PROJECT TRAFFIC ANALYSIS REPORT

Northeast Connector Expressway – Phase 1
Project Development and Environmental Study
Cyril Drive to Nova Road
Osceola County, Florida

CFX Project Number: 599-228

Prepared for:
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Contents

List of Tables

List of Figures

Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
BEA	Bureau of Economic Analysis
CAAGR	Compounded Annual Average Growth Rate
CFX	Central Florida Expressway Authority
CF&M	Concept, Feasibility, and Mobility Study
DDHV	Directional Design Hour Volume
D Factor	Directional Factor
EB	eastbound
FDOT	Florida Department of Transportation
FKA	Fishkind & Associates
FTO	Florida Traffic Online
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
K Factor	Peak Hour Factor
LOS	Level of Service
LRTP	Long Range Transportation Plan
MOCF	?
MOE	Measure of Effectiveness
MP	mile post
mph	mile(s) per hour
NB	northbound
NEC	Northeast Connector Expressway
NEDCMP	Northeast District Conceptual Master Plan
OBCC	Osceola-Brevard County Connectors
OCX	Osceola County Expressway Authority
SR 534	Osceola Parkway Extension
PD&E	Project Development and Environment
PHF	Peak Hour Factor
PPE	Poinciana Parkway Extension
PSAWDT	Peak-Season Average Weekday Traffic
ROW	right-of-way
SB	southbound
SP	Southport Connector Expressway
SR 417	State Road 417
T Factor	Truck Factor
TAZ	Traffic Analysis Zone
TIP	Transportation Improvement Plan
vph	Vehicles per Hour
v/c	Volume-to-Capacity
WB	Westbound

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1. Project Overview

1.1 Project Background and Description

The Central Florida Expressway Authority (CFX) is conducting a Project Development and Environment (PD&E) Study to evaluate the Northeast Connector Expressway (NEC) - Phase 1, in Osceola County. This proposed 4.3-mile, limited-access facility is an extension of the Osceola Parkway Extension (SR 534) from its proposed terminus at Cyrils Drive southeasterly to Nova Road and will include an initial two toll lanes in each direction. SR 534 is a proposed eight-mile new tolled expressway commencing at SR 417 just east of the Boggy Creek Road Interchange and running southeasterly to a terminus at Cyrils Drive in the Northeast District (NED). This project is currently programmed for design.

This Project Traffic Analysis Report supports the PD&E Study and contains a summary of assumptions and analysis methodology, a summary of existing conditions, a description of the travel demand model used in the forecast, the traffic forecasts of the alternatives, and operational analysis of the future traffic.

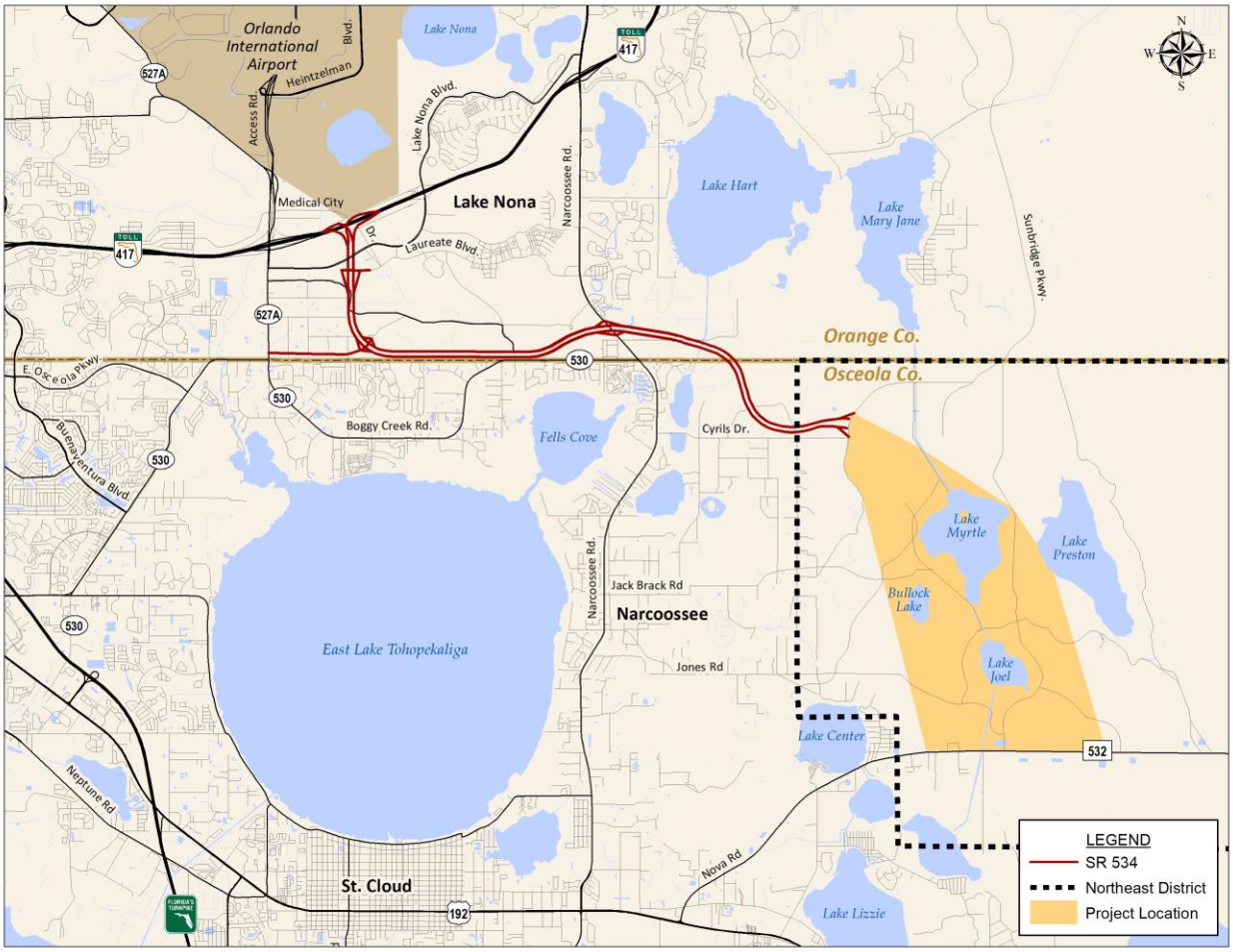
As an extension of the planned SR 534, the NEC Phase 1 serves a burgeoning area of Osceola County. Osceola County has been the center of residential development activity in Central Florida for the last twenty years. Between 2000 and 2019, Osceola County's population has grown by 117.8 percent from 172,490 residents to 375,750 residents, with a compounded annual growth rate of 4.2 percent. This is the highest growth rate of the five counties that comprise CFX (Brevard, Lake, Orange, Osceola, Seminole), as shown in **Table 1-1**. In the same timeframe, housing units grew at a similar pace of 125 percent from 72,300 to 162,700 or a compounded annual growth rate of 4.4 percent. This trend is anticipated to continue due to the abundance of vacant land in the Osceola County urban growth boundary, including the approved sector plans for the NED and North Ranch properties. Orange and Seminole Counties are near build out in their urban service areas. Projected growth rates in Osceola County through 2040 are expected to be the highest in the region with 2.3 percent for both population and housing units. The study area map is shown on **Figure 1-1.**

Table 1-1. Historical Population

County	Population 2000	Population 2010	Population 2019	Growth Rate	CAAGR
Brevard	476,230	543,376	601,942	26.4%	1.2%
Lake	210,528	297,052	367,118	74.4%	3.0%
Orange	896,344	1,145,956	1,393,452	55.5%	2.3%
Osceola	172,493	268,685	375,751	117.8%	4.2%
Seminole	365,196	422,718	471,826	29.2%	1.4%
Area Total	**2,120,791**	**2,677,787**	**3,210,089**	**54.1%**	**2.2%**
Florida	15,982,378	18,801,310	21,477,737	34.4%	1.6%

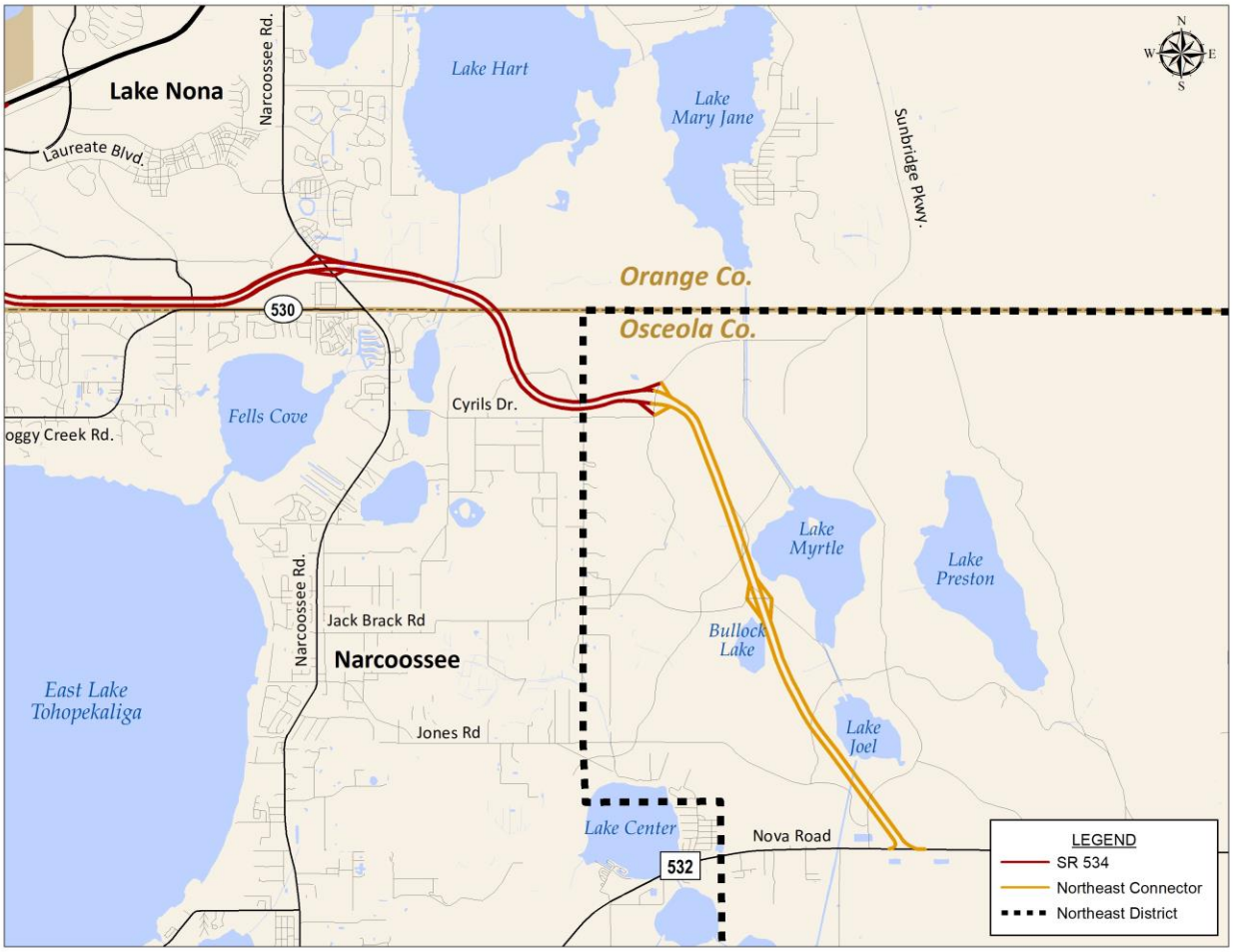
Source: United States Census

Figure 1-1. Study Area Map



The PD&E project location is shown in Figure 1-2. Commencing at the proposed terminus of the SR 534 at Cyrils Drive, the NEC – Phase 1 project limits extend south to Nova Road with an intermediate full interchange at Jack Brack Road and a partial interchange at Nova Road. At present, the study area is largely undeveloped lands and rural in nature. There is, however, a large-scale conceptual master plan for this area called the Northeast District, which is discussed in more detail in Section 3.1.

Figure 1-2. Project Location Map



1.2 Purpose and Need

The purpose of the NEC is to enhance north-south mobility and provide connections between existing and future east-west corridors in the study area. The NEC will link the planned SR 534 with the planned OBCC. These connections will promote regional connectivity, provide for transit opportunities, and enhance mobility in Osceola County and the entire Central Florida region. The link between the planned SR 534 and OBCC will also provide a seamless limited access, high-speed connection from the OIA to I-95 in Brevard County.

The need for the project is to provide system linkage and regional connectivity, meet social and economic needs, provide additional transportation capacity, achieve consistency with transportation plans, provide for multimodal opportunities, and improve safety and evacuation routes. Additionally, the East Central Florida Corridor Task Force Report recommended continuing the project development process for the NEC.

1.3 Alternatives Considered

As part of the PD&E Study, two 2,000-foot-wide corridor alternatives for the NEC were considered, starting at the SR 534/Cyrils Drive interchange and ending at Nova Road. Corridor A is west of Lake Joel, shown in orange, and Corridor B is east of Lake Joel, shown in light blue, in **Figure 1-3**. A preliminary corridor traffic analysis was completed early in the study to evaluate conceptual design traffic for the two corridors. Preliminary model volumes by segment as well as the weighted average AADT. The weighted average provided an even comparison based on the amount of traffic generated by the project weighted by the length of the project. Corridor A was selected as the preferred corridor. Additionally, a partial cloverleaf interchange design and diamond interchange design were also analyzed for the interchange at Jack Brack Road . The traffic analysis did not show one interchange design performed better than the other in the future year, so the diamond interchange design was selected for further analysis. The alternatives developed with the preferred Corridor A were based on a four-lane typical section on a 330-foot right-of-way, with a 106-foot median. There will be four 12-foot travel lanes, two in each direction. The proposed typical section is shown in **Figure 1-4.**

Figure 1-3. NEC Corridor Alternatives

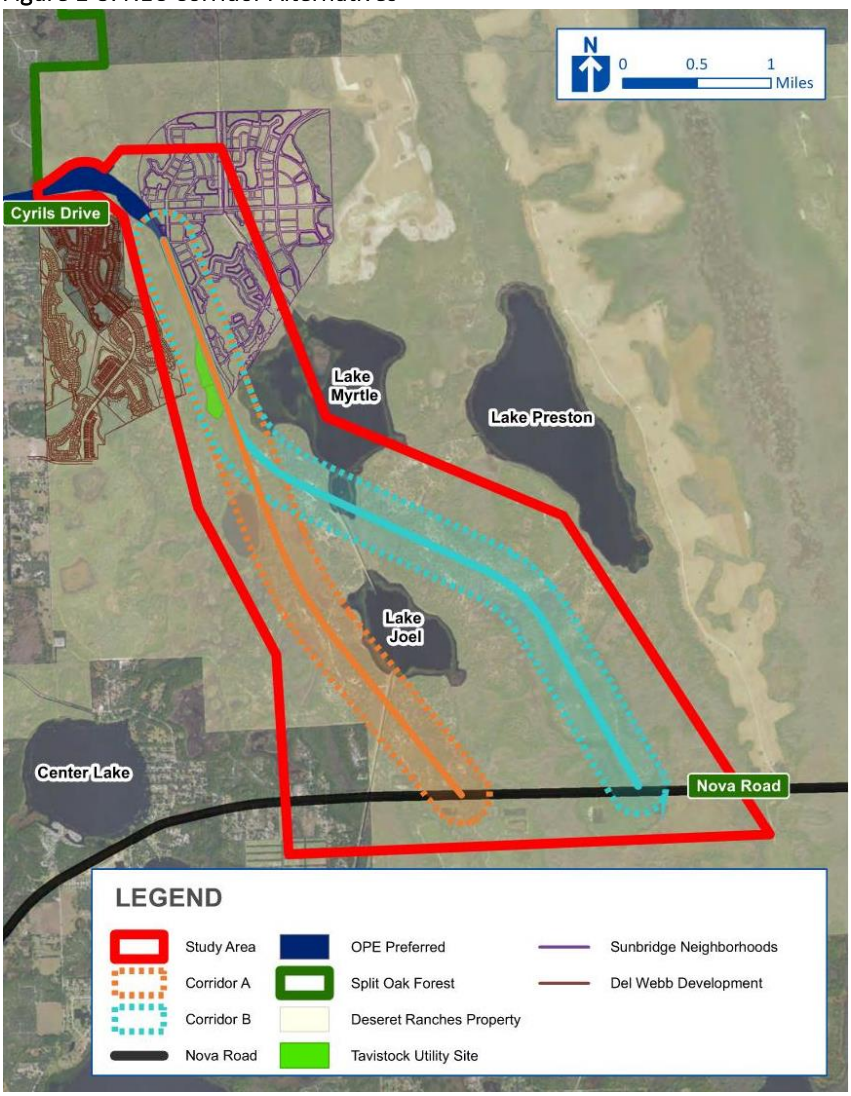
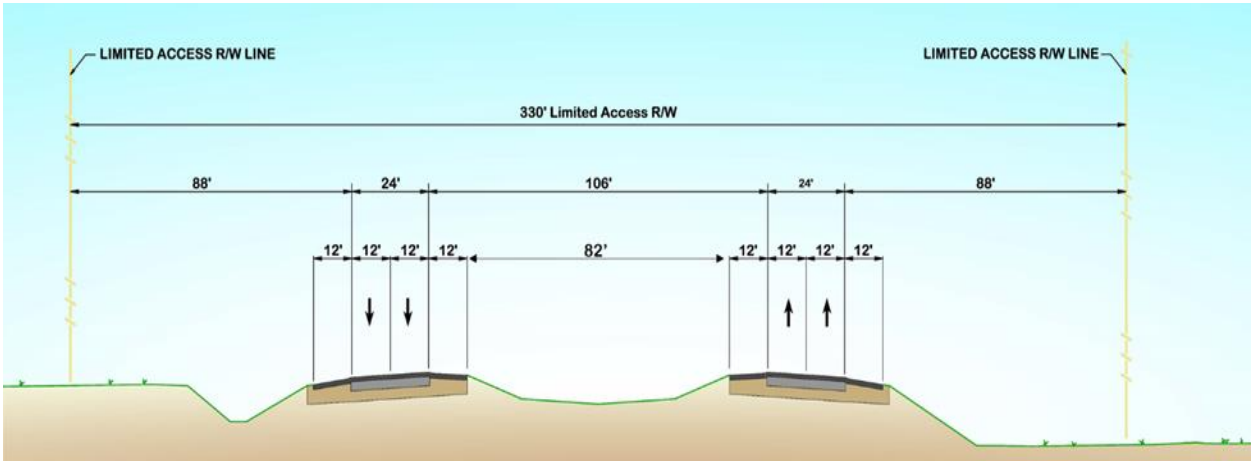


Figure 1-4. NEC Typical Section



2. Assumptions and Methodology

The purpose of this chapter is to provide a summary of the data and methods used to analyze existing and future traffic conditions associated with the project. The modeling tools include a project-specific travel demand model, created to produce reliable forecasts of future traffic volumes under the No-Build and Build conditions. With forecasts of future traffic volumes in the preferred Corridor A, the analysis makes use of Level of Service (LOS) and Volume-to-Capacity (v/c) Ratio Analysis to evaluate existing and future peak-hour conditions on roadway segments, including No-Build and Build conditions. Synchro v10 Analysis is used to assess existing and future peak-hour conditions at the ramp intersections. After this brief introduction, more details on the modeling tools and results are provided in subsequent chapters.

The assumptions for the traffic analysis are as follows:

- Existing Year Conditions – 2020
- Opening Year – 2025
- Design Year - 2045

2.1 Data Sources

This analysis of existing and future conditions makes use of several types of data, including traffic counts and roadway characteristics described below.

2.1.1 Traffic Counts

Traffic volume data for the NEC was obtained in several ways. A project-specific traffic count program was conducted in January 2021, at a time in which pre-COVID-19 traffic had returned to the system. This traffic is assumed to be year 2020 traffic as it was taken within the first weeks of 2021 and just exceeded pre-COVID-19 conditions. The counts included 72-hour directional counts at six locations in the study area, which are shown in **Figure 2-1** and listed in **Table 2-1**. This information was used to define existing traffic conditions and for model validation. These counts were supplemented with count data from the Florida Department of Transportation (FDOT) Florida Traffic Online (FTO) website application which are also shown in Figure 2-1 and listed in **Table 2-2.** All the traffic count data is available in **Appendix A**.

Figure 2-1. Traffic Count Locations

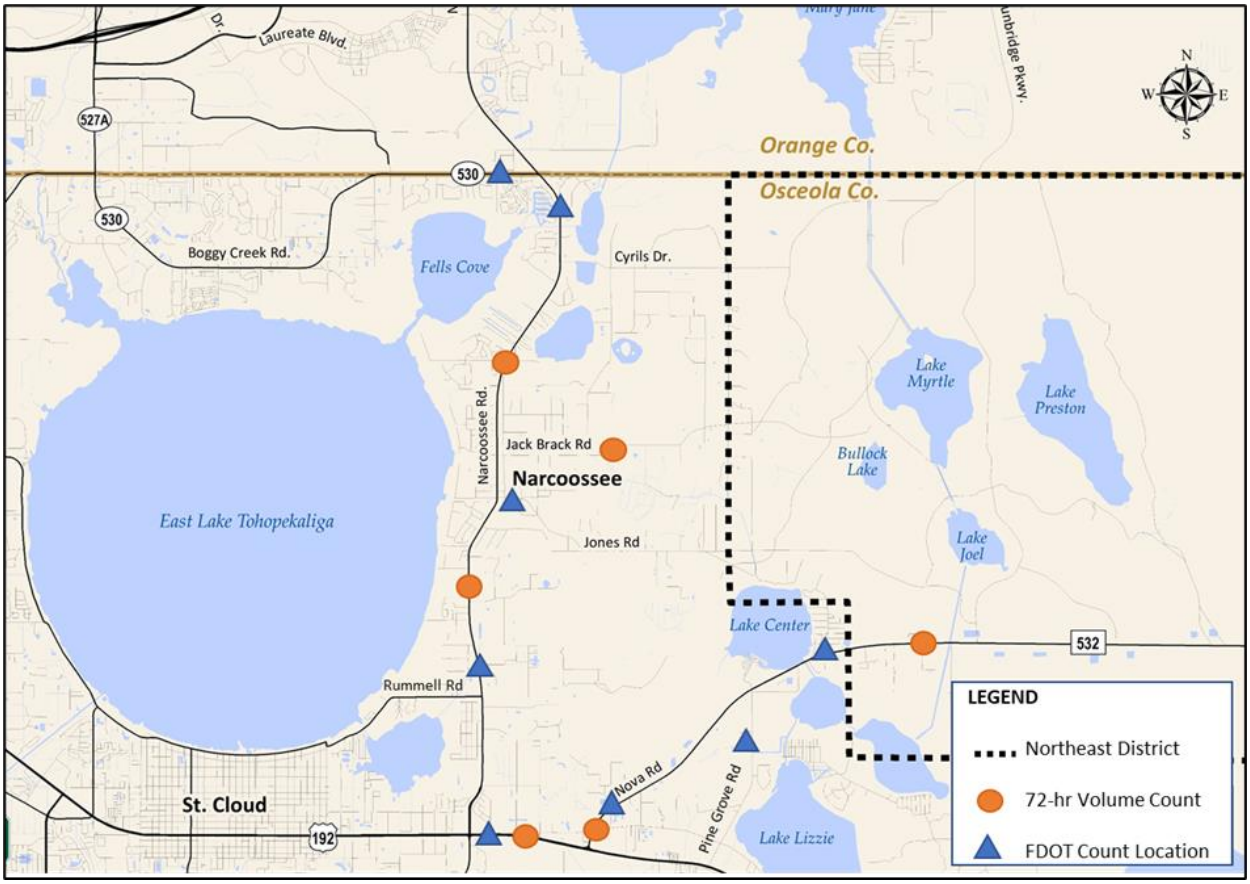


Table 2-1. Data Collection – Traffic Count Locations

Roadway	Location	Count Type	Date Taken
Narcoossee Road	North of Jack Brack Road	72 Hour Bi-Directional	01/26 – 01/28/2021
Narcoossee Road	South of Jones Road	72 Hour Bi-Directional	01/26 – 01/28/2021
Jack Brack Road	East of Narcoossee Road	72 Hour Bi-Directional	01/26 – 01/28/2021
US 192	East of Narcoossee Road	72 Hour Bi-Directional	01/26 – 01/28/2021
Nova Road	North of US 192	72 Hour Bi-Directional	01/26 – 01/28/2021
Nova Road	East of Fort Hill Road	72 Hour Bi-Directional	01/26 – 01/28/2021

Table 2-2. Data Collection – FDOT Count Locations

Roadway	Location	Co-site #
Nova Road	E of Eden Drive	928050
Nova Road	E of Lake Lizzie Road	927041
Pine Grove Road	N of Bass Road	928084
Narcoossee Road	N of Rummel Road	927044
Narcoossee Road	S of Boggy Creek	927045
Jones Road	E of Narcoossee Rd	927074
Boggy Creek Road	W of Narcoossee Rd.	927050
US 192	E of Narcoossee Rd	920255

2.1.2 Roadway Characteristics

Information about the existing roadway geometry was obtained from recent aerial photography. This included the number of lanes on all roadway segments. Posted speed limits were obtained from state and local sources. This information was used to validate the travel demand model.

2.2 Traffic Analysis

The analysis of existing and future conditions followed the approach used to evaluate proposed engineering projects throughout Florida, consistent with the FDOT Traffic Analysis Handbook, March 2014. The following is a summary of the methods, factors, and analytic tools that were used.

2.2.1 Method

To develop estimates of design traffic, the following methodology was used. First an examination of historical counts in the project study area was conducted to establish historical growth rates. Traffic forecasts for the year 2025 and 2045 under No-Build conditions were developed from the project-specific travel demand model. The No-Build scenarios were then compared against the year 2017 calibrated project-specific model run to establish growth rates for existing facilities in these two future years and model volumes were used for the NEC and other proposed facilities, including the Jack Brack Road Extension.

Using model volumes and model growth rates, 2025 and 2045 No-Build design traffic Annual Average Daily Traffic (AADT) and Directional Design Hour Volumes (DDHV) were generated. To develop the design traffic, the travel demand model was run for year 2025 and 2045 alternatives. A traffic profile of the Build scenario was developed. Model volumes were used for the ramp terminus intersections and the turning movements balanced to estimate the intersection DDHVs.

2.2.2 Factors

The study analysis is based on the standard set of traffic factors, developed for the project. The Peak Hour Factor (K Factor) is defined as the proportion of the AADT that occurs during the design hour. The Directional Factor (D Factor) is the percentage of traffic moving in the peak travel direction during the peak-hour. The D-Factor is calculated by dividing the higher directional volume by the total roadway volume for that hour. The T Factor is the percentage of the AADT volume generated by trucks or commercial vehicles. The K, D, and T Factors are needed to advance design of highway projects and to calculate congestion or performance measurements. The peak-hour factor (PHF) is the hourly volume during the peak-hour of the day divided by the peak 15-minute flow rate within that hour. This is a measure of fluctuation in demand within the peak-hour. PHF is used in capacity and level of service analysis to account for the variation in traffic volumes during the peak-hour. A PHF of 0.95 was assumed for future conditions. Traffic factor analysis is performed and the resulting factors recommended for the study are presented in Section 3.3.3.

2.2.3 Tools

The study area does not have many transportation facilities, as it is largely vacant land. The surrounding area has facilities with varying levels of roadway functional classification, including minor and major collectors, and principal arterials. LOS is considered as the primary Measure of Effectiveness (MOE) for this study to determine the traffic operational conditions of the roadways analyzed. The NEC is analyzed as an expressway. The LOS analysis is conducted using the FDOT Quality/LOS Handbook Generalized Tables (2020) for segment AADTs and Synchro v10 software for the ramp intersection DDHVs.

The proposed intersections at the ramp termini at Jack Brack Road and Nova Road are evaluated using Synchro Signal Timing and Analysis Software, Version 10 for signalized intersections. The Synchro results are based on the Highway Capacity Manual (HCM) LOS and delay targets shown in **Table 2-3**.

Table 2-3. Level of Service Criteria, Signalized Intersections

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	≤ 1.0	> 1.0
≤ 10	A	F
> 10 – 20	B	F
> 20 – 35	C	F
> 35 – 55	D	F
> 55 – 80	E	F
> 80	F	F

Source: **Highway Capacity Manual (HCM)**, V 6.0, Exhibit 19-8.
Notes: For approach-based and intersection wide assessments, LOS is defined solely by control delay.
Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group.

2.3 Level of Service Targets and Performance Measures

Per Policy 000-525-006 Level of Service target for the State Highway System, the adopted FDOT level of service for state roads, is LOS "D." The LOS "D" volume (or capacity) depends on the type of facility and the number of lanes. CFX also has a LOS "D" volume for Freeways for its system facilities. The NEC was

evaluated at LOS D for directional travel in peak-hour. Intersection LOS was based on the amount of delay in the peak-hour.

Although Osceola County does not have adopted level of service standards, they do provide the adjusted service volume thresholds for the peak-hour peak direction. These adjusted volumes are derived from the FDOT generalized peak-hour directional service volume table for interrupted flow facilities on signalized arterials. LOS D volumes were used as the roadway capacity, which corresponds to how Osceola County calculates the LOS and v/c ratios published on their traffic counts website.

3. Existing Conditions

This chapter contains a summary of the existing conditions. This begins with land use patterns along the corridor and is followed by an account of transportation features and services. After a description of current traffic volumes, there is an analysis of existing traffic operations.

3.1 Socioeconomic Data and Land Use

The study area is located in Osceola County, just south of the Orange County boundary. The NEC Phase 1 proposed improvement project will also influence traffic traveling to/from Orange County as well as Brevard County. Osceola County is the 18th most populous county in Florida with 375,751 residents but ranks fourth in overall population growth. According to the US Census Bureau, between 2010 and 2019, the Osceola County population grew by 39.8 percent, outpacing the state's growth of 14.2 percent for the same period. Orange County experienced significant growth, almost 22 percent, increasing by over 247,500 residents or 2.4 percent per year. Brevard County also experienced population increases; however, it features lower population growth rates than the state. These growth rates are expected to continue in the future and provide growth on the project.

Employment trends in the region from 2000 to 2019 were developed from the United States Bureau of Economic Analysis (BEA) data. Osceola County has traditionally been a "bedroom community" to the primary employment center in Orange County. Osceola County increased its employment between 2010 and 2019 by 59.1 percent with a total of 161,250 employees. With over 1.17 million employees in 2019, Orange County still increased its employment base by 42.1 percent over the same period. Brevard County has almost double the employment of Osceola County with 313,825 employees in 2019, but lower growth between 2010 and 2019 at 22.3 percent, slightly lower than the statewide employment growth of 31.1 percent over the same period.

In the study area, the NEC corridor is mostly undeveloped, but the study area is encompassed by the planned NED, a conceptual master plan adopted in the Osceola County Comprehensive Plan. In August 2010, Osceola County adopted a large-scale conceptual master plan for a 17,150-acre area known as the Northeast District. The Northeast District Conceptual Master Plan (NEDCMP) provides specific design and implementation recommendations for this growing area of the county. Guided by a stakeholder group of representatives from local planning and regulatory agencies, the NEDCMP balances the employment core planned for this area with housing and commercial uses to reduce travel distances.

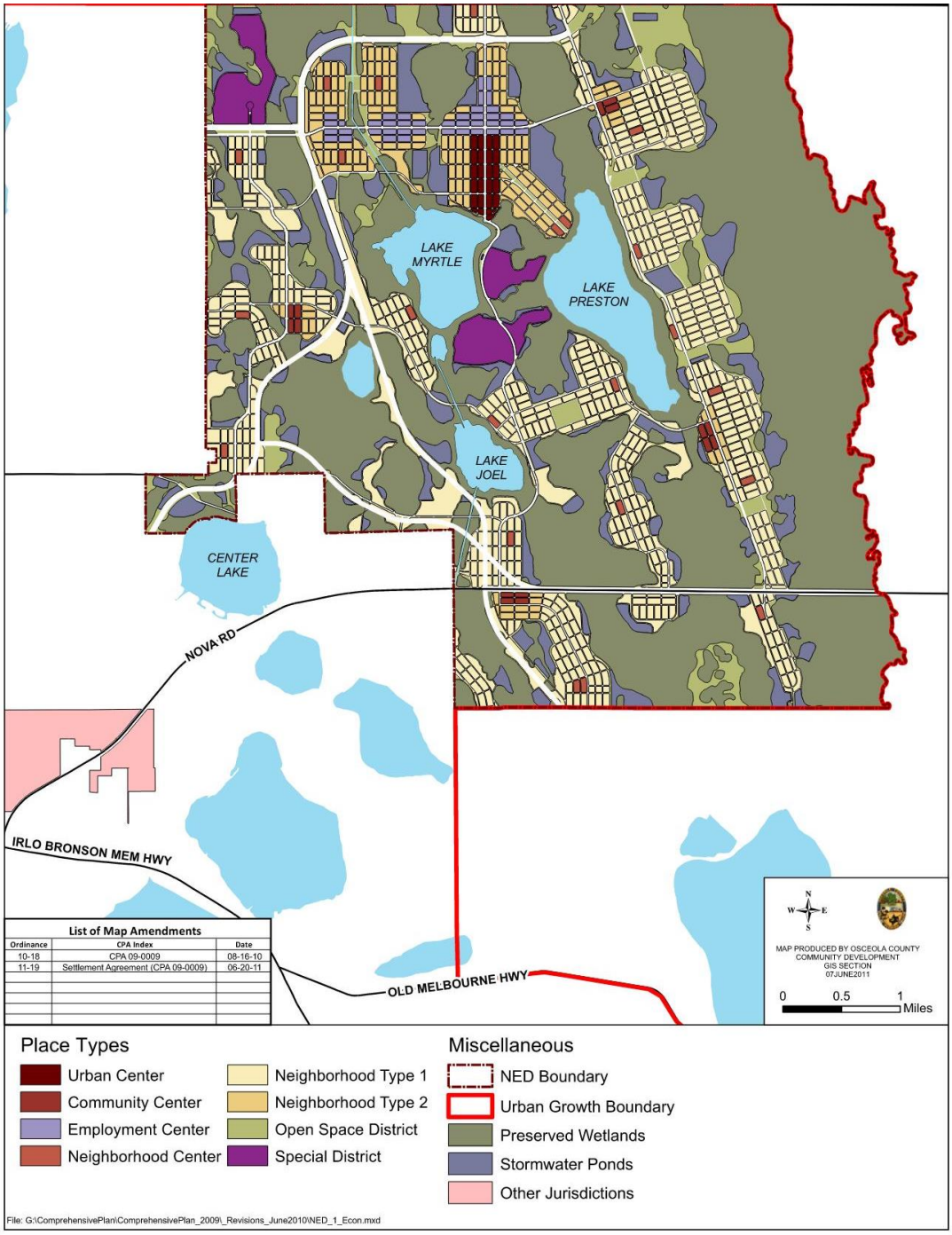
Table 3-1 NED Development Program at Buildout

NED Land Use	Units
Single Family Detached (units)	16,346
Multifamily (units)	8,884
Townhomes (units)	3,940
Retail (square feet)	1,828,800
Office (square feet)	5,792,800
Research & Industrial (square feet)	1,009,800
Hotel (rooms)	5,000

Original plans had the first residents living in the NEDCMP by 2013 and full build-out by 2039, but construction of homes did not start until 2019, a seven-year delay, which pushes the full build-out

of the plan to a 2045 timeframe. With over 29,000 housing units and approximately 8.6 million square feet of commercial and industrial uses, this is a very large-scale development with significant infrastructure needs. The approved development program is outlined in **Table 3-1** and a map of the approved development program is shown in **Figure 3-1.** The adopted NED Element from the Osceola Comprehensive Plan is provided in **Appendix B.**

Figure 3-1 NED Development Program, Osceola County Comprehensive Plan, 2010



3.2 Transportation Network

The transportation network includes roadways, transit routes, pedestrian paths, and bicycle routes.

3.2.1 Roadway

The project area roadways and their functional classification and jurisdiction are listed in **Table 3-2**.

Table 3-2. Project Area Roadways

Roadway	Federal Functional Classification	Jurisdiction	Number of Lanes
SR 417	Principal Arterial, Expressway, Urban	CFX	4
Narcoossee Rd: S of Boggy Creek Rd	Principal Arterial, Urban	Osceola County	4
Boggy Creek Rd	Major Collector, Urban	Orange County	2
Clapp Simms Duda Rd	Local	Osceola County	2
Cyrils Dr	Local	Osceola County	4
Jack Brack Rd	Local	Osceola County	2
Jones Rd	Minor Collector, Urban and Rural	Osceola County	2
Nova Rd	Minor Arterial, Urban and Rural	Osceola County	2
US 192: Narcoossee Rd - Nova Rd	Principal Arterial, Urban	FDOT	6
US 192: East of Nova Rd	Principal Arterial, Rural	FDOT	4

3.2.2 Transit

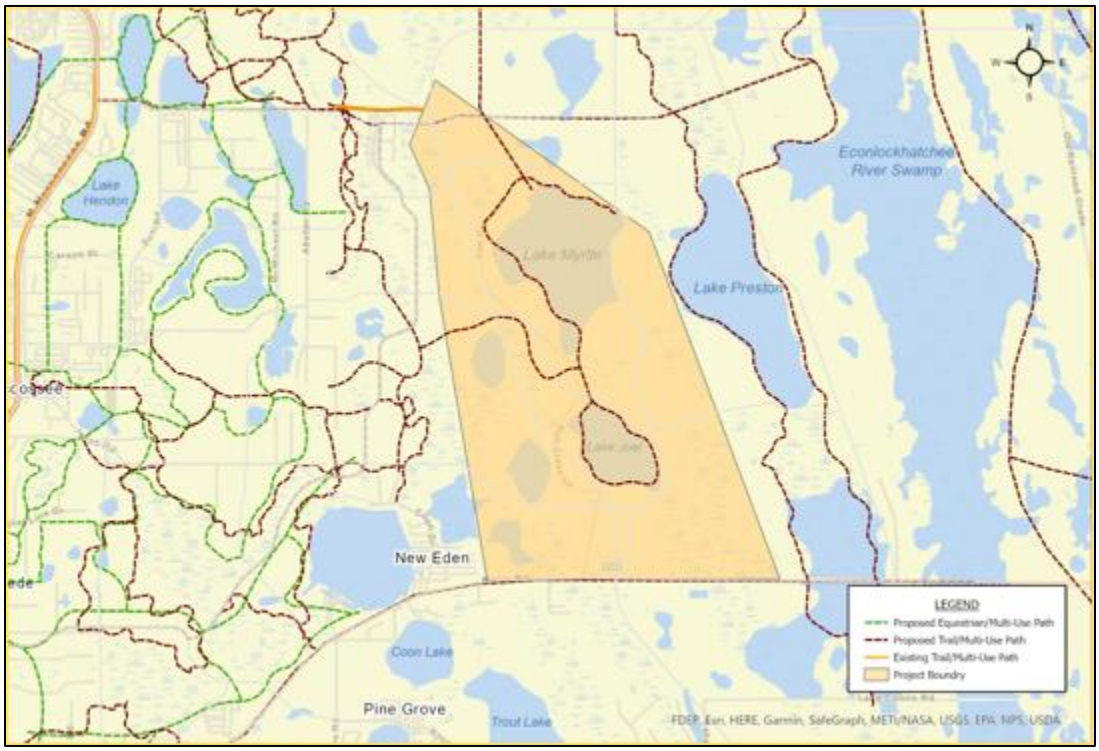
The Central Florida Regional Transportation Authority (doing business as LYNX) operates fixed route and flexible transit services within Osceola County. While there is not a fixed route service that operates in the study area, Link 10 is the closest route. Link 10 runs through the City of St. Cloud in a loop serving US 192 travelling eastbound along 10th Street and westbound along 17th Street, just west of Narcoossee, and operates with 30-minute headways.

