measurements were taken from the top of the headwall.

Inspection Date and Key: 4/11/2006 MSSN

Bent #	Left Height	Right Height
1	7.60	7.60

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Bridge Profile

DATE PRINTED: 1/16/2022 5:27:40 PM

Profile Data - Numerical Summary

Bent #	Left Height	Right Height
1.5	7.80	7.80
2	7.90	7.90
2.5	7.80	7.80
3	7.70	8.00
3.5	7.70	7.80
4	7.80	7.90

(All Heights are in Feet)

Air Temp:

Profile Notes:

Waterline = 7.0' at Wall 3, Left Side

All measurements were taken from the top of the headwall.

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

BY:	CONSOR Engineers, LLC	STRUCTURE NAME:	SR 429 OVR WHITTEN HORSE CREEK
OWNER:	33 Turnpike	YEAR BUILT:	2006
MAINTAINED BY:	33 Turnpike	SECTION NO.:	75 473 000
STRUCTURE TYPE:	1 Reinforced Concrete - 19 Culvert	MP:	2.752
LOCATION:	3.2MI N OF SR 530	ROUTE:	00429
SERV. TYPE ON:	1 Highway	FACILITY CARRIED:	SR 429 8.334
SERV. TYPE UNDER:	5 Waterway	FEATURE INTERSECTED:	WHITTENHORSE CRK

☐ FUNCTIONALLY OBSOLETE ☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/2/2021 UNDERWATER: N/A

SUFFICIENCY RATING: 85

HEALTH INDEX: 66.76

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

BY:	CONSOR Engineers, LLC	STRUCTURE NAME:	SR 429 OVR WHITTEN HORSE CREEK
OWNER:	33 Turnpike	YEAR BUILT:	2006
MAINTAINED BY:	33 Turnpike	SECTION NO.:	75 473 000
STRUCTURE TYPE:	1 Reinforced Concrete - 19 Culvert	MP:	2.752
LOCATION:	3.2MI N OF SR 530	ROUTE:	00429
SERV. TYPE ON:	1 Highway	FACILITY CARRIED:	SR 429 8.334
SERV. TYPE UNDER:	5 Waterway	FEATURE INTERSECTED:	WHITTENHORSE CRK

☐ THIS BRIDGE CONTAINS FRACTURE CRITICAL COMPONENTS

☐ THIS BRIDGE IS SCOUR CRITICAL

☐ THIS REPORT IDENTIFIES DEFICIENCIES WHICH REQUIRE PROMPT CORRECTIVE ACTION

☐ FUNCTIONALLY OBSOLETE ☐ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Regular NBI

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 11/2/2021 UNDERWATER: N/A

OVERALL NBI RATINGS:

DECK:	N N/A (NBI)	CHANNEL:	6 Bank Slumping
SUPERSTRUCTURE:	N N/A (NBI)	CULVERT:	8 No Major Problem
SUBSTRUCTURE:	N N/A (NBI)	SUFF. RATING:	85
PERF. RATING:	Good	HEALTH INDEX:	66.76

FIELD PERSONNEL / TITLE / NUMBER:	INITIALS
Daniels, Wade - Bridge Inspector (CBI#00636) (lead)	WD
Miller, Benjamin - Assistant Bridge Inspector	

REVIEWING BRIDGE INSPECTION SUPERVISOR:

Meek, Frederick - Bridge Inspector (CBI#00397)

CONFIRMING REGISTERED PROFESSIONAL ENGINEER:

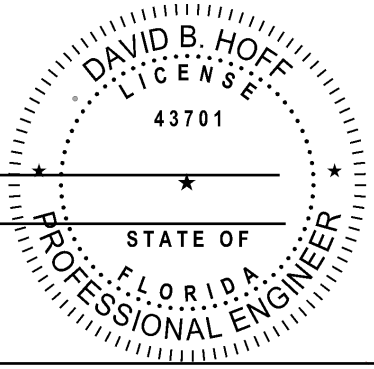
Hoff, David B. - Professional Engineer (PE #43701) CONSOR Engineers, LLC
2121 Old Hickory Tree Road
Registry No. 6876
St. Cloud Florida 34772

This item has been digitally signed and sealed by:

SIGNATURE:

DATE:

on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

All Elements

MISCELLANEOUS : Channel

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	8290 / 3	Channel	0	.	0	.	1	100	0	.	1 (EA)
Structure Unit 0	9130 / 3	Aggradation	0	.	0	.	1	100	0	.	1 (EA)

Element Inspection Notes:

8290/3 CS3: (9130) There is sand and silt accumulation, up to 1ft-6in high in front of Cell 2 at the west inlet, with vegetation flow restricting the flow (DECREASE-SILT WAS REMOVED AT CELL 1/ INCREASE IN CELL 2). See Photo 3. REPAIR (1 EA)

Both cells have up to 1ft of sediment of buildup, mostly located in the first five precast sections from either end in each cell (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (quantified above)

The west and east sides of the culvert have vegetation growth (NEW). See Photo 4. REPAIR (quantified above)

For channel measurements, profiles, and photos, refer to the attached Bridge Profile Report and Photos 5 and 6.

CORRECTIVE ACTION EVALUATION
Remove vegetation from both sides of culvert. Completed under work order Site #8596426 on 1/20/2021; however, is reoccurring as noted above.

No work order issued: The previously reported sand and silt accumulation, up to 10in high in front of both cells at the west inlet

9130/3 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	8475 / 3	R/Conc Walls	96	97.96	1	1.02	1	1.02	0	.	98 ft
Structure Unit 0	1130 / 3	Cracking (RC and Other)	0	.	1	50	1	50	0	.	2 ft

Element Inspection Notes:

8475/3 Note: This element includes all four wingwalls.

CS3: (1130) The northwest headwall/wing wall joint has a vertical crack full height x up to 1/2in wide (NO CHANGE). See Photo 7. NO CORRECTIVE ACTION REQUIRED. (1 FT)

CS2: (1130) The northeast and southeast headwall/wing wall joint interface has a vertical crack, full height x 1/16in W; the southeast has been sealed (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (1 FT)

Cleanliness (considered incidental to this element):
The wing walls are overgrown with vegetation (NEW). See Photo 8. REPAIR

1130/3 Refer to Parent Element

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

SUBSTRUCTURE : Culvert

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	241 / 3	Re Conc Culvert	0	.	354	98.33	6	1.67	0	.	360 ft
Structure Unit 0	1080 / 3	Delamination/Spall/Patched Area	0	.	2	100	0	.	0	.	2 ft
Structure Unit 0	1120 / 3	Efflorescence/Rust Staining	0	.	4	40	6	60	0	.	10 ft
Structure Unit 0	1190 / 3	Abrasion(PSC/RC)	0	.	348	100	0	.	0	.	348 ft

Element Inspection Notes:

241/3

CS3: (1120) The construction joints at each end of each cell are grouted over, approximately 5ft from each opening. The grout has vertical cracks, up to 1/16in wide with corrosion bleed-out, up each sidewall and across the top slab underside (NO CHANGE). See Photo 9. NO CORRECTIVE ACTION REQUIRED. (6 FT)

CS2: (1080) The joints in the cells have edge spalls, up to 4in H x 3in W x 1/2in D (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (2 FT)

(1120) Both headwalls have vertical cracks, up to full height x 1/64in wide, some with light efflorescence (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (4 FT)

(1190) The culvert sidewalls have scaling, typically up to 1/16in deep with isolated areas 1/32in deep, throughout from the floor slab extending, up to 2ft-10in high on the sidewalls (NO CHANGE). NO CORRECTIVE ACTION REQUIRED. (348 FT)

Joint (considered incidental to this element):
There are minor areas of missing joint sealant throughout the joints in all cells (NO CHANGE). NO CORRECTIVE ACTION REQUIRED.

Roadway (considered incidental to this element):
The southbound left travel lane and both northbound travel lanes have random longitudinal and transverse cracks, up to 20ft L x 1/4in W (NEW). See Photo 10. NO CORRECTIVE ACTION REQURED.

Cleanliness (considered incidental to this element):
The headwalls are overgrown with vegetation (NEW). See Photo 11. REPAIR

CORRECTIVE ACTION EVALUATION:
No work order issued: The previously reported light raveling, up to 3ft W x 30ft L, in the southbound right travel lane has been repaired.

1080/3 Refer to Parent Element

1120/3 Refer to Parent Element

1190/3 Refer to Parent Element

Total Number of Elements*: 3
*excluding defects/protective systems

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Inspector Recommendations

UNIT: Structure MISCELLANEOUS
Unit 0

ELEMENT/ENV: 8290 / 3 Channel **ELEM CATEGORY: Channel**

CONDITION STATE			PRIORITY
3	MMS Quantity: 2 mh	Element Estimated Quantity: 1 (EA)	3

WORK ORDER RECOMMENDATION:
Remove the vegetation growth on the west and east sides of the culvert. (2MH) Photo 4

CONDITION STATE			PRIORITY
3	MMS Quantity: 2 mh	Element Estimated Quantity: 1 (EA)	3

WORK ORDER RECOMMENDATION:
Remove the sand, silt and vegetation growth in Cell 2. (2MH) Photo 3

ELEMENT/ENV: 8475 / 3 R/Conc Walls **ELEM CATEGORY: Other Elements**

CONDITION STATE			PRIORITY
1 , 2 , 3	MMS Quantity: 2 mh	Element Estimated Quantity: 1 ft	3

WORK ORDER RECOMMENDATION:
Remove the vegetation overgrowing the wing walls. (2MH) Photo 8

UNIT: Structure SUBSTRUCTURE
Unit 0

ELEMENT/ENV: 241 / 3 Re Conc Culvert **ELEM CATEGORY: Culvert**

CONDITION STATE			PRIORITY
2 , 3	MMS Quantity: 2 mh	Element Estimated Quantity: 1 ft	3

WORK ORDER RECOMMENDATION:
Remove the vegetation overgrowing the headwalls. (2Mh) Photo 11

Structure Notes

This structure is inventoried from south to north.

Type: Double Cell Precast
Material: Precast Concrete
Box Height: 4ft
Box Width: 10.2ft
Length: 180ft
Culvert Width at Centerline of Roadway: 20.4ft
Year Built: 2006
Embankment Depth: 5ft
Water Depth: 1.4ft
Pipe Diameter: N/A
Clear Zone: 45ft 3in (Southbound)

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

INSPECTION NOTES: HGVD 11/2/2021

Sufficiency Rating Calculation Accepted by KNIEISM at 12/9/2021 8:43:07 AM

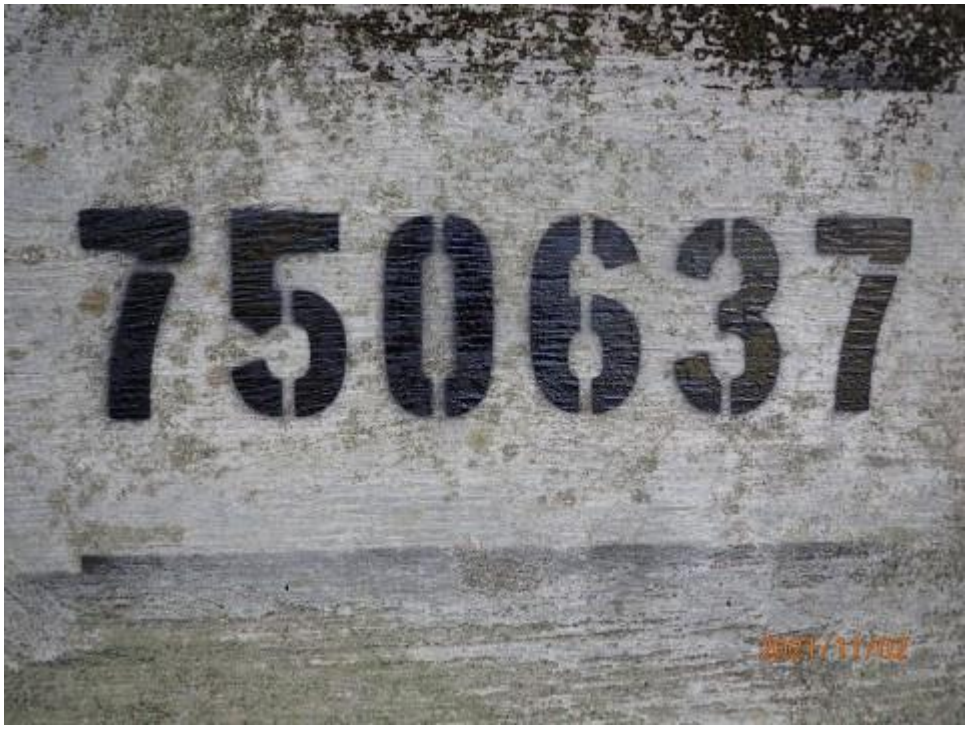
LOAD RATING: The load rating on file for Bridge 750637, dated 06/12/2006, was determined to accurately reflect the current physical conditions found during this routine inspection conducted on 11/02/2021. Confirming Individual: D. Hoff 12/07/2021. The Confirming Engineer provided a cursory review of the previous load rating and does not assume any responsibility for the accuracy of the load rating calculations performed by others.

The NBI rating for item 61 Channel was lowered to 6 to better reflect current conditions.

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**



Bridge No. 750637: Photo 1 - ID Number on Structure

Bridge No. 750637: Photo 2 - East Elevation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Element 8290: Photo 3 - Vegetation Growth Restricting Flow in Cell 2

Element 8290: Photo 4 - Typical Vegetation Growth on the Side of Culvert

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Element 8290: Photo 5 - Channel Looking East from Bridge

Element 8290: Photo 6 - Channel Looking West from Bridge

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Element 8475: Photo 7 - Vertical Crack in the Northwest Headwall/Wing Wall Joint

Element 8475: Photo 8 - Typical Wing Wall Overgrown with Vegetation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Element 241: Photo 9 - Typical Vertical Crack with Corrosion Bleed-Out in the Construction Joint

Element 241: Photo 10 - Typical Crack in the the Travel Lane

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Inspection

Structure ID: 750637

DISTRICT: D8 - Turnpike **INSPECTION DATE: 11/2/2021 HGVD**

Element 241: Photo 11 - Typical Headwall Overgrown with Vegetation

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report

REPORT ID: INSP005 | **CIDR** | **DATE PRINTED: 12/9/2021**

Structure ID: 750637

Description

Structure Unit Identification

Bridge/Unit Key: 750637 1
Structure Name: SR 429 OVR WHITTEN HORSE CREEK
Description: MAIN SPAN 1
Type: M - Main

Roadway Identification

NBI Structure No (8): 750637
Position/Prefix (5): 1 - Route On Structure
Kind Hwy (Rte Prefix): 3 State Hwy
Design Level of Service: 1 Mainline
Route Number/Suffix: 00429 / 0 N/A (NBI)
Feature Intersect (6): WHITTENHORSE CRK
Critical Facility: Not Defense-crit
Facility Carried (7): SR 429 8.334
Mile Point (11): 2.752
Latitude (16): 028d23'08.3" Long (17): 081d36'54.7"

Roadway Traffic and Accidents

Lanes (28): 4 Medians: 1 Speed: 65 mph
ADT Class: 4 ADT Class 4
Recent ADT (29): 35300 Year (30): 2020
Future ADT (114): 61246 Year (115): 2042
Truck % ADT (109): 12
Detour Length (19): 0 mi
Detour Speed: 65 mph
Accident Count: -1 Rate:

Roadway Classification

Nat. Hwy Sys (104): 1 On the NHS
National base Net (12): 1 - On Base Network
LRS Inventory Rte (13a): 75 473 000 Sub Rte (13b): 00
Functional Class (26): 12 Urban Fwy/Expwy
Federal Aid System: ON
Defense Hwy (100): 0 Not a STRAHNET hwy
Direction of Traffic (102): 2 2-way traffic
Emergency: [ ]

Roadway Clearances

Vertical (10): 99.99 ft Appr. Road (32): 88 ft
Horiz. (47): 44 ft Roadway (51): 0 ft
Truck Network (110): 0 Not part of natl netwo
Toll Facility (20): 2 On toll road
Fed. Lands Hwy (105): 0 N/A (NBI)
School Bus Route: [ ]
Transit Route: [X]

NBI Project Data

Proposed Work (075A): Not Applicable (P)
Work To Be Done By (075B): Not Applicable (P)
Improvement Length (076): 0 ft

Improvement Cost (094): $ 0.00
Roadway Improvement Cost (095): $ 0.00
Total Cost (096): $ 0.00
Year of Estimate (097):

NBI Rating

Channel (61): 6 Bank Slumping
Deck (58): N N/A (NBI)
Superstructure (59): N N/A (NBI)
Substructure (60): N N/A (NBI)

Culvert (62): 8 No Major Problem
Waterway (71): 8 Equal Desirable
Unrepaired Spalls: -1 sq.ft.
Review Required: [X]

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report

REPORT ID: INSP005 | **CIDR** | **DATE PRINTED: 12/9/2021**

Structure ID: 750637

Structure Identification

Admin Area: METROPLAN Orlando
District (2): D8 - Turnpike
County (3): (75)Orange
Place Code (4): Lake Buena Vista
Location (9): 3.2MI N OF SR 530
Border Br St/Reg (98): Not Applicable (P) Share: 0 %
Border Struct No (99):
FIPS State/Region (1): 12 Florida Region 4-Atlanta
NBIS Bridge Len (112): Y - Meets NBI Length

Parallel Structure (101): No || bridge exists
Temp. Structure (103): Not Applicable (P)
Maint. Resp. (21): 33 Turnpike
Owner (22): 33 Turnpike
Historic Signif. (37): 5 Not eligible for NRHP

Geometrics

Spans in Main Unit (45): 2
Approach Spans (46): 0
Length of Max Span (48): 10.2 ft
Structure Length (49): 20.4 ft
Total Length: 22.4 ft
Deck Area: 0 sqft
Structure Flared (35): 0 No flare

Age and Service

Year Built (27): 2006
Year Reconstructed (106): 0
Type of Service On (42a): 1 Highway
Under (42b): 5 Waterway
Fracture Critical Details: Not Applicable

Structure Type and Material

Curb/Sidewalk (50): Left: 0 ft Right: 0 ft
Bridge Median (33): 1 Open median
Main Span Material (43A): 1 Reinforced Concrete
Appr Span Material (44A): Not Applicable (P)
Main Span Design (43B): 19 Culvert
Appr Span Design (44B): Not Applicable (P)

Deck Type and Material

Deck Width (52): 0 ft
Skew (34): 16 deg
Deck Type (107): N N/A (NBI)
Surface (108): N N/A (no deck (NBI))
Membrane: N N/A (no deck (NBI))
Deck Protection: N N/A (no deck (NBI))

Appraisal

Structure Appraisal

Open/Posted/Closed (41): A Open, no restriction
Deck Geometry (68): N Not applicable (NBI)
Underclearances (69): N Not applicable (NBI)
Approach Alignment (72): 8-No Speed Red thru Curv
Bridge Railings (36a): N N/A or not required
Transitions (36b): N N/A or not required

Approach Guardrail (36c): 1 Meets Standards
Approach Guardrail Ends (36d): 1 Meets Standards
Scour Critical (113): 8 Stable Above Footing

Navigation Data

Navigation Control (38): Permit Not Required
Nav Vertical Clr (39): 0 ft
Nav Horizontal Clr (40): 0 ft
Min Vert Lift Clr (116): 0 ft
Pier Protection (111): Not Applicable (P)

NBI Condition Rating

Sufficiency Rating: * 85
Health Index: 66.76 ✓
Structural Eval (67): 8 Equal Desirable Crit
Deficiency: Not Deficient

Minimum Vertical Clearance

Over Structure (53): 99.99 ft
Under (reference) (54a): N Feature not hwy or RR
Under (54b): 0 ft

Minimum Lateral Underclearance

Reference (55a): N Feature not hwy or RR
Right Side (55b): 0 ft
Left Side (56): 0 ft

Schedule

Current Inspection

Inspection Date: 11/02/2021 ✓
Inspector: KNIEIWD - Wade Daniels ✓
Bridge Group: CA542
Alt. Bridge Group:
Primary Type: Regular NBI
Review Required: [X]

Next Inspection Date Scheduled

NBI: 11/02/2023 ✓
Element: 11/02/2023 ✓
Fracture Critical:
Underwater:
Other/Special:
Inventory Photo Update Due: 11/14/2023

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
CIDR

REPORT ID: INSP005
Structure ID: 750637
DATE PRINTED: 12/9/2021

Schedule Cont.

Inspection Types Performed NBI [X] Element [X] Fracture Critical [ ] Underwater [ ] Other Special [ ]

Inspection Intervals	Required (92)	Frequency (92)	Last Date (93)
Fracture Critical	[ ]	mos	
Underwater	[ ]	mos	
Other Special	[ ]	mos	
NBI		24 mos (91)	11/02/2021 ✓ (90)

Inspection Resources

Crew Hours:	4
Flagger Hours:	0
Helper Hours:	0
Snooper Hours:	0
Special Crew Hours:	0
Special Equip Hours:	0

Bridge Related

General Bridge Information

Parallel Bridge Seq:
Channel Depth: 1.4 ft ✓
Radio Frequency:
Phone Number:
Exception Date:
Exception Type:
Accepted By Maint:
Warranty Expiration: 00/00/0000
Performance Rating: Good

Bridge Rail 1: Not applicable-No rail
Bridge Rail 2: Not applicable-No rail
Electrical Devices: No electric service
Culvert Type: Precast concrete box
Maintenance Yard: 803-TPK 237-308&BLine&EW
FIHS ON / OFF: On-Route Only on FIHS
Previous Structure:
2nd Previous Structure:
Replacement Structure:

Permitted Utilities: Power [ ] Water [ ] Gas [ ] Fiber Optic [ ] Sewage [ ] Other [ ]

Bridge Load Rating Information

Inventory Type (065): 1 LF Load Factor
Operating Type (063): 1 LF Load Factor
Original Design Load (031): HL 93
Date: 06/12/2006
Initials: GD
Load Rating Rev. Recom.:
Load Rating Plans Status: Design or Construction

Inventory Rating (066): 42.7 tons
Operating Rating (064): 71.2 tons
FL120 Permit Rating: -1.0 tons
HS20/FL120 Max Span Rating: 71.2 tons
Dynamic Impact in Percent: 0 %
Governing Span Length: 9.8 ft
Minimum Span Length:
Distribution Method: AASHTO formula

Load Rating Notes:

LEGAL LOADS

SU2: 50.0 tons
SU3: 72.2 tons
SU4: 78.8 tons
C3: 82.3 tons
C4: 70.9 tons
C5: 97.0 tons
ST5: 105.5 tons
Posting (070): 5 At/Above Legal Loads
Open/Posted/Closed (041): A Open, no restriction

POSTING

Recom. SU Posting: 99 tons
Recom. C Posting: 99 tons
Recom. ST5 Posting: 99 tons
Actual SU Posting: 99 tons
Actual C Posting: 99 tons
Actual ST5 Posting: 99 tons
Actual Blanket Posting: 99 tons
Emergency Vehicle: 1 EV inapplicable

FLOOR BEAM (FB) FB Present: No

FB Span Length, Gov: 0.0 ft
FB Spacing, Gov: 0.0 ft
FB OPR Rating: 0.0 tons
FB SU4 OPR Rating: 0.0 tons
FB FL120 Rating: 0.0 tons

SEGMENTAL (SEG)

SEG Wing-Span: -1.0 ft
SEG Web-to-Web Span: -1.0 ft
SEG Transverse HL93 Operating: -1.00 RF

Bridge Scour and Storm Information

Pile Driving Record: Not Applicable
Foundation Type: Unknown
Mode of Flow: Riverine
Rating Scour Eval: Unknown
Highest Scour Eval: Unknown
Scour Evaluation Method:

Scour Recommended I: Unknown
Scour Recommended II: Unknown
Scour Recommended III: Unknown
Scour Elevation: 999 ft
Action Elevation: 999 ft
Storm Frequency: 999

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005 — **Inspection/CIDR/Bridge Profile Report**

Structure ID: 750637 — **CIDR** — **DATE PRINTED: 12/9/2021**

Elements

Inspection Date: 11/02/2021 **HGVD**

MISCELLANEOUS : Channel

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	8290 / 3	Channel	0	.	0	.	1	100	0	.	1 (EA)
Structure Unit 0	9130 / 3	Aggradation	0	.	0	.	1	100	0	.	1 (EA)

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	8475 / 3	R/Conc Walls	96	97.96	1	1.02	1	1.02	0	.	98 ft
Structure Unit 0	1130 / 3	Cracking (RC and Other)	0	.	1	50	1	50	0	.	2 ft

SUBSTRUCTURE : Culvert

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
Structure Unit 0	241 / 3	Re Conc Culvert	0	.	354	98.33	6	1.67	0	.	360 ft
Structure Unit 0	1080 / 3	Delamination/Spall/Patched Area	0	.	2	100	0	.	0	.	2 ft
Structure Unit 0	1120 / 3	Efflorescence/Rust Staining	0	.	4	40	6	60	0	.	10 ft
Structure Unit 0	1190 / 3	Abrasion(PSC/RC)	0	.	348	100	0	.	0	.	348 ft

Total Number of Elements*: 3
*excluding defects/protective systems

Inspection Information

Inspection Date: 11/02/2021 **Type:** Regular NBI

Inspector: KNIEIWD - Wade Daniels

Inspection Notes: Sufficiency Rating Calculation Accepted by KNIEISM at 12/9/2021 8:43:07 AM

LOAD RATING: The load rating on file for Bridge 750637, dated 06/12/2006, was determined to accurately reflect the current physical conditions found during this routine inspection conducted on 11/02/2021. Confirming Individual: D. Hoff 12/07/2021. The Confirming Engineer provided a cursory review of the previous load rating and does not assume any responsibility for the accuracy of the load rating calculations performed by others.

The NBI rating for item 61 Channel was lowered to 6 to better reflect current conditions.

Structure Notes

This structure is inventoried from south to north.

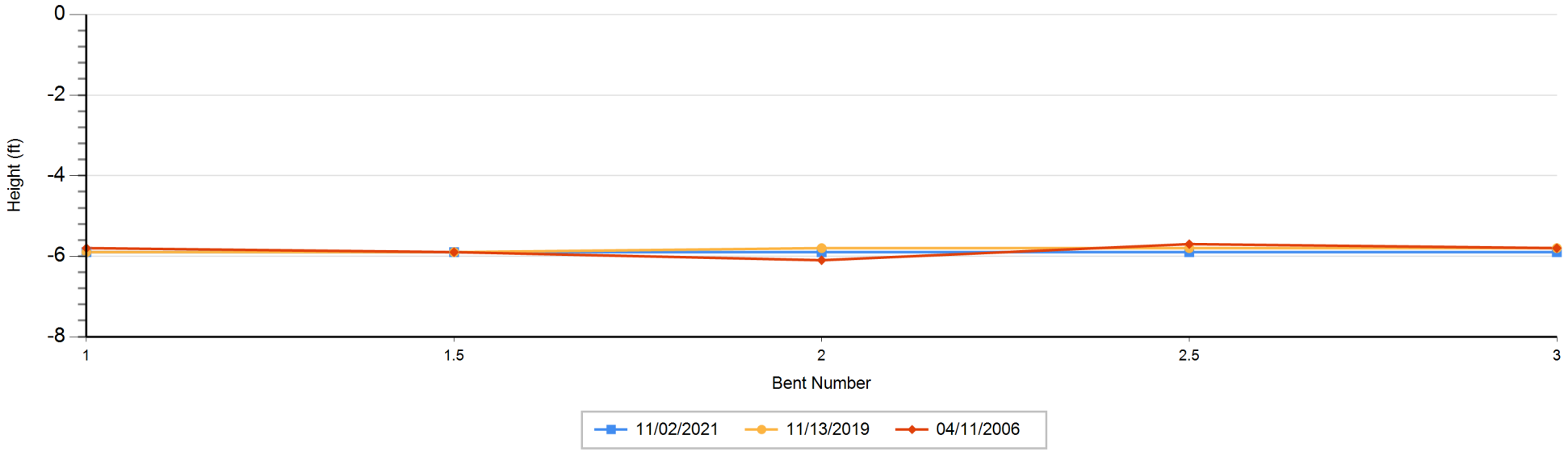
Type: Double Cell Precast
Material: Precast Concrete
Box Height: 4ft
Box Width: 10.2ft
Length: 180ft
Culvert Width at Centerline of Roadway: 20.4ft
Year Built: 2006
Embankment Depth: 5ft
Water Depth: 1.4ft
Pipe Diameter: N/A
Clear Zone: 45ft 3in (Southbound)

Schedule Notes

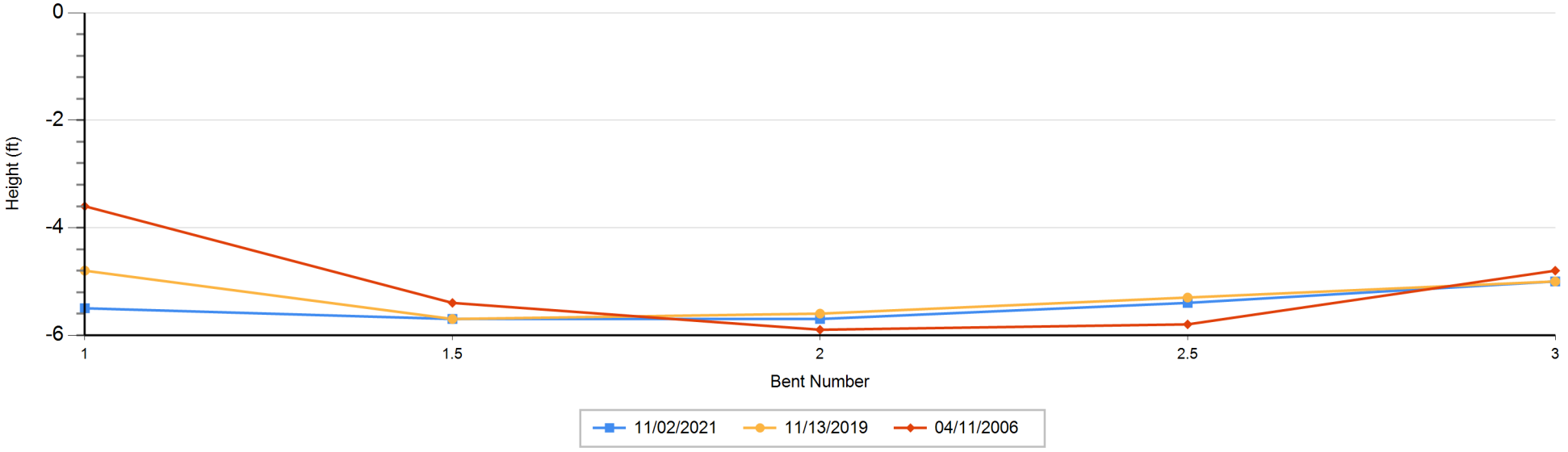
FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Bridge Profile

DATE PRINTED: 12/9/2021 9:21:58 AM

Left Profile by Inspection



Right Profile by Inspection



FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Bridge Profile

DATE PRINTED: 12/9/2021 9:21:58 AM

Profile Data - Numerical Summary

Inspection Date and Key: 11/2/2021 HGVD

Bent #	Left Height	Right Height
1	5.90	5.50
1.5	5.90	5.70
2	5.90	5.70
2.5	5.90	5.40
3	5.90	5.00

(All Heights are in Feet)

Air Temp: 84

Profile Notes:

Waterline at Span 2, Midspan = Left 5.0ft, Right 4.3ft
All measurements were taken from the top of the headwall.

Inspection Date and Key: 11/13/2019 AVJU

Bent #	Left Height	Right Height
1	5.90	4.80
1.5	5.90	5.70
2	5.80	5.60
2.5	5.80	5.30
3	5.80	5.00

Air Temp: 68

Profile Notes:

Waterline at Span 2, Midspan = Left 4.7
Waterline at Span 1, Midspan = Right 4.1
All measurements were taken from the top of the headwall.

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR/Bridge Profile Report
Bridge Profile

DATE PRINTED: 12/9/2021 9:21:58 AM

Profile Data - Numerical Summary

Inspection Date and Key: 4/11/2006 FETM

Bent #	Left Height	Right Height
1	5.80	3.60
1.5	5.90	5.40
2	6.10	5.90
2.5	5.70	5.80
3	5.80	4.80

(All Heights are in Feet)

Air Temp:

Profile Notes:

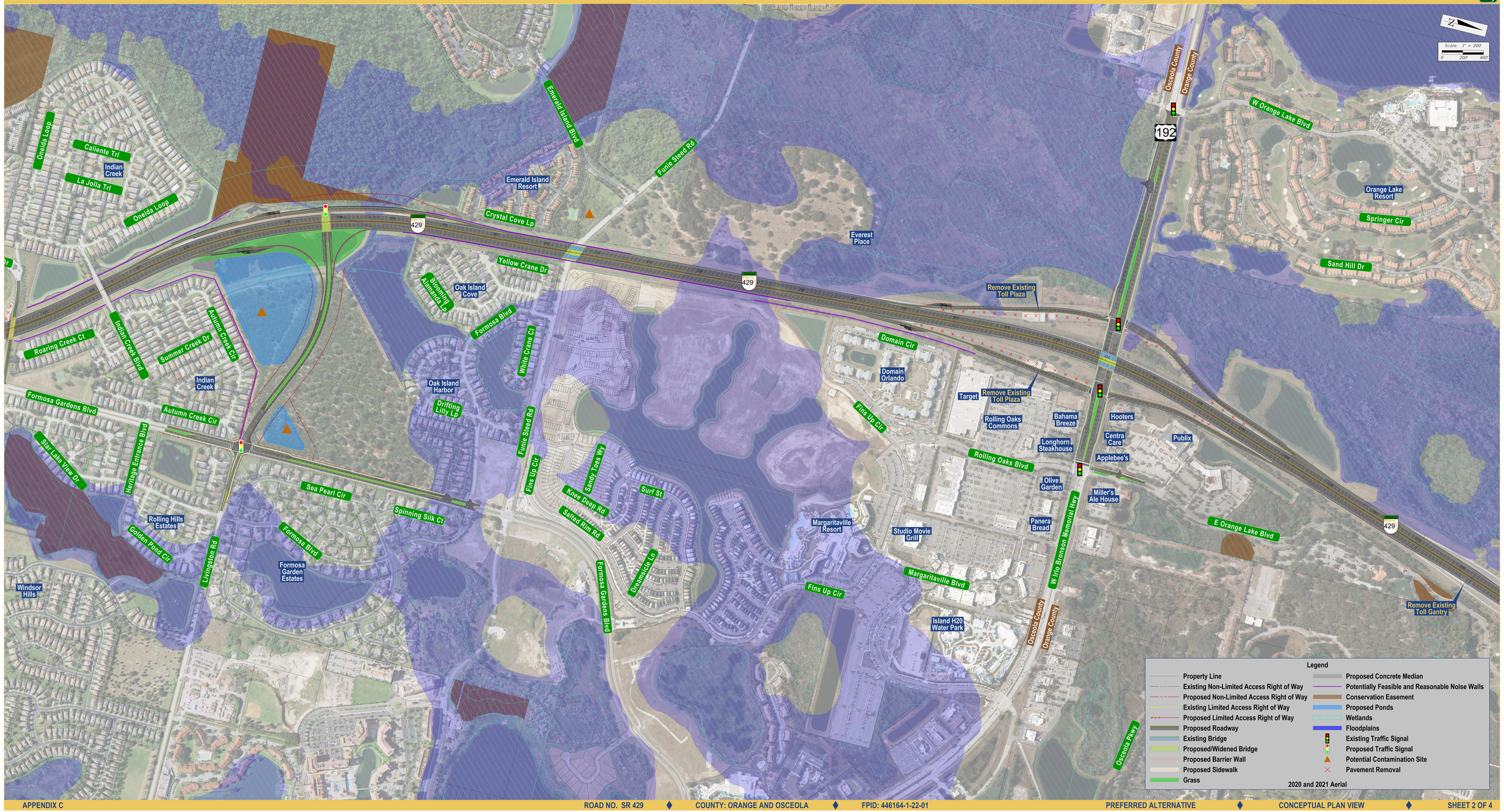
Waterline = 5.4' at Wall 2, Left Side

All measurements were taken to the top of the headwall.

Appendix C
Preferred Alternative

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Sinclair Road Interchange

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Livingston Road and US 192 Interchanges



Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Western Way Interchange

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Seidel Road Interchange

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Sinclair Road Interchange

Scale: 1" = 200'
0 200' 400'

Begin Project
Tie to Existing

INTERSTATE 4

LEGEND:
- DENOTES MAINLINE TANGENT SECTION
- DENOTES MAINLINE CURVE SECTION
- DENOTES RAMP/LOCAL ROAD TANGENT SECTION
- DENOTES RAMP/LOCAL ROAD CURVE SECTION

Project Development and Environment (PD&E) Study to Widen Western Beltway (SR 429) - Livingston Road and US 192 Interchanges

Scale: 1" = 200'
0 200' 400'

Osceola County
Orange County

LEGEND:
- DENOTES MAINLINE TANGENT SECTION
- DENOTES MAINLINE CURVE SECTION
- DENOTES RAMP/LOCAL ROAD TANGENT SECTION
- DENOTES RAMP/LOCAL ROAD CURVE SECTION

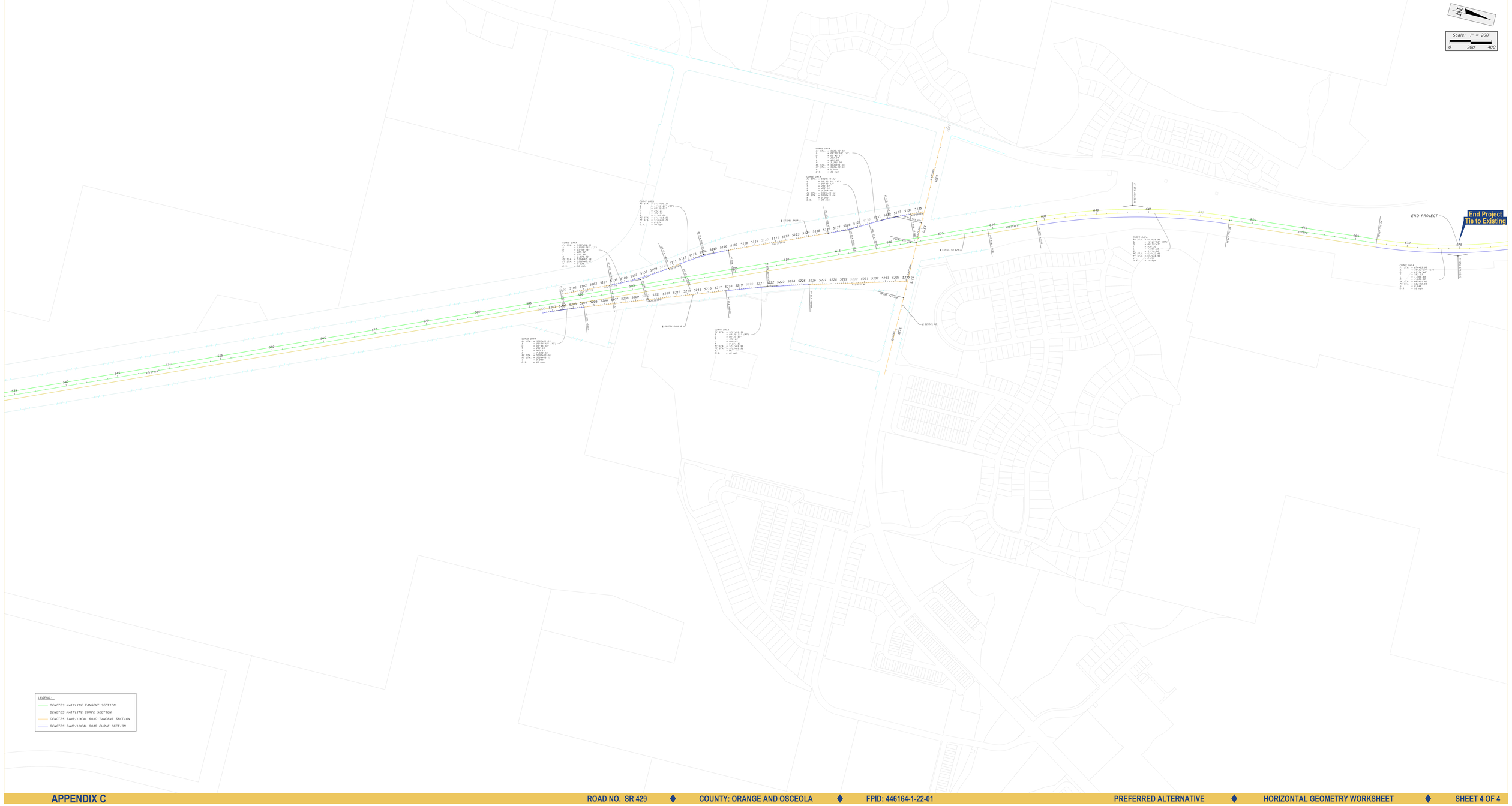
N

Scale: 1" = 200'

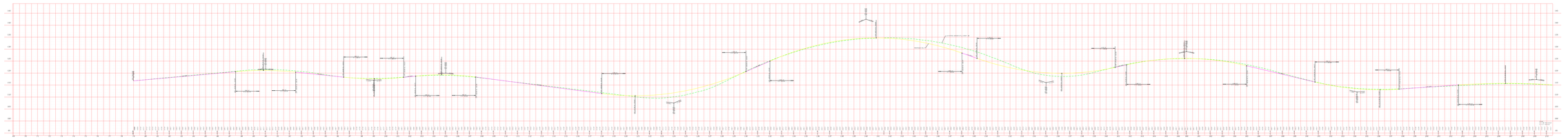
0 200' 400'

LEGEND:

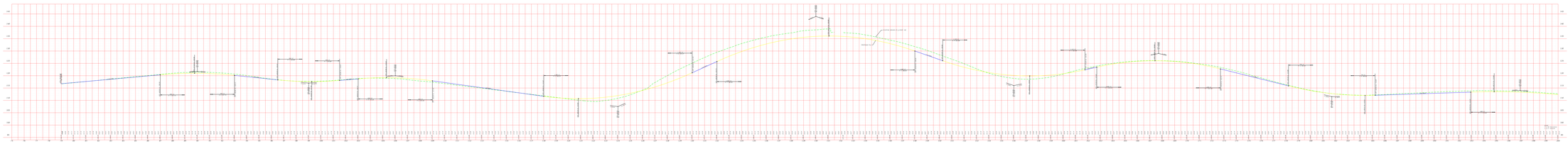
- DENOTES MAINLINE TANGENT SECTION
- DENOTES MAINLINE CURVE SECTION
- DENOTES RAMP/LOCAL ROAD TANGENT SECTION
- DENOTES RAMP/LOCAL ROAD CURVE SECTION


Scale: 1" = 200'
0 200' 400'
END PROJECT
End Project
Tie to Existing
℄ SEIDEL RAMP A
℄ SEIDEL RAMP B
℄ CONST. SR 429
℄ SEIDEL RD
LEGEND:
DENOTES MAINLINE TANGENT SECTION
DENOTES MAINLINE CURVE SECTION
DENOTES RAMP/LOCAL ROAD TANGENT SECTION
DENOTES RAMP/LOCAL ROAD CURVE SECTION

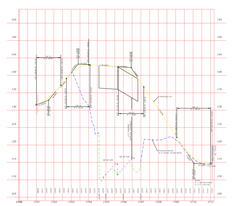
NB SR 429 PGL



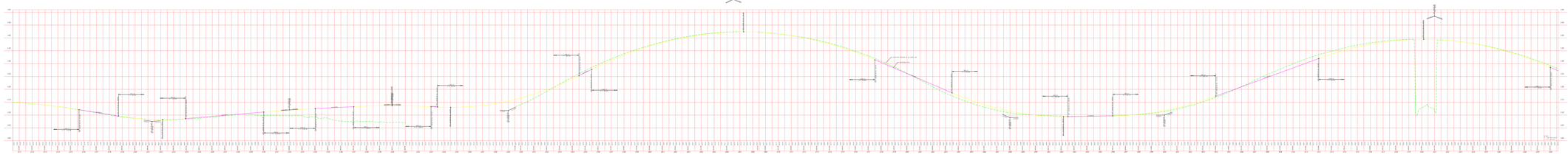
SB SR 429 PGL



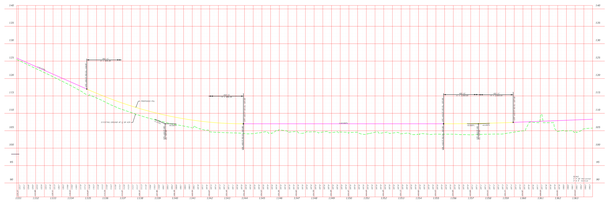
CANARY ISLAND DRIVE PGL



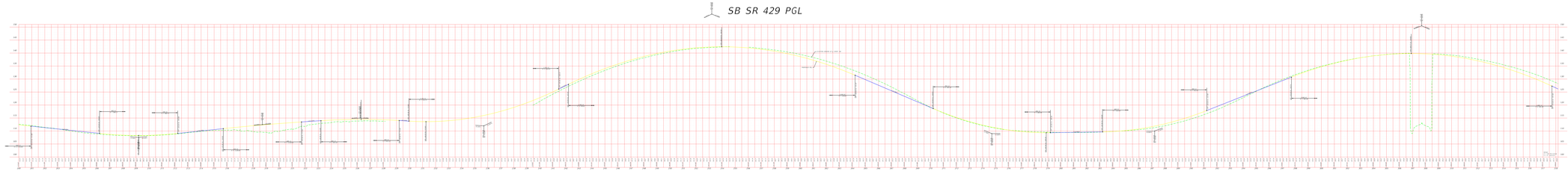
NB SR 429 PGL



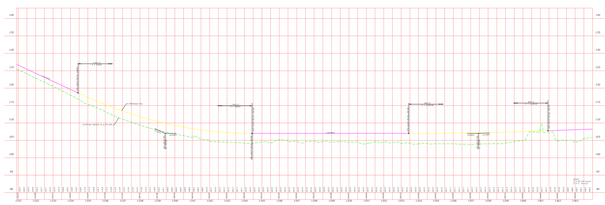
NB SR 429 PGL



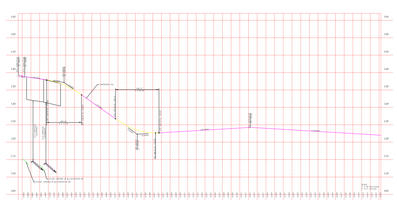
SB SR 429 PGL



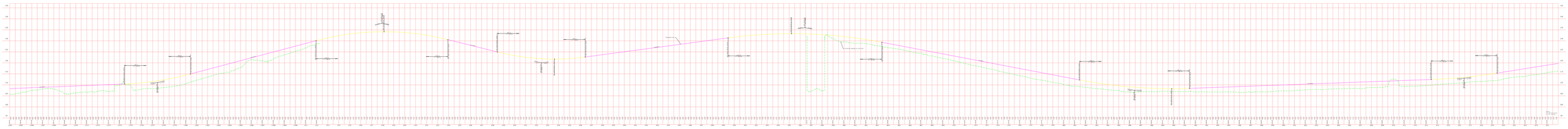
SB SR 429 PGL



LIVINGSTON ROAD PGL



NB SR 429 PGL



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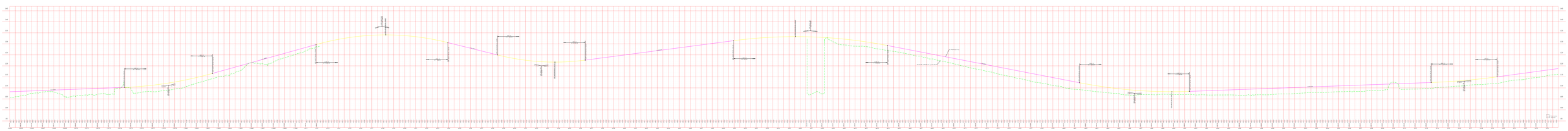

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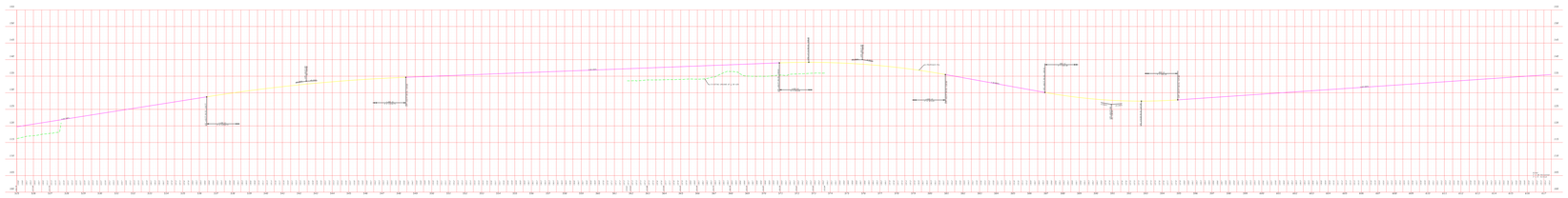

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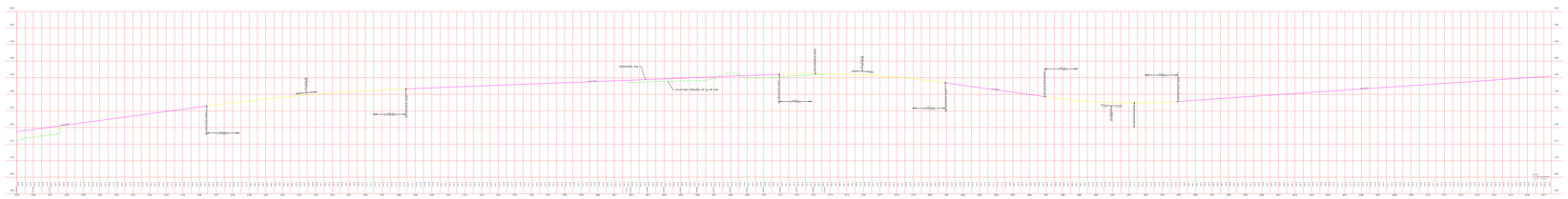

Appendix D
ETDM Summary Report

Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAULT
SECRETARY

ETDM Summary Report

Project #14446 - SR 429 Widening from north of I-4 to Seidel Road PD&E Study

Programming Screen - Published on 01/08/2021

Printed on: 2/22/2021

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Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Alternative-specific information, consisting of descriptions of each alternative and associated road segments; an overview of ETAT Programming Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources.
- Project Scope information, consisting of general project commitments resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

#14446 SR 429 Widening from north of I-4 to Seidel Road PD&E Study

District: District 5
County: Orange , Osceola
Planning Organization: Florida's Turnpike Enterprise
Plan ID: Not Available
Federal Involvement: Other Federal Permit

Phase: Programming Screen
From:
To:
Financial Management No.: 446164-1

Contact Information: Stephanie Underwood 4072643434 Stephanie.Underwood@dot.state.fl.us
Snapshot Data From: Summary Report Re-Published 1/08/2021
Issues and Categories are reflective of what was in place at the time of the screening event.

	Social and Economic							Cultural			Natural					Physical					
	Land Use Changes	Social	Relocation Potential	Farmlands	Aesthetic Effects	Economic	Mobility	Section 4(f) Potential	Historic and Archaeological Sites	Recreation Areas	Wetlands and Surface Waters	Water Quality and Quantity	Floodplains	Wildlife and Habitat	Coastal and Marine	Noise	Air Quality	Contamination	Infrastructure	Navigation	Special Designations
Alternative #1 From: North of I-4 To: Seidel Road *Re-Published: 01/08/2021 Reviewed from 06/04/2020 to 07/19/2020)*	2	3	2	N/A	2	1	1	N/A	3	0	2	2	2	3	N/A	3	2	2	2	0	N/A

Purpose and Need

Purpose and Need

The purpose of this project is to increase capacity along State Road 429 (SR 429) from north of Interstate 4 (I-4) Milepost 2 (MP 2) to Seidel Road (MP 11) to accommodate future travel demands.

Transportation Demand

The Florida's Turnpike Enterprise *Florida Traffic Trends Report, July 2019*, indicates that traffic volumes on the segment of SR 429 from I-4 to Seidel Road has experienced a 12.5% annual growth rate between 2008 and 2018. According to growth projections, annual growth rates are anticipated to continue at a rate of 4% to 9% annually leading to increased travel demand necessitating capacity improvements as discussed in the following section.

Capacity

In the no-build condition, the segment of SR 429 from north of I-4 to Hartzog Road does not meet level of service (LOS) standards (LOS D) by the year 2035. Additionally, in the no-build condition, the segment of SR 429 between Hartzog Road and Seidel Road does not meet LOS standards (also LOS D) by the year 2030. By the year 2045, Annual Average Daily Traffic (AADT) on the segment of SR 429 from north of I-4 to Seidel Road will increase substantially and ranges from 81,500 to 108,700 daily trips leading to additional congestion and degradation of level of service. In the build condition, either six lanes to eight lanes are needed on this segment of SR 429 to meet level of service standards by the year 2045.

Consistency with Planning Documents

The project is not currently documented in the MetroPlan Orlando Long Range Transportation Plans (LRTP), the Transportation Improvement Program (TIP), or the State Transportation Improvement Program (STIP). Therefore, additional coordination will take place during the PD&E Study.

Purpose and Need Reviews

FL Department of Agriculture and Consumer Services

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/17/2020	Mark Kiser (Mark.Kiser@fdacs.gov)	No Purpose and Need comments found.

FL Department of Economic Opportunity

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/18/2020	Matt Preston (matt.preston@deo.myflorida.com)	No Purpose and Need comments found.

FL Department of State

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	06/17/2020	Adrianne Daggett (Adrianne.Daggett@dos.myflorida.com)	No comment

FL Fish and Wildlife Conservation Commission

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/14/2020	Jason Hight (Jason.Hight@MyFWC.com)	No Purpose and Need comments found.

National Marine Fisheries Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/09/2020	Jennifer Schull (Jennifer.Schull@noaa.gov)	No Purpose and Need comments found.

National Park Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/10/2020	Anita Barnett (anita_barnett@nps.gov)	No Purpose and Need comments found.

South Florida Water Management District

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	06/08/2020	Trisha Stone (tstone@sfwmd.gov)	No Purpose and Need comments found.

US Army Corps of Engineers

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/13/2020	Randy Turner (Randy.L.Turner@usace.army.mil)	No Purpose and Need comments found.

US Coast Guard

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	06/10/2020	Lisia Kowalczyk (Lisia.J.Kowalczyk2@uscg.mil)	No Purpose and Need comments found.

US Environmental Protection Agency

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	07/19/2020	Alya Singh-White (Singh-White.Alya@epa.gov)	No Purpose and Need comments found.

US Fish and Wildlife Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	06/09/2020	Zakia Williams (zakia_williams@fws.gov)	No Purpose and Need comments found.

