# Report of the Jacksonville Planning and Development Department

# Conceptual Master Plan - November 5, 2021

Ordinance/Application No.: 2021-692

Subject: 301 Villages Conceptual Master Plan, Dated

August 30, 2021

Property Location: South of I-10, north of Maxville-MacClenny Highway

(SR 228), and between US Highway 301 and the

**Duval-Baker County line** 

Property Acreage: Approximately 7,002 acres

Planning District: District 4, Southwest

City Council District: District 12

Applicant: Paul M. Harden, Esquire

**Development Boundary:** Rural Area

## **BACKGROUND**

Ordinance 2021-302-E approved a land use map amendment on 7,002 acres of land from a variety of agriculture land use categories to the Multi-Use (MU) land use category. Land use map amendments to the MU land use category are required to include a site specific policy that addresses the site area, the permitted uses as well as the densities and intensities of uses along with a statement that development shall not be permitted until such time as a conceptual master plan is approved by the City Council. Pursuant to these requirements, the land use map amendment to MU was approved subject to Future Land Use Element (FLUE) Policy 4.3.20.

Ordinance 2021-692 implements the requirement to develop the conceptual master plan consistent with the provisions of the MU land use category and FLUE Policy 4.3.20.

## **FLUE Policy 4.3.20**

In accordance with Ordinance 2021-302-E, which designates a 7,002 acre MU land use category on the Future Land Map, the owner or authorized agent shall develop a conceptual long-term master plan addressing the entire 7,002 acre site. The conceptual master plan shall commence within one (1) year of the approval date of Ordinance 2021-302-E/L-5457-20A, and conclude no later than three (3) years from the approval date of Ordinance 2021-302-E/L-5457-20A. The conceptual master plan shall be subject to review and approval by the City Council prior to submittal of land development reviews and approvals. Development within the site shall be consistent with the conceptual

master plan, and development shall not be permitted until such time as a conceptual master plan is approved by the City Council.

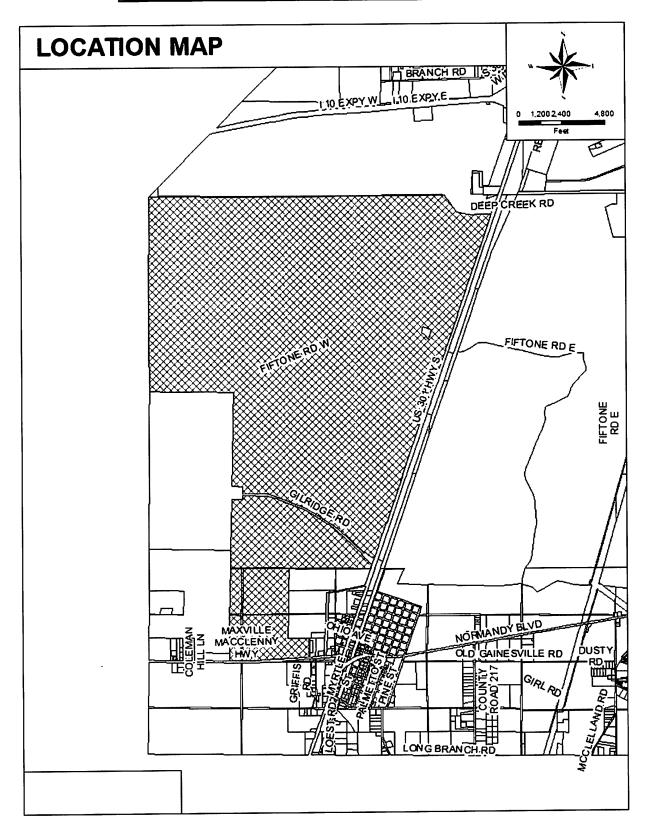
The permitted uses include a variety of attached and detached residential, neighborhood and regional commercial centers including lodging; professional and business offices including hospital and medical related uses; and light industrial. More specifically, the following land use categories are permitted: Low Density Residential (LDR), Medium Density Residential (MDR), Community/General Commercial (CGC), Residential-Professional-Institutional (RPI), Light Industrial (LI) and Recreation and Open Space (ROS), all consistent with the Multi-Use Land Use Category.