3.2.3 Bicycle and Pedestrian

Bicycles and pedestrians are prohibited on expressway facilities in Florida. Due to the proposed study area being mainly rural and undeveloped in context, there is limited pedestrian and bicycle infrastructure along current rights of-way, except for Narcoossee Road and Cyrils Drive. Narcoossee Road is a major corridor with bicycle lanes and pedestrian sidewalks adjacent to both sides of the entire roadway, from Boggy Creek Road to US 192. The northbound and southbound bicycle lanes are four feet wide. Cyrils Drive is an east-west running, four-lane local road with a sidewalk on the eastbound side and a multi-use path on the westbound side.

There are currently no trails or multi-use paths within the project area, except for the recently constructed multi-use path on Cyrils Road, Osceola County has proposed several potential multi-use paths and trails in the Osceola County Comprehensive Plan 2040. This plan includes a trail adjacent to an extended Cyrils Drive to the north and a trail adjacent to Nova Road to the south. There are also proposed trails that encircle Lake Myrtle and Lake Joel, with trail connections from the north and west. Existing and proposed trail facilities are shown on **Figure 3-2.**

Figure 3-2 Existing and Proposed Trail Facilities



3.3 Traffic Volumes

3.3.1 Historic

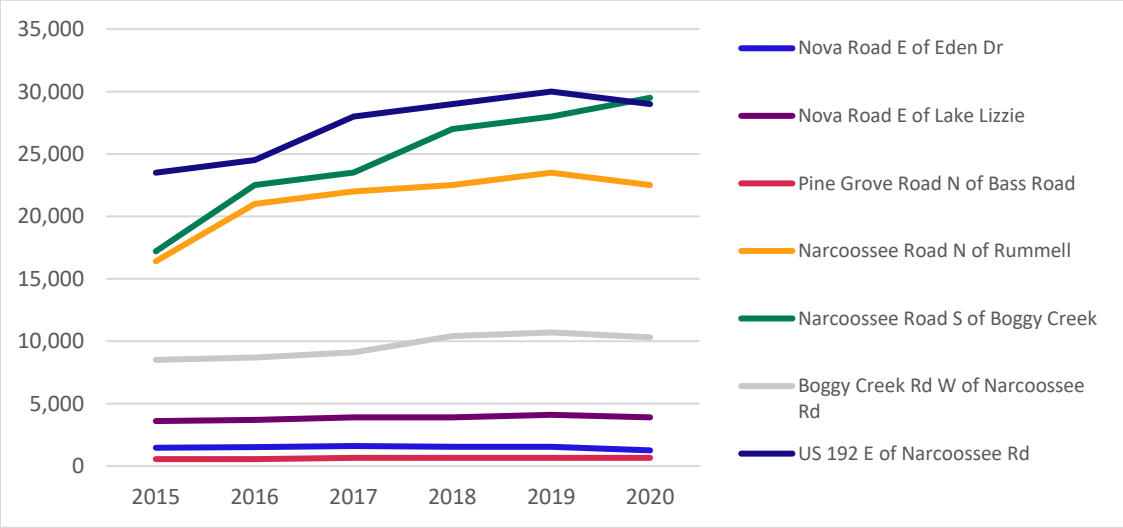
Table 3-3 contains a recent history of traffic volumes (AADT) in the study area. The count locations are located on major collectors and arterials in the study area, including Narcoossee Road, Nova Road, Jones Road, and Boggy Creek Road. Traffic has been steadily increasing and annual growth rates range between 0.4 percent on Nova Road east of Eden Drive to 10.3 percent on Narcoossee Road south of Boggy Creek Road, which is a very high annual growth rate over a 10-year period.

Table 3-3. Historic Two-Way AADT in Study Area

Road	Location	Cosite	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Growth Rate
Nova Road	E of Eden Drive	928050	N/A	1,200	1,200	1,200	1,450	1,450	1,500	1,600	1,550	1,550	1,250	0.4%
Nova Road	E of Lake Lizzie Road	927041	2,900	3,200	3,200	3,600	3,600	3,600	3,700	3,900	3,900	4,100	3,900	3.4%
Pine Grove Road	N of Bass Road	928084	N/A	N/A	500	500	550	550	550	650	650	650	650	3.8%
Narcoossee Road	N of Rummel Road	927044	13,300	13,500	13,500	15,800	16,000	16,400	21,000	22,000	22,500	23,500	22,500	6.9%
Narcoossee Road	S of Boggy Creek	927045	14,500	13,000	13,000	16,600	16,800	17,200	22,500	23,500	27,000	28,000	29,500	10.3%
Jones Road	E of Narcoossee Rd	927074	1,350	N/A	400	400	800	800	800	500	500	500	1,850	3.7%
Boggy Creek Road	W of Narcoossee Rd.	927050	6,400	6,300	6,300	7,500	7,700	8,500	8,700	9,100	10,400	10,700	10,300	6.1%
US 192	E of Narcoossee Rd	920255	22,000	21,500	20,400	19,500	24,500	23,500	24,500	28,000	29,000	30,000	29,000	3.2%

These historical traffic volumes are plotted in **Figure 3-3**. Traffic growth on the higher volume collectors and arterials is evident, especially on Narcoossee Road and US 192, and growth on the lower volume minor collectors and local roads is relatively flat, specifically on Nova Road and Pine Grove Road.

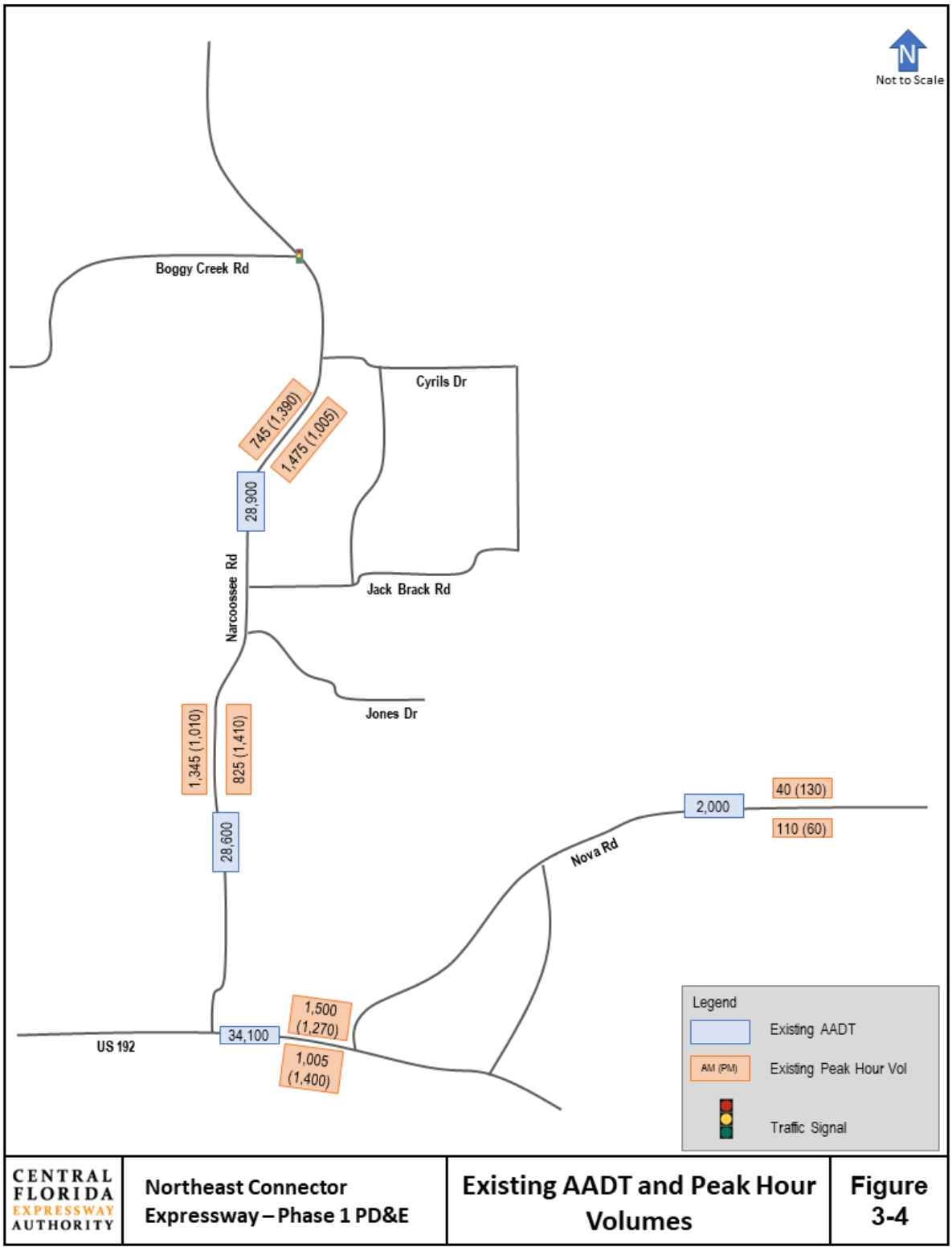
Figure 3-3. Historic AADT in Study Area



3.3.2 Average Annual Daily Traffic

As the NEC originates from a proposed facility and terminates at an existing facility, Nova Road, the existing AADTs in the study area are comprised only of Nova Road. The daily traffic volumes from the count location were used to develop existing (2020) AADT for Nova Road in the traffic study area, shown on **Figure 3-4**.

Figure 3-4. Existing AADT and Peak-Hour Volumes



3.3.3 Traffic Peaking and Directionality Characteristics

Table 3-4 contains peaking (K) and directional (D) factors for the AM and PM peak-hours, developed for roadway segments in the project area from the traffic counts taken as part of the data collection effort in January 2021.

Table 3-4. K and D Factors

Location	Direction	Peak Hour		Daily	AADT	D-Factor AM Peak	D-Factor PM Peak	K-Factor AM Peak	K-Factor PM Peak
		AM	PM						
Narcoossee Rd N of Jack Brack	NB	1,477	1,004	15,009	28,900	67%	42%	7.6%	8.2%
	SB	744	1,392	14,379		33%	58%		
Narcoossee Rd S of Jones Road	NB	823	1,410	14,543	28,600	38%	58%	7.4%	8.2%
	SB	1,346	1,008	14,894		62%	42%		
Jack Brack Rd E of Narcoossee	EB	179	232	2,508	5,000	48%	55%	7.3%	8.3%
	WB	194	191	2,619		52%	45%		
US 192 b/w Narcoossee Rd & Nova Rd	EB	1,006	1,397	17,220	34,100	40%	52%	7.2%	7.7%
	WB	1,502	1,270	17,530		60%	48%		
Nova Rd N of US 192	NB	200	405	4,271	8,600	32%	54%	7.0%	8.5%
	SB	417	343	4,563		68%	46%		
Nova Rd E of Rockwood Rd	EB	110	57	985	2,000	74%	30%	7.5%	9.5%
	WB	39	132	998		26%	70%		

The peak directions, identified by the greater D-Factor, are highlighted in red. The K-Factors on the local roads in the study area range from 7.0 to 7.6 percent in the AM Peak to 7.7 to 9.5 percent in PM Peak. These lower values reflect the rural nature of the study area. The D-factors in the study area range from a high of 74 percent during the AM Peak and 70 percent during the PM Peak. For Narcoossee Road, the peak direction is northbound in the AM Peak and southbound in the PM Peak from Jack Brack Road north – or heading to Orlando, but switches to southbound in the AM peak and northbound in the PM peak south of Jones Road – or heading to St. Cloud. A similar phenomenon occurs on Nova Road, closer to US 192 the AM peak is westbound and PM peak is eastbound, but past the Fort Hill Road the AM peak is eastbound and PM peak is westbound – or toward Brevard County. For both US 192 and Jack Brack Road the AM Peak is westbound and the PM peak is eastbound.

Truck factors were taken from vehicle classification data from the FTO for three locations: Narcoossee Road, US 192, and Nova Road. **Table 3-5** shows vehicle classification data on the existing facilities in the study area. Total truck percentages run between 4.6 and 15.8 percent, with Narcoossee Road having the lowest truck percentage and Nova Road having the highest, and an average of 6.4 percent total trucks, 3.9 percent for heavy trucks.

Table 3-5. Vehicle Classification

Count Location	Cosite	Passenger Vehicles	Total Trucks	Medium Trucks	Heavy Trucks
Narcoossee Road	927043	95.2%	4.6%	2.0%	2.6%
US 192	920302	91.6%	8.1%	3.0%	5.1%
Nova Road	928050	84.1%	15.8%	5.2%	10.6%
Study Area		**93.4%**	**6.4%**	**2.5%**	**3.9%**

Based on the observed traffic factors and guidance from the 2019 FDOT Project Traffic Forecasting Handbook, the following traffic factors, shown in **Table 3-6,** will be applied in future years:

Table 3-6. Traffic Factors for Future Year Analysis

Roadway	K-Factor	D-Factor	T-Factor
Northeast Connector Expressway	11%	60%	4%
Cross Streets and Local Roads	9%	55%	6%

While the K-Factor for the cross streets and local roads is the FDOT standard of nine percent, the NEC K-Factor is 11 percent. The K-Factor of 11 percent is used so that NEC is not under designed, as many recent CFX expansion projects have sustained 11 percent or more K-Factors (30th highest hour) for many years after opening, including the SR 429 and SR 414. The NEC, which will connect to the existing CFX expressway system, is in a high growth area that is set to develop over the next twenty years.

3.4 Traffic Operational Analysis

The purpose of this section is to establish current operational conditions within the traffic area of influence. This analysis employs LOS and v/c Ratio Analysis to evaluate existing daily and peak-hour conditions on roadway segments and Synchro Analysis to assess existing peak-hour conditions at intersections.

3.4.1 Roadway Segments

The volume to capacity ratio at the adopted LOS for all roadway segments in the study area are shown in **Table 3-7**. The LOS "D" daily volumes (or capacities) come from the 2020 FDOT Quality/Level of Service Generalized Tables, Daily and Peak-Hour Directional Volumes for Florida's Urbanizing Areas - State Signalized Arterials (Class I). The v/c ratios presented are for traffic volumes during the day (Daily), morning peak-hour (AM Peak), and evening peak-hour (PM Peak). All of the segments operate at an acceptable v/c ratio, less than 1, with Narcoossee Road north of Jack Brack Road operating at a 0.80 v/c ratio for daily traffic and between a 0.70 and 0.74 in the peak hours.

Table 3-7. 2020 Performance of Existing Roadway Segments

Location	Facility Type	Lanes	LOS "D" Service Volume		Volume			Volume to capacity		
			Daily 2-Way	Peak Hour Peak Dir	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak
Narcoossee Road, N of Jack Brack Rd	Class 1 Arterial	4L	35,800	2,000	28,900	1,475	1,390	0.81	0.74	0.70
Narcoossee Road, S of Jones Road	Class 1 Arterial	4L	35,800	2,000	28,600	1,345	1,410	0.80	0.67	0.71
US 192, b/n Narcoossee Rd & Nova Rd	Class 1 Arterial	6L	59,900	3,020	34,100	1,500	1,400	0.57	0.50	0.46
Nova Road, E of Rockwood Drive	Class 1 Arterial	2L	14,580	667	2,000	110	130	0.14	0.16	0.19

Source: 2020 FDOT Quality/Level of Service Generalized Service Volume Tables – Urbanizing Area, Adjusted for Non-State Signalized Roadway (-10%)

4. Development of Future Year Traffic Forecast

This chapter contains a brief description of the travel demand model and the 2045 design traffic forecasts for the corridors evaluated.

4.1 Model Development

CDM Smith used the latest version of the CFX travel demand model with a validation year of 2017 and forecast years of 2025 and 2045. This is a regional daily model with a disaggregated zone structure and supporting network in the study area. This section contains a brief description of the base year validation and future year travel demand model.

4.1.1 Base Year Model (2017)

Design traffic for the NEC Phase 1 PD&E Study was forecasted using version CFX Model PPE_SP developed for the purpose of evaluating the proposed Poinciana Parkway Extension (PPE) and Southport Connector Expressway (SP). This version of the model incorporates all of the most recent model updates for these project studies and provides continuity between the traffic forecasts.

This version of the CFX Model is from a previous study and based on the Central Florida Regional Planning Model (CFRPM) v6.1 model. CFX Model PPE_SP was validated for a 2017 base year with a concentration on the sub-area of Orange and Osceola Counties. The full model covers all of Orange, Seminole, Osceola, Lake, Sumter, Marion, Volusia, Flagler, and Brevard Counties, as well as connected portions of Polk and Indian River County. Since this project is a continuation or extension, the SR 534 revenue highway network was included in the 2017 base year calibrated model to ensure consistency between the traffic forecasts for SR 534 and NEC. The networks and zones were checked to ensure consistency with existing development patterns.

4.1.2 Socioeconomic Data

The CFX Model PPE_SP uses the base-year socio-economic data set for 2017 developed by Fishkind and Associates (FKA) for the Concept, Feasibility and Mobility (CF&M) studies completed for the Osceola County Expressway Authority (OCX) Master Plan projects by CFX in 2018. FKA was employed to develop socioeconomic data for the entirety of Osceola County and a portion of Orange County. The data included population, dwelling units/households, school enrollment, and employment control totals for the 2017 base year, as well as provide 2025, 2035, and 2045 forecasts, for modeling purposes. The base year reevaluation for these two counties was completed using historical population and employment growth rates, property appraiser parcel data, Florida Department of Business and Professional Regulation licensure data, Department of Education data, Woods & Poole data, and DataStory, a third party GIS data service that provides historical socioeconomic data estimates to develop estimates of population, housing units, employment, school enrollment, and hotel/units at a county control total level.

4.1.3 Base Year Model Network

As stated previously, the base year network was carried over from the model developed to evaluate the SR 534 project. The network was checked for correct area and facility types, speeds, and capacities and lanes. There were no changes of note to the base year model.

4.1.4 Base Year Model Validation

Since a previously validated model was used for this study, there was not revalidation effort for this project. The model was run and checked to ensure that model volumes generated were reasonable to the 2017 traffic counts in the study area. **Table 4-1** presents the 2017 counts and 2017 base year model volumes with the volume to count ratio. This model consistently loads more traffic on East-West running facilities between Orange and Osceola Counties and Brevard County, as shown in the higher volume to count ratios on US 192 and Nova Road. For the roads in the project area, the overall volume to count ratio is 1.06, which is close to 1.0 and within an acceptable range.

Table 4-1. Base Year Model Volume to Count Ratio

Roadway	Location	2017 Count	2017 Model	Volume to Count
US 192	E of Narcoossee Rd	28,000	33,200	1.19
Nova Rd	N of US 192	3,900	8,200	2.10
Nova Rd	E of Eden Dr	1,600	2,600	1.63
Pine Grove Rd	N of Bass Rd	650	1,200	1.85
Jones Rd	E of Narcoossee Rd	500	600	1.20
Narcoossee Rd	US-192 to Rummell Rd	22,000	17,700	0.80
Narcoossee Rd	Jones Rd to Boggy Creek Rd	23,500	26,700	1.14
Narcoossee Rd	2 miles N of Boggy Creek Rd	35,500	31,700	0.89
Boggy Creek Rd	W to Narcoossee Rd	9,100	10,300	1.13
Study Area Total		124,750	132,200	1.06

4.2 Future Year Models (2025 and 2045)

By starting with the CFX Model PPE_SP, the future year model retains all the updates and enhancements created for previous models and with additional base year model improvements in the Study Area. The design traffic opening forecast year is set to 2025 and the horizon forecast year is set to 2045, consistent with the requirements for CFX Projects. Loaded network plots of the 2025 and 2045 No-Build and Build Conditions are provided in **Appendix C.**

4.2.1 Socioeconomic Forecasts

New independent socioeconomic forecasts of population, school enrollment, and employment were developed by FKA for the entirety of Osceola County and a portion of Orange County for the CF&M studies completed in 2018 and are also incorporated into this project model. FKA considered the historical growth rates, as well as published forecasts from the Bureau of Economic and Business Research (BEBR) and Woods & Poole to develop forecasts of population at a county control total level.

Employment control total forecasts were estimated in a similar fashion, using Woods & Poole, ESRI, and Data Story sources. School enrollment forecasts were completed by geocoding the existing 2017 enrollments for K-12 students for public and private schools in the study area, analyzing the county-specific detailed age profile forecasts, estimating future control totals for each county, and allocating forecasted student enrollment based on each Traffic Analysis Zones' (TAZ) share of the current student allocations. FKA used a land use allocation model to allocate the population and employment control total forecasts in the study area. FKA considered market characteristics including acres of developable vacant land, holding capacity of vacant land, developments of regional impact and other approved developments, utility, and transportation access proximity, surrounding land use compatibility, and other variables to determine the attractiveness of development. There were no changes in the socioeconomic data sets (ZDATA1 and ZDATA2 files) in this study.

4.2.2 Future Year Networks

The future year networks from the CFX Model PPE_SP were updated with the network from the model used in the CFX SR 534 PD&E Re-evaluation Study to incorporate the preferred alternative from that study. The network changes to the link attributes completed in the base year network were checked for additional updates needed in the future year networks to reflect planned improvements in the study area.

The future year networks in the model contain the transportation improvements identified in the CFX, FDOT, and county work programs, as well as the improvements included in the cost feasible plan from Metroplan Orlando's Long-Range Transportation Plan (LRTP) for year 2045. The 2045 network improvements of note include:

- New Expressway - SR 534 from SR 417 to Cyrils Drive
- 6-lane SR 417 from International Drive to SR 528
- 6-lane Narcoossee Road from Boggy Creek Road to US 192
- 4-lane Boggy Creek Road from Simpson Road to Narcoossee Road
- 4-lane Jack Brack Road Extension from Absher Road to Sunbridge Parkway
- New 2-lane Sunbridge Parkway from Cyrils Drive to Nova Road
- 4-lane Nova Road from US 192 to Deer Park Road

4.2.3 Tolls

CFX is the operator and developer of several toll roads in the Central Florida region. The NEC will be a toll facility with tolls collected electronically as customers pass through toll collection locations. Customers will pay with a transponder (E-PASS or one of several interoperable transponders) or through the video billing process, known as Pay by Plate. Recent CFX expansion projects, including the Wekiva Parkway, were planned to open with the standard toll rate of $0.18 per mile in 2016 dollars, with rates escalated at the rate of inflation with a minimum of 1.5 percent per year, in accordance with established CFX toll policies. For design traffic purposes, the assumed toll rate will be static and start at $0.18 per mile with a 1.5 percent escalation per year. To assess the impact of the proposed NEC project as a future toll facility, the forecasts were based on the use of a coefficient of toll (CTOLL). CTOLL is applied to all toll facilities in the model and is the conversion of cost (toll) to time, based upon average incomes in the

study area and is incorporated in the model as a time penalty. The model global model has a CTOLL Value of 0.06 or a value of time at $16.67 per hour.

The Build alternatives for the NEC were evaluated with and without tolls. The alternatives assumed two toll locations, one on the segment between Cyrils Drive and Jack Brack Road and one on the segment between Jack Brack Road and Nova Road. Segment-based tolling is a convenient way to analyze the project. Eventually, CFX will adopt a toll plan using a combination of mainline and ramp toll locations, limiting the number of toll locations customers encounter.

5. Alternatives Analysis

This section provides a description of the traffic analysis completed in the corridor analysis as well as the design traffic for the preferred corridor alternative. A No-Build and Build condition are presented for opening year 2025 and horizon year 2045. This section also provides the AADT and DDHV for the preferred alternative, including operational analysis for the segments and intersections.

5.1 Corridor Analysis

As an expansion facility, two potential corridors were developed by the PD&E Study team. Corridor A and Corridor B were evaluated, both of which commence at the proposed terminus of the SR 534 project at Cyrils Drive and continue south terminating at different locations on Nova Road. Corridor A is located on the west side of Lake Myrtle and Lake Joel, crossing the C-32C Canal south of Lake Joel. Corridor B is the easternmost corridor on the west side of Lake Myrtle and the east side of Lake Joel crossing the C-32C Canal north of Lake Joel. Both options would complete the interchange at Cyrils Drive and introduce a new full interchange at the proposed Jack Brack Road Extension and a partial interchange at Nova Road.

Early in the study, a preliminary version of the 2045 travel demand model was run for the two corridors under a tolled condition. The two corridors attracted a similar amount of future year traffic, but Corridor A had a slightly higher future traffic volume than Corridor B. The evaluation of corridor performance between the options was completed using the weighted average daily traffic. This is calculated as the sum-product of segment Average Daily Traffic (ADT) and length (miles) divided by the length of the corridor. The model volumes for each segment and the average weighted ADT by corridor are presented in **Table 5-1.** In addition, Osceola County representatives requested that Jack Brack Road be analyzed as a two-lane and four-lane facility to determine future improvement needs. This analysis is documented in **Appendix D**.

Table 5-1. Corridor Analysis – Average Weighted ADT

Segments	NEC	
	Corridor A	Corridor B
Cyrils Dr to Jack Brack Rd	30,500	29,600
Jack Brack Rd to Nova Rd (CR 532)	19,300	10,300
Average Weighted ADT	24,100	17,400

In addition to the Jack Brack Road analysis, a Capacity Analysis for Planning of Junctions (CAP-X) analysis was completed on two alternative design options for the Jack Brack Road interchange, due to some right-of-way constraints on the southside of the interchange. CAP-X is a Federal Highway Administration tool to consider the traffic operations of different interchange designs. The two alternatives considered were a diamond and partial cloverleaf (PAR-CLO) as shown in **Figures 5-1** and **5-2**. The CAP-X tool did not have the exact PAR-CLO design considered for the Jack Brack interchange, so CDM Smith followed the procedures to develop an alternative design. The results of the CAP-X are presented in **Table 5-2**. The results indicate that either interchange design will operate at acceptable volume to capacity ratio on the ramps.

Figure 5-1. Diamond Concept at Jack Brack Road

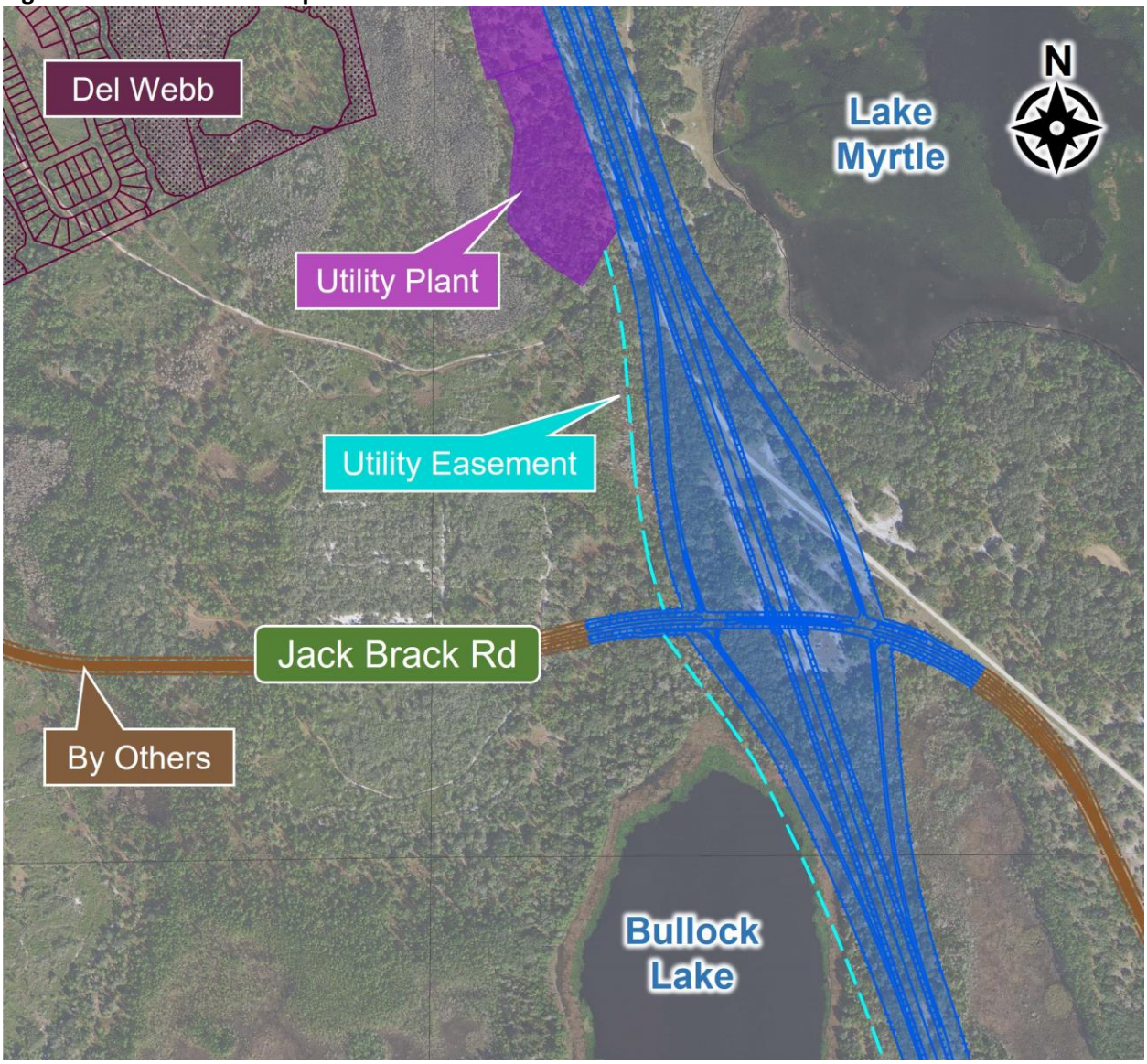


Figure 5-2. PAR-CLO Concept at Jack Brack Road

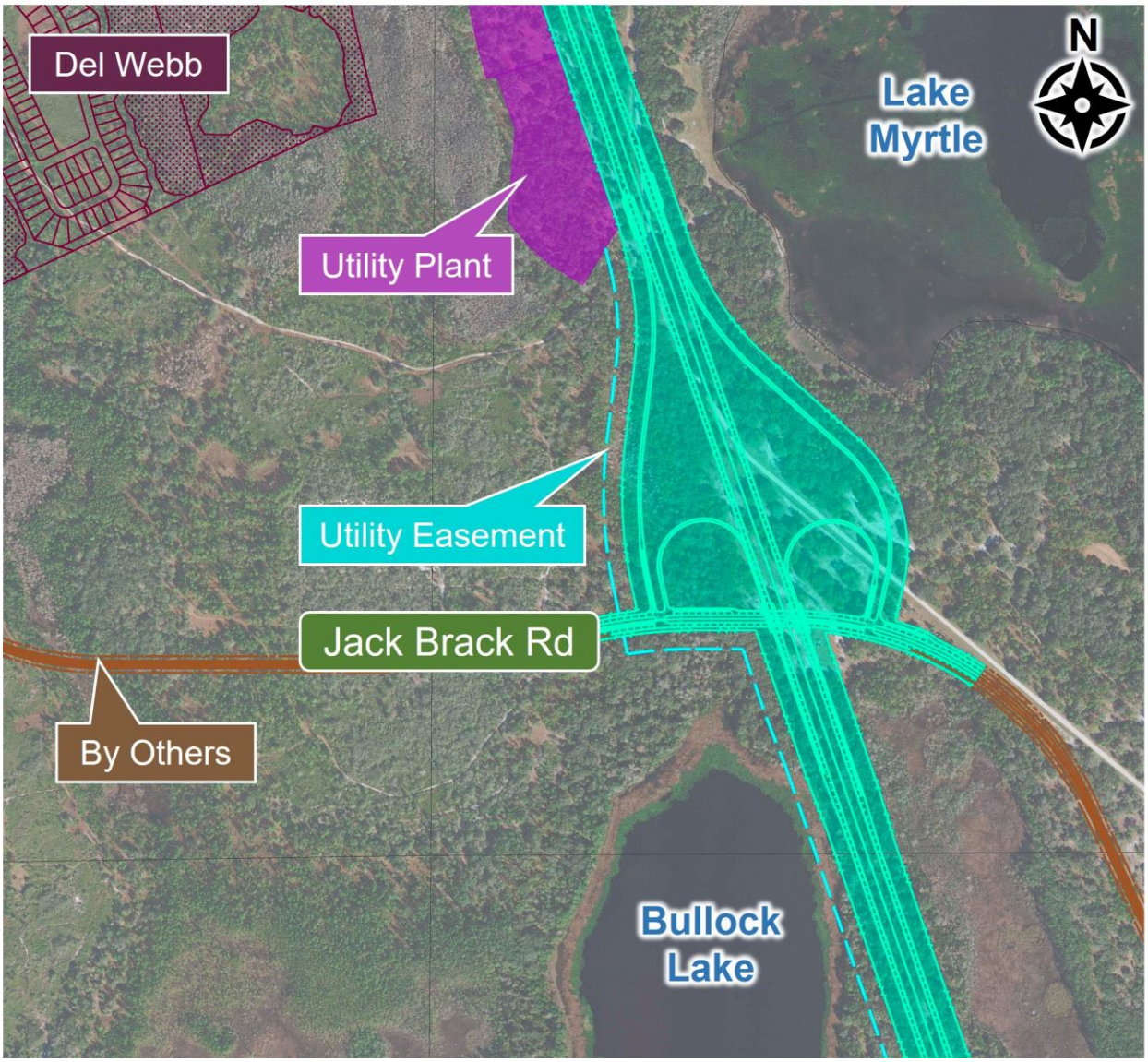
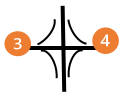
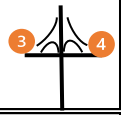
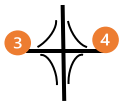


Table 5-2. Jack Brack Road Interchange CAP-X Analysis

Period	Capacity Analysis for Planning Junctions (CAP-X)				
	Type of Interchange		Zone	V/C	Final V/C
AM- Peak		Diamond	Zone 3	0.52	**0.54**
			Zone 4	0.54	
		Partial Cloverleaf	Zone 3	0.53	**0.53**
			Zone 4	0.53	
PM - Peak		Diamond	Zone 3	0.53	**0.53**
			Zone 4	0.53	
		Partial Cloverleaf	Zone 3	0.52	**0.54**
			Zone 4	0.54	

With the preliminary analysis considered, the project team selected the diamond interchange configuration at the Jack Brack Road Interchange as the preferred alternative to move forward to with for the remainder of the design traffic. Analysis results are provided in **Appendix E**.

5.2 Daily Traffic Forecasts and LOS

The daily traffic forecasts were developed as AADT for the traffic forecast years 2025 and 2045. Forecasts were developed for both No-Build and Build conditions. The travel demand model developed to forecast daily traffic is described in detail in Section 4.1. **Figure 5-3** and **Figure 5-4** provide AADT for the 2025 No-Build and Build conditions for the preferred alternative, respectively, and **Figure 5-5** and **Figure 5-6** provide AADT for the 2045 No-Build and Build conditions, respectively, for the preferred alternative. A model output adjustment factor (MOCF) of 0.98 for Osceola County was used as prescribed by the FDOT Project Forecasting Handbook.