Project Description Data

Project Description

The project involves capacity improvements to SR 429 from north of I-4 (MP 2) in Osceola County to Seidel Road (MP 11) in Orange County, a distance of approximately 8.8 miles.

Summary of Public Comments

Summary of Public Comments is not available at this time.

Justification

There are no Public Comments available at this time.

Planning Consistency Status

No information available.

Lead Agency

FL Department of Transportation

Participating and Cooperating Agencies

Participating and Cooperating agencies are not applicable for this class of action.

Exempted Agencies

Agency Name	Justification	Date
FDOT Office of Environmental Management	OEM is automatically exempt from projects identified as 'State Funds Only'(SFO).	05/21/2020
Federal Transit Administration	FTA has requested to be exempt from reviewing any non-transit projects.	01/27/2020

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

User Defined Communities Within 500 Feet

- com.esri.aims.mtier.io.http.UnableToPingEsrimapException

Census Places Within 500 Feet

- com.esri.aims.mtier.io.http.UnableToPingEsrimapException

Alternative #1

Alternative Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
Alternative was not named.	North of I-4	Seidel Road	Widening	ETAT Review Complete	? mi.		Roadway	Y

Project Effects Overview for Alternative #1

Issue	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	2 Minimal	FL Department of Economic Opportunity	07/18/2020
Social	3 Moderate	US Environmental Protection Agency	07/19/2020
Economic	0 None	FL Department of Economic Opportunity	07/18/2020
Cultural			
Historic and Archaeological Sites	3 Moderate	FL Department of State	06/17/2020
Recreation Areas	0 None	South Florida Water Management District	06/08/2020
Recreation Areas	N/A N/A / No Involvement	National Park Service	07/10/2020
Recreation Areas	0 None	FL Department of Environmental Protection	07/19/2020
Natural			
Wetlands and Surface Waters	2 Minimal	US Fish and Wildlife Service	06/09/2020
Wetlands and Surface Waters	3 Moderate	US Environmental Protection Agency	07/19/2020
Wetlands and Surface Waters	2 Minimal	US Army Corps of Engineers	07/13/2020
Wetlands and Surface Waters	2 Minimal	National Marine Fisheries Service	07/09/2020
Wetlands and Surface Waters	2 Minimal	FL Department of Environmental Protection	07/19/2020
Wetlands and Surface Waters	N/A N/A / No Involvement	South Florida Water Management District	06/08/2020
Water Quality and Quantity	2 Minimal	FL Department of Environmental Protection	07/19/2020
Water Quality and Quantity	2 Minimal	US Environmental Protection Agency	07/19/2020
Water Quality and Quantity	N/A N/A / No Involvement	South Florida Water Management District	06/08/2020
Floodplains	N/A N/A / No Involvement	South Florida Water Management District	06/08/2020
Wildlife and Habitat	2 Minimal	FL Department of Agriculture and Consumer Services	07/17/2020
Wildlife and Habitat	3 Moderate	FL Fish and Wildlife Conservation Commission	07/14/2020
Wildlife and Habitat	3 Moderate	US Fish and Wildlife Service	06/09/2020
Coastal and Marine	N/A N/A / No Involvement	South Florida Water Management District	06/08/2020
Coastal and Marine	2 Minimal	National Marine Fisheries Service	07/09/2020
Physical			
Air Quality	2 Minimal	US Environmental Protection Agency	07/19/2020

Contamination	N/A N/A / No Involvement	South Florida Water Management District	06/08/2020
Contamination	2 Minimal	US Environmental Protection Agency	07/19/2020
Contamination	0 None	FL Department of Environmental Protection	07/19/2020
Navigation	N/A N/A / No Involvement	US Army Corps of Engineers	07/13/2020
Navigation	N/A N/A / No Involvement	US Coast Guard	06/10/2020

Special Designations

Special Designations	0 None	South Florida Water Management District	06/08/2020
Special Designations	0 None	US Environmental Protection Agency	07/19/2020

ETAT Reviews and Coordinator Summary: Social and Economic

Land Use Changes

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

Florida Department of Economic Opportunity (FDEO)stated that the proposed project does not contradict local government strategies and is not included on any of the future transportation maps in the applicable comprehensive plans. The FDEO noted that Future land use designations surrounding the proposed project in Orange County are predominately Planned Development and Community Village Center and that Future land use designations surrounding the proposed project in Osceola County are predominately Residential. The FDEO recommends the affected counties update their respective plans to include the proposed project.

Coordination with local governments and FDEO will continue throughout the PD&E phase to achieve planning consistency. Significant impacts to land use patterns are not anticipated.

A Sociocultural Effects Evaluation will be conducted in accordance with Part 2 Chapter 4 of the FDOT PD&E Manual.

Degree of Effect: 2 *Minimal* assigned 07/18/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

Orange County 2010-2030, adopted on May 19, 2009 (updated on February 6, 2018).

Osceola County Comprehensive Plan 2040, adopted in May of 2019.

Comments on Effects to Resources:

Compatibility with Community Development Goals and Comprehensive Plan:

The proposed project is in a very early stage of the Project Development. DEO staff did not identify local government strategies contrary to the objectives of the proposed project.

Future Transportation Map:

The project is not identified on any of the future transportation maps in the applicable comprehensive plans. DEO staff recommends that the affected counties update their respective plans to include the proposed project.

Land Uses:

Future land use designations surrounding the proposed project in Orange County are predominately Planned Development and Community Village Center.

Future land use designations surrounding the proposed project in Osceola County are predominately Residential.

Parks:

The project is not located within a quarter mile of any County parks.

Area of Critical State Concern (ACSC), Coastal High Hazard Area (CHHA), and Military Bases:

The project is not located within an ACSC, or the CHHA. It does not encroach on any military installation.

Other Planning-Related Items:

The proposed project is located in close proximity to Walt Disney World Resort.

Contact Information:

Orange County - Karen McGuire (407) 836-5615, or Maria Cahill (407) 836-5322.
Osceola County - Cori Carpenter, Principal Planner: cori.carpenter@osceola.org and Francine N. Sutton: francinesutton@osceola.org (Osceola County).

Additional Comments (optional):

CLC Commitments and Recommendations:

Social

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
The United States Environmental Protection Agency (USEPA) assigned a Degree of Effect of Moderate due to the sizeable minority population in the project area (42%). USEPA recommended that the PD&E study include an analysis of information relating to characteristics of potentially impacted population for the proposed alternative, as well as that the PD&E study identify the population of children living in the proposed project area and other sensitive receptors, and that measures are taken to ensure that minority and low-income populations are not disproportionally impacted. USEPA stated that the project will likely result in social impacts related to noise, vibration, construction detours and travel pattern disruptions.
A comprehensive Public Involvement Plan (PIP) will be developed during the PD&E phase, which will outline methods to collect input from special populations, as well as other residents and property owners within the project vicinity. Disproportionate and adverse effects to special populations will be avoided and/or mitigated to the greatest extent possible.
A Sociocultural Effects Evaluation will be conducted in accordance with Part 2, Chapter 4 of the FDOT PD&E Manual. The proposed project is anticipated to result in moderate involvement with social resources.

Degree of Effect: 3 *Moderate* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:
Social impacts to residential populations, residential communities, minority or low-income populations, commercial businesses, social facilities, schools, churches, group care facilities and other cultural resources such as social, economic, mobility, land use, and aesthetics.

These resources are of a high level of importance for transportation projects. EPA is assigning a moderate degree of effect to the social issue. There is a sizeable minority population in the proposed project area.

Comments on Effects to Resources:
This proposed project, involves capacity improvements to SR 429 from north of I-4 (MP 2) in Osceola County to Seidel Road (MP 11) in Orange County, a distance of approximately 8.8 miles. The road will be widened to either six or eight lanes.

Analysis of the Environmental Screening Tool (EST) Geographic Information System (GIS) data shows the following existing land uses within the 500-foot project buffer area: Roads and Highways (547.39 acres or 31.54%), Land designated as Golf Courses (119 acres or 7%), Coniferous Plantations (118 acres or 6%), Citrus Groves (85 acres or 5%), Fixed Single Family Units (Two-Five Dwelling Units Per Acre) (100 acres or 5%), and Mixed Wetland Hardwoods (95 acres or 4%).

The Sociocultural Data Report (SDR) identified 493 households, with a total population of 178 people. Based on EPA EJSCREEN ACS data, approximately 42% of the population is minority. A GIS review shows commercial and residential areas located along the corridor but primarily located on one side and opposed by undeveloped land or forest. Road widening and additional ROW is not anticipated to involve numerous property relocations; however, there are some areas along the corridor where properties are located on both sides and additional ROW may be needed. The EPA recommends the PD&E study include an analysis of information relating to characteristics of potentially impacted populations for the proposed alternative. Measures should be taken to ensure that minority and low-income populations are not disproportionately impacted. The PED lists the Central Florida Preparatory School as the only social facility in the study area. The EPA recommends that the PD&E study identify the population of children living in the proposed project area and other sensitive receptors such as preschools, childcare centers, and schools.

The project will likely result in social impacts such as noise, vibration, construction detours and travel pattern disruptions. Involvement from the local and surrounding communities is recommended and public involvement activities should be a part of the project development phases when a more defined project corridor is identified.

Additional Comments (optional):

CLC Commitments and Recommendations:

Relocation Potential

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

No ETAT reviews were submitted for this issue. The 2011-2017 SFWMD Residential Areas GIS data indicated that there are 3 residential areas totaling 149.08 acres (100 acres of fixed single-family units, 6.44 acres of rural residential, 10.64 acres of multiple dwelling units-high rise, and 32 acres designated as multiple dwelling units-low rise) within the 500-foot project buffer. The Osceola County 2040 Future Land Use Map identifies the areas along the project corridor as predominantly Tourist, Commercial, Medium Density / Intensity, Rural Enclave, and Residential Low Density While efforts will be made to identify alternatives that stay within the existing right-of-way, the proposed widening of SR 429 from north of I-4 to Seidel Road may require additional right-of-way from adjacent properties for potential pond site and/or drainage accommodations.

A Sociocultural Effects Evaluation will be conducted in accordance with Part 2, Chapter 4 of the FDOT PD&E Manual during the PD&E Study to determine potential impacts to residents and businesses. Florida's Turnpike Enterprise will engage the community to solicit input on the minimization of any potential relocation impacts. A Conceptual Stage Relocation Plan (CSRP) will be prepared if relocations are determined to be necessary.

None found

Farmlands

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

No ETAT reviews were submitted for this issue. This project does not involve federal funding. Pursuant to Part 2, Chapter 6 of the FDOT PD&E Manual, the project is not subject to the provisions of the Farmland Protection Policy Act of 1981, 7 CFR Part 658.

None found

Aesthetic Effects

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

No ETAT reviews were submitted for this issue. Because the project involves the widening of existing limited access facility, minimal impacts to aesthetics are anticipated. The PD&E Study and future phases of project development will analyze ways to minimize impacts to existing landscaping and identify new landscaping features with the build alternatives. For these reasons, a Summary Degree of Effect of Minimal has been assigned to this issue.

Aesthetic effects and enhancements, such as decorative features on noise walls, will be evaluated during the PD&E Study and documented in the appropriate Environmental Document, pursuant to Part 2, Chapter 5 of the FDOT PD&E Manual.

None found

Economic

Project Effects

Coordinator Summary Degree of Effect: 1 *Enhanced* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

The Florida Department of Economic Opportunity (FDEO) noted that the proposed project is not located within a Rural Area of Opportunity (RAO). FDEO also commented that this project has little potential to attract new development but could generate temporary jobs during construction.

The capacity improvements to SR 429 are anticipated to enhance mobility of people and goods and is anticipated to have a positive economic effect on the surrounding area.

Degree of Effect: 0 *None* assigned 07/18/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

Orange County 2010-2030, adopted on May 19, 2009 (updated on February 6, 2018).

Osceola County Comprehensive Plan 2040, adopted in May of 2019.

Comments on Effects to Resources:

The project is not located within a Rural Area of Opportunity.

The proposed project has little potential to attract new development. Temporary jobs during the construction phase could be generated. However, the proposed project will not necessarily create new jobs; an analysis of net job creation will be necessary to determine the impact.

Additional Comments (optional):

CLC Commitments and Recommendations:

Mobility

Project Effects

Coordinator Summary Degree of Effect: 1 *Enhanced* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

No ETAT reviews were submitted for this issue. This project will increase roadway capacity, which will reduce congestion and enhance mobility.

Pursuant to Part 2, Chapter 4 of the FDOT PD&E Manual, a Sociocultural Effects Evaluation will be conducted to evaluate impacts and enhancements to mobility.

None found

ETAT Reviews and Coordinator Summary: Cultural

Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

No ETAT reviews were submitted for this issue. Pursuant to Part 2, Chapter 7 of the FDOT PD&E Manual, Section 4(f) is not applicable on state funded projects.

None found

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

The Florida Department of State (FDOS) noted that the study area has not been comprehensively surveyed for historic and cultural resources and, as such, a survey should be conducted for this project. FDOS stated that the project has the potential to affect cultural and historical resources.
A Cultural Resources Assessment Survey (CRAS) will be prepared in accordance with Part 2, Chapter 8 of the FDOT PD&E Manual. Communications will continue with the Department of State, Division of Historical Resources (DHR) pursuant to Subsection 10.2.3.6 of the Environmental Resource Permit Applicant's Handbook Volume I, as applicable.

Degree of Effect: 3 *Moderate* assigned 06/17/2020 by Adrianne Daggett, FL Department of State

Coordination Document: PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 12and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

Direct Effects

Identified Resources and Level of Importance:

As reported; however, due to the fact that the project proposes widening, and becausethe soil types and landformsin the area, the potential for unrecorded archaeological resources also exists, especially if the project will include new ROW.

Comments on Effects to Resources:

This project has the potential to affect cultural and historical resources.

Additional Comments (optional):

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 12and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

CLC Commitments and Recommendations:

Recreation Areas

Project Effects

Coordinator Summary Degree of Effect: 0 *None* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

The Florida Department of Environmental Protection (FDEP) had no comments.
The National Park Service (NPS) had no comments.
The South Florida Water Management District (SFWMD) had no comments.
No impacts to recreation areas are anticipated, however, any potential impacts to recreation areas will be evaluated during the PD&E phase, pursuant to Part 2, Chapter 7 of the FDOT PD&E Manual.

Degree of Effect: 0 *None* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: N/A *N/A / No Involvement* assigned 07/10/2020 by Anita Barnett, National Park Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 0 *None* assigned 07/19/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Natural

Wetlands and Surface Waters

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
The Florida Department of Environmental Protection (FDEP) stated that there are 275.83 acres of palustrine wetlands within the 500-foot project buffer. FDEP also noted that the proposed project will require an Environmental Resource Permit (ERP).
The National Marine Fisheries Service (NMFS) commented that there are mixed wetland hardwoods, palustrine wetlands and riverine wetlands located within the project corridor and range from low to high in quantity. The NMFS mentioned that if wetland impacts are unavoidable, sequential minimization and mitigation should take place. The NMFS stated that in addition to the direct impacts from filling wetlands, construction activities may impact adjacent wetlands through sedimentation and runoff. NMFS noted that essential fish habitat would not be impacted by the proposed project.
The South Florida Water Management District (SFWMD) commented that for the proposed project, the Florida Department of Environmental protection (FDEP) and the SFWMD has an agreement that any ERP permit/permit modification for this roadway would be processed by FDEP, not SFWMD.
The US Army Corps of Engineers (USACE) commented that wetlands in the area appear to be the water crossings of Whittenhorse Creek and Boggy Creek which are associated with the Bear Bay and Davenport Creek Swamp and may impact fringes of these systems. The USACE recommends a continued emphasis on wetland avoidance and minimization opportunities throughout the planning process and that a wetland survey should be conducted along the project corridor to identify any existing wetlands. USACE noted that the Corps RIBITS indicates the proposed project would traverse the geographical service areas of five federally approved mitigation banks that could be used as compensatory mitigation for unavoidable impacts to wetlands and surface waters. The USACE stated that if the project does not qualify for the Department of the Army's Regional General Permit (RGP)-92 then it would need to be permitted using a Standard Individual Permit.
The United States Environmental Protection Agency (USEPA) stated that the proposed project may directly impact wetlands due to dredge and fill activities and to maximize the collection and treatment of stormwater. The USEPA recommended a wetlands study to identify wetland areas that will be impacted by the project. The USEPA encouraged avoidance, minimization, and mitigation of impacts on wetlands, surface waters and groundwater in the project vicinity.
The United States Fish and Wildlife Service (FWS) stated that wetlands, which provide an important habitat for fish and wildlife, may occur within and near the project site. FWS recommended avoiding wetlands to the greatest extent possible and mitigation that fully compensates for the loss of the wetlands if impacts are unavoidable.

During the PD&E Study, a wetland evaluation will be prepared and documented in a Natural Resources Evaluation (NRE) report in accordance with Part 2, Chapter 9 of the FDOT PD&E Manual to determine potential adverse impacts to wetlands and surface waters. All necessary measures will be taken to avoid and/or minimize impacts to wetlands to the greatest extent practicable during project design. Should avoidance and/or minimization not be practicable, a mitigation plan will be prepared in accordance with 62-330 F.A.C and CWA 404. Florida's Turnpike Enterprise is committed to providing sufficient mitigation to offset unavoidable impacts to wetlands and surface waters consistent with both state and federal regulations.

Florida's Turnpike Enterprise will continue to coordinate with FDEP, FWS, USEPA, SFWMD, USACE and NMFS throughout the PD&E Study, as applicable.

Degree of Effect: 2 *Minimal* assigned 06/09/2020 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required
Coordination Document Comments:
no comments provided

Direct Effects

Identified Resources and Level of Importance:
Wetlands

Comments on Effects to Resources:
Wetlands provide important habitat for fish and wildlife and may occur within and near the project site. We recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the Florida Department of Transportation provide mitigation that fully compensates for the loss of important resources.

Additional Comments (optional):
no comments provided

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Wetlands, wetlands habitat, and water quality.

Wetlands are a high level of importance as they are a critical natural resource and serve several functions including filtration/treatment of surface water runoff, flood control, erosion control, groundwater recharge/discharge, wildlife and species habitat, and recreation and tourism opportunities.

Comments on Effects to Resources:

This proposed project, involves capacity improvements to SR 429 from north of I-4 (MP 2) in Osceola County to Seidel Road (MP 11) in Orange County, a distance of approximately 8.8 miles. The road will be widened to either six or eight lanes.

GIS data identified approximately 273 acres of Palustrine Wetlands and 1 acre of Riverine Wetlands within the 500-foot project buffer. The 2011-2017 SFWMD Wetlands GIS data indicate there are approximately 95 acres of mixed wetland hardwoods. The proposed project may directly impact wetlands due to dredge and fill activities. Indirect and cumulative impacts to wetlands, wetlands habitat and water quality may occur. Potential impacts include, but are not limited to, loss of wetlands function, loss of wildlife habitat, degradation of water quality in wetlands, degradation of water quality in surface waters, and reduction in flood storage and capacity.

With an increase in impervious surface area the project area is expected to experience an increase in stormwater runoff. Every effort should be made to maximize the collection and treatment of stormwater. Stormwater runoff should be diverted from streams and creeks. Wetlands should not be displaced by the installation of stormwater conveyance and treatment systems. Best management practices should be implemented during construction, including the installation and regular maintenance of erosion control structures. Additionally, stormwater collection and treatment mechanisms should be designed to protect the function of surrounding wetlands, floodplains, and surface water features.

The EPA recommends a wetlands study to identify wetlands areas that will be impacted by the project. The wetlands study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/13/2020 by Randy Turner, US Army Corps of Engineers

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

A review of the EST revealed the presence of approximately 274 acres of palustrine wetlands and 1.5 acres of riverine wetlands within a 500 foot buffer; 137 acres of palustrine wetlands and 1 acre of riverine wetlands within a 200 foot buffer; and, 0.29 acre of palustrine wetlands and 1 acre of riverine wetlands within a 100 foot buffer. The riverine wetlands appear to be the water crossings of Whittenhorse Creek and Boggy Creek. These waters are associated with the Bear Bay and Davenport Creek Swamp. Fringes of these systems could also be impacted by the road widening. Based on the limited information at his point in the planning phase, the level of importance would be minimum**.** This could change to moderate during the design phase.

Comments on Effects to Resources:

Any palustrine wetlands in the project area deemed to be jurisdictional along the roadway corridor already have been secondarily impacted so a functional assessment should reveal a lower quality of wetlands. Any impacts to the creek crossings may be considered impacts to wood stork foraging habitat.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/09/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Based on our review of the information provided on the EST website, GIS-based effects analysis on wetlands and interpretation of aerial photographs, NOAA's National Marine Fisheries Service (NMFS) has determined that mixed wetland hardwoods, palustrine wetlands and riverine wetlands are located within the project corridor. These wetlands range from low to high in quality.

Comments on Effects to Resources:

The wetlands along the proposed roadway expansion provide water quality functions, such as removal of sediments, excess nutrients, and contaminants, which benefit and support these aquatic ecosystems. Through hydrological connections, these wetlands also contribute plant material and other useable nutrients (both dissolved and particulate organic matter) into aquatic food webs that include recreationally, commercially, and ecologically important species within downstream estuaries. If wetland impacts are unavoidable, sequential minimization and mitigation should take place.

In addition to the direct impacts from filling wetlands, construction activities may impact adjacent wetlands through sedimentation and runoff. Best management practices should be used to prevent sedimentation and runoff.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/19/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The National Wetlands Inventory GIS report indicates that there are 275.83 acres of palustrine wetlands within the 500-ft. project buffer zone.

Comments on Effects to Resources:

The proposed project will require an environmental resource permit (ERP) . The ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of roadway construction to the greatest extent practicable:
- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: N/A *N/A / No Involvement* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

The Florida Department of Environmental Protection (FDEP) previouslyissued the Environmental Resource Permit(s) (ERP)forthe existing State Road 429 roadway, not the South Florida Water Management District (SFWMD). Specifically, the project is covered under one or any combination of the following FDEP ERPs:
ERP No. 253197
ERP No. 191564
ERP No. 191262
ERP No. 125086

Therefore, based upon the operating agreement between the FDEP and the SFWMD, any ERPpermit/permit modification(s) for this roadway wouldbe processed by FDEP, not SFWMD.

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Water Quality and Quantity

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
The Florida Department of Environmental Protection (FDEP) commented that every effort should be made to maximize the treatment of stormwater runoff from the road widening project to prevent ground and surface water contamination. FDEP recommends retrofitting of stormwater conveyance systems to help reduce impacts to water quality. FDEP noted that a Basin Management Action Plan has been created for the Lake Okeechobee Basin and adopted.
The South Florida Water Management District (SFWMD) commented that for the proposed project, the Florida Department of Environmental protection (FDEP) and the SFWMD has an agreement that any ERP permit/permit modification for this roadway would be processed by FDEP, not SFWMD.
United States Environmental Protection Agency (USEPA)noted that there are five Waterbody ID's (3170IA, 3170F5, 3170K, RCID2, and 3170F4) within the 500-foot project buffer area. The USEPA stated that current and existing stormwater management systems along the roadway should be evaluated for their effectiveness. Indirect and cumulative effects on water quality should be evaluated to identify and quantify incremental and cumulative impacts on natural resources as a result of past, present, and reasonably foreseeable actions.

The PD&E Study will include a Water Quality Impact Evaluation (WQIE) in accordance with Part 2, Chapter 11 of the FDOT PD&E Manual to further examine potential effects to surface and groundwater resources, as well as identify impaired waters and other waterbodies that may be affected by this project. In addition, a Pond Siting Report (PSR) will be prepared to identify alternatives for stormwater management and treatment. Florida's Turnpike Enterprise will continue to coordinate with the USEPA, and FDEP during the PD&E Study, as applicable.

The effects on water quality and means to avoid, minimize and mitigate impacts will be evaluated during the study based on the project specific effects from the alternatives developed during the study. The project will be designed to meet state water quality and quantity requirements, and Best Management Practices (BMPs) will be utilized during construction.

Florida's Turnpike Enterprise will provide water quality treatment consistent with 62-330 F.A.C., specifically water quality and quantity regulations outlined in the Statewide Environmental Resource Permit Applicant's Handbook Vol. II. The proposed project is expected to result in minimal involvement with water quality and quantity resources.

Degree of Effect: 2 *Minimal* assigned 07/19/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:
Stormwater runoff from the roadway surface may alter adjacent surface waters through increased pollutant loading. If widened, increased runoff carrying oils, greases, metals, sediment, and other pollutants from the increased impervious surface would be of concern. Natural resource impacts within and adjacent to the proposed road right-of-way may include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed.

Comments on Effects to Resources:
Every effort should be made to maximize the treatment of stormwater runoff from the proposed road project to prevent ground and surface water contamination. Stormwater treatment should be designed to maintain the natural pre-development hydroperiod and water quality, as well as to protect the natural functions of adjacent wetlands. We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. Retro-fitting of stormwater conveyance systems would help reduce impacts to water quality.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Surface water, ground water

These resources are of a high level of importance in the State of Florida. Water quality within the project area and within the State of Florida are of a high level of importance. Stormwater runoff from the roadway may alter adjacent surface waters through increased pollutant loading.

Comments on Effects to Resources:
This proposed project, involves capacity improvements to SR 429 from north of I-4 (MP 2) in Osceola County to Seidel Road (MP 11) in Orange County, a distance of approximately 8.8 miles. The road will be widened to either six or eight lanes.

Per the PED, there are five Waterbody IDs (3170IA, 3170F5, 3170K, RCID2, and 3170F4) within the 500-foot project buffer area. With an increase in impervious surface area, the project area is expected to experience an increase in stormwater runoff which may carry sediment, oils, greases, heavy metals and other pollutants. Current and existing stormwater management systems along the roadway should be evaluated for their effectiveness. Proper stormwater conveyance, containment, and treatment will be required in accordance with state and federal regulations and guidelines. Engineering design features and hydrological drainage structures should be such that stormwater transport, flow, and discharge meet requirements.

Indirect and cumulative effects on water quality should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (water quality) as a result of past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: N/A *N/A / No Involvement* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:
The Florida Department of Environmental Protection (FDEP) previouslyissued the Environmental Resource Permit(s) (ERP)forthe existing State Road 429 roadway, not the South Florida Water Management District (SFWMD). Specifically, the project is covered under one or any combination of the following FDEP ERPs:
ERP No. 253197
ERP No. 191564
ERP No. 191262
ERP No. 125086

Therefore, based upon the operating agreement between the FDEP and the SFWMD, any ERPpermit/permit modification(s) for this roadway wouldbe processed by FDEP, not SFWMD.

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Floodplains

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
The South Florida Water Management District (SFWMD) commented that for the proposed project, the Florida Department of Environmental protection (FDEP) and the SFWMD has an agreement that any ERP permit/permit modification for this roadway would be processed by FDEP, not SFWMD.

Digital Flood Insurance Rate Map (DFIRM) GIS data provided in the EST indicated that within the 500-foot project buffer there are 102.65 acres (5.91%) of Flood Hazard Zone AE (areas inundated by 100-year flooding, for which Base Flood Elevations [BFEs] have been determined), 172.4 acres (9.93%) of Flood Hazard Zone A (areas inundated by 100-year flooding, for which BFEs have not been determined), 6.38 acres (0.37%) of Flood Hazard Zone AH (Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet), and 1,454.8 acres (83.79%) outside of the 100-year floodplain.

A Location Hydraulics Report (LHR) in accordance with Part 2, Chapter 13 of the FDOT PD&E Manual will be prepared during the PD&E Study and an Environmental Resource Permit (ERP) from FDEP will be required. The proposed project is expected to have minimal involvement with floodplain resources.

Degree of Effect: N/A *N/A / No Involvement* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

The Florida Department of Environmental Protection (FDEP) previouslyissued the Environmental Resource Permit(s) (ERP)forthe existing State Road 429 roadway, not the South Florida Water Management District (SFWMD). Specifically, the project is covered under one or any combination of the following FDEP ERPs:
ERP No. 253197
ERP No. 191564
ERP No. 191262
ERP No. 125086

Therefore, based upon the operating agreement between the FDEP and the SFWMD, any ERPpermit/permit modification(s) for this roadway wouldbe processed by FDEP, not SFWMD.

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:

Florida Department of Agriculture and Consumer Services (FDACS) commented that within the project area the federally listed plant species of Britton's beargrass and scrub buckwheat are identified and may occur in the project footprint. FDACS recommended that any populations discovered within the project footprint be relocated to a suitable offsite location by Florida Native Plant Society or other similar organizations.
Florida Fish and Wildlife Conservation Commission (FWC) FWC noted that the Davenport Creek Swamp is the most prominent wildlife habitat within the project area. FWC reported the following Federally Endangered, Federally Threatened or State-Threatened species that may occur along the project area listed by the Federal Endangered Species Act and the State of Florida; American alligator, eastern indigo snake, bluetail mole skink, sand skink, wood stork, red-cockaded woodpecker, Florida scrub jay, Audubon's crested caracara, Florida panther, Florida pine snake, short-tailed snake, gopher tortoise, Florida burrowing owl, Florida sandhill crane, southeastern American kestrel, little blue heron, tricolored heron, and roseate spoonbill.

FWC recommends to include plant community mapping and wildlife surveys, to develop a plan to address direct, indirect, and cumulative effects of the project on wildlife habitat resources, to refer to FWC's Gopher Tortoise Permitting Guidelines, to conduct specific surveys for wading birds prior to the commencement of any clearing, grading, or filling activities, to survey for nesting sandhill cranes during their respective breeding season prior to construction, to survey the property for burrowing owls prior to construction activities to ensure that no burrowing owl burrows occur onsite, to keep construction sites clean to avoid conflict with black bears, to refer to permitting guidelines in the FWC's Species Conservation Measures and Permitting Guidelines for impacts to other state-listed species, and to include in the compensatory mitigation plan the replacement of any public conservation lands and any wetland, upland, or aquatic habitat functional values for listed species which are lost as a result of the project.
United States Fish and Wildlife Service (FWS) noted that the federally listed wood stork, eastern indigo snake, Audubon's crested caracara, Florida scrub-jay, federally listed skinks, and federally listed plant species may occur in or near the project area. FWS recommended that any lost foraging habitat resulting from the project be replaced within the Core Foraging Area (CFA) of the affected nesting colony. Additionally, the Service recommends that the FDOT prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the Project Development and Environment process.

A Natural Resources Evaluation (NRE) will be prepared in accordance with Part 2, Chapter 16 of the FDOT PD&E Manual. Surveys will be conducted for the listed species potentially occurring within the study area and the effects on listed species will be evaluated. This report will also serve as the Biological Assessment. Avoidance, minimization and mitigation for unavoidable impacts will be assessed during the alternatives development to avoid and minimize effects on protected species. Coordination will continue during the PD&E Study with FWS, FDACS, and the FWC, as necessary.

Degree of Effect: 2 *Minimal* assigned 07/17/2020 by Mark Kiser, FL Department of Agriculture and Consumer Services

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Resources identified are Lake Wales Ridge plants including Britton's beargrass and scrub buckwheat. These are federally listed plant species that may occur in the project footprint.

Comments on Effects to Resources:

Because these are federally listed plant species, any loss of individuals may cause significant impacts to the population.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 07/14/2020 by Jason Hight, FL Fish and Wildlife Conservation Commission

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

FWC staff appreciates the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com iffurther overall coordination is needed on this project.

Direct Effects

Identified Resources and Level of Importance:

FWC staff's assessment reveals that land cover in the corridor is mostly urban (55.31%), with agriculture, rural, and extractive (20.45%) lands subject to development pressure because of the project's proximity to Disney World. Other upland vegetative communities include shrub and brushland (1.37%, 21.35 acres), upland hardwood forest (1.1%, 17.15 acres), mixed hardwood-coniferous (0.65%, 10.19 acres), and sandhill (0.28%, 4.36 acres). Wetland and aquatic land cover types include cultural-lacustrine (6.8%, 106.19 acres), freshwater forested wetlands (6.33%, 98.81 acres), prairies and bogs (2.57%, 40.19 acres), wet flatwoods (1.72%, 26.84 acres), cypress/tupelo (1.41%, 22.02 acres), marshes (1.09%, 17.01 acres), baygall (0.27%, 4.25 acres), freshwater non-forested wetlands (0.26%, 4.11 acres), cypress (0.17%, 2.62 acres), other coniferous wetlands (0.16%, 2.45 acres), and lacustrine (0.06%, 0.96 acres). The most valuable wildlife habitat in the assessment area is the mix of forested and herbaceous wetlands in the Davenport Creek Swamp west of the southern portion of the project.

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act and the State of Florida as Federally Endangered (FE), Federally Threatened (FT), or State-Threatened (ST) have the potential to occur in the project area: American alligator (FT based on similarity of appearance to American crocodile), eastern indigo snake (FT), bluetail mole skink (FT), sand skink (FT), wood stork (FT), red-cockaded woodpecker (FE), Florida scrub jay (FT), Audubon's crested caracara (FT), Florida panther (FE), Florida pine snake (ST), short-tailed snake (ST), gopher tortoise (ST), Florida burrowing owl (ST), Florida sandhill crane (ST), southeastern American kestrel (ST), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST).

The GIS analysis revealed several specific characteristics associated with lands along the project alignment that provide an indication of potential habitat quality or sensitivity that will require field studies to verify the presence or absence of listed wildlife species and the quality of wildlife habitat resources. Within the assessment area, 338.93 acres (19.53%) are classified by the FWC's Integrated Wildlife Habitat Ranking System as high or moderately high value, and 306.24 acres (17.64%) have a moderately high value on the FWC's Potential Habitat Richness ranking. The FWC's Strategic Habitat Conservation Area Priority Rankings classify 511.51 acres of the assessment area as high value, based on habitat suitability for either the scrub jay, sand skink, or Florida mouse. In the Florida Natural Areas Inventory Critical Lands and Waters Identification Project (CLIP), 291.22 acres (17.34%) is ranked Priority 1 or 2 (high) for Biodiversity Resources. The project is within the common range of the black bear, and there have been 51 black bear nuisance reports within one mile of the project. Nearly three-fourths (71.13%) of the assessment area is classified as potential sand skink and bluetail mole skink habitat above 82 feet ground elevation. The project is within U.S. Fish and Wildlife Service (FWS) Consultation Areas for Audubon's crested caracara, Everglade snail kite, Florida grasshopper sparrow, red-cockaded woodpecker, Florida scrub-jay, sand skink, and Lake Wales Ridge plants, and within the core foraging area of three wood stork colonies.

Comments on Effects to Resources:

Primary wildlife issues associated with this project include: increased habitat fragmentation; potential adverse effects to a significant number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened; potential increase in wildlife roadkill; and potential water quality degradation as a result of stormwater runoff from the new or expanded roadway surface draining into adjacent wetlands.

Despite the valuable wildlife habitat in proximity to this segment of SR 429, the widening project should be possible to construct within the existing ROW. Because of this, FWC staff believe the effects of this project could be moderate provided any listed species impacts are appropriately mitigated, any new drainage retention areas (DRAs) are placed away from undisturbed natural habitat, and Best Management Practices are adopted in the project design to avoid degradation of adjacent or downstream water quality.

Additional Comments (optional):
FWC staff appreciates the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com iffurther overall coordination is needed on this project.

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 06/09/2020 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required
Coordination Document Comments:
no comments provided

Direct Effects
Identified Resources and Level of Importance:
Federally listed species and fish and wildlife resources

Comments on Effects to Resources:
Federally-listed species -

The U.S. Fish and Wildlife Service (Service) has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources. Based on review of our GIS database, the Service notes that the following federally listed species may occur in or near the project area.

Wood Stork

The project corridor is located in the Core Foraging Area (CFA; all lands within 18.6 miles) of two active nesting colonies of the threatened wood stork (*Mycteria americana*). The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. The Service does not consider the preservation of wetlands, by itself, as adequate compensation for impacts to wood stork foraging habitat, because the habitat lost is not replaced. Accordingly, any wetland mitigation plan proposed should include a restoration, enhancement, or creation component. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service, provided that the impacted wetlands occur within the permitted service area of the bank.

For projects that impact 5 or more acres of wood stork foraging habitat, the Service requires a functional assessment be conducted using our "Wood Stork Foraging Analysis Methodology" (Methodology) on the foraging habitat to be impacted and the foraging habitat provided as mitigation. The Methodology can be found at: https://www.fws.gov/verobeach/BirdsPDFs/20120712_WOST Forage Assessment Methodology_Appendix.pdf.

Eastern indigo snake

The project occurs within the geographic range of the threatened Eastern indigo snake (*Drymarchon corais couperi*). To minimize impacts to the indigo snake, we recommend that widening of the roadway occur within the existing disturbed road right-of-way to the greatest extent practicable, and the Service' Standard Protection Measures for the Eastern Indigo Snake (https://www.fws.gov/verobeach/ReptilesPDFs/20130812_EIS Standard%20Protection Measures_final.pdf) be followed during construction.
Audubon's crested caracara

The project occurs within the geographic range and the Service's consultation area for the threatened Audubon's crested caracara (*Polyborus plancus*). If suitable nesting habitat for the caracara occurs within 985 feet of the project footprint, then nest surveys (based on the Service's guidance) should be conducted to determine if active nests of the caracara occur in or near the project footprint.
Florida scrub-jay

The project is located in the geographic range of the threatened Florida scrub-jay (*Aphelocoma coerulescens*). If suitable habitat (i.e., those with appropriate soils and elevation) occurs within the project, we recommend that surveys, based on the Service's guidance, be conducted to determine the

status of Florida scrub-jays.

Federally listed skinks

The project is located in the geographic range of the threatened sand skink (*Plestidon reynoldsi* = *Neoseps reynoldsi*) and blue-tailed mole skink (*Plestidon egregius lividus* = *Eumeces egregius lividus*). If suitable habitat (i.e., those with appropriate soils and elevation) occurs within the project, we recommend that surveys, based on the Service's guidance, be conducted to determine the status of Federally listed skinks.

The Service also believes that the following federally listed species have the potential to occur in or near the project site: Federally listed plants (http://www.fws.gov/verobeach/Listed SpeciesPlants.html).Accordingly, the Service recommends that the FDOT prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Fish and wildlife resources -

To benefit fish and wildlife, we recommend that native plants, trees and shrubs be used in the landscaping of the lands within the roadway right-of-way. The use of native wildflowers would be especially beneficial to insect pollinators and provide a more aesthetically pleasing environment than sod by itself.

Wetlands provide important habitat for fish and wildlife and may occur within and near the project site. We recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the Florida Department of Transportation provide mitigation that fully compensates for the loss of important resources.

Additional Comments (optional):
no comments provided

CLC Commitments and Recommendations:

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
National Marine Fisheries Service (NMFS) commented that there are mixed wetland hardwoods, palustrine wetlands, and riverine wetlands located within the project corridor that range from low to high in quality. The NMFS stated that if wetland impacts are unavoidable, sequential minimization and mitigation should take place. The NMFS stated that in addition to the direct impacts from filling wetlands, construction activities may impact adjacent wetlands through sedimentation and runoff. The NMFS noted that essential fish habitat (EFH) would not be impacted by the proposed project.
South Florida Water Management District (SFWMD)commented that for the proposed project, the Florida Department of Environmental protection (FDEP) and the SFWMD has an agreement that any ERP permit/permit modification for this roadway would be processed by FDEP, not SFWMD.

Due to the project's inland location, no project impacts on coastal or marine resources are anticipated. Additionally, much of the project corridor is developed and would likely not be considered under the Coastal Barrier Resources Act (CBRA). Therefore, Florida's Turnpike Enterprise assigns a Summary Degree of Effect (SDOE) of N/A / No Involvement with Coastal and Marine resources.

Unavoidable impacts to wetlands and surface waters will require an Environmental Resource Permit (ERP) from FDEP, and a Clean Water Act (CWA) Section 404 Dredge and Fill Permit from the U.S. Army Corps of Engineers (USACE). The ERP will also serve as the Water Quality Certification under CWA 401. Pursuant to Part 2, Chapter 15 of the FDOT PD&E Manual, a Natural Resource Evaluation (NRE) will be conducted during the PD&E phase to determine specific impacts to wetlands and surface waters.
NMFS concerns regarding wetland impacts will be addressed in the Wetlands and Surface Waters discussion of the Natural Resources Evaluation (NRE). Additionally, mitigation for unavoidable wetland impacts will be provided per state and federal regulations. The final mitigation determination will be made during subsequent design phases of the project.

Degree of Effect: N/A *N/A / No Involvement* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

The Florida Department of Environmental Protection (FDEP) previouslyissued the Environmental Resource Permit(s) (ERP)forthe existing State Road 429 roadway, not the South Florida Water Management District (SFWMD). Specifically, the project is covered under one or any combination of the following FDEP ERPs:
ERP No. 253197
ERP No. 191564
ERP No. 191262
ERP No. 125086

Therefore, based upon the operating agreement between the FDEP and the SFWMD, any ERPpermit/permit modification(s) for this roadway wouldbe processed by FDEP, not SFWMD.

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/09/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:
Based on our review of the information provided on the EST website, GIS-based effects analysis on wetlands and interpretation of aerial photographs, NOAA's National Marine Fisheries Service (NMFS) has determined that mixed wetland hardwoods, palustrine wetlands and riverine wetlands are located within the project corridor. These wetlands range from low to high in quality.

Comments on Effects to Resources:
The wetlands along the proposed roadway expansion provide water quality functions, such as removal of sediments, excess nutrients, and contaminants, which benefit and support these aquatic ecosystems. Through hydrological connections, these wetlands also contribute plant material and other useable nutrients (both dissolved and particulate organic matter) into aquatic food webs that include recreationally, commercially, and ecologically important species within downstream estuaries. If wetland impacts are unavoidable, sequential minimization and mitigation should take place.

In addition to the direct impacts from filling wetlands, construction activities may impact adjacent wetlands through sedimentation and runoff. Best management practices should be used to prevent sedimentation and runoff.

Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Physical

Noise

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
No ETAT reviews were submitted for this issue. SFWMD Residential Areas 2014-2016 data identified 100 acres of Fixed Single-Family Units, 32 acres of Multiple Dwelling Units-Low Rise, 6.44 acres of Rural Residential and 10.64 acres of Multiple Dwelling Units-High Rise. Other noise sensitive sites in proximity to the corridor include Disney's Animal Kingdom and the Surgical Center/Walk in Clinic. There are no existing noise barriers identified within the 500-foot project buffer.

Moderate noise impacts are anticipated. Pursuant to Part 2, Chapter 18 of the FDOT PD&E Manual, a noise study will be conducted to identify noise sensitive sites and to determine eligibility for noise abatement measures.

None found

Air Quality

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
United States Environmental Protection Agency (USEPA)stated that the project area has not been designated non-attainment or maintenance for any ozone, carbon monoxide or particulate matter under the criteria provided in the Clean Air Act.

An air quality screening evaluation will be conducted, if necessary, in accordance with Part 2, Chapter 19 of the FDOT PD&E Manual.

Degree of Effect: 2 *Minimal* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:
Air quality is of a high level of importance.

Comments on Effects to Resources:

A minimal degree of effect is being assigned to the air quality issue for the proposed project. This portion of Osceola and Orange Counties has not been designated non-attainment or maintenance for any of the ozone, carbon monoxide (CO) or particulate matter (PM) National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the proposed project is expected to have minimal impact on air quality.

Additional Comments (optional):

CLC Commitments and Recommendations:

Contamination

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
Florida Department of Environmental Protection (FDEP) had no comments.
South Florida Water Management District (SFWMD) commented that if construction dewatering is necessary, a Water Use General Permit (available under Rule 40E-2.061(2), FAC) from the SFWMD may be required to address any contamination issues.
United States Environmental Protection Agency (USEPA)noted that soils, groundwater, and surface waters have the potential to be affected adversely by contaminated sites, which can lead to poor drinking water quality and loss of water supply.

Disposal requirements for land clearing and demolition debris would be based on the specific clearing/disturbance location and take into consideration contamination identified or suspected, if any, at the clearing/disturbance area. If construction dewatering is necessary, a Water General Use Permit from SFWMD may be required. The specific permit application would depend on proximity to identified contamination.

Pursuant to Part 2, Chapter 20 of the FDOT PD&E Manual, a Contamination Screening Evaluation Report (CSER) will be prepared during the PD&E Study. Regulated facilities identified within search criteria established in Chapter 20 of the FDOT PD&E Manual will be assessed to determine the need for avoidance, minimization, or remediation prior to construction. The proposed project is expected to result in minimal involvement with potential sources of contamination.

Degree of Effect: N/A *N/A / No Involvement* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: To Be Determined: Further Coordination Required
Coordination Document Comments:
If construction dewatering is necessary, a Water Use Permit from the SFWMDmay be required. A Water Use General Permit is available under Rule 40E-2.061(2), FAC. Projects that do not qualify forthe Water Use General Permit will require a Water Use Permit from SFWMD. A Water Use Permit application must address any contamination issues located within the vicinity of the project area.

Direct Effects

Identified Resources and Level of Importance:
Surface water and ground water

Comments on Effects to Resources:
If construction dewatering is necessary, a Water Use Permit from the SFWMDmay be required. A Water Use General Permit is available under Rule 40E-2.061(2), FAC. Projects that do not qualify forthe Water Use General Permit will require a Water Use Permit from SFWMD. A Water Use Permit application must address any contamination issues located within the vicinity of the project area.

Additional Comments (optional):
If construction dewatering is necessary, a Water Use Permit from the SFWMDmay be required. A Water Use General Permit is available under Rule 40E-2.061(2), FAC. Projects that do not qualify forthe Water Use General Permit will require a Water Use Permit from SFWMD. A Water Use Permit application must address any contamination issues located within the vicinity of the project area.

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects
Identified Resources and Level of Importance:
Soils, groundwater and surface waters have the potential to be negatively affected by contaminated site features such as underground petroleum storage tanks, industrial or commercial facilities with onsite storage of hazardous materials, solid waste facilities, hazardous waste facilities, USEPA RCRA facilities, etc.
A minimal degree of effect is being assigned to this issue for the proposed project.

Comments on Effects to Resources:
This proposed project, involves capacity improvements to SR 429 from north of I-4 (MP 2) in Osceola County to Seidel Road (MP 11) in Orange County, a distance of approximately 8.8 miles. The road will be widened to either six or eight lanes.

Based on the information provided in the PED, one Petroleum Contamination Monitoring Site, one Hazardous Waste Facility, two Solid Waste Facilities, and six Storage Tank Contamination Monitoring Sites are located within the 500-foot buffer distance. There were no FDEP Superfund/National Priority List (NPL) Waste Cleanup Sites, Landfills, or Superfund sites located within the 1-mile project buffer. The proposed project is expected to result in very minimal involvement with potential sources of contamination.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 0 *None* assigned 07/19/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: No Involvement

Direct Effects
Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
No ETAT reviews were submitted for this issue. Analysis of GIS data provided in the EST shows there are several infrastructure sites within the 500-foot project buffer. These sites include three (3) Federal Aviation Administration (FAA) Obstructions (Towers), three (3) ORNL Electric Power Transmission Lines (Florida Power and Light Company), and one (1) Wireless Antenna Structure Location.

A Utility Assessment Package will be prepared as part of the PD&E phase. Direct effects to adjacent infrastructure resources and right-of-way will be minimized to the greatest extent practicable.

None found

Navigation

Project Effects

Coordinator Summary Degree of Effect: 0 *None* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
The United States Coast Guard (USCG) stated that there is no coast guard involvement.
The United States Army Corps of Engineers (USACE) stated no involvement.

No navigable waterway crossings were identified within the 500-foot study area buffer.

Degree of Effect: N/A *N/A / No Involvement* assigned 07/13/2020 by Randy Turner, US Army Corps of Engineers

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:
None

Comments on Effects to Resources:
N/A

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: N/A *N/A / No Involvement* assigned 06/10/2020 by Lisia Kowalczyk, US Coast Guard

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Special Designations

Special Designations

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 09/14/2020 by Florida's Turnpike Enterprise

Comments:
South Florida Water Management District (SFWMD) had no comments.
United States Environmental Protection Agency (USEPA) had no comments.
Per the ETDM Manual, Special Designations is limited to Outstanding Florida Waters (OFWs), Aquatic Preserves, Wild and Scenic Rivers, and Sole Source Aquifers. Analysis of GIS data provided in the EST identified that the project area is within the Biscayne Sole Source Aquifer Streamflow and Recharge Source Zone, a Sole Source Aquifer designated by the USEPA.

Degree of Effect: 0 *None* assigned 06/08/2020 by Trisha Stone, South Florida Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 0 *None* assigned 07/19/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Recommendations

There are no general project recommendations identified for this project in the EST.

Anticipated Permits

Permit	Type	Conditions	Review Org	Review Date
Individual or Standard	USACE		Florida's Turnpike Enterprise	05/26/20
National Pollutant Discharge Eliminated System	FDEP		Florida's Turnpike Enterprise	05/26/20
Gopher Tortoise Permit	FFWCC		Florida's Turnpike Enterprise	06/04/20
Environmental Resource Permit	Water		Florida's Turnpike Enterprise	05/26/20

Anticipated Technical Studies

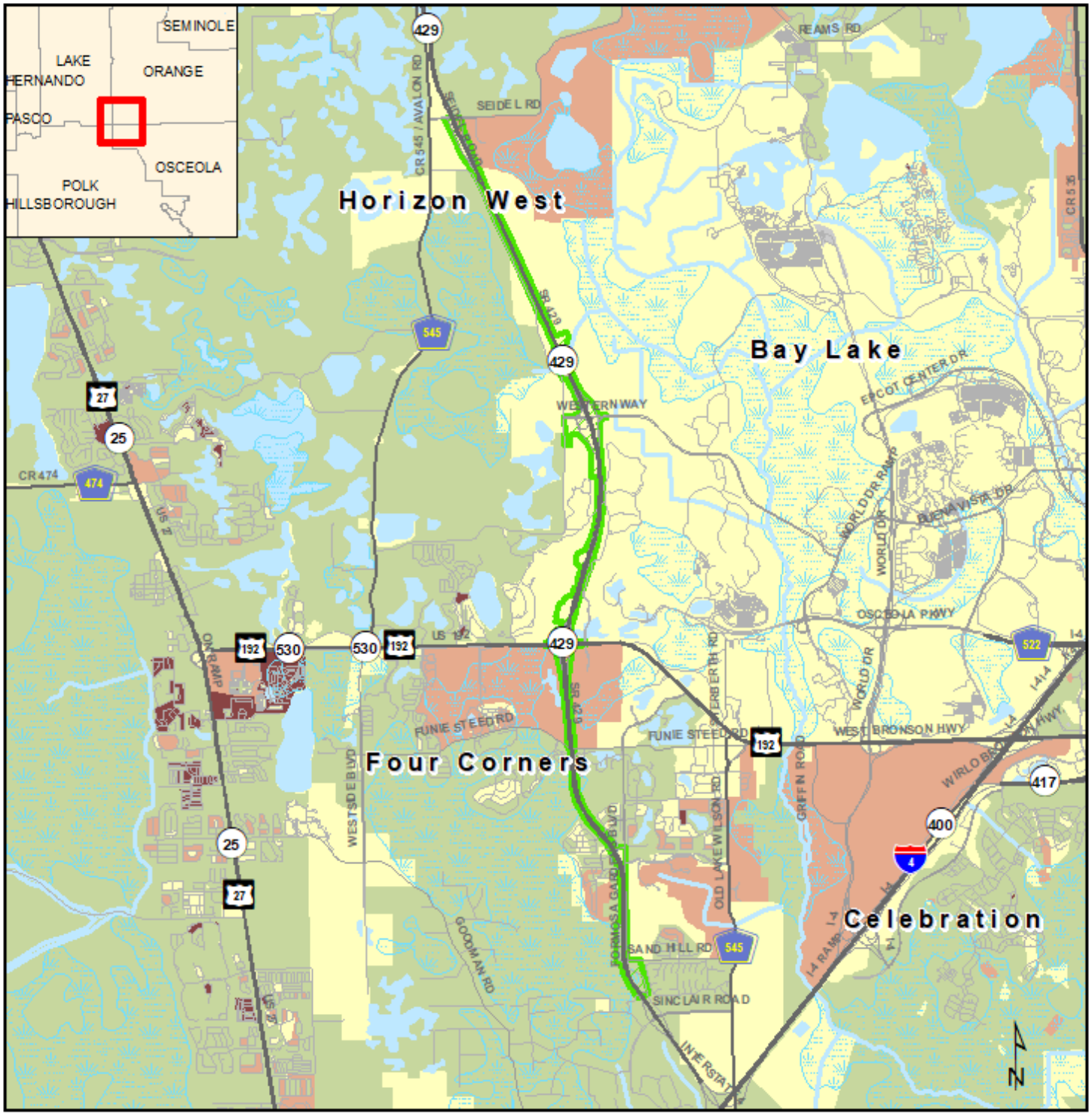
Technical Study Name	Type	Conditions	Review Org	Review Date
Drainage/Pond Siting Report	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Geotechnical Report	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Noise Study Report	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
Conceptual Stage Relocation Plan	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
Water Quality Impact Evaluation	Other		Florida's Turnpike Enterprise	05/21/2020
State Environmental Impact Report (SEIR)	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
Contamination Screening Evaluation Technical Memorandum	Other		Florida's Turnpike Enterprise	05/21/2020
Preliminary Engineering Report	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Air Quality Technical Memorandum	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
Cultural Resource Assessment Survey	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
Interchange Modification Report (IMR)	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Utility Assessment Technical Memorandum	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Location Hydraulics Technical Memorandum	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Bridge Analysis Report	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020
Natural Resources Evaluation (NRE)	ENVIRONMENTAL		Florida's Turnpike Enterprise	05/21/2020
ITS Technical Memorandum	ENGINEERING		Florida's Turnpike Enterprise	05/21/2020

Dispute Resolution Activity Log

There are no dispute actions identified for this project in the EST.