The following specific densities and intensities are permitted consistent with the Multi-Use Land Use Category:

Single Family Residential (DU)	11,250
Multi-family Residential (DU)	3,750
Commercial (GSF)	750,000
Hotel/Lodging (RMS)	340
Office (GSF)	300,000
Light Industrial (GSF)	300,000
Hospital (GSF)	375,000

The conceptual master plan may include a land use conversion process that allows for the modification of the above densities and intensities, provided a conversion/exchange table is submitted to and approved by the Planning and Development Department.

# **CONCEPTUAL MASTER PLAN LOCATION MAP**



## **CONSISTENCY EVALUATION**

## **MU Future Land Use Category Consistency**

Pursuant to the Multi-use (MU) Future Land Use Category, a conceptual master plan must, at a minimum, include information to address nine requirements. Each requirement is listed below along with analysis regarding the compliance of the 301 Villages Conceptual Master Plan, dated August 30, 2021, with the requirement.

1. The general distribution, location and densities or intensities of residential and non-residential development.

The Master Plan includes a map and a table listing the permissible development that indicates the permitted uses and densities and intensities in a manner consistent with those permitted under FLUE Policy 4.3.20. The map illustrates the general distribution and location of densities and intensities throughout the 7,002 acre site through the identification of village types and neighborhood centers. The village types correspond to the uses, densities and intensities listed in the permissible development table.

According to the Master Plan map and permissible development table, uses within the project are permitted under a series of six villages; each village containing a mix of uses, densities and intensities. Commercial uses are noted on the map through the identification of neighborhood centers that are intended to support residential neighborhoods within each village.

Additionally, the 301 Villages Master Plan, dated August 30, 2021, allows for the exchange of land uses based upon trip generation rates for each land use as authorized in the policy and according to the Master Plan, the conversion table shall be contained in the implementing PUD. However, FLUE Policy 4.3.20 requires that the conversion table be included in the master plan. Therefore, it is recommended that Ordinance 2021-692 be approved subject to revising the On File exhibit to the 301 Villages Conceptual Master Plan, Dated November 2, 2021.

2. Acknowledgement that rezonings will be submitted where such uses, densities and intensities are inconsistent with the current zoning designations prior to development reviews and approvals for developments within the overall site.

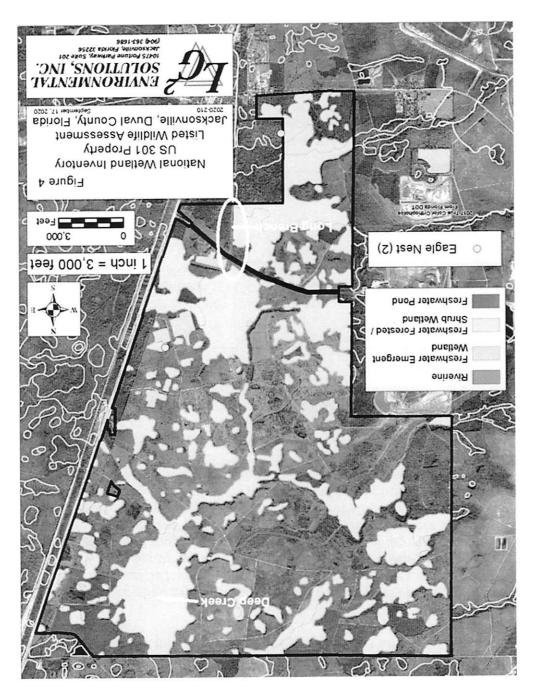
The Master Plan provides a narrative that includes acknowledgement that development plans must be consistent with the Master Plan.

3. The general distribution and location of conservation areas and wetland buffers.

The general distribution and location of conservation areas are depicted on the Master Plan map and labeled as the Deep Creek Greenway and Conservation Lands and Upland Buffers. These areas are subject to final design, road crossings, surveys and permitting. A minimum fifteen (15) foot-wide upland buffer is to be maintained between developed areas and Category I (saltwater marsh) and Category II (riverine/estuarine) wetlands, subject to allowances for averaging of the buffer width in justified instances.

During review of the Master Plan site, staff noted the existence of approximately 13 acres of Category II wetlands within the boundaries of the Master Plan. No Category II wetlands were identified. Approximately 2,350 acres of the site contains Category III (all other wetlands) wetlands which are dispersed throughout the property. The Category III wetlands are located in the southern portion of the Master Plan, adjacent to Long Branch Creek and south of Gilridge Road.