Figure 5-3. 2025 No-Build AADT

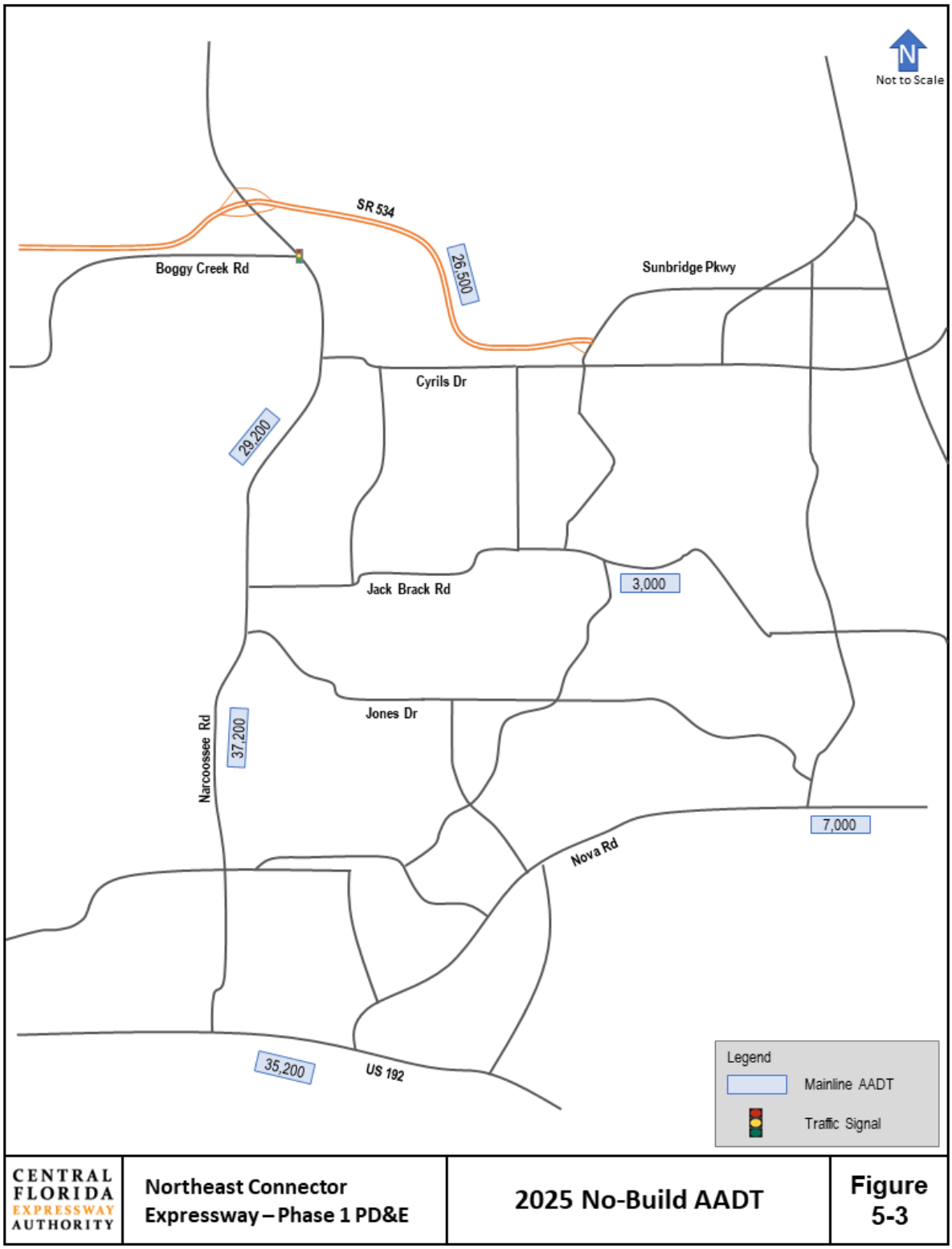


Figure 5-4. 2025 Build AADTs

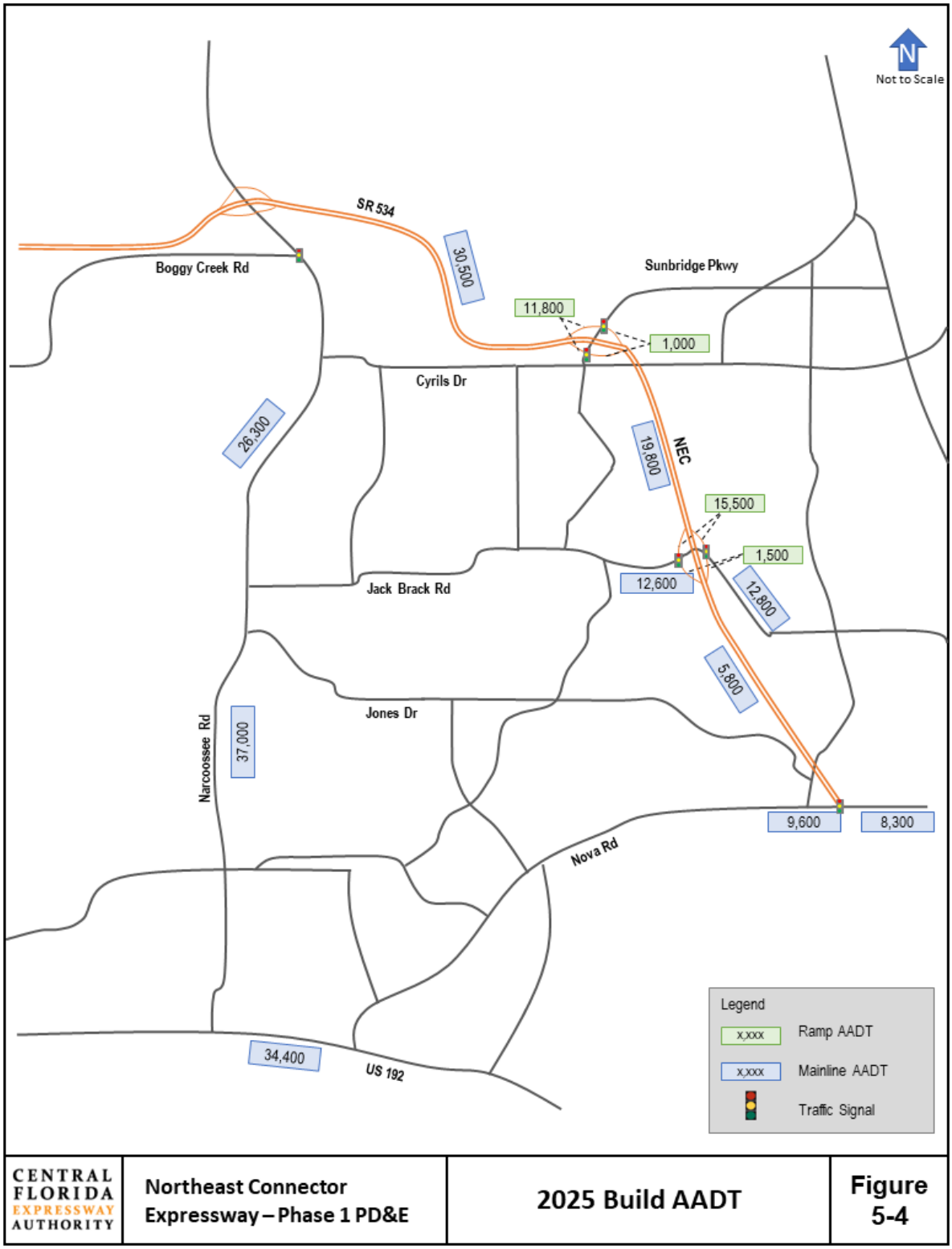


Figure 5-5. 2045 No Build AADTs

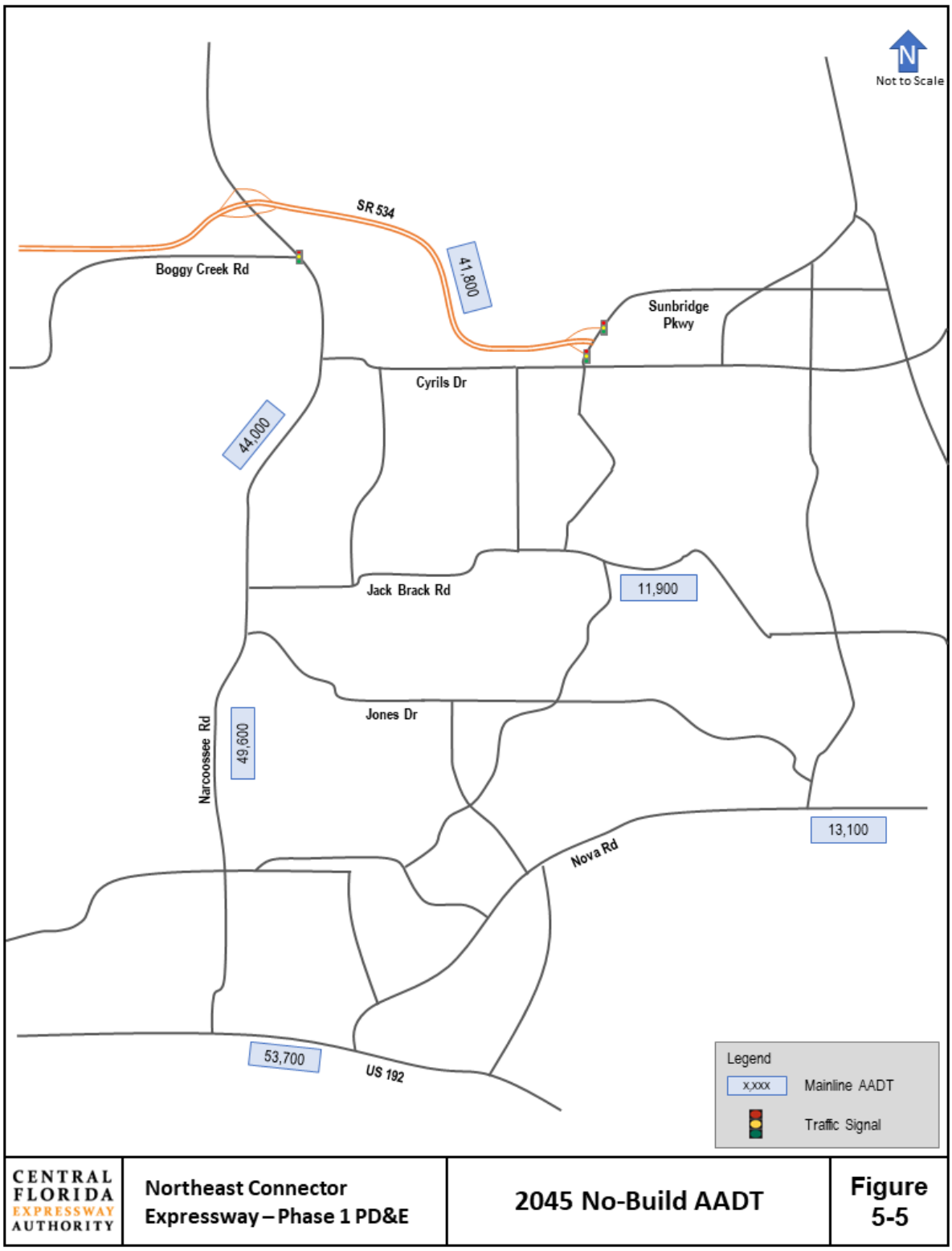
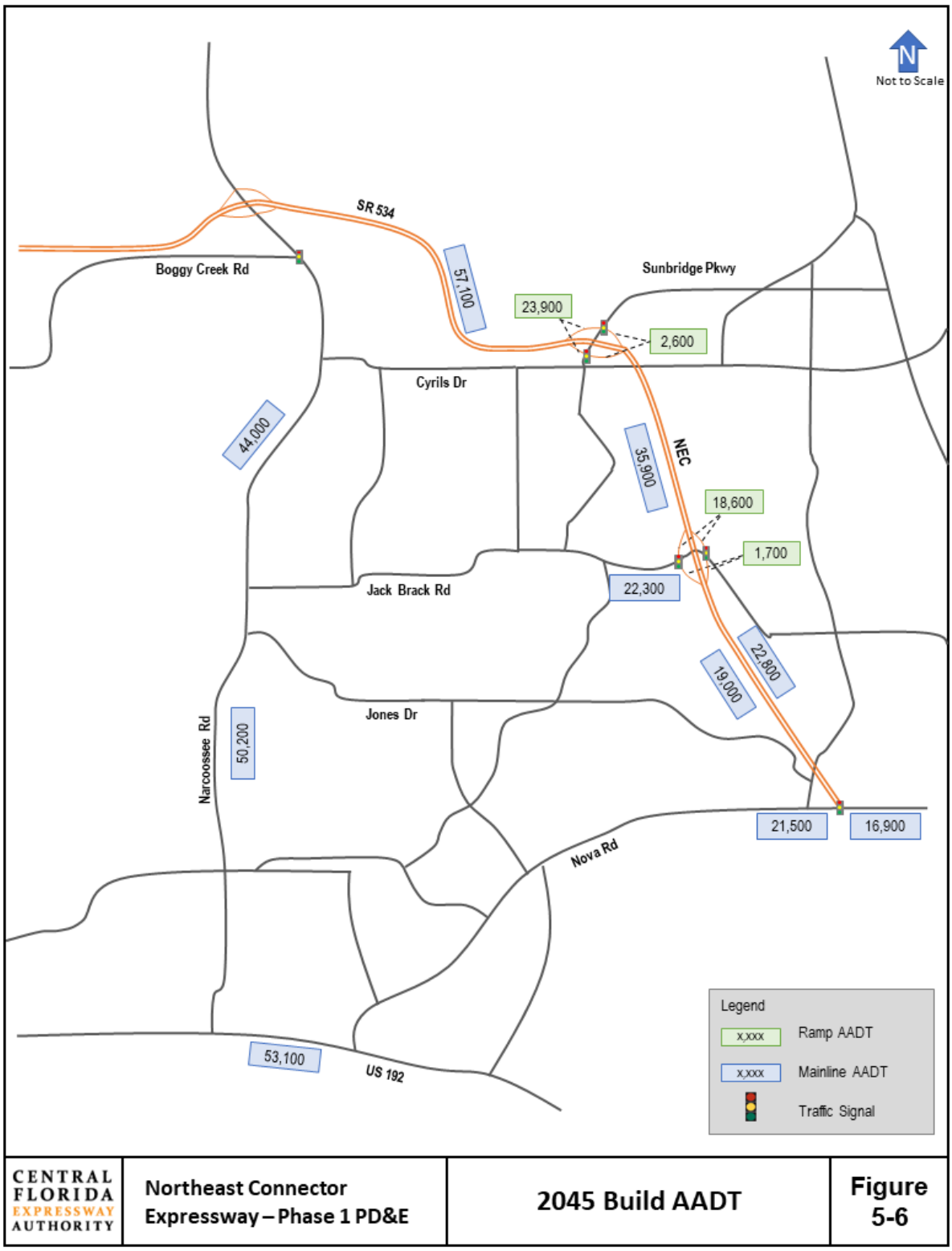


Figure 5-6. 2045 Build AADTs



It should be noted that model volumes were converted from peak-season average weekday traffic (PSAWDT) to AADT using the model output conversion factor of 0.98.

The daily roadway segment LOS analysis was conducted for the No-Build and Build conditions using the 2020 FDOT Quality and Level of Service Handbook Generalized service volumes tables. A summary of 2025 and 2045 No-Build daily volumes and LOS are provided in **Table 5-3,** and 2025 and 2045 Build daily volumes and LOS are provided in **Table 5-4**. The expressway sections are shaded in light blue.

Table 5-3. 2025 & 2045 No-Build AADT and LOS

Location	Type	2025 No-Build					2045 No-Build				
		Lanes	LOS D	AADT	V/C Ratio	LOS	Lanes	LOS D	AADT	V/C Ratio	LOS
SR 534, Narcoossee to Sunbridge Pkwy	Freeway	4	83,200	26,500	0.32	B	4	83,200	41,800	0.50	B
SR 534 Sunbridge Ramps to/from West	Freeway	1	n/a	26,500			1	n/a	41,800		
NEC Sunbridge Ramps to/from East	Freeway		n/a	-				n/a	-		
NEC, Sunbridge Pkwy to Jack Brack Rd	Freeway		n/a	-				n/a	-		
NEC Jack Brack Ramps to/from North	Freeway		n/a	-				n/a	-		
NEC Jack Brack Ramps to/from South	Freeway		n/a	-				n/a	-		
NEC, Jack Brack Rd to Nova Rd	Freeway		n/a	-				n/a	-		
NEC Nova Rd Ramps to/from North	Freeway		n/a	-				n/a	-		
Jack Brack Rd, W of NEC	Class 1 Art	1	15,900	3,000	0.19	C	2	35,800	11,900	0.33	C
Jack Brack Rd, E of NEC	Class 1 Art	1	15,900	3,000	0.19	C	2	35,800	11,900	0.33	C
Nova Rd, W of NEC	Class 1 Art	1	15,900	7,000	0.44	C	2	35,800	13,100	0.37	C
Nova Rd, E of NEC	Class 1 Art	1	15,900	7,000	0.44	C	2	35,800	13,100	0.37	C
Narcoossee Rd, N of Jack Brack Rd	Class 1 Art	2	39,800	29,200	0.73	C	2	39,800	44,000	1.11	F
Narcoossee Rd, S of Jones Rd	Class 1 Art	2	39,800	37,200	0.93	C	2	39,800	49,600	1.25	F
US 192 b/w Narcoossee Rd & Nova Rd	Class 1 Art	3	59,900	35,200	0.59	C	3	59,900	53,700	0.90	C

Table 5-4. 2025 & 2045 Build AADT and LOS

Location	Type	2025 Build					2045 Build				
		Lanes	LOS D	AADT	V/C Ratio	LOS	Lanes	LOS D	AADT	V/C Ratio	LOS
SR 534, Narcoossee to Sunbridge Pkwy	Freeway	4	83,200	30,500	0.37	B	4	83,200	57,100	0.69	C
SR 534 Sunbridge Ramps to/from West	Freeway	1	n/a	11,800			1	n/a	23,900		
NEC Sunbridge Ramps to/from East	Freeway	1	n/a	1,000			1	n/a	2,600		
NEC, Sunbridge Pkwy to Jack Brack Rd	Freeway	4	83,200	19,800	0.24	B	4	83,200	35,900	0.43	B
NEC Jack Brack Ramps to/from North	Freeway	1	n/a	15,500			1	n/a	18,600		
NEC Jack Brack Ramps to/from South	Freeway	1	n/a	1,500			1	n/a	1,700		
NEC, Jack Brack Rd to Nova Rd	Freeway	4	83,200	5,800	0.07	B	4	83,200	19,000	0.23	B
NEC Nova Rd Ramps to/from North	Freeway	1	n/a	5,800			1	n/a	19,000		
Jack Brack Rd, W of NEC	Class 1 Art	2	35,800	12,600	0.35	C	2	35,800	22,300	0.62	C
Jack Brack Rd, E of NEC	Class 1 Art	2	35,800	12,800	0.36	C	2	35,800	22,800	0.64	C
Nova Rd, W of NEC	Class 1 Art	1	35,800	9,600	0.27	C	2	35,800	21,500	0.60	C
Nova Rd, E of NEC	Class 1 Art	1	35,800	8,300	0.23	C	2	35,800	16,900	0.47	C
Narcoossee Rd, N of Jack Brack Rd	Class 1 Art	2	39,800	26,300	0.66	C	2	39,800	44,000	1.11	F
Narcoossee Rd, S of Jones Rd	Class 1 Art	2	39,800	37,000	0.93	C	2	39,800	50,200	1.26	F
US 192 b/w Narcoossee Rd & Nova Rd	Class 1 Art	3	59,900	34,400	0.57	C	2	59,900	53,100	0.89	C

As shown in the tables, all the roadway segments on the local road network in the No-Build condition are expected to operate at LOS C or better in 2025 and 2045, except for Narcoossee Road, which is over capacity for a 4-lane Class 1 Arterial in 2045. The SR 534 is forecasted to operate at LOS B in both 2025 and 2045. Under the Build condition, the local roadway segments are expected to operate at LOS C or

better in 2025 and 2045, except for Narcoossee Road, which is over capacity for a 4-lane Class 1 Arterial in 2045. The SR 534 and NEC are forecasted to operate at LOS C or better in both 2025 and 2045.

5.3 Design-Hour Traffic Forecasts and LOS

The DDHV for the traffic forecast years 2025 and 2045 were developed for both No-Build and Build conditions. DDHV were developed using the K and D factors (described in Section 3.3.3) along with the forecasted AADTs (described and shown in Section 5.2.)

The DDHVs for 2025 design year conditions are presented in **Figure 5-7** and **Figure 5-8,** respectively. Figure 5-7 is a summary of the 2025 No-Build condition DDHVs. Figure 5-8 presents the 2025 DDHVs under the Build condition. The DDHVs for 2045 horizon year conditions are presented in **Figure 5-9** and **Figure 5-10,** respectively. Figure 5-9 is a summary of the 2045 No-Build condition DDHVs. Figure 5-10 presents the 2045 DDHVs under the Build condition.

Figure 5-7. 2025 No-Build DDHV

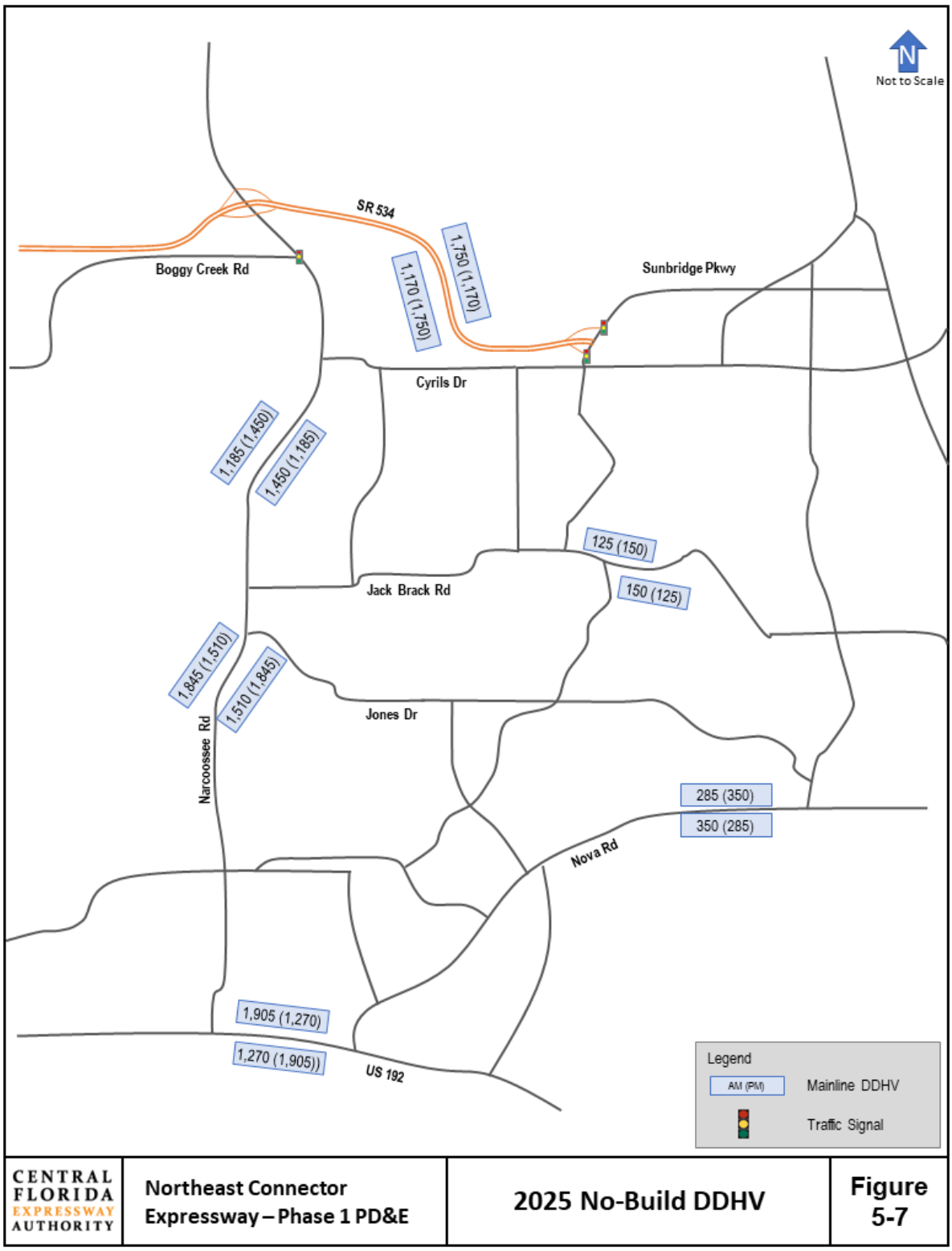


Figure 5-8. 2025 Build DDHV

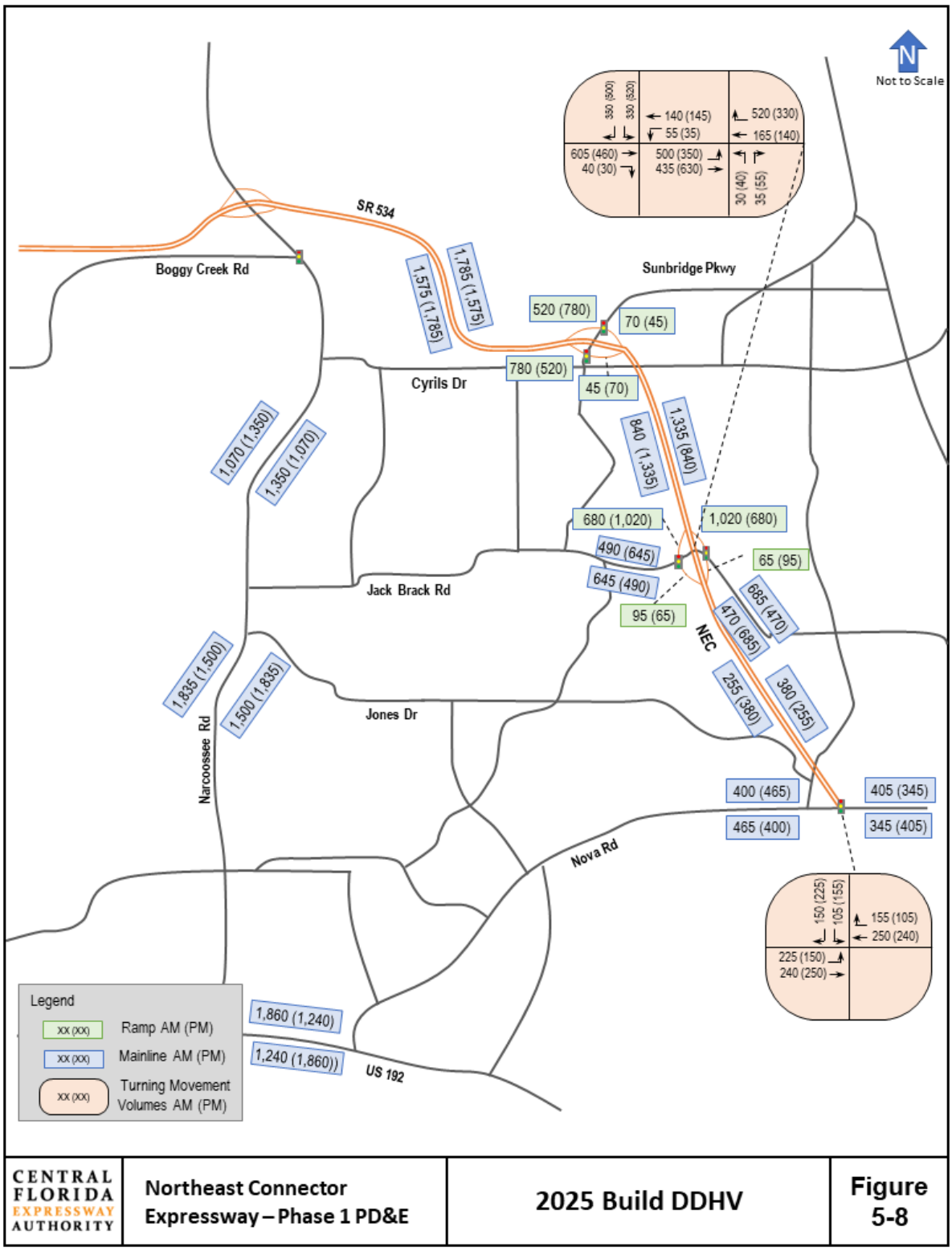


Figure 5-9. 2045 No-Build DDHV

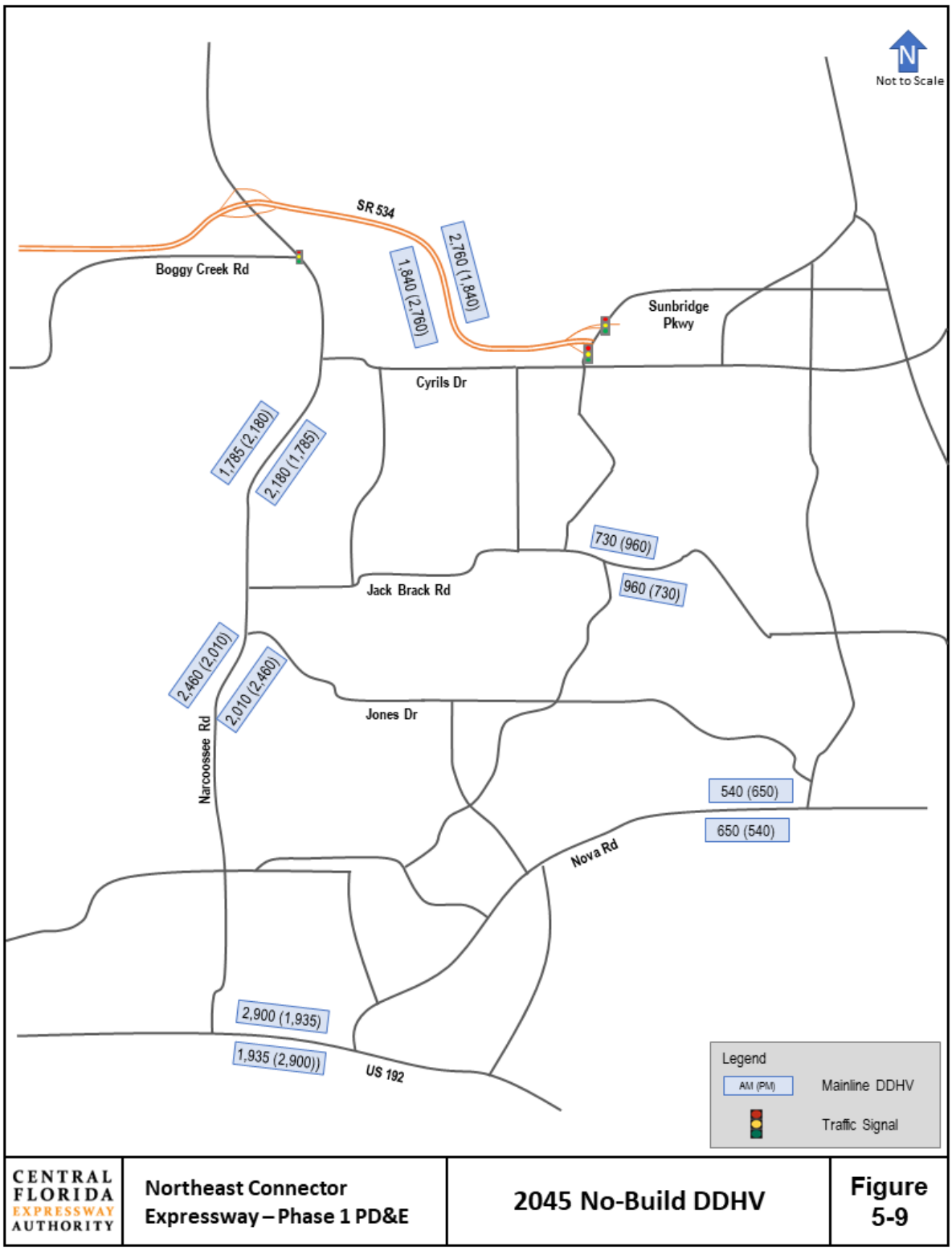
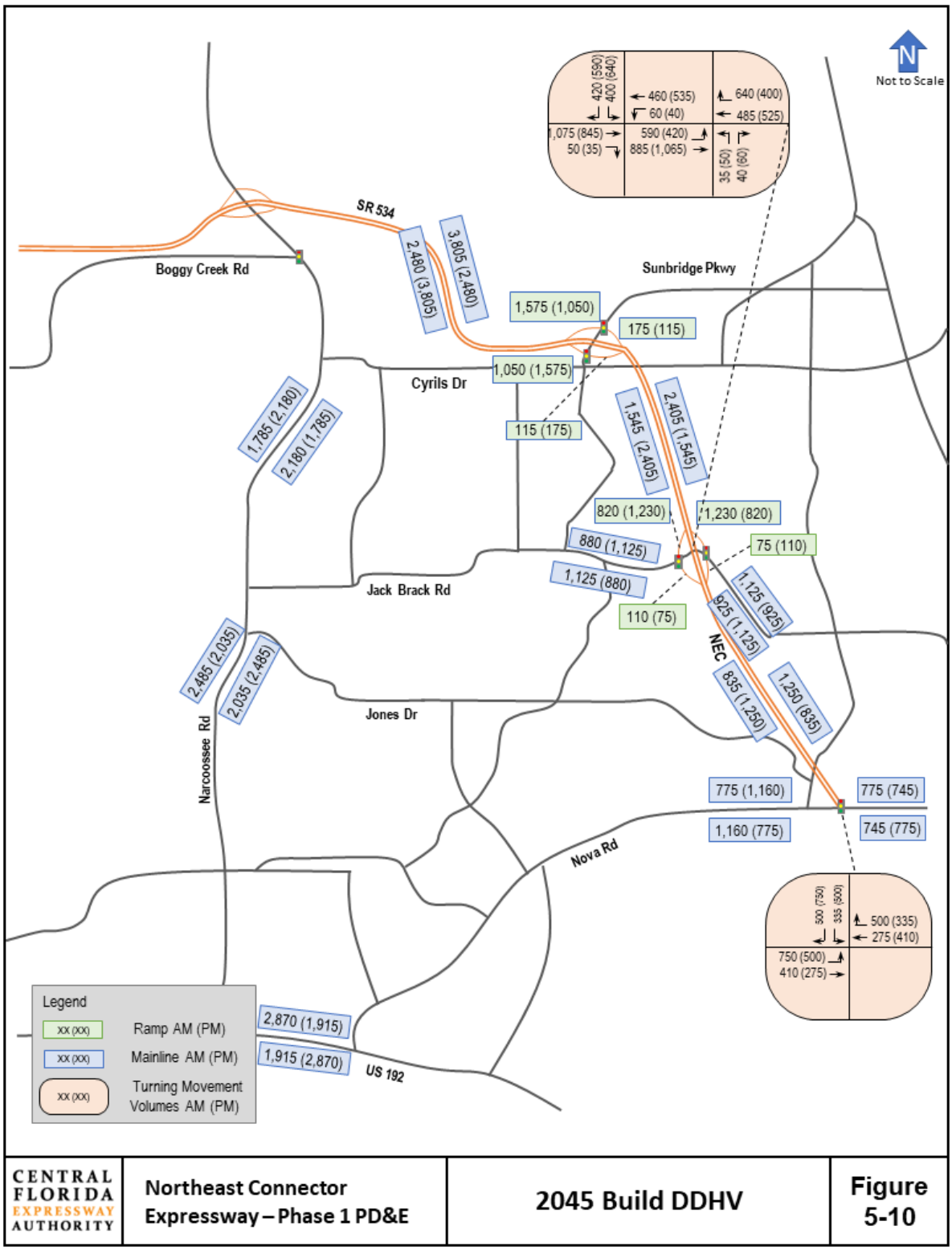


Figure 5-10. 2045 Build DDHV



The roadway segment LOS analysis was conducted in the AM Peak and PM Peak Hours for the No-Build and Build conditions using the projected DDHVs and the 2020 FDOT Quality and Level of Service Handbook Generalized service volume tables. A summary of No-Build Peak-Hour Segment LOS is provided in **Table 5-5** and Build Peak-Hour Segment LOS is provided in **Table 5-6** for the year 2045.

As shown in the tables, NEC is projected to operate at LOS B in 2025 under Build conditions during the peak-hour/peak-direction, which is assumed as two-lanes in each direction. The local roads in the study area are projected to operate at LOS C in both AM and PM Peak Hours. In 2045 under the Build condition, the NEC is projected to operate at LOS B, while the SR 534 is projected to operate at LOS E in the NB direction in AM Peak Hour and the SB direction in the PM Peak Hour. Again, the local roads are projected to operate at LOS C in the peak hours in 2045.