Hardcopy Maps: Alternative #1

TO



Age Distribution Map

ETDM Alternative

ETDM Alternative Terminus

ETDM Alternative Eliminated

Median Age

0 - 18

18 - 30

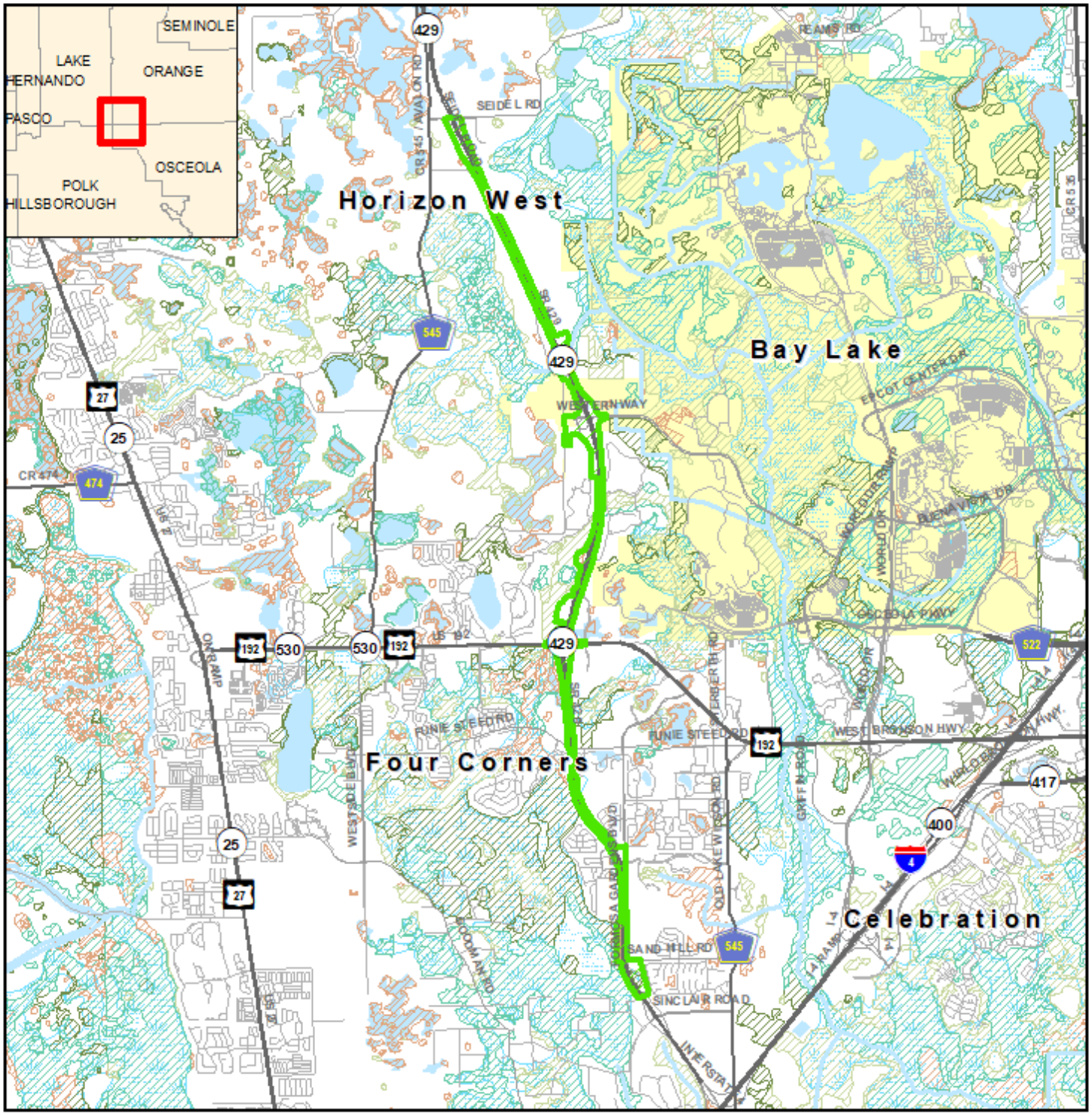
30 - 65

> 65

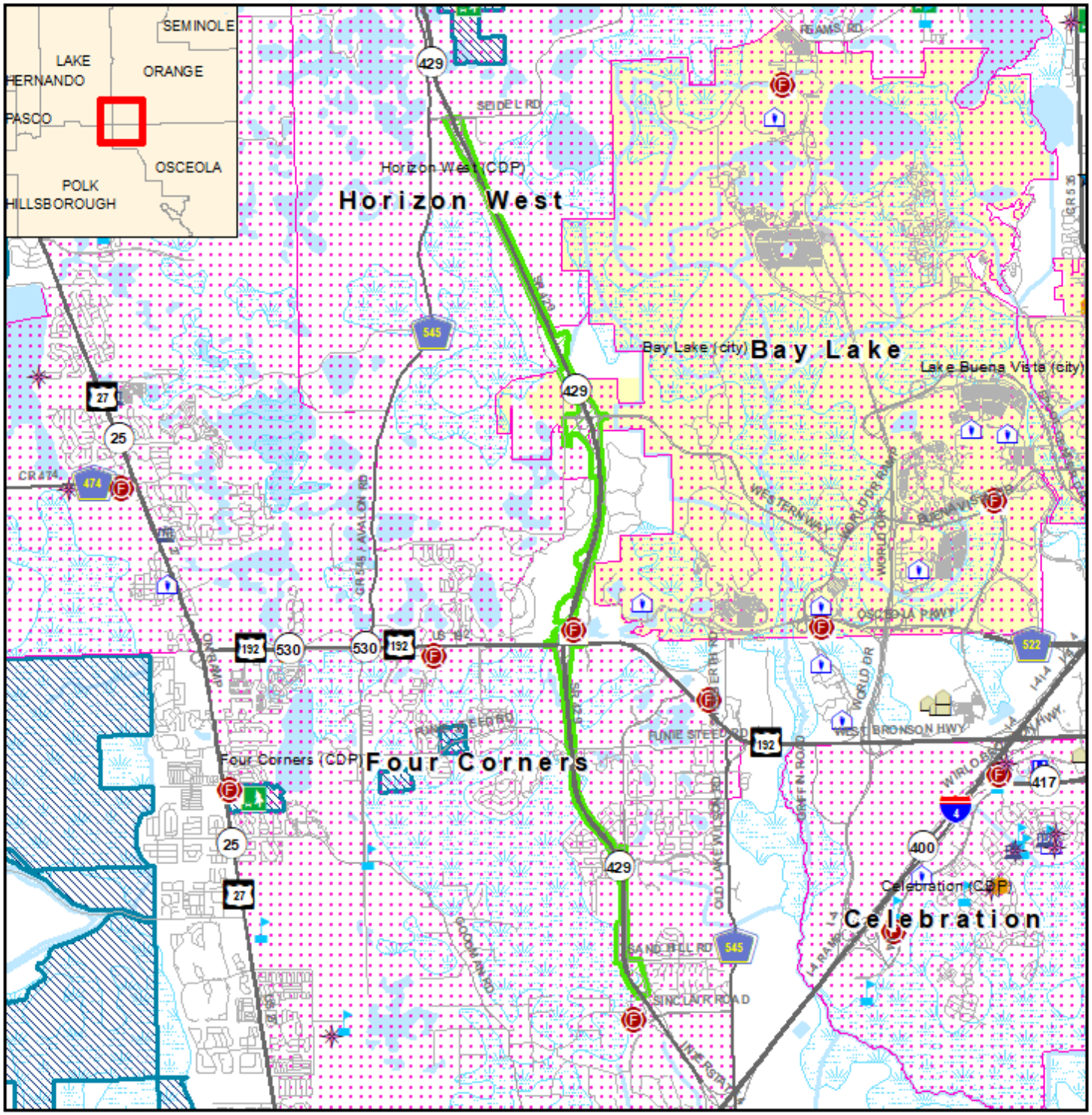
Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)

0 0.125 0.25 0.5 Miles

TO



TO



Community Services Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- Government
- Civic Center
- Cemetery
- Community Center
- Law Enforcement
- Place of Worship
- Cultural Center
- Fire Station
- Hospital
- School
- Park
- Recreational Trail
- Community Boundary
- Conservation or Recreation Area

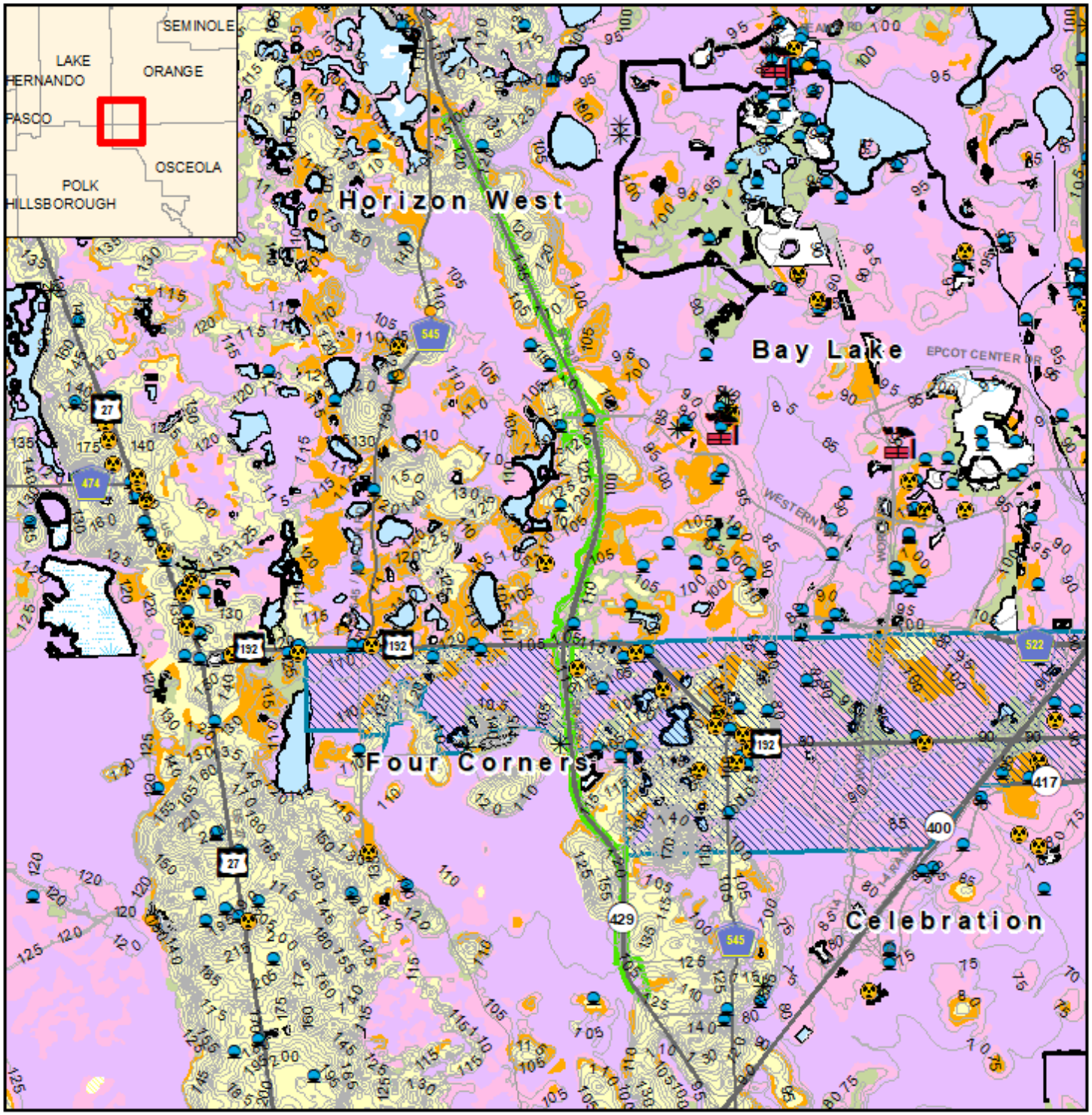
Data Sources:
US Geological Survey; FL Department of Transportation; NAVTEQ; FL Property Appraisers; FL Natural Areas Inventory

0 0.325 0.65 1.3 Miles

N

ETDM EST FDOT

TO



Contamination Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- Toxic Release Inventory
- Dry Cleaning Facility
- Solid Waste Facility
- Hazardous Material Site
- Power Plant
- Superfund Site
- Nuclear Site
- FDEP Tanks
- 5 FT Contour
- Brownfield Area

Soil Drainage

- Excessively Drained
- Well Drained
- Somewhat Excessively Drained
- Moderately Well Drained
- Somewhat Poorly Drained
- Poorly Drained
- Very Poorly Drained
- Unclassified

0 0.375 0.75 1.5 Miles

N

Data Sources:NAVTEQ; US Geological Survey; FL Department of Transportation; FL Department of Environmental Protection; FL Water Management Districts; US Environmental Protection Agency; Natural Resource Conservation Service

ETDM EST FDOT

TO

Cultural Resources Data Map

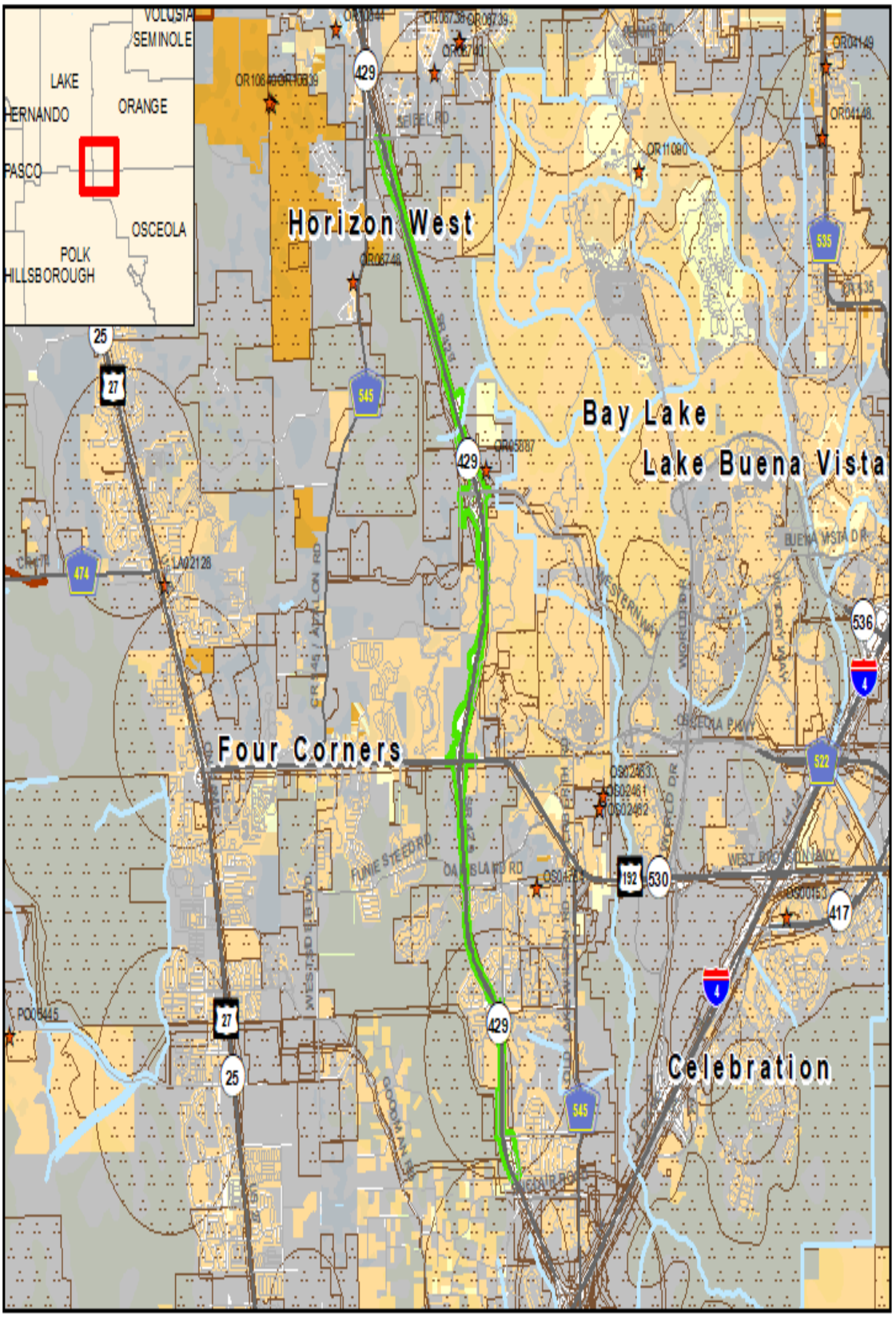
- ETDM Alternative
- Major Road
- Local Road or Trail
- Historic Structure
- Historic Bridge
- State Historic Highway
- Historic Cemetery
- Historic Resource Group
- Cultural Resource Field Survey Area

Year Built

- Pre 1970
- Post 1980
- 1970 - 1979
- Parcels w/ no values

N

0 0.25 0.5 1 Miles

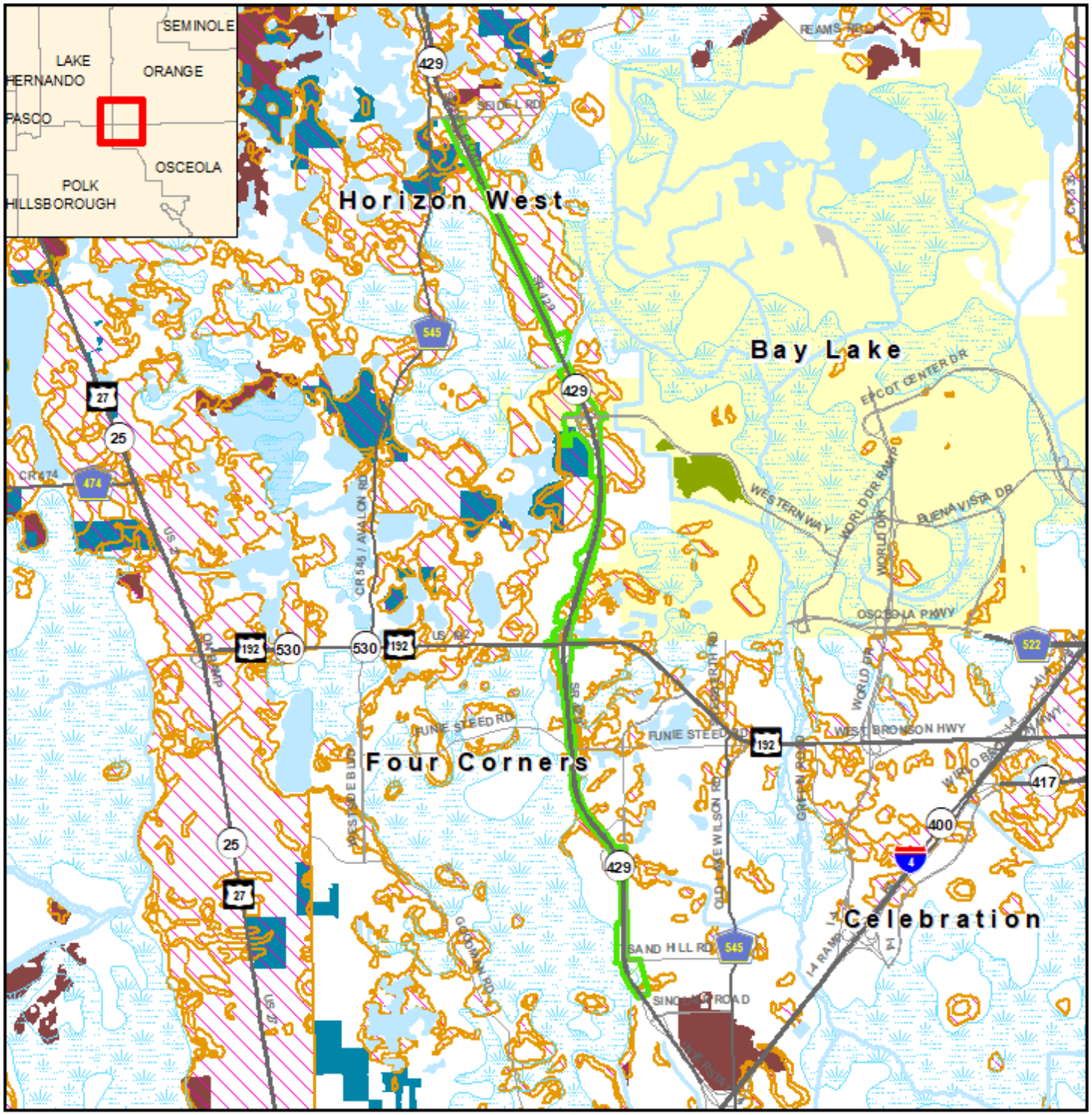


ETDM EST FDOT

This map and its content is made available by the Florida Department of Transportation on an "as is," "as available" basis without warranties of any kind, express or implied.
Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

14446 - SR 429 Widening from north of I-4 to Seidel Road PD&E Study

TO



Farmlands Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- Cropland/Pastureland
- Nurseries/Vineyards
- Specialty Farms
- Tree Crops
- Rural Open Lands
- Prime Farmland Soils

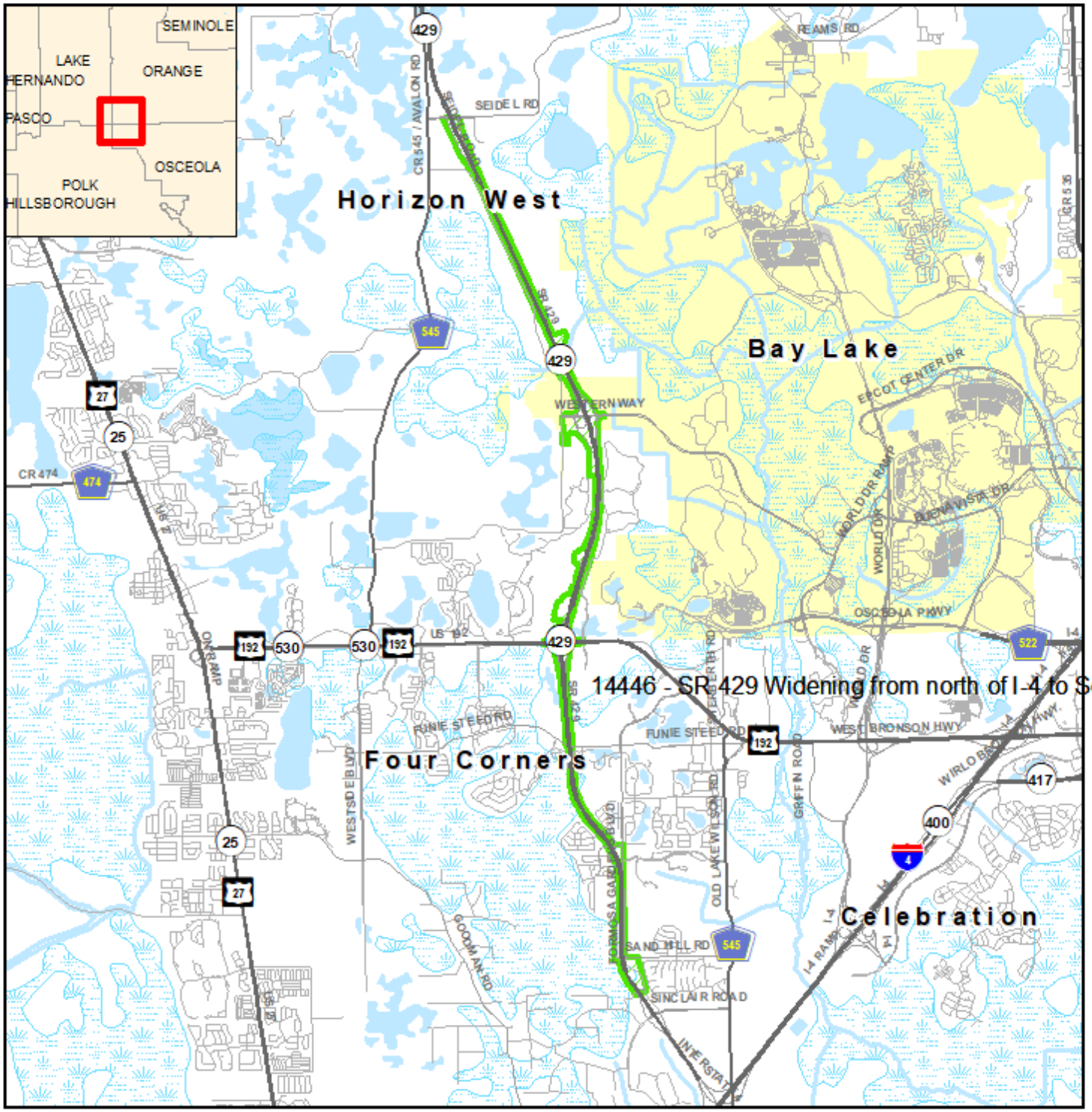
Data Sources:
NAVTEQ
Florida Water Management Districts
US Geological Survey
Natural Resources Conseration Services

0 0.35 0.7 1.4 Miles

N

ETDM EST FDOT

TO



Floodplains Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- Special Flood Hazard Area

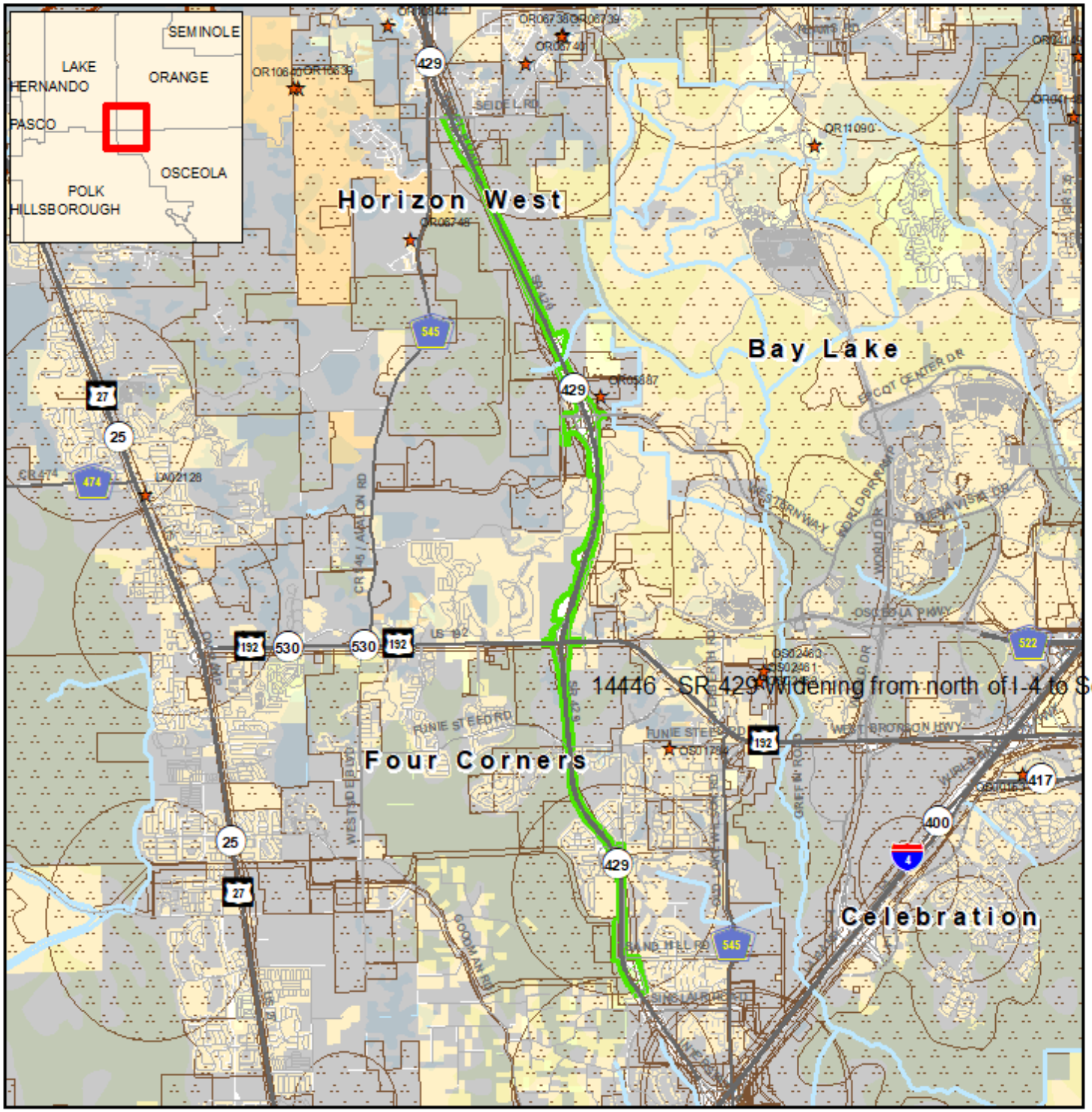
Data Sources:
NAVTEQ
US Geological Survey
Federal Emergency Management Agency

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Historic Resource Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail

Year Built
- Pre 1970
- Post 1980
- 1970 - 1979
- Parcels w/ no values

- Historic Structure
- Historic Bridge
- State Historic Highway
- Historic Cemetery
- Historic Resource Group
- Cultural Resource Field Survey Area

Data Sources:
NAVTEQ
US Geological Survey
Florida Department of Transportation
Florida Department of State,
Bureau of Archaeological Research

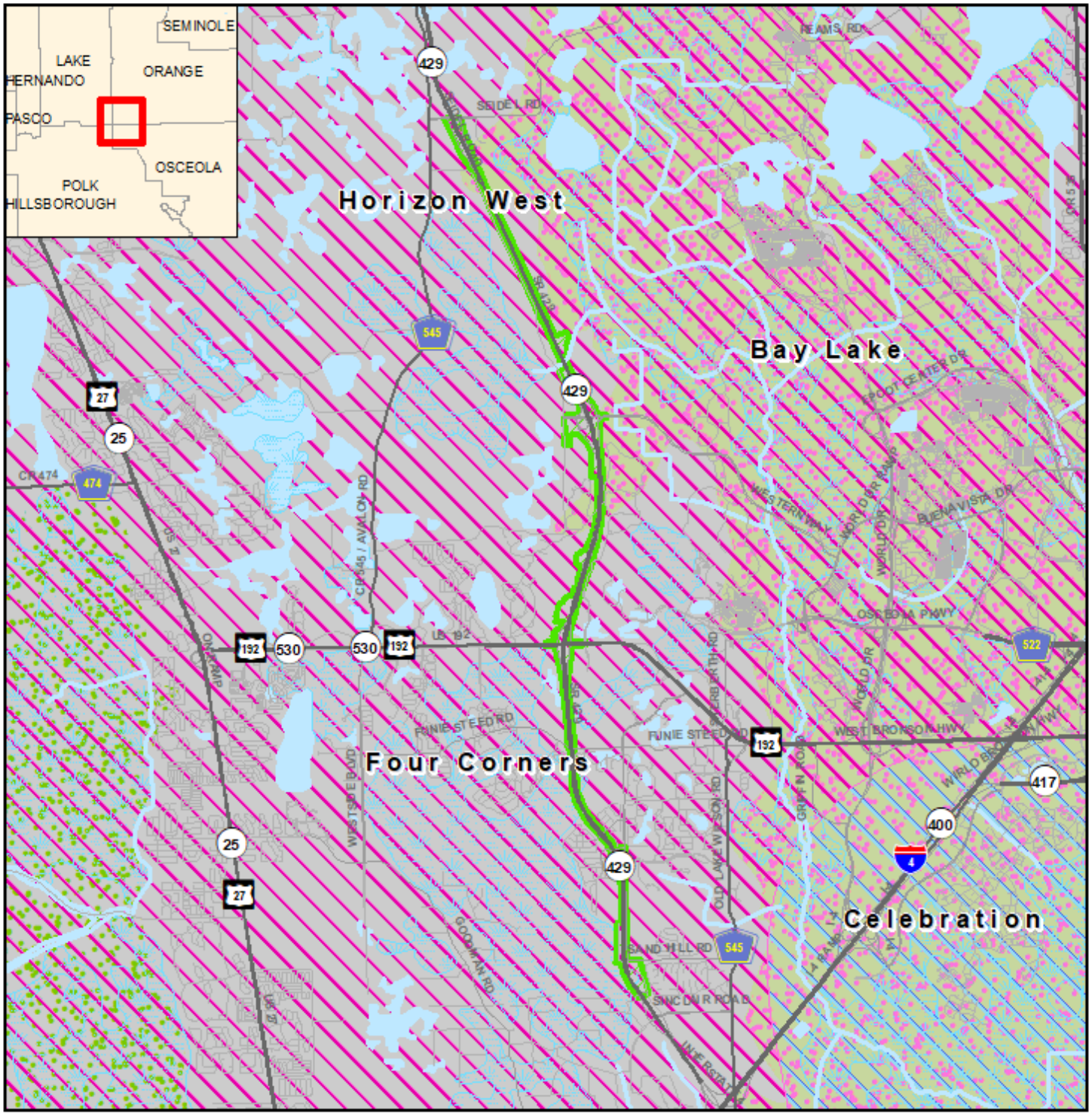
Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

0 0.425 0.85 1.7 Miles

N

ETDM EST FDOT

TO



Hydrogeology Map

ETDM Alternative
ETDM Alternative Terminus
ETDM Alternative Eliminated
Major Road
Local Road or Trail
City Limits

N

0 0.45 0.9 1.8 Miles

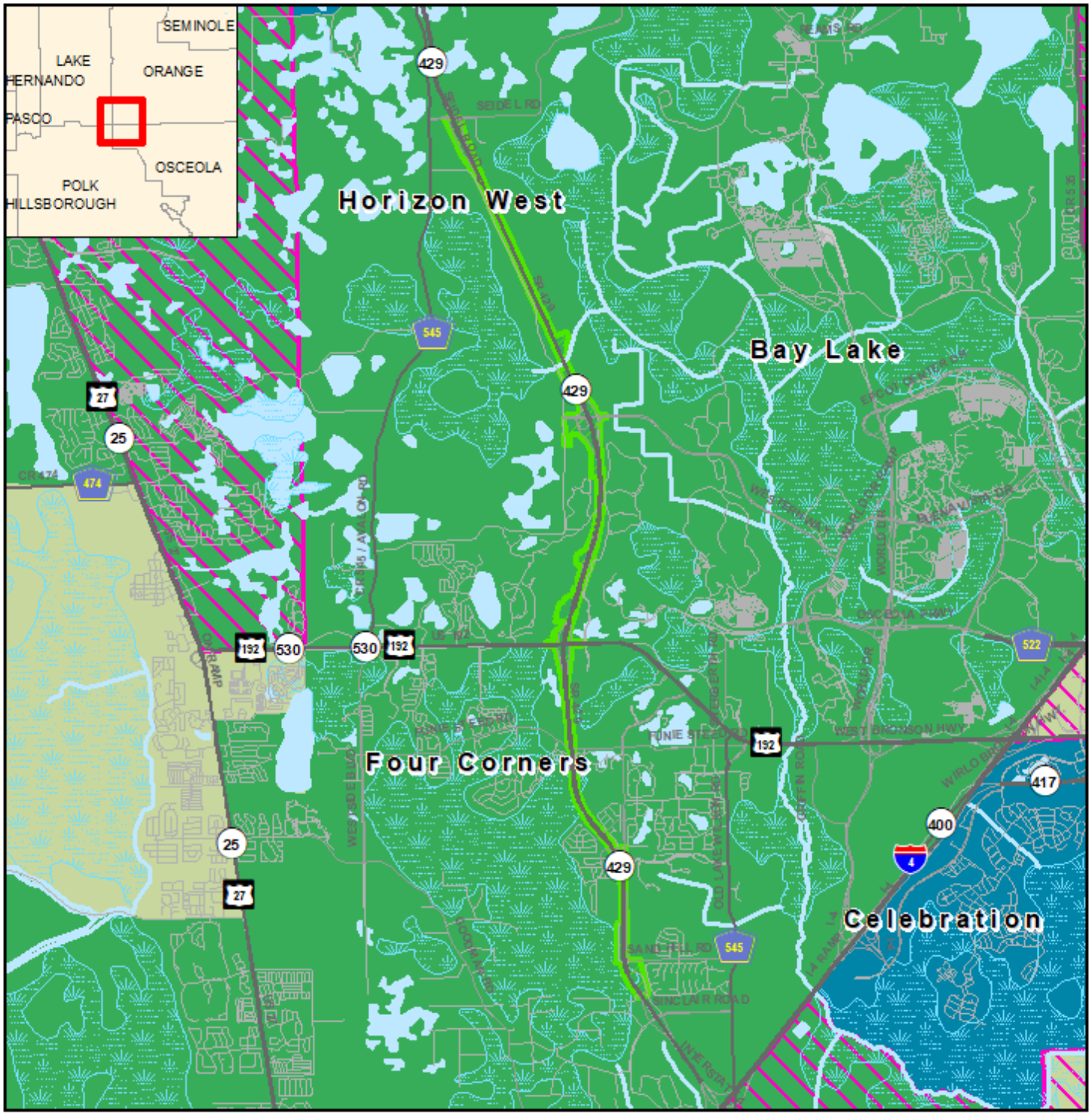
Recharge Areas of the Floridan Aquifer
Discharge 1 to 5
Discharge > 5
Disharge < 1
Recharge 1 to 10
Recharge > 10
Recharge < 1

Surface Geology
Eocene
Miocene
Miocene/Pliocene
Oligocene
Oligocene/Miocene
Pleistocene
Holocene
Pleistocene/Holocene
Pliocene
Pliocene/Pleistocene

Data Sources: NAVTEQ; US Geological Survey
Florida Department of Transportation
South West Florida Water Management District
Florida Geological Survey

ETDM EST FDOT

TO



Income Map

ETDM Alternative
ETDM Alternative Terminus
ETDM Alternative Eliminated
Major Road
Local Road or Trail
> 20% Below Poverty

Median Household Income

0 - 10,000
10,001 - 29,999
30,000 - 49,999
50,000 - 79,999
80,000 - 125,000
> 125,000

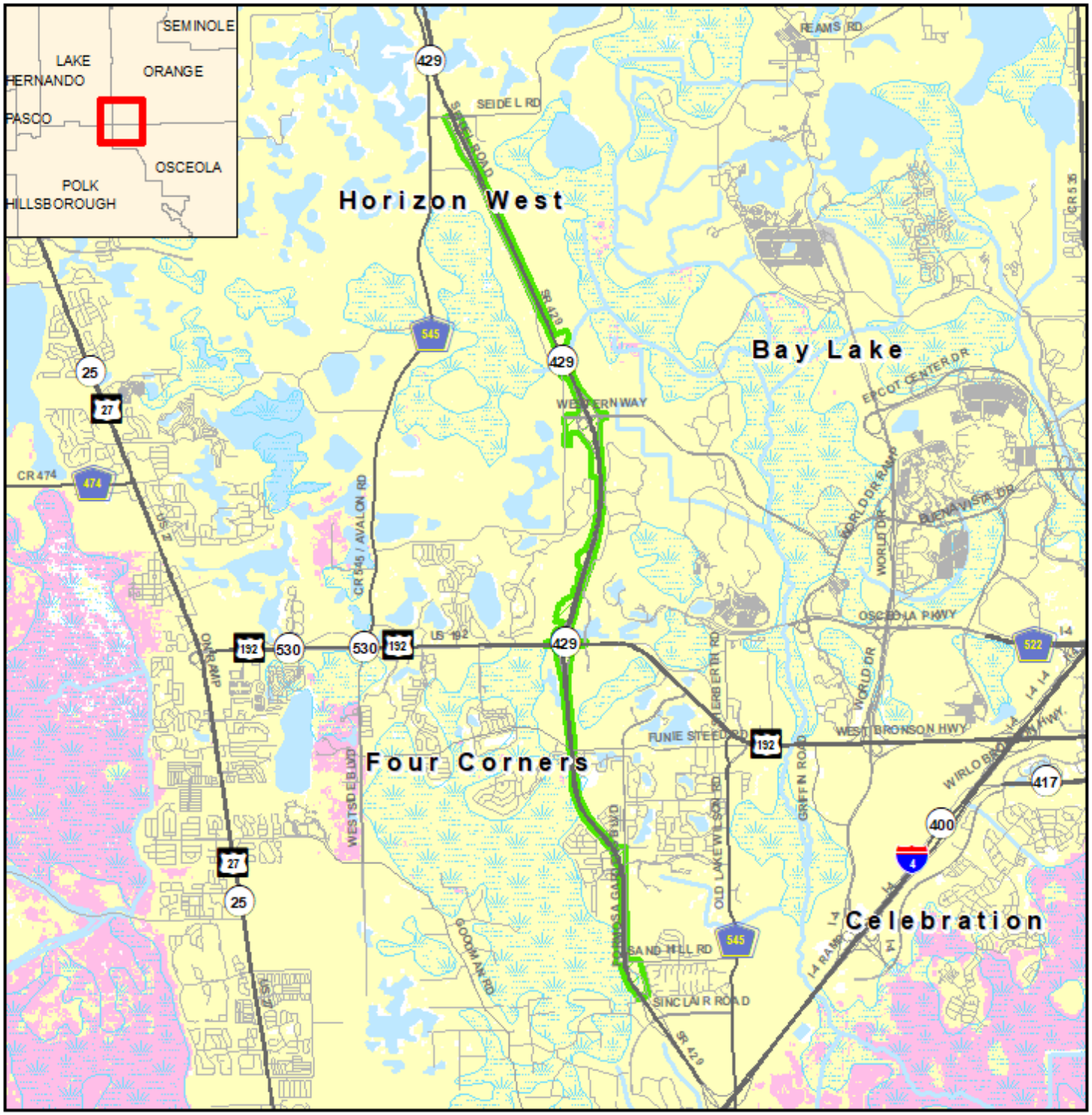
0 0.45 0.9 1.8 Miles

N

Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)

ETDM EST FDOT

TO



Integrated Wildlife Model Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- Low Habitat Quality
- Medium Habitat Quality
- High Habitat Quality

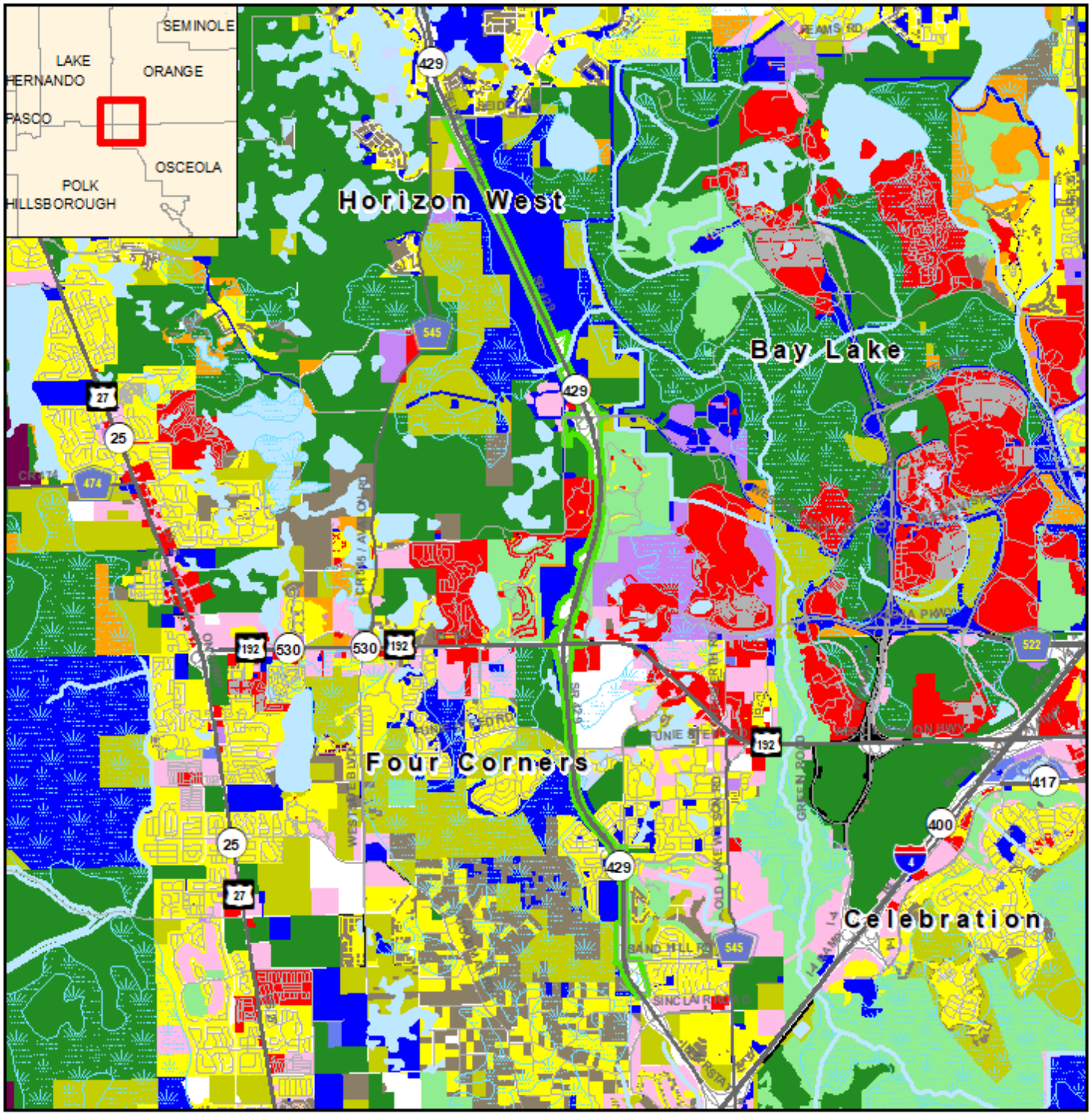
Data Sources:
NAVTEQ
US Geological Survey
Florida Department of Transportation
Florida Fish & Wildlife Conservation Commission

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Land Use Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- Agricultural
- Industrial
- Institutional
- Mining
- Open (Not Agricultural)
- Other
- Public
- Right-of-Way
- Recreational
- Residential
- Retail/Office
- Vacant (Residential)
- Vacant (Nonresidential)
- Water
- No Data

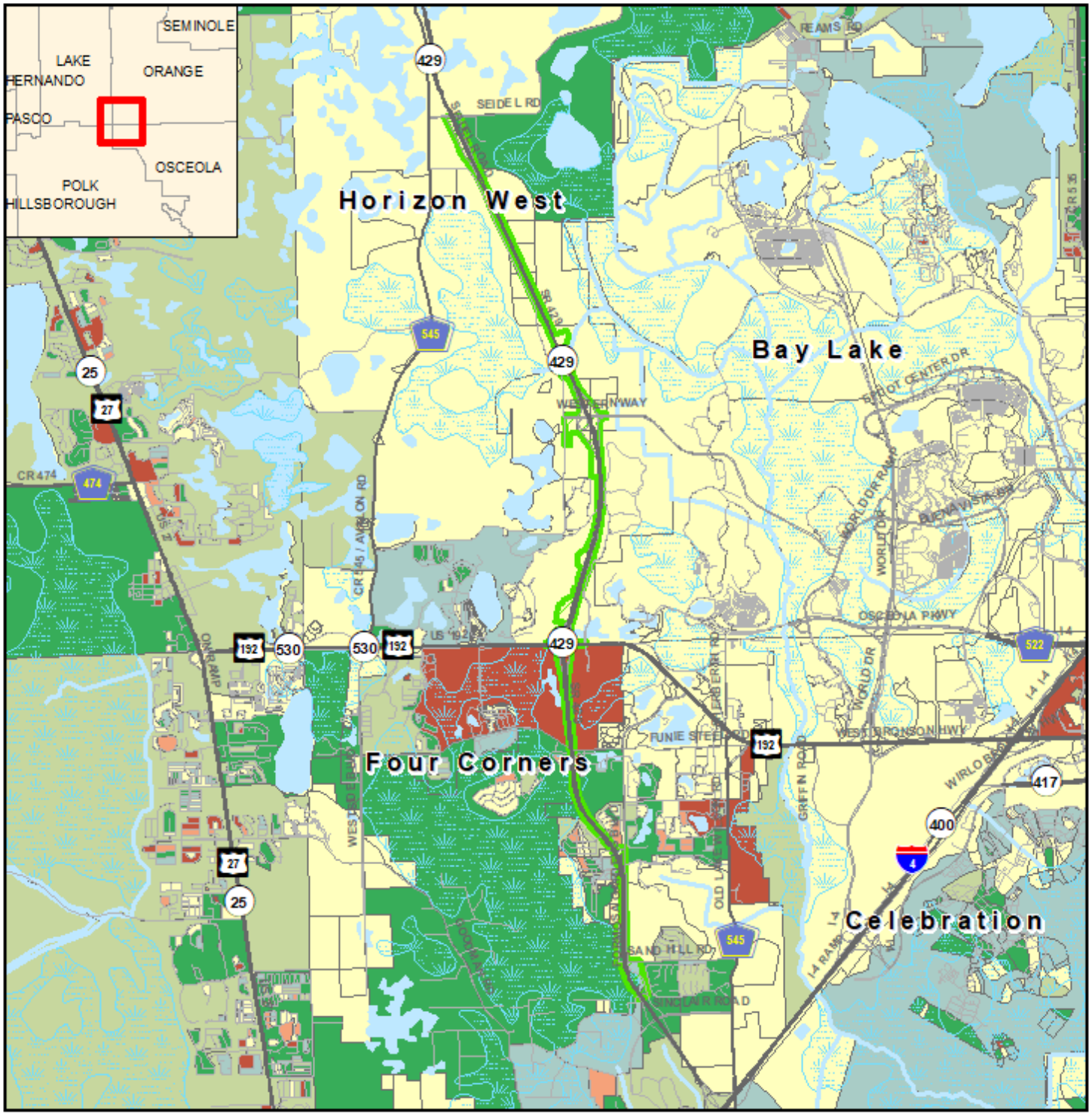
Data Sources:
NAVTEQ
US Geological Survey
Florida Department of Revenue
Florida Department of Transportation
Florida County Property Appraiser Offices

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Minority Population Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail

Percent Minority Population (2010)

0 - 6 | 7 - 20 | 21 - 40 | 41 - 60 | 61 - 85 | 86 - 100

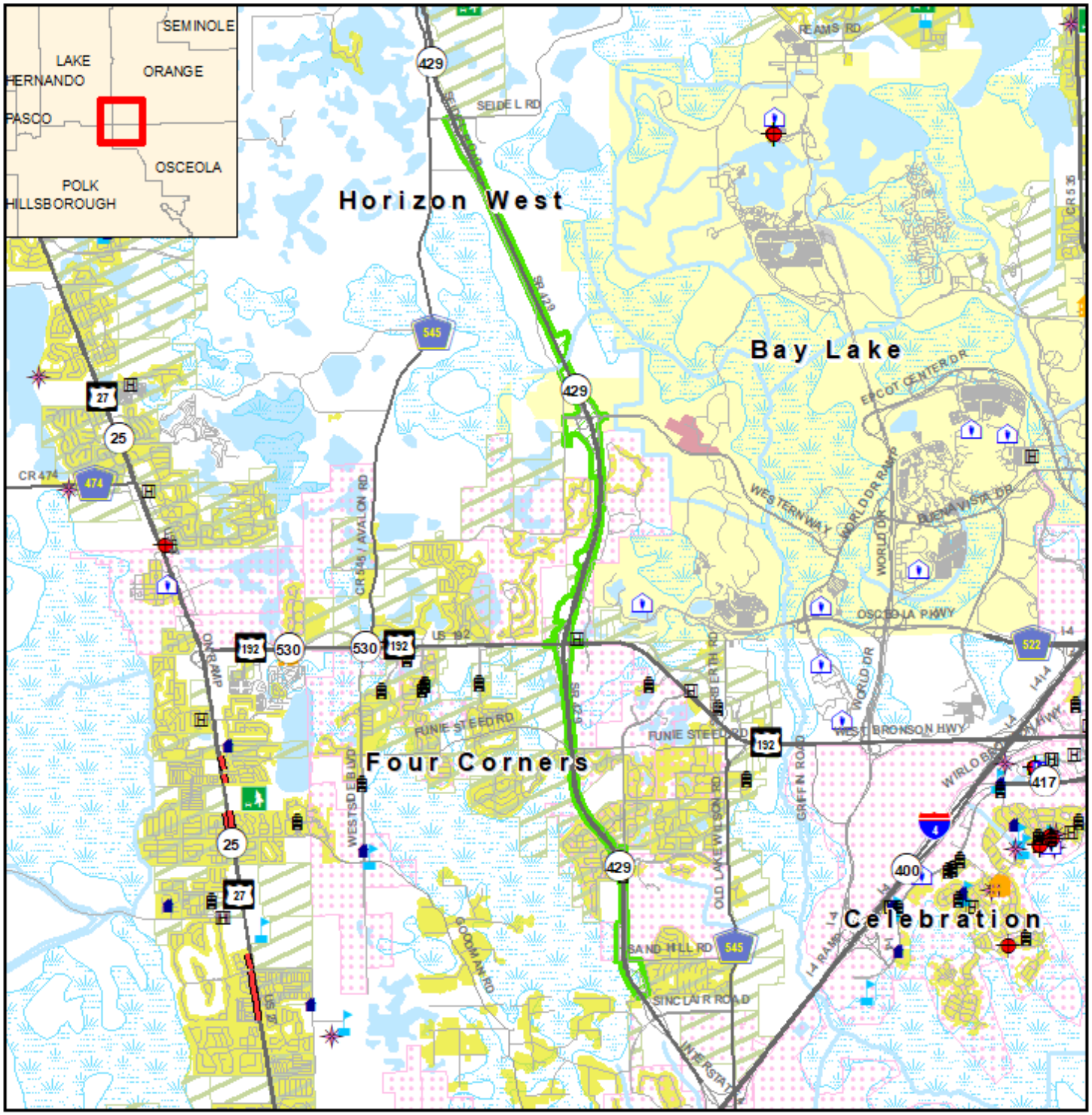
Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Noise Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- City Limits
- Noise Barriers
- Existing Trails
- Condo Owners Associations
- Hospitals
- Laser On-site
- Group Care Facilities
- Cemetery
- Community Center
- Cultural Center
- Health Care
- Park
- Place of Worship
- School
- Historic Cemetery
- Planned Unit Developments
- Wildlife Refuges
- National Parks
- National Park Projects
- Marine Sanctuaries
- Military Installations
- Industrial
- Residential
- HUD Renewal
- Nat'l Estuarine Reserves
- Enterprise Zones
- DRI

0 0.35 0.7 1.4 Miles

N

Data Sources:
GeoPlan Center, US Geological Survey, US Census Bureau, HUD, Florida DOT, US Fish and Wildlife, National Park Service, NOAA, National Estuarine Research, Enterprise Florida

ETDM EST FDOT

TO

Population Density Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail

Population Per Acre (2010)