Due to the existence of Category II wetlands, the land use map amendment to the MU category was reviewed and approved by the Waterways Commission on January 13, 2021



4. The strategy for providing centralized utilities for water and sewer service throughout the planning area, including a general phasing plan that identifies when development is anticipated to require the need for additional facilities. The Water Supply Facilities Work Plan (WSFWP) must be updated prior to any development phase requiring construction of potable, treatment, and/or non-potable water supply facilities to incorporate the applicable planned facilities into the WSFWP.

In order to effectively analyze the strategy for providing centralized utilities for water and sewer service, the proposed 301 Villages Master Plan, dated August 30, 2021, was routed to the JEA for review and comment. JEA reviewed the Master Plan and recommended that responses to this requirement in the Master Plan be replaced by the language provided below:

The Developer shall provide a site within the Property to serve the water and sewer service needs of 301 Villages for potable water and wastewater. Centralized utilities for water and sewer service shall be provided by JEA. The projected water and wastewater demands are specified below. If utility infrastructure in sufficient capacity to serve the projected demands is not available to service the Property prior to the commencement of Phase 1 development, pursuant to Chapter 163, Florida Statutes, and Policy 1.1.15 of the Infrastructure Element Potable Water Sub-Element of the City's Comprehensive Plan, the City and JEA will jointly prepare an appropriate amendment to the City's Water Supply Facilities Work Plan to identify phased facilities to provide water and wastewater service for 301 Villages. If the infrastructure is not already available, the Developer shall be responsible for the costs of connecting the Property to the existing JEA utility infrastructure. Such improvements shall be dedicated to JEA upon completion of construction of such improvements and acceptance by JEA.

		Non-Potable Water		Total
	Potable Water Demand (MGD)	(Irrigation) Demand (MGD)	Total Water Demand (MGD)	Wastewater Generation (MGD)
Phase 1	0.937	0.547	1.483	1.013
Phases 1 & 2	2.787	1.742	4.529	3.053
Build-out	4.017	2.441	6.458	4.369

In the alternative, if a private utility is issued a final certificate of authorization by the Public Service Commission to provide water and wastewater services to the Property and obtains the requisite permit from FDEP for the construction of a new water and wastewater facility, and is issued the requisite consumptive use permit from the Water Management District, the Developer shall modify this Conceptual Master Plan and provide the strategy for providing centralized utilities for water and sewer service throughout the development, including the general phasing plan.

### Infrastructure Element - Potable Water Sub-Element

Policy 1.1.15

The City shall continue to amend the 2030 Comprehensive Plan as needed to implement the City's Water Supply Facilities Work Plan 2018-2028 (Jacksonville Planning and Development Department, February 2019), adopted by reference. Supporting data and analysis may be attached as appendices to the Water Supply Facilities Work Plan, and updated from time to time, without the necessity of an amendment to the Comprehensive Plan. The City and JEA shall continue to identify and implement traditional and alternative water supply projects and programs, including conservation and water reuse, that are consistent with the SJRWMD's Regional Water Supply Plan to meet the City's water needs.

5. Identification of the major internal transportation facilities necessary to serve the future land uses through an efficient and connected network.

Major internal transportation facilities are depicted on the Master Plan map. These major facilities identify the intent to provide an efficient and connected transportation network between each village within the overall development.

The Transportation Planning Division of the Planning and Development Department reviewed the master plan and provided the following technical assistance:

Future traffic studies may be required by the City for internal roadways and shall be based on the actual use and trip generation of the proposed sites. The need for traffic studies for particular sites shall be determined prior to final 10-set review and the traffic study shall be included with the Civil Site Plan submittal for that particular site.

Assuming the interior roads will be dedicated to the City of Jacksonville, a Revocable Permit and Indemnification Agreement will be required for traffic control signs on decorative posts. Such signs shall be maintained by the permittee of said permit. All street name signs shall include block numbers.

Any uncontrolled crosswalk shall be by an engineering study to justify it per MUTCD Section 3B.18.

The City of Jacksonville Traffic Engineer shall review any traffic calming devices on City of Jacksonville streets.

All traffic control signs shall meet the Manual on Uniform Traffic Control Devices (MUTCD) requirements for height, reflectivity, crash worthiness, and distance from the edge of pavement.