Table 5-5. 2025 & 2045 No-Build DDHV and LOS

Location	Type	2025 No-Build								2045 No-Build							
		Lanes	LOS D	AM Peak	V/C Ratio	LOS	PM Peak	V/C Ratio	LOS	Lanes	LOS D	AM Peak	V/C Ratio	LOS	PM Peak	V/C Ratio	LOS
SR 534, Narcoossee to Sunbridge Pkwy	NB	2	3,740	1,750	0.47	B	1,170	0.31	B	2	3,740	2,760	0.74	C	1,840	0.49	B
	SB	2	3,740	1,170	0.31	B	1,750	0.47	B	2	3,740	1,840	0.49	B	2,760	0.74	C
SR 534 Sunbridge Ramps to/from West	WB	1	n/a	1,750			1,170			1	n/a	2,760			1,840		
	EB	1	n/a	1,170			1,750			1	n/a	1,840			2,760		
NEC Sunbridge Ramps to/from East	WB		n/a	-			-				n/a	-			-		
	EB		n/a	-			-				n/a	-			-		
NEC, Sunbridge Pkwy to Jack Brack Rd	NB		n/a	-			-				n/a	-			-		
	SB		n/a	-			-				n/a	-			-		
NEC Jack Brack Ramps to/from North	NB		n/a	-			-				n/a	-			-		
	SB		n/a	-			-				n/a	-			-		
NEC Jack Brack Ramps to/from South	NB		n/a	-			-				n/a	-			-		
	SB		n/a	-			-				n/a	-			-		
NEC, Jack Brack Rd to Nova Rd	NB		n/a	-			-				n/a	-			-		
	SB		n/a	-			-				n/a	-			-		
NEC Nova Rd Ramps to/from North	NB		n/a	-			-				n/a	-			-		
	SB		n/a	-			-				n/a	-			-		
Jack Brack Rd, W of NEC	EB	1	790	150	0.19	C	125	0.16	C	2	1,800	590	0.33	C	485	0.27	C
	WB	1	790	125	0.16	C	150	0.19	C	2	1,800	485	0.27	C	590	0.33	C
Jack Brack Rd, E of NEC	EB	1	790	125	0.16	C	150	0.19	C	2	1,800	485	0.27	C	590	0.33	C
	WB	1	790	150	0.19	C	125	0.16	C	2	1,800	590	0.33	C	485	0.27	C
Nova Rd, W of NEC	EB	1	790	350	0.44	C	285	0.36	C	2	1,800	650	0.36	C	535	0.30	C
	WB	1	790	285	0.36	C	350	0.44	C	2	1,800	535	0.30	C	650	0.36	C
Nova Rd, E of NEC	EB	1	790	285	0.36	C	350	0.44	C	2	1,800	535	0.30	C	650	0.36	C
	WB	1	790	350	0.44	C	285	0.36	C	2	1,800	650	0.36	C	535	0.30	C
Narcoossee Rd N of Jack Brack	NB	2	2,000	1,450	0.73	C	1,185	0.59	C	2	2,000	2,180	1.09	F	1,785	0.89	C
	SB	2	2,000	1,185	0.59	C	1,450	0.73	C	2	2,000	1,785	0.89	C	2,180	1.09	F
Narcoossee Rd S of Jones Rd	NB	2	2,000	1,510	0.76	C	1,845	0.92	C	2	2,000	2,010	1.01	F	2,460	1.23	F
	SB	2	2,000	1,845	0.92	C	1,510	0.76	C	2	2,000	2,460	1.23	F	2,010	1.01	F
US 192 btw Narcoossee Rd & Nova Rd	EB	2	3,020	1,270	0.42	C	1,905	0.63	C	2	3,020	1,935	0.64	C	2,900	0.96	C
	WB	2	3,020	1,905	0.63	C	1,270	0.42	C	2	3,020	2,900	0.96	C	1,935	0.64	C

Table 5-6. 2025 & 2045 Build DDHV and LOS

Location	Type	2025 Build								2045 Build							
		Lanes	LOS D	AM Peak	V/C Ratio	LOS	PM Peak	V/C Ratio	LOS	Lanes	LOS D	AM Peak	V/C Ratio	LOS	PM Peak	V/C Ratio	LOS
SR 534, Narcoossee to Sunbridge Pkwy	NB	2	3,740	1,785	0.48	B	1,575	0.42	B	2	3,740	3,805	1.02	B	2,480	0.66	B
	SB	2	3,740	1,575	0.42	BC	1,785	0.48	B	2	3,740	2,480	0.66	B	3,805	1.02	B
SR 534 Sunbridge Ramps to/from West	WB	1	n/a	780			520			1	n/a	1,575			1,050		
	EB	1	n/a	520			780			1	n/a	1,050			1,575		
NEC Sunbridge Ramps to/from East	WB	1	n/a	70			45			1	n/a	175			115		
	EB	1	n/a	45			70			1	n/a	115			175		
NEC, Sunbridge Pkwy to Jack Brack Rd	NB	2	3,740	1,335	0.36	B	840	0.22	B	2	3,740	2,405	0.64	B	1,545	0.41	B
	SB	2	3,740	840	0.22	B	1,335	0.36	B	2	3,740	1,545	0.41	B	2,405	0.64	B
NEC Jack Brack Ramps to/from North	NB	1	n/a	1,020			680			1	n/a	1,230			820		
	SB	1	n/a	680			1,020			1	n/a	820			1,230		
NEC Jack Brack Ramps to/from South	NB	1	n/a	65			95			1	n/a	75			110		
	SB	1	n/a	95			65			1	n/a	110			75		
NEC, Jack Brack Rd to Nova Rd	NB	2	3,740	380	0.10	B	255	0.07	B	2	3,740	1,250	0.33	B	835	0.22	B
	SB	2	3,740	255	0.07	B	380	0.10	B	2	3,740	835	0.22	B	1,250	0.33	B
NEC Nova Rd Ramps to/from North	NB	1	n/a	380			255			1	n/a	1,250			835		
	SB	1	n/a	255			380			1	n/a	835			1,250		
Jack Brack Rd, W of NEC	EB	2	1,800	645	0.36	C	490	0.27	C	2	1,800	1,125	0.63	C	880	0.49	C
	WB	2	1,800	490	0.27	C	645	0.36	C	2	1,800	880	0.49	C	1,125	0.63	C
Jack Brack Rd, E of NEC	EB	2	1,800	470	0.26	C	685	0.38	C	2	1,800	925	0.51	C	1,125	0.63	C
	WB	2	1,800	685	0.38	C	470	0.26	C	2	1,800	1,125	0.63	C	925	0.51	C
Nova Rd, W of NEC	EB	2	1,800	465	0.26	C	400	0.22	C	2	1,800	1,160	0.64	C	775	0.43	C
	WB	2	1,800	400	0.22	C	465	0.26	C	2	1,800	775	0.43	C	1,160	0.64	C
Nova Rd, E of NEC	EB	1	790	285	0.36	C	350	0.44	C	2	1,800	535	0.30	C	650	0.36	C
	WB	1	790	350	0.44	C	285	0.36	C	2	1,800	650	0.36	C	535	0.30	C
Narcoossee Rd N of Jack Brack	NB	2	2,000	1,450	0.73	C	1,185	0.59	C	2	2,000	2,180	1.09	F	1,785	0.89	C
	SB	2	2,000	1,185	0.59	C	1,450	0.73	C	2	2,000	1,785	0.89	C	2,180	1.09	F
Narcoossee Rd S of Jones Rd	NB	2	2,000	1,510	0.76	C	1,845	0.92	C	2	2,000	2,010	1.01	F	2,460	1.23	F
	SB	2	2,000	1,845	0.92	C	1,510	0.76	C	2	2,000	2,460	1.23	F	2,010	1.01	F
US 192 btw Narcoossee Rd & Nova Rd	EB	2	3,020	1,270	0.42	C	1,905	0.63	C	2	3,020	1,935	0.64	C	2,900	0.96	C
	WB	2	3,020	1,905	0.63	C	1,270	0.42	C	2	3,020	2,900	0.96	C	1,935	0.64	C

5.3.1 DDHV Intersection Operations

The intersection LOS analysis using Synchro v.10 was conducted for the AM Peak and PM Peak Hours for each turning movement. Since the area is primarily undeveloped there are no project intersections in the No-Build condition. A summary of Build 2025 AM and PM Peak-Hour Intersection LOS are provided in **Table 5-7** and a summary of the 2045 AM and PM Peak-Hour Intersection LOS are provided in **Table 5-8**. For analysis purposes, the future intersection geometry at the arterial intersections assumes no changes to the existing condition geometry. The Synchro reports for 2045 No-Build and 2045 Build conditions are provided in **Appendix F.**

Table 5-7. 2025 Build AM and PM Peak-Hour Intersection LOS

2025														
Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	TOT
AM Peak														
NEC at Jack Brack Rd (NB Ramps)	Delay (sec/veh)	67.7	18.9			29.4	4.9	44.9		0.3				30.2
	LOS	E	B			C	A	D		A				C
NEC at Jack Brack Rd (SB Ramps)	Delay (sec/veh)		18.8	1.4	81.5	16.8					50.1		7.7	24.7
	LOS		B	A	F	B					D		A	C
NEC at Nova Rd	Delay (sec/veh)	39.1	10.1			30.2	5.5				31.5		6.2	21.2
	LOS	D	B			C	A				C		A	C
PM Peak														
NEC at Jack Brack Rd (NB Ramps)	Delay (sec/veh)	76.8	31			45.9	7.7	62.2		0.2				37.4
	LOS	E	C			D	A	E		A				D
NEC at Jack Brack Rd (SB Ramps)	Delay (sec/veh)		37.5	0.2	104.1	28.3					44.1		6.4	30.2
	LOS		D	A	F	C					D		A	C
NEC at Nova Rd	Delay (sec/veh)	43.2	14.9			33.2	6.7				25		4.4	21.1
	LOS	D	B			C	A				C		A	C

Table 5-8. 2045 Build AM and PM Peak-Hour Intersection LOS

2045														
Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	TOT
AM Peak														
NEC at Jack Brack Rd (NB Ramps)	Delay (sec/veh)	82.1	19.9			33.2	8.3	45.1		0.4				33.3
	LOS	F	B			C	A	D		A				C
NEC at Jack Brack Rd (SB Ramps)	Delay (sec/veh)		29.7	3.1	78.3	12.4					52.0		8.0	27.0
	LOS		C	A	F	B					D		A	C
NEC at Nova Rd	Delay (sec/veh)	42.5	9.0			34.5	7.3				38.4		7.5	23.6
	LOS	D	A			C	A				D		A	C
PM Peak														
NEC at Jack Brack Rd (NB Ramps)	Delay (sec/veh)	80.3	28.9			50.8	7.1	63.3		0.5				38.6
	LOS	F	C			D	A	E		A				D
NEC at Jack Brack Rd (SB Ramps)	Delay (sec/veh)		38.5	0.1	106.4	20.3					54.4		11.2	33.2
	LOS		D	A	F	C					D		B	C
NEC at Nova Rd	Delay (sec/veh)	53.8	19.5			46.6	8.3				22.9		13.4	27.3
	LOS	D	B			D	A				C		B	C

The Synchro Analysis shows that the ramp terminal intersections operate a LOS D or better in the AM and PM Peak Hours for 2045 using a single controller at the Jack Brack Road Interchange. The 50th and 95th percentile queue length for the 2025 and 2045 Build conditions are presented in **Table 5-9.**

Table 5-9. 50th and 95th Percentile Queue Lengths for 2025 and 2045 Build

2025													
Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Peak													
NEC at Jack Brack Rd (NB Ramps)	Queue Length 50th (ft)	257	104			56	0	24		0			
	Queue Length 95th (ft)	318	128			84	78	55		0			
NEC at Jack Brack Rd (SB Ramps)	Queue Length 50th (ft)		173	0	60	19					149		0
	Queue Length 95th (ft)		214	9	111	28					198		88
NEC at Nova Rd	Queue Length 50th (ft)	78	41			77	0				32		0
	Queue Length 95th (ft)	115	59			112	48				55		50
PM Peak													
NEC at Jack Brack Rd (NB Ramps)	Queue Length 50th (ft)	197	209			60	0	38		0			
	Queue Length 95th (ft)	253	247			93	85	78		0			
NEC at Jack Brack Rd (SB Ramps)	Queue Length 50th (ft)		186	0	39	25					226		0
	Queue Length 95th (ft)		237	0	80	37					285		92
NEC at Nova Rd	Queue Length 50th (ft)	54	53			78	0				42		0
	Queue Length 95th (ft)	86	76			114	43				66		52
2045													
Intersection		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
AM Peak													
NEC at Jack Brack Rd (NB Ramps)	Queue Length 50th (ft)	333	173			185	44	28		0			
	Queue Length 95th (ft)	397	197			235	177	60		0			
NEC at Jack Brack Rd (SB Ramps)	Queue Length 50th (ft)		420	0	65	41					185		0
	Queue Length 95th (ft)		495	18	119	51					240		96
NEC at Nova Rd	Queue Length 50th (ft)	282	66			92	6				117		0
	Queue Length 95th (ft)	356	89			131	101				161		95
PM Peak													
NEC at Jack Brack Rd (NB Ramps)	Queue Length 50th (ft)	237	393			248	0	48		0			
	Queue Length 95th (ft)	295	475			313	89	94		3			
NEC at Jack Brack Rd (SB Ramps)	Queue Length 50th (ft)		364	0	44	53					309		37
	Queue Length 95th (ft)		437	0	m47	76					381		183
NEC at Nova Rd	Queue Length 50th (ft)	200	67			160	0				135		139
	Queue Length 95th (ft)	263	96			215	82				178		326

m = Volume for 95th Percentile Queue is metered by upstream signal

6. Conclusion

The Preferred Corridor for the NEC Phase 1 project is Corridor A, which envisions a 4.3 mile-long, four-lane tolled expressway extension of the SR 534, from its terminus at Cyrils Drive to Nova Road in northeast Osceola County. In a predominately rural, undeveloped part of Osceola County, the NEC will serve the planned development known as the Northeast District. Adopted as an element of the Osceola County Comprehensive Plan, the Northeast District is a master-planned community covering over 17,000 acres.

The NEC Phase 1 project will introduce one full interchange at Jack Brack Road and a partial interchange (to and from the north) at Nova Road. To ensure adequate right-of-way is secured for future demand, the future interchange geometry is recommended for the new interchanges at Jack Brack Road and Nova Road to include:

- Dual exclusive left-turn lanes and single right-turn lane at the ramp termini,
- Dual exclusive left-turn lanes from cross street on to the receiving ramps, and
- On-ramps will need to accommodate two lanes of receiving traffic.

The traffic analysis shows that the NEC will help traffic conditions in the study area in the Build condition by handling between 19,000 and 35,900 AADT in 2045 that would have otherwise used the overburdened local arterials. The NEC provides an opportunity for high-speed north-south travel for the development of the Northeast District, consistent with the CFX 2040 Master Plan, and provides regional connectivity in this rapidly growing area of Osceola County.

APPENDIX

Appendix A
Traffic Counts Collected by FTE
FDOT Traffic Data

Appendix B

Northeast District Element,
Osceola County Comprehensive Plan

Appendix C
2045 Loaded Travel Demand Model Networks
No-Build and Build Conditions

Appendix D
Jack Brack Road – Two-lane versus
Four-lane Analysis Memo

Appendix E
CAP-X Analysis for Jack Brack Road Interchange

Appendix F
SYNCHRO Analysis
2025 Build AM Peak Conditions
2025 Build PM Peak Conditions
2045 Build AM Peak Conditions
2045 Build PM Peak Conditions

Appendix A

Data Collection - Traffic Counts
Florida Transportation Engineers

Florida Traffic Online Counts
Florida Department of Transportation

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 150404000000
Station ID: 921001111100
NARCOOSSEE RD N/O JACK BRACK RD

Start Time	26-Jan-21 Tue	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		16	209			34	185				
12:15		12	192			31	196				
12:30		14	200			16	195				
12:45		7	191	49	792	12	213	93	789	142	1581
01:00		4	213			12	213				
01:15		9	220			25	211				
01:30		14	202			10	200				
01:45		12	212	39	847	12	200	59	824	98	1671
02:00		14	195			12	209				
02:15		9	203			14	191				
02:30		11	257			19	184				
02:45		17	230	51	885	11	254	56	838	107	1723
03:00		17	238			7	249				
03:15		28	258			20	252				
03:30		37	234			12	309				
03:45		30	223	112	953	12	369	51	1179	163	2132
04:00		38	240			7	312				
04:15		36	247			9	333				
04:30		51	214			28	304				
04:45		78	235	203	936	24	418	68	1367	271	2303
05:00		102	246			33	396				
05:15		137	272			53	351				
05:30		144	248			62	336				
05:45		192	231	575	997	55	315	203	1398	778	2395
06:00		250	193			76	308				
06:15		306	254			97	251				
06:30		317	205			146	220				
06:45		308	158	1181	810	186	202	505	981	1686	1791
07:00		354	153			165	214				
07:15		361	117			154	196				
07:30		387	110			216	160				
07:45		357	102	1459	482	217	161	752	731	2211	1213
08:00		360	112			268	152				
08:15		238	107			250	108				
08:30		282	72			171	130				
08:45		261	56	1141	347	204	115	893	505	2034	852
09:00		218	68			173	105				
09:15		206	58			187	100				
09:30		200	56			159	95				
09:45		194	50	818	232	179	75	698	375	1516	607
10:00		202	48			148	72				
10:15		201	40			142	85				
10:30		207	38			193	66				
10:45		194	30	804	156	168	56	651	279	1455	435
11:00		188	32			161	48				
11:15		218	33			144	61				
11:30		217	20			180	44				
11:45		200	22	823	107	197	33	682	186	1505	293
Total		7255	7544			4711	9452			11966	16996
Percent		49.0%	51.0%			33.3%	66.7%			41.3%	58.7%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 150404000000
Station ID: 921001111100
NARCOOSSEE RD N/O JACK BRACK RD

Start Time	27-Jan-21 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		18	233			38	203				
12:15		17	180			30	201				
12:30		11	234			19	196				
12:45		12	206	58	853	28	198	115	798	173	1651
01:00		4	233			18	191				
01:15		7	194			17	171				
01:30		15	222			10	177				
01:45		10	244	36	893	14	238	59	777	95	1670
02:00		11	233			11	212				
02:15		9	219			8	240				
02:30		11	247			21	320				
02:45		18	217	49	916	12	297	52	1069	101	1985
03:00		29	242			10	226				
03:15		27	240			10	250				
03:30		32	212			22	367				
03:45		31	214	119	908	9	345	51	1188	170	2096
04:00		45	210			9	297				
04:15		43	198			12	345				
04:30		66	230			24	301				
04:45		57	207	211	845	31	330	76	1273	287	2118
05:00		102	251			43	378				
05:15		147	260			45	320				
05:30		134	277			48	359				
05:45		178	216	561	1004	73	320	209	1377	770	2381
06:00		261	228			80	309				
06:15		312	198			108	287				
06:30		322	234			138	227				
06:45		315	188	1210	848	164	213	490	1036	1700	1884
07:00		340	147			189	201				
07:15		371	154			160	171				
07:30		427	117			204	170				
07:45		391	129	1529	547	221	154	774	696	2303	1243
08:00		331	91			231	148				
08:15		264	77			264	154				
08:30		252	92			192	128				
08:45		239	75	1086	335	175	95	862	525	1948	860
09:00		279	62			188	105				
09:15		187	70			214	119				
09:30		201	66			165	110				
09:45		192	57	859	255	214	92	781	426	1640	681
10:00		194	41			156	91				
10:15		205	58			171	57				
10:30		183	32			194	59				
10:45		201	33	783	164	157	63	678	270	1461	434
11:00		196	27			179	44				
11:15		198	24			175	53				
11:30		235	25			148	44				
11:45		199	17	828	93	190	50	692	191	1520	284
Total		7329	7661			4839	9626			12168	17287
Percent		48.9%	51.1%			33.5%	66.5%			41.3%	58.7%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 150404000000
Station ID: 921001111100
NARCOOSSEE RD N/O JACK BRACK RD

Start Time	28-Jan-21 Thu	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		18	228			46	197				
12:15		16	205			36	221				
12:30		11	210			26	197				
12:45		11	188	56	831	23	190	131	805	187	1636
01:00		6	213			23	212				
01:15		21	190			31	223				
01:30		8	207			16	203				
01:45		10	190	45	800	7	219	77	857	122	1657
02:00		9	245			17	232				
02:15		9	218			22	212				
02:30		12	250			5	222				
02:45		13	214	43	927	11	222	55	888	98	1815
03:00		28	225			12	235				
03:15		23	253			10	270				
03:30		37	258			14	311				
03:45		39	234	127	970	13	370	49	1186	176	2156
04:00		41	240			8	320				
04:15		49	272			6	254				
04:30		68	217			30	309				
04:45		66	232	224	961	33	414	77	1297	301	2258
05:00		97	260			43	345				
05:15		136	272			43	314				
05:30		160	266			71	379				
05:45		188	213	581	1011	63	364	220	1402	801	2413
06:00		236	231			88	336				
06:15		331	218			106	297				
06:30		308	185			133	247				
06:45		325	171	1200	805	170	247	497	1127	1697	1932
07:00		357	155			163	227				
07:15		368	140			140	209				
07:30		385	127			208	150				
07:45		332	146	1442	568	196	162	707	748	2149	1316
08:00		356	102			235	167				
08:15		300	89			241	126				
08:30		277	74			186	119				
08:45		227	92	1160	357	193	88	855	500	2015	857
09:00		266	84			188	110				
09:15		221	58			224	115				
09:30		197	73			161	97				
09:45		201	80	885	295	181	87	754	409	1639	704
10:00		210	53			167	68				
10:15		224	42			164	54				
10:30		200	40			184	62				
10:45		205	34	839	169	186	56	701	240	1540	409
11:00		215	32			190	65				
11:15		199	24			155	50				
11:30		213	34			168	49				
11:45		210	16	837	106	210	48	723	212	1560	318
Total		7439	7800			4846	9671			12285	17471
Percent		48.8%	51.2%			33.4%	66.6%			41.3%	58.7%
Grand Total		22023	23005			14396	28749			36419	51754
Percent		48.9%	51.1%			33.4%	66.6%			41.3%	58.7%
ADT		ADT 29,391		AADT 29,391							

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15366B000000
Station ID: 921002111100
NARCOOSSEE RD S/O JONES RD

Start	26-Jan-21	NB		Hour Totals		SB		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		28	194			20	202				
12:15		29	187			10	197				
12:30		20	174			13	202				
12:45		10	213	87	768	8	196	51	797	138	1565
01:00		15	214			3	216				
01:15		22	214			9	208				
01:30		10	231			17	208				
01:45		9	209	56	868	14	192	43	824	99	1692
02:00		8	229			13	192				
02:15		15	190			7	234				
02:30		21	222			12	240				
02:45		11	274	55	915	10	233	42	899	97	1814
03:00		9	237			15	231				
03:15		13	245			30	258				
03:30		16	315			30	239				
03:45		13	357	51	1154	30	236	105	964	156	2118
04:00		8	332			30	250				
04:15		10	336			32	270				
04:30		30	330			45	223				
04:45		35	403	83	1401	60	259	167	1002	250	2403
05:00		29	420			90	259				
05:15		65	342			127	290				
05:30		68	346			131	246				
05:45		65	300	227	1408	178	222	526	1017	753	2425
06:00		83	327			221	219				
06:15		96	235			290	240				
06:30		136	226			281	223				
06:45		214	197	529	985	320	159	1112	841	1641	1826
07:00		167	184			339	151				
07:15		194	185			312	137				
07:30		230	146			357	111				
07:45		266	131	857	646	317	104	1325	503	2182	1149
08:00		224	119			323	125				
08:15		240	113			254	107				
08:30		195	111			274	80				
08:45		211	90	870	433	251	66	1102	378	1972	811
09:00		179	86			220	73				
09:15		188	92			203	71				
09:30		179	71			217	63				
09:45		199	61	745	310	202	51	842	258	1587	568
10:00		161	62			193	50				
10:15		168	67			208	46				
10:30		209	54			216	33				
10:45		175	51	713	234	189	32	806	161	1519	395
11:00		184	38			178	32				
11:15		152	51			215	29				
11:30		191	43			217	16				
11:45		196	29	723	161	201	20	811	97	1534	258
Total		4996	9283			6932	7741			11928	17024
Percent		35.0%	65.0%			47.2%	52.8%			41.2%	58.8%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15366B000000
Station ID: 921002111100
NARCOOSSEE RD S/O JONES RD

Start Time	27-Jan-21 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		32	180			20	226				
12:15		27	226			19	164				
12:30		17	207			13	236				
12:45		24	213	100	826	8	195	60	821	160	1647
01:00		15	200			4	220				
01:15		15	182			11	200				
01:30		7	197			13	215				
01:45		15	228	52	807	12	230	40	865	92	1672
02:00		10	234			10	228				
02:15		13	220			9	226				
02:30		21	311			11	249				
02:45		10	305	54	1070	15	235	45	938	99	2008
03:00		11	253			26	246				
03:15		9	231			25	242				
03:30		22	359			29	228				
03:45		14	327	56	1170	27	248	107	964	163	2134
04:00		10	309			37	215				
04:15		14	342			43	197				
04:30		23	302			54	272				
04:45		37	326	84	1279	47	221	181	905	265	2184
05:00		46	393			92	238				
05:15		59	343			135	257				
05:30		50	370			121	276				
05:45		78	298	233	1404	168	215	516	986	749	2390
06:00		84	298			243	249				
06:15		128	278			289	223				
06:30		136	213			301	212				
06:45		192	191	540	980	311	197	1144	881	1684	1861
07:00		180	200			310	159				
07:15		203	148			363	144				
07:30		205	150			378	135				
07:45		246	134	834	632	330	128	1381	566	2215	1198
08:00		203	143			280	104				
08:15		229	129			270	95				
08:30		220	125			242	104				
08:45		190	79	842	476	231	80	1023	383	1865	859
09:00		150	85			247	70				
09:15		219	108			223	80				
09:30		198	86			184	80				
09:45		230	92	797	371	194	62	848	292	1645	663
10:00		157	78			188	38				
10:15		191	54			219	71				
10:30		192	50			188	28				
10:45		188	55	728	237	191	34	786	171	1514	408
11:00		204	33			207	34				
11:15		167	51			221	21				
11:30		181	40			229	23				
11:45		204	39	756	163	207	14	864	92	1620	255
Total		5076	9415			6995	7864			12071	17279
Percent		35.0%	65.0%			47.1%	52.9%			41.1%	58.9%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15366B000000
Station ID: 921002111100
NARCOOSSEE RD S/O JONES RD

Start Time	28-Jan-21 Thu	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		48	221			15	220				
12:15		30	210			16	191				
12:30		19	236			10	213				
12:45		21	169	118	836	16	199	57	823	175	1659
01:00		22	220			6	220				
01:15		26	231			20	193				
01:30		14	215			9	225				
01:45		10	216	72	882	11	188	46	826	118	1708
02:00		16	250			8	239				
02:15		14	231			6	219				
02:30		9	230			14	237				
02:45		10	233	49	944	11	224	39	919	88	1863
03:00		11	265			28	227				
03:15		14	270			20	271				
03:30		12	309			30	260				
03:45		14	363	51	1207	35	260	113	1018	164	2225
04:00		5	319			37	251				
04:15		8	280			46	265				
04:30		32	320			55	244				
04:45		39	408	84	1327	59	245	197	1005	281	2332
05:00		42	379			84	257				
05:15		54	318			126	290				
05:30		72	361			139	260				
05:45		70	360	238	1418	170	215	519	1022	757	2440
06:00		91	333			230	245				
06:15		112	285			291	227				
06:30		152	251			283	209				
06:45		181	248	536	1117	319	173	1123	854	1659	1971
07:00		157	209			336	166				
07:15		172	201			348	152				
07:30		218	154			351	134				
07:45		232	154	779	718	296	148	1331	600	2110	1318
08:00		207	157			323	101				
08:15		217	118			305	98				
08:30		226	117			267	93				
08:45		207	97	857	489	240	102	1135	394	1992	883
09:00		198	106			267	100				
09:15		202	107			217	61				
09:30		185	73			188	74				
09:45		190	78	775	364	211	80	883	315	1658	679
10:00		177	67			210	48				
10:15		208	53			223	51				
10:30		204	60			205	36				
10:45		200	56	789	236	207	38	845	173	1634	409
11:00		191	57			199	31				
11:15		191	57			188	30				
11:30		189	45			206	36				
11:45		198	47	769	206	207	16	800	113	1569	319
Total		5117	9744			7088	8062			12205	17806
Percent		34.4%	65.6%			46.8%	53.2%			40.7%	59.3%
Grand Total		15189	28442			21015	23667			36204	52109
Percent		34.8%	65.2%			47.0%	53.0%			41.0%	59.0%
ADT		ADT 29,438		AADT 29,438							

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15871D000000
Station ID: 921003311100
JACK BRACK RD E/O NARCOOSSEE RD

Start Time	26-Jan-21 Tue	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		8	37			1	47				
12:15		3	34			2	34				
12:30		2	40			4	37				
12:45		0	36	13	147	0	36	7	154	20	301
01:00		1	39			1	39				
01:15		3	29			3	37				
01:30		1	41			0	45				
01:45		0	29	5	138	1	40	5	161	10	299
02:00		3	29			0	37				
02:15		1	46			4	43				
02:30		0	30			4	67				
02:45		0	42	4	147	1	55	9	202	13	349
03:00		0	38			2	43				
03:15		5	45			3	45				
03:30		2	68			4	40				
03:45		0	37	7	188	3	43	12	171	19	359
04:00		1	34			2	33				
04:15		1	62			6	47				
04:30		2	54			10	43				
04:45		0	56	4	206	10	61	28	184	32	390
05:00		1	49			14	47				
05:15		0	70			15	39				
05:30		7	60			14	61				
05:45		4	46	12	225	27	41	70	188	82	413
06:00		8	58			31	37				
06:15		19	43			31	37				
06:30		17	42			39	30				
06:45		19	53	63	196	39	26	140	130	203	326
07:00		22	42			52	25				
07:15		28	45			68	17				
07:30		27	38			53	19				
07:45		26	37	103	162	77	16	250	77	353	239
08:00		52	45			69	24				
08:15		51	29			30	15				
08:30		24	30			39	14				
08:45		48	21	175	125	42	10	180	63	355	188
09:00		23	28			37	11				
09:15		29	22			33	5				
09:30		21	22			33	10				
09:45		28	12	101	84	29	10	132	36	233	120
10:00		25	12			34	7				
10:15		27	17			43	5				
10:30		36	14			32	4				
10:45		34	7	122	50	45	8	154	24	276	74
11:00		32	10			34	7				
11:15		25	12			35	4				
11:30		34	4			47	5				
11:45		31	5	122	31	23	4	139	20	261	51
Total		731	1699			1126	1410			1857	3109
Percent		30.1%	69.9%			44.4%	55.6%			37.4%	62.6%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15871D000000
Station ID: 921003311100
JACK BRACK RD E/O NARCOOSSEE RD

Start Time	27-Jan-21 Wed	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		10	26			2	48				
12:15		6	30			2	32				
12:30		5	34			1	37				
12:45		3	37	24	127	4	38	9	155	33	282
01:00		0	41			1	33				
01:15		3	27			1	44				
01:30		3	34			3	40				
01:45		2	34	8	136	0	43	5	160	13	296
02:00		2	35			0	40				
02:15		0	44			3	51				
02:30		0	74			2	55				
02:45		2	62	4	215	0	43	5	189	9	404
03:00		1	35			3	40				
03:15		2	54			2	33				
03:30		1	54			1	40				
03:45		0	47	4	190	4	30	10	143	14	333
04:00		1	41			5	36				
04:15		0	40			4	49				
04:30		3	50			10	33				
04:45		2	45	6	176	12	50	31	168	37	344
05:00		1	45			11	51				
05:15		1	50			10	46				
05:30		4	63			16	55				
05:45		10	65	16	223	19	46	56	198	72	421
06:00		15	61			35	40				
06:15		10	52			41	38				
06:30		24	41			37	30				
06:45		19	49	68	203	50	23	163	131	231	334
07:00		37	50			49	22				
07:15		16	37			55	23				
07:30		24	32			71	18				
07:45		33	30	110	149	84	18	259	81	369	230
08:00		52	33			50	14				
08:15		42	31			41	10				
08:30		36	33			53	15				
08:45		32	17	162	114	38	18	182	57	344	171
09:00		34	30			41	13				
09:15		44	29			37	12				
09:30		24	30			42	7				
09:45		24	12	126	101	39	8	159	40	285	141
10:00		23	13			36	7				
10:15		33	10			31	5				
10:30		44	10			51	6				
10:45		23	8	123	41	37	7	155	25	278	66
11:00		29	11			43	4				
11:15		30	8			32	6				
11:30		40	7			44	8				
11:45		36	5	135	31	46	2	165	20	300	51
Total		786	1706			1199	1367			1985	3073
Percent		31.5%	68.5%			46.7%	53.3%			39.2%	60.8%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15871D000000
Station ID: 921003311100
JACK BRACK RD E/O NARCOOSSEE RD

Start Time	28-Jan-21 Thu	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	46			5	58				
12:15		7	40			4	40				
12:30		3	34			3	53				
12:45		3	30	21	150	0	28	12	179	33	329
01:00		3	40			1	30				
01:15		6	27			4	36				
01:30		2	32			1	29				
01:45		0	31	11	130	0	30	6	125	17	255
02:00		2	40			2	58				
02:15		2	36			2	36				
02:30		0	29			1	58				
02:45		1	52	5	157	3	49	8	201	13	358
03:00		0	38			2	40				
03:15		0	42			1	44				
03:30		1	58			4	53				
03:45		5	52	6	190	5	43	12	180	18	370
04:00		2	44			2	37				
04:15		2	42			6	55				
04:30		2	55			10	63				
04:45		0	41	6	182	12	64	30	219	36	401
05:00		0	62			11	48				
05:15		2	54			13	55				
05:30		5	74			16	47				
05:45		3	58	10	248	15	37	55	187	65	435
06:00		20	65			27	39				
06:15		9	57			42	48				
06:30		18	53			53	32				
06:45		26	49	73	224	42	35	164	154	237	378
07:00		21	41			38	28				
07:15		36	43			46	19				
07:30		30	30			65	23				
07:45		32	32	119	146	82	19	231	89	350	235
08:00		53	30			70	14				
08:15		59	35			43	21				
08:30		32	40			56	21				
08:45		55	23	199	128	50	19	219	75	418	203
09:00		39	30			41	8				
09:15		37	19			49	11				
09:30		35	23			33	10				
09:45		33	25	144	97	34	13	157	42	301	139
10:00		29	12			41	7				
10:15		35	8			65	5				
10:30		34	12			39	7				
10:45		30	10	128	42	48	9	193	28	321	70
11:00		35	10			56	6				
11:15		39	10			40	4				
11:30		41	12			40	7				
11:45		32	7	147	39	34	5	170	22	317	61
Total		869	1733			1257	1501			2126	3234
Percent		33.4%	66.6%			45.6%	54.4%			39.7%	60.3%
Grand Total		2386	5138			3582	4278			5968	9416
Percent		31.7%	68.3%			45.6%	54.4%			38.8%	61.2%
ADT		ADT 5,128		AADT 5,128							

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15874D000000
Station ID: 921004311100
US-192 BTN NARCOOSSEE RD / NOVA RD

Start Time	26-Jan-21 Tue	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		18	262			23	235				
12:15		31	281			28	272				
12:30		26	261			20	257				
12:45		20	259	95	1063	16	267	87	1031	182	2094
01:00		16	232			16	223				
01:15		36	235			26	245				
01:30		15	237			15	244				
01:45		10	229	77	933	23	240	80	952	157	1885
02:00		16	247			13	235				
02:15		32	286			12	228				
02:30		25	255			19	349				
02:45		21	274	94	1062	16	334	60	1146	154	2208
03:00		6	299			25	293				
03:15		13	334			23	304				
03:30		16	327			33	294				
03:45		26	349	61	1309	29	291	110	1182	171	2491
04:00		26	380			17	317				
04:15		51	319			44	317				
04:30		44	349			59	344				
04:45		80	350	201	1398	70	331	190	1309	391	2707
05:00		85	398			98	290				
05:15		90	340			113	319				
05:30		115	350			144	296				
05:45		151	353	441	1441	204	284	559	1189	1000	2630
06:00		166	303			228	289				
06:15		171	286			276	280				
06:30		220	260			297	243				
06:45		295	224	852	1073	289	180	1090	992	1942	2065
07:00		303	242			349	157				
07:15		234	209			393	163				
07:30		216	222			344	147				
07:45		260	157	1013	830	378	113	1464	580	2477	1410
08:00		264	163			357	131				
08:15		260	158			302	106				
08:30		255	137			330	78				
08:45		257	122	1036	580	308	83	1297	398	2333	978
09:00		197	103			280	80				
09:15		259	122			271	68				
09:30		188	96			258	63				
09:45		202	82	846	403	251	59	1060	270	1906	673
10:00		208	70			236	65				
10:15		205	80			239	52				
10:30		205	68			224	34				
10:45		235	47	853	265	268	20	967	171	1820	436
11:00		212	49			238	38				
11:15		210	49			263	27				
11:30		260	40			280	36				
11:45		236	33	918	171	249	22	1030	123	1948	294
Total		6487	10528			7994	9343			14481	19871
Percent		38.1%	61.9%			46.1%	53.9%			42.2%	57.8%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15874D000000
Station ID: 921004311100
US-192 BTN NARCOOSSEE RD / NOVA RD

Start Time	27-Jan-21 Wed	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		30	285			26	260				
12:15		27	268			28	258				
12:30		28	248			34	203				
12:45		26	280	111	1081	17	267	105	988	216	2069
01:00		10	275			19	240				
01:15		21	280			16	245				
01:30		12	268			19	320				
01:45		12	285	55	1108	11	317	65	1122	120	2230
02:00		26	286			17	306				
02:15		19	274			9	312				
02:30		20	305			21	327				
02:45		20	291	85	1156	17	297	64	1242	149	2398
03:00		12	277			24	291				
03:15		21	291			23	273				
03:30		30	296			22	331				
03:45		42	323	105	1187	29	255	98	1150	203	2337
04:00		33	359			43	300				
04:15		47	367			47	299				
04:30		32	360			62	312				
04:45		69	340	181	1426	73	295	225	1206	406	2632
05:00		67	347			106	316				
05:15		78	380			124	321				
05:30		109	358			158	327				
05:45		138	339	392	1424	186	318	574	1282	966	2706
06:00		157	315			238	322				
06:15		192	293			282	268				
06:30		244	301			282	254				
06:45		288	273	881	1182	278	202	1080	1046	1961	2228
07:00		285	220			374	181				
07:15		210	211			417	174				
07:30		215	194			338	151				
07:45		280	202	990	827	390	109	1519	615	2509	1442
08:00		268	176			322	122				
08:15		253	176			350	111				
08:30		255	155			287	84				
08:45		226	138	1002	645	259	97	1218	414	2220	1059
09:00		245	113			312	89				
09:15		208	130			281	89				
09:30		234	116			280	110				
09:45		245	88	932	447	230	61	1103	349	2035	796
10:00		227	76			270	84				
10:15		209	67			238	47				
10:30		221	60			227	39				
10:45		220	50	877	253	281	38	1016	208	1893	461
11:00		243	59			262	35				
11:15		256	49			245	26				
11:30		240	42			260	19				
11:45		246	41	985	191	230	22	997	102	1982	293
Total		6596	10927			8064	9724			14660	20651
Percent		37.6%	62.4%			45.3%	54.7%			41.5%	58.5%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15874D000000
Station ID: 921004311100
US-192 BTN NARCOOSSEE RD / NOVA RD

Start Time	28-Jan-21 Thu	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		36	268			20	248				
12:15		32	241			26	252				
12:30		35	247			26	247				
12:45		16	253	119	1009	30	275	102	1022	221	2031
01:00		34	246			20	259				
01:15		19	252			18	215				
01:30		22	278			13	262				
01:45		17	254	92	1030	17	276	68	1012	160	2042
02:00		30	255			15	272				
02:15		29	273			16	250				
02:30		23	276			14	351				
02:45		14	273	96	1077	17	324	62	1197	158	2274
03:00		20	275			25	285				
03:15		17	297			26	251				
03:30		24	329			32	310				
03:45		27	338	88	1239	41	299	124	1145	212	2384
04:00		27	368			36	310				
04:15		38	309			35	321				
04:30		34	330			54	364				
04:45		75	361	174	1368	75	300	200	1295	374	2663
05:00		80	381			83	302				
05:15		114	411			113	307				
05:30		122	311			134	302				
05:45		132	343	448	1446	180	304	510	1215	958	2661
06:00		178	345			245	285				
06:15		182	306			286	260				
06:30		211	283			269	245				
06:45		266	240	837	1174	277	214	1077	1004	1914	2178
07:00		287	207			360	182				
07:15		230	229			410	138				
07:30		222	171			359	150				
07:45		277	197	1016	804	394	130	1523	600	2539	1404
08:00		232	159			348	151				
08:15		274	168			324	106				
08:30		228	147			298	84				
08:45		230	123	964	597	308	81	1278	422	2242	1019
09:00		223	116			291	91				
09:15		191	108			262	77				
09:30		208	105			240	65				
09:45		213	90	835	419	252	61	1045	294	1880	713
10:00		200	104			243	52				
10:15		250	72			241	51				
10:30		227	68			258	40				
10:45		225	52	902	296	270	32	1012	175	1914	471
11:00		232	75			233	33				
11:15		201	49			244	36				
11:30		219	46			224	26				
11:45		245	30	897	200	266	22	967	117	1864	317
Total		6468	10659			7968	9498			14436	20157
Percent		37.8%	62.2%			45.6%	54.4%			41.7%	58.3%
Grand Total		19551	32114			24026	28565			43577	60679
Percent		37.8%	62.2%			45.7%	54.3%			41.8%	58.2%
ADT		ADT 34,752		AADT 34,752							

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15513E000000
Station ID: 921005111100
NOVA RD N/O US-192