0 - 4.9 | 5 - 29.9 | 30 - 99.9 | 100 - 349.9 | 350 - 800 | > 800

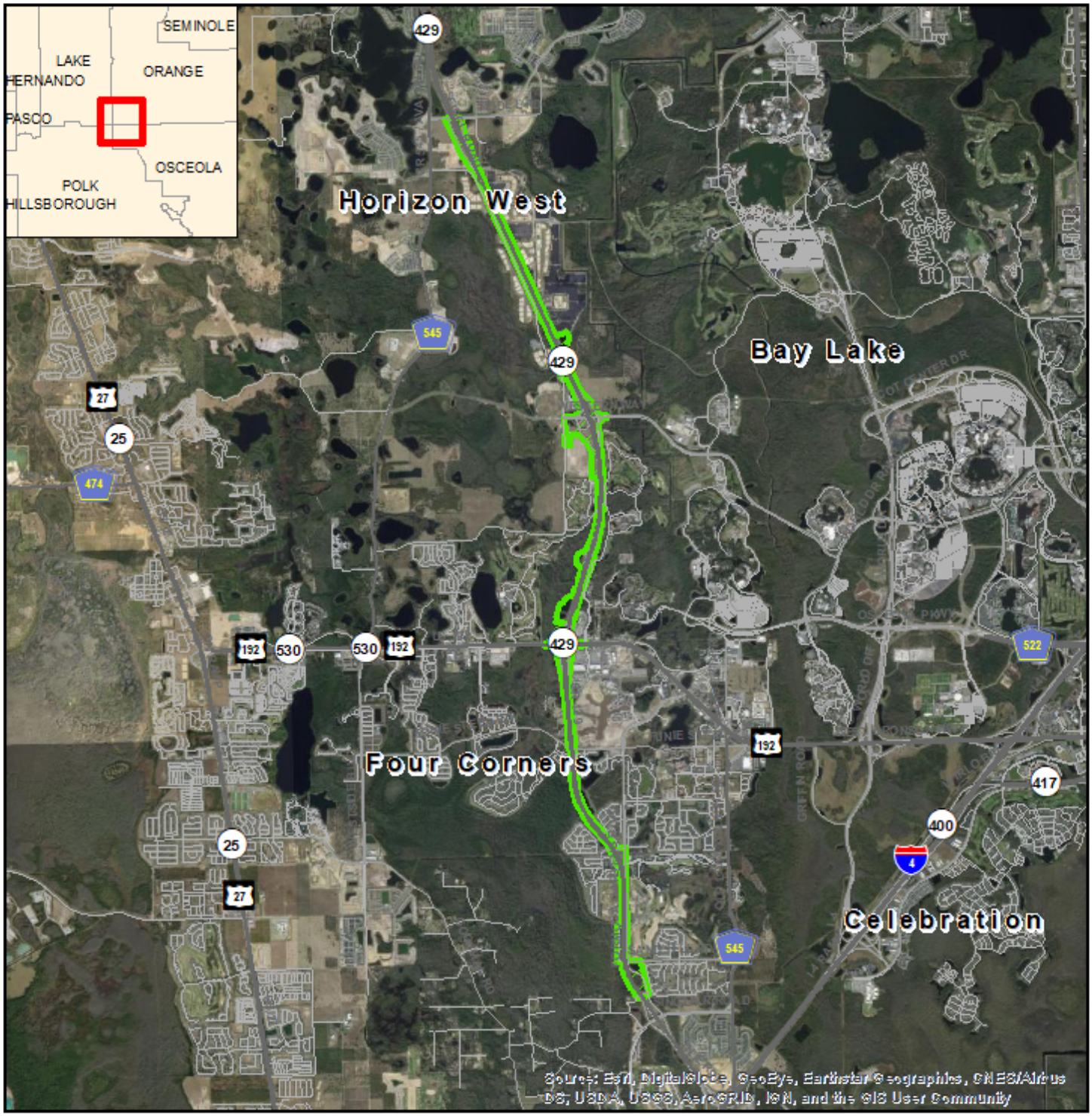
Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Project Aerial Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail

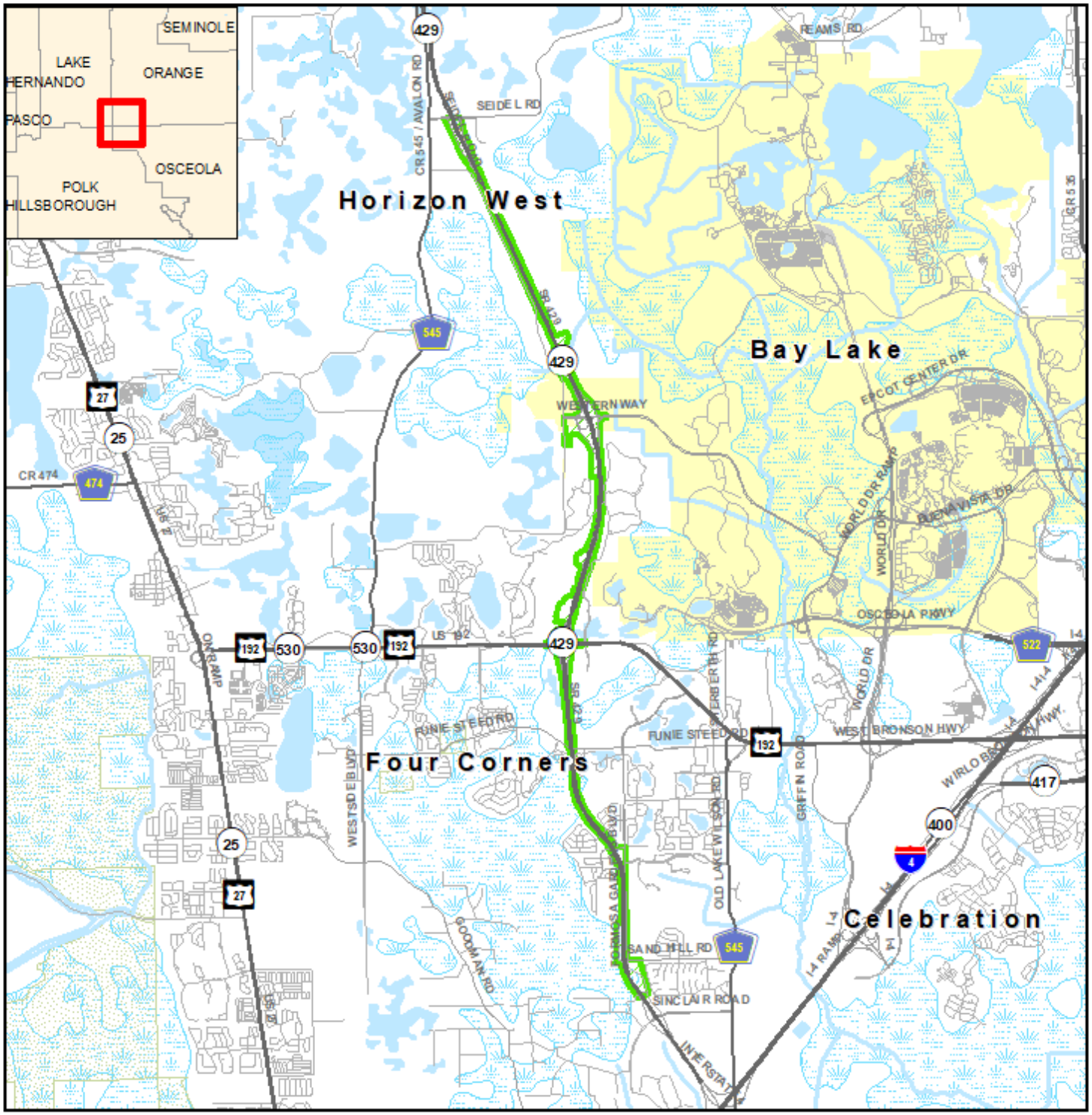
Data Sources:
Highways - NAVTEQ
Digital Orthophotograph - ArcGIS Online

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

TO



Project Base Map

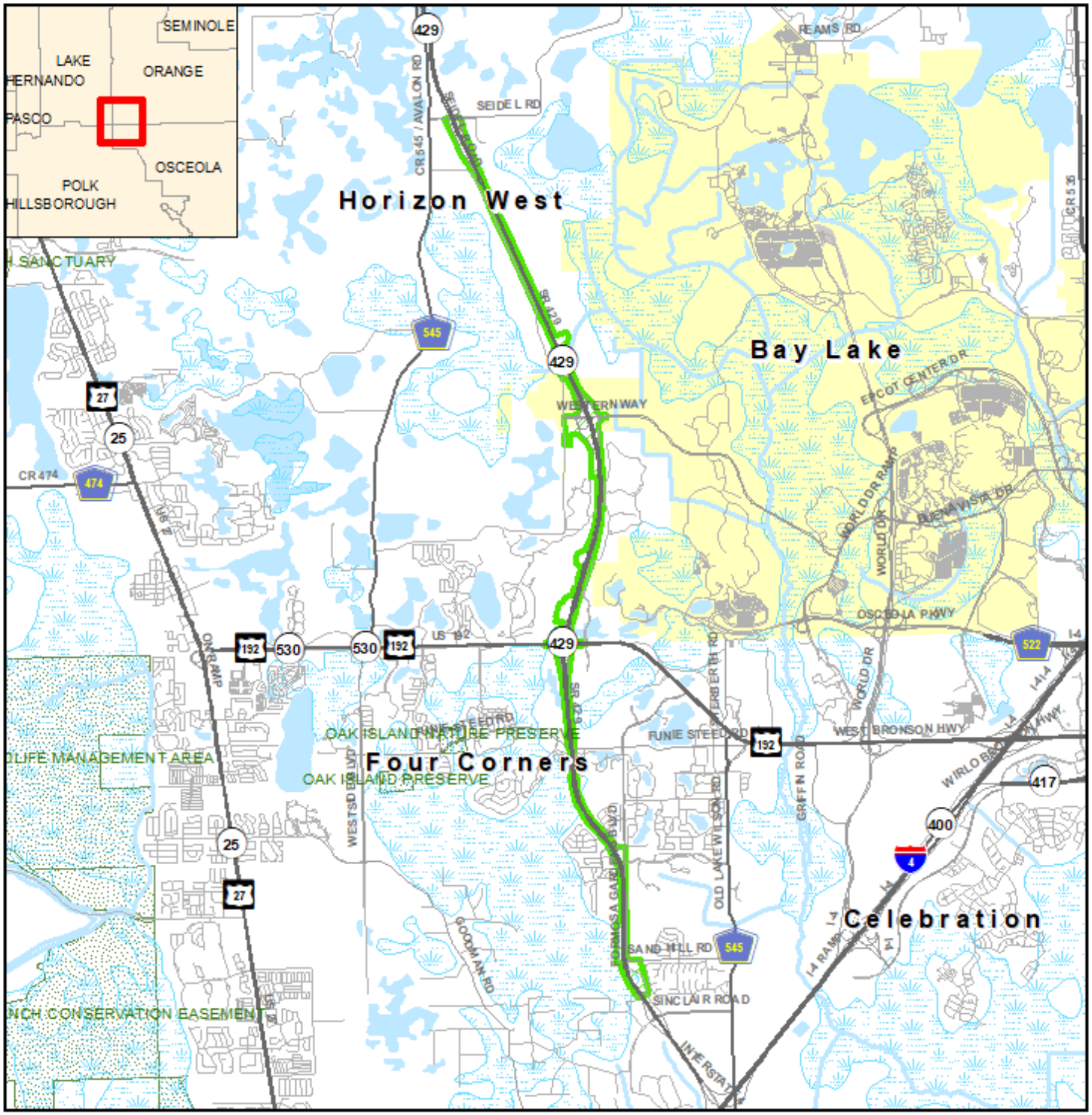
- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Local Road or Trail
- Major Road
- City Limits
- Managed Conservation Lands

Data Sources:
NAVTEQ
US Geological Survey
US Census Bureau
County Property Appraisers
Florida Natural Areas Inventory

0 0.35 0.7 1.4 Miles

N

TO



Recreational Areas Map

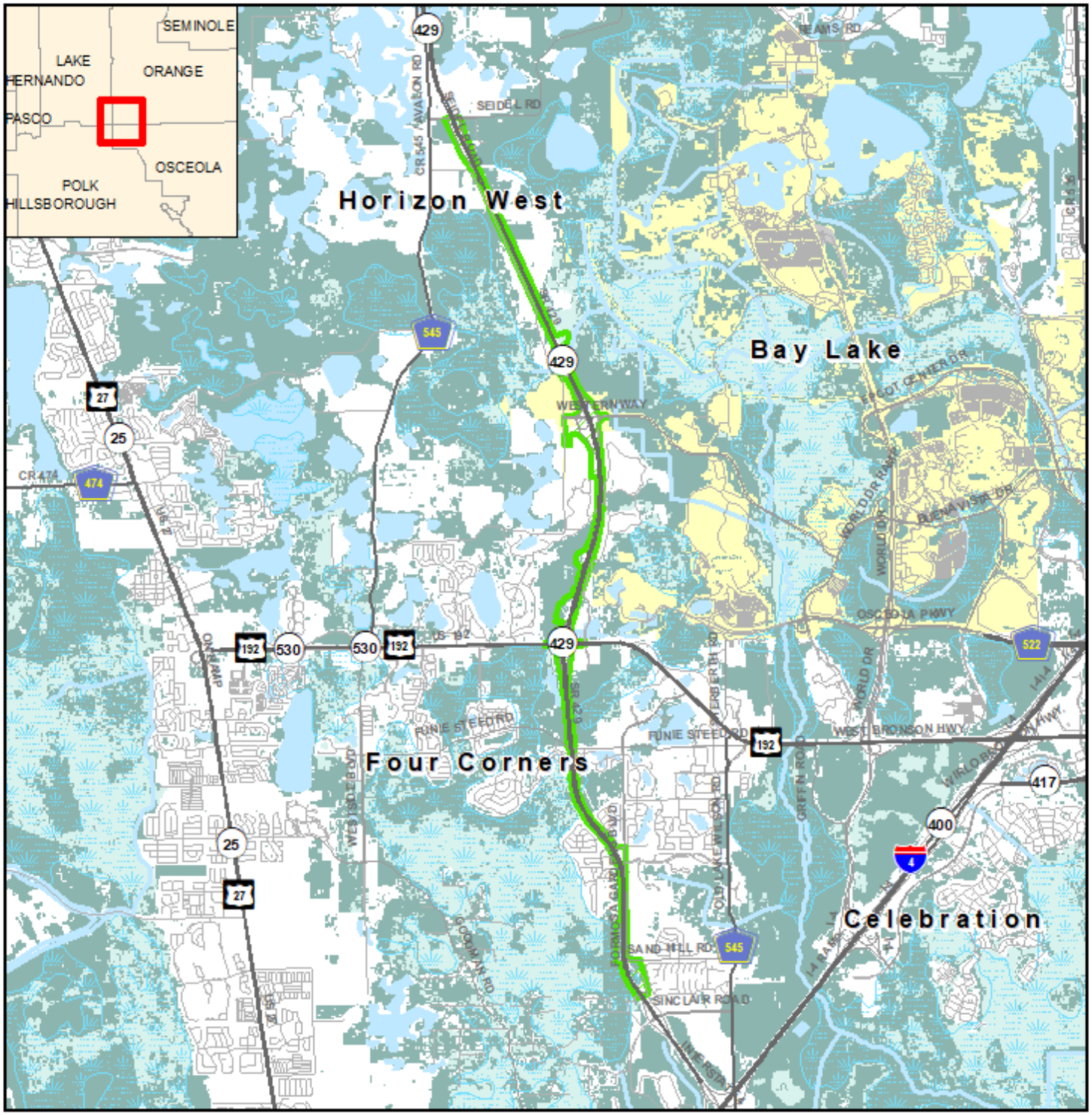
- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- Conservation or Recreation Area

Data Sources:
NAVTEQ
US Geological Survey
Florida Natural Areas Inventory

0 0.45 0.9 1.8 Miles

N

TO



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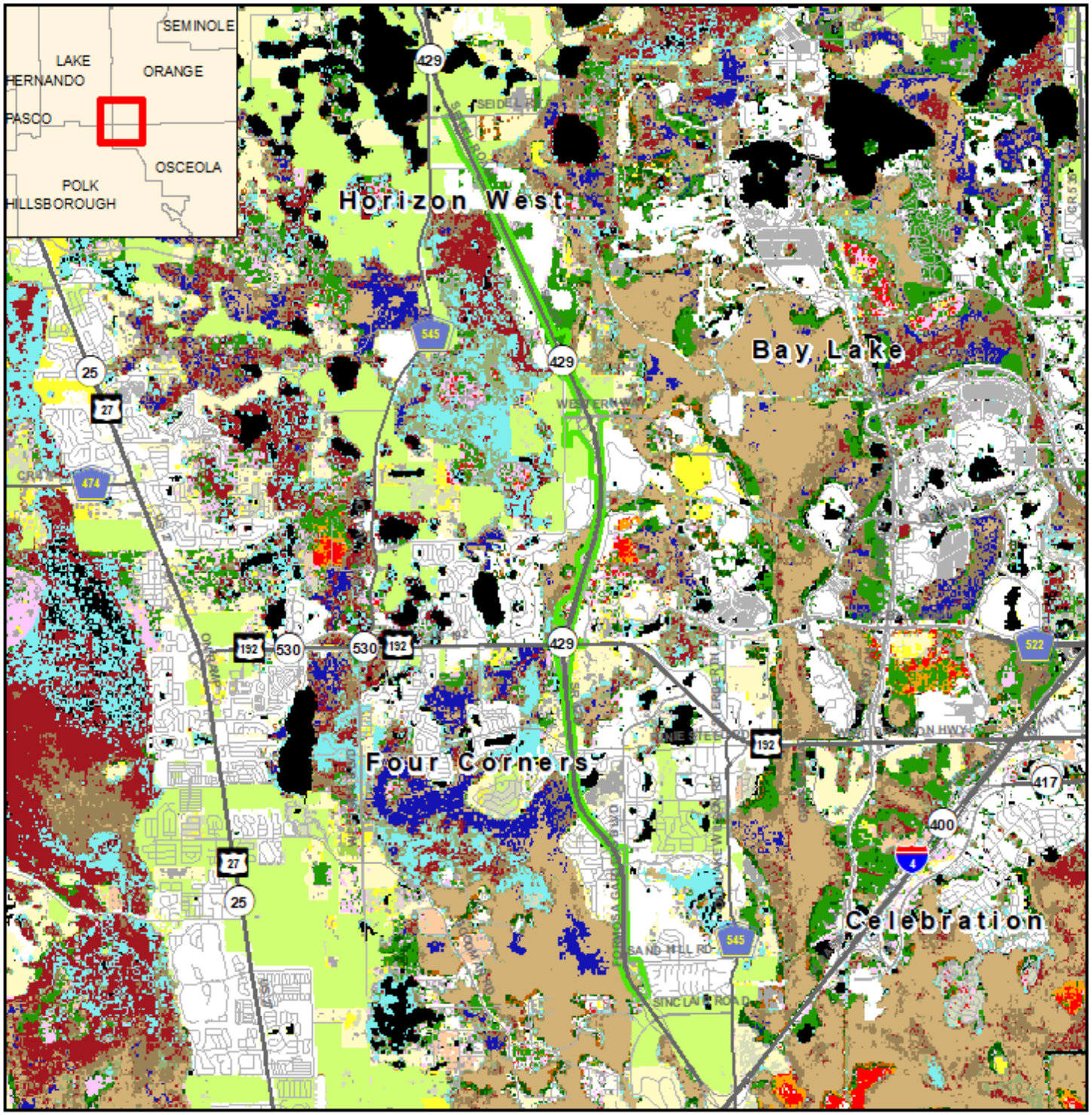


Vegetation Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Not Classified
- Coastal Strand
- Sand/Beach
- Xeric Oak Scrub
- Sand Pine Scrub
- Sandhill
- Dry Prairie
- Mixed Hardwood-pine Forest
- Hardwood Hammocks and Forests
- Pinelands
- Cabbage Palm-live Oak Hammock
- Tropical Hardwood Hammock
- Freshwater Marsh and Wet Prairie
- Sawgrass Marsh
- Cattail Marsh
- Shrub Swamp
- Bay Swamp
- Cypress Swamp
- Cypress/Pine/Cabbage Palm
- Mixed Wetland Forest
- Hardwood Swamp
- Hydric Hammock
- Bottomland Hardwood Forest
- Salt Marsh
- Mangrove Swamp
- Scrub Mangrove
- Tidal Flats
- Open Water
- Shrub and Brushland
- Grassland
- Bare Soil/Clearcut
- Improved Pasture
- Unimproved Pasture
- Sugarcane
- Citrus
- Row and Field Crops
- Other Agriculture
- Exotic Plants
- Australian Pine
- Melaleuca
- Brazilian Pepper
- High Impact Urban
- Low Impact Urban
- Extractive

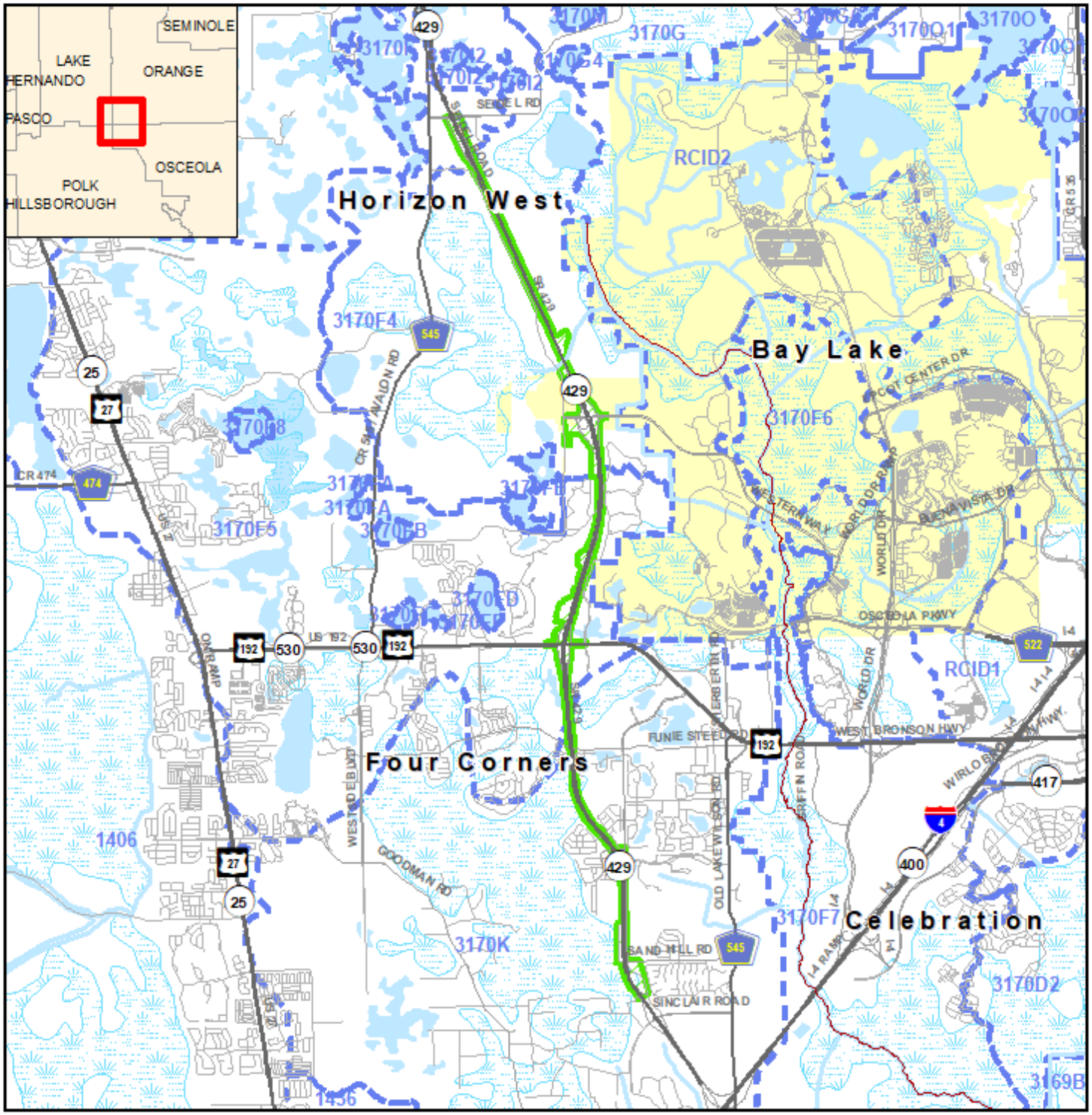
0 0.45 0.9 1.8 Miles

N

Data Sources: NAVTEQ; Florida Department of Transportation; Florida Fish and Wildlife Conservation Commission

ETDM EST FDOT

TO



Water Resource Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- 1st Magnitude Spring
- River, Stream or Canal
- Navigable Water Way
- SFWMD Canals
- Drainage Basin
- Outstanding Florida Water
- Surface Water Class I
- Surface Water Class II
- Water Body
- Swamp/Marsh

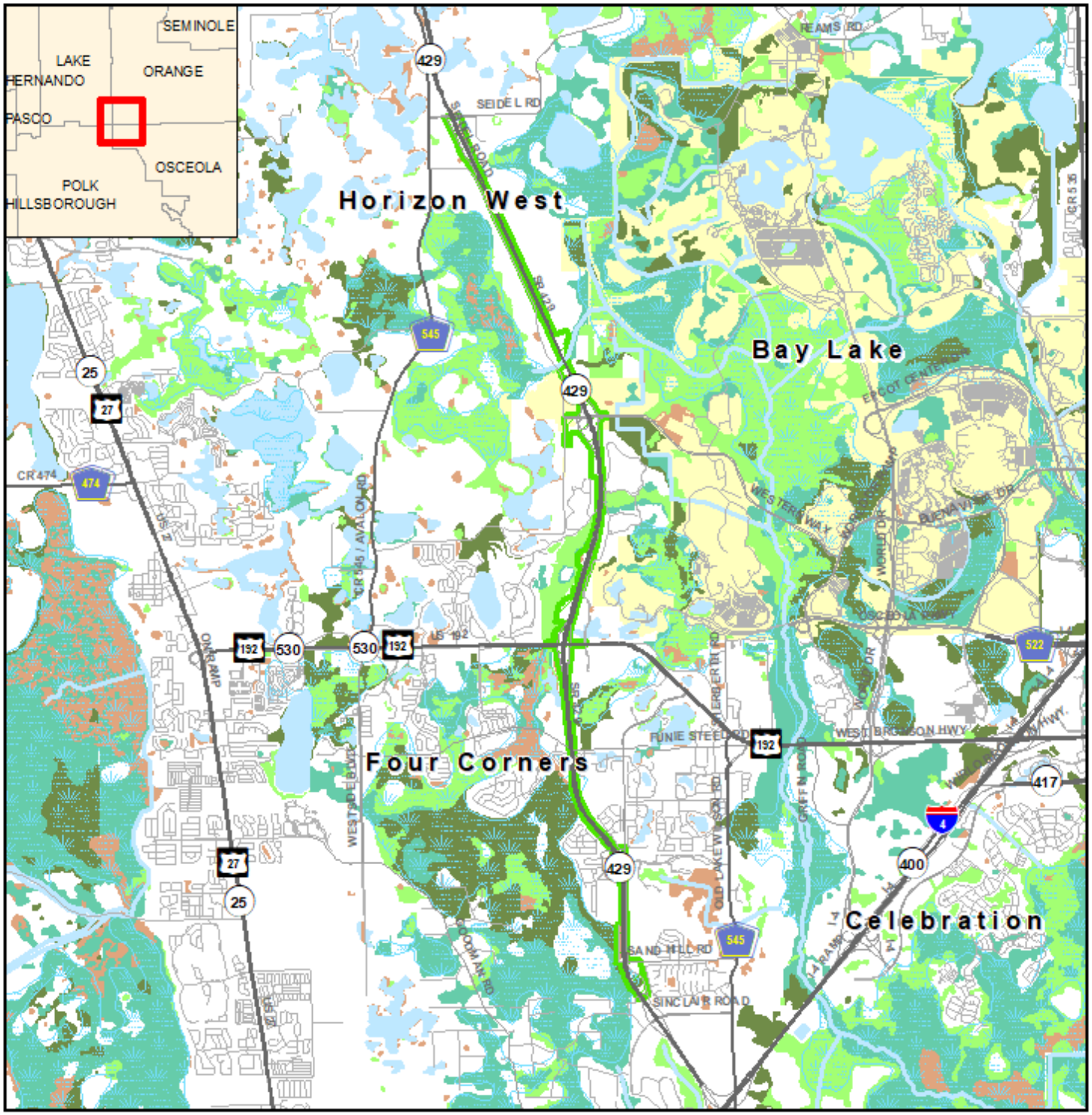
Data Sources:
NAVTEQ
US Geological Survey
Florida Department of Transportation
Florida Department of Environmental Protection
Florida Geological Survey
US Bureau of Transportation Statistics

0 0.425 0.85 1.7 Miles

N

ETDM EST FDOT

TO



Wetlands and Surface Waters Map

- ETDM Alternative
- ETDM Alternative Terminus
- ETDM Alternative Eliminated
- Major Road
- Local Road or Trail
- City Limits
- River, Stream or Canal
- Water Body
- Swamp/Marsh

Data Sources:
NAVTEQ
Florida Water Management Districts
US Geological Survey

0 0.45 0.9 1.8 Miles

N

ETDM EST FDOT

Appendices

PED Comments

Advance Notification Comments

FL Department of Agriculture and Consumer Services Comment --
No additional comments.

--Mark Kiser, 7/17/2020

Response --

--, $tools.date.format("M/d/yyyy",$comment.responseTimestamp)

US Army Corps of Engineers Comment --
The Corps has no issues with the Advance Notification Package and concurs with the initial assessment of Wetlands and Surface Water and Navigation issues. Given the limited information at this time on a proposed design of the roadway expansion, the Corps determines that the wetland and surface water issue, the level of importance could be minimal or moderate**.**

--Randy Turner, 7/13/2020

Response --

--, $tools.date.format("M/d/yyyy",$comment.responseTimestamp)

FL Department of State Comment --
No comments

--Adrianne Daggett, 6/17/2020

Response --

--, $tools.date.format("M/d/yyyy",$comment.responseTimestamp)

GIS Analyses

Since there are so many GIS Analyses available for Project #14446 - SR 429 Widening from north of I-4 to Seidel Road PD&E Study, they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

http://etdmpub.fla-etat.org/est/index.jsp?tpID=14446&startPageName=GIS%20Analysis%20Results

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Summary Report Re-Published 1/08/2021Milestone** is selected. GIS Analyses snapshots have been taken for Project #14446 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

Note: Attachments are not included in this Summary Report, but can be accessed by clicking on the links below:

Date	Type	Size	Link / Description
06/02/2020	Hardcopy Map (from Attach Document Tool)	1.54 MB	http://etdmpub.fla-etat.org/est/servlet/blobViewer?blobID=30220 None Provided

Degree of Effect Legend

Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.	

0	None (after 12/5/2005)	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The *None* degree of effect is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
2	Minimal to None (assigned prior to 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Potential Dispute (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Dispute Resolution (Programming Screen)	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

Appendix E
Livingston Road Ramp Bridge Shoulder Evaluation Tech Memorandum

FINAL
LIVINGSTON ROAD RAMP BRIDGE SHOULDER EVALUATION TECHNICAL MEMORANDUM

Florida Department of Transportation

Florida's Turnpike Enterprise

Project Development and Environment (PD&E) Study to

Widen Western Beltway (SR 429)

from North of I-4/SR 429 Interchange to Seidel Road

Orange and Osceola Counties, Florida

Financial Management Number: 446164-1

ETDM Number: 14446

May 2023

Widen Western Beltway PD&E Study
FPID: 446164-1
Livingston Road Ramp Bridge Shoulder Width Evaluation
May 19, 2023

Introduction

This Tech Memo evaluates options for shoulder width for the proposed Livingston Road Ramp Bridge. The Livingston Road interchange ramp bridge connects Livingston Road to SR 429 southbound on- and off-ramps. The Design Speed is 40 mph.

Project Summary

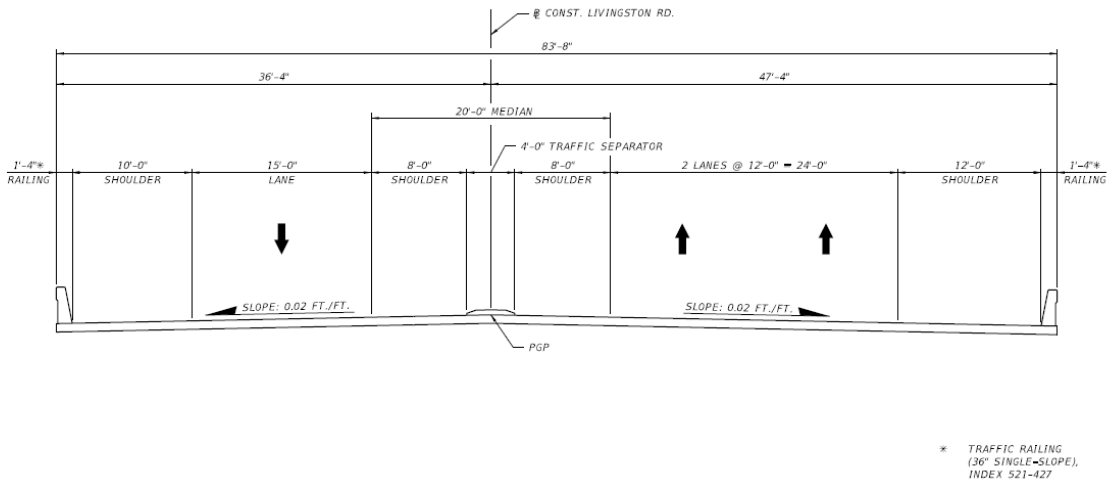
The Florida Department of Transportation (FDOT), Florida's Turnpike Enterprise (the Enterprise) is evaluating improvements to the Western Beltway/State Road (SR) 429 from north of Interstate 4 (I-4) in Osceola County (Milepost 1) to the Seidel Road interchange (Milepost 11) in Orange County, a distance of approximately 10 miles. The Western Beltway (SR 429) is part of a limited-access, tolled beltway around Orlando, and is part of the overall Florida's Turnpike system of tolled expressways. The existing typical section for SR 429 from I-4 to Seidel Road is a four-lane divided expressway located within approximately 300 feet of right of way (ROW). The typical section includes 10-foot paved outside shoulders and four-foot inside paved shoulders on the mainline as well as guardrail in the median. Improvements being evaluated include widening from two to four lanes in each direction, incorporating interchange modifications and safety improvements along SR 429, adding, or upgrading Intelligent Transportation Systems (ITS), and adding a potential new interchange location at Livingston Road. An adjacent project, the Poinciana Parkway Extension Connector PD&E Study (Financial Project Identification Number [FPID] 446581-1) from County Road (CR) 532 to north of the I-4/SR 429 interchange will also evaluate improvements along SR 429 from the I-4 interchange to north of Sinclair Road. If Poinciana Parkway Extension Connector moves forward, the widening of Western Beltway (SR 429) will match that project north of Sinclair Road. However, in order to maintain independent utility, should the Poinciana Parkway Extension Connector not move forward, the Western Beltway widening would continue south of Sinclair Road to the I-4 interchange.

I. Current Preferred Alternative – Wide Shoulders

The typical section shown in Figure 1 provides:

- One lane westbound – 8' inside shoulder/10' outside shoulder
- Two lanes eastbound – 8' inside shoulder/12' outside shoulder
- Total bridge width - 83'-8"
- The total bridge length – 209'

Figure 1 – Proposed Livingston Road Ramp Bridge Typical Section

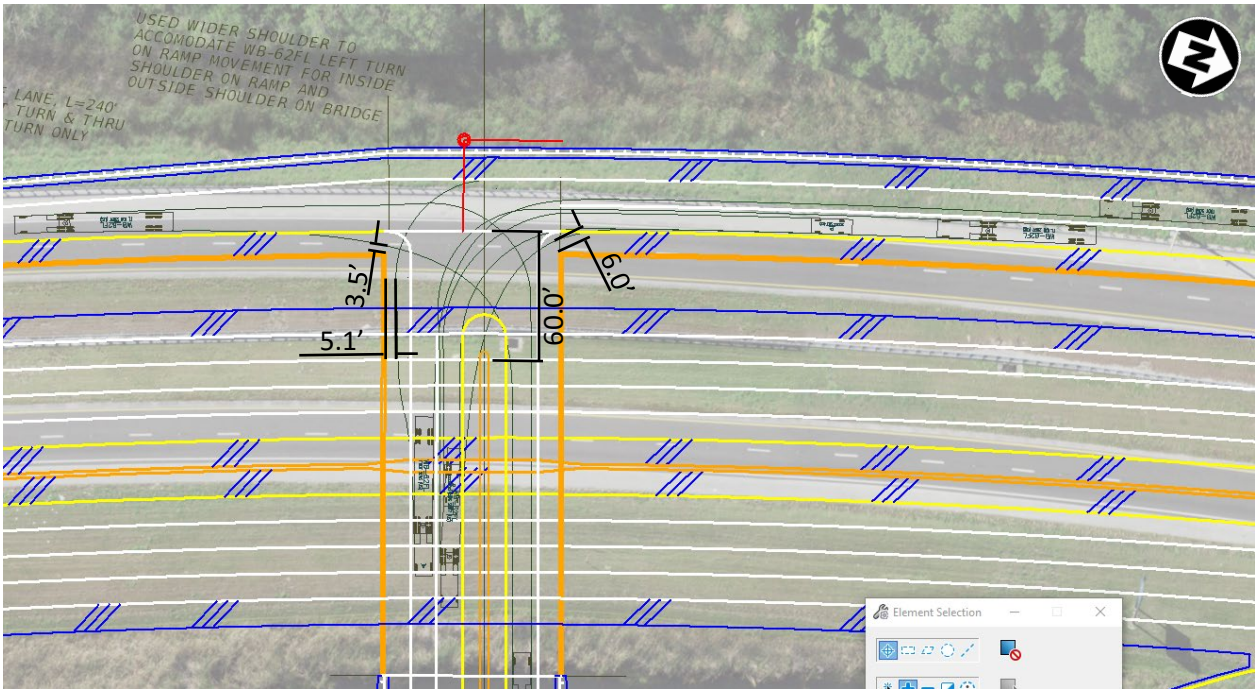


Livingston Road Ramp Bridge
Bridge No. TBD

STA 2400+15.00 T0 STA. 2402+20.33

Per FDOT FDM Figure 260.1.1, inside shoulder requirement is 6'. The outside shoulder requirement for a single lane is 6' and for two lanes is 10'. The shoulders in the above typical section are wider than required in Figure 260.1.1. The wider shoulders accommodate the turning movements for the design vehicle WB-62FL. Although, we anticipate that most of the traffic using this interchange will be passenger vehicles and smaller trucks as it connects a mostly residential area. An auto turn analysis was performed to identify the turning paths of the design vehicle at the intersection, see Figure 2. The analysis included the WB-62FL vehicle turning into the near and far lanes, as well as with a passenger vehicle turning concurrently on the inside lane. The proposed stop bar for westbound traffic is located approximately 60' east of the intersection. The critical points are located at the southwestern corner of the bridge, providing approximately 3.5' of separation from the barrier wall, while the northwestern corner provides approximately 6' of separation. The critical point at the southwest corner assumes a 7.5' offset from the inside edge of travel for a design vehicle making the movement to the center of the single lane southbound on-ramp as the ramp is merging from two to one from the outside. The design vehicle is also turning at the tightest radius it can maneuver. 90° barrier wall corners were identified as a maintenance issue at other locations where large turning vehicles scrape and damage the concrete corner.

Figure 2 – Current Preferred Alternative for Livingston Road Ramp bridge



The area of the proposed bridge is approximately 17,500 sf. At $180/sf, the cost for the bridge is approximately $3,150,000. The traffic signal would be located behind the guardrail on the west side of the intersection.

II. Revised Livingston Road Ramp Bridge – Option 1 Standard Shoulders with Wedges

Reducing the shoulder widths to standard widths to meet FDM Figure 260.1.1 on the bridge provides:

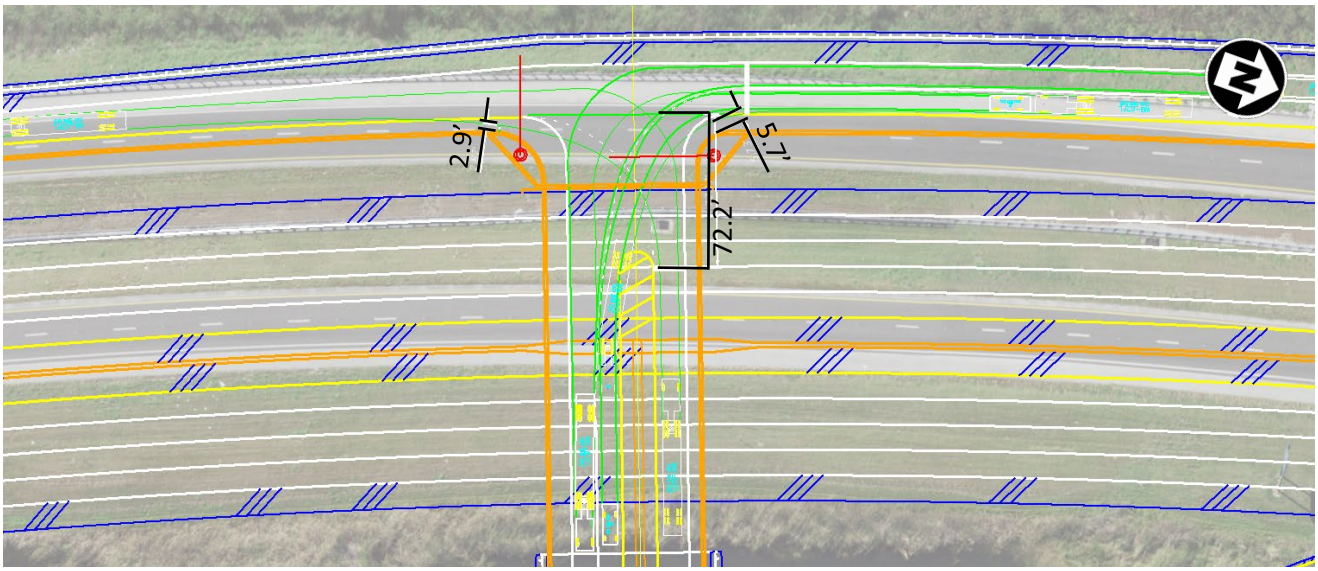
- One lane westbound – 6' inside shoulder/6' outside shoulder
- Two lanes eastbound – 6' inside shoulder/10' outside shoulder
- Total bridge width – 73'-8"
- Total bridge length – 185'
- Requires wedges to the corners of the T-intersection.

The wedges are proposed to be constructed on MSE wall. The MSE wall will be located at the outside edge of the SR 429 SB shoulder behind a barrier wall. The barrier wall is necessary since the MSE wall is within the clear zone for SR 429. This will shorten the length of the bridge by approximately 24' to 185'. The area of the proposed bridge is approximately 13,600 sf. At $180/sf, the cost for the bridge is approximately $2,448,000.

An auto turn analysis was performed for the same design vehicles on the bridge with narrower shoulders, see Figure 3. The critical points are located at the southwestern corner of the bridge, providing approximately 2.9' of separation from the barrier wall, while the northwestern corner provides approximately 5.7' of separation. The turning path of the design vehicle requires locating the westbound traffic stop bar approximately 72' east of the intersection. The location of the traffic signals has some options in this configuration. It could be located behind the guardrail on the west side of the intersection

as in the prior alternative. Alternatively, the traffic signals could be separated and installed in the wedges. Additional MSE wall, embankment and miscellaneous items are estimated at $100,000. The increased distance between the stop bar and the intersection will add some delay to the operation of the intersection and may cause driver confusion leading to safety issues such as wrong way driving.

Figure 3 – Revised Livingston Road Ramp Bridge – Option 1 Standard Shoulders with Wedges



III. Revised Livingston Road ramp bridge – Option 2 Flared Bridge

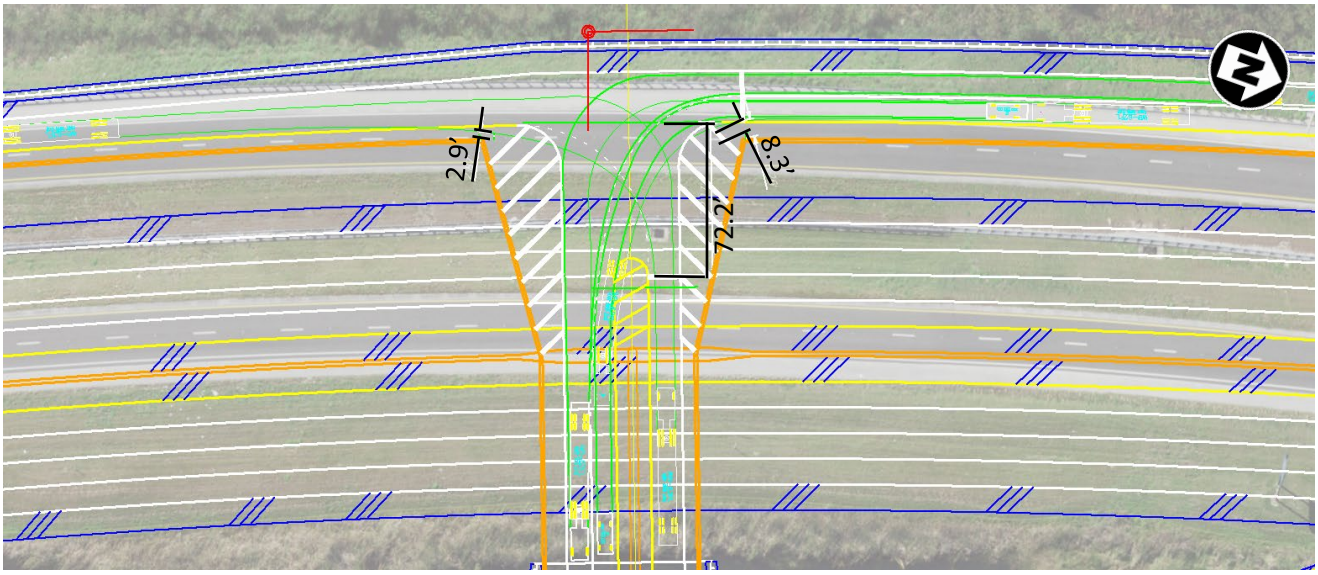
This option consists of constructing a flared bridge between the SR 429 median pier and the southbound ramp. This provides the required clear zone for southbound SR 429 under the bridge. The flared bridge provides:

- One lane westbound – 6' inside shoulder/outside shoulder varies (6' to 27'-2")
- Two lanes eastbound – 6' inside shoulder/ outside shoulder varies (10' to 32'-8")
- Total bridge width - 73'-8" to 123'-4"
- The total bridge length – 209'

The area of the proposed bridge is approximately 18,105 sf. At $180/sf, the cost for the bridge is approximately $3,258,900.

An auto turn analysis was performed for the same design vehicle on the bridge, see Figure 4. The critical points are located at the southwestern corner of the bridge, providing approximately 2.9' of separation from the barrier wall, while the northwestern corner provides approximately 8.3' of separation. The turning path of the design vehicle requires locating the westbound traffic stop bar approximately 72' east of the intersection. The traffic signals would be located behind the guardrail on the west side of the intersection. The increased distance between the stop bar and the intersection will add some delay to the operation of the intersection and may cause driver confusion leading to safety issues such as wrong way driving.

Figure 4 – Revised Livingston Road Ramp Bridge – Option 2 Flared Bridge



Current Preferred Alternative Livingston Road ramp bridge cost:

- $3,150,000

Option 1 Standard Shoulders with Wedges cost:

- Bridge: $2,448,000
- Additional MSE wall, embankment, misc: $100,000 (2 wedges)
- Total cost: $2,548,000

Option 2 Flared Bridge cost:

- Bridge: $3,258,900
- Total cost: $3,258,900

The cost for Option 1 Wedges is approximately $602,000 less expensive than the current Preferred Alternative. The cost for Option 2 Flared Bridge is approximately $108,900 more expensive than the current Preferred Alternative.

IV. Advantages and Disadvantages

Alternative	Advantages	Disadvantages
Preferred Alternative	Maintains SR 429 Clear Zone and the flexibility to widen SR 429 in the future.	Shoulder widths exceed FDM standards.
Cost $3,150,000	Stop bar located at a more conventional location/less driver confusion.	Barrier wall has 90°/square corners.
	No added intersection delay with conventional intersection/stop bar 60' from intersection.	
	Consistent shoulder widths.	
Option 1 - Wedges	Standard shoulder widths.	Conflicts with SR 429 clear zone and precludes the flexibility to widen SR 429 in the future.
Cost $2,548,000	Lowest cost.	Added operational delay at intersection with stop bar 72' from intersection.
	Barrier wall does not have 90°/square corners.	Stop bar separation from intersection introduces unconventional configuration that could be confusing/lead to wrong way driving.
Option 2 - Flared	Span 1 standard shoulder widths.	Span 2 shoulder widths exceed FDM standards.
Cost $3,258,900	Maintains SR 429 Clear Zone and the flexibility to widen SR 429 in the future.	Variable-width shoulders.
	Barrier wall does not have 90°/square corners.	Highest cost.
		Added operational delay at intersection with stop bar 72' from intersection.
		Stop bar separation from intersection introduces unconventional configuration that could be confusing/lead to wrong way driving.

V. Recommendations:

RS&H recommends the Current Preferred Alternative concept for the following reasons:

- While the bridge shoulders exceed the minimum standards (FDM Figure 260.1.1), they are not "excessive", meaning they are not wider than the standard 12' full shoulder width for a 2-lane interstate ramp per FDM Table 211.4.1).
- SR 429 Clear Zone is maintained which preserves the flexibility to widen SR 429 without replacing the bridge.
- While it includes 90° barrier wall corners on the west side of the bridge where large vehicles will be turning left, there is additional room available for large vehicles to swing wider than the conservative estimate accounted for in the AutoTurn analysis.
- This concept provides a more conventional intersection design with minimal distance between the intersection and the stop bar, as well as shoulders of a consistent width throughout, that minimizes the potential for driver confusion and wrong-way driving. The intersection also minimizes operational delays.

Since Final Design is not yet programmed and it could be several years until final design begins, it is recommended the bridge configuration be further evaluated and optimized during final design to ensure all criteria and standards in effect in the future are met.

Next Steps:

- FTE approve recommendation and close-out ERC reviews
- RS&H will update Typical Section Package, Bridge Analysis Tech Memo, and Preliminary Engineering Report, including concept plans, to Final.

Appendix F
Drainage Coordination Meeting Minutes

Florida Department of Transportation

RON DESANTIS
GOVERNOR

Florida's Turnpike Enterprise
P.O. Box 613069, Ocoee, FL 34761
407-532-3999

KEVIN J. THIBAULT, P.E.
SECRETARY

MEETING MINUTES
FTE/FDEP PRE-APP COORDINATION MEETING
Poinciana Parkway Extension PD&E Study from CR 532 to North of I-4
FPID No.: 446581-1-22-01
Western Beltway (SR 429) Widening PD&E Study from North of I-4 to Seidel Road
FPID No.: 446164-1-22-01

Osceola and Orange Counties County, Florida
Monday, April 11, 2022, 9:00 am

I. Attendees:

FTE
Henry Pinzon (PD&E)
Rax Jung (Project Dev. Engineer/EMO)
Philip Stein (Environmental)
Annemarie Hammond (Environmental Permits Coordinator)
Erin Yao (Drainage Engineer)

FDEP
Teayann Duclos (Environmental Manager)
Jennipher Walton (Env. Specialist)
Leo Anglero (ERP/Stormwater)
Allan Popak (Environmental Specialist)
Lindsay Furr (Environmental Consultant)
Jill Farris (Environmental Consultant)

FTE/GEC
Stephanie Underwood (PM/HNTB GEC)
Fred Gaines (Permitting/Atkins GEC)
Adriana Kirwan (Drainage/HNTB GEC)
Tiffany Crosby (Senior Scientist/Atkins GEC)

RS&H Team
Douglas Reed (RS&H PM)
Erik Scott (RS&H Drainage)
Sarah Johnson (KHA/Environmental)

FDOT Central Office
Jonathan Turner (Project Delivery Coordinator)

FDOT District 5
Casey Lyon (Env. Permits Coordinator)

II. Introductions

The meeting started with FDOT District 5 discussed their projects with FDEP. After attendees were introduced, Stephanie Underwood explained the purpose of the meeting was to initiate pre-application coordination with the Florida Department of Environmental Protection for the two Project Development and Environment (PD&E) studies.

III. PowerPoint presentation

Erik Scott explained the two projects with a PowerPoint presentation and separate exhibits (attached). Discussion is summarized below.

<u>Widen Western Beltway PD&E Study:</u>

- The PD&E study was summarized, including existing conditions and the proposed widening of SR

429 from four to eight-lanes from north of I-4 to Seidel Road. Improvements are also proposed at the existing interchanges at Sinclair Road, US 192, Western Way, and Seidel Road. A new interchange is proposed at Livingston Road. It was noted that this is early in the process in the PD&E phase, and not the Design phase, so a permit application is not imminent.

- FDEP and Reedy Creek Improvement District (RCID) permitted SR 429 in 2001. FTE is coordinating with RCID.
- The existing water quality volume was calculated based on the criteria of 1-inch over the contributing basin or 2.5-inches over the impervious area. For most of the basins the 1-inch over the contributing area was the controlling factor for the required water quality. This is due in part because the existing corridor was in located within a rural corridor and offsite areas were included in the contributing basin calculation. Since 2001, some of the offsite areas have been developed with new, offsite ponds. Therefore, when adding the additional pavement along SR 429 for the eight-lane configuration, most of the basins still have sufficient water quality volume provided in the existing ponds. For any basins lacking the required water quality volume within the existing permitted ponds, the difference will be accommodated by adjusting the existing control structures or providing additional pond area.
- Basin boundaries will be revised to reflect the development adjacent to SR 429.
- The project study area is located within two impaired WBIDs, Davenport Creek for bacteria and Whittenhorse Creek for dissolved oxygen. In addition, the project study is located within the Lake Okeechobee Subwatershed BMAP. FTE believes that additional treatment is not required given FDOT BMPs include a series of treatment trains and their facilities do not directly discharge into the impaired waterbodies. FDEP stated that additional treatment considerations may not be necessary because they are moving away from the 50% additional treatment volume but will need to be discussed further during the design phase.
- Attenuation will be provided per FDEP criteria for open and closed basins, with consideration for RCID requirements.
- FDEP agreed this stormwater approach is reasonable.
- The corridor has floodplains associated with Boggy Creek and Whittenhorse Creek. There is one existing Floodplain Compensation site located north of Indian Creek Boulevard adjacent to the southbound lanes. Though encroachments are anticipated, they will be minimal. Encroachments will be mitigated by compensation sites or by using the importer/exporter method.
- FTE confirmed with FDEP that the Environmental Resource Permit (ERP) for widening of Western Beltway (SR 429) will be handled by FDEP. This includes the 404 permit.
- Wetland lines from the previous permit will be used as much as possible in areas that are not new interchanges. Direct wetland impacts are approximately 10 acres.
- Conservation easements are located within the project study area.
- Wetlands and conservation easements impacts will be avoided and minimized as much as possible. Some minimization methods considered include bridging or MSE walls.
- Impacts to most species is minimal along the existing roadway; however, there is suitable sand skink habitat to be considered especially within the new interchange area.
- Mitigation banks are located within the available service area for this project to offset any unavoidable wetland impacts.
- Coordination with USFWS for species involvement occurred in 2021.
- There were no questions, but if any questions arise, additional coordination can occur.

Poinciana Parkway Extension PD&E Study:

- The PD&E study was summarized, including existing conditions; the proposed new six-lane expressway on new alignment; and interchanges at CR 532, I-4, and Sinclair Road. The new

alignment crosses Davenport Creek on bridge structure.