Any non-city standard material, fixture, pavement marking, etc. in the City of Jacksonville right of way or proposed right of way shall require a Revocable Permit and Indemnification Agreement and shall be maintained by the permittee.

Roadway clear zones shall be a minimum of 4' from the face of curb or shall meet the requirements of the FDOT Manual of Uniform Minimum Standards for Design Construction and Maintenance for Streets and Highways (Florida Green Book) where there is no curb and gutter.

Alleys shall not be maintained by the City of Jacksonville.

All landscaping, signage, parking, walls, structures, bus stops shelters, etc. shall be located outside of the line of clear sight as defined by FDOT Design Manual Section 212.11.

On street parking shall meet all of the parking restriction and requirements of the Florida State Statutes.

Street light plans with photometric calculations shall be included in the plans for major access roadways. Street light plans with photometric calculations may be required for subdivisions with proposed City of Jacksonville rights of way that do not meet current standard cross sections.

6. General identification of how the major internal transportation facilities will connect to the external transportation network with proposed future connections to any State facilities subject to review by the Florida Department of Transportation.

Transportation connections to the external transportation network are identified on the Master Plan map. In conjunction with the requirement to conduct a basic transportation assessment pursuant to item number seven of the MU land category, the applicant coordinated with the Florida Department of Transportation (FDOT) in development of connections to the external transportation network. Upon review of the 301 Villages Master Plan, dated August 30, 2021, FDOT offered the following comments:

The master plan shows seven (7) proposed connections to US-301 and one (1) to Normandy Blvd. The traffic study needs to include the projected volumes at existing and new connections and the I-10/US-301 interchange for each phase. Failures should be noted and then impacts addressed in terms of proposed improvements. Intersection Control Evaluation will be required for all connections of significant impact to the State roadway system. Any required improvements will be at the expense of the developer.

All proposed improvements should be identified and approved by FDOT prior to the approval of the PUD. Each connection and/or roadway improvement will require access permitting through the Jacksonville Permits office. FDOT's long term plans are to remove all signals from US-301 to allow uninterrupted flow using grade separations and interchanges.

In order to address the FDOT comments, the applicant provided a revised 301 Villages Master Plan, dated November 2, 2021. The revised Master Plan adds biennial traffic monitoring report requirements as well as a note to the cover page acknowledging that all connections to US 301 will meet minimum spacing requirements per the F.A.C.

7. A basic assessment shall be conducted of the currently identified and expected roadway operating conditions of the immediately surrounding transportation network for the conceptual master plan (methodologies and assumptions used in this assessment shall be agreed upon by the Planning and Development Department, the Florida Department of Transportation, and the owner or authorized agent).

The applicant coordinated with the Florida Department of Transportation (FDOT) and the City in development of the traffic study. Upon review of the 301 Villages Master Plan, dated August 30, 2021, FDOT offered the following comments:

The traffic study included in the master plan indicates that the segment of US-301 (a SIS facility) from the project's entrance to I-10 will fail by the end of Phase 2 (2031) with project traffic. The traffic study shall provide a more detailed review of the impacts of this development.

The traffic study shall include the projected volumes at existing and new connections and the I-10/US-301 interchange for each phase. Failures should be noted and impacts addressed in terms of proposed improvements. Intersection Control Evaluation will be required for all connections of significant impact to the State roadway system. Any required improvements will be at the expense of the developer.

Due to the project's major impacts and long term nature of likely improvements, FDOT supports a traffic monitoring report to be submitted to the FDOT and the City every 2-3 years for review. The first monitoring report shall be due within 3 years of date of commencement of Phase I, unless otherwise agreed upon between the FDOT, the City, and the applicant. A methodology meeting between FDOT, the City, and applicant should be conducted prior to the analysis.

In order to address the FDOT comments, the applicant provided a revised 301 Villages Master Plan, dated November 2, 2021. The revised Master Plan adds biennial traffic monitoring report requirements as well as a note to the cover page acknowledging that all connections to US 301 will meet minimum spacing requirements per the F.A.C.

8. Coordination with the Florida Fish and Wildlife Conservation Commission staff in the design of the conceptual master plan.

The Florida Fish and Wildlife Conservation Commission (FWC), provided technical assistance in review of the Future Land Use Map amendment that designated the property under the MU land use category (2021-302-E). The letter, dated January 21, 2021, identifies the potentially affected species and wildlife habitats and provides resources and guidance for their protection along with technical assistance as development plans progress. The letter also indicates the need to consider federally listed species through coordination with the USFWS North Florida Ecological Services Office. A copy of the FWC letter is included in the Master Plan.