Start Time	26-Jan-21 Tue	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		6	49			6	61				
12:15		9	76			2	79				
12:30		6	76			3	70				
12:45		6	66	27	267	4	68	15	278	42	545
01:00		1	61			3	52				
01:15		4	68			2	79				
01:30		1	60			1	64				
01:45		3	56	9	245	4	47	10	242	19	487
02:00		3	48			1	71				
02:15		5	60			2	66				
02:30		4	69			3	64				
02:45		4	67	16	244	9	78	15	279	31	523
03:00		1	76			6	83				
03:15		4	83			8	92				
03:30		5	93			10	78				
03:45		3	93	13	345	8	81	32	334	45	679
04:00		0	110			7	92				
04:15		8	99			10	75				
04:30		6	98			17	69				
04:45		11	100	25	407	19	81	53	317	78	724
05:00		13	91			23	79				
05:15		10	87			34	77				
05:30		27	121			45	86				
05:45		32	93	82	392	60	90	162	332	244	724
06:00		40	89			71	75				
06:15		30	74			73	72				
06:30		40	71			97	66				
06:45		52	68	162	302	92	49	333	262	495	564
07:00		61	74			101	39				
07:15		62	65			97	45				
07:30		43	59			91	36				
07:45		34	59	200	257	120	29	409	149	609	406
08:00		58	62			92	36				
08:15		61	44			65	26				
08:30		48	46			69	25				
08:45		51	36	218	188	75	35	301	122	519	310
09:00		42	37			65	17				
09:15		64	33			55	13				
09:30		42	25			56	20				
09:45		38	19	186	114	68	10	244	60	430	174
10:00		44	19			40	8				
10:15		48	20			68	11				
10:30		49	21			60	9				
10:45		56	15	197	75	67	4	235	32	432	107
11:00		65	11			61	7				
11:15		53	12			62	8				
11:30		57	12			62	7				
11:45		61	10	236	45	77	6	262	28	498	73
Total		1371	2881			2071	2435			3442	5316
Percent		32.2%	67.8%			46.0%	54.0%			39.3%	60.7%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15513E000000
Station ID: 921005111100
NOVA RD N/O US-192

Start Time	27-Jan-21 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	72			6	73				
12:15		9	72			8	68				
12:30		4	59			4	55				
12:45		4	55	21	258	4	59	22	255	43	513
01:00		1	62			3	71				
01:15		6	61			3	59				
01:30		4	62			2	74				
01:45		1	66	12	251	1	65	9	269	21	520
02:00		4	70			2	69				
02:15		3	70			1	69				
02:30		1	83			4	77				
02:45		4	67	12	290	9	80	16	295	28	585
03:00		2	66			4	86				
03:15		2	84			6	96				
03:30		4	77			7	62				
03:45		8	96	16	323	9	60	26	304	42	627
04:00		4	89			14	80				
04:15		3	87			14	79				
04:30		8	110			18	74				
04:45		12	91	27	377	22	84	68	317	95	694
05:00		8	78			28	92				
05:15		10	115			33	85				
05:30		29	111			47	104				
05:45		26	112	73	416	62	78	170	359	243	775
06:00		50	86			81	85				
06:15		27	82			77	98				
06:30		49	80			82	74				
06:45		35	70	161	318	87	61	327	318	488	636
07:00		32	65			100	49				
07:15		72	53			103	48				
07:30		44	51			96	35				
07:45		50	43	198	212	122	26	421	158	619	370
08:00		75	48			78	30				
08:15		70	50			84	26				
08:30		60	32			83	19				
08:45		41	46	246	176	74	14	319	89	565	265
09:00		63	28			58	17				
09:15		49	40			71	15				
09:30		55	44			68	22				
09:45		64	21	231	133	60	20	257	74	488	207
10:00		52	22			64	16				
10:15		52	25			51	9				
10:30		53	16			55	12				
10:45		48	18	205	81	74	10	244	47	449	128
11:00		64	13			70	6				
11:15		61	16			75	6				
11:30		65	11			57	4				
11:45		53	7	243	47	44	2	246	18	489	65
Total		1445	2882			2125	2503			3570	5385
Percent		33.4%	66.6%			45.9%	54.1%			39.9%	60.1%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15513E000000
Station ID: 921005111100
NOVA RD N/O US-192

Start Time	28-Jan-21 Thu	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		7	61			4	61				
12:15		10	58			1	66				
12:30		6	48			3	67				
12:45		2	69	25	236	4	75	12	269	37	505
01:00		3	62			7	62				
01:15		4	76			2	59				
01:30		3	59			2	81				
01:45		2	60	12	257	2	64	13	266	25	523
02:00		1	62			1	71				
02:15		4	86			2	60				
02:30		3	72			4	78				
02:45		1	70	9	290	7	67	14	276	23	566
03:00		4	66			4	82				
03:15		1	74			4	61				
03:30		1	82			10	82				
03:45		2	94	8	316	10	86	28	311	36	627
04:00		1	93			13	90				
04:15		2	102			12	79				
04:30		13	84			13	88				
04:45		15	107	31	386	24	90	62	347	93	733
05:00		14	100			22	90				
05:15		17	118			36	75				
05:30		33	89			46	86				
05:45		28	100	92	407	47	87	151	338	243	745
06:00		44	92			74	80				
06:15		25	80			76	64				
06:30		34	78			98	82				
06:45		38	77	141	327	72	51	320	277	461	604
07:00		54	52			111	52				
07:15		60	74			105	38				
07:30		33	55			98	35				
07:45		55	45	202	226	107	32	421	157	623	383
08:00		64	46			108	38				
08:15		63	53			70	18				
08:30		49	46			69	28				
08:45		49	38	225	183	66	29	313	113	538	296
09:00		52	29			60	11				
09:15		46	29			70	19				
09:30		48	31			52	19				
09:45		51	24	197	113	58	10	240	59	437	172
10:00		56	15			58	18				
10:15		50	19			67	13				
10:30		45	27			65	10				
10:45		50	12	201	73	60	5	250	46	451	119
11:00		55	16			50	7				
11:15		56	12			71	11				
11:30		54	14			53	10				
11:45		57	9	222	51	66	5	240	33	462	84
Total		1365	2865			2064	2492			3429	5357
Percent		32.3%	67.7%			45.3%	54.7%			39.0%	61.0%
Grand Total		4181	8628			6260	7430			10441	16058
Percent		32.6%	67.4%			45.7%	54.3%			39.4%	60.6%
ADT		ADT 8,833		AADT 8,833							

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15917D000000
Station ID: 921006311100
NOVA RD E/O ROCKWOOD DR

Start Time	26-Jan-21 Tue	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	11			0	10				
12:15		2	13			2	10				
12:30		1	26			2	18				
12:45		1	16	5	66	2	12	6	50	11	116
01:00		0	20			0	11				
01:15		1	13			1	16				
01:30		0	11			1	14				
01:45		1	12	2	56	1	9	3	50	5	106
02:00		0	11			1	19				
02:15		0	10			1	14				
02:30		3	18			0	17				
02:45		3	9	6	48	1	30	3	80	9	128
03:00		1	14			2	22				
03:15		0	7			2	20				
03:30		4	16			0	15				
03:45		2	12	7	49	0	25	4	82	11	131
04:00		1	12			0	28				
04:15		2	15			1	30				
04:30		4	16			1	36				
04:45		10	22	17	65	1	33	3	127	20	192
05:00		10	18			2	28				
05:15		13	15			6	23				
05:30		24	17			4	34				
05:45		29	7	76	57	6	48	18	133	94	190
06:00		23	7			6	17				
06:15		38	12			8	32				
06:30		28	9			12	17				
06:45		19	4	108	32	9	11	35	77	143	109
07:00		40	4			8	7				
07:15		30	5			10	9				
07:30		20	5			13	9				
07:45		11	4	101	18	18	3	49	28	150	46
08:00		18	8			4	5				
08:15		10	2			19	5				
08:30		20	2			11	3				
08:45		23	3	71	15	10	6	44	19	115	34
09:00		16	1			13	8				
09:15		13	5			9	4				
09:30		13	4			10	1				
09:45		10	1	52	11	13	1	45	14	97	25
10:00		9	2			10	1				
10:15		16	2			9	2				
10:30		11	5			10	2				
10:45		15	0	51	9	9	2	38	7	89	16
11:00		12	1			6	0				
11:15		7	2			15	1				
11:30		15	0			10	6				
11:45		13	0	47	3	8	1	39	8	86	11
Total		543	429			287	675			830	1104
Percent		55.9%	44.1%			29.8%	70.2%			42.9%	57.1%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15917D000000
Station ID: 921006311100
NOVA RD E/O ROCKWOOD DR

Start Time	27-Jan-21 Wed	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	25			1	13				
12:15		1	11			2	12				
12:30		1	20			1	20				
12:45		0	16	3	72	1	15	5	60	8	132
01:00		0	17			2	15				
01:15		1	17			1	11				
01:30		0	12			0	11				
01:45		0	11	1	57	1	22	4	59	5	116
02:00		0	8			0	16				
02:15		2	18			0	19				
02:30		0	11			1	12				
02:45		1	17	3	54	0	25	1	72	4	126
03:00		2	9			3	33				
03:15		0	18			0	22				
03:30		1	21			1	18				
03:45		3	10	6	58	2	14	6	87	12	145
04:00		6	22			0	37				
04:15		4	8			1	36				
04:30		6	15			3	32				
04:45		6	9	22	54	3	32	7	137	29	191
05:00		11	11			3	41				
05:15		12	14			5	24				
05:30		19	12			6	43				
05:45		28	24	70	61	5	32	19	140	89	201
06:00		37	9			11	37				
06:15		31	8			13	34				
06:30		24	6			8	17				
06:45		22	5	114	28	7	17	39	105	153	133
07:00		18	5			15	17				
07:15		22	1			9	12				
07:30		22	2			8	9				
07:45		19	2	81	10	6	3	38	41	119	51
08:00		17	5			10	6				
08:15		25	7			10	7				
08:30		28	6			10	8				
08:45		15	0	85	18	15	7	45	28	130	46
09:00		21	9			17	5				
09:15		15	5			9	7				
09:30		16	4			12	3				
09:45		25	3	77	21	9	5	47	20	124	41
10:00		15	1			11	4				
10:15		10	2			6	2				
10:30		15	4			8	1				
10:45		17	0	57	7	14	0	39	7	96	14
11:00		19	1			13	1				
11:15		11	0			9	0				
11:30		25	0			10	1				
11:45		10	2	65	3	8	0	40	2	105	5
Total		584	443			290	758			874	1201
Percent		56.9%	43.1%			27.7%	72.3%			42.1%	57.9%

FTE
8250, Pascal Dr
Punta Gorda, FL 33950
Ph# (941) 639 2818, Fax# (941) 639 4851

Site Code: 15917D000000
Station ID: 921006311100
NOVA RD E/O ROCKWOOD DR

Start Time	28-Jan-21 Thu	EB Morning	EB Afternoon	Hour Totals Morning	Hour Totals Afternoon	WB Morning	WB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	16			1	9				
12:15		2	11			0	22				
12:30		0	6			1	10				
12:45		1	24	3	57	2	24	4	65	7	122
01:00		0	8			1	6				
01:15		1	17			2	10				
01:30		0	11			0	22				
01:45		0	20	1	56	0	10	3	48	4	104
02:00		0	13			1	20				
02:15		2	21			1	11				
02:30		1	15			2	16				
02:45		0	20	3	69	1	13	5	60	8	129
03:00		1	12			0	13				
03:15		1	16			0	23				
03:30		0	11			1	30				
03:45		1	11	3	50	0	27	1	93	4	143
04:00		2	16			2	26				
04:15		1	10			1	29				
04:30		4	10			1	40				
04:45		13	15	20	51	1	38	5	133	25	184
05:00		13	12			2	39				
05:15		19	12			3	23				
05:30		22	13			4	26				
05:45		27	10	81	47	4	34	13	122	94	169
06:00		32	14			8	25				
06:15		33	6			9	20				
06:30		21	5			16	18				
06:45		22	5	108	30	10	12	43	75	151	105
07:00		26	8			12	15				
07:15		23	4			12	8				
07:30		30	4			8	2				
07:45		22	4	101	20	16	8	48	33	149	53
08:00		31	1			12	8				
08:15		17	2			10	3				
08:30		12	3			7	6				
08:45		16	6	76	12	6	4	35	21	111	33
09:00		14	2			8	5				
09:15		18	3			19	1				
09:30		16	4			12	4				
09:45		11	4	59	13	7	7	46	17	105	30
10:00		14	5			10	5				
10:15		9	2			11	5				
10:30		11	1			16	0				
10:45		11	0	45	8	10	1	47	11	92	19
11:00		10	0			14	0				
11:15		10	1			9	4				
11:30		12	2			13	0				
11:45		8	1	40	4	16	0	52	4	92	8
Total		540	417			302	682			842	1099
Percent		56.4%	43.6%			30.7%	69.3%			43.4%	56.6%
Grand Total		1667	1289			879	2115			2546	3404
Percent		56.4%	43.6%			29.4%	70.6%			42.8%	57.2%
ADT		ADT 1,983		AADT 1,983							

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 8050 - NOVA RD, E OF EDEN DR - OFF SYSTEM HPMS '18

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2020	1250 C	E	650	W	600	9.50	53.00	16.00
2019	1550 F	E	750	W	800	9.50	53.20	23.80
2018	1550 C	E	750	W	800	9.50	53.60	22.30
2017	1600 T	E	850	W	750	9.50	52.80	34.20
2016	1500 S	E	800	W	700	9.50	52.50	27.80
2015	1450 F	E	750	W	700	9.50	52.70	25.90
2014	1450 C	E	750	W	700	9.50	52.80	28.50
2013	1200 S		0		0	9.50	53.00	25.70
2012	1200 F		0		0	9.50	53.10	24.50
2011	1200 C	E	0	W	0	9.50	53.10	20.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 7041 - NOVA ROAD, LAKE LIZZIE ROAD TO EDEN ROAD (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	3900 S	N 2000	S 1900	9.00	53.00	5.50
2019	4100 F	N 2100	S 2000	9.00	53.20	5.50
2018	3900 C	N 2000	S 1900	9.00	53.60	5.50
2017	3900 S	N 2000	S 1900	9.00	52.80	34.20
2016	3700 F	N 1900	S 1800	9.00	52.50	27.80
2015	3600 C	N 1800	S 1800	9.00	52.70	4.90
2014	3600 F	N 1800	S 1800	9.00	52.80	4.90
2013	3600 C	N 1800	S 1800	9.00	53.00	4.90
2012	3200 F	N 1600	S 1600	9.00	53.10	24.50
2011	3200 C	N 1600	S 1600	9.00	53.10	20.90
2010	2900 C	N 1400	S 1500	9.12	53.51	25.30
2009	2900 F	N 1400	S 1500	9.10	53.73	23.50
2008	2900 C	N 1400	S 1500	8.66	53.12	20.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 8084 - PINE GROVE RD, 500 FT N OF BASS RD - OFF SYSTEM HPMS '17

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2020	650 C	S	300	N	350	9.00	53.00	4.30
2019	650 S	S	300	N	350	9.00	53.20	10.70
2018	650 F	S	300	N	350	9.00	53.60	10.70
2017	650 C	S	300	N	350	9.00	52.80	10.70
2016	550 S	S	250	N	300	9.00	52.50	27.80
2015	550 F	S	250	N	300	9.00	52.70	25.90
2014	550 C	S	250	N	300	9.00	52.80	28.50
2013	500 F		0		0	9.00	53.00	25.70
2012	500 C	S	0	N	0	9.00	53.10	24.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 7044 - NARCOOSEE ROAD/CR-15/SR-500, RUMMELL ROAD TO JONES (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	22500 S	N 10500	S 12000	9.00	53.00	7.40
2019	23500 F	N 11000	S 12500	9.00	53.20	7.40
2018	22500 C	N 10500	S 12000	9.00	53.60	7.40
2017	22000 S	N 10500	S 11500	9.00	52.80	34.20
2016	21000 F	N 10000	S 11000	9.00	52.50	27.80
2015	16400 C	N 7600	S 8800	9.00	52.70	8.60
2014	16000 F	N 7400	S 8600	9.00	52.80	8.60
2013	15800 C	N 7300	S 8500	9.00	53.00	8.60
2012	13500 F	N 6800	S 6700	9.00	53.10	24.50
2011	13500 C	N 6800	S 6700	9.00	53.10	20.90
2010	13300 C	N 6700	S 6600	9.12	53.51	25.30
2009	13600 F	N 6800	S 6800	9.10	53.73	23.50
2008	13400 C	N 6700	S 6700	8.66	53.12	20.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 7045 - NARCOOSEE ROAD/CR-15/SR-500, JONES TO BOGGY CREEK (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	29500 C	N 14000	S 15500	9.00	53.00	7.00
2019	28000 F	N 12500	S 15500	9.00	53.20	6.90
2018	27000 C	N 12000	S 15000	9.00	53.60	6.90
2017	23500 S	N 11500	S 12000	9.00	52.80	34.20
2016	22500 F	N 11000	S 11500	9.00	52.50	27.80
2015	17200 C	N 8600	S 8600	9.00	52.70	6.90
2014	16800 F	N 8400	S 8400	9.00	52.80	6.90
2013	16600 C	N 8300	S 8300	9.00	53.00	6.90
2012	13000 F	N 6500	S 6500	9.00	53.10	24.50
2011	13000 C	N 6500	S 6500	9.00	53.10	20.90
2010	14500 C	N 7300	S 7200	9.12	53.51	25.30
2009	11900 F	N 4700	S 7200	9.10	53.73	23.50
2008	11700 C	N 4600	S 7100	8.66	53.12	20.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 7074 - JONES RD, 0.6 MI E OF NARCOOSSEE RD, ST CLOUD (HPMS) '20

YEAR	AADT	DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2020	1850 C	E	950	W	900	9.00	53.00	7.50
2019	500 S	E	250	W	250	9.00	53.20	2.20
2018	500 F	E	250	W	250	9.00	53.60	2.20
2017	500 C	E	250	W	250	9.00	52.80	2.20
2016	800 S	E	400	W	400	9.00	52.50	9.10
2015	800 F	E	400	W	400	9.00	52.70	9.10
2014	800 C	E	400	W	400	9.00	52.80	9.10
2013	400 F	E	200	W	200	9.00	53.00	15.10
2012	400 C	E	200	W	200	9.00	53.10	15.10
2010	1350 S	E	700	W	650	9.12	53.51	25.30
2009	1350 F	E	700	W	650	9.10	53.73	23.50
2008	1350 C	E	700	W	650	8.66	53.12	20.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 7050 - BOGGY CREEK ROAD, GUS ROAD TO NARCOOSEE ROAD (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	10300 S	N 4800	S 5500	9.00	53.00	7.50
2019	10700 F	N 5000	S 5700	9.00	53.20	7.50
2018	10400 C	N 4900	S 5500	9.00	53.60	7.50
2017	9100 S	N 4500	S 4600	9.00	52.80	7.60
2016	8700 F	N 4300	S 4400	9.00	52.50	7.60
2015	8500 C	N 4200	S 4300	9.00	52.70	7.60
2014	7700 F	N 4000	S 3700	9.00	52.80	9.70
2013	7500 C	N 3900	S 3600	9.00	53.00	9.70
2012	6300 F	N 3100	S 3200	9.00	53.10	24.50
2011	6300 C	N 3100	S 3200	9.00	53.10	20.90
2010	6400 C	N 3100	S 3300	9.12	53.51	25.30
2009	8000 F	N 3800	S 4200	9.10	53.73	23.50
2008	7800 C	N 3700	S 4100	8.66	53.12	20.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 92 - OSCEOLA

SITE: 0255 - ON US-192, 0.333 MI. E OF CR-15 (RCLP)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	29000 F	E 14500	W 14500	9.00	53.00	10.70
2019	30000 C	E 15000	W 15000	9.00	53.20	10.70
2018	29000 F	E 14500	W 14500	9.00	53.60	10.80
2017	28000 C	E 14000	W 14000	9.00	52.80	10.80
2016	24500 F	E 12000	W 12500	9.00	52.50	8.40
2015	23500 C	E 11500	W 12000	9.00	52.70	8.40
2014	24500 C	E 11500	W 13000	9.00	52.80	9.20
2013	19500 C	E 9800	W 9700	9.00	53.00	8.70
2012	20400 C	E 10500	W 9900	9.00	53.10	22.80
2011	21500 C	E 11000	W 10500	9.00	53.10	20.20
2010	22000 C	E 11000	W 11000	9.12	53.51	13.40
2009	22000 C	E 11000	W 11000	9.10	53.73	11.40
2008	21000 C	E 10500	W 10500	8.66	53.12	11.00
2007	24000 C	E 12000	W 12000	9.20	54.21	13.70
2006	24000 C	E 12000	W 12000	9.12	53.26	8.00
2005	22000 C	E 11000	W 11000	9.00	55.80	12.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Appendix B

Northeast District Element
Osceola County Comprehensive Plan,
Adopted August 2010

Northeast District Element

Adopted by the Osceola County
Board of County Commissioners
August 16, 2010

DATE EFFECTIVE	INDEX	ORDINANCE NO.	AMENDMENT TYPE
	CPA09-0009	10-18	LARGE SCALE TEXT/MAP
7/27/11	CPA09-0009	11-19	LARGE SCALE TEXT/MAP

TABLE OF CONTENTS TO GOALS, OBJECTIONS & POLICIES SECTION

TABLE OF CONTENTS TO EXHIBITS SECTION

TABLE OF CONTENTS TO MAPS SECTION

NORTHEAST DISTRICT ELEMENT

GOAL 1: ACHIEVING SMART GROWTH

The goal of the Northeast District Conceptual Master Plan is to create a regional employment center that can position the County to successfully participate in the expanding regional high-tech economy and can help diversify the local economy to include a growing number of high-wage, high-value jobs. This goal can be achieved by using long-range, large-scale planning to accommodate sustainable economic development and contribute to a sound tax base, alleviate the pressure for urban sprawl, and reduce vehicle miles traveled by linking road and transit networks.

The plan also will provide a variety of housing options; protect environmentally sensitive lands, wildlife corridors and upland habitat, and create a strong sense of place through street layout, open space arrangements, streetscape appearance, and linkage of neighborhoods to commercial services and jobs.

Objective 1.1: Development Framework

Ensure that buildout of the Northeast District planning area occurs in a predictable, yet flexible manner consistent with the vision and intent of the County's Mixed Use District policies and the Northeast District Conceptual Master Plan.

Policy 1.1.1: *Applicability.*

The Northeast District planning area consists of the land area depicted on Future Land Use Map 2 (FLU 2) of the Comprehensive Plan as Mixed Use District 8 and part of Mixed Use District 7 and NED Map 1 – Development Program Map – of the Northeast District Conceptual Master Plan.

Policy 1.1.2: *Conceptual Master Plan.*

The Northeast District Conceptual Master Plan, as developed through the efforts of the Northeast District Stakeholder Group, consists of a regulatory element and a data and analysis element, and shall serve to guide future growth and development within the Northeast District planning area. The regulatory element of the Northeast District Conceptual Master Plan consists of the Northeast District Element, NED Maps 1- 6, and NED Tables 1-6.

Policy 1.1.3: *Buildout Scenario.*

The Northeast District Conceptual Master Plan presents a buildout scenario, as required by Future Land Use Element (FLUE) Policy 1.1.10. The buildout scenario, shown below, replaces the development program for Mixed Use District 8 previously adopted by FLUE Policy 1.1.9.

Northeast District Buildout Scenario:

- Employment – 44,130
- Residential – 29,320 dwelling units
- Commercial/Office/Industrial – 8,540,000 sq. feet
- Institutional/Civic – 1,995,000 sq. feet*
- Hotel – 5,000 rooms

*The building area listed for Institutional/Civic use does not include public primary and secondary schools.

Policy 1.1.4: *Function.*
The Northeast District Conceptual Master Plan represents one approach for achieving the envisioned buildout scenario for the Northeast District consistent with the mixed-use policies outlined in FLUE Policies 1.3.11 – 1.3.13. As provided in FLUE Policy 1.1.11, an alternate conceptual master plan may be prepared for the District and proffered to the Osceola County Board of County Commissioners for consideration. Approval of an alternate conceptual master plan is dependent upon a showing that the proposal supports the policies of the Mixed Use District land use category.

Policy 1.1.5: *Concurrent Rezoning of Lands.*
The County shall adopt a SmartCode for Mixed Use Districts, which shall create a Mixed Use District zoning classification and establish form based development guidelines for Mixed Use Districts. Concurrent with SmartCode adoption, the County shall rezone all lands within the Northeast District Conceptual Master Plan Area to the Mixed Use District classification.

Policy 1.1.6: *Interim Use of Land.*
Legal land uses existing at the time of adoption of the Conceptual Master Plan for the Northeast District shall be allowed to continue until such time the site occupied by the particular use is developed or redeveloped consistent with the Conceptual Master Plan and the Mixed Use Zoning District. Both existing and new agricultural uses shall be deemed to be an allowable interim land use for all areas within the Northeast District prior to their development in accordance with the Conceptual Master Plan.

Policy 1.1.7: *Framework Street Impact Fees.*
In recognition that the County is promoting smart growth communities, and smart growth principles are intended to reduce vehicular trips both within and external to Mixed Use Districts, the County considers the framework streets, illustrated on NED Map 3, to be impact fee creditable. Prior to the issuance of any impact fee credits, the County shall complete a study to determine the extent of the impact fee credits. At the next annual update of the Impact Fee Ordinance following the study's completion, the Ordinance shall be amended to incorporate the study results and authorize impact fee credits as determined appropriate by the study.

Policy 1.1.8: *Evolution of Development Patterns.*
Uses, densities and intensities within blocks shall be allowed to change over time in order for the buildout scenario outlined in Policy 1.1.3 to be realized.

Objective 1.2: Implementing the Northeast District Conceptual Master Plan
Establish a review and approval process designed to facilitate development of the Northeast District consistent with the County's mixed use policies and the Conceptual Master Plan.

Policy 1.2.1: *Safe Harbor Provision.*
NED Maps 2, 3, and 4 of the Northeast District Conceptual Master Plan illustrate the structural elements that support the Northeast District Development Program. Consistent application of the structural elements provides a "Safe Harbor" for applicants. "Safe Harbor" entitles the applicant to a ministerial approval of Concept Plans which are prepared consistent with the structural elements as illustrated on NED Maps 2, 3, and 4, and staging as demonstrated on NED Map 5. The Safe Harbor provision recognizes that the scale of the maps, their conceptual nature using best available information, permitting and engineering considerations, and existing land uses and plats may necessitate one or more adjustments to the structural elements as they are applied to specific sites. Adjustments made under the Safe Harbor Provision shall be the minimum required to address the condition or circumstance necessitating a change.

Policy 1.2.2: *Concept Plan and Site Development Plans.*
The SmartCode for Mixed Use Districts shall include provisions for preparation, review and approval of a Concept Plan and Site Development Plans, the two types of plans required to implement Conceptual Master Plans.

The Concept Plan shall designate place types, mixture of uses, and their densities and intensities for a phase or portion of the area encompassed by the Conceptual Master Plan. The Concept Plan shall outline regional connections, internal connectivity, road network, transit, parks, trails, schools, major infrastructure and other civic amenities. The Site Development Plans shall apply design and development criteria to a phase or portion of an area encompassed within an approved Concept Plan. As described in the SmartCode for Mixed Use Districts, each Site Development Plan shall provide a greater amount of specificity to the street types, place types and block design, phasing, diversity of residential product type, drainage, utility calculations, civic areas, parks and landscape design.

Concept Plans and Site Development Plans shall be reviewed and approved as outlined in the SmartCode for Mixed Use Districts. The SmartCode shall stipulate that no development will be authorized by the County except in conformance with an approved Concept Plan and Site Development Plan.

Policy 1.2.3: *Applicant-Initiated Adjustments.*
Adjustments may be proffered by an applicant in addition to those provided for under the Safe Harbor provision. The adjustments may include refinements to the location, size and boundaries of place types, the fine-grained network, framework streets and the distribution of the buildout program described in Tables 1 – 6. Adjustments to the Conceptual Master Plan for a project site shall become final through approval of Concept Plans or Site Development Plans, as required by the SmartCode for Mixed Use Districts.

Policy 1.2.4: *Review.*
Approval of applicant-initiated adjustments shall be based upon a demonstration by the applicant of the following:

1. The requested change is consistent with the FLUE mixed-use policies;
2. The requested change supports an area's livability as a pedestrian-oriented, mixed-use community;

3. The requested change contributes to the County's desire for a balance and mix of uses, as represented in the buildout scenario described in Policy 1.1.3;
4. The requested change will not interfere with adjacent or neighboring property owners' ability to qualify for the Safe Harbor provision without their consent.

Policy 1.2.5: *Relationship to Other Comprehensive Plan Policies.*
Where the Northeast District Conceptual Master Plan prescribes requirements or standards different than those contained in the Osceola County Comprehensive Plan, the Conceptual Master Plan shall control. Otherwise, all policies within the Comprehensive Plan shall apply to the Northeast District Conceptual Master Plan Area.

Objective 1.3: Northeast District Boundary Expansion
Provide sufficient land area to create major employment opportunities and communities attractive to the high-tech industry in a location that allows the County to fully participate in the bio-tech/high-tech economic cluster emerging in the southeast quadrant of the Orlando metropolitan area.

Policy 1.3.1: *Urban Growth Boundary.*
The County's Urban Growth Boundary (UGB) is modified to include all of the property encompassed within the Northeast District Conceptual Master Plan.

Policy 1.3.2: *Staging Development.*
Development within the Northeast District planning area shall occur in an organized manner based upon the creation of jobs, efficient use of land, and investments in transportation infrastructure, rather than specific time periods. The staging strategy for the Northeast District is illustrated on NED Map 5.

Policy 1.3.3: *Staging Area 1.*
Staging Area 1 is a reconfiguration of the acreage previously approved for Mixed Use District 8. Development may occur within this area consistent with the Comprehensive Plan's Mixed Use policies, Northeast District Conceptual Master Plan, and all other applicable Comprehensive Plan policies.

Policy 1.3.4: *Staging Area 2.*
Development may proceed when the following activities have occurred:

- 4,000 jobs have been created in Staging Area 1; and
- 7,000 dwelling units have been constructed in Staging Area 1; and
- The Osceola Parkway Extension is under construction from its current terminus at Boggy Creek Road to the location depicted in the Northeast Conceptual Master Plan; or
- Southport Connector is under construction from US 192 to the location depicted in the Northeast District Conceptual Master Plan.

The above criteria shall not preclude an applicant from submitting development applications including, but not limited to, Application for Development Approval / Development of Regional Impact, Concept Plan and/or Site Development Plan for approval by Osceola County; nor shall it

preclude an applicant from constructing infrastructure improvements; however, building permits shall not be approved by Osceola County until the listed criteria have been met.

Policy 1.3.5: *Staging Area 3.*
Development may proceed when the following activities have occurred:

- 14,000 cumulative jobs have been created in Staging Areas 1 and 2; and
- 14,000 cumulative dwelling units have been constructed in Staging Areas 1 and 2; and
- The Osceola Parkway Extension into the Northeast District has been completed and the Southport Connector is secured and committed or vice versa.

The above criteria shall not preclude an applicant from submitting development applications including, but not limited to, Application for Development Approval / Development of Regional Impact, Concept Plan and/or Site Development Plan for approval by Osceola County; nor shall it preclude an applicant from constructing infrastructure improvements; however, building permits shall not be approved by Osceola County until the listed criteria have been met.

Policy 1.3.6: *Modification of Staging Area Boundaries.*
The boundaries of Staging Area 1, Staging Area 2, and Staging Area 3 may be shifted within the interior of the Northeast District provided that the sum of the land area within each of the three boundaries is not increased and the following conditions are met:

- The proposed modification furthers the economic and urban development strategies included within the Northeast District Conceptual Master Plan and the County's Mixed Use District Policies;
- The proposed modification would represent a logical extension of services;
- Adequate public facilities to support the proposed development within the proposed modification area are available, or will be available at the time development of the expansion area is to occur, consistent with the County's concurrency requirements;
- The proposed modification will accommodate new job growth or the facilities and amenities necessary to attract and retain major new employers within the Northeast District;
- The proposed modification would not divide a Concept Plan.

Policy 1.3.7: *Density Calculations.*
Within the Northeast District, net density for residential use is defined as the ratio of the total number of residential units to the developable land area occupied by the residential use. The developable land area consists of the land available for development only, excluding all land set aside for recreation and open space, stormwater management and flood control systems, rights-of-way for roadways, transit and trails, natural water bodies and wetlands.

Objective 1.4: Multimodal Transportation District
Establish a Multimodal Transportation District (MMTD) for the purpose of promoting transit, walking, and bicycling, and reducing dependence on the automobile within the Northeast District planning area.

Policy 1.4.1: *Required Design Elements.*
The Northeast District MMTD boundaries shall be coterminous with the Northeast District planning area. It shall incorporate the following community design elements, as required in 163.3180(15) (a-d), Florida Statutes:

1. An interconnected network of streets and paths designed to encourage walking and bicycle use, with traffic calming where desirable;
2. A complementary mix and range of land uses, including residential, employment, educational, recreational and cultural;
3. Appropriate densities and intensities of land uses within walking distance of transit stops; and
4. Daily activities within walking distance of residences, public uses, streets and open spaces that are safe, comfortable and attractive for the pedestrian, with adjoining buildings open to the street and parking designed so as not to interfere with pedestrian and bicycle travel.

Policy 1.4.2: *Development Standards.*
Prior to approving the first Concept Plan within the Northeast District MMTD, the County shall adopt the requisite design and development standards within the SmartCode.

Policy 1.4.3: *Organization of Land Uses.*
The Northeast District MMTD will provide for an appropriate density, intensity and mix of land uses to support multimodal transportation as follows:

1. The Central Core Area shall extend ¼ mile walking distance from a passenger station, rail station, and/or transit superstop, and shall contain the highest densities and intensities of land use in the MMTD, and be located along a framework street at key crossings of perpendicular routes or on one side of a framework street along roadway facilities parallel or perpendicular to the framework street.
2. Medium-Density Areas surrounding the Central Core Area shall extend between ¼ and ½ mile walking distance from a passenger station, rail station, and/or transit superstop, and shall be an area in which densities and intensities may decline but shall remain sufficient to support transit use.

Policy 1.4.4: *Densities.*
The overall minimum and maximum densities and intensities of development within the Northeast District MMTD shall be as set forth in the following table, unless otherwise set forth in an approved Development Order or Concept Plan:

Area	Urban Center		Employment Center		Community Center		Neighborhood 1		Neighborhood 2	
	Minimum Res. (DU/Acre)	Minimum Non-Res. (FAR)	Minimum Res. (DU/Acre)	Minimum Non-Res. (FAR)	Minimum Res. (DU/Acre)	Minimum Non-Res. (FAR)	Minimum Res. (DU/Acre)	Minimum Non-Res. (FAR)	Minimum Res. (DU/Acre)	Minimum Non-Res. (FAR)
Before Transit										
Central Core (1/4 Mile)	16	0.6	16	0.6	10	0.5	7	0.25	10	0.25
Surrounding Area (1/4 - 1/2 Mile)	12	0.4	12	0.4	8	0.35	5	0.25	7	0.25
After Transit										
Central Core (1/4 Mile)	20	1	20	1	15	0.6	10	0.25	14	0.35
Surrounding Area (1/4 - 1/2 Mile)	16	0.75	16	0.75	12	0.45	8	0.25	10	0.35
**For the purposes of the Northeast District MMTD, there shall be no minimum density or intensity for Neighborhood Centers.*										

*All densities are net as defined Policy 1.3.7.
** "After Transit" minimum densities and intensities shall apply only at such time that rail transit or bus rapid transit, with headways less than or equal to twenty minutes, serving the Central Core and Medium Density Areas has been secured and committed. Prior to such time, the minimum densities and intensities shall be as indicated in the "Before Transit" Table.

Policy 1.4.5: *Appropriate Land Uses.*
The Northeast District MMTD shall ensure that the land uses incorporated into the Conceptual Master Plan are physically and functionally integrated, including a connected and continuous system of pedestrian facilities.

Policy 1.4.6: *Mixture of Land Uses.*
The Northeast District shall accomplish an overall mix of residential and non-residential uses as outlined in the Conceptual Master Plan and implementing policies and regulations.

Policy 1.4.7: *Relationship to Major Thoroughfares.*
The Northeast District MMTD shall be planned in a manner that maximizes internal circulation and does not cause the Florida Strategic Intermodal System (SIS) to exceed its adopted Level of Service Standard without appropriate mitigation.

Policy 1.4.8: *Transportation Quality/Level of Service (LOS).*

1. The following minimum quality/level of service standards (LOS) for transit, bicycle, and pedestrian facilities and roadways shall apply in the Northeast District MMTD. LOS shall be measured in accordance with the methodology established in the FDOT *Multimodal Transportation Districts and Areawide Quality of Service Handbook* (Nov. 2003 or as revised).

Pedestrian	Transit	Bicycle	Automobile
C	D	D	SIS/CP*
*LOS standards for facilities on the Strategic Intermodal System (SIS) are established by the Florida Department of Transportation. LOS standards for non-SIS roadway facilities are established in the Osceola County Comprehensive Plan.			

2. Osceola County shall coordinate with LYNX and METROPLAN ORLANDO to apply the transit quality of service framework as found in the most recent edition of the *Transit Capacity and Quality of Service Manual* (TCQSM) and required as part of METROPLAN ORLANDO'S long-range transportation plan.
3. The Northeast District MMTD shall include the following performance targets for transit, bicycle and pedestrian facilities, and roadways within a MMTD as follows:
    a. 80% of all the bicycle and pedestrian facilities within the MMTD network shall function at LOS C or better;
    b. All parcels within ¼ mile of a transit stop should be serviced by pedestrian facilities operating at LOS C or better; and
    b. 80% of the employees and dwelling units in the District will have convenient access to transit.

Policy 1.4.9: *Transportation Concurrency.*
Transportation concurrency in the Northeast District MMTD shall be evaluated based upon the financially feasible long-range capital improvements plan and program for the MMTD, without regard to the period of time between development or redevelopment and the scheduled construction of the capital improvements.

Policy 1.4.10: *Vehicle Trip Reduction/ Transportation Demand Management*.
The Northeast District MMTD shall incorporate transportation demand management strategies into its transportation planning process to alleviate congestion. A range of techniques will be considered, such as vanpool/ridesharing programs, parking management and pricing, transit vouchers, pre-tax incentives, telecommuting, flextime, and/or other appropriate trip reduction strategies.

Policy 1.4.11: *Intergovernmental Coordination.*
Osceola County shall coordinate with the Florida Department of Transportation, METROPLAN ORLANDO, LYNX and other affected agencies and jurisdictions to implement Northeast District Conceptual Master Plan as a means for promoting transportation choice.

Policy 1.4.12: *Consideration for Demographics.*
Special consideration shall be given to areas within the Northeast District with concentrations of students, seniors, low-income families or others that are more dependent on modes other than the automobile to provide safe and accessible travel alternatives.