- There are two alternatives, but the worst-case Alternative 1 was discussed.
- FTE clarified with FDEP that they anticipated that SFWMD would be responsible for issuing the ERP and FDEP would be responsible for reviewing and issuing the 404 permit.
- The team depicted the wetlands and conservation areas within the study area.
- Wetland lines from the previous permits will be used as much as possible in existing roadway areas; new wetland lines will be set in the new alignment area. Direct wetland impacts range from 131 acres to 141 acres for the alternatives. Approximately 130 acres of direct impacts will be minimized with bridges and MSE walls.
- Conservation easements for RCID and Reunion are present within and adjacent to the project study area.
- Wetlands and conservation easements impacts will be avoided and minimized as much as possible. Some minimization methods considered include bridging or MSE walls.
- FTE has already met with USFWS in October 2020 and again in October 2021. A scrub jay survey was completed in October 2021, however; there were no observations of scrub-jays as a result of the survey. Suitable sand skink habitat is located within the project study area and sand skink tracks were observed during pedestrian transects.
- We will coordinate with FWC for state-listed species.
- Mitigation banks are located within the available service area for this project to offset any unavoidable wetland impacts. FDEP confirmed with FTE that mitigation banks should be utilized for wetland mitigation as the 1st priority and followed by other options after this measure. Impacts to conservation easements should be a last resort. Should the release of a Conservation Easement or an impact to a Conservation Easement be necessary, FDEP has asked that FTE coordinate with FDEP early in the design development given the process is different than that of mitigation banks.
- FTE indicated that the avoidance and minimization measures mentioned previously is standard and considered adequate; FDEP indicated that FTE is on the right track

MEETING MINUTES
FTE/RCID AGENCY COORDINATION MEETING
Poinciana Parkway Extension PD&E Study from CR 532 to North of I-4
FPID No.: 446581-1-22-01
Western Beltway (SR 429) Widening PD&E Study from North of I-4 to Seidel Road
FPID No.: 446164-1-22-01

Osceola and Orange Counties County, Florida
Wednesday, May 19, 2021, 1:00 pm

I. Attendees:

Henry Pinzon (FTE PD&E)	Erin Yao (FTE/Drainage)	Rax Jung (FTE Project Dev. Eng./EMO)	Douglas Reed (RS&H PM)
Stephanie Underwood (FTE PM)	Doug Zang (FTE/Environmental)	Annemarie Hammond (FTE/Env. Permit Coordinator)	Erik Scott (RS&H Drainage)
Ramon Breton (KHA, DPM 446581)	Fred Gaines (FTE/Permitting)	Clif Tate (KHA/Engineering)	Sarah Johnson (KHA/Environmental)
Adriana Kirwan (FTE/Drainage)		Kate Kolbo (RCID Planning/Engineering)	

II. Introductions

Stephanie introduced the Florida Turnpike Enterprise (FTE) staff and explained the purpose of the meeting was to coordinate with the Reedy Creek Improvement District (RCID). RS&H team staff was introduced followed by the RCID staff. John Classe (RCID District Administrator and Sam Dewes (RCID Roadway) were not in attendance.

III. PowerPoint presentation

Doug Reed went through a PowerPoint presentation (attached), which was sent to RCID after the meeting. Discussion is summarized below.

a. Slide 7: Kate Kolbo explained that there are no set procedures if the Wildlife Management Conservation Area (WMCA) is impacted. It was set up in 1966 as a major floodway to never be impacted. Although two crossings were anticipated, including I-4. Poinciana Parkway would also be an exemption. However, there cannot be any adverse impacts to the existing flow rates. Most flows are north to south, except for Reunion which flows south to north. Major cross drains will be required along the utility "stair step" area to maintain flows.

   Sarah Johnson pointed out the two graphics were slightly different and asked which one is correct. Kate Kolbo will send the CADD file for the correct WMCA limits to Stephanie Underwood, who will distribute it to the team. Kate mentioned that they use a different datum and they will convert it to NAVD88 before sending.

   Fred Gaines asked if any easements had been transferred to other owners. Kate responded that none had been transferred.

b. Slide 15: Kate indicated that the system is well defined. The cross section is fixed, canals cannot be widened, and drainage structures cannot be modified. Therefore, the flow cannot be increased. Any additional runoff must flow elsewhere. Stephanie Underwood suggested pre-post flows should be ok. Kate responded that it may not

be, depending on the definition off pre-post, but she will send the stipulations to Stephanie. The Reedy Creek system is based on 13 cfm/sq mile, and they are already exceeding that volume. Anything over that will require a fee. Kate mentioned that I-4 Beyond the Ultimate (BtU) project is attenuating to below the pre-post volume.

Fred Gaines mentioned that Turnpike had already paid a fee for SR 429 during the original construction.

Erik Scott asked about the permit process. Kate responded that a SFWMD permit application should be sent to RCID first for review and approval before being submitted to South Florida Water Management District (SFWMD). RCID will then send SFWMD a letter explaining the negotiation points and expressing support.

Kate mentioned that RCID uses a different rainfall distribution than SFWMD with a 50 yr/72 hr event. Erik asked about the unit hydrograph, and Kate will send Stephanie the RCID drainage person's contact information who can provide the information.

Erik mentioned we anticipate staying below the 290 cfs that was used previously. Kate will pull the permit and modifications can be worked through. Kate also mentioned they would require an initial 30-day review period to provide comments or questions. The Turnpike's team will provide information for RCID to feed into the model. Kate also mentioned they will review the projects even if outside the RCID boundary as long as it is within the watershed.

Erik asked if there were any other entities that were interested in taking additional water. Kate responded that there were none.

Fred asked if RCID can provide conceptual approval since this is PD&E and we are not submitting an actual permit until a later phase. Kate responded that conceptual approval can be granted.

The bottom line was reiterated:

- Stay out of the WMCA, and
- Do not discharge more flow into RCID

IV. Action Items

a. Doug Reed will prepare meeting minutes. (done)
b. Kate Kolbo will send the CADD files for the correct WMCA limits and flow stipulations. (done)

MEETING MINUTES
FTE/RCID AGENCY COORDINATION MEETING #2
Poinciana Parkway Extension PD&E Study from CR 532 to North of I-4
FPID No.: 446581-1-22-01
Western Beltway (SR 429) Widening PD&E Study from North of I-4 to Seidel Road
FPID No.: 446164-1-22-01

Osceola and Orange Counties County, Florida
Thursday, March 3, 2022, 10:00 am

I. Attendees:

Henry Pinzon (FTE PD&E)	Todd Rimmer (Walt Disney Planning)	Rax Jung (FTE Project Dev. Eng./EMO)	Douglas Reed (RS&H PM)
Stephanie Underwood (FTE PM)	Emam Emam (FTE/Planning/Traffic)	Philip Stein (FTE/Environmental)	Erik Scott (RS&H Drainage)
Ramon Breton (KHA, DPM 446581)	Fred Gaines (FTE/Permitting)	Clif Tate (KHA/Engineering)	Matt Betancourt (RS&H Public Inv.)
Katherine Luetzow (RCID)	Sarah Johnson (KHA/Env)	Kate Kolbo (RCID Planning/Eng)	Rick Langlass (RS&H DPM/Eng.)
Sandy Morales (RCID)			

II. Introductions

Stephanie introduced the Florida Turnpike Enterprise (FTE) staff and explained the purpose of the meeting was to continue coordination with the Reedy Creek Improvement District (RCID) on the two PD&E studies. The RS&H team and RCID was also introduced.

III. PowerPoint presentation

Doug Reed went through a PowerPoint presentation. Discussion is summarized below.

<u>Poinciana Parkway Extension PD&E Study and Drainage Design:</u>
Erik Scott outlined the anticipated worst—case encroachment into Whittenhorse Creek with the proposed 8-lane typical. Kate Kolbo requested the hydraulic model FTE is using to evaluate the HGL. RS&H does not anticipate any changes to the Boggy Creek culvert. Davenport Creek will be bridged

Kate Kolbo indicated that FTE is not required to use a specific hydraulic model, but all modeling (electronic executable files) would need to be submitted for RCID review.

Todd Rimmer indicated that the CADD files would be requested from Mattamy Homes for the Celebration Island Village site plan.

Erik Scott requested the RCID model for use. Kate Kolbo agreed to send it after the meeting.

Kate Kolbo suggested the permit request should be submitted to RCID before submitting to the South Florida Water Management District (SFWMD).

The fee structure of $4.15 per acre/csm is still applicable. The $200/acre is also still

applicable for the portion of the project located within the RCID boundary if runoff drains into RCID. The original permits will be reviewed and fees will be assessed based on the improvements.

It was noted that the easements are water management first and foremost, then wildlife conservation.

Todd Rimmer asked if the two Poinciana Parkway Extension alternatives operate similarly. The response was yes, the configuration differs, but operations are similar. Todd also suggested the relocation of utilities be included in the evaluation and footprint.

Historical storage must be preserved as this area serves a large area of Osceola and Orange counties. Flood storage is critical.

Kate Kolbo will send the latest GIS files for the most up to date information on the jurisdictional and water management conservation area limits. A separate meeting can be set up to go through the information.

Widen Western Beltway PD&E Study:
Todd Rimmer indicated they are looking at 2040 traffic models for Western Way due to its connection into Lake County. Emam Emam indicated he can share the Synchro files which have been coordinated with District 5 and FDOT Central Office.

Bike and pedestrian facilities can be removed from Western Way since other means (i.e. shuttles) are being incorporated by Disney for bike and pedestrian accommodations. This will ultimately be safer due to the free flow ramp movements.

RCID is evaluating widening Western Way to six lanes. Funding is included in the 10-year plan.

It was noted that Disney was not invited to the Reunion Coordination meeting scheduled for March 10, 2022.

In general, it was agreed that Poinciana Parkway Extension Alternative 2 has reduced direct and indirect impacts to RCID resources compared to Alternative 1.

IV. Action Items

a. Doug Reed will prepare meeting minutes. (done)
b. Kate Kolbo will send the RCID model.
c. Stephanie Underwood will send the HEC-RAS and Synchro models.

Appendix G
SR 429 Stopping Sight Distance Technical Memorandum

Technical Memorandum

Project: Widen Western Beltway PD&E

FPID #: 446164-1

Re: Stopping Sight Distance and shoulder width for SR 429 in the area of the Sand Hill Road overpass.

The proposed shoulders on the Sand Hill Rd bridge are wider than the minimum required by the FDM in order to provide stopping sight distance (SSD) on the horizontal curve.

The required SSD distance in this area is based on the design speed (70 mph) and grades for the vertical curves. The existing grades of the vertical curve are -2.103% and +2.273%. These will be the grades in the final design. Also, since this is a Turnpike facility, it should meet the Interstate requirements for SSD. Table 211.10.1 from the FDM would be used to select the SSD. Since the vertical grades are greater than 2%, the distance for the downgrade of 3% should be used for the SSD for the vertical curve. The selection of the SSD from the downgrade of 3% is supported by AASHTO. In section 3.2.2.4 Effect of Grade on Stopping, it states "On nearly all roads and streets, the grade is traversed by traffic both directions of travel, but the sight distance at any point on the highway generally is different in each direction, particularly on straight roads in rolling terrain. As a general rule, the sight distance available on downgrades is larger than on upgrades, more or less automatically providing the appropriate corrections for grade. This may explain why some designers do not adjust stopping sight distance because of grade. Exceptions are one-way roadways or streets, as on divided highways with independent profiles." We recommend that the 3% downgrade is used to select the SSD for this curve.

Using FDM Table 211.10.1 and selecting 3% downgrade results in a required SSD of 861 feet. Currently, the SSD on the SR 429 bridge over Sand Hill Road is approximately 630 feet for northbound and 655 feet for southbound. Therefore, the existing SSD does not meet the FDM requirements.

The proposed typical section for widening SR 429 to 8-lanes using the current Preferred Alternative alignment would extend the SSD deficiency along the length of the horizontal curve due to the construction of a concrete median barrier and outside concrete barrier.

The sight distance deficiency occurs on the inside of the curves which corresponds to the low end of the bridges. Widening the bridges on this side would reduce the minimum vertical clearance over Sand Hill Road. It would also require reconstruction of the existing MSE along the outside of the northbound lanes. The new MSE wall would be pushed closer to the existing limited access right-of-way (ROW)and Connector Road. This would reduce the border width for SR 429 and may require realignment of Connector Road. Realignment of Connector Road would create ROW impacts to a golf course parcel on the north side of Sand Hill Road. For this reason, we recommend widening the bridges to the high side to keep the existing bridges and avoid ROW impacts.

We recommend pursuing a design variation for SSD in order to keep the current Preferred Alternative alignment on the bridge and maximize the use of the existing bridges. We recommend using FDM Table 211.10.2 Minimum Stopping Sight Distance for Freeways, Expressway, and Ramps. This table is the same as AASHTO Table 3-2 Stopping Sight Distance on Grades. **Using the SSD for a 3% downgrade, the minimum SSD is 771 feet.**

With the current Preferred Alternative alignment, we can achieve an SSD of 828 feet for southbound and 823 feet for northbound. This distance meets the minimum 771 feet and is approximately 96% of the SSD of 861 feet required by FDM. Maximizing the SSD to the greatest extent possible will improve the ability for a driver to see an obstacle and be able to brake before reaching the obstacle. The 827 feet for southbound and 823 feet for northbound is also an improvement from the current SSDs on the curve at the bridge (approximately 655 feet for southbound and 630 feet for northbound). The length of shoulder wider than 12 feet is approximately 1,925 feet for the southbound direction and approximately 1,525 feet in the northbound direction.

Using an SSD of approximately 823 to 827 feet, results in maximum inside shoulder widths of approximately 23.5-24.1 feet wide. While the shoulder widths could be reduced by using the minimum SSD of 771 feet, that would involve removing portions of the existing bridge to reduce the shoulder width. Removing portions of the existing bridge would add cost and complexity to the design and construction of the project. Therefore, we recommend providing the greatest amount of SSD (above the minimum) to improve safety for SSD and to minimize unnecessary project costs.

In FDM Section 215.4.6.1 Barrier Offset, a 12-foot offset limit is set for guardrail to reduce potential for impacts where the vehicle is behaving significantly different than the crash tested conditions. However, it states that rigid barrier is typically used when there are barrier deflection or right-of-way limitations. The offset for rigid barrier may vary where differing barrier placement is justified for site-specific conditions. The EOR interprets this to mean that an offset to a rigid barrier can be greater than 12 feet.

A review of crashes on SR 429 within 1,500 feet of Sand Hill Rd indicates no significant crash history at this location. There is one fatal crash identified in the SB lanes south of Sand Hill Road. The cause of the crash was due to a vehicle failing to stop in time when the vehicle in front of them slowed down.

To summarize, we recommend using a 3% downgrade factor at 70 mph to select the SSD. As meeting the SSD for Interstate would involve reducing the minimum vertical clearance of the SR 429 bridges over Sand Hill Road, reducing the border width for SR 429, adding costs for a new MSE wall, and a possible realigning of Connector Road (causing ROW impacts at a golf course), we recommend pursuing a design variation for SSD at this location. We recommend using FDM Table 211.10.2 to select the SSD for 70 mph at 3%. The SSD for the downgrade is 771 feet. Using the current Preferred Alternative alignment at the bridge, we can achieve an SSD of 828 feet for southbound and 845 feet for northbound. This distance meets approximately 96% of the required SSD for FDM Table 211.10.1 (861 feet). A review of crashes indicated no significant crash history at this location. Since reducing the shoulder width to meet the 771 feet minimum SSD would require removing portions of the existing bridge, adding cost and complexity to the project, we recommend maximizing the SSD at this location to improve safety and minimize unnecessary project costs. The length of shoulder, wider than 12 feet, is approximately 1,925 feet for the southbound direction and approximately 1,525 feet in the northbound direction.

In addition, we recommend adding pavement markings and rumble strips to the pavement between the travel lanes and barrier walls to indicate to the driver that the additional pavement is not a travel lane.

Appendix H
Long Range Estimates

Appendix H
TSM&O Option 1 LRE

Date: 10/21/2022 11:59:22 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 29 Project Grand Total **$4,469,357.75**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 1 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

Sequence: 3 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.147 MI 777 LF

Description: SR429 SB Ramp to US 192 (3 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.147
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.43	AC	$35,365.45	$50,572.59
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	430.34	CY	$671.72	$289,067.98
	Earthwork Component Total				$339,640.58

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,936.15	SY	$18.93	$55,581.32
285-709	OPTIONAL BASE,BASE GROUP 09	2,101.07	SY	$76.60	$160,941.96
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,036.29	SY	$12.35	$12,798.18
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	85.49	TN	$353.04	$30,181.39
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	284.98	TN	$353.04	$100,609.34
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	41.45	TN	$309.81	$12,841.62
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	170.99	TN	$309.81	$52,974.41

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	79.00	EA	$7.66	$605.14
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.15	GM	$5,768.26	$865.24
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.29	GM	$2,898.45	$840.55
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.15	GM	$5,919.72	$887.96
	Roadway Component Total				$429,127.12

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	892.07	SY	$30.04	$26,797.78
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	345.43	SY	$16.85	$5,820.50

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	47.50	TN	$353.04	$16,769.40
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	34.54	TN	$309.81	$10,700.84

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,035.00	SY	$10.66	$21,693.10

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,787.60	LF	$3.30	$5,899.08
104-11	FLOATING TURBIDITY BARRIER	14.72	LF	$7.47	$109.96
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	14.72	LF	$3.99	$58.73
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.36	AC	$45.26	$16.29
107-2	MOWING	0.36	AC	$81.43	$29.31
	Shoulder Component Total				$90,873.94

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$130.52	$3,132.48
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$280.79	$4,492.64
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$3,098.00	$6,196.00
570-1-1	PERFORMANCE TURF	59.47	SY	$8.97	$533.45
	Drainage Component Total				$14,354.57

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$202.18	$606.54
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$12,021.61

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.36	$9,360.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$825.77	$4,128.85
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$6.70	$20,100.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	5.00	EA	$10,564.67	$52,823.35
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$896.91	$4,484.55
	Subcomponent Total				$90,896.75
	Lighting Component Total				$90,896.75

Sequence 3 Total $976,914.57

Sequence: 4 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.088 MI 462 LF

Description: SR429 SB Ramp to US 192 (4 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.088
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.28	AC	$35,365.45	$45,267.78
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	229.39	CY	$671.72	$154,085.85
	Earthwork Component Total				$199,353.63

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165

Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 48.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,977.33	SY	$18.93	$56,360.86
285-709	OPTIONAL BASE,BASE GROUP 09	2,480.94	SY	$76.60	$190,040.00
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	616.00	SY	$12.35	$7,607.60
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	50.82	TN	$353.04	$17,941.49
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	338.80	TN	$353.04	$119,609.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	24.64	TN	$309.81	$7,633.72
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	203.28	TN	$309.81	$62,978.18

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.18	GM	$5,768.26	$1,038.29
	Comment: Markings for Turn Lanes				
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.09	GM	$2,898.45	$260.86
	Comment: Markings Prior to Turn Lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	71.00	EA	$7.66	$543.86
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.09	GM	$5,768.26	$519.14
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.09	GM	$5,919.72	$532.77
	Roadway Component Total				$465,066.72

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110

Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	530.27	SY	$30.04	$15,929.31
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	205.33	SY	$16.85	$3,459.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	28.23	TN	$353.04	$9,966.32
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	20.53	TN	$309.81	$6,360.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	1,904.00	SY	$10.66	$20,296.64

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,062.60	LF	$3.30	$3,506.58
104-11	FLOATING TURBIDITY BARRIER	8.75	LF	$7.47	$65.36
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	8.75	LF	$3.99	$34.91
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.21	AC	$45.26	$9.50
107-2	MOWING	0.21	AC	$81.43	$17.10
	Shoulder Component Total				$62,624.87

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$130.52	$2,088.32
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$280.79	$2,246.32
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$3,098.00	$3,098.00
570-1-1	PERFORMANCE TURF	35.35	SY	$8.97	$317.09
	Drainage Component Total				$7,749.73

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,295.01	$2,590.02
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80

700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$202.18	$404.36
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$10,524.42

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$825.77	$3,303.08
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$6.70	$16,080.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

Sequence 4 Total $818,036.77

Sequence: 10 RSU - Resurfacing, Undivided **Net Length:** 0.133 MI 702 LF

Description: US 192 East Bound Intersecting with SR 429

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	3,745.28	SY	$12.35	$46,254.21
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	308.99	TN	$353.04	$109,085.83
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	308.99	TN	$309.81	$95,728.19

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1

Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	90.00	EA	$7.66	$689.40
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.13	GM	$5,768.26	$749.87
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.40	GM	$2,898.45	$1,159.38
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.13	GM	$5,919.72	$769.56
	Roadway Component Total				$254,436.44

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	780.27	SY	$16.85	$13,147.55
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	42.91	TN	$353.04	$15,148.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	31.21	TN	$309.81	$9,669.17
570-1-1	PERFORMANCE TURF	416.66	SY	$8.97	$3,737.44

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	13.30	LF	$7.47	$99.35
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	13.30	LF	$3.99	$53.07
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.32	AC	$45.26	$14.48
107-2	MOWING	0.32	AC	$81.43	$26.06
	Shoulder Component Total				$42,135.01

Sequence 10 Total $296,571.45

Sequence: 11 RSU - Resurfacing, Undivided **Net Length:** 0.060 MI 319 LF

Description: US 192 West Bound. West of SR 429SB Exit Ramp

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,275.65	SY	$12.35	$15,754.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	105.24	TN	$353.04	$37,153.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	105.24	TN	$309.81	$32,604.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	33.00	EA	$7.66	$252.78
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.06	GM	$5,768.26	$346.10
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.12	GM	$2,898.45	$347.81
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.06	GM	$5,919.72	$355.18
	Roadway Component Total				$86,814.48

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG	354.35	SY	$16.85	$5,970.80

	DEPTH			
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	19.49 TN	$353.04	$6,880.75
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	14.17 TN	$309.81	$4,390.01
570-1-1	PERFORMANCE TURF	189.22 SY	$8.97	$1,697.30

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	6.04	LF	$7.47	$45.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	6.04	LF	$3.99	$24.10
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.15	AC	$45.26	$6.79
107-2	MOWING	0.15	AC	$81.43	$12.21
	Shoulder Component Total				$19,266.02

Sequence 11 Total $106,080.50

Sequence: 12 RSU - Resurfacing, Undivided **Net Length:** 0.073 MI 383 LF

Description: US 192 West Bound East of SR 429 SB Exit Ramp. Includes Signalized Intersection

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Roadway Pavement Width L/R	36.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,552.00	SY	$12.35	$31,517.20
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	210.54	TN	$353.04	$74,329.04
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	210.54	TN	$309.81	$65,227.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	59.00	EA	$7.66	$451.94
711-16-101	THERMOPLASTIC, STD-OTH,	0.07	GM	$5,768.26	$403.78

	WHITE, SOLID, 6"				
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.29	GM	$2,898.45	$840.55
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.07	GM	$5,919.72	$414.38
	Roadway Component Total				$173,184.29

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	425.33	SY	$16.85	$7,166.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	23.39	TN	$353.04	$8,257.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	17.01	TN	$309.81	$5,269.87
570-1-1	PERFORMANCE TURF	227.13	SY	$8.97	$2,037.36

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	7.25	LF	$7.47	$54.16
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.25	LF	$3.99	$28.93
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.18	AC	$45.26	$8.15
107-2	MOWING	0.18	AC	$81.43	$14.66
	Shoulder Component Total				$23,076.49

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	2 Lane Mast Arm
Multiplier	1
Description	SR 429 SB Exit Ramp to US 192

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$21.74	$4,348.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05

633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$862.56	$1,725.12
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$825.77	$9,909.24
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	4.00	EA	$76,197.28	$304,789.12
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	8.00	AS	$1,983.71	$15,869.68
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	8.00	EA	$395.65	$3,165.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00	AS	$1,518.60	$12,148.80
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 East Bound Intersection with SR 429 Entrance Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 3

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 West bound intersecting

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36
	Signalizations Component Total				$1,258,497.70

Sequence 12 Total $1,454,758.48

Date: 10/21/2022 11:59:23 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 29 Project Grand Total **$4,469,357.75**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 1 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

Project Sequences Subtotal			**$3,652,361.77**
102-1	Maintenance of Traffic	10.00 %	$365,236.18
101-1	Mobilization	10.00 %	$401,759.80
Project Sequences Total			**$4,419,357.75**

Project Unknowns	0.00 %	$0.00
Design/Build	0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$50,000.00	$50,000.00
Project Non-Bid Subtotal					**$50,000.00**

Version 29 Project Grand Total **$4,469,357.75**

Appendix H
TSM&O Option 2 LRE

Date: 10/21/2022 12:06:26 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 28 Project Grand Total **$13,486,053.97**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 2 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

Sequence: 1 NUR - New Construction, Undivided, Rural **Net Length:** 0.485 MI 2,558 LF

Description: SR429 SB Ramp to US 192 (1 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.485
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.69	AC	$35,365.45	$165,863.96
120-6	EMBANKMENT	24,783.80	CY	$54.45	$1,349,477.91
	Earthwork Component Total				$1,515,341.87

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,801.12	SY	$18.93	$204,465.20

285-709	OPTIONAL BASE,BASE GROUP 09	7,009.36	SY	$76.60	$536,916.98
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	937.99	TN	$353.04	$331,147.99
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	562.80	TN	$309.81	$174,361.07

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	65.00	EA	$7.66	$497.90
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.48	GM	$2,074.87	$995.94
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.48	GM	$997.70	$478.90
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.48	GM	$5,919.72	$2,841.47
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.48	GM	$2,305.00	$1,106.40

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-41	SHLDR CONC BARRIER, RETAINING SECTION	1,087.00	LF	$320.00	$347,840.00

Roadway Component Total $1,600,651.84

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,166.96	SY	$30.04	$125,175.48

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	218.86	TN	$353.04	$77,266.33
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	328.30	TN	$309.81	$101,710.62

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	10,937.00	SY	$10.66	$116,588.42

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	6,651.22	LF	$3.30	$21,949.03
104-11	FLOATING TURBIDITY BARRIER	121.12	LF	$7.47	$904.77
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	121.12	LF	$3.99	$483.27
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
107-1	LITTER REMOVAL	5.87	AC	$45.26	$265.68
107-2	MOWING	5.87	AC	$81.43	$477.99
	Shoulder Component Total				$447,561.59

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	392.00	LF	$130.52	$51,163.84
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	88.00	LF	$280.79	$24,709.52
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	20.00	EA	$3,098.00	$61,960.00
570-1-1	PERFORMANCE TURF	341.09	SY	$8.97	$3,059.58

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-881	INLETS, BARRIER WALL, RIG, C&G, <=10'	5.00	EA	$6,926.62	$34,633.10
	Drainage Component Total				$175,526.04

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	10.00	AS	$1,295.01	$12,950.10
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$7,237.13	$7,237.13

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-506	SIGN PANEL, RELOCATE, 101-200 SF	4.00	EA	$1,916.67	$7,666.68

700-4-127	OH STATIC SIGN STR, F&I, S 151-200 FT	2.00	EA	$223,480.40	$446,960.80
700-4-622	OH STATIC SIGN STR, DEEP REMOVE, SPAN	2.00	EA	$19,458.66	$38,917.32
	Signing Component Total				$514,293.09

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,600.00	LF	$9.36	$14,976.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	8.00	EA	$825.77	$6,606.16
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,800.00	LF	$6.70	$32,160.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	8.00	EA	$10,564.67	$84,517.36
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	8.00	EA	$896.91	$7,175.28
	Subcomponent Total				$145,434.80
	Lighting Component Total				$145,434.80

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	1,087.00
Begin height	5.00
End Height	5.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,435.00	SF	$43.98	$239,031.30
	Retaining Walls Component Total				$239,031.30

UTILITIES COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
1000-7	UTILITY WORK	2.00	EA	$500,000.00	$1,000,000.00
	Comment: RELOCATION OF TRANSMISSION POLLS				
	Utilities Component Total				$1,000,000.00

Sequence 1 Total $5,637,840.53

Sequence: 2 NUR - New Construction, Undivided, Rural **Net Length:** 0.104 MI

Description: SR429 SB Ramp to US 192 (2 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.104
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.26	AC	$35,365.45	$44,560.47
120-6	EMBANKMENT	6,019.37	CY	$54.45	$327,754.70
	Earthwork Component Total				$372,315.17

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,056.53	SY	$18.93	$57,860.11
285-709	OPTIONAL BASE,BASE GROUP 09	2,241.05	SY	$76.60	$171,664.43
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	302.60	TN	$353.04	$106,829.90
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	181.56	TN	$309.81	$56,249.10

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	56.00	EA	$7.66	$428.96
710-11-101	PAINTED PAVT	0.10	GM	$2,074.87	$207.49

	MARK,STD,WHITE,SOLID,6"				
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.21	GM	$977.63	$205.30
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.21	GM	$2,898.45	$608.67
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.10	GM	$5,919.72	$591.97

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-41	SHLDR CONC BARRIER, RETAINING SECTION	346.00	LF	$320.00	$110,720.00

Roadway Component Total $505,365.93

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	896.18	SY	$30.04	$26,921.25
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	47.07	TN	$353.04	$16,617.59
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	70.61	TN	$309.81	$21,875.68

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	105.80	LF	$303.34	$32,093.37
570-1-2	PERFORMANCE TURF, SOD	3,169.00	SY	$10.66	$33,781.54

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,430.46	LF	$3.30	$4,720.52
104-11	FLOATING TURBIDITY BARRIER	26.05	LF	$7.47	$194.59
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	26.05	LF	$3.99	$103.94

104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
107-1	LITTER REMOVAL	1.26	AC	$45.26	$57.03
107-2	MOWING	1.26	AC	$81.43	$102.60
	Shoulder Component Total				$139,208.11

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	88.00	LF	$130.52	$11,485.76
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$280.79	$6,738.96
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$3,098.00	$15,490.00
570-1-1	PERFORMANCE TURF	73.36	SY	$8.97	$658.04

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-881	INLETS, BARRIER WALL, RIG, C&G, <=10'	2.00	EA	$6,926.62	$13,853.24
	Drainage Component Total				$48,226.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$7,237.13	$7,237.13

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-506	SIGN PANEL, RELOCATE, 101-200 SF	1.00	EA	$1,916.67	$1,916.67
700-4-114	OH STATIC SIGN STR, F&I, C 41-50 FT	1.00	EA	$119,202.82	$119,202.82
700-4-611	OH STATIC SIGN STR, SHALLOW REMOVE, CANT	1.00	EA	$6,965.82	$6,965.82
	Signing Component Total				$139,768.53

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x	4.00	EA	$825.77	$3,303.08

	24"				
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$6.70	$16,080.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	346.00
Begin height	5.00
End Height	5.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,730.00	SF	$43.98	$76,085.40
	Retaining Walls Component Total				$76,085.40

UTILITIES COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
1000-7	UTILITY WORK	1.00	EA	$500,000.00	$500,000.00
	Comment: RELOCATION OF TRANSMISSION POLLS				
	Utilities Component Total				$500,000.00

Sequence 2 Total $1,853,686.54

Sequence: 3 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.128 MI 676 LF

Description: SR429 SB Ramp to US 192 (3 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.128
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1

Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.24	AC	$35,365.45	$43,853.16
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	374.72	CY	$671.72	$251,706.92
	Earthwork Component Total				$295,560.08

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,553.17	SY	$18.93	$48,331.51
285-709	OPTIONAL BASE,BASE GROUP 09	1,827.02	SY	$76.60	$139,949.73
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	901.12	SY	$12.35	$11,128.83
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	74.34	TN	$353.04	$26,244.99
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	247.81	TN	$353.04	$87,486.84
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	36.04	TN	$309.81	$11,165.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	148.68	TN	$309.81	$46,062.55

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	69.00	EA	$7.66	$528.54
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.13	GM	$5,768.26	$749.87
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.26	GM	$2,898.45	$753.60
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.13	GM	$5,919.72	$769.56

	Roadway Component Total	$373,171.57

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	775.71	SY	$30.04	$23,302.33
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	300.37	SY	$16.85	$5,061.23
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	41.30	TN	$353.04	$14,580.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	30.04	TN	$309.81	$9,306.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,035.00	SY	$10.66	$21,693.10

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,554.43	LF	$3.30	$5,129.62
104-11	FLOATING TURBIDITY BARRIER	12.80	LF	$7.47	$95.62
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	12.80	LF	$3.99	$51.07
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.31	AC	$45.26	$14.03
107-2	MOWING	0.31	AC	$81.43	$25.24

	Shoulder Component Total	$82,238.43

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$130.52	$3,132.48
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$280.79	$4,492.64
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$3,098.00	$6,196.00
570-1-1	PERFORMANCE TURF	51.71	SY	$8.97	$463.84

	Drainage Component Total	$14,284.96

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$202.18	$606.54
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$12,021.61

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.36	$9,360.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$825.77	$4,128.85
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$6.70	$20,100.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	5.00	EA	$10,564.67	$52,823.35
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$896.91	$4,484.55
	Subcomponent Total				$90,896.75
	Lighting Component Total				$90,896.75

Sequence 3 Total	$868,173.40

Sequence: 4 WUR - Widen/Resurface, Undivided, Rural

Net Length: 0.088 MI 462 LF

Description: SR429 SB Ramp to US 192 (4 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.088
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00

Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.28	AC	$35,365.45	$45,267.78
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	229.39	CY	$671.72	$154,085.85
	Earthwork Component Total				$199,353.63

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 48.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,977.33	SY	$18.93	$56,360.86
285-709	OPTIONAL BASE,BASE GROUP 09	2,480.94	SY	$76.60	$190,040.00
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	616.00	SY	$12.35	$7,607.60
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	50.82	TN	$353.04	$17,941.49
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	338.80	TN	$353.04	$119,609.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	24.64	TN	$309.81	$7,633.72
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	203.28	TN	$309.81	$62,978.18

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.18	GM	$5,768.26	$1,038.29
	Comment: Markings for Turn Lanes				
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.09	GM	$2,898.45	$260.86
	Comment: Markings Prior to Turn Lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1

Skip Stripe No. of Stripes 4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	71.00	EA	$7.66	$543.86
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.09	GM	$5,768.26	$519.14
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.09	GM	$5,919.72	$532.77
	Roadway Component Total				$465,066.72

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	530.27	SY	$30.04	$15,929.31
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	205.33	SY	$16.85	$3,459.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	28.23	TN	$353.04	$9,966.32
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	20.53	TN	$309.81	$6,360.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	1,904.00	SY	$10.66	$20,296.64

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,062.60	LF	$3.30	$3,506.58
104-11	FLOATING TURBIDITY BARRIER	8.75	LF	$7.47	$65.36
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	8.75	LF	$3.99	$34.91
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.21	AC	$45.26	$9.50
107-2	MOWING	0.21	AC	$81.43	$17.10
	Shoulder Component Total				$62,624.87

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$130.52	$2,088.32
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$280.79	$2,246.32
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$3,098.00	$3,098.00
570-1-1	PERFORMANCE TURF	35.35	SY	$8.97	$317.09
	Drainage Component Total				$7,749.73

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,295.01	$2,590.02
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$202.18	$404.36
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$10,524.42

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$825.77	$3,303.08
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$6.70	$16,080.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

Sequence 4 Total $818,036.77

Sequence: 10 RSU - Resurfacing, Undivided **Net Length:** 0.133 MI 702 LF

Description: US 192 East Bound Intersecting with SR 429

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	3,745.28	SY	$12.35	$46,254.21
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	308.99	TN	$353.04	$109,085.83
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	308.99	TN	$309.81	$95,728.19

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	90.00	EA	$7.66	$689.40
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.13	GM	$5,768.26	$749.87
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.40	GM	$2,898.45	$1,159.38
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.13	GM	$5,919.72	$769.56
	Roadway Component Total				$254,436.44

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	780.27	SY	$16.85	$13,147.55
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	42.91	TN	$353.04	$15,148.95

337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	31.21	TN	$309.81	$9,669.17
570-1-1	PERFORMANCE TURF	416.66	SY	$8.97	$3,737.44

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	13.30	LF	$7.47	$99.35
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	13.30	LF	$3.99	$53.07
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.32	AC	$45.26	$14.48
107-2	MOWING	0.32	AC	$81.43	$26.06
	Shoulder Component Total				$42,135.01

Sequence 10 Total $296,571.45

Sequence: 11 RSU - Resurfacing, Undivided **Net Length:** 0.060 MI 319 LF

Description: US 192 West Bound. West of SR 429SB Exit Ramp

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,275.65	SY	$12.35	$15,754.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	105.24	TN	$353.04	$37,153.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	105.24	TN	$309.81	$32,604.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	33.00	EA	$7.66	$252.78
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.06	GM	$5,768.26	$346.10

711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.12 GM	$2,898.45	$347.81
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.06 GM	$5,919.72	$355.18
	Roadway Component Total			$86,814.48

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	354.35	SY	$16.85	$5,970.80
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	19.49	TN	$353.04	$6,880.75
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	14.17	TN	$309.81	$4,390.01
570-1-1	PERFORMANCE TURF	189.22	SY	$8.97	$1,697.30

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	6.04	LF	$7.47	$45.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	6.04	LF	$3.99	$24.10
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.15	AC	$45.26	$6.79
107-2	MOWING	0.15	AC	$81.43	$12.21
	Shoulder Component Total				$19,266.02

Sequence 11 Total $106,080.50

Sequence: 12 RSU - Resurfacing, Undivided **Net Length:** 0.073 MI 383 LF

Description: US 192 West Bound East of SR 429 SB Exit Ramp. Includes Signalized Intersection

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Roadway Pavement Width L/R	36.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,552.00	SY	$12.35	$31,517.20
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	210.54	TN	$353.04	$74,329.04
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	210.54	TN	$309.81	$65,227.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	59.00	EA	$7.66	$451.94
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.07	GM	$5,768.26	$403.78
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.29	GM	$2,898.45	$840.55
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.07	GM	$5,919.72	$414.38
	Roadway Component Total				$173,184.29

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	425.33	SY	$16.85	$7,166.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	23.39	TN	$353.04	$8,257.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	17.01	TN	$309.81	$5,269.87
570-1-1	PERFORMANCE TURF	227.13	SY	$8.97	$2,037.36

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	7.25	LF	$7.47	$54.16

104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.25 LF	$3.99	$28.93
104-18	INLET PROTECTION SYSTEM	1.00 EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.18 AC	$45.26	$8.15
107-2	MOWING	0.18 AC	$81.43	$14.66
	Shoulder Component Total			$23,076.49

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	2 Lane Mast Arm
Multiplier	1
Description	SR 429 SB Exit Ramp to US 192

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$21.74	$4,348.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$862.56	$1,725.12
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$825.77	$9,909.24
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	4.00	EA	$76,197.28	$304,789.12
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	8.00	AS	$1,983.71	$15,869.68
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	8.00	EA	$395.65	$3,165.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00	AS	$1,518.60	$12,148.80
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 East Bound Intersection with SR 429 Entrance Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05

635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 3

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 West bound intersecting with SR 429 SB exit ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36
	Signalizations Component Total				$1,258,497.70

Sequence 12 Total $1,454,758.48

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 28 Project Grand Total **$13,486,053.97**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 2 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

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Project Sequences Subtotal			**$11,035,147.67**
102-1	Maintenance of Traffic	10.00 %	$1,103,514.77
101-1	Mobilization	10.00 %	$1,213,866.24
Project Sequences Total			**$13,352,528.68**
Project Unknowns		0.00 %	$0.00
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$133,525.29	$133,525.29
Project Non-Bid Subtotal					**$133,525.29**
Version 28 Project Grand Total					**$13,486,053.97**

Appendix H
TSM&O Option 3 LRE

Date: 10/21/2022 11:39:33 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 27 Project Grand Total **$18,489,127.44**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 3 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

Sequence: 1 NUR - New Construction, Undivided, Rural **Net Length:** 0.206 MI 1,087 LF

Description: SR429 SB Ramp to US 192 (1 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.206
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$35,365.45	$70,730.90
120-6	EMBANKMENT	10,526.73	CY	$54.45	$573,180.45
	Earthwork Component Total				$643,911.35

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,590.20	SY	$18.93	$86,892.49

285-709	OPTIONAL BASE,BASE GROUP 09	2,978.80	SY	$76.60	$228,176.08
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	398.62	TN	$353.04	$140,728.80
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	239.17	TN	$309.81	$74,097.26

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	28.00	EA	$7.66	$214.48
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.21	GM	$2,074.87	$435.72
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.21	GM	$997.70	$209.52
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.21	GM	$5,919.72	$1,243.14
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.21	GM	$2,305.00	$484.05

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-41	SHLDR CONC BARRIER, RETAINING SECTION	1,087.00	LF	$320.00	$347,840.00
	Roadway Component Total				$880,321.54

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,770.85	SY	$30.04	$53,196.33

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	93.01	TN	$353.04	$32,836.25
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	139.52	TN	$309.81	$43,224.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	4,037.00	SY	$10.66	$43,034.42

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,826.60	LF	$3.30	$9,327.78
104-11	FLOATING TURBIDITY BARRIER	51.48	LF	$7.47	$384.56
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	51.48	LF	$3.99	$205.41
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
107-1	LITTER REMOVAL	2.50	AC	$45.26	$113.15
107-2	MOWING	2.50	AC	$81.43	$203.58
	Shoulder Component Total				$185,266.17

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	168.00	LF	$130.52	$21,927.36
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$280.79	$11,231.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	9.00	EA	$3,098.00	$27,882.00
570-1-1	PERFORMANCE TURF	144.95	SY	$8.97	$1,300.20

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-881	INLETS, BARRIER WALL, RIG, C&G, <=10'	2.00	EA	$6,926.62	$13,853.24
	Drainage Component Total				$76,194.40

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,295.01	$6,475.05
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$7,237.13	$7,237.13

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-506	SIGN PANEL, RELOCATE, 101-200 SF	2.00	EA	$1,916.67	$3,833.34

700-4-127	OH STATIC SIGN STR, F&I, S 151-200 FT	1.00	EA	$223,480.40	$223,480.40
700-4-622	OH STATIC SIGN STR, DEEP REMOVE, SPAN	1.00	EA	$19,458.66	$19,458.66
	Signing Component Total				$261,045.64

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,600.00	LF	$9.36	$14,976.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	8.00	EA	$825.77	$6,606.16
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,800.00	LF	$6.70	$32,160.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	8.00	EA	$10,564.67	$84,517.36
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	8.00	EA	$896.91	$7,175.28
	Subcomponent Total				$145,434.80
	Lighting Component Total				$145,434.80

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	1,087.00
Begin height	5.00
End Height	5.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,435.00	SF	$43.98	$239,031.30
	Retaining Walls Component Total				$239,031.30

UTILITIES COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
1000-7	UTILITY WORK	2.00	EA	$500,000.00	$1,000,000.00
	Comment: RELOCATION OF TRANSMISSION POLLS				
	Utilities Component Total				$1,000,000.00

Sequence 1 Total $3,431,205.20

Sequence: 2 NUR - New Construction, Undivided, Rural **Net Length:** 0.104 MI

550 LF

Description: SR429 SB Ramp to US 192 (2 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.104
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.26	AC	$35,365.45	$44,560.47
120-6	EMBANKMENT	6,019.37	CY	$54.45	$327,754.70
	Earthwork Component Total				$372,315.17

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,056.53	SY	$18.93	$57,860.11
285-709	OPTIONAL BASE,BASE GROUP 09	2,241.05	SY	$76.60	$171,664.43
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	302.60	TN	$353.04	$106,829.90
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	181.56	TN	$309.81	$56,249.10

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	56.00	EA	$7.66	$428.96
710-11-101	PAINTED PAVT	0.10	GM	$2,074.87	$207.49

	MARK,STD,WHITE,SOLID,6"				
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.21	GM	$977.63	$205.30
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.21	GM	$2,898.45	$608.67
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.10	GM	$5,919.72	$591.97

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-72-41	SHLDR CONC BARRIER, RETAINING SECTION	346.00	LF	$320.00	$110,720.00

Roadway Component Total $505,365.93

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	896.18	SY	$30.04	$26,921.25
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	47.07	TN	$353.04	$16,617.59
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	70.61	TN	$309.81	$21,875.68

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	3,169.00	SY	$10.66	$33,781.54

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,430.46	LF	$3.30	$4,720.52
104-11	FLOATING TURBIDITY BARRIER	26.05	LF	$7.47	$194.59
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	26.05	LF	$3.99	$103.94
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00

107-1	LITTER REMOVAL	1.26 AC	$45.26	$57.03
107-2	MOWING	1.26 AC	$81.43	$102.60
	Shoulder Component Total			$107,114.74

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	88.00	LF	$130.52	$11,485.76
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$280.79	$6,738.96
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$3,098.00	$15,490.00
570-1-1	PERFORMANCE TURF	73.36	SY	$8.97	$658.04

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-881	INLETS, BARRIER WALL, RIG, C&G, <=10'	1.00	EA	$6,926.62	$6,926.62
	Drainage Component Total				$41,299.38

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$7,237.13	$7,237.13

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-506	SIGN PANEL, RELOCATE, 101-200 SF	1.00	EA	$1,916.67	$1,916.67
700-4-114	OH STATIC SIGN STR, F&I, C 41-50 FT	1.00	EA	$119,202.82	$119,202.82
700-4-611	OH STATIC SIGN STR, SHALLOW REMOVE, CANT	1.00	EA	$6,965.82	$6,965.82
	Signing Component Total				$139,768.53

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$825.77	$3,303.08
715-1-13	LIGHTING CONDUCTORS, F&I,	2,400.00	LF	$6.70	$16,080.00

	INSUL, NO.4-2				
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	346.00
Begin height	5.00
End Height	5.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,730.00	SF	$43.98	$76,085.40
	Retaining Walls Component Total				$76,085.40

UTILITIES COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
1000-7	UTILITY WORK	1.00	EA	$500,000.00	$500,000.00
	Comment: RELOCATION OF TRANSMISSION POLLS				
	Utilities Component Total				$500,000.00

Sequence 2 Total $1,814,666.55

Sequence: 3 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.128 MI 676 LF

Description: SR429 SB Ramp to US 192 (3 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.128
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1

Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.24	AC	$35,365.45	$43,853.16
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	374.72	CY	$671.72	$251,706.92
	Earthwork Component Total				$295,560.08

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,553.17	SY	$18.93	$48,331.51
285-709	OPTIONAL BASE,BASE GROUP 09	1,827.02	SY	$76.60	$139,949.73
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	901.12	SY	$12.35	$11,128.83
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	74.34	TN	$353.04	$26,244.99
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	247.81	TN	$353.04	$87,486.84
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	36.04	TN	$309.81	$11,165.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	148.68	TN	$309.81	$46,062.55

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	69.00	EA	$7.66	$528.54
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.13	GM	$5,768.26	$749.87
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.26	GM	$2,898.45	$753.60
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.13	GM	$5,919.72	$769.56

	Roadway Component Total	$373,171.57

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	775.71	SY	$30.04	$23,302.33
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	300.37	SY	$16.85	$5,061.23
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	41.30	TN	$353.04	$14,580.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	30.04	TN	$309.81	$9,306.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,035.00	SY	$10.66	$21,693.10

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,554.43	LF	$3.30	$5,129.62
104-11	FLOATING TURBIDITY BARRIER	12.80	LF	$7.47	$95.62
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	12.80	LF	$3.99	$51.07
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.31	AC	$45.26	$14.03
107-2	MOWING	0.31	AC	$81.43	$25.24

	Shoulder Component Total	$82,238.43

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$130.52	$3,132.48
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$280.79	$4,492.64
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$3,098.00	$6,196.00
570-1-1	PERFORMANCE TURF	51.71	SY	$8.97	$463.84

	Drainage Component Total	$14,284.96

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$202.18	$606.54
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$12,021.61

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.36	$9,360.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$825.77	$4,128.85
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$6.70	$20,100.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	5.00	EA	$10,564.67	$52,823.35
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$896.91	$4,484.55
	Subcomponent Total				$90,896.75
	Lighting Component Total				$90,896.75

Sequence 3 Total	$868,173.40

Sequence: 4 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.088 MI 462 LF

Description: SR429 SB Ramp to US 192 (4 of 4)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.088
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1

Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.28	AC	$35,365.45	$45,267.78
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	229.39	CY	$671.72	$154,085.85
	Earthwork Component Total				$199,353.63

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Existing Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 48.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,977.33	SY	$18.93	$56,360.86
285-709	OPTIONAL BASE,BASE GROUP 09	2,480.94	SY	$76.60	$190,040.00
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	616.00	SY	$12.35	$7,607.60
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	50.82	TN	$353.04	$17,941.49
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	338.80	TN	$353.04	$119,609.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	24.64	TN	$309.81	$7,633.72
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	203.28	TN	$309.81	$62,978.18

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.18	GM	$5,768.26	$1,038.29
	Comment: Markings for Turn Lanes				
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.09	GM	$2,898.45	$260.86
	Comment: Markings Prior to Turn Lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	71.00	EA	$7.66	$543.86
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.09	GM	$5,768.26	$519.14
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.09	GM	$5,919.72	$532.77

Roadway Component Total $465,066.72

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	530.27	SY	$30.04	$15,929.31
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	205.33	SY	$16.85	$3,459.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	28.23	TN	$353.04	$9,966.32
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	20.53	TN	$309.81	$6,360.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	1,904.00	SY	$10.66	$20,296.64

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,062.60	LF	$3.30	$3,506.58
104-11	FLOATING TURBIDITY BARRIER	8.75	LF	$7.47	$65.36
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	8.75	LF	$3.99	$34.91
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.21	AC	$45.26	$9.50
107-2	MOWING	0.21	AC	$81.43	$17.10

Shoulder Component Total $62,624.87

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$130.52	$2,088.32
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$280.79	$2,246.32
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$3,098.00	$3,098.00
570-1-1	PERFORMANCE TURF	35.35	SY	$8.97	$317.09
	Drainage Component Total				$7,749.73

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,295.01	$2,590.02
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$202.18	$404.36
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$10,524.42

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$825.77	$3,303.08
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$6.70	$16,080.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

Sequence 4 Total $818,036.77

Sequence: 5 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.505 MI 2,666 LF

Description: SR429 SB (1of5)

EARTHWORK COMPONENT

User Input Data

Description	Value

Standard Clearing and Grubbing Limits L/R	40.00 / 80.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.505
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.35	AC	$35,365.45	$259,936.06
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,563.30	CY	$671.72	$1,050,099.88
	Earthwork Component Total				$1,310,035.93

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	12.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	7,701.41	SY	$18.93	$145,787.69
285-709	OPTIONAL BASE,BASE GROUP 09	3,652.24	SY	$76.60	$279,761.58
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	7,108.99	SY	$12.35	$87,796.03
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	586.49	TN	$300.00	$175,947.00
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	488.74	TN	$300.00	$146,622.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	284.36	TN	$601.26	$170,974.29
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	142.18	TN	$601.26	$85,487.15

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	273.00	EA	$7.66	$2,091.18
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.50	GM	$5,768.26	$2,884.13
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	1.01	GM	$2,898.45	$2,927.43
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.50	GM	$5,919.72	$2,959.86
	Roadway Component Total				$1,103,238.34

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,342.41	SY	$30.04	$130,446.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	228.08	TN	$353.04	$80,521.36
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	165.88	TN	$309.81	$51,391.28

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,963.00	SY	$10.66	$31,585.58

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	6,131.51	LF	$3.30	$20,233.98
104-11	FLOATING TURBIDITY BARRIER	50.49	LF	$7.47	$377.16
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	50.49	LF	$3.99	$201.46
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	2.00	EA	$238.94	$477.88
107-1	LITTER REMOVAL	1.22	AC	$45.26	$55.22
107-2	MOWING	1.22	AC	$81.43	$99.34
	Shoulder Component Total				$318,129.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	80.00	LF	$130.52	$10,441.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$280.79	$11,231.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	6.00	EA	$3,098.00	$18,588.00
570-1-1	PERFORMANCE TURF	203.98	SY	$8.97	$1,829.70
	Drainage Component Total				$42,090.90

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$561.06	$1,122.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	11.00	AS	$1,295.01	$14,245.11
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$307.80	$615.60
700-1-60	SINGLE POST SIGN, REMOVE	11.00	AS	$202.18	$2,223.98
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	2.00	AS	$5,822.23	$11,644.46
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$838.95	$1,677.90
	Signing Component Total				$31,529.17

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	7

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,400.00	LF	$9.36	$13,104.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	7.00	EA	$825.77	$5,780.39
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,200.00	LF	$6.70	$28,140.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	7.00	EA	$10,564.67	$73,952.69
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	7.00	EA	$896.91	$6,278.37
	Subcomponent Total				$127,255.45
	Lighting Component Total				$127,255.45

Sequence 5 Total $2,932,279.05

Sequence: 6 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.209 MI 1,102 LF

Description: SR429 SB (2of5)

EARTHWORK COMPONENT

User Input Data

Description	Value

Standard Clearing and Grubbing Limits L/R	40.00 / 126.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.209
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.21	AC	$35,365.45	$148,888.54
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	646.99	CY	$671.72	$434,596.12
	Earthwork Component Total				$583,484.67

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	12.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,183.37	SY	$18.93	$60,261.19
285-709	OPTIONAL BASE,BASE GROUP 09	1,509.65	SY	$76.60	$115,639.19
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,938.50	SY	$12.35	$36,290.48
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	242.43	TN	$300.00	$72,729.00
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	202.02	TN	$300.00	$60,606.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	117.54	TN	$601.26	$70,672.10
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	58.77	TN	$601.26	$35,336.05

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	113.00	EA	$7.66	$865.58
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.21	GM	$5,768.26	$1,211.33
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.42	GM	$2,898.45	$1,217.35
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.21	GM	$5,919.72	$1,243.14
	Roadway Component Total				$456,071.41

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,794.93	SY	$30.04	$53,919.70
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	94.28	TN	$353.04	$33,284.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	68.56	TN	$309.81	$21,240.57

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	2,552.00	SY	$10.66	$27,204.32

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,534.45	LF	$3.30	$8,363.69
104-11	FLOATING TURBIDITY BARRIER	20.87	LF	$7.47	$155.90
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	20.87	LF	$3.99	$83.27
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.51	AC	$45.26	$23.08
107-2	MOWING	0.51	AC	$81.43	$41.53
	Shoulder Component Total				$147,295.61

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	32.00	LF	$130.52	$4,176.64
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$280.79	$4,492.64
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00	EA	$3,098.00	$9,294.00
570-1-1	PERFORMANCE TURF	84.31	SY	$8.97	$756.26
	Drainage Component Total				$18,719.54

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,295.01	$6,475.05
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	5.00	AS	$202.18	$1,010.90
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$15,015.99

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,200.00	LF	$9.36	$11,232.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	6.00	EA	$825.77	$4,954.62
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,600.00	LF	$6.70	$24,120.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	6.00	EA	$10,564.67	$63,388.02
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	6.00	EA	$896.91	$5,381.46
	Subcomponent Total				$109,076.10
	Lighting Component Total				$109,076.10