9. Requirements and limitations for submitting proposed conceptual master plan amendments through the Planning and Development Department to the City Council for review and approval.

According to the Master Plan, revisions to the Master Plan may be sought by parcel owners, subject to written consent from the Master Developer of Record.

In order to effectively implement and update the Master Plan, the property owner shall provide the Planning and Development Department with a letter formally identifying the Master Developer of Record for the purposes of implementation and compliance with the Master Plan. The letter shall include contact information for the Master Developer and shall be submitted to the Department within 30 days of approval of the Master Plan.

## **FLUE Policy 4.3.20 Consistency**

Pursuant to the FLUE Policy 4.3.20, the permitted uses include a variety of attached and detached residential, neighborhood and regional commercial centers including lodging; professional and business offices including hospital and medical related uses; and light industrial. More specifically, the following land use categories are permitted: Low Density Residential (LDR), Medium Density Residential (MDR), Community/General Commercial (CGC), Residential-Professional-Institutional (RPI), Light Industrial (LI) and Recreation and Open Space (ROS), all consistent with the Multi-Use Land Use Category.

The following specific densities and intensities are permitted consistent with the Multi-Use Land Use Category:

Single Family Residential (DU)	11,250
Multi-family Residential (DU)	3,750
Commercial (GSF)	750,000
Hotel/Lodging (RMS)	340
Office (GSF)	300,000
Light Industrial (GSF)	300,000
Hospital (GSF)	375,000

The conceptual master plan may include a land use conversion process that allows for the modification of the above densities and intensities, provided a conversion/exchange table is submitted to and approved by the Planning and Development Department.

FLUE Policy 4.3.20 also requires that the conceptual master plan shall commence within one (1) year of the approval date of Ordinance 2021-302-E/L-5457-20A, and conclude no later than three (3) years from the approval date of Ordinance 2021-203-E/L-5457-20A.

## Consistency Review:

The 301 Villages Conceptual Master Plan, dated August 30, 2021, and the revised Plan, dated November 2, 2021, includes both a master plan map and tables listing the permitted uses and densities and intensities in a manner consistent with FLUE Policy 4.3.20.

Pursuant to the approved site specific policy, the Master Plan may include a land use conversion process that allows for modification of the permitted densities and intensities, provided a conversion/exchange table is submitted to and approved by the Planning and Development Department. However, the Master Plan defers that authority to the implementing PUD zoning which is inconsistent with the site specific policy and inconsistent with the 2030 Comprehensive Plan. Therefore, it is recommended that Ordinance 2021-692 be approved subject to revising the on file exhibit to the 301 Villages Conceptual Master Plan, Dated November 2, 2021. The revised Master Plan incorporated a conversion factor table that has been reviewed and approved by the Planning and Development Department.

Ordinance 2021-302-E was approved by the City Council on July 27, 2021, and as such, development and completion of the master plan is well within the timeframes required in FLUE Policy 4.3.20.

## PLANNING DEPARTMENT RECOMMENDATION:

#### **APPROVE SUBECT TO THE FOLLOWING CONDITIONS:**

- 1. Revise the On File exhibit for Ordinance 2021-692 to reflect the revised 301 Villages Conceptual Master Plan, Dated November 2, 2021.
- 2. The property owner shall provide the Planning and Development Department with a letter formally identifying the Master Developer of Record for the purposes of implementation and compliance with the Master Plan. The letter shall include contact information for the Master Developer and shall be submitted to the Department within 30 days of approval of the Master Plan.
- 3. The following language related to requirements for the strategy for providing centralized utilities for water and sewer service throughout the planning area, as described on page two of the 301 Villages Master Plan, dated November 2, 2021, shall be revised as depicted below:

#### LANGUAGE TO BE REMOVED:

The Developer shall provide a site within the Property to serve the water and sewer service needs of 301 Villages for potable water and wastewater. Centralized utilities for water and sewer service will be provided by a utility service system authorized by law. The projected water and wastewater demand are specified below. Prior to the commencement of Phase 1 development, the City shall amend its Water Supply Facilities Work Plan to identify phased facilities to provide water and wastewater service for 301 Villages.