Policy 1.4.13: *Contributions to Multimodal Network.*
Proposed development within the Northeast District MMTD shall contribute to providing a safe, convenient, comfortable and aesthetically pleasing transportation environment that promotes walking, cycling, and transit use. Appropriate improvements or enhancements to the multimodal network may include but are not limited to the following:

1. Accommodations for pedestrian access and movement, including sidewalks, benches and clearly marked crossings;
2. Accommodations for bicycles, including lockers, showers, and racks;
3. Connections between the MMTD and the regional bicycle/pedestrian network if applicable;
4. Shared use paths in accordance with the FDOT Bicycle Facilities Planning and Design Guidelines Handbook;
5. Accommodations for transfer of passengers at designated transit facilities;
6. Preferential parking for rideshare participants;
7. Access for motor vehicle passenger drop-offs and pick-ups at designated transit facilities and at commercial and office development sites; and/or
8. Accommodation for the mobility impaired, including parking spaces, sidewalks and ramps for handicapped access.

Policy 1.4.14: *Multimodal Street Design and Operation.*
Osceola County shall establish within the SmartCode for the Mixed Use Districts multimodal street cross-sections, design standards, and operational measures (e.g. pre-emptive signals, dedicated bus lanes, etc.) to ensure streets are safe and convenient for transit, automobile, truck, bicycle and pedestrian travel. Strategies may include but are not limited to marked crosswalks, wider sidewalks, on-street parking, bus turnouts, traffic calming, raised medians or other appropriate safety enhancements that reduce hazardous conflicts between modes and that are consistent with the planned functions of the roadway.

Policy 1.4.15: *Street Function and Type.*
The type of street in the Northeast District MMTD shall vary and be appropriate to the street function and expected users. Street types are described below:

1. Regional roadways:
    a. Regional roadway alignments will generally follow alignments on the Conceptual Master Plan. Adjustments to the alignments by subsequent planning efforts will be made in a way that supports and furthers the long-term viability of centers and neighborhoods.
    b. Interchange locations will be in general accordance with Conceptual Master Plan to assure proper access to MMTD properties.
    c. Concept and Development Plans will refine/protect regional roadway corridors and interchanges as identified on the Conceptual Master Plan.
    d. Funding for regional facilities will be determined through detailed studies.
2. Regional fixed guideway transit:
    a. Such facilities will be planned, designed and constructed in the corridors generally depicted in the Conceptual Master Plan, and are intended to connect the Northeast District to Innovation Way, Medical City, Orlando International Airport, Kissimmee, St. Cloud and other existing or future Urban Centers.

Modifications to alignments and station locations by subsequent planning efforts will be made in a way that supports and furthers the long-term viability of centers and neighborhoods.

b. Concept and Site Development Plans will refine/protect regional transit corridors and organize development intensities around proposed transit station areas and transit superstops following accepted TOD principles and guidelines, with allowances for evolution of densities over time in accordance with market demand.

c. Alternatives analysis (AA) studies for regional transit will be conducted by either Osceola County or another lead agency when development levels indicate that transit is feasible. AA studies will determine the preferred alignment, technology and funding strategy, including both capital and operating costs.

3. Framework roadway facilities:
    a. The location of framework streets is defined by the Conceptual Master Plan. Adjustments to the alignments by subsequent planning efforts may be made in order to support and further the viability of the District's centers and neighborhoods.
    b. Concept and Development Plans will refine/protect framework roadway corridors as identified on the Conceptual Master Plan.
    c. Framework streets shall function as complete streets. They shall be designed and constructed to enable multiple users – pedestrians, bicyclists, motorists and transit riders of all ages and abilities – to safely and conveniently move along and across the District's thoroughfares.
    d. The construction of framework streets will generally follow the alignments illustrated on NED Map 3 and shall include the infrastructure needed for them to function as complete streets.
    e. Framework streets are part of the community design elements that will allow the Northeast District to function as a walkable, transit-ready urban area. As such, construction of framework streets shall be timed to coincide with the transportation needs created by the neighborhoods and centers they are designed to serve, consistent with the Staging sequence depicted on NED Map 5.
    f. The developer shall be responsible for funding the construction of all framework streets. Pursuant to Policy 1.1.7, framework streets are considered to be impact fee creditable.
4. Framework and local transit:
    a. Framework and local transit facilities will be designed to provide access among centers and neighborhoods and to provide feeder service to regional transit.
    b. The County will work with the property owner to establish a streetcar system capable of connecting neighborhoods with community centers and urban/employment centers.
    c. The County will work with LYNX to prioritize funding and implementation of service to the Northeast District.
    d. Local transit shall become operational commensurate with the demand for service along individual lines and routes associated with each of the framework streets.

Policy 1.4.16: *Street Intersections.*
The SmartCode for Mixed Use Districts shall include standards for street intersections to facilitate pedestrian crossings.

Policy 1.4.17: *Street Network and Connectivity.*
The Northeast District MMTD shall provide a dense, interconnected network of local and framework streets as illustrated in the Northeast District Conceptual Master Plan and in accordance with the following:

1. The street network shall be comprised of a system of interconnected and direct routes with a connectivity index to be established within the SmartCode for Mixed Use Districts.
2. The Northeast District MMTD shall be subject to a maximum block length, to be established in the SmartCode for Mixed Use Districts, to advance connectivity as development occurs.
3. The local street circulation pattern shall maximize access to individual lots and activity center destinations (e.g. schools, commercial areas, parks). At the same time, the circulation pattern shall manage traffic in residential areas through design and traffic calming techniques. (e.g. chicanes, speed tables, raised intersections, on-street parking, etc.)

Policy 1.4.18: *Internal Connectivity.*
To provide continuous circulation systems for pedestrians, bicyclists and automobiles, unconnected streets (e.g. cul-de-sacs, T-turnarounds and dead ends), and block lengths greater than the maximum shall be discouraged. In places where an unconnected street cannot be avoided, pedestrian and bicycle connectivity shall be provided when feasible.

Policy 1.4.19: *Reserved.*

Policy 1.4.20: *Bicycle/Pedestrian Network and Connectivity.*
The Northeast District MMTD shall provide direct bicycle and pedestrian connections within and between residential areas and supporting community facilities and services, such as shopping areas, employment centers, transit stops, neighborhood parks, and schools. Standards and design criteria shall be established within the SmartCode for Mixed Use Districts.

Policy 1.4.21: *Sidewalks and Pedestrian Facilities.*
New development within the Northeast District MMTD shall provide complete streets that include safe and convenient pedestrian facilities that are reasonably free from hazards and adequately separated from streets that carry high levels of automobile traffic, and provide a reasonable and direct route of travel between destinations. Standards for pedestrian facilities shall be established in the SmartCode for Mixed Use Districts.

Policy 1.4.22: *Bicycle Facilities.*
The Northeast District MMTD shall contain a network of bicycle facilities to provide safe and convenient movement for bicyclists that are reasonably free from hazard, are adequately separated from streets that carry high levels of automobile traffic, and provide reasonable and direct routes of travel between destinations throughout the MMTD. The bicycle facilities may

consist of bicycle lanes, signed routes along the street network, and off-street shared use paths, as may be established in the SmartCode for Mixed Use Districts. Bicycle lanes shall be provided on all framework streets within the MMTD in accordance with the FDOT Bicycle Facilities Planning and Design Guidelines.

Policy 1.4.23: *Bicycle Parking*.
The SmartCode for Mixed Use Districts shall establish standards for bicycle parking facilities. These standards shall address, among other things, the location, number, and configuration of the bicycle parking facilities. Vehicle parking space credit may be given for the provision of bicycle parking.

Policy 1.4.24: *Consideration for Schools.*
Osceola County shall give special consideration in its SmartCode for Mixed Use Districts to schools and their multimodal needs to provide a safe, accessible environment for students by giving high priority to bicycle and pedestrian facilities within a two-mile radius of all schools.

Policy 1.4.25: *School Infrastructure.*
The infrastructure necessary to support schools shall include the means to assure safe access to schools such as sidewalks, bicycle paths, turn lanes, and signalization.

Policy 1.4.26: *Access to Parks, Recreation and Open Space.*
To advance connectivity and allow access for the entire community, the SmartCode for Mixed Use Districts shall include standards and criteria for public access to parks, recreation areas, conservation areas, natural areas, lakes and general open space.

Policy 1.4.27: *Transit.*
The County shall work with LYNX to help ensure that the Northeast District MMTD is well-connected via transit to major trip generators and attractors both inside and outside of the MMTD, to ensure that transit stops and waiting areas are safe and comfortable, and to enhance intermodal connections.

1. Identified needs shall be reflected in the LYNX Transit Development Plan (TDP) and/or the Osceola County capital improvements program, and funding identified for improvements that increase the availability, speed, frequency, duration and reliability of transit serving the MMTD.
2. The County shall coordinate with LYNX regarding the provision of transit stations, superstops, and other facilities for the transfer of passengers to and from the MMTD via the regional transit system.
3. The County shall coordinate with LYNX regarding the provision of benches, signage, lights, and covered or enclosed waiting areas for transit stations and/or superstops within the MMTD.
4. The County shall coordinate with LYNX regarding the provision of bicycle parking at transit stations and superstops and bicycle racks on buses as a means to interface bicycle travel with public transit.

Policy 1.4.28: *Bicycle and Pedestrian Access to Transit Stops.*
The SmartCode for Mixed Use Districts shall include standards and criteria to ensure that walks to/from transit stops and buildings shall be made short, comfortable, and safe, and that the bicycle network and transit network shall interconnect to increase the transit network travel shed.

Policy 1.4.29: *Parking Management.*
Parking shall be limited to discourage single-occupant vehicle commuting and reinforce non-auto modes, but not so limited as to adversely impact the viability and vitality of the MMTD. Emphasis shall be on short-term parking (e.g. parking duration limits, time-of-day limits, restricted parking zones) over long-term parking in commercial areas.

Policy 1.4.30: *Limits on Parking.*
Off-street parking areas shall be limited in size and scale through strategies established in the SmartCode for Mixed Use Districts, such as shared parking, parking credits, and maximum parking limits.

Policy 1.4.31: *Public Parking.*
Publicly available surface and structured parking within the Northeast District MMTD may be planned, designed, and constructed to provide needed parking in locations that do not disrupt pedestrian circulation and allow for higher building intensity near transit stations.

1. Public parking sites will be determined during the development of the Concept Plan or Site Development Plan according to the following criteria:
    a. Surface lots and structures will be located in proximity to the buildings served.
    b. Surface lots will not exceed a block within the Concept Plan.
    c. Surface lots will be located so as to allow for the conversion to structured parking.
2. Available public parking may be allocated to a use to meet minimum parking requirements. Priorities for public parking allocations will be given to properties in the Central Core Area.

Policy 1.4.32: *Shared Parking*.
The SmartCode for Mixed Use Districts shall include standards and criteria for shared parking where it can be demonstrated that the demand for parking of combined uses can be satisfied with shared and jointly accessible off-street parking.

Policy 1.4.33: *Parking Credits.*
New development may be eligible for parking credits in exchange for transit facility placement, bicycle facilities, a portion of the on-street spaces abutting the property, allocated public parking spaces, and/or monetary contribution toward public parking. The standards and criteria for parking credits shall be established in the SmartCode for Mixed Use Districts.

Policy 1.4.34: *Amount of Off-Street Parking.*
Maximum allowances for off-street parking spaces shall be established in the SmartCode for Mixed Use Districts for land uses within the MMTD and reviewed periodically as conditions change to ensure they continue to adequately address parking needs and the availability of transit or other non-auto modes.

Policy 1.4.35: *Location and Design of Off-Street Parking.*
Off-street parking and maneuvering areas shall be located and designed in a manner that supports and does not conflict with pedestrian activity.

Policy 1.4.36: *Structured Parking.*
The standards for structured parking shall be established in the SmartCode for Mixed Use Districts and may address ground floor uses, vehicle access, design elements, and locational criteria.

Policy 1.4.37: *Funding of Capital Improvements.*
A financially feasible long-range capital improvements plan and program for the MMTD is required for the interconnected network of streets, paths, bicycle, pedestrian and transit systems that will reduce reliance on automobiles for access and internal circulation.

Potential funding sources for improvements include the following:

- Community Development District(s)
- Road Impact Fees
- Developer Contributions
- Municipal Service Taxing Unit / Municipal Service Benefit Unit
- Available State or Federal Highway or Transit Funds
- Tax Increment Financing

The capital improvements will put in place the major roadway network (framework streets), which are designed with bicycle lanes and sidewalks. The multimodal boulevards are also designed with dedicated transit lanes. The capital improvements on the schedule will therefore provide for overall connectivity for pedestrians, cyclists, and transit riders in the MMTD.

Policy 1.4.38: *MMTD Financial Feasibility and Monitoring.*
Prior to or concurrent with approval of a Concept Plan prepared pursuant to NED Policy 1.1.2, a financially feasible long-range capital improvements program (CIP) shall be developed and approved for at least the area contained within the Concept Plan. Upon approval of the CIP, Osceola County shall amend its adopted Capital Improvements Element (CIE) to include the CIP's required capital improvements and their proposed funding sources. As part of the CIE's required updates, the CIP shall be reviewed annually to ensure MMTD level of service standards are achieved and maintained by the end of the development timeframe and the proposed improvements necessary for achieving and maintaining the level of service standards are financially feasible.

Policy 1.4.39: *Future Activities and Agreements.*

1. Upon adoption of the Northeast District Conceptual Master Plan (NED CMP), the landowner, or its successors and assigns will initiate and co-create the Northeast District Strategic Economic Plan with Osceola County and provide funds for the County's use for employee salaries, consulting fees, or technical assistance related to the County's participation in creating such Plan.
2. Following DCA's finding of compliance for, and the resolution of all appeals/intervener objections to, the NED CMP, Osceola County and the landowner or its successors and

assigns will prepare an agreement or agreements to be executed coincident with the County's adoption of the first DRI Development Order for the NED, which agreement or agreements will provide for:

a. Funds to Osceola County for pursuing economic development opportunities in the Northeast District identified in the Northeast District Strategic Economic Plan.
b. Funds for job training in fields that are transferable to targeted industries identifies in the Northeast District Strategic Economic Plan.
c. Land and partial funding for creation of a business incubator in the Northeast District focusing on start-up enterprises related to targeted industries identified in the Northeast District Strategic Economic Plan.

Objective 1.5: Environmental Resource Management
Ensure that viable environmental communities are sustained during and after development, protect major wetland systems, and promote wildlife movement.

Policy 1.5.1: *Econlockhatchee Swamp Protection Zone.*
A protection zone is hereby established to enhance the protection of the Econlockhatchee (Econ) Swamp provided by Conservation Policy 1.4.12. This protection includes an area that is two hundred and fifty (250) feet landward as measured from the western edge of the wetlands comprising the Econ Swamp, except where additional areas are determined to be essential for protection of listed wildlife species based on existing published wildlife guidelines. Within the protection zone, development shall be limited to preserved or restored uplands; created forested or herbaceous wetlands; stormwater attenuation areas when sufficient uplands are retained in the protection zone to ensure wildlife movement and habitat, as determined in consultation with the water management district and Florida Fish and Wildlife Conservation Commission (and then only when designed as created forested or herbaceous wetlands); mitigation activities when approved by a regulatory agency; passive recreation; walking trails; and other resource-based uses that are compatible with the protection of the Econ Swamp. Consistent with Conservation Policy 1.4.12, unless otherwise expressly allowed by Policies 1.5.1 through 1.5.23, in no case shall development be permitted within fifty (50) feet from the western edge of the wetlands comprising the Econ Swamp.

Policy 1.5.2: *Econlockhatchee Swamp Preservation Area.*
The wetlands within the Econlockhatchee Swamp, and fully isolated uplands within such wetlands, shall be designated the Econlockhatchee Swamp Preservation Area as shown on NED Map 6, and shall be preserved in perpetuity by a conservation easement consistent with Section 704.06,F.S. The conservation easement shall be granted to the County and one or more of the St. Johns River or South Florida Water Management Districts, Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, or U.S. Fish and Wildlife Service in a manner that also serves as mitigation for wetland or other impacts or species relocation, but in no event shall the conservation easement be granted later than commencement of actual physical development in the uplands east of Lake Preston and its connected wetlands and west of the Econlockhatchee Swamp Protection Zone. Any upland within the Preservation Area shall qualify as a sending area for transferable development rights pursuant to FLUE Objective 3.1. The conservation easement shall also allow in wetlands, consistent with Section 704.06(3),F.S., passive recreation facilities, such as elevated boardwalks and observation decks,

permitted by the St. Johns River Water Management District, the South Florida Water Management District or other resource protection agencies.

Policy 1.5.3: *Transportation/Utility Corridors.*
Consistent with Section 704.06(11),F.S., two east-west transportation/utility corridors shall be reserved by the conservation easement protecting the Econlockhatchee Swamp Preservation Area and shall be allowed within the Econlockhatchee Swamp Protection Zone. Each corridor shall be restricted to rights of way for one or more transportation facilities as defined in Section 334.03,F.S., and telecommunications lines, electrical transmission and distribution lines, pipelines for liquefied or gaseous substances, and other compatible linear infrastructure. The County deems these transportation/utility corridors to be in the public interest in order to promote and facilitate a connected network of multi-modal transportation facilities and utilities to serve local and regional needs in the future. The southern corridor shall include the right of way for Nova Road. The northern corridor shall be located in the area bounded on the north by the Osceola-Orange County line and on the south by an east-west line from the northern edge of Lake Preston. To the maximum extent feasible, transportation facilities and compatible linear infrastructure shall be co-located. In consultation with the Florida Fish and Wildlife Conservation Commission, rights of way for such facilities shall minimize impacts to wetlands and wildlife habitat and shall make adequate provision for the protection of wildlife movement. The right of way for a new or expanded transportation facility in a corridor shall be established only after amendment of the Transportation Element map series pursuant to law.

Policy 1.5.4: *Habitat Management Plans.*
Upland or wetland habitats preserved by a conservation easement shall be subject to a habitat management plan for the purpose of wildlife preservation and the maintenance of native species diversity. Prior to actual physical development in the Northeast District, the habitat management plan must be reviewed and approved by Osceola County, the Florida Fish and Wildlife Conservation Commission, and the applicable water management district, but the plan may become operational by phase. The habitat management plan may be used to mitigate impacts to listed wildlife species and their habitat elsewhere in the Northeast District. It shall be the responsibility of the landowner, successors in interest, or the grantee of a conservation easement, whether a public entity, private entity, or private property owners' association, to manage the preservation area consistent with the approved management plan.

Policy 1.5.5: *Wildlife Data.*
An applicant for Concept Plan approval within the Northeast District shall compile and submit baseline data consistent with guidelines for any state or federally listed wildlife or plant species, based on Florida Fish and Wildlife Conservation Commission and U.S. Fish and Wildlife Service survey methodologies and casual observation of non-listed wildlife and plant species. The purpose of the baseline data is to recognize the cumulative effects that development within the Northeast District is having on species diversity and habitat over time.

Policy 1.5.6: *Wetlands and Floodplains.*
Development shall minimize encroachment into the 100-year floodplain and wetland/habitat areas by ensuring that public and private roads are sited to avoid crossing of floodplains and wetlands, or require that such crossings are sited at the narrowest point of a floodplain or wetland

system for continuity of a corridor. No net floodplain encroachment (fill) shall be permitted within the 100-Year Floodplain of the Econ Swamp (as adopted by FEMA).

Policy 1.5.7: *Site Development Standards.*
Osceola County and the landowner will collaborate with the Florida Fish and Wildlife Conservation Commission to prepare site development standards that promote preservation of wildlife during development and promote the provision of usable habitat post-development. Site development standards shall include but are not limited to monitoring, low-voltage lighting, berms, and fencing. Post-development measures may include, but are not limited to, published guidelines and conservation measures for listed species, planting of native vegetation, low-voltage lighting, berms, fencing and controlled burns.

Policy 1.5.8: *Wildlife Crossings.*
Osceola County and the landowner will collaborate with the Florida Fish and Wildlife Conservation Commission, the U.S. Fish and Wildlife Service, the Florida Department of Transportation and applicable expressway authorities to establish standards and locations for wildlife crossings on public roads that cross wetlands and other potential wildlife corridors. To facilitate these wildlife crossings, Osceola County shall require appropriately sized crossings and fencing to direct species to the crossings.

Policy 1.5.9: *Econ River Water Quality.*
Osceola County will continue to coordinate with the water management districts on all development approvals in the Northeast District to ensure the continued protection of the water quality standards of the Econlockhatchee Swamp as an Outstanding Florida Water.

Policy 1.5.10: *Native Vegetation.*
To promote wildlife usage within protected wildlife corridors, non-native landscape species shall be prohibited within these corridors, with the exception of turf grasses used as a road or yard stabilizer. Osceola County shall ensure that landscaping guidelines for property in the Northeast District prohibit vegetation identified on the Florida Exotic Pest Plant Council's List of Invasive Plant Species.

Policy 1.5.11: *Preservation Areas.*
In an effort to minimize the spread of invasive exotic plants into existing preservation areas, such as the TM Econ Mitigation Bank and Split Oak Forest Mitigation Park, as well as the Econ Swamp, Osceola County shall require a 550 foot zone in which non-native landscape species (excluding turf grasses) are not allowed. The limited use of turf grasses as a road or yard stabilizer will be allowed on a case-by-case basis. Property owners should be notified of prescribed burning conditions and encouraged to make structures "firewise."

Policy 1.5.12: *Water Conservation.*
Osceola County shall develop education programs and requirements for the Northeast District that encourage xeric and waterwise landscaping and other water conservation measures. The County will, through the implementation of the SmartCode, minimize the amount of impervious surface area for development in the Northeast District.

Policy 1.5.13: *Buffers for Conservation Areas and Wildlife Corridor.*
A buffer of 250 feet shall be provided on the northern boundary of the Northeast District adjacent to designated conservation areas in Orange County for the purpose of compatibility with Orange County's Environmental Land Stewardship Program, and may be used for preserved or restored uplands, created forested or herbaceous wetlands, mitigation activities when approved by a regulatory agency; passive recreation, walking trails and other resource-based uses.

Policy 1.5.14: *Protection of natural resources.*
Osceola County shall protect its natural resources in the Northeast District through adoption of land development regulations that promote the preservation or conservation of environmentally sensitive lands to include habitats containing listed animal and plant species. Natural resource protection shall be achieved through mechanisms such as stricter buffer requirements, lower allowable densities in environmentally sensitive areas, open space preservation requirements, removal of exotic plant and animal species, fire management, maintenance of greenways and habitat corridors, preservation of native vegetation, control of hydrological characteristics, and through use of clustering or density transfers to help minimize the effect of development.

Policy 1.5.15: *Prescribed and controlled burning.*
The County shall promote and encourage the use of prescribed and controlled burning to maintain the health and diversity of fire-dependent ecosystems to private and public lands.

Policy 1.5.16: *Safe development line defined.*
The County establishes the safe development line for all lakes at an elevation of one foot above the highest elevation of the regulated high pool state means high water level or ordinary high water level.

Policy 1.5.17: *Non-water dependent structures.*
Osceola County prohibits construction of non-water dependent structures lakeward of safe development lines as established by the County. The County shall continue to coordinate with state and federal agencies to insure proper consideration of this policy given for any alteration activities proposed along surface waters.

Policy 1.5.18: *Classification of wetlands within the Northeast District.*
For the purpose of identifying the types, values, functions, sizes, conditions and locations of wetlands within the Northeast District, the County shall use the applicable qualitative and quantitative assessment methods of the Uniform Mitigation Assessment Method (UMAM) as set out in Chapter 62-345, F.A.C.

1. Category I wetlands shall mean those wetlands that score at .65 or above utilizing UMAM.
2. Category II wetlands shall mean those wetlands that score between .4 and .64 utilizing the UMAM.
3. Category III wetlands shall mean those wetlands that score below .4 utilizing the UMAM.

Policy 1.5.19: *Public education about wetland regulations.*
Osceola County shall work cooperatively with federal and state regulatory agencies to educate the public and enforce federal, state and county wetland regulations.

Policy 1.5.20: *Ecological Evaluation (EE) of wetlands.*
Osceola County shall ensure that the structure and function of wetlands are preserved by requiring an Ecological Evaluation (EE) to be conducted for sites proposed for development. Osceola County shall establish the development threshold that triggers the need for an EE based upon size, amount, and use, and will also define its content, which shall include both qualitative and quantitative assessments. At a minimum, the EE shall address these topics:

1. General site description
2. Habitat descriptions (using FLUCFCS)
3. Onsite soil types
4. Protected species observed and potentially on-site
5. Detailed description of any onsite wetlands
6. Environmental regulatory analysis
7. Other constraints
8. Summary/conclusions
9. Location, soil, habitat/wetlands and protected species exhibit graphics

Policy 1.5.21: *Wetland protection standards within Northeast District.*
Within the Northeast District the following wetland protection standards shall apply:

1. The County shall limit the removal, alteration, or encroachment within Category I wetlands to only those cases where it is in the public's interest or no other feasible or practical alternatives exist that will permit a reasonable use of the land. Maximizing protection, preservation, and continuing viability of these wetlands shall be the principal consideration for determining the amount and the section of a wetland allowed to be removed, altered or encroached upon.
2. Removal, encroachment, or alteration may be allowed in Category II wetlands where it is in the public's interest or no other feasible or practical alternatives exist that will permit a reasonable use of the land, or for the purpose of increasing connectivity between neighborhoods. The value of enhanced neighborhood or community connectivity will be balanced against the value of the wetlands.
3. Removal, encroachment, or alternation of Category III wetlands is presumed to be allowed unless removal, encroachment, or alteration is determined to be contrary to the public interest.

Policy 1.5.22: *Wetland preservation.*
Except for specific encroachments consistent with Policy 1.5.21, wetlands within the Northeast District shall be made subject to a conservation easement granted to the County and one or more of the St. Johns River or South Florida Water Management Districts, Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, or U.S. Fish and Wildlife Service in a manner that also serves as mitigation for wetland or other impacts or species relocation, but in no event shall the conservation easement be granted later than commencement of actual physical development in the phase in which the conservation easement is to be located. The conservation easement area shall allow passive recreation facilities

consistent with Section 704.06,F.S., and shall be subject to a habitat management plan as required by Policy 1.5.4.

Policy 1.5.23: *Mandatory setbacks around wetlands.*
Osceola County shall require mandatory setbacks around wetlands. The required setbacks shall remain in native vegetation with impervious surfaces limited to only that allowed in Conservation Element Policy 1.4.14. The mandatory setbacks are as follows:

1. A minimum of a 50-foot setback for Category I wetlands.
2. An average of a 50-foot setback with a minimum of 25 feet at any given location for Category II wetlands.
3. An average of 25-foot setback with a minimum of 15 feet at any given location for Category III wetlands.

Policy 1.5.24: *Mitigation of impacts to wetlands.*
Adverse impacts to wetlands shall be mitigated and the appropriate amount of mitigation necessary to offset that loss shall be determined using the Uniform Mitigation Assessment Method as described in Chapter 62-345, FAC.

Policy 1.5.25: *Reclaimed water in new development in the Northeast District.*
The County shall require the use of reclaimed water and/or other non-potable sources of water for all new development in the Northeast District, as availability is determined by service providers and based on the same criteria applied to new development elsewhere in the County.

Policy 1.5.26: *Development adjacent to Econlockhatchee Swamp Protection Zone.*
Notwithstanding anything to the contrary in NED Policies 1.1.4, 1.2.1, and 1.2.3, development in the uplands east of Lake Preston and its connected wetlands and west of the Econlockhatchee Swamp Protection Zone shall not exceed 5,957 residential units, 210,000 GSF of retail, 120,000 GSF of office and 411,000 GSF of civic uses. Such development shall be located consistent with the locations identified on NED Map 1 – NED Map 6.

Policy 1.5.27: *Development Tables.*
The following tables shall guide the planning and development within the Northeast District and the MMTD:

Table 1. Desired Development Program at Buildout	
Place Type	**Acres**
Urban Center	80
Community Center	60
Neighborhood Center	90
Employment Center	150
Special District	420
Neighborhood Type 1	2,600
Neighborhood Type 2	570
Open Space District	13,370
Additional Land Uses	
Schools	250
Infrastructure/ ROW's	1,100
Southport Connector & Osceola Parkway ROW's	440
Total	19,140

Table 2. Development Program by Urban Center					
Place Type	**Detached & Attached Units**	**Commercial (SF)**	**Office (SF)**	**Industrial (SF)**	**Civic (SF)**
Urban Center	2,300	790,000	1,700,000	0	110,000
Total	2,300	790,000	1,700,000	0	110,000

Table 3. Development Program by Community Center					
Place Type	Detached & Attached Units	Commercial (SF)	Office (SF)	Industrial (SF)	Civic (SF)
Community Center 1	200	90,000	50,000	0	15,000
Community Center 2	270	120,000	70,000	0	20,000
Community Center 3	300	130,000	70,000	0	20,000
Community Center 4	270	120,000	70,000	0	20,000
Total	1,040	460,000	260,000	0	75,000

Table 4. Development Program by Employment Center & Special District					
Place Type	Detached & Attached Units	Commercial (SF)	Office (SF)	Industrial (SF)	Civic (SF)
Employment Center	2,500	300,000	2,000,000	0	190,000
Northwest Special District	0	80,000	1,700,000	1,000,000	120,000
Central Special Districts	1,500	190,000	60,000	0	60,000
Total	4,000	570,000	3,760,000	1,000,000	370,000

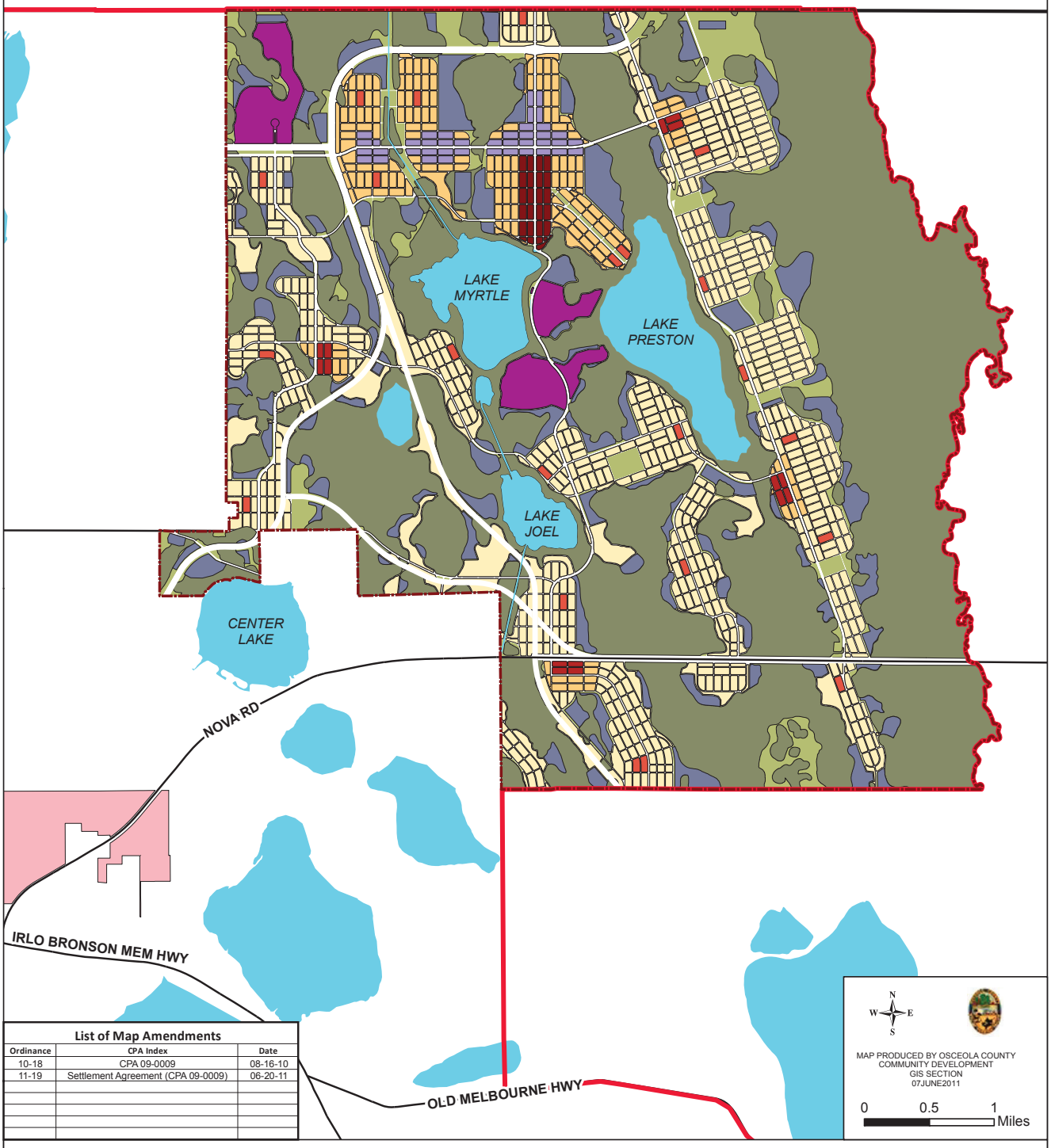
Table 5. Residential Development Program by Neighborhood				
Neighborhood	**Detached Units**	**Attached Units**	**Total Dwelling Units**	**Total Population**
East Neighborhoods				
EN – 1	380	90	470	1,220
EN – 2	570	80	650	1,666
EN – 3	560	70	630	1,650
EN – 4	780	30	810	2,092
EN – 5	690	30	720	1,865
EN – 6	460	50	510	1,323
EN – 7	870	120	990	2,570
EN – 8	450	20	470	1,220
SubTotal	4,760	490	5,250	13,607
Central Neighborhoods				
CN – 1	710	160	870	2,250
CN – 2	710	150	860	2,231
CN – 3	980	220	1,200	3,101
CN – 4	410	90	500	1,309
CN – 5	690	220	910	2,350
CN – 6	690	210	900	2,335
SubTotal	4,190	1,050	5,240	13,576
Urban Neighborhoods				
UN – 1	430	590	1,020	1,478
UN – 2	570	780	1,350	1,952
UN – 3	440	600	1,040	1,508
UN – 4	640	570	1,210	1,755
UN – 5	210	280	490	710
UN – 6	330	460	790	1,146
SubTotal	2,620	3,280	5,900	8,549
Narcoossee Neighborhoods				
NN – 1	720	30	750	1,938
NN – 2	460	20	480	1,233
NN – 3	520	140	660	1,703
NN – 4	790	30	820	2,129
NN – 5	530	20	550	1,426
NN – 6	640	30	670	1,737
NN – 7	250	10	260	668
SubTotal	3,910	280	4,190	10,834
Total	**15,480**	**5,100**	**20,580**	**46,566**

Table 6. Development Program Summary at Buildout							
Place Type	**Detached Units**	**Attached Units**	**Commercial (SF)**	**Office (SF)**	**Industrial (SF)**	**Civic (SF)**	**Hotel (Rooms)**
Urban Centers	0	2,300	790,000	1,700,000	0	110,000	1,400
Community Centers	0	1,040	460,000	260,000	0	75,000	0
Neighborhood Centers	0	1,400	0	0	0	1,440,000	0
Neighborhood Type 1 & 2	15,480	5,100	0	0	0	0	0
Employment Centers	0	2,500	300,000	2,000,000	0	190,000	1,500
Special Districts	1,500	0	270,000	1,760,000	1,000,000	180,000	2,100
Total	**16,980**	**12,340**	**1,820,000**	**5,720,000**	**1,000,000**	**1,995,000**	**5,000**

NED 1: Development Program

ORANGE COUNTY

ORANGE COUNTY



List of Map Amendments

Ordinance	CPA Index	Date
10-18	CPA 09-0009	08-16-10
11-19	Settlement Agreement (CPA 09-0009)	06-20-11

MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Place Types

- Urban Center
- Community Center
- Employment Center
- Neighborhood Center
- Neighborhood Type 1
- Neighborhood Type 2
- Open Space District
- Special District

Miscellaneous

- NED Boundary
- Urban Growth Boundary
- Preserved Wetlands
- Stormwater Ponds
- Other Jurisdictions

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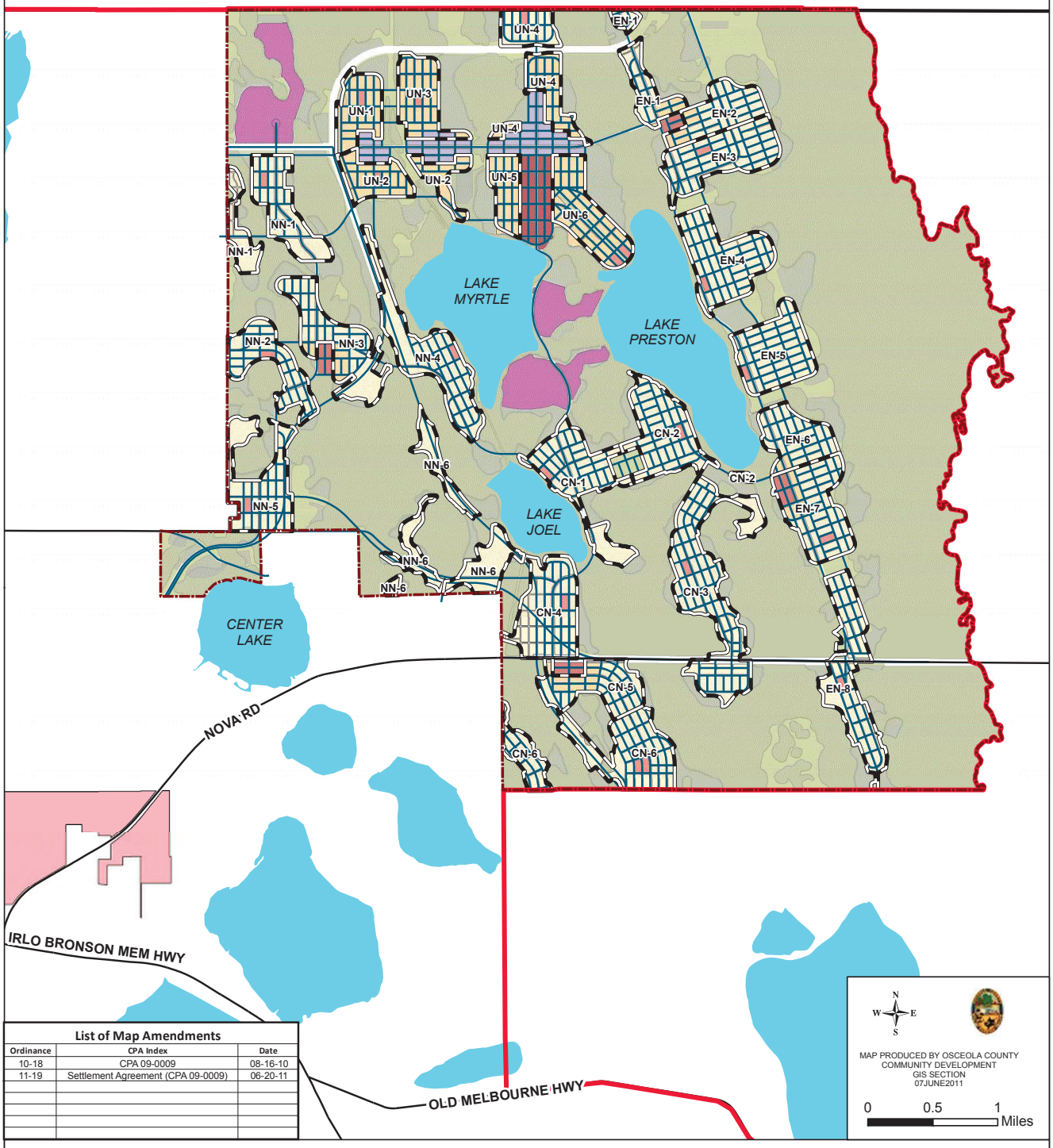
NED 2: Fine Grain Network