Sequence 6 Total $1,329,663.32

Sequence: 7 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.110 MI 582 LF

Description: SR429 SB (3of5)

EARTHWORK COMPONENT

User Input Data

Description	Value

Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.110
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.07	AC	$35,365.45	$37,841.03
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	328.04	CY	$671.72	$220,351.03
	Earthwork Component Total				$258,192.06

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Existing Roadway Pavement Width L/R	24.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 38.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,103.23	SY	$18.93	$58,744.14
285-709	OPTIONAL BASE,BASE GROUP 09	2,478.06	SY	$76.60	$189,819.40
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,551.62	SY	$12.35	$19,162.51
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	128.01	TN	$300.00	$38,403.00
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	337.80	TN	$300.00	$101,340.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	62.06	TN	$601.26	$37,314.20
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	98.27	TN	$601.26	$59,085.82

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	74.00	EA	$7.66	$566.84
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.22	GM	$5,768.26	$1,269.02
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.33	GM	$2,898.45	$956.49
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.22	GM	$5,919.72	$1,302.34
	Roadway Component Total				$507,963.76

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	4.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	4.00 / 0.00
New Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	667.84	SY	$30.04	$20,061.91
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	258.60	SY	$16.85	$4,357.41
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	35.56	TN	$353.04	$12,554.10
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	25.86	TN	$309.81	$8,011.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-2	PERFORMANCE TURF, SOD	1,330.00	SY	$10.66	$14,177.80

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,338.27	LF	$3.30	$4,416.29
104-11	FLOATING TURBIDITY BARRIER	11.02	LF	$7.47	$82.32
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	11.02	LF	$3.99	$43.97
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,740.00	$2,740.00
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.27	AC	$45.26	$12.22
107-2	MOWING	0.27	AC	$81.43	$21.99
	Shoulder Component Total				$66,718.64

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$130.52	$2,088.32
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$280.79	$2,246.32
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$3,098.00	$6,196.00
570-1-1	PERFORMANCE TURF	44.52	SY	$8.97	$399.34
	Drainage Component Total				$10,929.98

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$561.06	$561.06
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,295.01	$3,885.03
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$307.80	$307.80
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$202.18	$606.54
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,822.23	$5,822.23
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$838.95	$838.95
	Signing Component Total				$12,021.61

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$825.77	$3,303.08
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$6.70	$16,080.00
715-61-442	LIGHT POLE CMPLT,STD,F&I, 45'MH,12'ARM L	4.00	EA	$10,564.67	$42,258.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$896.91	$3,587.64
	Subcomponent Total				$72,717.40
	Lighting Component Total				$72,717.40

Sequence 7 Total $928,543.45

Sequence: 8 RSU - Resurfacing, Undivided **Net Length:** 0.563 MI 2,974 LF

Description: SR429 SB (4of5)

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	11,896.90	SY	$12.35	$146,926.72
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	981.49	TN	$300.00	$294,447.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	475.88	TN	$601.26	$286,127.61

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-11-102	THERMOPLASTIC, STD, WHITE, SOLID, 8"	1.13	GM	$8,135.53	$9,193.15
	Comment: Proposed Chevrons				
711-11-124	THERMOPLASTIC, STD, WHITE, SOLID, 18"	1,785.00	LF	$5.46	$9,746.10
	Comment: Proposed Chevrons				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	76.00	EA	$7.66	$582.16
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.56	GM	$5,768.26	$3,230.23
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.56	GM	$2,898.45	$1,623.13
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.56	GM	$5,919.72	$3,315.04
	Roadway Component Total				$755,191.14

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80

Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	4,626.57	SY	$16.85	$77,957.70
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	254.46	TN	$300.00	$76,338.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	185.06	TN	$601.26	$111,269.18

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	56.33	LF	$7.47	$420.79
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	56.33	LF	$3.99	$224.76
104-18	INLET PROTECTION SYSTEM	2.00	EA	$238.94	$477.88
107-1	LITTER REMOVAL	1.36	AC	$45.26	$61.55
107-2	MOWING	1.36	AC	$81.43	$110.74
	Shoulder Component Total				$266,860.60

Sequence 8 Total $1,022,051.74

Sequence: 9 RSU - Resurfacing, Undivided **Net Length:** 0.122 MI 643 LF

Description: SR 429 SB (5of5)

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,714.94	SY	$12.35	$21,179.51
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	141.48	TN	$300.00	$42,444.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	68.60	TN	$601.26	$41,246.44

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-124	PAINTED PAVT MARK,STD,WHITE,SOLID, 18" **Comment:** Proposed Chevrons	193.00	LF	$3.34	$644.62

711-11-102	THERMOPLASTIC, STD, WHITE, SOLID, 8" **Comment:** Proposed Chevrons	0.25	GM	$8,135.53	$2,033.88

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	16.00	EA	$7.66	$122.56
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.12	GM	$5,768.26	$692.19
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.12	GM	$2,898.45	$347.81
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.12	GM	$5,919.72	$710.37
	Roadway Component Total				$109,421.38

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	714.56	SY	$16.85	$12,040.34
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	39.30	TN	$300.00	$11,790.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	28.58	TN	$601.26	$17,184.01
570-1-1	PERFORMANCE TURF	381.58	SY	$8.97	$3,422.77

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	12.18	LF	$7.47	$90.98
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	12.18	LF	$3.99	$48.60
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.29	AC	$45.26	$13.13

107-2	MOWING	0.29 AC	$81.43	$23.61
	Shoulder Component Total			$44,852.38

Sequence 9 Total $154,273.76

Sequence: 10 RSU - Resurfacing, Undivided **Net Length:** 0.133 MI 702 LF

Description: US 192 East Bound Intersecting with SR 429

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	3,745.28	SY	$12.35	$46,254.21
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	308.99	TN	$353.04	$109,085.83
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	308.99	TN	$309.81	$95,728.19

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	90.00	EA	$7.66	$689.40
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.13	GM	$5,768.26	$749.87
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.40	GM	$2,898.45	$1,159.38
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.13	GM	$5,919.72	$769.56
	Roadway Component Total				$254,436.44

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67

Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	780.27	SY	$16.85	$13,147.55
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	42.91	TN	$353.04	$15,148.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	31.21	TN	$309.81	$9,669.17
570-1-1	PERFORMANCE TURF	416.66	SY	$8.97	$3,737.44

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	13.30	LF	$7.47	$99.35
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	13.30	LF	$3.99	$53.07
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.32	AC	$45.26	$14.48
107-2	MOWING	0.32	AC	$81.43	$26.06
	Shoulder Component Total				$42,135.01

Sequence 10 Total $296,571.45

Sequence: 11 RSU - Resurfacing, Undivided **Net Length:** 0.060 MI 319 LF

Description: US 192 West Bound. West of SR 429SB Exit Ramp

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	12.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,275.65	SY	$12.35	$15,754.28
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	105.24	TN	$353.04	$37,153.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	105.24	TN	$309.81	$32,604.40

Pavement Marking Subcomponent

Description	Value

Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	33.00	EA	$7.66	$252.78
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.06	GM	$5,768.26	$346.10
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.12	GM	$2,898.45	$347.81
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.06	GM	$5,919.72	$355.18
	Roadway Component Total				$86,814.48

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	354.35	SY	$16.85	$5,970.80
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	19.49	TN	$353.04	$6,880.75
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	14.17	TN	$309.81	$4,390.01
570-1-1	PERFORMANCE TURF	189.22	SY	$8.97	$1,697.30

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	6.04	LF	$7.47	$45.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	6.04	LF	$3.99	$24.10
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.15	AC	$45.26	$6.79
107-2	MOWING	0.15	AC	$81.43	$12.21
	Shoulder Component Total				$19,266.02

Sequence 11 Total $106,080.50

Sequence: 12 RSU - Resurfacing, Undivided **Net Length:** 0.073 MI 383 LF

Description: US 192 West Bound East of SR 429 SB Exit Ramp. Includes Signalized Intersection

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Roadway Pavement Width L/R	36.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,552.00	SY	$12.35	$31,517.20
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	210.54	TN	$353.04	$74,329.04
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	210.54	TN	$309.81	$65,227.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	59.00	EA	$7.66	$451.94
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.07	GM	$5,768.26	$403.78
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.29	GM	$2,898.45	$840.55
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.07	GM	$5,919.72	$414.38
	Roadway Component Total				$173,184.29

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 2.67
Paved Outside Shoulder Width L/R	5.00 / 5.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	425.33	SY	$16.85	$7,166.81
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	23.39	TN	$353.04	$8,257.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	17.01	TN	$309.81	$5,269.87
570-1-1	PERFORMANCE TURF	227.13	SY	$8.97	$2,037.36

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	7.25	LF	$7.47	$54.16
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.25	LF	$3.99	$28.93
104-18	INLET PROTECTION SYSTEM	1.00	EA	$238.94	$238.94
107-1	LITTER REMOVAL	0.18	AC	$45.26	$8.15
107-2	MOWING	0.18	AC	$81.43	$14.66
	Shoulder Component Total				$23,076.49

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	2 Lane Mast Arm
Multiplier	1
Description	SR 429 SB Exit Ramp to US 192

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.36	$7,488.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$21.74	$4,348.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$862.56	$1,725.12
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$825.77	$9,909.24
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	4.00	EA	$76,197.28	$304,789.12
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	8.00	AS	$1,983.71	$15,869.68
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	8.00	EA	$395.65	$3,165.20
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00	AS	$1,518.60	$12,148.80
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 East Bound Intersection with SR 429 Entrance Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$403.09	$1,612.36

Signalization 3

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	US 192 West bound intersecting with SR 429 SB exit ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.36	$7,020.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$21.74	$5,435.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,423.05	$8,423.05
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$825.77	$13,212.32
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,218.98	$4,218.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$8.04	$482.40
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$70,954.83	$283,819.32
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,983.71	$23,804.52
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$855.46	$6,843.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$395.65	$4,747.80
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,518.60	$18,223.20

665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00 EA	$321.88	$2,575.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$38,021.23	$38,021.23
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00 EA	$403.09	$1,612.36
	Signalizations Component Total			$1,258,497.70

Sequence 12 Total $1,454,758.48

Date: 10/21/2022 11:39:35 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 27 Project Grand Total **$18,489,127.44**

Description: 446164-1-22-01 Version 1-P. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD] Alternative 3 for SR 429 South Bound Ramp to US 192. Includes Signalized Intersection

Project Sequences Subtotal			**$15,156,303.67**
102-1	Maintenance of Traffic	10.00 %	$1,515,630.37
101-1	Mobilization	10.00 %	$1,667,193.40
Project Sequences Total			**$18,339,127.44**
Project Unknowns		0.00 %	$0.00
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 27 Project Grand Total					**$18,489,127.44**

Appendix H
Preferred Alternative LRE

Date: 9/23/2022 4:21:17 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English
Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 26 Project Grand Total **$321,698,295.54**

Description: PREFERRED T RAMP ALTERNATIVE: COPY OF VERSION 25, BUT INCLUDES UPDATES TO PAVEMENT DESIGN. 446164-1-22-01. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD]. INCLUDES 25% UNKNOWN FACTO& UNIT COST REVISION. INCLUDES PREFERED ALTERNATIVE FOR SINCLAIR AND SEIDEL.

Sequence: 1 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.210 MI 1,107 LF

Description: Sinclair Rd Connector Intersecting with SR 429 NB On Ramp. Includes Signalized Intersection

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EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.210
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.53	AC	$20,000.00	$30,600.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	334.28	CY	$26.31	$8,794.91
	Earthwork Component Total				$39,394.91

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	8.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	3.00 / 9.00

Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,952.58	SY	$2.59	$7,647.18
285-709	OPTIONAL BASE,BASE GROUP 09	1,557.48	SY	$26.06	$40,587.93
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,829.55	SY	$5.17	$14,628.77
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	233.44	TN	$141.47	$33,024.76
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	202.99	TN	$141.47	$28,717.00
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	113.18	TN	$240.52	$27,222.05
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	121.79	TN	$240.52	$29,292.93

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	113.00	EA	$6.19	$699.47
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.42	GM	$1,303.59	$547.51
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.42	GM	$933.65	$392.13
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.42	GM	$4,552.88	$1,912.21
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.42	GM	$4,552.50	$1,912.05
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.42	GM	$2,270.75	$953.72
	Roadway Component Total				$187,537.71

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 6.00
New Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,557.48	SY	$21.79	$33,937.49
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	81.20	TN	$141.47	$11,487.36
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	6.50	TN	$240.52	$1,563.38

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,546.60	LF	$2.70	$6,875.82
104-11	FLOATING TURBIDITY BARRIER	20.97	LF	$12.73	$266.95
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	20.97	LF	$4.01	$84.09
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.51	AC	$45.28	$23.09
107-2	MOWING	0.51	AC	$72.25	$36.85
	Shoulder Component Total				$57,366.26

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	32.00	LF	$116.05	$3,713.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00	EA	$2,241.18	$6,723.54
570-1-1	PERFORMANCE TURF	84.72	SY	$2.02	$171.13
	Drainage Component Total				$13,354.67

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,617.22	$8,086.10
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	5.00	AS	$118.97	$594.85
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$16,126.48

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value

Type	2 Lane Mast Arm
Multiplier	1
Description	Signalized Intersection between Sinclair Rd Connector and SR 429 NB on Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.49	$7,592.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$22.53	$4,506.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$840.51	$1,681.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$765.10	$9,181.20
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	2.00	EA	$71,795.93	$143,591.86
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	4.00	AS	$1,469.23	$5,876.92
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	4.00	AS	$856.59	$3,426.36
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	4.00	EA	$330.47	$1,321.88
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	4.00	AS	$1,408.24	$5,632.96
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	4.00	EA	$326.91	$1,307.64
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44
	Signalizations Component Total				$233,057.44

Sequence 1 Total $546,837.47

Sequence: 2 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.069 MI 364 LF

Description: SR 429 NB On Ramp from Sinclair Rd Connector

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.069
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1

Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.50	AC	$20,000.00	$10,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	206.45	CY	$26.31	$5,431.70
	Earthwork Component Total				$15,431.70

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Existing Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	808.43	SY	$2.59	$2,093.83
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	606.32	SY	$5.17	$3,134.67
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	50.02	TN	$141.47	$7,076.33
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	24.25	TN	$240.52	$5,832.61

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.07	GM	$1,303.59	$91.25
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.07	GM	$4,552.88	$318.70
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.07	GM	$4,552.50	$318.68
	Roadway Component Total				$18,866.07

SHOULDER COMPONENT

User Input Data

Description	Value

Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	592.58	SY	$21.79	$12,912.32
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	31.12	TN	$141.47	$4,402.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	22.64	TN	$240.52	$5,445.37

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	836.72	LF	$2.70	$2,259.14
104-11	FLOATING TURBIDITY BARRIER	6.89	LF	$12.73	$87.71
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	6.89	LF	$4.01	$27.63
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.17	AC	$45.28	$7.70
107-2	MOWING	0.17	AC	$72.25	$12.28
	Shoulder Component Total				$28,245.93

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$116.05	$1,856.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18
570-1-1	PERFORMANCE TURF	27.84	SY	$2.02	$56.24
	Drainage Component Total				$5,527.42

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$118.97	$237.94

700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$10,917.91

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	400.00	LF	$9.49	$3,796.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	2.00	EA	$765.10	$1,530.20
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	1,200.00	LF	$2.69	$3,228.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	2.00	EA	$6,352.63	$12,705.26
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	2.00	EA	$462.80	$925.60
	Subcomponent Total				$22,185.06
	Lighting Component Total				$22,185.06

Sequence 2 Total $101,174.09

Sequence: 3 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.091 MI 481 LF

Description: Roadway Widening and Traffic Separator Reconstruction at the intersection of Seidel Rd and Avalon Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	12.00 / 12.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.091
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.26	AC	$20,000.00	$5,200.00
120-2-2	BORROW EXCAVATION, TRUCK	225.29	CY	$26.31	$5,927.38

MEASURE

Earthwork Component Total	$11,127.38

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Existing Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	12.00 / 0.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	779.23	SY	$2.59	$2,018.21
285-709	OPTIONAL BASE,BASE GROUP 09	658.98	SY	$26.06	$17,173.02
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,565.38	SY	$5.17	$13,263.01
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	211.64	TN	$141.47	$29,940.71
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	88.18	TN	$141.47	$12,474.82
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	102.62	TN	$240.52	$24,682.16
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	52.91	TN	$240.52	$12,725.91

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	12.00	EA	$6.19	$74.28
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.18	GM	$1,303.59	$234.65
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.18	GM	$4,552.88	$819.52
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.18	GM	$4,552.50	$819.45

Roadway Component Total	$114,225.74

SHOULDER COMPONENT

User Input Data

Description	Value

Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Sidewalk Width L/R	0.00 / 0.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	962.02	LF	$2.70	$2,597.45
104-11	FLOATING TURBIDITY BARRIER	9.11	LF	$12.73	$115.97
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	9.11	LF	$4.01	$36.53
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	5.00	EA	$169.34	$846.70
107-1	LITTER REMOVAL	0.79	AC	$45.28	$35.77
107-2	MOWING	0.79	AC	$72.25	$57.08
	Shoulder Component Total				$6,611.39

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.50
Performance Turf Width	22.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	962.02	LF	$30.43	$29,274.27
570-1-1	PERFORMANCE TURF	1,202.52	SY	$2.02	$2,429.09
	Median Component Total				$31,703.36

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00	AS	$528.30	$1,584.90
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$11,536.25

Sequence 3 Total $175,204.12

Sequence: 4 RSD - Resurfacing, Divided **Net Length:** 0.180 MI 950 LF

Description: Seidel Rd intersecting with SR 429. Includes 2 Signalized Intersections

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	29.00 / 35.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	6,754.65	SY	$5.17	$34,921.54
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	557.26	TN	$141.47	$78,835.57
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	270.19	TN	$240.52	$64,986.10

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	73.00	EA	$6.19	$451.87
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.36	GM	$1,303.59	$469.29
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.36	GM	$438.24	$157.77
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.36	GM	$1,694.38	$609.98
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.36	GM	$4,552.88	$1,639.04
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.36	GM	$4,552.50	$1,638.90
	Roadway Component Total				$183,710.06

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	17.99	LF	$12.73	$229.01
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	17.99	LF	$4.01	$72.14
107-1	LITTER REMOVAL	1.31	AC	$45.28	$59.32
107-2	MOWING	1.31	AC	$72.25	$94.65
	Shoulder Component Total				$455.12

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	36.00
Total Median Shoulder Width L/R	0.00 / 0.00
Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	3,799.49	SY	$2.02	$7,674.97
	Median Component Total				$7,674.97

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	2 Lane Mast Arm
Multiplier	1
Description	Signalized Intersection between SR 429 SB On Ramp and Seidel Rd

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.49	$7,592.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$22.53	$4,506.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$840.51	$1,681.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$765.10	$9,181.20
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	3.00	EA	$71,795.93	$215,387.79
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	8.00	AS	$1,469.23	$11,753.84
653-1-11	PEDESTRIAN SIGNAL, F&I LED	8.00	AS	$856.59	$6,852.72

	COUNT, 1 WAY			
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	8.00 EA	$330.47	$2,643.76
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00 AS	$1,408.24	$11,265.92
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00 EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00 AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00 EA	$433.11	$1,732.44

Signalization 2

Description	Value
Type	2 Lane Mast Arm
Multiplier	1
Description	Signalized Intersection between SR 429 NB off ramp and Seidel Rd.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.49	$7,592.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	200.00	LF	$22.53	$4,506.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	2.00	EA	$840.51	$1,681.02
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$765.10	$9,181.20
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-4	STEEL MAST ARM ASSEMBLY, F&I, 40'- 30'	3.00	EA	$71,795.93	$215,387.79
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	8.00	AS	$1,469.23	$11,753.84
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	8.00	EA	$330.47	$2,643.76
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	8.00	AS	$1,408.24	$11,265.92
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44
	Signalizations Component Total				$644,838.26

Sequence 4 Total $836,678.41

Sequence: 101 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.060 MI 315 LF

Description: SR 429 SB Ramp to I4 WB

EARTHWORK COMPONENT

User Input Data

Description	Value

Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.060
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.44	AC	$20,000.00	$8,800.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	223.17	CY	$26.31	$5,871.60
	Earthwork Component Total				$14,671.60

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 12.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,190.82	SY	$2.59	$3,084.22
285-709	OPTIONAL BASE,BASE GROUP 09	431.85	SY	$26.06	$11,254.01
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	840.58	SY	$5.17	$4,345.80
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	69.35	TN	$141.47	$9,810.94
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	57.79	TN	$141.47	$8,175.55
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	33.62	TN	$240.52	$8,086.28
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	34.67	TN	$240.52	$8,338.83

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	315.00	LF	$2.48	$781.20

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt

Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	32.00	EA	$6.19	$198.08
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.12	GM	$1,303.59	$156.43
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.12	GM	$933.65	$112.04
711-15-102	THERMOPLASTIC, STD-OP, WHITE, SOLID, 8"	0.12	GM	$7,379.69	$885.56
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.12	GM	$4,552.88	$546.35
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.12	GM	$2,270.75	$272.49

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	10.50	TN	$227.60	$2,389.80
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	315.00	LF	$21.34	$6,722.10
	Roadway Component Total				$65,159.68

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	10.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	10.00 / 12.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	793.64	SY	$21.79	$17,293.42
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	42.38	TN	$141.47	$5,995.50
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1.85	TN	$240.52	$444.96
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.12	GM	$1,446.19	$173.54

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	315.00	LF	$29.95	$9,434.25

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	725.00	LF	$2.70	$1,957.50
104-11	FLOATING TURBIDITY BARRIER	5.97	LF	$12.73	$76.00
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	5.97	LF	$4.01	$23.94
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.14	AC	$45.28	$6.34
107-2	MOWING	0.14	AC	$72.25	$10.12
	Shoulder Component Total				$38,506.80

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	8.00	LF	$116.05	$928.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18
570-1-1	PERFORMANCE TURF	24.12	SY	$2.02	$48.72

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	1.00	EA	$5,128.69	$5,128.69
	Drainage Component Total				$9,720.19

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$118.97	$237.94
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$10,917.91

Sequence 101 Total $138,976.18

Sequence: 102 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.027 MI 140 LF

Description: SR 429 SB to I4 EB

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.030
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.19	AC	$20,000.00	$3,800.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	43.06	CY	$26.31	$1,132.91
	Earthwork Component Total				$4,932.91

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Existing Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	186.56	SY	$2.59	$483.19
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	233.20	SY	$5.17	$1,205.64
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	19.24	TN	$141.47	$2,721.88
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	9.33	TN	$240.52	$2,244.05

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	280.00	LF	$2.48	$694.40

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.05	GM	$1,303.59	$65.18
711-15-102	THERMOPLASTIC, STD-OP, WHITE, SOLID, 8"	0.05	GM	$7,379.69	$368.98
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.05	GM	$4,552.88	$227.64

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	9.33	TN	$227.60	$2,123.51
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	280.00	LF	$21.34	$5,975.20
	Roadway Component Total				$16,109.67

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 8.00
New Total Outside Shoulder Width L/R	12.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 8.00
New Paved Outside Shoulder Width L/R	12.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	191.69	SY	$21.79	$4,176.93
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	124.37	SY	$7.71	$958.89
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	10.26	TN	$141.47	$1,451.48
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	0.41	TN	$240.52	$98.61

546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.05	GM	$1,446.19	$72.31

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	321.82	LF	$2.70	$868.91
104-11	FLOATING TURBIDITY BARRIER	2.65	LF	$12.73	$33.73
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	2.65	LF	$4.01	$10.63
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.06	AC	$45.28	$2.72
107-2	MOWING	0.06	AC	$72.25	$4.34
	Shoulder Component Total				$10,769.78

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	8.00	LF	$116.05	$928.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18
570-1-1	PERFORMANCE TURF	10.71	SY	$2.02	$21.63
	Drainage Component Total				$4,564.41

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	1.00	AS	$118.97	$118.97
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$9,181.72

Sequence 102 Total $45,558.49

Sequence: 103 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.119 MI 626 LF

Description: (1 of 2) I4 EB Ramp to SR 429 NB

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.119
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.87	AC	$20,000.00	$17,400.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	525.23	CY	$26.31	$13,818.80
	Earthwork Component Total				$31,218.80

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,339.78	SY	$2.59	$8,650.03
285-709	OPTIONAL BASE,BASE GROUP 09	1,692.85	SY	$26.06	$44,115.67
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	834.94	SY	$5.17	$4,316.64
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	68.88	TN	$141.47	$9,744.45
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	229.61	TN	$141.47	$32,482.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	33.40	TN	$240.52	$8,033.37
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	137.77	TN	$240.52	$33,136.44

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	626.00	LF	$105.00	$65,730.00
536-73	GUARDRAIL REMOVAL	936.00	LF	$2.48	$2,321.28

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	64.00	EA	$6.19	$396.16
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.24	GM	$1,303.59	$312.86
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.24	GM	$933.65	$224.08
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.24	GM	$4,552.88	$1,092.69
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.24	GM	$2,270.75	$544.98

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	31.63	TN	$227.60	$7,198.99
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	939.00	LF	$21.34	$20,038.26
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	1.00	EA	$3,002.12	$3,002.12
	Roadway Component Total				$241,340.95

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,715.81	SY	$21.79	$37,387.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	91.84	TN	$141.47	$12,992.60

337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	3.67	TN	$240.52	$882.71
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.24	GM	$1,446.19	$347.09

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	626.00	LF	$29.95	$18,748.70

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,440.28	LF	$2.70	$3,888.76
104-11	FLOATING TURBIDITY BARRIER	11.86	LF	$12.73	$150.98
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	11.86	LF	$4.01	$47.56
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.29	AC	$45.28	$13.13
107-2	MOWING	0.29	AC	$72.25	$20.95
	Shoulder Component Total				$77,571.21

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$116.05	$2,785.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$2,241.18	$4,482.36
570-1-1	PERFORMANCE TURF	47.91	SY	$2.02	$96.78

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	2.00	EA	$5,128.69	$10,257.38
	Drainage Component Total				$18,994.92

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,617.22	$4,851.66
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$12,654.10

Sequence 103 Total $381,779.98

Sequence: 104 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.131 MI 689 LF

Description: (2 of 2) I4 EB Ramp to SR 429 NB

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.130
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.95	AC	$20,000.00	$19,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	573.78	CY	$26.31	$15,096.15
	Earthwork Component Total				$34,096.15

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 12.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,674.88	SY	$2.59	$9,517.94
285-709	OPTIONAL BASE,BASE GROUP 09	1,862.70	SY	$26.06	$48,541.96
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	918.72	SY	$5.17	$4,749.78
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	75.79	TN	$141.47	$10,722.01
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	252.65	TN	$141.47	$35,742.40
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	36.75	TN	$240.52	$8,839.11

337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	151.59	TN	$240.52	$36,460.43

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	13,308.00	SY	$2.59	$34,467.72
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	689.00	LF	$105.00	$72,345.00
536-73	GUARDRAIL REMOVAL	689.00	LF	$2.48	$1,708.72

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	70.00	EA	$6.19	$433.30
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.26	GM	$1,303.59	$338.93
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.26	GM	$933.65	$242.75
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.26	GM	$4,552.88	$1,183.75
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.26	GM	$2,270.75	$590.40

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	22.97	TN	$227.60	$5,227.97
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	689.00	LF	$21.34	$14,703.26
	Roadway Component Total				$285,815.43

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	12.00 / 12.00

Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,887.97	SY	$21.79	$41,138.87
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	101.06	TN	$141.47	$14,296.96
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	4.04	TN	$240.52	$971.70
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.26	GM	$1,446.19	$376.01

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	400.00	LF	$29.95	$11,980.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,584.79	LF	$2.70	$4,278.93
104-11	FLOATING TURBIDITY BARRIER	13.05	LF	$12.73	$166.13
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	13.05	LF	$4.01	$52.33
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.32	AC	$45.28	$14.49
107-2	MOWING	0.32	AC	$72.25	$23.12
	Shoulder Component Total				$76,389.77

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$116.05	$2,785.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$2,241.18	$4,482.36
570-1-1	PERFORMANCE TURF	52.72	SY	$2.02	$106.49

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	2.00	EA	$5,128.69	$10,257.38
	Drainage Component Total				$20,377.83

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12	1.00	AS	$528.30	$528.30

	SF			
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00 AS	$1,617.22	$4,851.66
700-1-50	SINGLE POST SIGN, RELOCATE	1.00 AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00 AS	$118.97	$356.91
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00 AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00 AS	$1,051.85	$1,051.85
	Signing Component Total			$12,654.10

Sequence 104 Total $429,333.28

Sequence: 105 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.079 MI 418 LF

Description: SR 429 SB to I4 East and West Ramp

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.079
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.57	AC	$20,000.00	$11,400.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	113.39	CY	$26.31	$2,983.29
	Earthwork Component Total				$14,383.29

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Existing Roadway Pavement Width L/R	0.00 / 50.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 6.10
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	841.00	SY	$2.59	$2,178.19
285-709	OPTIONAL BASE,BASE GROUP 09	298.76	SY	$26.06	$7,785.69
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,323.20	SY	$5.17	$12,010.94
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	191.66	TN	$141.47	$27,114.14
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	38.97	TN	$141.47	$5,513.09
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	92.93	TN	$240.52	$22,351.52
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	23.38	TN	$240.52	$5,623.36

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	418.00	LF	$2.48	$1,036.64
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.16	GM	$4,552.88	$728.46

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	53.00	EA	$6.19	$328.07
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.16	GM	$1,303.59	$208.57
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.24	GM	$933.65	$224.08
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.16	GM	$4,552.88	$728.46
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.24	GM	$2,270.75	$544.98

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	13.93	TN	$227.60	$3,170.47

536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	418.00 LF	$21.34	$8,920.12
	Roadway Component Total			$98,466.78

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 12.00
New Total Outside Shoulder Width L/R	12.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 12.00
New Paved Outside Shoulder Width L/R	12.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	572.90	SY	$21.79	$12,483.49
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	557.57	SY	$7.71	$4,298.86
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	30.67	TN	$141.47	$4,338.88
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	22.30	TN	$240.52	$5,363.60
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.16	GM	$1,446.19	$231.39

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	961.80	LF	$2.70	$2,596.86
104-11	FLOATING TURBIDITY BARRIER	7.92	LF	$12.73	$100.82
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.92	LF	$4.01	$31.76
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.19	AC	$45.28	$8.60
107-2	MOWING	0.19	AC	$72.25	$13.73
	Shoulder Component Total				$32,559.22

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$116.05	$1,856.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18

570-1-1	PERFORMANCE TURF	32.00 SY	$2.02	$64.64

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	3.00	EA	$5,128.69	$15,386.07
	Drainage Component Total				$20,921.89

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$118.97	$237.94
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-3-606	SIGN PANEL, REMOVE, 101-200 SF	2.00	EA	$533.67	$1,067.34
700-4-125	OH STATIC SIGN STR, F&I, S 51-100 FT	1.00	EA	$262,000.00	$262,000.00
700-4-620	OH STATIC SIGN STR, REMOVE, SPAN	1.00	EA	$12,920.08	$12,920.08
	Signing Component Total				$286,905.33

Sequence 105 Total $453,236.51

Sequence: 106 RSU - Resurfacing, Undivided **Net Length:** 0.099 MI 523 LF

Description: I4 WB Ramp to SR 429 NB

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	872.08	SY	$5.17	$4,508.65
334-1-13	SUPERPAVE ASPHALTIC CONC,	71.95	TN	$141.47	$10,178.77

	TRAFFIC C			
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	34.88 TN	$240.52	$8,389.34

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	523.00	LF	$2.48	$1,297.04

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.20	GM	$1,303.59	$260.72
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.20	GM	$4,552.88	$910.58
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.20	GM	$4,552.50	$910.50

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	17.77	TN	$227.60	$4,044.45
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	523.00	LF	$21.34	$11,160.82
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	1.00	EA	$3,002.12	$3,002.12
	Roadway Component Total				$44,662.99

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	2.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	2.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O

Rumble Strips ï¿½No. of Sides 2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	697.66	SY	$7.71	$5,378.96
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	38.37	TN	$141.47	$5,428.20
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	3.07	TN	$240.52	$738.40
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.20	GM	$1,446.19	$289.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	523.00	LF	$29.95	$15,663.85
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	5,723.00	SF	$31.00	$177,413.00
	Comment: Noise Barrier Wall A: Reunion East Side				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	9.91	LF	$12.73	$126.15
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	9.91	LF	$4.01	$39.74
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.24	AC	$45.28	$10.87
107-2	MOWING	0.24	AC	$72.25	$17.34
	Shoulder Component Total				$205,275.09

Sequence 106 Total $249,938.08

Sequence: 107 WDR - Widen/Resurface, Divided, Rural **Net Length:** 0.358 MI 1,889 LF

Description: (1 of 4)SR 429 NB and SB. Mill/Resurface, Widen, and Reconstruction.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	88.00 / 88.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.358
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %

Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	7.64	AC	$20,000.00	$152,800.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	22,199.12	CY	$26.31	$584,058.85
	Earthwork Component Total				$736,858.85

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Existing Roadway Pavement Width L/R	20.00 / 20.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	8.00 / 0.00
Widened Inside Pavement Width L/R	22.00 / 22.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	20,571.11	SY	$2.59	$53,279.17
285-709	OPTIONAL BASE,BASE GROUP 09	11,123.10	SY	$26.06	$289,867.99
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	8,396.37	SY	$5.17	$43,409.23
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	692.70	TN	$141.47	$97,996.27
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,500.85	TN	$141.47	$212,325.25
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	335.85	TN	$240.52	$80,778.64
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	900.51	TN	$240.52	$216,590.67

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
536-73	GUARDRAIL REMOVAL	2,834.00	LF	$2.48	$7,028.32
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.72	GM	$438.24	$315.53
	Comment: Extra Striping for the full 8 lanes				
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.72	GM	$1,694.38	$1,219.95
	Comment: Extra Striping for the full 8 lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4

Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	242.00	EA	$6.19	$1,497.98
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.43	GM	$1,303.59	$1,864.13
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.43	GM	$438.24	$626.68
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	1.43	GM	$5,266.55	$7,531.17
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.43	GM	$1,694.38	$2,422.96
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	1.43	GM	$5,718.11	$8,176.90

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	32.83	TN	$227.60	$7,472.11
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	945.00	LF	$21.34	$20,166.30
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	4.00	EA	$3,002.12	$12,008.48
	Roadway Component Total				$1,064,577.73

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	12.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	4,756.55	SY	$21.79	$103,645.22
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	253.99	TN	$141.47	$35,931.97
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	11.08	TN	$240.52	$2,664.96

546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.72	GM	$1,446.19	$1,041.26

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	1,889.00	LF	$29.95	$56,575.55
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	41,558.00	SF	$31.00	$1,288,298.00
	Comment: Noise Barrier Wall A: Reunion East Side				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,345.12	LF	$2.70	$11,731.82
104-11	FLOATING TURBIDITY BARRIER	35.78	LF	$12.73	$455.48
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	35.78	LF	$4.01	$143.48
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	2.60	AC	$45.28	$117.73
107-2	MOWING	2.60	AC	$72.25	$187.85
	Shoulder Component Total				$1,503,715.21

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00
Performance Turf Width	5.34
New Total Median Shoulder Width L/R	12.00 / 12.00
New Paved Median Shoulder Width L/R	12.00 / 12.00
Existing Total Median Shoulder Width L/R	0.00 / 0.00
Existing Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	5,176.36	SY	$21.79	$112,792.88
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	277.08	TN	$141.47	$39,198.51
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	11.08	TN	$240.52	$2,664.96
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	1,889.00	LF	$105.00	$198,345.00
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	1.00	GM	$1,446.19	$1,446.19
570-1-1	PERFORMANCE TURF	1,120.92	SY	$2.02	$2,264.26
	Median Component Total				$356,711.80

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	288.00	LF	$116.05	$33,422.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	32.00	LF	$171.65	$5,492.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00	EA	$2,241.18	$33,617.70
570-1-1	PERFORMANCE TURF	251.89	SY	$2.02	$508.82

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	8.00	EA	$5,128.69	$41,029.52
425-1-781	INLETS, MED BARRIER, TYPE 1, <=10'	9.00	EA	$7,450.32	$67,052.88
	Drainage Component Total				$181,124.12

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,617.22	$14,554.98
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	9.00	AS	$118.97	$1,070.73
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$24,131.23

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
000-000	ITS	1,889.00	LF	$66.00	$124,674.00
	Comment: General ITS per LF of roadway in Sequence. Assume $66/LF				
	Intelligent Traffic System (ITS) Component Total				$124,674.00

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	16

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,200.00	LF	$9.49	$30,368.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,600.00	LF	$2.69	$25,824.00
715-4-14	LIGHT POLE COMPLETE, F&I-	16.00	EA	$6,352.63	$101,642.08

	STD, 45'				
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	16.00	EA	$462.80	$7,404.80
	Subcomponent Total				$177,480.48
	Lighting Component Total				$177,480.48

Sequence 107 Total $4,169,273.42

Sequence: 108 WDR - Widen/Resurface, Divided, Rural **Net Length:** 1.697 MI 8,960 LF

Description: (2 of 4)SR 429 NB and SB. Mill/Resurface, Widen, and Reconstruction. (Includes excel/decal as X-Items)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	88.00 / 88.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.358
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	36.20	AC	$20,000.00	$724,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	5,361.98	CY	$26.31	$141,073.69
	Earthwork Component Total				$865,073.69

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Existing Roadway Pavement Width L/R	20.00 / 20.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	18.00 / 18.00
Widened Inside Pavement Width L/R	10.00 / 10.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	97,068.40	SY	$2.59	$251,407.16
285-709	OPTIONAL BASE,BASE GROUP 09	57,066.26	SY	$26.06	$1,487,146.74
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	39,822.93	SY	$5.17	$205,884.55
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	3,285.39	TN	$300.00	$985,617.00
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	7,665.91	TN	$300.00	$2,299,773.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	1,592.92	TN	$601.26	$957,759.08
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	2,230.08	TN	$601.26	$1,340,857.90

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	13,308.00	SY	$2.59	$34,467.72
285-709	OPTIONAL BASE,BASE GROUP 09	13,308.00	SY	$26.06	$346,806.48
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,097.00	TN	$141.47	$155,192.59
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	532.00	TN	$240.52	$127,956.64
536-73	GUARDRAIL REMOVAL	12,200.00	LF	$2.48	$30,256.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.81	GM	$438.24	$1,669.69
	Comment: Extra Striping for the full 8 lanes				
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	3.81	GM	$1,694.38	$6,455.59
	Comment: Extra Striping for the full 8 lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	1,145.00	EA	$6.19	$7,087.55
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	6.79	GM	$1,303.59	$8,851.38
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	6.79	GM	$438.24	$2,975.65
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	6.79	GM	$5,266.55	$35,759.87
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	6.79	GM	$1,694.38	$11,504.84
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	6.79	GM	$5,718.11	$38,825.97

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00

Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	103.33	TN	$227.60	$23,517.91
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	3,000.00	LF	$21.34	$64,020.00
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	10.00	EA	$3,002.12	$30,021.20
	Roadway Component Total				$8,453,814.51

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	2.50 / 4.00
New Total Outside Shoulder Width L/R	9.50 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	2.50 / 4.00
New Paved Outside Shoulder Width L/R	9.50 / 8.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	18,079.61	SY	$21.79	$393,954.70
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	6,471.23	SY	$7.71	$49,893.18
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	958.24	TN	$141.47	$135,562.21
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	52.57	TN	$240.52	$12,644.14
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	3.39	GM	$1,446.19	$4,902.58

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	1,600.00	LF	$29.95	$47,920.00
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	40,370.00	SF	$31.00	$1,251,470.00
	Comment: Noise Barrier Wall A: Reunion East Side				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	20,608.37	LF	$2.70	$55,642.60
104-11	FLOATING TURBIDITY BARRIER	169.70	LF	$12.73	$2,160.28
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	169.70	LF	$4.01	$680.50
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$2,921.89	$5,843.78

107-1	LITTER REMOVAL	12.34 AC	$45.28	$558.76
107-2	MOWING	12.34 AC	$72.25	$891.56
	Shoulder Component Total			$1,962,124.30

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	26.00
Performance Turf Width	0.00
New Total Median Shoulder Width L/R	12.00 / 12.00
New Paved Median Shoulder Width L/R	12.00 / 12.00
Existing Total Median Shoulder Width L/R	0.00 / 0.00
Existing Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	24,550.84	SY	$21.79	$534,962.80
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,314.16	TN	$141.47	$185,914.22
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	52.57	TN	$198.46	$10,433.04
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	8,960.00	LF	$105.00	$940,800.00
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	3.00	GM	$1,446.19	$4,338.57
	Median Component Total				$1,676,448.63

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,360.00	LF	$116.05	$157,828.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	136.00	LF	$171.65	$23,344.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	68.00	EA	$2,241.18	$152,400.24
570-1-1	PERFORMANCE TURF	1,194.69	SY	$2.02	$2,413.27

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-793	INLETS, MED BARRIER, TYPE 2, J BOT, <10'	36.00	EA	$7,879.39	$283,658.04
	Drainage Component Total				$619,643.95

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12	4.00	AS	$528.30	$2,113.20

	SF				
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	41.00	AS	$1,617.22	$66,306.02
700-1-50	SINGLE POST SIGN, RELOCATE	4.00	AS	$328.07	$1,312.28
700-1-60	SINGLE POST SIGN, REMOVE	41.00	AS	$118.97	$4,877.77
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	4.00	AS	$6,597.30	$26,389.20
700-2-60	MULTI- POST SIGN, REMOVE	4.00	AS	$1,051.85	$4,207.40
	Signing Component Total				$105,205.87

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
000-000	GENERAL ITS	8,960.00	LF	$66.00	$591,360.00
	Comment: General ITS per LF of roadway in Sequence. Assume $66/LF				
	Intelligent Traffic System (ITS) Component Total				$591,360.00

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	76

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	15,200.00	LF	$9.49	$144,248.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	76.00	EA	$765.10	$58,147.60
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	45,600.00	LF	$2.69	$122,664.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	76.00	EA	$6,352.63	$482,799.88
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	76.00	EA	$462.80	$35,172.80
	Subcomponent Total				$843,032.28
	Lighting Component Total				$843,032.28

Sequence 108 Total $15,116,703.23

Sequence: 109 WDR - Widen/Resurface, Divided, Rural **Net Length:** 8.440 MI 44,563 LF

Description: (3 of 4)SR 429 NB and SB. Mill/Resurface, Widen, and Reconstruction. Includes NB Bridges and Mainline, Toll Plaza (Includes excel/decal as X-Items)

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	88.00 / 88.00
Incidental Clearing and Grubbing Area	0.00

Alignment Number	1
Distance	8.440
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	180.05	AC	$20,000.00	$3,601,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	395,292.09	CY	$26.31	$10,400,134.89
	Earthwork Component Total				$14,001,134.89

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Existing Roadway Pavement Width L/R	19.00 / 19.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	29.00 / 29.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	524,855.47	SY	$2.59	$1,359,375.67
285-709	OPTIONAL BASE,BASE GROUP 09	290,453.03	SY	$26.06	$7,569,205.96
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	188,155.73	SY	$5.17	$972,765.12
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	39,487.95	TN	$300.00	$11,846,385.00
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	15,522.85	TN	$300.00	$4,656,855.00
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	23,692.77	TN	$240.52	$5,698,585.04
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	7,526.23	TN	$601.26	$4,525,221.05

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	55,705.00	SY	$2.59	$144,275.95
	Comment: Acceleration / Deceleration Lanes				
285-709	OPTIONAL BASE,BASE GROUP	55,705.00	SY	$26.06	$1,451,672.30

	09				
	Comment: Acceleration / Deceleration Lanes				
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	6,288.00	TN	$300.00	$1,886,400.00
	Comment: Acceleration / Deceleration Lanes				
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	3,826.00	TN	$601.26	$2,300,420.76
	Comment: Acceleration / Deceleration Lanes				
455-133-2	SHEET PILING STEEL, TEMPORARY-CRITICAL	150.00	SF	$77.28	$11,592.00
521-8-4	CONC TRAF RAIL BAR,JCT SLAB,42"V SHP	780.00	LF	$293.73	$229,109.40
536-73	GUARDRAIL REMOVAL	84,727.00	LF	$2.48	$210,122.96
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	16.80	GM	$438.24	$7,362.43
	Comment: Extra Striping for the full 8 lanes				
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	16.80	GM	$1,694.38	$28,465.58
	Comment: Extra Striping for the full 8 lanes				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	5,697.00	EA	$12.38	$70,528.86
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	33.76	GM	$1,303.59	$44,009.20
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	33.76	GM	$438.24	$14,794.98
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	33.76	GM	$5,266.55	$177,798.73
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	33.76	GM	$1,694.38	$57,202.27
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	33.76	GM	$5,718.11	$193,043.39

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	787.33	TN	$227.60	$179,196.31
536-1-1	GUARDRAIL- ROADWAY, GEN	23,500.00	LF	$21.34	$501,490.00

	TL-3			
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	12.00 EA	$3,002.12	$36,025.44
	Roadway Component Total			$44,171,903.40

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	122,103.17	SY	$21.79	$2,660,628.07
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	6,535.94	TN	$300.00	$1,960,782.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	261.44	TN	$601.26	$157,193.41
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	16.88	GM	$1,446.19	$24,411.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER-CONCRETE	2,000.00	LF	$29.95	$59,900.00
521-8-7	CONC BARRIER, W/JUNCT SL, 36 SS	998.00	LF	$250.00	$249,500.00
	Comment: Barrier wall for retaining wall sections				
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	253,330.00	SF	$31.00	$7,853,230.00
	Comment: Noise Barrier Walls Wall B: Indian Creek West Side Wall C: Indian Creek East Side Wall D: Emerald Island Resort Wall E: Oak Island Cove Wall F: Domain Orlando Wall H: Lake Shore				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	102,495.36	LF	$2.70	$276,737.47
104-11	FLOATING TURBIDITY BARRIER	844.00	LF	$12.73	$10,744.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	844.00	LF	$4.01	$3,384.44
104-15	SOIL TRACKING PREVENTION DEVICE	9.00	EA	$2,921.89	$26,297.01
104-18	INLET PROTECTION SYSTEM	17.00	EA	$169.34	$2,878.78
107-1	LITTER REMOVAL	61.36	AC	$45.28	$2,778.38
107-2	MOWING	61.36	AC	$72.25	$4,433.26

	Shoulder Component Total	$13,292,898.63

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	26.00
Performance Turf Width	0.00
New Total Median Shoulder Width L/R	12.00 / 12.00
New Paved Median Shoulder Width L/R	12.00 / 12.00
Existing Total Median Shoulder Width L/R	0.00 / 0.00
Existing Paved Median Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	122,103.17	SY	$21.79	$2,660,628.07
334-1-15	SUPERPAVE ASPHALTIC CONC, TRAFFIC E	6,535.94	TN	$300.00	$1,960,782.00
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	261.44	TN	$601.26	$157,193.41
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	44,563.00	LF	$105.00	$4,679,115.00
	Median Component Total				$9,457,718.48

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	6,752.00	LF	$116.05	$783,569.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	680.00	LF	$171.65	$116,722.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	338.00	EA	$2,241.18	$757,518.84
570-1-1	PERFORMANCE TURF	5,941.76	SY	$2.02	$12,002.36

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-541	INLETS, DT BOT, TYPE D, <10'	88.00	EA	$5,744.39	$505,506.32
425-1-701	INLETS, GUTTER, TYPE S, <10'	20.00	EA	$5,128.69	$102,573.80
425-1-793	INLETS, MED BARRIER, TYPE 2, J BOT, <10'	177.00	EA	$7,879.39	$1,394,652.03

Retention Basin 1

Description	Value
Size	15 AC
Multiplier	1
Depth	12.00
Description	(1 of 3) Livingston Interchange Ponds

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.00	AC	$20,000.00	$300,000.00
120-1	REGULAR EXCAVATION	290,400.00	CY	$14.07	$4,085,928.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$5,744.39	$11,488.78
425-2-71	MANHOLES, J-7, <10'	3.00	EA	$8,031.77	$24,095.31
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	104.00	LF	$193.67	$20,141.68
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	600.00	LF	$522.06	$313,236.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	3,600.00	LF	$22.19	$79,884.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	4.00	EA	$2,473.66	$9,894.64
570-1-1	PERFORMANCE TURF	72,600.00	SY	$2.02	$146,652.00

Retention Basin 2

Description	Value
Size	2 AC
Multiplier	1
Depth	12.00
Description	(2 of 3)Livingston Interchange Ponds

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$20,000.00	$40,000.00
120-1	REGULAR EXCAVATION	38,720.00	CY	$14.07	$544,790.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$5,744.39	$5,744.39
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$8,031.77	$8,031.77
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$193.67	$10,845.52
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$522.06	$104,412.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	$22.19	$26,184.20
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,473.66	$2,473.66
570-1-1	PERFORMANCE TURF	9,680.00	SY	$2.02	$19,553.60

Retention Basin 3

Description	Value
Size	2.5 AC
Multiplier	1
Depth	12.00
Description	(3 of 3)Livingston Interchange Ponds

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50	AC	$20,000.00	$50,000.00
120-1	REGULAR EXCAVATION	48,400.00	CY	$14.07	$680,988.00
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00	EA	$5,834.18	$5,834.18
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$8,031.77	$8,031.77
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$193.67	$10,845.52
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$522.06	$104,412.00

550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00 LF	$22.19	$29,623.65
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00 EA	$2,473.66	$2,473.66
570-1-1	PERFORMANCE TURF	12,100.00 SY	$2.02	$24,442.00
	Drainage Component Total			$10,342,551.68

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	17.00 AS	$528.30	$8,981.10
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	203.00 AS	$1,617.22	$328,295.66
700-1-50	SINGLE POST SIGN, RELOCATE	17.00 AS	$328.07	$5,577.19
700-1-60	SINGLE POST SIGN, REMOVE	203.00 AS	$118.97	$24,150.91
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	17.00 AS	$6,597.30	$112,154.10
700-2-60	MULTI- POST SIGN, REMOVE	17.00 AS	$1,051.85	$17,881.45

X-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
700-3-205	SIGN PANEL, F&I OM, 51-100 SF	1.00 EA	$3,596.55	$3,596.55
700-3-206	SIGN PANEL, F&I OM, 101-200 SF	21.00 EA	$6,415.00	$134,715.00
700-3-207	SIGN PANEL, F&I OM, 201-300 SF	5.00 EA	$8,100.77	$40,503.85
700-3-605	SIGN PANEL, REMOVE, 51-100 SF	1.00 EA	$527.12	$527.12
700-3-606	SIGN PANEL, REMOVE, 101-200 SF	15.00 EA	$533.67	$8,005.05
700-3-607	SIGN PANEL, REMOVE, 201-300 SF	5.00 EA	$820.83	$4,104.15
700-4-113	OH STATIC SIGN STR, F&I, C 31-40 FT	1.00 EA	$93,048.37	$93,048.37
700-4-114	OH STATIC SIGN STR, F&I, C 41-50 FT	12.00 EA	$103,304.66	$1,239,655.92
700-4-126	OH STATIC SIGN STR, F&I, S 101-150 FT	1.00 EA	$205,085.23	$205,085.23
700-4-610	OH STATIC SIGN STR, REMOVE, CANT	8.00 EA	$4,237.55	$33,900.40
700-4-620	OH STATIC SIGN STR, REMOVE, SPAN	5.00 EA	$12,920.08	$64,600.40
	Signing Component Total			$2,324,782.45

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

EX-Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
000-000	GENERAL ITS	45,400.00 LF	$66.00	$2,996,400.00
	Comment: General ITS per LF of roadway and Bridges in Sequence. Assume $66/LF			
	Intelligent Traffic System (ITS) Component			$2,996,400.00

Total	

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	**Value**
Multiplier (Number of Poles)	774

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	154,800.00	LF	$9.49	$1,469,052.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	774.00	EA	$765.10	$592,187.40
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	464,400.00	LF	$2.69	$1,249,236.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	774.00	EA	$6,352.63	$4,916,935.62
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	774.00	EA	$462.80	$358,207.20
	Subcomponent Total				$8,585,618.22
	Lighting Component Total				$8,585,618.22

LANDSCAPING COMPONENT

User Input Data

Description	**Value**
Cost %	2.00
Component Detail	N
Landscaping Component Total	$1,545,301.44

BRIDGES COMPONENT

Bridge 920604

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	70.70
Width (LF)	37.00
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	524.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$197.96**
Basic Bridge Cost	**$457,782.50**
Description	NB SR 429 OVER SAND HILL RD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	524.00	SF	$96.67	$50,655.08
400-2-10	CONC CLASS II, APPROACH SLABS	82.22	CY	$539.79	$44,381.53
415-1-9	REINF STEEL- APPROACH SLABS	14,388.50	LB	$1.09	$15,683.46

Bridge 920604 Total	$568,502.58

Bridge 920606

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	142.60
Width (LF)	37.42
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	855.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$186.39**
Basic Bridge Cost	**$933,816.10**
Description	NB SR 429 OVER FUNIE STEED RD.

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	855.00 SF	$96.67	$82,652.85
400-2-10	CONC CLASS II, APPROACH SLABS	83.16 CY	$539.79	$44,888.94
415-1-9	REINF STEEL- APPROACH SLABS	14,553.00 LB	$1.09	$15,862.77

Bridge 920606 Total	$1,077,220.66

Bridge 920610

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	174.43
Width (LF)	38.67
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	1,236.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$184.31**
Basic Bridge Cost	**$1,180,411.42**
Description	NB SR 429 OVER US 192

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,236.00 SF	$96.67	$119,484.12
400-2-10	CONC CLASS II, APPROACH SLABS	85.93 CY	$539.79	$46,384.15
415-1-9	REINF STEEL- APPROACH SLABS	15,037.75 LB	$1.09	$16,391.15

Bridge 920610 Total	$1,362,670.84

Bridge 750617

Description	**Value**

Estimate Type		SF Estimate
Primary Estimate		YES
Length (LF)		134.50
Width (LF)		39.34
Type		Overpass Widening
Cost Factor		1.25
Structure No.		
Removal of Existing Structures area		1,042.00
Default Cost per SF		$140.00
Factored Cost per SF		$175.00
Final Cost per SF		**$187.07**
Basic Bridge Cost		**$925,965.25**
Description	NB SR 429 OVER W. ORANGE LAKE BLVD.	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,042.00	SF	$96.67	$100,730.14
400-2-10	CONC CLASS II, APPROACH SLABS	87.42	CY	$539.79	$47,188.44
415-1-9	REINF STEEL- APPROACH SLABS	15,298.50	LB	$1.09	$16,675.37
	Bridge 750617 Total				$1,090,559.20

Bridge 750620

Description		**Value**
Estimate Type		SF Estimate
Primary Estimate		YES
Length (LF)		172.00
Width (LF)		39.92
Type		Overpass Widening
Cost Factor		1.25
Structure No.		
Removal of Existing Structures area		1,433.00
Default Cost per SF		$140.00
Factored Cost per SF		$175.00
Final Cost per SF		**$184.44**
Basic Bridge Cost		**$1,201,592.00**
Description	NB SR 429 OVER WESTERN WAY	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,433.00	SF	$96.67	$138,528.11
400-2-10	CONC CLASS II, APPROACH SLABS	88.71	CY	$539.79	$47,884.77
415-1-9	REINF STEEL- APPROACH SLABS	15,524.25	LB	$1.09	$16,921.43
	Bridge 750620 Total				$1,404,926.31

Bridge 750622

Description		**Value**
Estimate Type		SF Estimate
Primary Estimate		YES
Length (LF)		143.50
Width (LF)		38.45

Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	1,040.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$186.31**
Basic Bridge Cost	**$965,575.63**
Description	NB SR 429 OVER SEIDEL RD.