	Potable Wate Demand (MGD)	Non-Potable Water (Irrigation) Demand (Iv. 2)	Tuar Water Demand (MGD)	Total Wastewater Generation (MGD)
Phase 1	0.937	0 .7	1.483	1.013
Phases 1 & 2	2.787	1.742	529	3.053
Build-out	4.017	2.441	6.458	4.369

#### **REVISED LANGUAGE:**

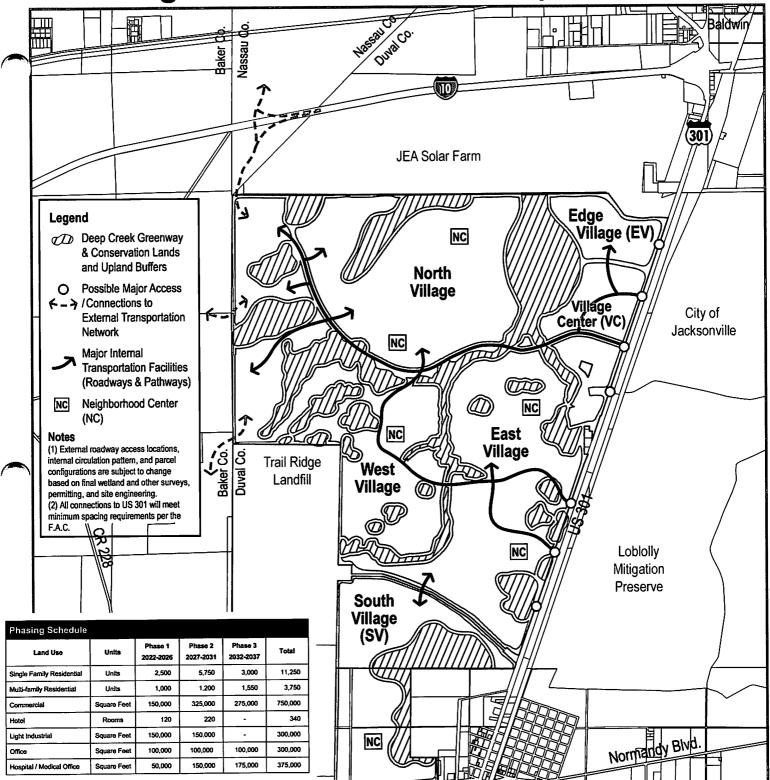
The Developer shall provide a site within the Property to serve the water and sewer service needs of 301 Villages for potable water and wastewater. Centralized utilities for water and sewer service shall be provided by JEA. The projected water and wastewater demands are specified below. If utility infrastructure in sufficient capacity to serve the projected demands is not available to service the Property prior to the commencement of Phase 1 development, pursuant to Chapter 163, Florida Statutes, and Policy 1.1.15 of the Infrastructure Element Potable Water Sub-Element of the City's Comprehensive Plan, the City and JEA will jointly prepare an appropriate amendment to the City's Water Supply Facilities Work Plan to identify phased facilities to provide water and wastewater service for 301 Villages. If the infrastructure is not already available, the Developer shall be responsible for the costs of connecting the Property to the existing JEA utility infrastructure. Such improvements shall be dedicated to JEA upon completion of construction of such improvements and acceptance by JEA.

		Non-Potable Water		Total
	Potable Water Demand (MGD)	(Irrigation) Demand (MGD)	Total Water Demand (MGD)	Wastewater Generation (MGD)
Phase 1	0.937	0.547	1.483	1.013
Phases 1 & 2	2.787	1.742	4.529	3.053
Build-out	4.017	2.441	6.458	4.369

In the alternative, if a private utility is issued a final certificate of authorization by the Public Service Commission to provide water and wastewater services to the Property and obtains the requisite permit from FDEP for the construction of a new water and wastewater facility, and is issued the requisite consumptive use permit from the Water Management District, the Developer shall modify this Conceptual Master Plan and provide the strategy for providing centralized utilities for water and sewer service throughout the development, including the general phasing plan.