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10-18	CPA 09-0009	08-16-10
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MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Place Types

- Urban Center
- Community Center
- Employment Center
- Neighborhood Center
- Neighborhood Type 1
- Neighborhood Type 2
- Open Space District
- Special District

Miscellaneous

- NED Boundary
- Urban Growth Boundary
- Preserved Wetlands
- Stormwater Ponds
- Other Jurisdictions

Network System

- Fine Grain Network

Neighborhoods

- Neighborhood Boundary
- TP-6 Neighborhood Label (Corresponds to Development Program)

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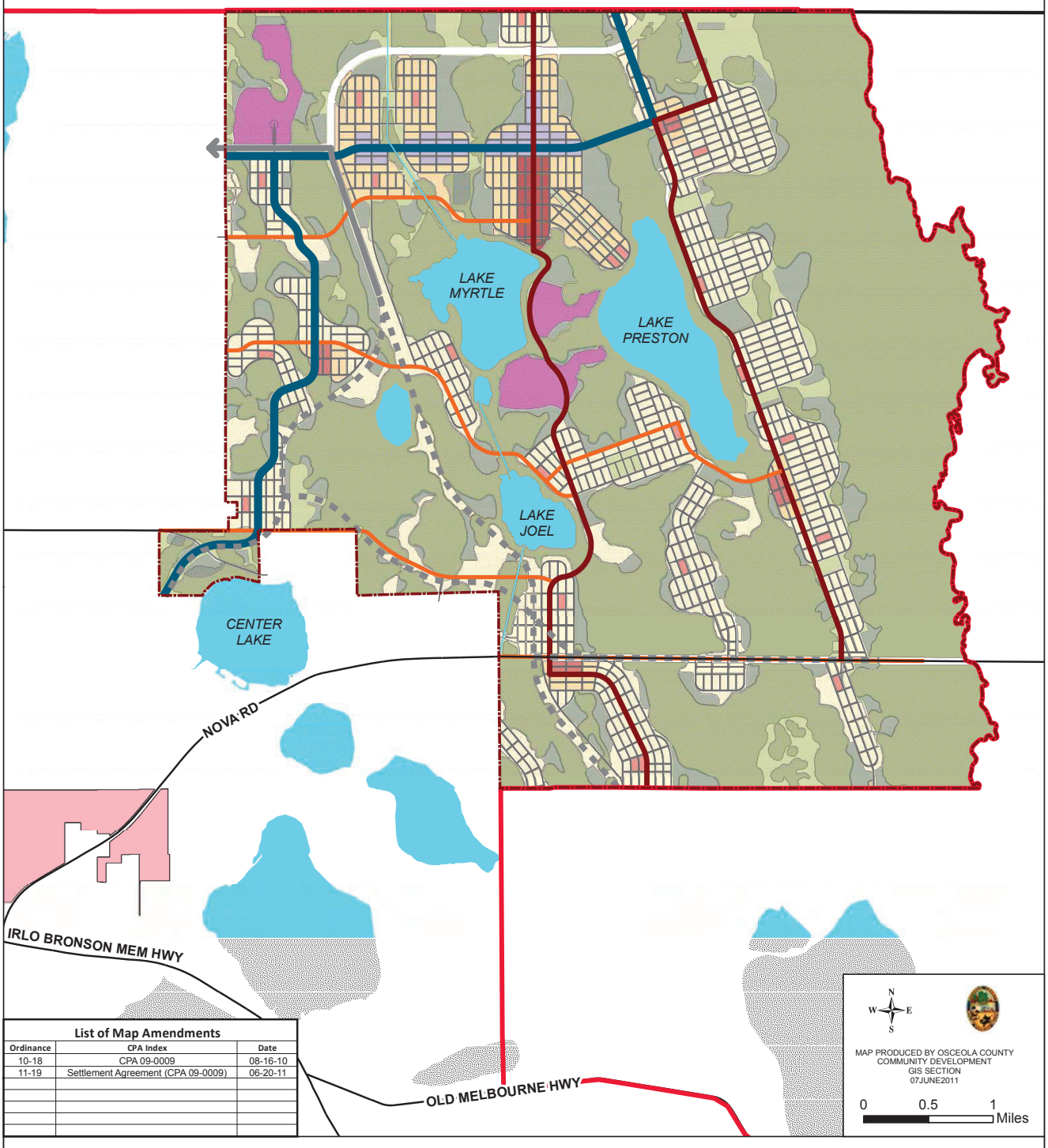
NED 3: Framework Streets



List of Map Amendments

Ordinance	CPA Index	Date
10-18	CPA 09-0009	08-16-10
11-19	Settlement Agreement (CPA 09-0009)	06-20-11

MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Place Types

- Urban Center
- Community Center
- Employment Center
- Neighborhood Center
- Neighborhood Type 1
- Neighborhood Type 2
- Open Space District
- Special District

Miscellaneous

- NED Boundary
- Urban Growth Boundary
- Preserved Wetlands
- Stormwater Ponds
- Local Streets
- Other Jurisdictions

Regional Facilities

- Expressway
- Expressway Alternatives

Framework Streets

- Avenue
- Boulevard
- Multimodal Corridor

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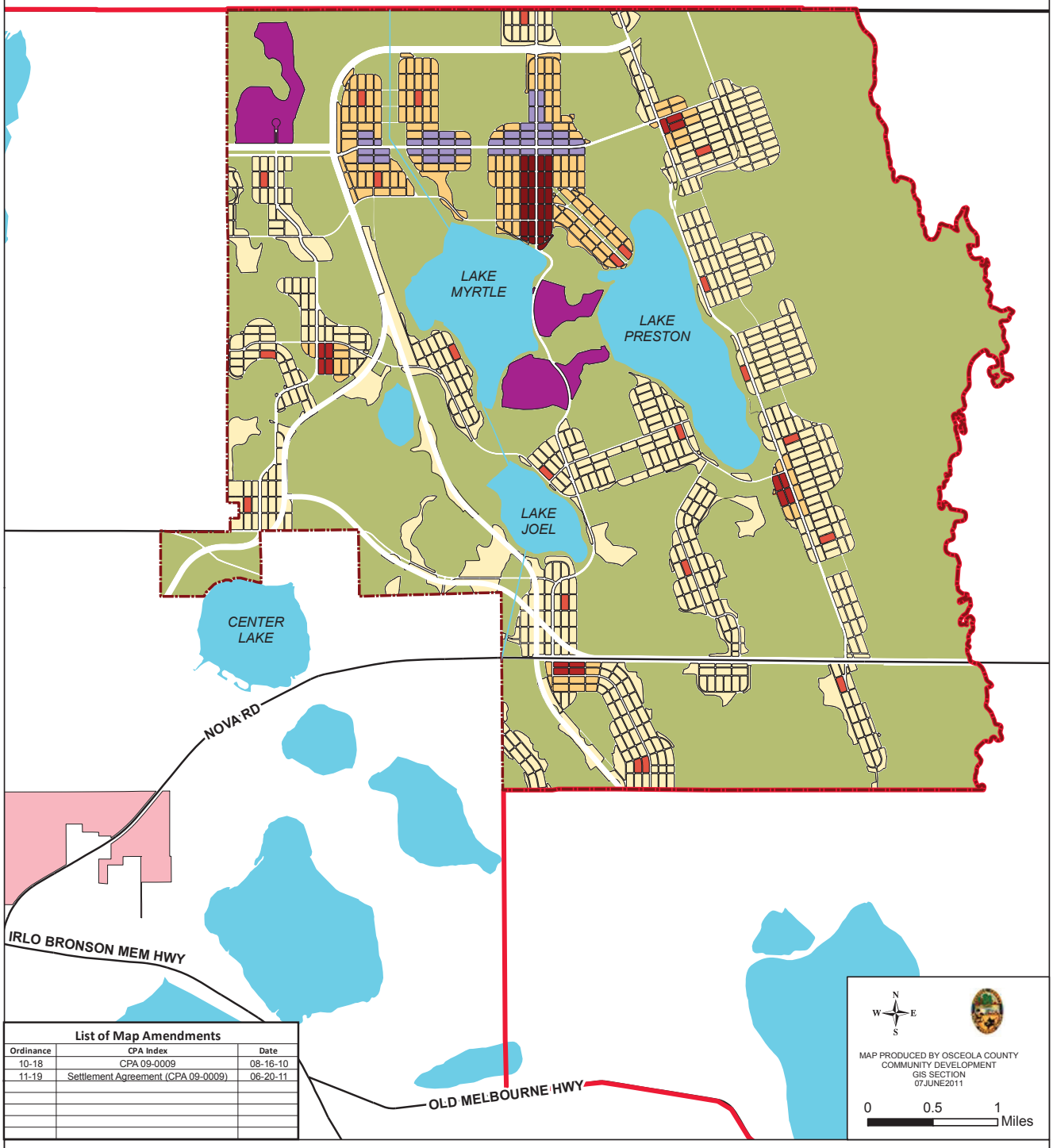
NED 4: Place Types

ORANGE COUNTY

ORANGE COUNTY



List of Map Amendments

Ordinance	CPA Index	Date
10-18	CPA 09-0009	08-16-10
11-19	Settlement Agreement (CPA 09-0009)	06-20-11

MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Place Types

- Urban Center
- Community Center
- Employment Center
- Neighborhood Center
- Neighborhood Type 1
- Neighborhood Type 2
- Open Space District
- Special District

Miscellaneous

- NED Boundary
- Urban Growth Boundary
- Other Jurisdictions

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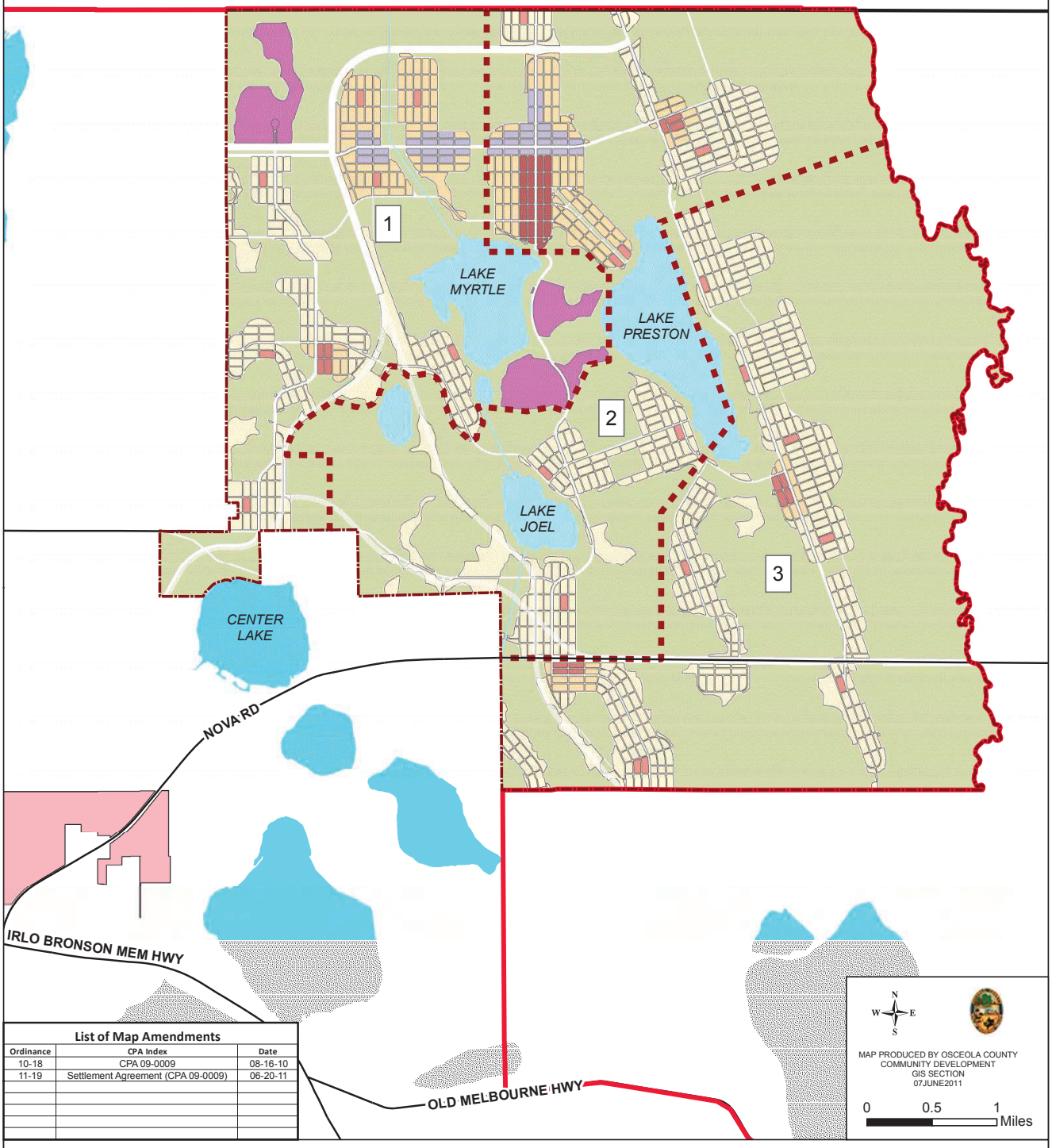
NED 5: Staging

ORANGE COUNTY

ORANGE COUNTY



List of Map Amendments		
Ordinance	CPA Index	Date
10-18	CPA 09-0009	08-16-10
11-19	Settlement Agreement (CPA 09-0009)	06-20-11

MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Place Types

- Urban Center
- Community Center
- Employment Center
- Neighborhood Center
- Neighborhood Type 1
- Neighborhood Type 2
- Open Space District
- Special District

Miscellaneous

- NED Boundary
- Urban Growth Boundary
- Other Jurisdictions

Staging

- Staging Areas
- 1 Staging Phases

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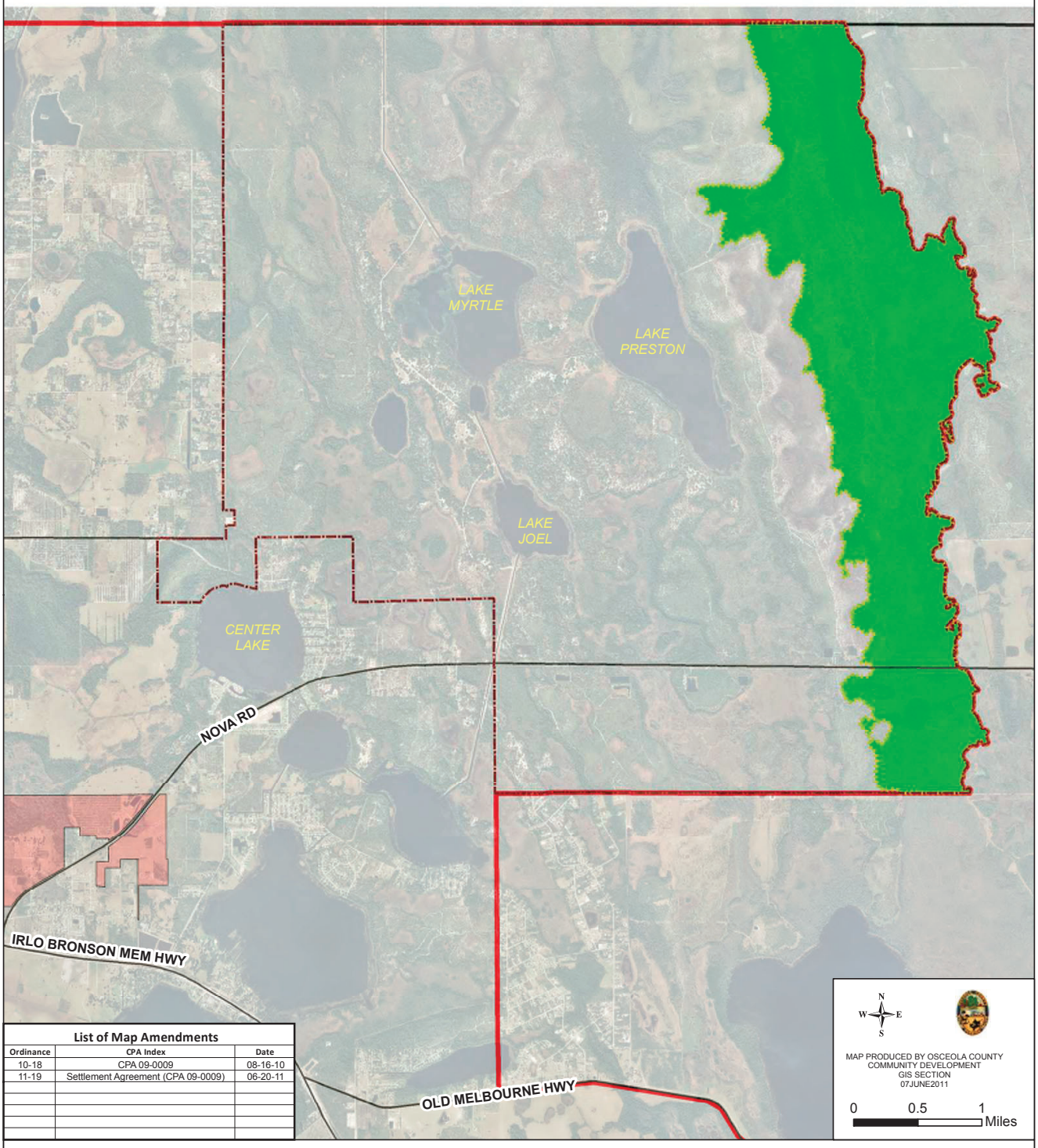
NED 6: Econlockhatchee Preservation Area

ORANGE COUNTY

ORANGE COUNTY



List of Map Amendments		
Ordinance	CPA Index	Date
10-18	CPA 09-0009	08-16-10
11-19	Settlement Agreement (CPA 09-0009)	06-20-11

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MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT
GIS SECTION
07JUNE2011

0 0.5 1 Miles

Legend

- NED Boundary
- Urban Growth Boundary
- Econlockhatchee Preservation Area
- Other Jurisdictions

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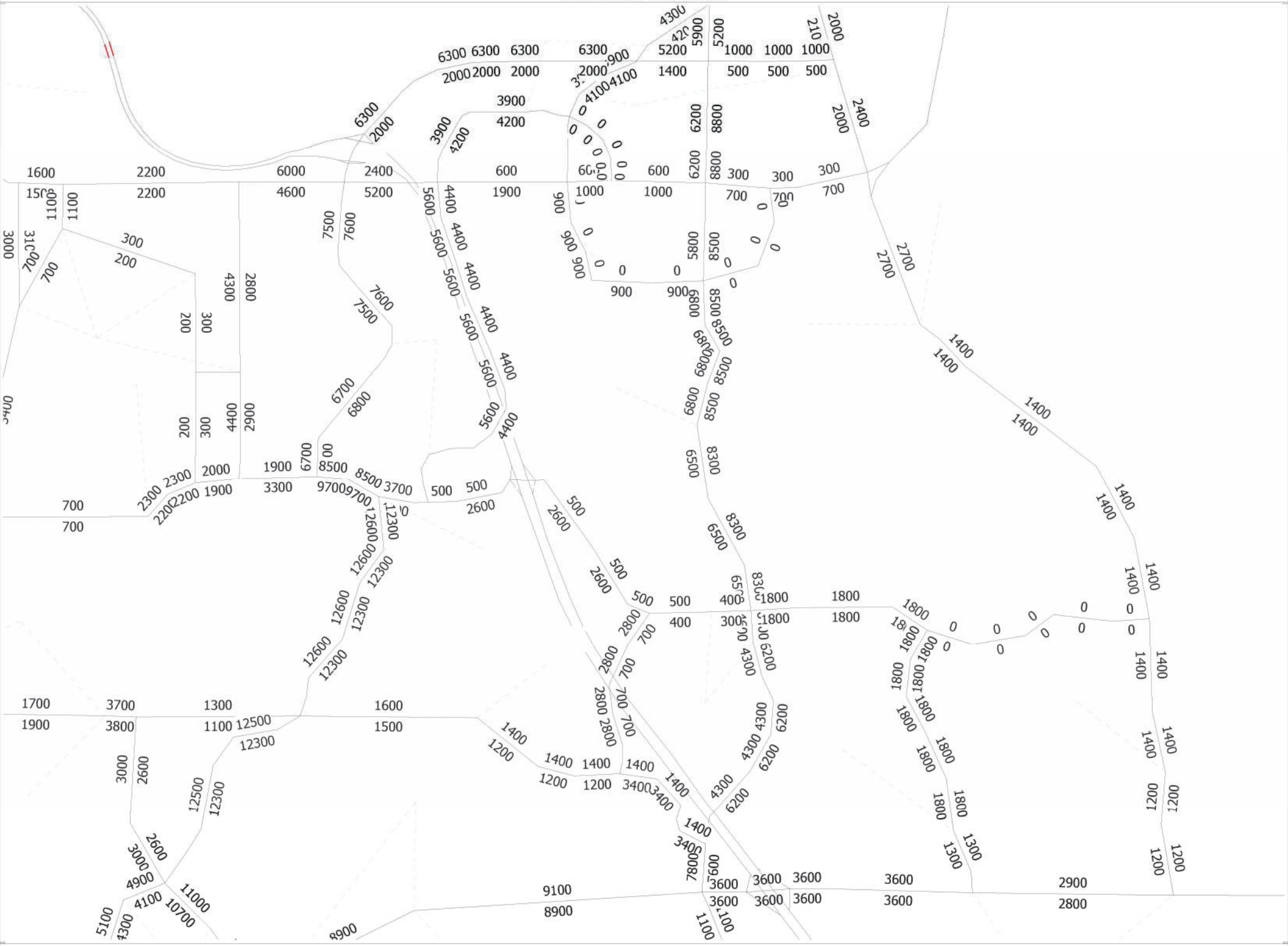
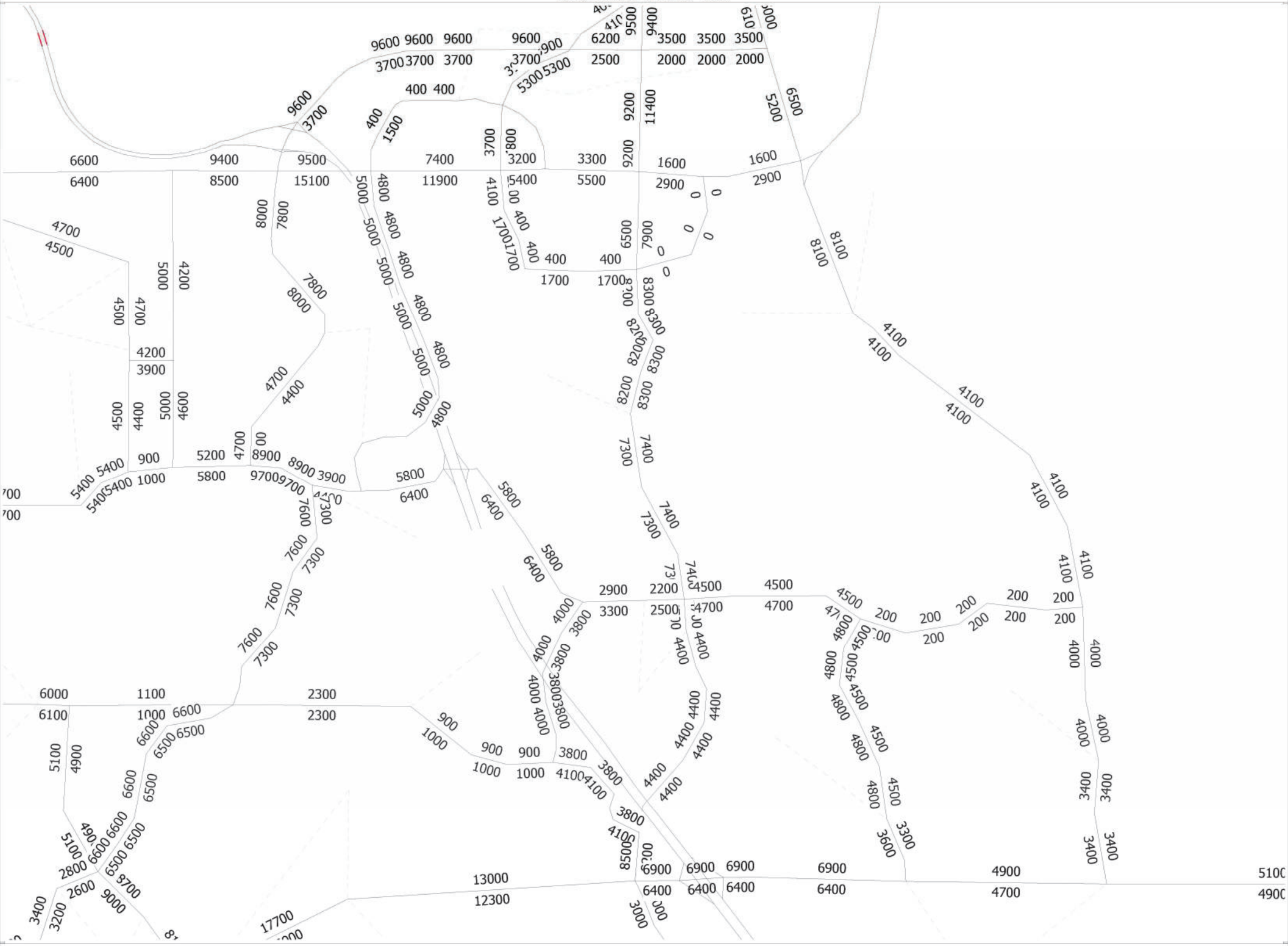
Appendix C

Model Loaded Networks
2025 No-Build and Build
2045 No-Build and Build





Appendix D

Jack Brack Road Two-lane Versus Four-lane Analysis Memo

Memorandum

To: *Jonathan Williamson, Dewberry*
Dan Kristoff, RS&H

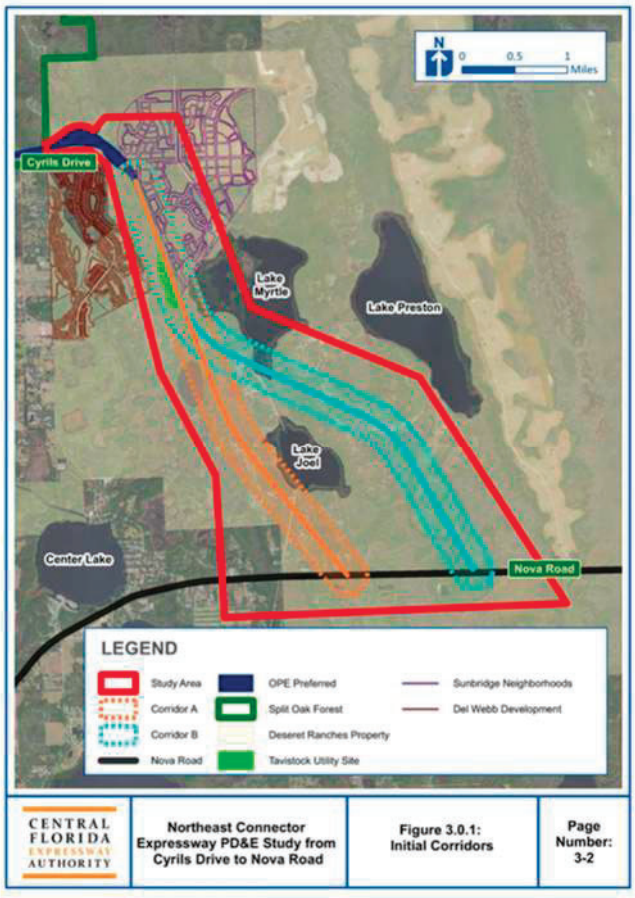
From: *Carleen Flynn and Om Kanike*

Date: *March 2021*

Subject: *Jack Brack Road Two-Lane Versus Four-Lane Analysis*

As part of the traffic analysis for the Northeast Connector Expressway PD&E Study, Osceola County requested a quick analysis of the need for widening of Jack Brack Road because of the new expressway. In 2018, Osceola County completed the Narcoossee Road Conceptual Design Studies for several roads in the Narcoossee Area, including Jack Brack Road. This document forecasted traffic through 2040 with maximum volumes reaching 13,100 AADT or volume to capacity ratio of 0.84. An Osceola County representative requested CDM Smith confirm this analysis with the traffic analysis being completed for the NEC Phase 1 PD&E Study. This memo documents the model runs and LOS analysis for Jack Brack Road using the travel demand model developed for the PD&E study.

Figure 1: NEC Corridors

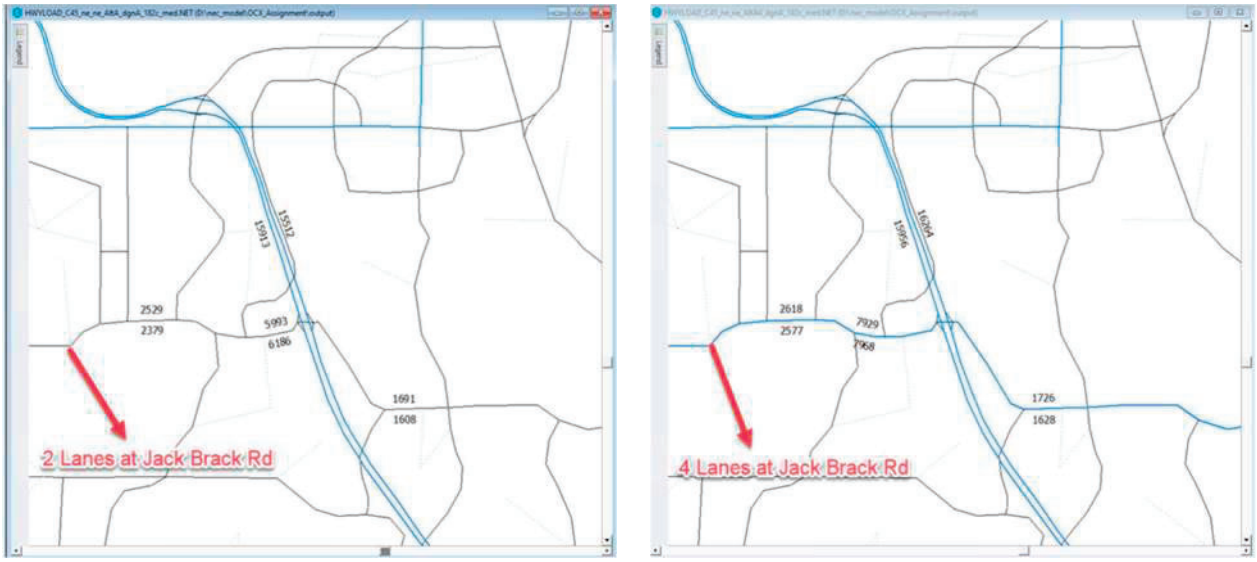


Assumptions: For this analysis the CFX PPE_SP model was used because it is the model developed for the Southport Connector Extension PD&E Study and includes the updates for the Poinciana Parkway (PP) and PP Extension, as well as the Osceola Parkway Extension. Using the Corridor A alternative, see **Figure 1**, the network in the CFX PPE_SP model was re-coded to incorporate Jack Brack Road as a two-lane and a four-lane facility from Narcoossee Road east to Absher Road and the Jack Brack Road extension from Absher Road to Sunbridge Parkway, through the proposed interchange at NEC. The 2045 horizon year was run for both the two-lane and four-lane scenarios, assuming an $0.18/mile toll in 2018

dollars inflated to the 2045 dollars per the Customer First toll policy, which equates to approximately $0.24/mile in 2045.

Model Results: The raw model volumes from the two model runs are shown in **Figure 2.** Please note these volumes were pulled directly from the loaded networks and not adjusted for seasonality or model adjustment factors.

Figure 2: 2045 Raw Model Volumes for two-lane and four-lane Jack Brack Road



A quick LOS analysis was completed using the model volumes and service volumes for two-lane and four-lane facilities using the FDOT Quality/Level of Service Handbook 2020 Generalized Tables for a Class II Arterial (35 mph or less) for urbanized areas. The two-way daily volumes and LOS rating are provided in **Table 1**. The analysis is consistent with the results in the Narcoossee Road Conceptual Design Studies report.

Table 1: LOS Analysis

Avg Daily Volumes (ADT)				
Segment	**Two-lanes**	**LOS**	**Four-lanes**	**LOS**
E of Absher	4,910	C	5,200	C
W of NEC	12,180	D	14,830	E
E of NEC	4,960	C	5,830	C

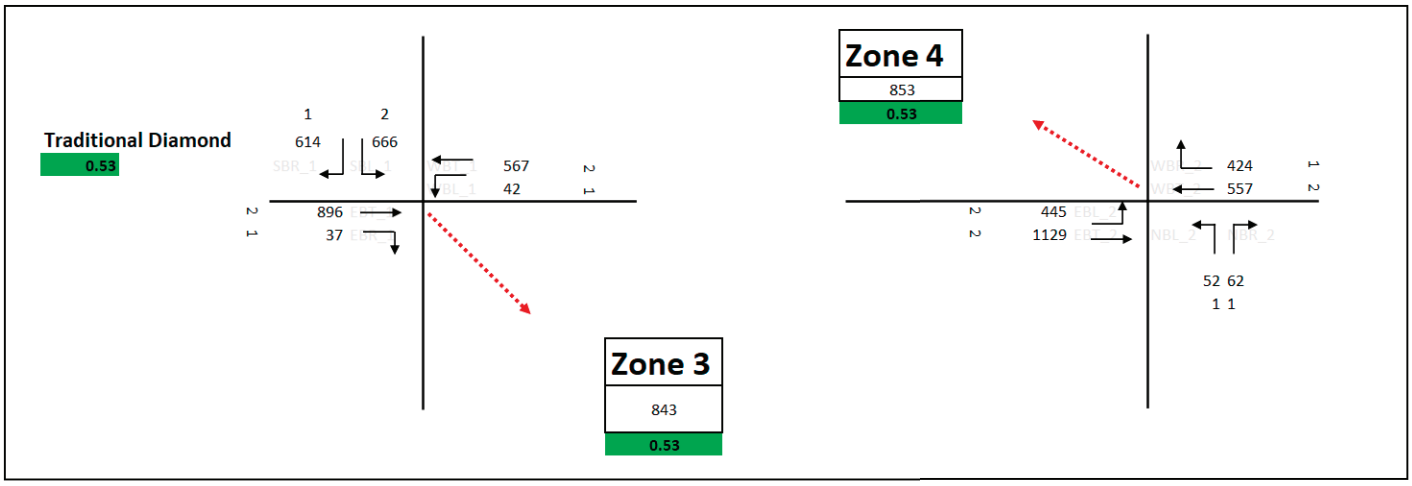
Note: This analysis is not a study to determine the need for widening of Jack Brack Road. This study was to show that traffic demand and loading from the proposed expressway would not significantly contribute to traffic on Jack Brack Road between Narcoossee Road and Absher Road.