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,040.00 SF	$96.67	$100,536.80
400-2-10	CONC CLASS II, APPROACH SLABS	85.44 CY	$539.79	$46,119.66
415-1-9	REINF STEEL- APPROACH SLABS	14,952.00 LB	$1.09	$16,297.68
	Bridge 750622 Total			$1,128,529.77

Bridge 920603

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	70.69
Width (LF)	33.01
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	524.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$197.97**
Basic Bridge Cost	**$408,358.46**
Description	SB SR 429 OVER SAND HILL RD.

Bridge Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	524.00 SF	$96.67	$50,655.08
400-2-10	CONC CLASS II, APPROACH SLABS	73.36 CY	$539.79	$39,598.99
415-1-9	REINF STEEL- APPROACH SLABS	12,838.00 LB	$1.09	$13,993.42
	Bridge 920603 Total			$512,605.95

Bridge 920605

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	142.52
Width (LF)	37.42
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	855.00

Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$186.39**
Basic Bridge Cost	**$933,292.22**
Description	SB SR 429 OVER FUNIE STEED RD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	855.00	SF	$96.67	$82,652.85
400-2-10	CONC CLASS II, APPROACH SLABS	83.16	CY	$539.79	$44,888.94
415-1-9	REINF STEEL- APPROACH SLABS	14,553.00	LB	$1.09	$15,862.77
	Bridge 920605 Total				$1,076,696.78

Bridge 920609

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	174.43
Width (LF)	23.38
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	618.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$184.31**
Basic Bridge Cost	**$713,680.35**
Description	SB SR 429 OVER US 192

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	618.00	SF	$96.67	$59,742.06
400-2-10	CONC CLASS II, APPROACH SLABS	51.96	CY	$539.79	$28,047.49
415-1-9	REINF STEEL- APPROACH SLABS	9,093.00	LB	$1.09	$9,911.37
	Bridge 920609 Total				$811,381.27

Bridge 750616

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	134.50
Width (LF)	23.92
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	510.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$187.07**
Basic Bridge Cost	**$563,017.00**

Description SB SR 429 OVER W. ORANGE LAKE BLVD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	510.00	SF	$96.67	$49,301.70
400-2-10	CONC CLASS II, APPROACH SLABS	53.16	CY	$539.79	$28,695.24
415-1-9	REINF STEEL- APPROACH SLABS	9,303.00	LB	$1.09	$10,140.27
	Bridge 750616 Total				$651,154.21

Bridge 750619

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	172.00
Width (LF)	38.92
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	1,433.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$184.44**
Basic Bridge Cost	**$1,171,492.00**

Description SB SR 429 OVER WESTERN WAY

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,433.00	SF	$96.67	$138,528.11
400-2-10	CONC CLASS II, APPROACH SLABS	86.49	CY	$539.79	$46,686.44
415-1-9	REINF STEEL- APPROACH SLABS	15,135.75	LB	$1.09	$16,497.97
	Bridge 750619 Total				$1,373,204.52

Bridge 750621

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	143.50
Width (LF)	38.50
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	1,040.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$186.31**
Basic Bridge Cost	**$966,831.25**

Description SB SR 429 OVER SEIDEL RD.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	1,040.00 SF	$96.67	$100,536.80
400-2-10	CONC CLASS II, APPROACH SLABS	85.56 CY	$539.79	$46,184.43
415-1-9	REINF STEEL- APPROACH SLABS	14,973.00 LB	$1.09	$16,320.57
	Bridge 750621 Total			$1,129,873.05
	Bridges Component Total			$12,187,325.14

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	460.00
Begin height	25.00
End Height	25.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	11,500.00	SF	$36.27	$417,105.00

Retaining Wall 2

Description	Value
Length	266.70
Begin height	21.00
End Height	21.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	5,600.70	SF	$36.27	$203,137.39

Retaining Wall 3

Description	Value
Length	140.00
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,100.00	SF	$36.27	$76,167.00

Retaining Wall 4

Description	Value
Length	148.00
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,220.00	SF	$36.27	$80,519.40

Retaining Wall 5

Description	Value
Length	73.30
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,099.50	SF	$36.27	$39,878.86

Retaining Wall 6

Description	Value
Length	86.70
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,300.50	SF	$36.27	$47,169.14

Retaining Wall 7

Description	Value
Length	90.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,800.00	SF	$36.27	$65,286.00

Retaining Wall 8

Description	Value
Length	150.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,000.00	SF	$36.27	$108,810.00

Retaining Wall 10

Description	Value
Length	100.00
Begin height	30.00

End Height	30.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,000.00	SF	$36.27	$108,810.00

Retaining Wall 11

Description	Value
Length	146.70
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,200.50	SF	$36.27	$79,812.13

Retaining Wall 12

Description	Value
Length	173.30
Begin height	15.00
End Height	15.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	2,599.50	SF	$36.27	$94,283.86
	Retaining Walls Component Total				$1,320,978.81

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-2	4-LANE ORT [4 X 2 LANES]	2.00	EA	$1,425,000.00	$2,850,000.00
	Comment: Replaces existing Western Beltway Plaza NORTHBOUND and SOUTHBOUND				
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	2.00	EA	$1,500.00	$3,000.00
	Comment: Replaces existing Western Beltway Plaza NORTHBOUND and SOUTHBOUND				
	Architectural Component Total				$2,853,000.00

Sequence 109 Total $123,079,613.14

Sequence: 110 WDR - Widen/Resurface, Divided, Rural **Net Length:** 0.663 MI 3,500 LF

Description: (4 of 4)SR 429 NB and SB. Mill/Resurface, Widen. Transition from 8 Lanes, to 4 Lane Divided.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	40.00 / 40.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.358
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	6.43	AC	$20,000.00	$128,600.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,187.35	CY	$26.31	$31,239.18
	Earthwork Component Total				$159,839.18

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Existing Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Inside Pavement Width L/R	6.00 / 6.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,333.63	SY	$2.59	$24,174.10
285-709	OPTIONAL BASE,BASE GROUP 09	4,923.49	SY	$26.06	$128,306.15
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	18,667.26	SY	$5.17	$96,509.73
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,540.05	TN	$141.47	$217,870.87
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	641.69	TN	$141.47	$90,779.88
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	746.69	TN	$601.26	$448,954.83
337-7-88	ASPH CONC FC,TRAFFIC E,FC-12.5,PG 76-22	385.01	TN	$601.26	$231,491.11

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	358.00	EA	$6.19	$2,216.02
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.65	GM	$1,303.59	$3,454.51
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	1.99	GM	$438.24	$872.10
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	2.65	GM	$5,266.55	$13,956.36
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	1.99	GM	$1,694.38	$3,371.82
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	2.65	GM	$5,718.11	$15,152.99
	Roadway Component Total				$1,277,110.48

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	8.00 / 8.00
New Total Outside Shoulder Width L/R	2.00 / 2.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	8.00 / 8.00
New Paved Outside Shoulder Width L/R	2.00 / 2.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,812.28	SY	$21.79	$39,489.58
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	6,222.42	SY	$7.71	$47,974.86
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	85.56	TN	$141.47	$12,104.17
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	20.53	TN	$198.46	$4,074.38
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	1.33	GM	$1,446.19	$1,923.43

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	8,050.26	LF	$2.70	$21,735.70
104-11	FLOATING TURBIDITY BARRIER	66.29	LF	$12.73	$843.87
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	66.29	LF	$4.01	$265.82
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89

107-1	LITTER REMOVAL	4.82 AC	$45.28	$218.25
107-2	MOWING	4.82 AC	$72.25	$348.24
	Shoulder Component Total			$131,900.20

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	26.00
Performance Turf Width	4.00
New Total Median Shoulder Width L/R	4.00 / 4.00
New Paved Median Shoulder Width L/R	4.00 / 4.00
Existing Total Median Shoulder Width L/R	4.00 / 4.00
Existing Paved Median Shoulder Width L/R	4.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,367.89	SY	$21.79	$73,386.32
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	3,111.21	SY	$7.71	$23,987.43
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	171.12	TN	$141.47	$24,208.35
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	20.53	TN	$198.46	$4,074.38
521-1-11	MEDIAN CONC BARRIER, 38" HEIGHT	3,500.00	LF	$105.00	$367,500.00
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	1.00	GM	$1,446.19	$1,446.19
570-1-1	PERFORMANCE TURF	1,555.61	SY	$2.02	$3,142.33
	Median Component Total				$497,745.00

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	536.00	LF	$116.05	$62,202.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	56.00	LF	$171.65	$9,612.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	27.00	EA	$2,241.18	$60,511.86
570-1-1	PERFORMANCE TURF	466.68	SY	$2.02	$942.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-541	INLETS, DT BOT, TYPE D, <10'	4.00	EA	$5,744.39	$22,977.56
	Drainage Component Total				$156,247.31

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	16.00	AS	$1,617.22	$25,875.52
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$328.07	$656.14
700-1-60	SINGLE POST SIGN, REMOVE	16.00	AS	$118.97	$1,903.52
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$6,597.30	$13,194.60
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,051.85	$2,103.70
	Signing Component Total				$44,790.08

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
000-000	GENERAL ITS	3,000.00	LF	$66.00	$198,000.00
	Comment: General ITS per LF of roadway in Sequence. Assume $66/LF				
	Intelligent Traffic System (ITS) Component Total				$198,000.00

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	28

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	5,600.00	LF	$9.49	$53,144.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	28.00	EA	$765.10	$21,422.80
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	16,800.00	LF	$2.69	$45,192.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	28.00	EA	$6,352.63	$177,873.64
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	28.00	EA	$462.80	$12,958.40
	Subcomponent Total				$310,590.84
	Lighting Component Total				$310,590.84

Sequence 110 Total $2,776,223.09

Sequence: 111 NUR - New Construction, Undivided, Rural **Net Length:** 0.099 MI 523 LF

Description: (1 of 2) US 429 NB Ramp to Sinclair Rd. Includes Toll Gantry

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00

Alignment Number	1
Distance	0.099
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.20	AC	$20,000.00	$24,000.00
120-6	EMBANKMENT	3,433.11	CY	$21.01	$72,129.64
	Earthwork Component Total				$96,129.64

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,558.10	SY	$2.59	$6,625.48
285-709	OPTIONAL BASE,BASE GROUP 09	1,414.51	SY	$26.06	$36,862.13
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	191.86	TN	$141.47	$27,142.43
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	115.11	TN	$240.52	$27,686.26

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	13.00	EA	$6.19	$80.47
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.20	GM	$1,303.59	$260.72
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.10	GM	$933.65	$93.36
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.20	GM	$4,552.88	$910.58
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.20	GM	$4,552.50	$910.50
711-16-231	THERMOPLASTIC, STD-OTH,	0.10	GM	$2,270.75	$227.08

	YELLOW, SKIP, 6"	
	Roadway Component Total	$100,799.02

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	852.31	SY	$21.79	$18,571.83
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	44.77	TN	$141.47	$6,333.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	67.15	TN	$240.52	$16,150.92
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.20	GM	$1,446.19	$289.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	200.00	LF	$29.95	$5,990.00
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	11,506.00	SF	$31.00	$356,686.00
	Comment: Noise Barrier Wall A: Reunion East Side				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,360.44	LF	$2.70	$3,673.19
104-11	FLOATING TURBIDITY BARRIER	24.78	LF	$12.73	$315.45
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	24.78	LF	$4.01	$99.37
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	1.20	AC	$45.28	$54.34
107-2	MOWING	1.20	AC	$72.25	$86.70

	Shoulder Component Total	$411,172.54

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	80.00	LF	$116.05	$9,284.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00	EA	$2,241.18	$8,964.72

570-1-1	PERFORMANCE TURF	69.77 SY	$2.02	$140.94
	Drainage Component Total			$21,136.06

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$10,360.04

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	400.00	LF	$9.49	$3,796.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	2.00	EA	$765.10	$1,530.20
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	1,200.00	LF	$2.69	$3,228.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	2.00	EA	$6,352.63	$12,705.26
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	2.00	EA	$462.80	$925.60
	Subcomponent Total				$22,185.06
	Lighting Component Total				$22,185.06

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing Sinclair Road Plaza NB OFF-RAMP				
735-4	2-LANE ORT [2 X 2 LANES]	1.00	EA	$1,105,000.00	$1,105,000.00
	Comment: Replaces existing Sinclair Road Plaza NB OFF-RAMP				
	Architectural Component Total				$1,106,500.00

Sequence 111 Total $1,768,282.36

Sequence: 112 NUR - New Construction, Undivided, Rural **Net Length:** 0.083 MI 438 LF

Description: (2 of 2) US 429 NB Ramp to Sinclair Rd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.083
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.01	AC	$20,000.00	$20,200.00
120-6	EMBANKMENT	3,870.15	CY	$21.01	$81,311.85
	Earthwork Component Total				$101,511.85

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	0.00 / 48.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,311.15	SY	$2.59	$8,575.88
285-709	OPTIONAL BASE,BASE GROUP 09	2,353.35	SY	$26.06	$61,328.30
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	321.38	TN	$141.47	$45,465.63
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	192.83	TN	$240.52	$46,379.47

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	146.00	LF	$30.43	$4,442.78

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	56.00	EA	$6.19	$346.64
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.17	GM	$1,303.59	$221.61
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.25	GM	$933.65	$233.41
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.17	GM	$4,552.88	$773.99
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.17	GM	$4,552.88	$773.99
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.25	GM	$2,270.75	$567.69
	Roadway Component Total				$169,109.39

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	713.84	SY	$21.79	$15,554.57
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	37.49	TN	$141.47	$5,303.71
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	56.24	TN	$240.52	$13,526.84
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.17	GM	$1,446.19	$245.85

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	5,723.00	SF	$31.00	$177,413.00
	Comment: Noise Barrier Wall A: Reunion East Side				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,139.42	LF	$2.70	$3,076.43
104-11	FLOATING TURBIDITY BARRIER	20.75	LF	$12.73	$264.15
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	20.75	LF	$4.01	$83.21
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	1.01	AC	$45.28	$45.73
107-2	MOWING	1.01	AC	$72.25	$72.97
	Shoulder Component Total				$218,508.35

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	72.00	LF	$116.05	$8,355.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00	EA	$2,241.18	$8,964.72
570-1-1	PERFORMANCE TURF	58.43	SY	$2.02	$118.03
	Drainage Component Total				$20,184.75

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$10,360.04

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	400.00	LF	$9.49	$3,796.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	2.00	EA	$765.10	$1,530.20
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	1,200.00	LF	$2.69	$3,228.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	2.00	EA	$6,352.63	$12,705.26
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	2.00	EA	$462.80	$925.60
	Subcomponent Total				$22,185.06
	Lighting Component Total				$22,185.06

Sequence 112 Total $541,859.44

Sequence: 120 NUR - New Construction, Undivided, Rural **Net Length:** 0.224 MI 1,180 LF

Description: On Ramp from Sinclair Rd to SR 429 SB. Includes new toll gantry

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00

Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.224
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.72	AC	$20,000.00	$54,400.00
120-6	EMBANKMENT	7,438.87	CY	$21.01	$156,290.66
	Earthwork Component Total				$210,690.66

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	24.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,769.28	SY	$2.59	$14,942.44
285-709	OPTIONAL BASE,BASE GROUP 09	3,190.15	SY	$26.06	$83,135.31
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	432.70	TN	$141.47	$61,214.07
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	259.62	TN	$240.52	$62,443.80

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	262.00	LF	$30.43	$7,972.66
520-70	CONCRETE TRAFFIC SEPARATOR, SP- VAR WIDT	100.00	SY	$73.25	$7,325.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	30.00	EA	$6.19	$185.70
710-11-101	PAINTED PAVT	0.45	GM	$1,303.59	$586.62

	MARK,STD,WHITE,SOLID,6"			
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.22 GM	$933.65	$205.40
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.45 GM	$4,552.88	$2,048.80
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.22 GM	$2,270.75	$499.56
	Roadway Component Total			$240,559.37

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,922.22	SY	$21.79	$41,885.17
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	100.96	TN	$141.47	$14,282.81
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	151.44	TN	$240.52	$36,424.35
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.45	GM	$1,446.19	$650.79

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	300.00	LF	$29.95	$8,985.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,068.21	LF	$2.70	$8,284.17
104-11	FLOATING TURBIDITY BARRIER	55.88	LF	$12.73	$711.35
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	55.88	LF	$4.01	$224.08
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	2.71	AC	$45.28	$122.71
107-2	MOWING	2.71	AC	$72.25	$195.80
	Shoulder Component Total				$114,688.12

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	184.00	LF	$116.05	$21,353.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$171.65	$6,866.00

430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	9.00 EA	$2,241.18	$20,170.62
570-1-1	PERFORMANCE TURF	157.34 SY	$2.02	$317.83
	Drainage Component Total			$48,707.65

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,617.22	$8,086.10
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$15,211.70

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.49	$9,490.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$765.10	$3,825.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$2.69	$8,070.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	5.00	EA	$6,352.63	$31,763.15
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$462.80	$2,314.00
	Subcomponent Total				$55,462.65
	Lighting Component Total				$55,462.65

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing Sinclair Road Plaza SB ON RAMP				
735-3-5	1-LANE ORT [1 X 2 LANES]	1.00	EA	$875,000.00	$875,000.00
	Comment: Replaces existing Sinclair Road Plaza SB ON RAMP				
	Architectural Component Total				$876,500.00

Sequence 120 Total $1,561,820.15

Sequence: 130 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.275 MI
1,450 LF

Description: Sinclair Rd Milling/Resurface and Widen. Includes 2 Signalized Intersections

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.275
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.67	AC	$20,000.00	$33,400.00
120-1	REGULAR EXCAVATION	10,865.26	CY	$14.07	$152,874.21
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	380.75	CY	$26.31	$10,017.53
	Earthwork Component Total				$196,291.74

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5
Existing Roadway Pavement Width L/R	25.00 / 28.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	3.15 / 3.15
Widened Inside Pavement Width L/R	26.85 / 26.85
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,328.46	SY	$2.59	$29,340.71
285-709	OPTIONAL BASE,BASE GROUP 09	9,878.57	SY	$26.06	$257,435.53
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	8,538.23	SY	$5.17	$44,142.65
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	704.40	TN	$141.47	$99,651.47
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,329.06	TN	$141.47	$188,022.12
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	341.53	TN	$240.52	$82,144.80
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	797.44	TN	$240.52	$191,800.27

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	610.00	LF	$30.43	$18,562.30

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	148.00	EA	$6.19	$916.12
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.10	GM	$1,303.59	$1,433.95
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.82	GM	$438.24	$359.36
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.10	GM	$4,552.88	$5,008.17
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.82	GM	$2,860.82	$2,345.87
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	1.10	GM	$4,552.50	$5,007.75
	Roadway Component Total				$926,171.07

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Sidewalk Width L/R	0.00 / 0.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	581.00	SY	$82.65	$48,019.65

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,899.78	LF	$2.70	$7,829.41
104-11	FLOATING TURBIDITY BARRIER	27.46	LF	$12.73	$349.57
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	27.46	LF	$4.01	$110.11
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	13.00	EA	$169.34	$2,201.42
107-1	LITTER REMOVAL	2.39	AC	$45.28	$108.22
107-2	MOWING	2.39	AC	$72.25	$172.68

	Shoulder Component Total	$61,712.95

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	10.00	EA	$5,264.85	$52,648.50
425-1-451	INLETS, CURB, TYPE J-5, <10'	3.00	EA	$9,698.46	$29,095.38
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	152.00	LF	$120.00	$18,240.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	48.00	LF	$171.65	$8,239.20
570-1-1	PERFORMANCE TURF	83.48	SY	$2.02	$168.63
	Drainage Component Total				$108,391.71

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	7.00	AS	$528.30	$3,698.10
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	7.00	AS	$118.97	$832.79
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$14,125.33

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Signalized Intersection on Sinclair Rd and SR 429 NB Off Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	3.00	EA	$68,710.55	$206,131.65
650-1-14	VEH TRAF SIGNAL,F&I	12.00	AS	$1,469.23	$17,630.76

	ALUMINUM, 3 S 1 W				
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Signalized Intersection on Sinclair Rd and the SR 429 SB Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	3.00	EA	$68,710.55	$206,131.65
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44
	Signalizations Component Total				$656,052.26

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,449.89	LF	$9.49	$13,759.46
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	189.20	LF	$22.53	$4,262.68
635-2-11	PULL & SPLICE BOX, F&I, 13" x	6.00	EA	$765.10	$4,590.60

	24"			
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,917.26 LF	$2.69	$13,227.43
715-4-13	LIGHT POLE COMPLETE, F&I-STD, 40'	6.00 EA	$5,845.33	$35,071.98
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	6.00 EA	$462.80	$2,776.80
	Subcomponent Total			$73,688.94
	Lighting Component Total			$73,688.95

Sequence 130 Total $2,036,434.01

Sequence: 141 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.143 MI 754 LF

Description: (1 of 2) SR 429 SB Ramp to Sinclair Rd

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.143
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.04	AC	$20,000.00	$20,800.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	247.76	CY	$26.31	$6,518.57
	Earthwork Component Total				$27,318.57

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Existing Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	837.76	SY	$2.59	$2,169.80
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,256.64	SY	$5.17	$6,496.83
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	103.67	TN	$141.47	$14,666.19
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	50.27	TN	$240.52	$12,090.94

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.29	GM	$1,303.59	$378.04
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.29	GM	$4,552.88	$1,320.34
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.29	GM	$4,552.50	$1,320.22
	Roadway Component Total				$38,442.37

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	4.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	557.95	SY	$21.79	$12,157.73
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	27.65	TN	$141.47	$3,911.65
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	20.11	TN	$240.52	$4,836.86

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	754.00	LF	$29.95	$22,582.30

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,734.16	LF	$2.70	$4,682.23
104-11	FLOATING TURBIDITY BARRIER	14.28	LF	$12.73	$181.78
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	14.28	LF	$4.01	$57.26
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.35	AC	$45.28	$15.85
107-2	MOWING	0.35	AC	$72.25	$25.29
	Shoulder Component Total				$51,542.18

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$116.05	$2,785.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$2,241.18	$4,482.36
570-1-1	PERFORMANCE TURF	57.69	SY	$2.02	$116.53
	Drainage Component Total				$10,130.49

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,617.22	$4,851.66
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$12,654.10

Sequence 141 Total $140,087.71

Sequence: 142 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.076 MI 400 LF

Description: (2 of 2) SR 429 SB Ramp to Sinclair Rd

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00

Alignment Number	1
Distance	0.076
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.55	AC	$20,000.00	$11,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	304.82	CY	$26.31	$8,019.81
	Earthwork Component Total				$19,019.81

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 12.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,423.02	SY	$2.59	$3,685.62
285-709	OPTIONAL BASE,BASE GROUP 09	548.31	SY	$26.06	$14,288.96
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,067.26	SY	$5.17	$5,517.73
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	88.05	TN	$141.47	$12,456.43
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	73.37	TN	$141.47	$10,379.65
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	42.69	TN	$240.52	$10,267.80
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	44.02	TN	$240.52	$10,587.69

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	32.00	LF	$30.43	$973.76

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2

Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	41.00	EA	$6.19	$253.79
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.15	GM	$1,303.59	$195.54
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.15	GM	$933.65	$140.05
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.15	GM	$4,552.88	$682.93
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.15	GM	$4,552.50	$682.88
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.15	GM	$2,270.75	$340.61
	Roadway Component Total				$70,453.44

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	651.92	SY	$21.79	$14,205.34
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	34.24	TN	$141.47	$4,843.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	24.90	TN	$240.52	$5,988.95

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	920.52	LF	$2.70	$2,485.40
104-11	FLOATING TURBIDITY BARRIER	7.58	LF	$12.73	$96.49
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.58	LF	$4.01	$30.40
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.18	AC	$45.28	$8.15
107-2	MOWING	0.18	AC	$72.25	$13.00
	Shoulder Component Total				$30,762.90

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$116.05	$1,856.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18
570-1-1	PERFORMANCE TURF	30.62	SY	$2.02	$61.85
	Drainage Component Total				$5,533.03

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$118.97	$237.94
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$10,917.91

Sequence 142 Total $136,687.09

Sequence: 150 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.071 MI 375 LF

Description: Connector Rd Segment connection to Sinclair Rd

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.071
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.52	AC	$20,000.00	$10,400.00

120-2-2	BORROW EXCAVATION, TRUCK MEASURE	284.77 CY	$26.31	$7,492.30
	Earthwork Component Total			$17,892.30

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 12.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	1,332.91	SY	$2.59	$3,452.24
285-709	OPTIONAL BASE,BASE GROUP 09	513.59	SY	$26.06	$13,384.16
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	999.68	SY	$5.17	$5,168.35
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	82.47	TN	$141.47	$11,667.03
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	68.73	TN	$141.47	$9,723.23
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	39.99	TN	$240.52	$9,618.39
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	41.24	TN	$240.52	$9,919.04

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	38.00	EA	$6.19	$235.22
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.14	GM	$1,303.59	$182.50
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.14	GM	$933.65	$130.71
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.14	GM	$4,552.88	$637.40
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.14	GM	$2,270.75	$317.91
	Roadway Component Total				$64,436.18

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	610.64	SY	$21.79	$13,305.85
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	32.07	TN	$141.47	$4,536.94
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	23.33	TN	$240.52	$5,611.33

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	862.22	LF	$2.70	$2,327.99
104-11	FLOATING TURBIDITY BARRIER	7.10	LF	$12.73	$90.38
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.10	LF	$4.01	$28.47
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.17	AC	$45.28	$7.70
107-2	MOWING	0.17	AC	$72.25	$12.28
	Shoulder Component Total				$29,012.17

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	16.00	LF	$116.05	$1,856.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	1.00	EA	$2,241.18	$2,241.18
570-1-1	PERFORMANCE TURF	28.68	SY	$2.02	$57.93

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	375.00	LF	$22.19	$8,321.25
	Drainage Component Total				$13,850.36

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00 AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00 AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	1.00 AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00 AS	$118.97	$237.94
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00 AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00 AS	$1,051.85	$1,051.85
	Signing Component Total			$10,917.91

Sequence 150 Total $136,108.92

Sequence: 170 NUR - New Construction, Undivided, Rural **Net Length:** 0.449 MI 2,370 LF

Description: New SR 429 NB Exit Ramp towards Livingston Connection 2 of 3.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.449
Top of Structural Course For Begin Section	121.00
Top of Structural Course For End Section	121.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.44	AC	$20,000.00	$108,800.00
120-6	EMBANKMENT	145,666.70	CY	$21.01	$3,060,457.37
	Earthwork Component Total				$3,169,257.37

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	6,583.87	SY	$2.59	$17,052.22
285-709	OPTIONAL BASE,BASE GROUP 09	4,037.23	SY	$26.06	$105,210.21

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	543.17 TN	$141.47	$76,842.26
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	325.90 TN	$240.52	$78,385.47

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Concrete
Solid Stripe No. of Paint Applications	0
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	0
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.45	GM	$4,552.88	$2,048.80
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.45	GM	$4,552.50	$2,048.62

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	19.60	TN	$227.60	$4,460.96
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	548.00	LF	$21.34	$11,694.32
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	4.00	EA	$3,002.12	$12,008.48
	Roadway Component Total				$309,751.35

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 4.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 2.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,753.94	SY	$21.79	$38,218.35
334-1-13	SUPERPAVE ASPHALTIC CONC,	86.91	TN	$141.47	$12,295.16

	TRAFFIC C				
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	130.36	TN	$240.52	$31,354.19
570-1-1	PERFORMANCE TURF	1,053.42	SY	$2.02	$2,127.91

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	61.00	LF	$30.43	$1,856.23

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	6,162.50	LF	$2.70	$16,638.75
104-11	FLOATING TURBIDITY BARRIER	112.22	LF	$12.73	$1,428.56
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	112.22	LF	$4.01	$450.00
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	5.44	AC	$45.28	$246.32
107-2	MOWING	5.44	AC	$72.25	$393.04
	Shoulder Component Total				$107,930.40

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	360.00	LF	$116.05	$41,778.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	80.00	LF	$171.65	$13,732.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	18.00	EA	$2,241.18	$40,341.24
570-1-1	PERFORMANCE TURF	316.03	SY	$2.02	$638.38
	Drainage Component Total				$96,489.62

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,617.22	$14,554.98
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$21,680.58

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	20

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,000.00	LF	$9.49	$37,960.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	20.00	EA	$765.10	$15,302.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	12,000.00	LF	$2.69	$32,280.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	20.00	EA	$6,352.63	$127,052.60
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	20.00	EA	$462.80	$9,256.00
	Subcomponent Total				$221,850.60
	Lighting Component Total				$221,850.60

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-5	1-LANE ORT [1 X 2 LANES]	1.00	EA	$875,000.00	$875,000.00
	Comment: New Livingston Road Plaza NB Off-Ramp				
	Architectural Component Total				$875,000.00

Sequence 170 Total $4,801,959.92

Sequence: 180 NUR - New Construction, Undivided, Rural **Net Length:** 0.159 MI 838 LF

Description: New SR 429 NB Entrance Ramp from Livingston Connection 2 of 3.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.159
Top of Structural Course For Begin Section	121.00
Top of Structural Course For End Section	121.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.93	AC	$20,000.00	$38,600.00
120-6	EMBANKMENT	50,797.80	CY	$21.01	$1,067,261.78
	Earthwork Component Total				$1,105,861.78

ROADWAY COMPONENT

User Input Data

Description	Value

Number of Lanes	1
Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,327.60	SY	$2.59	$6,028.48
285-709	OPTIONAL BASE,BASE GROUP 09	1,427.28	SY	$26.06	$37,194.92
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	192.03	TN	$141.47	$27,166.48
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	115.22	TN	$240.52	$27,712.71

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Concrete
Solid Stripe No. of Paint Applications	0
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	0
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.16	GM	$4,552.88	$728.46
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.16	GM	$4,552.50	$728.40
	Roadway Component Total				$99,559.45

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 4.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	4.00 / 2.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	620.07	SY	$21.79	$13,511.33
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	30.72	TN	$141.47	$4,345.96
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	46.09	TN	$240.52	$11,085.57
570-1-1	PERFORMANCE TURF	372.42	SY	$2.02	$752.29

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,178.63	LF	$2.70	$5,882.30

104-11	FLOATING TURBIDITY BARRIER	39.68	LF	$12.73	$505.13
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	39.68	LF	$4.01	$159.12
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	1.92	AC	$45.28	$86.94
107-2	MOWING	1.92	AC	$72.25	$138.72
	Shoulder Component Total				$39,389.25

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	128.00	LF	$116.05	$14,854.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	32.00	LF	$171.65	$5,492.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00	EA	$2,241.18	$15,688.26
570-1-1	PERFORMANCE TURF	111.72	SY	$2.02	$225.67
	Drainage Component Total				$36,261.13

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	4.00	AS	$1,617.22	$6,468.88
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$13,594.48

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	7

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,400.00	LF	$9.49	$13,286.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	7.00	EA	$765.10	$5,355.70
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,200.00	LF	$2.69	$11,298.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	7.00	EA	$6,352.63	$44,468.41
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	7.00	EA	$462.80	$3,239.60
	Subcomponent Total				$77,647.71
	Lighting Component Total				$77,647.71

Sequence 180 Total $1,372,313.80

Sequence: 190 NDU - New Construction, Divided, Urban **Net Length:** 0.298 MI 1,572 LF

Description: (2 of 3)New Livingston Connection with entrance and exit ramps to SR 429 NB.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 60.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.300
Top of Structural Course For Begin Section	106.00
Top of Structural Course For End Section	106.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.33	AC	$20,000.00	$86,600.00
120-6	EMBANKMENT	38,773.97	CY	$21.01	$814,641.11
	Earthwork Component Total				$901,241.11

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,185.63	SY	$2.59	$26,380.78
285-709	OPTIONAL BASE,BASE GROUP 09	8,383.23	SY	$26.06	$218,466.97
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,152.69	TN	$141.47	$163,071.05
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	691.62	TN	$240.52	$166,348.44

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Concrete
Solid Stripe No. of Paint Applications	0
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	0
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	121.00	EA	$12.38	$1,497.98
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.60	GM	$4,552.88	$2,731.73
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.60	GM	$2,860.82	$1,716.49
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.60	GM	$4,552.50	$2,731.50
	Roadway Component Total				$582,944.94

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.25 / 6.25
Total Outside Shoulder Perf. Turf Width L/R	4.00 / 4.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,571.86	LF	$30.43	$47,831.70
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,571.86	LF	$30.43	$47,831.70
570-1-1	PERFORMANCE TURF	1,397.21	SY	$2.02	$2,822.36

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,143.71	LF	$2.70	$8,488.02
104-11	FLOATING TURBIDITY BARRIER	74.43	LF	$12.73	$947.49
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	74.43	LF	$4.01	$298.46
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	16.00	EA	$169.34	$2,709.44
107-1	LITTER REMOVAL	7.58	AC	$45.28	$343.22
107-2	MOWING	7.58	AC	$72.25	$547.66
	Shoulder Component Total				$114,741.94

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	17.50

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	3,143.71	LF	$29.46	$92,613.70
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	150.00	LF	$54.37	$8,155.50
570-1-2	PERFORMANCE TURF, SOD	3,056.39	SY	$8.72	$26,651.72

	Median Component Total	$127,420.92

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	11.00	EA	$5,264.85	$57,913.35
425-1-451	INLETS, CURB, TYPE J-5, <10'	3.00	EA	$9,698.46	$29,095.38
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$4,541.77	$9,083.54
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$9,180.70	$18,361.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	792.00	LF	$120.00	$95,040.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00	LF	$171.65	$12,358.80
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	1,496.00	LF	$360.10	$538,709.60
570-1-1	PERFORMANCE TURF	90.50	SY	$2.02	$182.81
	Drainage Component Total				$760,744.88

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	8.00	AS	$528.30	$4,226.40
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$8,797.21	$8,797.21
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	1.00	AS	$12,241.36	$12,241.36
	Signing Component Total				$26,882.19

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,571.86	LF	$9.49	$14,916.95
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	311.99	LF	$22.53	$7,029.13
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	11.00	EA	$765.10	$8,416.10
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	5,740.85	LF	$2.69	$15,442.89
715-4-13	LIGHT POLE COMPLETE, F&I-STD, 40'	11.00	EA	$5,845.33	$64,298.63
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	11.00	EA	$462.80	$5,090.80
	Subcomponent Total				$115,194.50
	Lighting Component Total				$115,194.50

Sequence 190 Total $2,629,170.48

Sequence: 191 NDR - New Construction, Divided, Rural **Net Length:** 0.072 MI 380 LF

Description: (1 of 3)New Livingston connection to SR 429 starting at the intersection with Formosa Gardens Blvd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	100.00 / 100.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.072
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.75	AC	$20,000.00	$35,000.00
120-6	EMBANKMENT	7,653.18	CY	$21.01	$160,793.31
	Earthwork Component Total				$195,793.31

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	48.00 / 24.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,055.04	SY	$2.59	$10,502.55
285-709	OPTIONAL BASE,BASE GROUP 09	3,097.04	SY	$26.06	$80,708.86
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	418.18	TN	$141.47	$59,159.92
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	250.91	TN	$240.52	$60,348.87

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Concrete
Solid Stripe No. of Paint Applications	0
Solid Stripe No. of Stripes	2

Skip Stripe No. of Paint Applications	0
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	49.00	EA	$6.19	$303.31
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.29	GM	$1,694.38	$491.37
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.14	GM	$4,552.88	$637.40
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.14	GM	$4,552.50	$637.35
	Roadway Component Total				$212,789.63

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	4.00 / 4.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	168.96	SY	$2.02	$341.30

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	760.00	LF	$30.43	$23,126.80

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	988.42	LF	$2.70	$2,668.73
104-11	FLOATING TURBIDITY BARRIER	18.00	LF	$12.73	$229.14
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	18.00	LF	$4.01	$72.18
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	1.75	AC	$45.28	$79.24
107-2	MOWING	1.75	AC	$72.25	$126.44
	Shoulder Component Total				$29,735.06

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	40.00

Performance Turf Width	5.34
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	4.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	365.80	SY	$21.79	$7,970.78
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	18.59	TN	$141.47	$2,629.93
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	13.52	TN	$240.52	$3,251.83
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	380.00	LF	$54.37	$20,660.60
570-1-1	PERFORMANCE TURF	225.56	SY	$2.02	$455.63
	Median Component Total				$34,968.77

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	64.00	LF	$116.05	$7,427.20
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	24.00	LF	$120.00	$2,880.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00	EA	$2,241.18	$6,723.54
524-1-1	CONCRETE DITCH PAVT, NR, 3"	144.00	SY	$88.86	$12,795.84
570-1-1	PERFORMANCE TURF	50.69	SY	$2.02	$102.39

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	2.00	EA	$5,264.85	$10,529.70
425-1-362	INLETS, CURB, TYPE P-6, >10'	1.00	EA	$11,800.26	$11,800.26
	Drainage Component Total				$56,378.53

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$8,797.21	$8,797.21
	Signing Component Total				$19,157.25

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.49	$7,592.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$765.10	$3,060.40
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$2.69	$6,456.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	4.00	EA	$6,352.63	$25,410.52
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$462.80	$1,851.20
	Subcomponent Total				$44,370.12
	Lighting Component Total				$44,370.12

Sequence 191 Total $593,192.67

Sequence: 211 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.107 MI 564 LF

Description: (1 of 3) Formosa Garden Blvd Widening, Reconstruction, Milling and Resurfacing up to Livingston Rd Intersection. Includes Signalized intersection.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.107
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.65	AC	$20,000.00	$13,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,091.42	CY	$26.31	$28,715.26
	Earthwork Component Total				$41,715.26

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Existing Roadway Pavement Width L/R	24.00 / 41.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 7.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	600.24	SY	$2.59	$1,554.62
285-709	OPTIONAL BASE,BASE GROUP 09	459.27	SY	$26.06	$11,968.58
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	4,072.64	SY	$5.17	$21,055.55
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	335.99	TN	$141.47	$47,532.51
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	60.31	TN	$141.47	$8,532.06
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	162.91	TN	$240.52	$39,183.11
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	36.18	TN	$240.52	$8,702.01

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	72.00	EA	$12.38	$891.36
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.43	GM	$1,303.59	$560.54
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.43	GM	$438.24	$188.44
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.43	GM	$4,552.88	$1,957.74
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.43	GM	$2,860.82	$1,230.15
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.43	GM	$4,552.50	$1,957.58
	Roadway Component Total				$145,314.25

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	4.25 / 8.25

Total Outside Shoulder Perf. Turf Width L/R	2.00 / 0.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	563.90	LF	$30.43	$17,159.48
520-1-10	CONCRETE CURB & GUTTER, TYPE F	563.90	LF	$30.43	$17,159.48
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	375.94	SY	$203.42	$76,473.71
570-1-1	PERFORMANCE TURF	125.31	SY	$2.02	$253.13

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,127.81	LF	$2.70	$3,045.09
104-11	FLOATING TURBIDITY BARRIER	10.68	LF	$12.73	$135.96
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	10.68	LF	$4.01	$42.83
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	5.00	EA	$169.34	$846.70
107-1	LITTER REMOVAL	0.93	AC	$45.28	$42.11
107-2	MOWING	0.93	AC	$72.25	$67.19
	Shoulder Component Total				$118,147.57

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	4.00
Performance Turf Width	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	144.00	LF	$54.37	$7,829.28

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	470.00	LF	$30.43	$14,302.10
	Median Component Total				$22,131.38

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	4.00	EA	$5,264.85	$21,059.40
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$9,698.46	$19,396.92
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	64.00	LF	$120.00	$7,680.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60

570-1-1	PERFORMANCE TURF	32.47	SY	$2.02	$65.59
	Drainage Component Total				$52,321.51

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00	AS	$528.30	$1,584.90
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$11,536.25

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	At the Intersection with Livingston Rd

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$68,710.55	$274,842.20
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44
	Signalizations Component Total				$396,736.68

Sequence 211 Total $787,902.90

Sequence: 212 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.479 MI 2,527 LF

Description: (2 of 3) Formosa Garden Blvd Widening, Reconstruction, Milling and Resurfacing from Livingston Rd to Formosa Blvd.

Special Conditions: Includes New Signalized Intersection at the intersection with Livingston RD.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	70.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.604
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.06	AC	$20,000.00	$81,200.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	8,650.78	CY	$26.31	$227,602.02
	Earthwork Component Total				$308,802.02

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Existing Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	24.00 / 0.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	7,463.10	SY	$2.59	$19,329.43
285-709	OPTIONAL BASE,BASE GROUP 09	6,831.34	SY	$26.06	$178,024.72
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	6,738.69	SY	$5.17	$34,839.03
334-1-13	SUPERPAVE ASPHALTIC CONC,	555.94	TN	$141.47	$78,648.83

	TRAFFIC C				
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	926.57	TN	$141.47	$131,081.86
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	269.55	TN	$240.52	$64,832.17
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	555.94	TN	$240.52	$133,714.69

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	194.00	EA	$12.38	$2,401.72
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.91	GM	$1,303.59	$2,489.86
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.96	GM	$438.24	$420.71
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.91	GM	$4,552.88	$8,696.00
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.96	GM	$2,860.82	$2,746.39
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	1.91	GM	$4,552.50	$8,695.28
	Roadway Component Total				$665,920.69

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	11.25 / 5.25
Total Outside Shoulder Perf. Turf Width L/R	3.00 / 3.00
Sidewalk Width L/R	6.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,527.01	LF	$30.43	$76,896.91
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,527.01	LF	$30.43	$76,896.91
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	1,684.67	SY	$203.42	$342,695.57
570-1-1	PERFORMANCE TURF	1,684.67	SY	$2.02	$3,403.03

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,054.02	LF	$2.70	$13,645.85
104-11	FLOATING TURBIDITY BARRIER	47.86	LF	$12.73	$609.26

104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	47.86	LF	$4.01	$191.92
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	23.00	EA	$169.34	$3,894.82
107-1	LITTER REMOVAL	4.17	AC	$45.28	$188.82
107-2	MOWING	4.17	AC	$72.25	$301.28
	Shoulder Component Total				$521,646.26

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	13.00
Performance Turf Width	9.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	5,054.02	LF	$30.43	$153,793.83
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	423.00	LF	$54.37	$22,998.51
570-1-2	PERFORMANCE TURF, SOD	2,527.01	SY	$8.72	$22,035.53
	Median Component Total				$198,827.87

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	18.00	EA	$5,264.85	$94,767.30
425-1-451	INLETS, CURB, TYPE J-5, <10'	5.00	EA	$9,698.46	$48,492.30
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	272.00	LF	$120.00	$32,640.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	80.00	LF	$171.65	$13,732.00
570-1-1	PERFORMANCE TURF	145.49	SY	$2.02	$293.89

Retention Basin 1

Description	Value
Size	2 AC
Multiplier	1
Depth	12.00
Description	Formosa Garden Blvd Pond

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$20,000.00	$40,000.00
120-1	REGULAR EXCAVATION	38,720.00	CY	$14.07	$544,790.40
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$5,744.39	$5,744.39
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$8,031.77	$8,031.77
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$193.67	$10,845.52
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$522.06	$104,412.00
570-1-1	PERFORMANCE TURF	9,680.00	SY	$2.02	$19,553.60

	Drainage Component Total	$923,303.17

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	11.00	AS	$528.30	$5,811.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	11.00	AS	$118.97	$1,308.67
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$16,714.41

Sequence 212 Total	$2,635,214.42

Sequence: 213 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.076 MI 400 LF

Description: (3 of 3) Livingston Road Widening, Reconstruction, Milling and Resurfacing up to intersection with Formosa Gardens Blvd.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	60.00 / 16.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.079
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.70	AC	$20,000.00	$14,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,253.83	CY	$26.31	$32,988.27
	Earthwork Component Total				$46,988.27

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Existing Roadway Pavement Width L/R	19.00 / 11.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	3.00 / 11.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	852.03	SY	$2.59	$2,206.76
285-709	OPTIONAL BASE,BASE GROUP 09	651.92	SY	$26.06	$16,989.04
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,334.08	SY	$5.17	$6,897.19
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	110.06	TN	$141.47	$15,570.19
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	85.60	TN	$141.47	$12,109.83
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	53.36	TN	$240.52	$12,834.15
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	51.36	TN	$240.52	$12,353.11

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	31.00	EA	$12.38	$383.78
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.30	GM	$1,303.59	$391.08
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.15	GM	$438.24	$65.74
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.30	GM	$4,552.88	$1,365.86
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.15	GM	$2,860.82	$429.12
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.30	GM	$4,552.50	$1,365.75
	Roadway Component Total				$82,961.60

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	4.25 / 8.25

Total Outside Shoulder Perf. Turf Width L/R	2.00 / 0.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	400.22	LF	$30.43	$12,178.69
520-1-10	CONCRETE CURB & GUTTER, TYPE F	400.22	LF	$30.43	$12,178.69
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	266.82	SY	$203.42	$54,276.52
570-1-1	PERFORMANCE TURF	88.94	SY	$2.02	$179.66

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	800.45	LF	$2.70	$2,161.22
104-11	FLOATING TURBIDITY BARRIER	7.58	LF	$12.73	$96.49
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	7.58	LF	$4.01	$30.40
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	4.00	EA	$169.34	$677.36
107-1	LITTER REMOVAL	0.66	AC	$45.28	$29.88
107-2	MOWING	0.66	AC	$72.25	$47.68
	Shoulder Component Total				$84,778.49

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	12.00
Performance Turf Width	8.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	800.45	LF	$30.43	$24,357.69
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	171.00	LF	$54.37	$9,297.27
570-1-1	PERFORMANCE TURF	355.75	SY	$2.02	$718.62
	Median Component Total				$34,373.58

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	3.00	EA	$5,264.85	$15,794.55
425-1-451	INLETS, CURB, TYPE J-5, <10'	1.00	EA	$9,698.46	$9,698.46
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	48.00	LF	$120.00	$5,760.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
570-1-1	PERFORMANCE TURF	23.04	SY	$2.02	$46.54

	Drainage Component Total	$34,045.95

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	2.00	AS	$118.97	$237.94
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$10,888.98

Sequence 213 Total	$294,036.87

Sequence: 230 NDR - New Construction, Divided, Rural **Net Length:** 0.118 MI 621 LF

Description: Livingston Connection 3 of 3.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	100.00 / 100.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.120
Top of Structural Course For Begin Section	131.00
Top of Structural Course For End Section	131.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.86	AC	$20,000.00	$57,200.00
120-6	EMBANKMENT	181,852.82	CY	$21.01	$3,820,727.75
	Earthwork Component Total				$3,877,927.75

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	15.00 / 24.00

Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	5,105.41	SY	$2.59	$13,223.01
285-709	OPTIONAL BASE,BASE GROUP 09	2,781.76	SY	$26.06	$72,492.67
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	369.97	TN	$141.47	$52,339.66
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	221.98	TN	$240.52	$53,390.63

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	32.00	EA	$12.38	$396.16
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.12	GM	$1,303.59	$156.43
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.12	GM	$438.24	$52.59
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.12	GM	$5,266.55	$631.99
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.12	GM	$1,694.38	$203.33
711-15-202	THERMOPLASTIC, STD-OP, YELLOW, SOLID, 8"	0.12	GM	$7,933.01	$951.96

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	24.32	TN	$227.60	$5,535.23
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	689.65	LF	$21.34	$14,717.13
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	4.00	EA	$3,002.12	$12,008.48

Roadway Component Total $226,099.27

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 11.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 9.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,080.41	SY	$21.79	$23,542.13
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	56.92	TN	$141.47	$8,052.47
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	41.40	TN	$198.46	$8,216.24
570-1-1	PERFORMANCE TURF	275.97	SY	$2.02	$557.46

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,614.41	LF	$2.70	$4,358.91
104-11	FLOATING TURBIDITY BARRIER	29.40	LF	$12.73	$374.26
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	29.40	LF	$4.01	$117.89
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	2.85	AC	$45.28	$129.05
107-2	MOWING	2.85	AC	$72.25	$205.91

Shoulder Component Total $48,645.55

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	20.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	8.00 / 8.00
Paved Median Shoulder Width L/R	8.00 / 8.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,149.41	SY	$21.79	$25,045.64
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	60.71	TN	$141.47	$8,588.64
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	44.15	TN	$198.46	$8,762.01
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	223.95	LF	$54.37	$12,176.16

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

520-1-10	CONCRETE CURB & GUTTER, TYPE F	500.00 LF	$30.43	$15,215.00
	Median Component Total			$69,787.45

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	96.00	LF	$116.05	$11,140.80
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	48.00	LF	$120.00	$5,760.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$171.65	$6,866.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$2,241.18	$11,205.90
524-1-1	CONCRETE DITCH PAVT, NR, 3"	235.20	SY	$88.86	$20,899.87
570-1-1	PERFORMANCE TURF	82.79	SY	$2.02	$167.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	2.00	EA	$5,128.69	$10,257.38
	Drainage Component Total				$66,297.19

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,617.22	$4,851.66
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$8,797.21	$8,797.21
	Signing Component Total				$20,774.47

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,200.00	LF	$9.49	$11,388.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	6.00	EA	$765.10	$4,590.60
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,600.00	LF	$2.69	$9,684.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	6.00	EA	$6,352.63	$38,115.78
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	6.00	EA	$462.80	$2,776.80
	Subcomponent Total				$66,555.18

Lighting Component Total		$66,555.18

BRIDGES COMPONENT

Bridge LIVI-1

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	280.00
Width (LF)	84.00
Type	Overpass Bridge
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$174.55**
Basic Bridge Cost	**$3,969,000.00**
Description	NEW LIVINGSTON ROAD BRIDGE OVER SR 429

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	186.67	CY	$539.79	$100,762.60
415-1-9	REINF STEEL- APPROACH SLABS	32,667.25	LB	$1.09	$35,607.30
	Bridge LIVI-1 Total				$4,105,369.90
	Bridges Component Total				$4,105,369.90

Sequence 230 Total	$8,481,456.76

Sequence: 240 NUR - New Construction, Undivided, Rural **Net Length:** 0.192 MI 1,012 LF

Description: (1 of 2)New SR 429 SB Exit Ramp towards Livingston Connection 3 of 3.

EARTHWORK COMPONENT

User Input Data

Description	**Value**
Standard Clearing and Grubbing Limits L/R	10.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.200
Top of Structural Course For Begin Section	111.00
Top of Structural Course For End Section	111.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	1 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.40	AC	$20,000.00	$28,000.00

120-6	EMBANKMENT	10,942.90	CY	$21.01	$229,910.33
	Earthwork Component Total				$257,910.33

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,486.38	SY	$2.59	$9,029.72
285-709	OPTIONAL BASE,BASE GROUP 09	1,724.07	SY	$26.06	$44,929.26
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	231.96	TN	$141.47	$32,815.38
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	139.17	TN	$240.52	$33,473.17

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.19	GM	$1,303.59	$247.68
711-15-201	THERMOPLASTIC, STD-OP,YELLOW, SOLID, 6"	0.19	GM	$5,718.11	$1,086.44
711-15-202	THERMOPLASTIC, STD-OP, YELLOW, SOLID, 8"	0.19	GM	$7,933.01	$1,507.27

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	27.20	TN	$227.60	$6,190.72
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	785.88	LF	$21.34	$16,770.68
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	3.00	EA	$3,002.12	$9,006.36

	Roadway Component Total	$155,056.68

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,423.79	SY	$21.79	$31,024.38
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	74.23	TN	$141.47	$10,501.32
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	111.34	TN	$240.52	$26,779.50
570-1-1	PERFORMANCE TURF	449.86	SY	$2.02	$908.72

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	785.88	LF	$29.95	$23,537.11

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,631.66	LF	$2.70	$7,105.48
104-11	FLOATING TURBIDITY BARRIER	47.92	LF	$12.73	$610.02
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	47.92	LF	$4.01	$192.16
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	2.32	AC	$45.28	$105.05
107-2	MOWING	2.32	AC	$72.25	$167.62

	Shoulder Component Total	$103,853.25

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	160.00	LF	$116.05	$18,568.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	40.00	LF	$171.65	$6,866.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	8.00	EA	$2,241.18	$17,929.44
570-1-1	PERFORMANCE TURF	134.96	SY	$2.02	$272.62

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	2.00	EA	$5,128.69	$10,257.38

	Drainage Component Total	$53,893.44

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	4.00	AS	$1,617.22	$6,468.88
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$13,594.48

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	9

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,800.00	LF	$9.49	$17,082.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	9.00	EA	$765.10	$6,885.90
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	5,400.00	LF	$2.69	$14,526.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	9.00	EA	$6,352.63	$57,173.67
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	9.00	EA	$462.80	$4,165.20
	Subcomponent Total				$99,832.77
	Lighting Component Total				$99,832.77

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	160.00
Begin height	11.00
End Height	11.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,760.00	SF	$36.27	$63,835.20
	Retaining Walls Component Total				$63,835.20

Sequence 240 Total	$747,976.15

Sequence: 242 NUR - New Construction, Undivided, Rural **Net Length:** 0.159 MI

839 LF

Description: (2 of 2)New SR 429 SB Exit Ramp towards Livingston Connection 3 of 3.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	10.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.160
Top of Structural Course For Begin Section	111.00
Top of Structural Course For End Section	111.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	1 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.16	AC	$20,000.00	$23,200.00
120-6	EMBANKMENT	25,933.17	CY	$21.01	$544,855.90
	Earthwork Component Total				$568,055.90

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,474.62	SY	$2.59	$11,589.27
285-709	OPTIONAL BASE,BASE GROUP 09	2,298.84	SY	$26.06	$59,907.77
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	307.63	TN	$141.47	$43,520.42
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	184.58	TN	$240.52	$44,395.18

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.16	GM	$1,303.59	$208.57

711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.16	GM	$4,552.88	$728.46
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.16	GM	$4,552.50	$728.40

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	27.96	TN	$227.60	$6,363.70
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	838.70	LF	$21.34	$17,897.86
	Roadway Component Total				$185,339.63

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,925.95	SY	$21.79	$41,966.45
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	102.54	TN	$141.47	$14,506.33
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	153.82	TN	$240.52	$36,996.79
570-1-1	PERFORMANCE TURF	372.89	SY	$2.02	$753.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	838.70	LF	$29.95	$25,119.06

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,181.38	LF	$2.70	$5,889.73
104-11	FLOATING TURBIDITY BARRIER	39.72	LF	$12.73	$505.64
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	39.72	LF	$4.01	$159.28
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	1.93	AC	$45.28	$87.39

107-2	MOWING	1.93	AC	$72.25	$139.44
	Shoulder Component Total				$129,045.25

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	128.00	LF	$116.05	$14,854.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	32.00	LF	$171.65	$5,492.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00	EA	$2,241.18	$15,688.26
570-1-1	PERFORMANCE TURF	111.87	SY	$2.02	$225.98

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	2.00	EA	$5,128.69	$10,257.38
	Drainage Component Total				$46,518.82

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	4.00	AS	$1,617.22	$6,468.88
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$13,594.48

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	7

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,400.00	LF	$9.49	$13,286.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	7.00	EA	$765.10	$5,355.70
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	4,200.00	LF	$2.69	$11,298.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	7.00	EA	$6,352.63	$44,468.41
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	7.00	EA	$462.80	$3,239.60
	Subcomponent Total				$77,647.71
	Lighting Component Total				$77,647.71

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	839.00
Begin height	13.00
End Height	13.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	10,907.00	SF	$36.27	$395,596.89
	Retaining Walls Component Total				$395,596.89

Sequence 242 Total $1,415,798.68

Sequence: 250 NUR - New Construction, Undivided, Rural **Net Length:** 0.592 MI 3,126 LF

Description: New SR 429 SB Entrance Ramp coming from Livingston Connection 3 of 3.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	10.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.592
Top of Structural Course For Begin Section	132.00
Top of Structural Course For End Section	132.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	1 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.31	AC	$20,000.00	$86,200.00
120-6	EMBANKMENT	145,365.21	CY	$21.01	$3,054,123.06
	Earthwork Component Total				$3,140,323.06

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	12,850.35	SY	$2.59	$33,282.41
285-709	OPTIONAL BASE,BASE GROUP 09	5,324.21	SY	$26.06	$138,748.91
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	716.32	TN	$141.47	$101,337.79
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	429.79	TN	$240.52	$103,373.09

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.59	GM	$1,303.59	$769.12
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.59	GM	$4,552.88	$2,686.20
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.59	GM	$4,552.50	$2,685.98

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	43.00	TN	$227.60	$9,786.80
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	1,260.00	LF	$21.34	$26,888.40
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	3.00	EA	$3,002.12	$9,006.36
	Roadway Component Total				$428,565.06

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	2.00 / 2.00
Paved Outside Shoulder Width L/R	8.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	6,480.74	SY	$21.79	$141,215.32
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	343.83	TN	$141.47	$48,641.63
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	515.75	TN	$240.52	$124,048.19
570-1-1	PERFORMANCE TURF	1,389.23	SY	$2.02	$2,806.24

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	1,260.00	LF	$29.95	$37,737.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	8,126.98	LF	$2.70	$21,942.85
104-11	FLOATING TURBIDITY BARRIER	148.00	LF	$12.73	$1,884.04
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	148.00	LF	$4.01	$593.48
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	7.18	AC	$45.28	$325.11
107-2	MOWING	7.18	AC	$72.25	$518.76
	Shoulder Component Total				$382,634.51

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	480.00	LF	$116.05	$55,704.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	104.00	LF	$171.65	$17,851.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	24.00	EA	$2,241.18	$53,788.32
570-1-1	PERFORMANCE TURF	416.77	SY	$2.02	$841.88

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	4.00	EA	$5,128.69	$20,514.76
	Drainage Component Total				$148,700.56

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	12.00	AS	$1,617.22	$19,406.64
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$6,597.30	$13,194.60
	Signing Component Total				$33,657.84

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	27

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	5,400.00	LF	$9.49	$51,246.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	27.00	EA	$765.10	$20,657.70
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	16,200.00	LF	$2.69	$43,578.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	27.00	EA	$6,352.63	$171,521.01
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	27.00	EA	$462.80	$12,495.60
	Subcomponent Total				$299,498.31
	Lighting Component Total				$299,498.31

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	1,563.00
Begin height	16.00
End Height	16.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	25,008.00	SF	$36.27	$907,040.16

Retaining Wall 2

Description	Value
Length	380.00
Begin height	16.00
End Height	16.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	6,080.00	SF	$36.27	$220,521.60
	Retaining Walls Component Total				$1,127,561.76

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-5	1-LANE ORT [1 X 2 LANES]	1.00	1	$875,000.00	$875,000.00
	Comment: New Livingston Road Plaza SB ON RAMP				
	Architectural Component Total				$875,000.00

Sequence 250 Total $6,435,941.10

Sequence: 260 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.710 MI 3,750 LF

Description: SR 429 NB exit Ramp to Bronson Memorial HWY. Includes Toll Plaza and deceleration lane

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.710
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.16	AC	$20,000.00	$103,200.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	3,011.54	CY	$26.31	$79,233.62
	Earthwork Component Total				$182,433.62

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 20.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 16.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	14,999.42	SY	$2.59	$38,848.50
285-709	OPTIONAL BASE,BASE GROUP 09	6,803.91	SY	$26.06	$177,309.89
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	8,333.01	SY	$5.17	$43,081.66
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	687.47	TN	$141.47	$97,256.38
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	916.63	TN	$141.47	$129,675.65
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	333.32	TN	$240.52	$80,170.13

337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	549.98	TN	$240.52	$132,281.19

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	384.00	EA	$6.19	$2,376.96
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.42	GM	$1,303.59	$1,851.10
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	1.42	GM	$933.65	$1,325.78
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.42	GM	$4,552.88	$6,465.09
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	1.42	GM	$2,270.75	$3,224.46
	Roadway Component Total				$713,866.80

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	6,108.10	SY	$21.79	$133,095.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	320.82	TN	$141.47	$45,386.41
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	233.32	TN	$240.52	$56,118.13

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	17,270.00	SF	$31.00	$535,370.00
	Comment: Noise Barrier Wall F: Domain Orlando				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

104-10-3	SEDIMENT BARRIER	8,624.67 LF	$2.70	$23,286.61
104-11	FLOATING TURBIDITY BARRIER	71.02 LF	$12.73	$904.08
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	71.02 LF	$4.01	$284.79
104-15	SOIL TRACKING PREVENTION DEVICE	1.00 EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	2.00 EA	$169.34	$338.68
107-1	LITTER REMOVAL	1.72 AC	$45.28	$77.88
107-2	MOWING	1.72 AC	$72.25	$124.27
	Shoulder Component Total			$797,908.24

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	112.00	LF	$116.05	$12,997.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	48.00	LF	$171.65	$8,239.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	8.00	EA	$2,241.18	$17,929.44
570-1-1	PERFORMANCE TURF	286.92	SY	$2.02	$579.58
	Drainage Component Total				$39,745.82

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	15.00	AS	$1,617.22	$24,258.30
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$328.07	$656.14
700-1-60	SINGLE POST SIGN, REMOVE	15.00	AS	$118.97	$1,784.55
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	2.00	AS	$5,537.31	$11,074.62
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,051.85	$2,103.70
	Signing Component Total				$40,933.91

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing US 192 Plaza NB OFF RAMP				
735-5	1-LANE ORT [1 X 2 LANES]	1.00	EA	$875,000.00	$875,000.00
	Comment: Replaces existing US 192 Plaza NB OFF RAMP				
	Architectural Component Total				$876,500.00

Sequence 260 Total $2,651,388.39

Sequence: 270 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.202 MI 1,064 LF

Description: SR 429 On ramp from Bronson Memorial Hwy

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.202
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.47	AC	$20,000.00	$29,400.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	846.14	CY	$26.31	$22,261.94
	Earthwork Component Total				$51,661.94

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Existing Roadway Pavement Width L/R	0.00 / 9.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 15.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,137.47	SY	$2.59	$10,716.05
285-709	OPTIONAL BASE,BASE GROUP 09	1,812.21	SY	$26.06	$47,226.19
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,063.92	SY	$5.17	$5,500.47
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	87.77	TN	$141.47	$12,416.82
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	243.81	TN	$141.47	$34,491.80
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	42.56	TN	$240.52	$10,236.53
337-7-83	ASPH CONC FC,TRAFFIC C,FC-	146.29	TN	$240.52	$35,185.67

12.5,PG 76-22

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	27.00	EA	$6.19	$167.13
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.40	GM	$1,303.59	$521.44
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.20	GM	$933.65	$186.73
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.40	GM	$4,552.88	$1,821.15
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.20	GM	$2,270.75	$454.15
	Roadway Component Total				$158,924.13

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,733.01	SY	$21.79	$37,762.29
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	91.02	TN	$141.47	$12,876.60
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	66.20	TN	$240.52	$15,922.42

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	900.00	LF	$29.95	$26,955.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,447.02	LF	$2.70	$6,606.95
104-11	FLOATING TURBIDITY BARRIER	20.15	LF	$12.73	$256.51
104-12	STAKED TURBIDITY BARRIER-	20.15	LF	$4.01	$80.80

	NYL REINF PVC				
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.49	AC	$45.28	$22.19
107-2	MOWING	0.49	AC	$72.25	$35.40
	Shoulder Component Total				$103,609.39

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	32.00	LF	$116.05	$3,713.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00	EA	$2,241.18	$6,723.54
570-1-1	PERFORMANCE TURF	81.41	SY	$2.02	$164.45
	Drainage Component Total				$13,347.99

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,617.22	$8,086.10
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	5.00	AS	$118.97	$594.85
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$16,126.48

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.49	$9,490.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$765.10	$3,825.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$2.69	$8,070.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	5.00	EA	$6,352.63	$31,763.15
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$462.80	$2,314.00
	Subcomponent Total				$55,462.65
	Lighting Component Total				$55,462.65

Sequence 270 Total $399,132.58

Sequence: 281 NUR - New Construction, Undivided, Rural **Net Length:** 0.071 MI 372 LF

Description: (1 of 2) SR 429 SB Exit Ramp to Bronson Memorial HWY

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.070
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.85	AC	$20,000.00	$17,000.00
120-6	EMBANKMENT	3,961.70	CY	$21.01	$83,235.32
	Earthwork Component Total				$100,235.32

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	0.00 / 72.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,805.12	SY	$2.59	$9,855.26
285-709	OPTIONAL BASE,BASE GROUP 09	2,991.57	SY	$26.06	$77,960.31
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	409.46	TN	$141.47	$57,926.31
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	245.68	TN	$240.52	$59,090.95

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1

Skip Stripe No. of Stripes 5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	67.00	EA	$6.19	$414.73
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.14	GM	$1,303.59	$182.50
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.35	GM	$933.65	$326.78
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.14	GM	$4,552.88	$637.40
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.35	GM	$2,270.75	$794.76
	Roadway Component Total				$207,189.00

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	606.34	SY	$21.79	$13,212.15
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	31.85	TN	$141.47	$4,505.82
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	47.77	TN	$240.52	$11,489.64
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.14	GM	$1,446.19	$202.47

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	967.82	LF	$2.70	$2,613.11
104-11	FLOATING TURBIDITY BARRIER	17.62	LF	$12.73	$224.30
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	17.62	LF	$4.01	$70.66
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	0.85	AC	$45.28	$38.49
107-2	MOWING	0.85	AC	$72.25	$61.41
	Shoulder Component Total				$35,339.94

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	64.00	LF	$116.05	$7,427.20

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00 LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00 EA	$2,241.18	$6,723.54
570-1-1	PERFORMANCE TURF	49.63 SY	$2.02	$100.25
	Drainage Component Total			$16,997.39

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$10,360.04

Sequence 281 Total $370,121.69

Sequence: 282 NUR - New Construction, Undivided, Rural **Net Length:** 0.350 MI 1,850 LF

Description: (2 of 2) SR 429 SB Ramp to Bronson Memorial HWY

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.350
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.24	AC	$20,000.00	$84,800.00
120-6	EMBANKMENT	14,315.16	CY	$21.01	$300,761.51
	Earthwork Component Total				$385,561.51

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	0.00 / 36.00

Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,511.81	SY	$2.59	$29,815.59
285-709	OPTIONAL BASE,BASE GROUP 09	7,468.29	SY	$26.06	$194,623.64
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,017.56	TN	$141.47	$143,954.21
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	610.54	TN	$240.52	$146,847.08

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	189.00	EA	$6.19	$1,169.91
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.70	GM	$1,303.59	$912.51
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.70	GM	$933.65	$653.56
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.70	GM	$4,552.88	$3,187.02
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.70	GM	$2,270.75	$1,589.52
	Roadway Component Total				$522,753.05

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,013.63	SY	$21.79	$65,667.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	158.29	TN	$141.47	$22,393.29
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	237.43	TN	$240.52	$57,106.66
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.70	GM	$1,446.19	$1,012.33

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,810.29	LF	$2.70	$12,987.78
104-11	FLOATING TURBIDITY BARRIER	87.60	LF	$12.73	$1,115.15
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	87.60	LF	$4.01	$351.28
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	4.25	AC	$45.28	$192.44
107-2	MOWING	4.25	AC	$72.25	$307.06
	Shoulder Component Total				$164,054.88

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	288.00	LF	$116.05	$33,422.40
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	64.00	LF	$171.65	$10,985.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	15.00	EA	$2,241.18	$33,617.70
570-1-1	PERFORMANCE TURF	246.68	SY	$2.02	$498.29
	Drainage Component Total				$78,523.99

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	8.00	AS	$1,617.22	$12,937.76
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
	Signing Component Total				$20,063.36

Sequence 282 Total $1,170,956.79

Sequence: 290 RSU - Resurfacing, Undivided **Net Length:** 0.363 MI 1,915 LF

Description: SR 429 SB Entrance Ramp from Bronson Memorial HWY. Includes Toll Plaza

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	0.00 / 26.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	5,532.38	SY	$5.17	$28,602.40
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	760.70	TN	$141.47	$107,616.23
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	456.42	TN	$240.52	$109,778.14

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.06	GM	$1,303.59	$78.22
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.06	GM	$4,552.88	$273.17

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	49.00	EA	$12.38	$606.62
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.73	GM	$1,303.59	$951.62
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.36	GM	$933.65	$336.11
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.73	GM	$4,552.88	$3,323.60
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.36	GM	$2,270.75	$817.47
	Roadway Component Total				$252,383.58

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	6.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	3,404.54	SY	$7.71	$26,249.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	187.25	TN	$141.47	$26,490.26
337-7-83	ASPH CONC FC,TRAFFIC C,FC-	136.18	TN	$240.52	$32,754.01

	12.5,PG 76-22				
546-72-1	GROUND-IN RUMBLE STRIPS, 16"	0.73	GM	$1,446.19	$1,055.72

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	300.00	LF	$29.95	$8,985.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	36.27	LF	$12.73	$461.72
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	36.27	LF	$4.01	$145.44
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.88	AC	$45.28	$39.85
107-2	MOWING	0.88	AC	$72.25	$63.58
	Shoulder Component Total				$96,413.92

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing US 192 Plaza SB ON RAMP				
735-4	2-LANE ORT [2 X 2 LANES]	1.00	EA	$1,105,000.00	$1,105,000.00
	Comment: Replaces existing US 192 Plaza SB ON RAMP				
	Architectural Component Total				$1,106,500.00

Sequence 290 Total $1,455,297.50

Sequence: 301 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.964 MI 5,090 LF

Description: Roadway reconstruction for Bronson Memorial Highway Crossing SR 492. Includes 4 Signalized Intersections.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.180
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1

Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	11.68	AC	$20,000.00	$233,600.00
120-1	REGULAR EXCAVATION	2,182.95	CY	$14.07	$30,714.11
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	17,722.03	CY	$26.31	$466,266.61
	Earthwork Component Total				$730,580.72

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	11
Existing Roadway Pavement Width L/R	50.75 / 45.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	8.50 / 15.00
Widened Inside Pavement Width L/R	1.75 / 1.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	20,682.04	SY	$2.59	$53,566.48
285-709	OPTIONAL BASE,BASE GROUP 09	15,592.12	SY	$26.06	$406,330.65
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	54,151.09	SY	$5.17	$279,961.14
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	4,467.47	TN	$141.47	$632,012.98
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	2,041.27	TN	$141.47	$288,778.47
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	2,166.04	TN	$240.52	$520,975.94
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,224.76	TN	$240.52	$294,579.28

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	9

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	1,301.00	EA	$12.38	$16,106.38
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.86	GM	$1,303.59	$5,031.86
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	8.68	GM	$438.24	$3,803.92

711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	3.86	GM	$4,552.88	$17,574.12
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	8.68	GM	$2,860.82	$24,831.92
	Roadway Component Total				$2,543,553.14

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	2.00 / 2.00
New Total Outside Shoulder Width L/R	7.25 / 7.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	5,089.92	LF	$30.43	$154,886.27
520-1-10	CONCRETE CURB & GUTTER, TYPE F	5,089.92	LF	$30.43	$154,886.27
570-1-1	PERFORMANCE TURF	5,655.47	SY	$2.02	$11,424.05

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,667.00	SY	$203.42	$542,521.14

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	10,179.84	LF	$2.70	$27,485.57
104-11	FLOATING TURBIDITY BARRIER	96.40	LF	$12.73	$1,227.17
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	96.40	LF	$4.01	$386.56
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	45.00	EA	$169.34	$7,620.30
107-1	LITTER REMOVAL	8.41	AC	$45.28	$380.80
107-2	MOWING	8.41	AC	$72.25	$607.62
	Shoulder Component Total				$904,347.64

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	15.00
Performance Turf Width	11.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	10,179.84	LF	$30.43	$309,772.53
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	1,200.00	LF	$54.37	$65,244.00

570-1-1	PERFORMANCE TURF	6,221.01	SY	$2.02	$12,566.44
	Median Component Total				$387,582.97

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	35.00	EA	$5,264.85	$184,269.75
425-1-451	INLETS, CURB, TYPE J-5, <10'	10.00	EA	$9,698.46	$96,984.60
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	536.00	LF	$120.00	$64,320.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	160.00	LF	$171.65	$27,464.00
570-1-1	PERFORMANCE TURF	293.06	SY	$2.02	$591.98
	Drainage Component Total				$373,630.33

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	22.00	AS	$528.30	$11,622.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$328.07	$656.14
700-1-60	SINGLE POST SIGN, REMOVE	22.00	AS	$118.97	$2,617.34
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$6,597.30	$13,194.60
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,051.85	$2,103.70
	Signing Component Total				$33,428.82

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Bronson Memorial Highway Intersection with SR 429 North Entrance and Exit Ramps

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-14	STEEL MAST ARM ASSEMBLY, F&I, 60'- 60'	1.00	EA	$73,423.25	$73,423.25

649-21-21	STEEL MAST ARM ASSEMBLY, F&I, 78'	1.00	EA	$93,129.04	$93,129.04
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Bronson Memorial Highway Intersection with SR 429 South Entrance and Exit Ramps

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	1.00	EA	$68,710.55	$68,710.55
649-21-12	STEEL MAST ARM ASSEMBLY, F&I, 60'- 40'	1.00	EA	$89,488.02	$89,488.02
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44

Signalization 3

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Bronson Memorial Highway Intersection with Rolling Oaks Blvd

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	375.00	LF	$9.49	$3,558.75
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	125.00	LF	$22.53	$2,816.25
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	8.00	EA	$765.10	$6,120.80
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	30.00	LF	$7.57	$227.10
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	2.00	EA	$68,710.55	$137,421.10
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	6.00	AS	$1,469.23	$8,815.38
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	5.00	AS	$856.59	$4,282.95
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	6.00	EA	$330.47	$1,982.82
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	6.00	AS	$1,408.24	$8,449.44
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	4.00	EA	$326.91	$1,307.64
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	2.00	EA	$433.11	$866.22
	Signalizations Component Total				$791,141.23

Sequence 301 Total $5,764,264.85

Sequence: 302 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.106 MI 562 LF

Description: Orange Lake Blvd Reconstruction near intersection with Bronson Memorial Hwy

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.106
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.64	AC	$20,000.00	$12,800.00

120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,120.19 CY	$26.31	$29,472.20
	Earthwork Component Total			$42,272.20

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 26.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 10.00
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	785.26	SY	$2.59	$2,033.82
285-709	OPTIONAL BASE,BASE GROUP 09	644.81	SY	$26.06	$16,803.75
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,622.95	SY	$5.17	$8,390.65
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	133.89	TN	$141.47	$18,941.42
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	85.83	TN	$141.47	$12,142.37
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	64.92	TN	$240.52	$15,614.56
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	51.50	TN	$240.52	$12,386.78

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	29.00	EA	$6.19	$179.51
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.43	GM	$1,303.59	$560.54
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.11	GM	$438.24	$48.21
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.43	GM	$4,552.88	$1,957.74
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.11	GM	$2,860.82	$314.69
	Roadway Component Total				$89,374.04

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	2.50 / 8.25
Total Outside Shoulder Perf. Turf Width L/R	0.25 / 0.00
Sidewalk Width L/R	0.00 / 6.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	561.79	LF	$30.43	$17,095.27
520-1-10	CONCRETE CURB & GUTTER, TYPE F	561.79	LF	$30.43	$17,095.27
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	374.53	SY	$203.42	$76,186.89
570-1-1	PERFORMANCE TURF	15.61	SY	$2.02	$31.53

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,123.58	LF	$2.70	$3,033.67
104-11	FLOATING TURBIDITY BARRIER	10.64	LF	$12.73	$135.45
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	10.64	LF	$4.01	$42.67
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	5.00	EA	$169.34	$846.70
107-1	LITTER REMOVAL	0.93	AC	$45.28	$42.11
107-2	MOWING	0.93	AC	$72.25	$67.19
	Shoulder Component Total				$117,498.64

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	24.00
Performance Turf Width	24.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-5-12	TRAF SEP CONC-TYPE I, 6' WIDE	80.00	LF	$129.95	$10,396.00
570-1-1	PERFORMANCE TURF	1,498.11	SY	$2.02	$3,026.18
	Median Component Total				$13,422.18

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	4.00	EA	$5,264.85	$21,059.40
425-1-451	INLETS, CURB, TYPE J-5, <10'	2.00	EA	$9,698.46	$19,396.92
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	64.00	LF	$120.00	$7,680.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60

570-1-1	PERFORMANCE TURF	32.35 SY	$2.02	$65.35
	Drainage Component Total			$52,321.27

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00	AS	$528.30	$1,584.90
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,617.22	$1,617.22
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$11,536.25

Sequence 302 Total $326,424.58

Sequence: 311 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.225 MI 1,190 LF

Description: (1 of 2)SR 429 NB Exit Ramp to Western Way

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.225
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.64	AC	$20,000.00	$32,800.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	881.76	CY	$26.31	$23,199.11
	Earthwork Component Total				$55,999.11

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Existing Roadway Pavement Width L/R	0.00 / 13.40
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 10.60
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,046.38	SY	$2.59	$10,480.12
285-709	OPTIONAL BASE,BASE GROUP 09	1,445.32	SY	$26.06	$37,665.04
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,771.94	SY	$5.17	$9,160.93
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	146.19	TN	$141.47	$20,681.50
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	192.73	TN	$141.47	$27,265.51
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	70.88	TN	$240.52	$17,048.06
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	115.64	TN	$240.52	$27,813.73

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	30.00	EA	$6.19	$185.70
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.45	GM	$1,303.59	$586.62
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.23	GM	$933.65	$214.74
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.45	GM	$4,552.88	$2,048.80
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.23	GM	$2,270.75	$522.27
	Roadway Component Total				$153,673.02

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80

Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,938.56	SY	$21.79	$42,241.22
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	101.82	TN	$141.47	$14,404.48
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	74.05	TN	$240.52	$17,810.51

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	2,737.26	LF	$2.70	$7,390.60
104-11	FLOATING TURBIDITY BARRIER	22.54	LF	$12.73	$286.93
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	22.54	LF	$4.01	$90.39
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.55	AC	$45.28	$24.90
107-2	MOWING	0.55	AC	$72.25	$39.74
	Shoulder Component Total				$85,380.00

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	40.00	LF	$116.05	$4,642.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	16.00	LF	$171.65	$2,746.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	3.00	EA	$2,241.18	$6,723.54
570-1-1	PERFORMANCE TURF	91.06	SY	$2.02	$183.94
	Drainage Component Total				$14,295.88

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	5.00	AS	$1,617.22	$8,086.10
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	5.00	AS	$118.97	$594.85
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$16,126.48

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,000.00	LF	$9.49	$9,490.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	5.00	EA	$765.10	$3,825.50
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	3,000.00	LF	$2.69	$8,070.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	5.00	EA	$6,352.63	$31,763.15
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	5.00	EA	$462.80	$2,314.00
	Subcomponent Total				$55,462.65
	Lighting Component Total				$55,462.65

Sequence 311 Total $380,937.14

Sequence: 312 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.369 MI 1,948 LF

Description: (2 of 2)SR 429 NB Exit Ramp to Western Way

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.369
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.68	AC	$20,000.00	$53,600.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,673.39	CY	$26.31	$44,026.89
	Earthwork Component Total				$97,626.89

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	5

Existing Roadway Pavement Width L/R	0.00 / 36.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 24.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,522.54	SY	$2.59	$24,663.38
285-709	OPTIONAL BASE,BASE GROUP 09	5,265.53	SY	$26.06	$137,219.71
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	7,791.17	SY	$5.17	$40,280.35
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	642.77	TN	$141.47	$90,932.67
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	714.19	TN	$141.47	$101,036.46
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	311.65	TN	$240.52	$74,958.06
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	428.51	TN	$240.52	$103,065.23

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	299.00	EA	$12.38	$3,701.62
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.74	GM	$1,303.59	$964.66
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	1.48	GM	$933.65	$1,381.80
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.74	GM	$4,552.88	$3,369.13
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	1.48	GM	$2,270.75	$3,360.71
	Roadway Component Total				$584,933.78

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T

Rumble Strips ï¿½No. of Sides 0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,172.74	SY	$21.79	$69,134.00
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	166.64	TN	$141.47	$23,574.56
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	121.20	TN	$240.52	$29,151.02

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,280.00	LF	$30.43	$38,950.40

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,479.92	LF	$2.70	$12,095.78
104-11	FLOATING TURBIDITY BARRIER	36.89	LF	$12.73	$469.61
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	36.89	LF	$4.01	$147.93
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.89	AC	$45.28	$40.30
107-2	MOWING	0.89	AC	$72.25	$64.30
	Shoulder Component Total				$176,719.13

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	56.00	LF	$116.05	$6,498.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00	EA	$2,241.18	$8,964.72
570-1-1	PERFORMANCE TURF	149.04	SY	$2.02	$301.06
	Drainage Component Total				$19,884.18

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	8.00	AS	$1,617.22	$12,937.76
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	8.00	AS	$118.97	$951.76
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85

Signing Component Total	$21,335.05

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	**Value**
Multiplier (Number of Poles)	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	800.00	LF	$9.49	$7,592.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	4.00	EA	$765.10	$3,060.40
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,400.00	LF	$2.69	$6,456.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	4.00	EA	$6,352.63	$25,410.52
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	4.00	EA	$462.80	$1,851.20
	Subcomponent Total				$44,370.12

Lighting Component Total	$44,370.12
Sequence 312 Total	$944,869.15

Sequence: 320 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.423 MI 2,231 LF

Description: SR 429 NB Entrance Ramp from Western Way

EARTHWORK COMPONENT

User Input Data

Description	**Value**
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.369
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.07	AC	$20,000.00	$61,400.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,648.13	CY	$26.31	$43,362.30
	Earthwork Component Total				$104,762.30

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	0.00 / 18.88
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 17.12
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,200.81	SY	$2.59	$23,830.10
285-709	OPTIONAL BASE,BASE GROUP 09	4,325.27	SY	$26.06	$112,716.54
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	4,679.72	SY	$5.17	$24,194.15
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	386.08	TN	$141.47	$54,618.74
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	583.48	TN	$141.47	$82,544.92
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	187.19	TN	$240.52	$45,022.94
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	350.09	TN	$240.52	$84,203.65

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	228.00	EA	$12.38	$2,822.64
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.84	GM	$1,303.59	$1,095.02
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.84	GM	$933.65	$784.27
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.84	GM	$4,552.88	$3,824.42
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.84	GM	$2,270.75	$1,907.43
	Roadway Component Total				$437,564.82

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00

New Paved Outside Shoulder Width L/R	10.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,633.73	SY	$21.79	$79,178.98
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	190.86	TN	$141.47	$27,000.96
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	138.81	TN	$240.52	$33,386.58

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,130.84	LF	$2.70	$13,853.27
104-11	FLOATING TURBIDITY BARRIER	42.25	LF	$12.73	$537.84
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	42.25	LF	$4.01	$169.42
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	1.02	AC	$45.28	$46.19
107-2	MOWING	1.02	AC	$72.25	$73.70
	Shoulder Component Total				$157,338.17

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	64.00	LF	$116.05	$7,427.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	32.00	LF	$171.65	$5,492.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	5.00	EA	$2,241.18	$11,205.90
570-1-1	PERFORMANCE TURF	170.69	SY	$2.02	$344.79
	Drainage Component Total				$24,470.69

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,617.22	$14,554.98
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	9.00	AS	$118.97	$1,070.73
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85

Signing Component Total	$23,071.24

Sequence 320 Total	$747,207.22

Sequence: 330 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.660 MI 3,487 LF

Description: SR 429 SB Exit Loop Ramp to Eastbound Western Way

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.660
Top of Structural Course For Begin Section	115.00
Top of Structural Course For End Section	115.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.80	AC	$20,000.00	$96,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	37,275.74	CY	$26.31	$980,724.72
	Earthwork Component Total				$1,076,724.72

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Existing Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 9.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	11,235.61	SY	$2.59	$29,100.23
285-709	OPTIONAL BASE,BASE GROUP 09	3,614.77	SY	$26.06	$94,200.91
327-70-4	MILLING EXIST ASPH PAVT, 3" AVG DEPTH	5,811.52	SY	$10.73	$62,357.61
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	479.45	TN	$141.47	$67,827.79
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	479.45	TN	$141.47	$67,827.79

337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	232.46	TN	$240.52	$55,911.28
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	287.67	TN	$240.52	$69,190.39

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	800.00	LF	$29.95	$23,960.00
536-73	GUARDRAIL REMOVAL	800.00	LF	$2.48	$1,984.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	89.00	EA	$12.38	$1,101.82
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.32	GM	$1,303.59	$1,720.74
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.66	GM	$933.65	$616.21
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.32	GM	$4,552.88	$6,009.80
711-16-231	THERMOPLASTIC, STD-OTH, YELLOW, SKIP, 6"	0.66	GM	$2,270.75	$1,498.70

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	28.00	TN	$227.60	$6,372.80
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	800.00	LF	$21.34	$17,072.00
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	4.00	EA	$3,002.12	$12,008.48
	Roadway Component Total				$518,760.55

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00

Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	5,679.79	SY	$21.79	$123,762.62
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	298.32	TN	$141.47	$42,203.33
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	216.96	TN	$240.52	$52,183.22

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-6	SHOULDER GUTTER- CONCRETE	1,500.00	LF	$29.95	$44,925.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	8,019.90	LF	$2.70	$21,653.73
104-11	FLOATING TURBIDITY BARRIER	66.04	LF	$12.73	$840.69
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	66.04	LF	$4.01	$264.82
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	2.00	EA	$169.34	$338.68
107-1	LITTER REMOVAL	1.60	AC	$45.28	$72.45
107-2	MOWING	1.60	AC	$72.25	$115.60
	Shoulder Component Total				$289,282.03

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	104.00	LF	$116.05	$12,069.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	48.00	LF	$171.65	$8,239.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	7.00	EA	$2,241.18	$15,688.26
570-1-1	PERFORMANCE TURF	266.80	SY	$2.02	$538.94

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-701	INLETS, GUTTER, TYPE S, <10'	6.00	EA	$5,128.69	$30,772.14
	Drainage Component Total				$67,307.74

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	14.00	AS	$1,617.22	$22,641.08
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$328.07	$656.14
700-1-60	SINGLE POST SIGN, REMOVE	14.00	AS	$118.97	$1,665.58
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	2.00	AS	$5,537.31	$11,074.62
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,051.85	$2,103.70
	Signing Component Total				$39,197.72

BRIDGES COMPONENT

Bridge 750618

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	174.50
Width (LF)	13.00
Type	Overpass Widening
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	603.00
Default Cost per SF	$140.00
Factored Cost per SF	$175.00
Final Cost per SF	**$184.30**
Basic Bridge Cost	**$396,987.50**
Description	SR 429 SB OFF-RAMP OVER WESTERN WAY

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	603.00	SF	$96.67	$58,292.01
400-2-10	CONC CLASS II, APPROACH SLABS	28.89	CY	$539.79	$15,594.53
415-1-9	REINF STEEL- APPROACH SLABS	5,055.75	LB	$1.09	$5,510.77
	Bridge 750618 Total				$476,384.81
	Bridges Component Total				$476,384.81

RETAINING WALLS COMPONENT

Retaining Wall 9

Description	Value
Length	77.50
Begin height	40.00
End Height	40.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	3,100.00	SF	$36.27	$112,437.00

Retaining Walls Component Total	$112,437.00

Sequence 330 Total	$2,580,094.57

Sequence: 341 WDR - Widen/Resurface, Divided, Rural **Net Length:** 0.285 MI 1,503 LF

Description: (1 of 2) SR 429 SB Entrance Ramp from Western Way

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.070
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.07	AC	$20,000.00	$41,400.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	237.37	CY	$26.31	$6,245.20

Earthwork Component Total	$47,645.20

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Existing Roadway Pavement Width L/R	8.56 / 10.02
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	3.44 / 1.96
Widened Inside Pavement Width L/R	0.00 / 0.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	4,242.41	SY	$2.59	$10,987.84
285-709	OPTIONAL BASE,BASE GROUP 09	1,012.17	SY	$26.06	$26,377.15

327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	3,103.31	SY	$5.17	$16,044.11
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	256.02	TN	$141.47	$36,219.15
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	124.02	TN	$141.47	$17,545.11
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	124.13	TN	$240.52	$29,855.75
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	74.41	TN	$240.52	$17,897.09

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.10	GM	$438.24	$43.82
	Comment: Extra ramp lane of traffic				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	77.00	EA	$12.38	$953.26
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.57	GM	$1,303.59	$743.05
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.28	GM	$438.24	$122.71
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.57	GM	$5,266.55	$3,001.93
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.28	GM	$1,694.38	$474.43
	Roadway Component Total				$160,265.40

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	12.00 / 8.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	10.00 / 6.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	2,782.62	SY	$21.79	$60,633.29

334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	146.98	TN	$141.47	$20,793.26
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	106.90	TN	$240.52	$25,711.59

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	757.00	LF	$30.43	$23,035.51

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,457.40	LF	$2.70	$9,334.98
104-11	FLOATING TURBIDITY BARRIER	28.47	LF	$12.73	$362.42
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	28.47	LF	$4.01	$114.16
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
107-1	LITTER REMOVAL	2.07	AC	$45.28	$93.73
107-2	MOWING	2.07	AC	$72.25	$149.56
	Shoulder Component Total				$143,150.39

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	232.00	LF	$116.05	$26,923.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	12.00	EA	$2,241.18	$26,894.16
570-1-1	PERFORMANCE TURF	200.43	SY	$2.02	$404.87
	Drainage Component Total				$58,342.23

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	7.00	AS	$1,617.22	$11,320.54
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	7.00	AS	$118.97	$832.79
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$6,597.30	$6,597.30
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$20,658.85

Sequence 341 Total $430,062.07

Sequence: 342 RSU - Resurfacing, Undivided **Net Length:** 0.290 MI 1,533 LF

Description: (2 of 2) SR 429 SB Entrance Ramp from Western Way

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	2,554.64	SY	$5.17	$13,207.49
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	210.76	TN	$141.47	$29,816.22
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	102.19	TN	$240.52	$24,578.74

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.58	GM	$1,303.59	$756.08
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.58	GM	$4,552.88	$2,640.67
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.58	GM	$4,552.50	$2,640.45
	Roadway Component Total				$73,639.65

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	1,021.86 SY	$7.71	$7,878.54
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	56.20 TN	$141.47	$7,950.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	40.87 TN	$240.52	$9,830.05

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	29.03	LF	$12.73	$369.55
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	29.03	LF	$4.01	$116.41
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.70	AC	$45.28	$31.70
107-2	MOWING	0.70	AC	$72.25	$50.58
	Shoulder Component Total				$26,396.78

Sequence 342 Total $100,036.43

Sequence: 350 WDU - Widen/Resurface, Divided, Urban **Net Length:** 0.610 MI 3,220 LF

Description: Western Way Reconstruction Crossing SR 429. Includes two signalized Intersection.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	25.00 / 25.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.610
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Existing Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.70	AC	$20,000.00	$74,000.00
120-1	REGULAR EXCAVATION	4,816.89	CY	$14.07	$67,773.64
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,190.50	CY	$26.31	$31,322.06
	Earthwork Component Total				$173,095.70

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	7
Existing Roadway Pavement Width L/R	29.50 / 33.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	3.00 / 1.50
Widened Inside Pavement Width L/R	6.50 / 5.50
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,594.84	SY	$2.59	$24,850.64
285-709	OPTIONAL BASE,BASE GROUP 09	6,375.09	SY	$26.06	$166,134.85
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	22,359.33	SY	$5.17	$115,597.74
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,844.64	TN	$141.47	$260,961.22
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	811.64	TN	$141.47	$114,822.71
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	894.37	TN	$240.52	$215,113.87
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	486.99	TN	$240.52	$117,130.83

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	5

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	494.00	EA	$12.38	$6,115.72
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.44	GM	$1,303.59	$3,180.76
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.05	GM	$438.24	$1,336.63
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	2.44	GM	$4,552.88	$11,109.03
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	3.05	GM	$2,860.82	$8,725.50
	Roadway Component Total				$1,045,079.50

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	2.00 / 2.00
New Total Outside Shoulder Width L/R	2.50 / 2.50
Total Outside Shoulder Perf. Turf Width L/R	0.25 / 0.25

Sidewalk Width L/R 0.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,219.74	LF	$30.43	$97,976.69
520-1-10	CONCRETE CURB & GUTTER, TYPE F	3,219.74	LF	$30.43	$97,976.69
570-1-1	PERFORMANCE TURF	178.87	SY	$2.02	$361.32

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	2,334.00	SY	$203.42	$474,782.28

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	6,439.49	LF	$2.70	$17,386.62
104-11	FLOATING TURBIDITY BARRIER	60.98	LF	$12.73	$776.28
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	60.98	LF	$4.01	$244.53
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	29.00	EA	$169.34	$4,910.86
107-1	LITTER REMOVAL	5.32	AC	$45.28	$240.89
107-2	MOWING	5.32	AC	$72.25	$384.37
	Shoulder Component Total				$697,962.42

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	19.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
570-1-1	PERFORMANCE TURF	1,910.38	SY	$2.02	$3,858.97
	Median Component Total				$3,858.97

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	22.00	EA	$5,264.85	$115,826.70
425-1-451	INLETS, CURB, TYPE J-5, <10'	7.00	EA	$9,698.46	$67,889.22
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	336.00	LF	$120.00	$40,320.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	104.00	LF	$171.65	$17,851.60
570-1-1	PERFORMANCE TURF	185.38	SY	$2.02	$374.47
	Drainage Component Total				$242,261.99

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	14.00	AS	$528.30	$7,396.20
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,617.22	$3,234.44
700-1-50	SINGLE POST SIGN, RELOCATE	2.00	AS	$328.07	$656.14
700-1-60	SINGLE POST SIGN, REMOVE	14.00	AS	$118.97	$1,665.58
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$6,597.30	$13,194.60
700-2-60	MULTI- POST SIGN, REMOVE	2.00	AS	$1,051.85	$2,103.70
	Signing Component Total				$28,250.66

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Intersection with SR 429 North Exit and Entrance Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$68,710.55	$274,842.20
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44

Signalization 2

Description	Value
Type	4 Lane Mast Arm
Multiplier	1
Description	Intersection with SR 429 South Exit and Entrance Ramp

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	750.00	LF	$9.49	$7,117.50
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	250.00	LF	$22.53	$5,632.50
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$8,368.88	$8,368.88
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$765.10	$12,241.60
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$4,122.68	$4,122.68
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$7.57	$454.20
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	4.00	EA	$68,710.55	$274,842.20
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	12.00	AS	$1,469.23	$17,630.76
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	8.00	AS	$856.59	$6,852.72
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	12.00	EA	$330.47	$3,965.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	12.00	AS	$1,408.24	$16,898.88
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$326.91	$2,615.28
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$34,261.40	$34,261.40
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$433.11	$1,732.44
	Signalizations Component Total				$793,473.36

Sequence 350 Total $2,983,982.60

Sequence: 360 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.136 MI 720 LF

Description: SR 429 SB Exit Ramp to Western Way

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.277
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.99	AC	$20,000.00	$19,800.00
120-2-2	BORROW EXCAVATION, TRUCK	1,160.30	CY	$26.31	$30,527.49

	MEASURE	
	Earthwork Component Total	$50,327.49

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Existing Roadway Pavement Width L/R	0.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 15.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	2,800.75	SY	$2.59	$7,253.94
285-709	OPTIONAL BASE,BASE GROUP 09	1,226.73	SY	$26.06	$31,968.58
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	165.04	TN	$141.47	$23,348.21
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	99.03	TN	$240.52	$23,818.70

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.27	GM	$1,303.59	$351.97
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.27	GM	$4,552.88	$1,229.28
	Roadway Component Total				$87,970.68

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,173.11	SY	$21.79	$25,562.07
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	61.62	TN	$141.47	$8,717.38
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	44.81	TN	$240.52	$10,777.70

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,656.44	LF	$2.70	$4,472.39
104-11	FLOATING TURBIDITY BARRIER	13.64	LF	$12.73	$173.64
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	13.64	LF	$4.01	$54.70
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.33	AC	$45.28	$14.94
107-2	MOWING	0.33	AC	$72.25	$23.84
	Shoulder Component Total				$52,887.89

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	24.00	LF	$116.05	$2,785.20
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	8.00	LF	$171.65	$1,373.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	2.00	EA	$2,241.18	$4,482.36
570-1-1	PERFORMANCE TURF	55.11	SY	$2.02	$111.32
	Drainage Component Total				$8,752.08

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	3.00	AS	$1,617.22	$4,851.66
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	3.00	AS	$118.97	$356.91
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$12,654.10

Sequence 360 Total $212,592.24

Sequence: 370 RSU - Resurfacing, Undivided **Net Length:** 0.530 MI
2,800 LF

Description: SR 429 SB Entrance Ramp from Seidel Rd. Includes Toll Plaza

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	165
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	4,666.64	SY	$5.17	$24,126.53
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	385.00	TN	$141.47	$54,465.95
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	186.67	TN	$240.52	$44,897.87

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.06	GM	$1,303.59	$1,381.81
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	1.06	GM	$4,552.88	$4,826.05

Roadway Component Total $129,698.21

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	2.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	1,866.66	SY	$7.71	$14,391.95
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	102.67	TN	$141.47	$14,524.72
337-7-83	ASPH CONC FC,TRAFFIC C,FC-	74.67	TN	$240.52	$17,959.63

12.5,PG 76-22

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	42,130.00	SF	$31.00	$1,306,030.00
	Comment: Noise Barrier Wall G: Waterleigh				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	53.03	LF	$12.73	$675.07
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	53.03	LF	$4.01	$212.65
104-18	INLET PROTECTION SYSTEM	2.00	EA	$169.34	$338.68
107-1	LITTER REMOVAL	1.28	AC	$45.28	$57.96
107-2	MOWING	1.28	AC	$72.25	$92.48
	Shoulder Component Total				$1,354,283.14

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing Seidel Road Plaza SB ON RAMP				
735-5	1-LANE ORT [1 X 2 LANES]	1.00	EA	$875,000.00	$875,000.00
	Comment: Replaces existing Seidel Road Plaza SB ON RAMP				
	Architectural Component Total				$876,500.00

Sequence 370 Total $2,360,481.35

Sequence: 380 WUR - Widen/Resurface, Undivided, Rural **Net Length:** 0.371 MI 1,960 LF

Description: SR 429 NB Exit Ramp to Seidel Rd. Includes Toll Plaza

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	30.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.371
Top of Structural Course For Begin Section	102.00
Top of Structural Course For End Section	102.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Existing Front Slope L/R	6 to 1 / 6 to 1
Existing Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %

Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.70	AC	$20,000.00	$54,000.00
120-2-2	BORROW EXCAVATION, TRUCK MEASURE	1,608.46	CY	$26.31	$42,318.58
	Earthwork Component Total				$96,318.58

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Existing Roadway Pavement Width L/R	0.00 / 6.00
Structural Spread Rate	165
Friction Course Spread Rate	80
Widened Outside Pavement Width L/R	0.00 / 18.00
Widened Structural Spread Rate	275
Widened Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	8,275.29	SY	$2.59	$21,433.00
285-709	OPTIONAL BASE,BASE GROUP 09	3,991.74	SY	$26.06	$104,024.74
327-70-5	MILLING EXIST ASPH PAVT, 2" AVG DEPTH	1,306.62	SY	$5.17	$6,755.23
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	107.80	TN	$141.47	$15,250.47
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	538.98	TN	$141.47	$76,249.50
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	52.26	TN	$240.52	$12,569.58
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	323.39	TN	$240.52	$77,781.76

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	50.00	EA	$6.19	$309.50
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.74	GM	$1,303.59	$964.66
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.37	GM	$933.65	$345.45
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.74	GM	$4,552.88	$3,369.13
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.74	GM	$4,552.50	$3,368.85
711-16-231	THERMOPLASTIC, STD-OTH,	0.37	GM	$2,270.75	$840.18

	YELLOW, SKIP, 6"	
	Roadway Component Total	$323,262.05

SHOULDER COMPONENT

User Input Data

Description	Value
Existing Total Outside Shoulder Width L/R	0.00 / 0.00
New Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Existing Paved Outside Shoulder Width L/R	0.00 / 0.00
New Paved Outside Shoulder Width L/R	4.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,192.52	SY	$21.79	$69,565.01
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	167.68	TN	$141.47	$23,721.69
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	121.95	TN	$240.52	$29,331.41

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	4,507.85	LF	$2.70	$12,171.20
104-11	FLOATING TURBIDITY BARRIER	37.12	LF	$12.73	$472.54
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	37.12	LF	$4.01	$148.85
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	1.00	EA	$169.34	$169.34
107-1	LITTER REMOVAL	0.90	AC	$45.28	$40.75
107-2	MOWING	0.90	AC	$72.25	$65.03
	Shoulder Component Total				$138,607.71

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	56.00	LF	$116.05	$6,498.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	24.00	LF	$171.65	$4,119.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	4.00	EA	$2,241.18	$8,964.72
570-1-1	PERFORMANCE TURF	149.96	SY	$2.02	$302.92
	Drainage Component Total				$19,886.04

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$528.30	$528.30
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	8.00	AS	$1,617.22	$12,937.76
700-1-50	SINGLE POST SIGN, RELOCATE	1.00	AS	$328.07	$328.07
700-1-60	SINGLE POST SIGN, REMOVE	8.00	AS	$118.97	$951.76
700-2-13	MULTI- POST SIGN, F&I GM, 21-30 SF	1.00	AS	$5,537.31	$5,537.31
700-2-60	MULTI- POST SIGN, REMOVE	1.00	AS	$1,051.85	$1,051.85
	Signing Component Total				$21,335.05

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	9

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,800.00	LF	$9.49	$17,082.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	9.00	EA	$765.10	$6,885.90
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	5,400.00	LF	$2.69	$14,526.00
715-4-14	LIGHT POLE COMPLETE, F&I-STD, 45'	9.00	EA	$6,352.63	$57,173.67
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	9.00	EA	$462.80	$4,165.20
	Subcomponent Total				$99,832.77
	Lighting Component Total				$99,832.77

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
735-3	EQUIPMENT REMOVAL FOR EXISTING PLAZA/SITE	1.00	EA	$1,500.00	$1,500.00
	Comment: Replaces existing Seidel Road Plaza NB OFF RAMP				
735-5	1-LANE ORT [1 X 2 LANES]	1.00	EA	$875,000.00	$875,000.00
	Comment: Replaces existing Seidel Road Plaza NB OFF RAMP				
	Architectural Component Total				$876,500.00

Sequence 380 Total $1,575,742.20

Sequence: 381 NUU - New Construction, Undivided, Urban **Net Length:** 0.142 MI 750 LF

Description: Replacement of Existing Canary Island Drive Bridge Over SR 429.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.074
Top of Structural Course For Begin Section	132.00
Top of Structural Course For End Section	147.00
Horizontal Elevation For Begin Section	132.00
Horizontal Elevation For End Section	127.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %
Alignment Number	2
Distance	0.052
Top of Structural Course For Begin Section	142.00
Top of Structural Course For End Section	117.00
Horizontal Elevation For Begin Section	119.00
Horizontal Elevation For End Section	117.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.72	AC	$20,000.00	$34,400.00
120-1	REGULAR EXCAVATION	22,629.29	CY	$14.07	$318,394.11
120-6	EMBANKMENT	25,399.04	CY	$21.01	$533,633.83
	Earthwork Component Total				$886,427.94

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	16.00 / 16.00
Structural Spread Rate	275
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	3,095.68	SY	$2.59	$8,017.81
285-709	OPTIONAL BASE,BASE GROUP 09	2,665.81	SY	$26.06	$69,471.01
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	366.55	TN	$141.47	$51,855.83
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	219.93	TN	$240.52	$52,897.56

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	31.00	TN	$227.60	$7,055.60
	Comment: Misc. Asphalt under guardrail				
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	195.00	LF	$306.12	$59,693.40
	Comment: Additional Barrier Wall tying into and extending				

	beyond the bridge barrier walls.			
536-1-0	GUARDRAIL- ROADWAY, GEN/LS TL-2	900.00 LF	$15.39	$13,851.00
	Comment: Guardrail behind curb and gutter, leading up to the outside walls on the bridge.			
536-8-111	CUARDR CONN TO RIGID BA, F&I, APPR N2	4.00 EA	$2,464.13	$9,856.52
	Comment: Rigid barrier connection from guardrail to barrier wall approaching the bridge.			
536-85-20	GUARDRAIL END TREAT-TRAILING ANCHORAGE	1.00 EA	$2,523.81	$2,523.81
	Comment: End Anchorage east of bridge.			
536-85-24	GUARDRAIL END TREATMENT-PARA APP TERM	1.00 EA	$3,002.12	$3,002.12
	Comment: End Anchorage east of bridge.			
710-11-201	PAINTED PAVT MARK,STD,YELLOW,SOLID,6"	0.15 GM	$1,303.31	$195.50
	Comment: Additional Yellow Stripe for Center Double Yellow. Components tab only provides for 0.15 GM.			

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	1
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	19.00	EA	$6.19	$117.61
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.14	GM	$1,303.59	$182.50
710-11-201	PAINTED PAVT MARK,STD,YELLOW,SOLID,6"	0.14	GM	$1,303.31	$182.46
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.14	GM	$4,552.88	$637.40
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.14	GM	$2,860.82	$400.51
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.14	GM	$4,552.50	$637.35
	Roadway Component Total				$280,577.99

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 7.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	749.76	LF	$30.43	$22,815.20
520-1-10	CONCRETE CURB & GUTTER,	749.76	LF	$30.43	$22,815.20

	TYPE F				
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	416.53	SY	$203.42	$84,730.53
570-1-1	PERFORMANCE TURF	833.07	SY	$2.02	$1,682.80

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
515-1-2	PIPE HANDRAIL - GUIDERAIL, ALUMINUM	150.00	LF	$105.23	$15,784.50
	Comment: Handrails along sidewalk prior to fencing over the bridge.				

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	1,499.52	LF	$2.70	$4,048.70
104-11	FLOATING TURBIDITY BARRIER	35.50	LF	$12.73	$451.92
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	35.50	LF	$4.01	$142.36
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$2,921.89	$2,921.89
104-18	INLET PROTECTION SYSTEM	8.00	EA	$169.34	$1,354.72
107-1	LITTER REMOVAL	1.72	AC	$45.28	$77.88
107-2	MOWING	1.72	AC	$72.25	$124.27
	Shoulder Component Total				$156,949.97

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-351	INLETS, CURB, TYPE P-5, <10'	4.00	EA	$5,264.85	$21,059.40
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	136.00	LF	$120.00	$16,320.00
570-1-1	PERFORMANCE TURF	44.99	SY	$2.02	$90.88
	Drainage Component Total				$37,470.28

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$528.30	$1,056.60
	Signing Component Total				$1,056.60

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	749.76	LF	$9.49	$7,115.22
630-2-12	CONDUIT, F& I, DIRECTIONAL	97.84	LF	$22.53	$2,204.34

	BORE			
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	3.00 EA	$765.10	$2,295.30
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	2,542.79 LF	$2.69	$6,840.11
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	3.00 EA	$5,845.33	$17,535.99
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	3.00 EA	$462.80	$1,388.40
	Subcomponent Total			$37,379.35
	Lighting Component Total			$37,379.36

BRIDGES COMPONENT

Bridge 920608

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	250.00
Width (LF)	40.92
Type	Overpass Bridge
Cost Factor	1.20
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$162.00
Final Cost per SF	**$168.49**
Basic Bridge Cost	**$1,657,260.00**
Description	REPLACE CANARY ISLAND DRIVE BRIDGE DUE TO INSUFFICIENT VERTICAL CLEARANCE OVER NORTHBOUND SR-429.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	90.93	CY	$539.79	$49,083.10
415-1-9	REINF STEEL- APPROACH SLABS	15,912.75	LB	$1.09	$17,344.90
	Bridge 920608 Total				$1,723,688.00
	Bridges Component Total				$1,723,688.00

Sequence 381 Total $3,123,550.14

Date: 9/23/2022 4:21:27 PM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 446164-1-22-01 **Letting Date:** 01/2099

Description: PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM I-4 TO SEIDEL RD.

District: 08 **County:** 97 TURNPIKE **Market Area:** 99 **Units:** English

Contract Class: 3 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 9.300 MI

Project Manager: UNDERWOOD

Version 26 Project Grand Total **$321,698,295.54**

Description: PREFERRED T RAMP ALTERNATIVE: COPY OF VERSION 25, BUT INCLUDES UPDATES TO PAVEMENT DESIGN. 446164-1-22-01. [PD&E STUDY TO WIDEN WESTERN BELTWAY (SR429) FROM SEIDEL ROAD TO SINCLAIR ROAD]. INCLUDES 25% UNKNOWN FACTO& UNIT COST REVISION. INCLUDES PREFERED ALTERNATIVE FOR SINCLAIR AND SEIDEL.

Project Sequences Subtotal **$212,593,914.41**

102-1	Maintenance of Traffic	10.00 %	$21,259,391.44
101-1	Mobilization	10.00 %	$23,385,330.58

Project Sequences Total **$257,238,636.43**

Project Unknowns	25.00 %	$64,309,659.11
Justification for high %:	CONCEPT/PD&E PROCESS	
Design/Build	0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00

Project Non-Bid Subtotal **$150,000.00**

Version 26 Project Grand Total **$321,698,295.54**