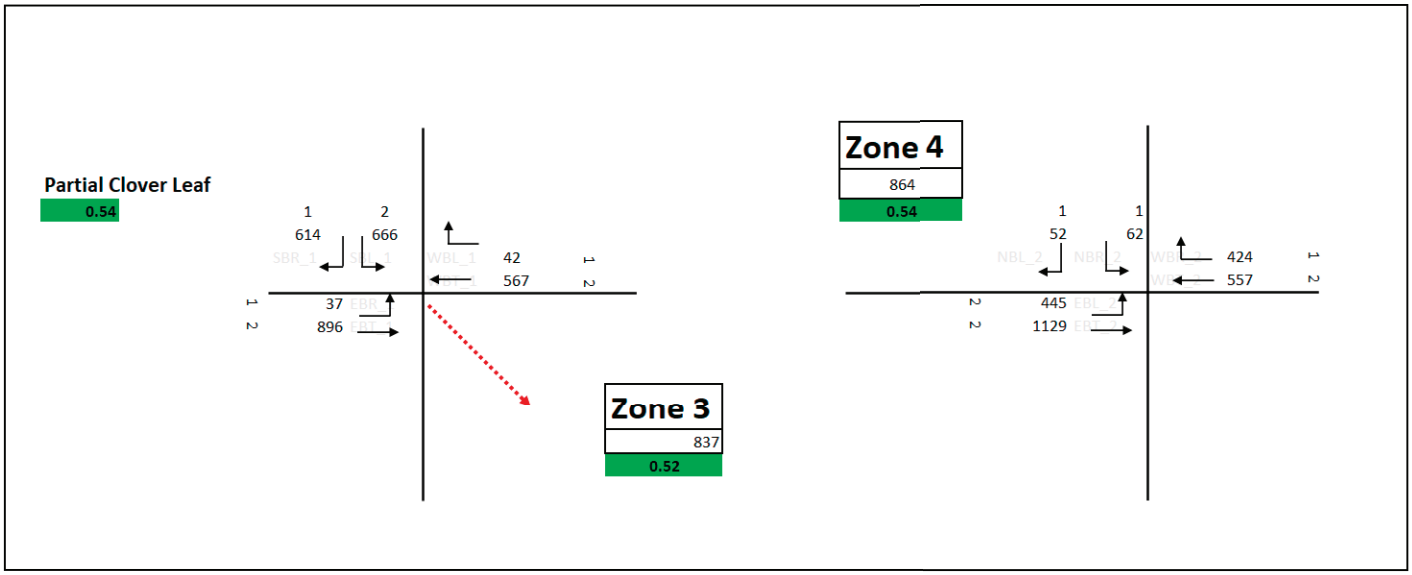
Appendix E

CAP-X Analysis for Jack Brack Road Interchange

CAP-X Analysis for
Jack Brack Road
Interchange

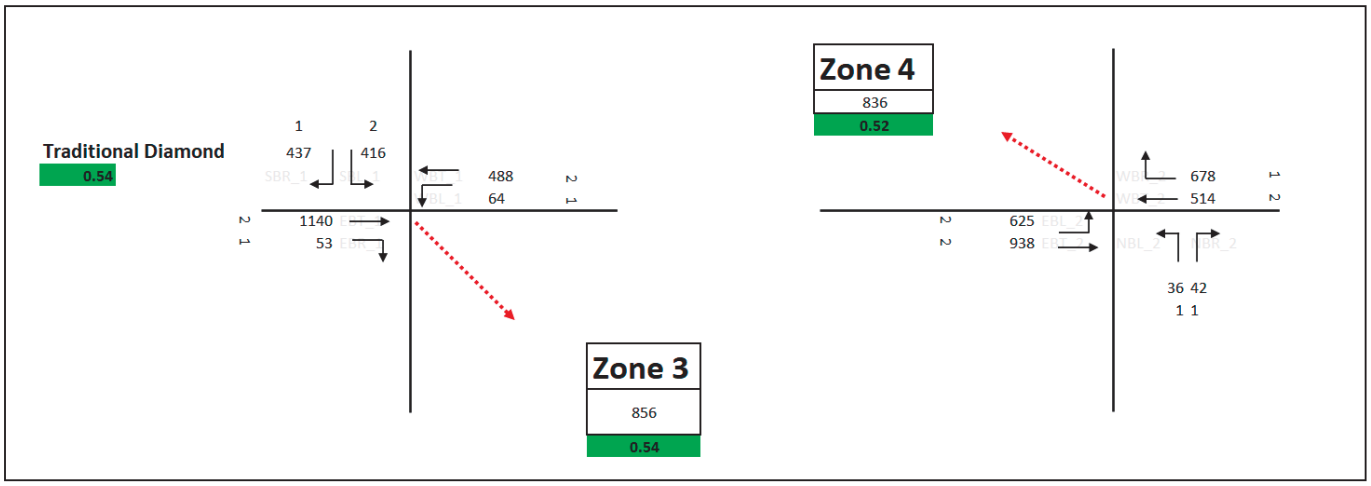
PM Peak

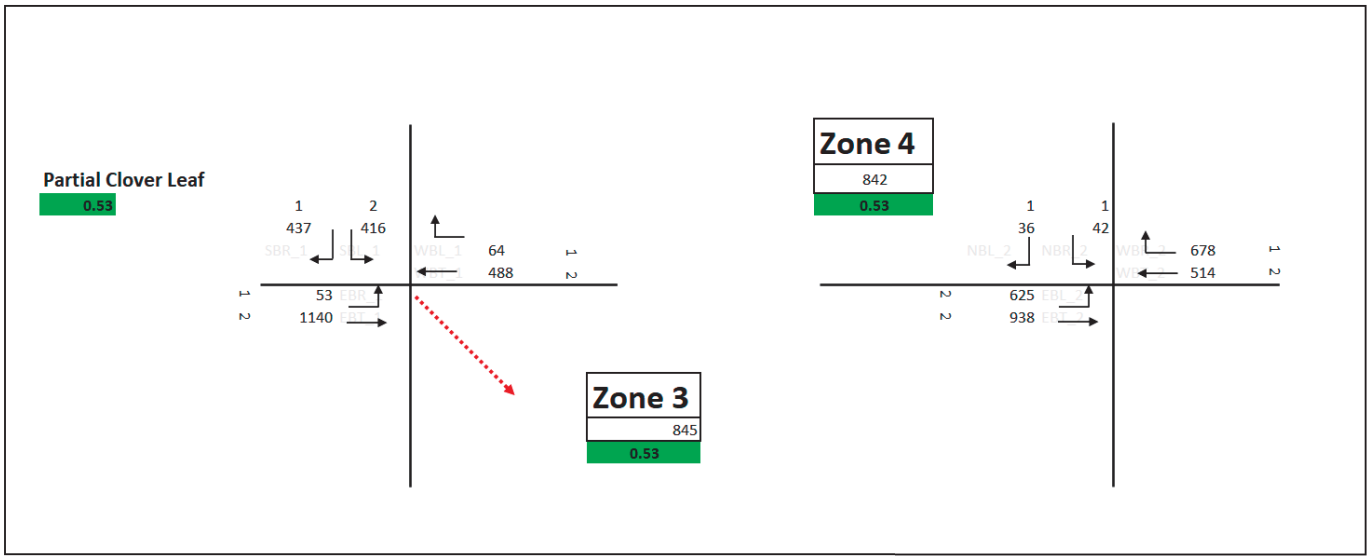




CAP-X Analysis for Jack Brack Road Interchange

AM Peak





Appendix F

Synchro Analysis

2025 AM Peak
2025 PM Peak
2045 AM Peak
2045 PM Peak

Appendix F

Synchro Analysis

2025 AM Peak

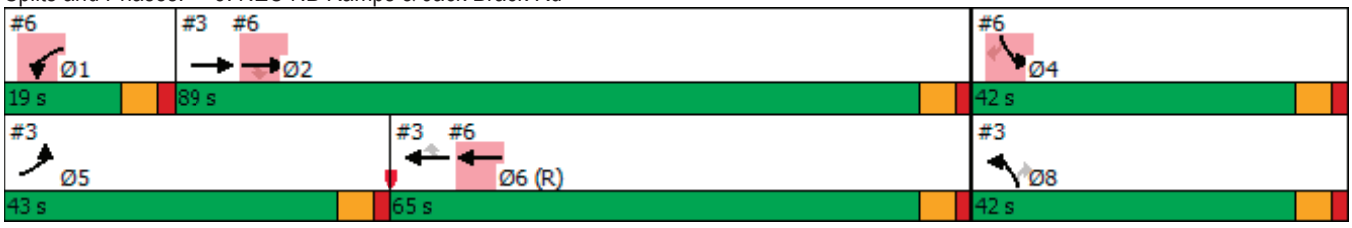
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	500	435	0	0	165	520	30	0	35	0	0	0
Future Volume (vph)	500	435	0	0	165	520	30	0	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	500		0	0		500	275		0	0		350
Storage Lanes	1		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						547			109			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		934			845			594			656	
Travel Time (s)		14.2			12.8			9.0			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	526	458	0	0	174	547	32	0	37	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	526	458	0	0	174	547	32	0	37	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	5	2			6		8					
Permitted Phases						6			8			
Detector Phase	5	2			6	6	8		8			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Minimum Split (s)	24.0	24.0			24.0	24.0	24.0		24.0			
Total Split (s)	43.0	89.0			65.0	65.0	42.0		42.0			
Total Split (%)	28.7%	59.3%			43.3%	43.3%	28.0%		28.0%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0			
Total Lost Time (s)	6.0	6.0			6.0	6.0	6.0		6.0			
Lead/Lag	Lead	Lag			Lag	Lag						
Lead-Lag Optimize?	Yes	Yes			Yes	Yes						
Recall Mode	Max	Max			Max	Max	Max		Max			
Act Effct Green (s)	37.0	83.0			59.0	59.0	36.0		36.0			

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	24.0
Total Split (s)	19.0	42.0
Total Split (%)	13%	28%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Recall Mode	None	None
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.25	0.55			0.39	0.39	0.24		0.24			
v/c Ratio	0.62	0.23			0.12	0.57	0.08		0.08			
Control Delay	67.7	18.9			29.4	4.9	44.9		0.3			
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0			
Total Delay	67.7	18.9			29.4	4.9	44.9		0.3			
LOS	E	B			C	A	D		A			
Approach Delay		45.0			10.8			21.0				
Approach LOS		D			B			C				
Queue Length 50th (ft)	257	104			56	0	24		0			
Queue Length 95th (ft)	318	128			84	78	55		0			
Internal Link Dist (ft)		854			765			514			576	
Turn Bay Length (ft)	500					500	275					
Base Capacity (vph)	846	1958			1392	954	424		462			
Starvation Cap Reductn	0	0			0	0	0		0			
Spillback Cap Reductn	0	0			0	0	0		0			
Storage Cap Reductn	0	0			0	0	0		0			
Reduced v/c Ratio	0.62	0.23			0.13	0.57	0.08		0.08			

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 30.2		Intersection LOS: C	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: NEC NB Ramps & Jack Brack Rd



Lane Group	Ø1	Ø4
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

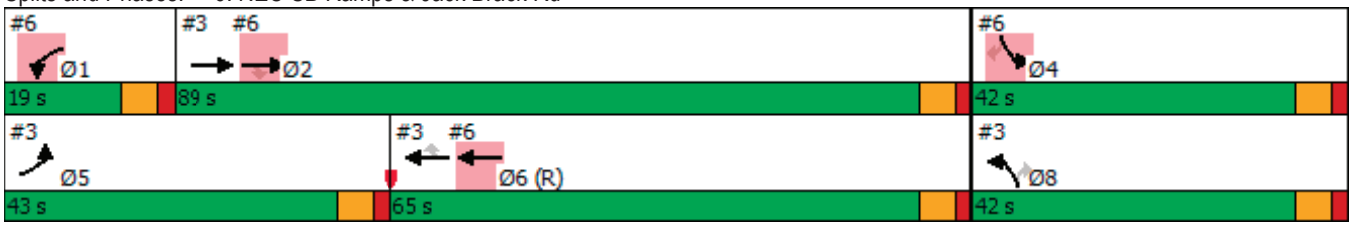
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	605	40	55	140	0	0	0	0	330	0	350
Future Volume (vph)	0	605	40	55	140	0	0	0	0	330	0	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		500	500		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			65									368
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		734			934			593			660	
Travel Time (s)		11.1			14.2			9.0			10.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	637	42	58	147	0	0	0	0	347	0	368
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	637	42	58	147	0	0	0	0	347	0	368
Turn Type		NA	Perm	Prot	NA					Prot		Perm
Protected Phases		2		1	6					4		
Permitted Phases			2									4
Detector Phase		2	2	1	6					4		4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0		5.0
Minimum Split (s)		24.0	24.0	11.0	24.0					24.0		24.0
Total Split (s)		89.0	89.0	19.0	65.0					42.0		42.0
Total Split (%)		59.3%	59.3%	12.7%	43.3%					28.0%		28.0%
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0		2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0		0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lead/Lag		Lag	Lag	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes	Yes							
Recall Mode		Max	Max	None	Max					None		None
Act Effct Green (s)		83.0	83.0	13.0	59.0					36.0		36.0

Lane Group	Ø5	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	5	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	24.0	24.0
Total Split (s)	43.0	42.0
Total Split (%)	29%	28%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	Max
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.55	0.55	0.09	0.39					0.24		0.24
v/c Ratio		0.33	0.05	0.38	0.11					0.42		0.56
Control Delay		18.8	1.4	81.5	16.8					50.1		7.7
Queue Delay		0.0	0.0	0.0	0.0					0.0		0.0
Total Delay		18.8	1.4	81.5	16.8					50.1		7.7
LOS		B	A	F	B					D		A
Approach Delay		17.7			35.1						28.3	
Approach LOS		B			D						C	
Queue Length 50th (ft)		173	0	60	19					149		0
Queue Length 95th (ft)		214	9	111	28					198		88
Internal Link Dist (ft)		654			854			513			580	
Turn Bay Length (ft)			500	500								
Base Capacity (vph)		1958	904	153	1392					823		659
Starvation Cap Reductn		0	0	0	0					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.33	0.05	0.38	0.11					0.42		0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: NEC SB Ramps & Jack Brack Rd



Lane Group	Ø5	Ø8
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	225	240	250	155	105	150
Future Volume (vph)	225	240	250	155	105	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	500			500	500	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				163		158
Link Speed (mph)		45	45		45	
Link Distance (ft)		916	847		1018	
Travel Time (s)		13.9	12.8		15.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	237	253	263	163	111	158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	237	253	263	163	111	158
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	34.0	79.0	45.0	45.0	41.0	41.0
Total Split (%)	28.3%	65.8%	37.5%	37.5%	34.2%	34.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	28.0	73.0	39.0	39.0	35.0	35.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Actuated g/C Ratio	0.23	0.61	0.32	0.32	0.29	0.29
v/c Ratio	0.30	0.12	0.23	0.26	0.11	0.28
Control Delay	39.1	10.1	30.2	5.5	31.5	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	10.1	30.2	5.5	31.5	6.2
LOS	D	B	C	A	C	A
Approach Delay		24.1	20.8		16.6	
Approach LOS		C	C		B	
Queue Length 50th (ft)	78	41	77	0	32	0
Queue Length 95th (ft)	115	59	112	48	55	50
Internal Link Dist (ft)		836	767		938	
Turn Bay Length (ft)	500			500	500	
Base Capacity (vph)	801	2152	1150	624	1001	573
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.12	0.23	0.26	0.11	0.28

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 32.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 14: Nova Rd & NEC

Appendix F

Synchro Analysis

2025 PM Peak

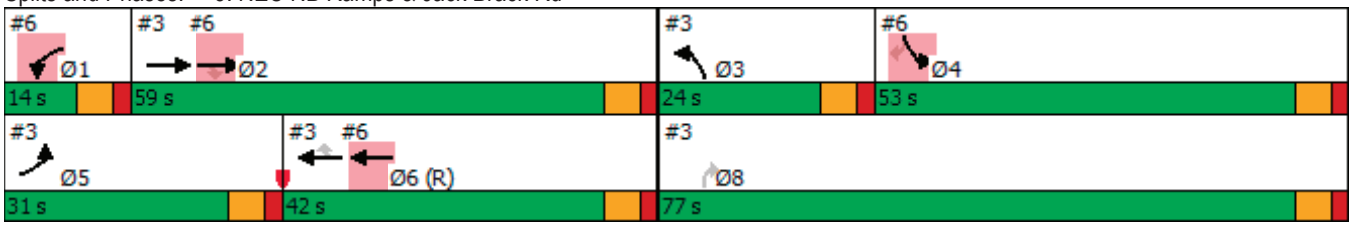
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	630	0	0	140	330	40	0	55	0	0	0
Future Volume (vph)	350	630	0	0	140	330	40	0	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	500		0	0		500	275		0	0		350
Storage Lanes	1		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						347			109			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		934			845			594			656	
Travel Time (s)		14.2			12.8			9.0			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	368	663	0	0	147	347	42	0	58	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	368	663	0	0	147	347	42	0	58	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	5	2			6		3					
Permitted Phases						6			8			
Detector Phase	5	2			6	6	3		8			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Minimum Split (s)	24.0	24.0			24.0	24.0	24.0		24.0			
Total Split (s)	31.0	59.0			42.0	42.0	24.0		77.0			
Total Split (%)	20.7%	39.3%			28.0%	28.0%	16.0%		51.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0			
Total Lost Time (s)	6.0	6.0			6.0	6.0	6.0		6.0			
Lead/Lag	Lead	Lag			Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes					
Recall Mode	Max	Max			Max	Max	Max		Max			
Act Effct Green (s)	25.0	53.0			36.0	36.0	18.0		71.0			

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	24.0
Total Split (s)	14.0	53.0
Total Split (%)	9%	35%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.17	0.35			0.24	0.24	0.12		0.47			
v/c Ratio	0.64	0.53			0.17	0.54	0.20		0.07			
Control Delay	76.8	31.0			45.9	7.7	62.2		0.2			
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0			
Total Delay	76.8	31.0			45.9	7.7	62.2		0.2			
LOS	E	C			D	A	E		A			
Approach Delay		47.3			19.1			26.2				
Approach LOS		D			B			C				
Queue Length 50th (ft)	197	209			60	0	38		0			
Queue Length 95th (ft)	253	247			93	85	78		0			
Internal Link Dist (ft)		854			765			514			576	
Turn Bay Length (ft)	500					500	275					
Base Capacity (vph)	572	1250			849	643	212		806			
Starvation Cap Reductn	0	0			0	0	0		0			
Spillback Cap Reductn	0	0			0	0	0		0			
Storage Cap Reductn	0	0			0	0	0		0			
Reduced v/c Ratio	0.64	0.53			0.17	0.54	0.20		0.07			

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 100			
Control Type: Pretimed			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 37.4		Intersection LOS: D	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: NEC NB Ramps & Jack Brack Rd



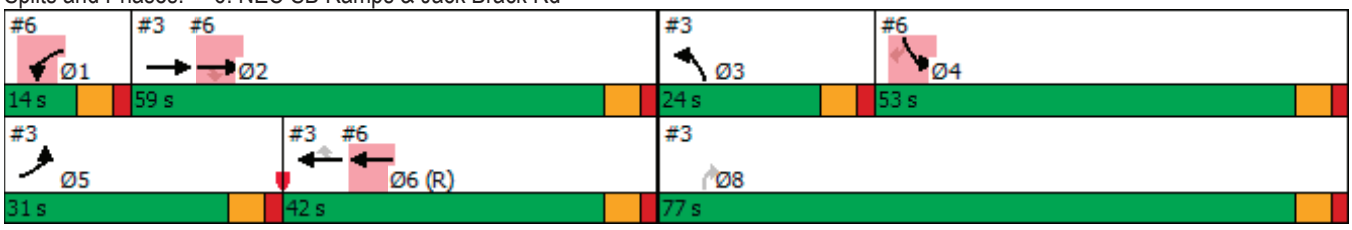
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	460	30	35	145	0	0	0	0	520	0	500
Future Volume (vph)	0	460	30	35	145	0	0	0	0	520	0	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		500	500		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109									526
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		734			934			593			660	
Travel Time (s)		11.1			14.2			9.0			10.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	484	32	37	153	0	0	0	0	547	0	526
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	484	32	37	153	0	0	0	0	547	0	526
Turn Type		NA	Perm	Prot	NA					Prot		Perm
Protected Phases		2		1	6					4		
Permitted Phases			2									4
Detector Phase		2	2	1	6					4		4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0		5.0
Minimum Split (s)		24.0	24.0	11.0	24.0					24.0		24.0
Total Split (s)		59.0	59.0	14.0	42.0					53.0		53.0
Total Split (%)		39.3%	39.3%	9.3%	28.0%					35.3%		35.3%
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0		2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0		0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lead/Lag		Lag	Lag	Lead	Lag					Lag		Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes					Yes		Yes
Recall Mode		Max	Max	None	Max					None		None
Act Effct Green (s)		53.0	53.0	8.0	36.0					47.0		47.0

Lane Group	Ø3	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	3	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0
Total Split (s)	24.0	31.0	77.0
Total Split (%)	16%	21%	51%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	
Recall Mode	Max	Max	Max
Act Effct Green (s)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.35	0.35	0.05	0.24					0.31		0.31
v/c Ratio		0.39	0.05	0.39	0.18					0.51		0.61
Control Delay		37.5	0.2	104.1	28.3					44.1		6.4
Queue Delay		0.0	0.0	0.0	0.0					0.0		0.0
Total Delay		37.5	0.2	104.1	28.3					44.1		6.4
LOS		D	A	F	C					D		A
Approach Delay		35.2			43.0						25.6	
Approach LOS		D			D						C	
Queue Length 50th (ft)		186	0	39	25					226		0
Queue Length 95th (ft)		237	0	80	37					285		92
Internal Link Dist (ft)		654			854			513			580	
Turn Bay Length (ft)			500	500								
Base Capacity (vph)		1250	629	94	849					1075		857
Starvation Cap Reductn		0	0	0	0					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.39	0.05	0.39	0.18					0.51		0.61

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 100			
Control Type: Pretimed			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 30.2		Intersection LOS: C	
Intersection Capacity Utilization 49.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 6: NEC SB Ramps & Jack Brack Rd



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	150	250	240	105	155	225
Future Volume (vph)	150	250	240	105	155	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	500			500	500	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				111		237
Link Speed (mph)		45	45		45	
Link Distance (ft)		916	847		1018	
Travel Time (s)		13.9	12.8		15.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	158	263	253	111	163	237
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	263	253	111	163	237
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	28.0	69.0	41.0	41.0	51.0	51.0
Total Split (%)	23.3%	57.5%	34.2%	34.2%	42.5%	42.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	22.0	63.0	35.0	35.0	45.0	45.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Actuated g/C Ratio	0.18	0.52	0.29	0.29	0.38	0.38
v/c Ratio	0.25	0.14	0.25	0.21	0.13	0.32
Control Delay	43.2	14.9	33.2	6.7	25.0	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	14.9	33.2	6.7	25.0	4.4
LOS	D	B	C	A	C	A
Approach Delay		25.5	25.1		12.8	
Approach LOS		C	C		B	
Queue Length 50th (ft)	54	53	78	0	42	0
Queue Length 95th (ft)	86	76	114	43	66	52
Internal Link Dist (ft)		836	767		938	
Turn Bay Length (ft)	500			500	500	
Base Capacity (vph)	629	1857	1032	540	1287	741
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.14	0.25	0.21	0.13	0.32

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Pretimed			
Maximum v/c Ratio: 0.32			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 30.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 14: Nova Rd & NEC

Appendix F

Synchro Analysis

2045 AM Peak

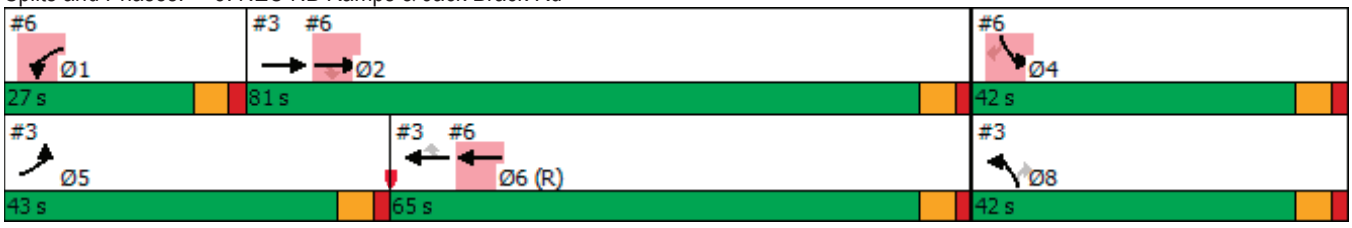
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	590	885	0	0	485	640	35	0	40	0	0	0
Future Volume (vph)	590	885	0	0	485	640	35	0	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	500		0	0		500	275		0	0		350
Storage Lanes	1		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						603			109			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		935			845			594			656	
Travel Time (s)		14.2			12.8			9.0			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	621	932	0	0	511	674	37	0	42	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	621	932	0	0	511	674	37	0	42	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	5	2			6		8					
Permitted Phases						6			8			
Detector Phase	5	2			6	6	8		8			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Minimum Split (s)	24.0	24.0			24.0	24.0	24.0		24.0			
Total Split (s)	43.0	81.0			65.0	65.0	42.0		42.0			
Total Split (%)	28.7%	54.0%			43.3%	43.3%	28.0%		28.0%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0			
Total Lost Time (s)	6.0	6.0			6.0	6.0	6.0		6.0			
Lead/Lag	Lead	Lag			Lag	Lag						
Lead-Lag Optimize?	Yes	Yes			Yes	Yes						
Recall Mode	Max	Max			Max	Max	Max		Max			
Act Effct Green (s)	37.0	75.0			59.0	59.0	36.0		36.0			

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	24.0
Total Split (s)	27.0	42.0
Total Split (%)	18%	28%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Recall Mode	None	None
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.25	0.50			0.39	0.39	0.24		0.24			
v/c Ratio	0.73	0.53			0.37	0.68	0.09		0.09			
Control Delay	82.1	19.9			33.2	8.3	45.1		0.4			
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0			
Total Delay	82.1	19.9			33.2	8.3	45.1		0.4			
LOS	F	B			C	A	D		A			
Approach Delay		44.8			19.0			21.3				
Approach LOS		D			B			C				
Queue Length 50th (ft)	333	173			185	44	28		0			
Queue Length 95th (ft)	397	197			235	177	60		0			
Internal Link Dist (ft)		855			765			514			576	
Turn Bay Length (ft)	500					500	275					
Base Capacity (vph)	846	1769			1392	988	424		462			
Starvation Cap Reductn	0	0			0	0	0		0			
Spillback Cap Reductn	0	0			0	0	0		0			
Storage Cap Reductn	0	0			0	0	0		0			
Reduced v/c Ratio	0.73	0.53			0.37	0.68	0.09		0.09			

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 33.3		Intersection LOS: C	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: NEC NB Ramps & Jack Brack Rd



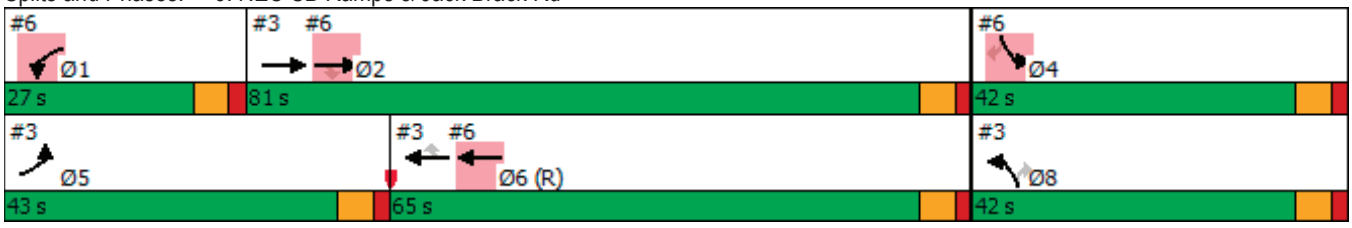
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1075	50	60	460	0	0	0	0	400	0	420
Future Volume (vph)	0	1075	50	60	460	0	0	0	0	400	0	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		500	500		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			65									442
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		734			935			593			637	
Travel Time (s)		11.1			14.2			9.0			9.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1132	53	63	484	0	0	0	0	421	0	442
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1132	53	63	484	0	0	0	0	421	0	442
Turn Type		NA	Perm	Prot	NA					Prot		Perm
Protected Phases		2		1	6					4		
Permitted Phases			2									4
Detector Phase		2	2	1	6					4		4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0		5.0
Minimum Split (s)		24.0	24.0	11.0	24.0					24.0		24.0
Total Split (s)		81.0	81.0	27.0	65.0					42.0		42.0
Total Split (%)		54.0%	54.0%	18.0%	43.3%					28.0%		28.0%
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0		2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0		0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lead/Lag		Lag	Lag	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes	Yes							
Recall Mode		Max	Max	None	Max					None		None
Act Effct Green (s)		75.0	75.0	21.0	59.0					36.0		36.0

Lane Group	Ø5	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	5	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	24.0	24.0
Total Split (s)	43.0	42.0
Total Split (%)	29%	28%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Recall Mode	Max	Max
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.50	0.50	0.14	0.39					0.24		0.24
v/c Ratio		0.64	0.06	0.26	0.35					0.51		0.62
Control Delay		29.7	3.1	78.3	12.4					52.0		8.0
Queue Delay		0.0	0.0	0.0	0.0					0.0		0.0
Total Delay		29.7	3.1	78.3	12.4					52.0		8.0
LOS		C	A	E	B					D		A
Approach Delay		28.5			20.0						29.5	
Approach LOS		C			C						C	
Queue Length 50th (ft)		420	0	65	41					185		0
Queue Length 95th (ft)		495	18	119	51					240		96
Internal Link Dist (ft)		654			855			513			557	
Turn Bay Length (ft)			500	500								
Base Capacity (vph)		1769	824	247	1392					823		715
Starvation Cap Reductn		0	0	0	0					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.64	0.06	0.26	0.35					0.51		0.62

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 75.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: NEC SB Ramps & Jack Brack Rd

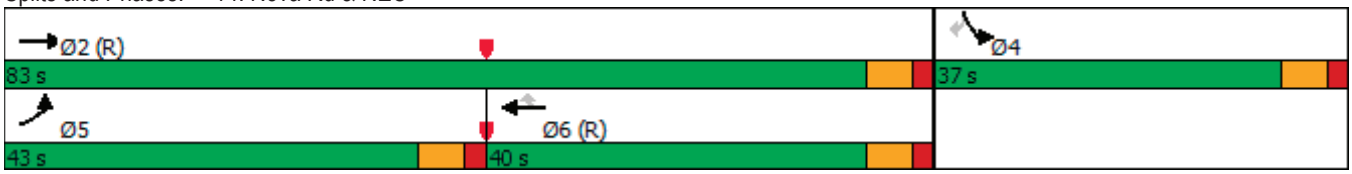


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	750	410	275	500	335	500
Future Volume (vph)	750	410	275	500	335	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	500			500	500	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				516		526
Link Speed (mph)		45	45		45	
Link Distance (ft)		916	847		1018	
Travel Time (s)		13.9	12.8		15.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	789	432	289	526	353	526
Shared Lane Traffic (%)						
Lane Group Flow (vph)	789	432	289	526	353	526
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	43.0	83.0	40.0	40.0	37.0	37.0
Total Split (%)	35.8%	69.2%	33.3%	33.3%	30.8%	30.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	37.0	77.0	34.0	34.0	31.0	31.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Actuated g/C Ratio	0.31	0.64	0.28	0.28	0.26	0.26
v/c Ratio	0.75	0.19	0.29	0.64	0.40	0.66
Control Delay	42.5	9.0	34.5	7.3	38.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	9.0	34.5	7.3	38.4	7.5
LOS	D	A	C	A	D	A
Approach Delay		30.6	17.0		19.9	
Approach LOS		C	B		B	
Queue Length 50th (ft)	282	66	92	6	117	0
Queue Length 95th (ft)	356	89	131	101	161	95
Internal Link Dist (ft)		836	767		938	
Turn Bay Length (ft)	500			500	500	
Base Capacity (vph)	1058	2270	1002	818	886	799
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.19	0.29	0.64	0.40	0.66

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 70			
Control Type: Pretimed			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 23.6		Intersection LOS: C	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 14: Nova Rd & NEC



Appendix F

Synchro Analysis

2045 PM Peak

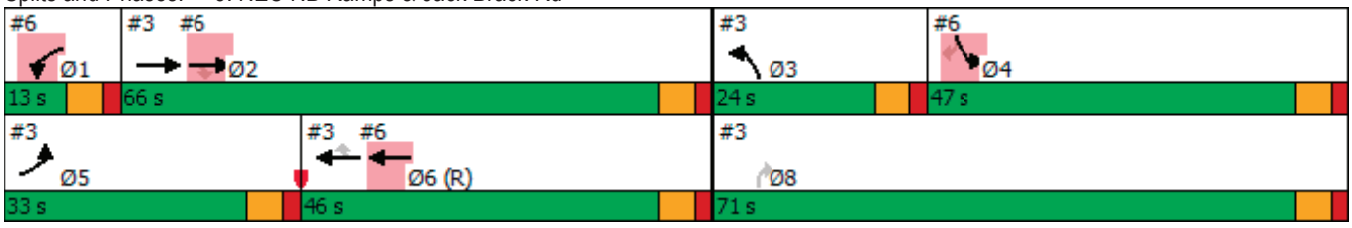
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	420	1065	0	0	525	400	50	0	60	0	0	0
Future Volume (vph)	420	1065	0	0	525	400	50	0	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	500		0	0		500	275		0	0		350
Storage Lanes	1		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	3433	3539	0	0	3539	1583	1770	0	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						421			109			
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		934			845			594			656	
Travel Time (s)		14.2			12.8			9.0			9.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	442	1121	0	0	553	421	53	0	63	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	442	1121	0	0	553	421	53	0	63	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot		Perm			
Protected Phases	5	2			6		3					
Permitted Phases						6			8			
Detector Phase	5	2			6	6	3		8			
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0		5.0			
Minimum Split (s)	24.0	24.0			24.0	24.0	24.0		24.0			
Total Split (s)	33.0	66.0			46.0	46.0	24.0		71.0			
Total Split (%)	22.0%	44.0%			30.7%	30.7%	16.0%		47.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0		2.0			
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0		0.0			
Total Lost Time (s)	6.0	6.0			6.0	6.0	6.0		6.0			
Lead/Lag	Lead	Lag			Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes					
Recall Mode	Max	Max			Max	Max	Max		Max			
Act Effct Green (s)	27.0	60.0			40.0	40.0	18.0		65.0			

Lane Group	Ø1	Ø4
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Grade (%)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Growth Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	1	4
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	11.0	24.0
Total Split (s)	13.0	47.0
Total Split (%)	9%	31%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.18	0.40			0.27	0.27	0.12		0.43			
v/c Ratio	0.72	0.79			0.59	0.58	0.25		0.08			
Control Delay	80.3	28.9			50.8	7.1	63.3		0.5			
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0			
Total Delay	80.3	28.9			50.8	7.1	63.3		0.5			
LOS	F	C			D	A	E		A			
Approach Delay		43.4			31.9			29.2				
Approach LOS		D			C			C				
Queue Length 50th (ft)	237	393			248	0	48		0			
Queue Length 95th (ft)	295	475			313	89	94		3			
Internal Link Dist (ft)		854			765			514			576	
Turn Bay Length (ft)	500					500	275					
Base Capacity (vph)	617	1415			943	730	212		747			
Starvation Cap Reductn	0	0			0	0	0		0			
Spillback Cap Reductn	0	0			0	0	0		0			
Storage Cap Reductn	0	0			0	0	0		0			
Reduced v/c Ratio	0.72	0.79			0.59	0.58	0.25		0.08			

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 100			
Control Type: Pretimed			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 38.6		Intersection LOS: D	
Intersection Capacity Utilization 61.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: NEC NB Ramps & Jack Brack Rd



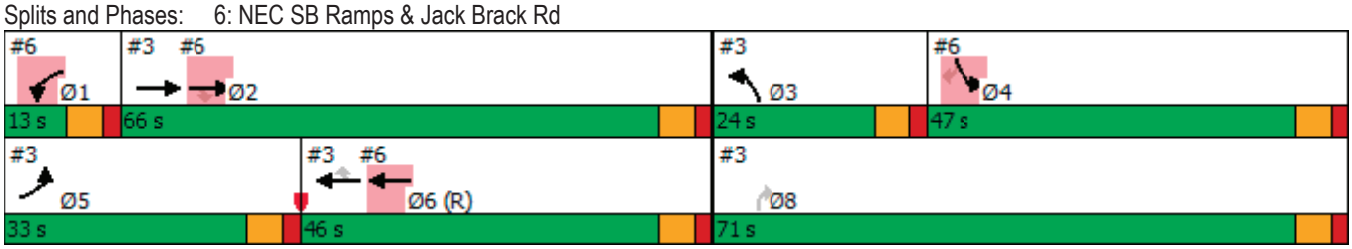
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	845	35	40	535	0	0	0	0	640	0	590
Future Volume (vph)	0	845	35	40	535	0	0	0	0	640	0	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		500	500		0	0		0	0		0
Storage Lanes	0		1	1		0	0		0	2		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor												
Frt			0.850									0.850
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3539	1583	1770	3539	0	0	0	0	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109									571
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		734			934			593			660	
Travel Time (s)		11.1			14.2			9.0			10.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	889	37	42	563	0	0	0	0	674	0	621
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	889	37	42	563	0	0	0	0	674	0	621
Turn Type		NA	Perm	Prot	NA					Prot		Perm
Protected Phases		2		1	6					4		
Permitted Phases			2									4
Detector Phase		2	2	1	6					4		4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0		5.0
Minimum Split (s)		24.0	24.0	11.0	24.0					24.0		24.0
Total Split (s)		66.0	66.0	13.0	46.0					47.0		47.0
Total Split (%)		44.0%	44.0%	8.7%	30.7%					31.3%		31.3%
Yellow Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0		2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0		0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0					6.0		6.0
Lead/Lag		Lag	Lag	Lead	Lag					Lag		Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes					Yes		Yes
Recall Mode		Max	Max	None	Max					None		None
Act Effct Green (s)		60.0	60.0	7.0	40.0					41.0		41.0

Lane Group	Ø3	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Growth Factor			
Heavy Vehicles (%)			
Bus Blockages (#/hr)			
Parking (#/hr)			
Mid-Block Traffic (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	3	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0
Total Split (s)	24.0	33.0	71.0
Total Split (%)	16%	22%	47%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	
Recall Mode	Max	Max	Max
Act Effct Green (s)			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.40	0.40	0.05	0.27					0.27		0.27
v/c Ratio		0.63	0.05	0.51	0.60					0.72		0.73
Control Delay		38.5	0.1	106.4	20.3					54.4		11.2
Queue Delay		0.0	0.0	0.0	0.0					0.0		0.0
Total Delay		38.5	0.1	106.4	20.3					54.4		11.2
LOS		D	A	F	C					D		B
Approach Delay		37.0			26.3						33.7	
Approach LOS		D			C						C	
Queue Length 50th (ft)		364	0	44	53					309		37
Queue Length 95th (ft)		437	0	m75	76					381		183
Internal Link Dist (ft)		654			854			513			580	
Turn Bay Length (ft)			500	500								
Base Capacity (vph)		1415	698	82	943					938		847
Starvation Cap Reductn		0	0	0	0					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.63	0.05	0.51	0.60					0.72		0.73

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 6:WBT, Start of Green			
Natural Cycle: 100			
Control Type: Pretimed			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 33.2		Intersection LOS: C	
Intersection Capacity Utilization 61.3%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 6: NEC SB Ramps & Jack Brack Rd



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	500	275	410	335	500	750
Future Volume (vph)	500	275	410	335	500	750
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	500			500	500	0
Storage Lanes	2			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.95	0.95	1.00	0.97	1.00
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3539	3539	1583	3433	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3539	3539	1583	3433	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				353		569
Link Speed (mph)		45	45		45	
Link Distance (ft)		916	847		1018	
Travel Time (s)		13.9	12.8		15.4	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Adj. Flow (vph)	526	289	432	353	526	789
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	289	432	353	526	789
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	30.0	61.0	31.0	31.0	59.0	59.0
Total Split (%)	25.0%	50.8%	25.8%	25.8%	49.2%	49.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	24.0	55.0	25.0	25.0	53.0	53.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Actuated g/C Ratio	0.20	0.46	0.21	0.21	0.44	0.44
v/c Ratio	0.77	0.18	0.59	0.58	0.35	0.78
Control Delay	53.8	19.5	46.6	8.3	22.9	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.8	19.5	46.6	8.3	22.9	13.4
LOS	D	B	D	A	C	B
Approach Delay		41.6	29.4		17.2	
Approach LOS		D	C		B	
Queue Length 50th (ft)	200	67	160	0	135	139
Queue Length 95th (ft)	263	96	215	82	178	326
Internal Link Dist (ft)		836	767		938	
Turn Bay Length (ft)	500			500	500	
Base Capacity (vph)	686	1622	737	609	1516	1016
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.18	0.59	0.58	0.35	0.78

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Pretimed			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 27.3		Intersection LOS: C	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 14: Nova Rd & NEC