301 Villages

# **Conceptual Master Plan**



Permissible	e Develop	oment					
Land Use	Single Family (Units)	Multi- family (Units)	Commercial (Sq. Foet)	Office (Sq. Fest)	Flex Industrial (Sq. Feet)	Hotel (Rooms)	Hospital/ Medical (Sq. Feet)
Total	11,250	3,750	750,000	300,000	300,000	340	375,000
Village		•	•		•		
J Center	•	•	•		•	•	•
West Village	•	•	•	•	•		
North Village	•	•	•	•			
East Village	•	•	•	•		•	
South Village	•	•			•		

Denotes land use is permissible within the village

November 2, 2021





Permissible	e Develop	oment					
Land Use	Single Family (Units)	Multi- family (Units)	Commercial (Sq. Feet)	Office (Sq. Feet)	Flex Industrial (Sq. Feet)	Hotel (Rooms)	Hospital/ Medical (Sq. Feet)
Total	11,250	3,750	750,000	300,000	300,000	340	375,000
Edge Village		•	•		•		
Village Center	•	•	•	•	•	•	•
West Village	•	•	•	•	•		
North Village	•	•	•	•			
East Village	•	•	•	•		•	
South Village	•	•			•		

• Denotes land use is permissible within the village

Phasing Schedule					
Land Use	Units	Phase 1 2022-2026	Phase 2 2027-2031	Phase 3 2032-2036	Total
Single Family Residential	Units	2,500	5,750	3,000	11,250
Multi-family Residential	Units	1,000	1,200	1,550	3,750
Commercial	Square Feet	150,000	325,000	275,000	750,000
Hotel	Rooms	120	220	-	340
Light Industrial	Square Feet	150,000	150,000	-	300,000
Office	Square Feet	100,000	100,000	100,000	300,000
Hospital / Medical Office	Square Feet	50,000	150,000	175,000	375,000

#### Notes:

- Unused development rights from a particular phase carry over into the subsequent phase until build-out.
   The Developer shall be permitted to convert between land uses based on the conversion table contained in the PUD-MU that allows for the exchange of land uses based upon trip generation for each land use.



The entire Property shall be subject to a PUD-MU district that will provide the land use controls for the distribution, location, densities, and intensities of permissible residential and non-residential development. Incremental development plans shall be submitted for individual portions of the 301 Villages in conjunction with corresponding construction plans. These plans must demonstrate consistency with the Conceptual Master Plan and compliance with all sections of the PUD-MU district subject to the City's PUD verification process.

In the event future development plans necessitate revising the Conceptual Master Plan, an amendment may be sought by the owner of the parcel which is the subject of the amendment but only with the written consent of the Master Developer of Record. Amendment to the adopted PUD-MU district may be accomplished through either an administrative modification, minor modification to the PUD, or by filing an application for rezoning as authorized by the PUD-MU or by Section 656.341 of the Zoning Code.

Conservation areas are shown as generalized areas on the Conceptual Master Plan and are subject to final design, road crossings, surveys and permitting. A key element of the Conceptual Master Plan is the preservation and enhancement of the Deep Creek Swamp and its tributaries. To protect water quality and preserve natural wetland functions, the Developer shall maintain a minimum fifteen (15) foot-wide upland buffer between developed areas contiguous to Category I and II Wetlands, except for those circumstances where an averaging of the buffer width, because of an unavoidable buffer reduction, achieves a greater overall upland buffer width.

The Developer shall provide a site within the Property to serve the water and sewer service needs of 301 Villages for potable water and wastewater. Centralized utilities for water and sewer service will be provided by a utility service system authorized by law. The projected water and wastewater demand are specified below. Prior to the commencement of Phase 1 development, the City shall amend its Water Supply Facilities Work Plan to identify phased facilities to provide water and wastewater service for 301 Villages.

		Non-Potable Water		Total
	Potable Water Demand (MGD)	(Irrigation) Demand (MGD)	Total Water Demand (MGD)	Wastewater Generation (MGD)
Phase 1	0.937	0.547	1.483	1.013
Phases 1 & 2	2.787	1.742	4.529	3.053
Build-out	4.017	2.441	6.458	4.369

To create a mobility-friendly community, the project's transportation network will accommodate the intensity and density of development that is interconnected through a network of pedestrian amenities and roadway network. The plan seeks to reduce the travel distance necessary for day-to-day activities. The plan consists of Villages, and a larger mix-use Village Center. Each Village will have multiple residential neighborhoods connected to one or more Neighborhood Centers that will support the Villages. The Villages will be linked to the Village Center by roadways and a pedestrian system consisting of sidewalks and multi-purpose paths. The major parkways(s) from US 301 will access all the Villages as well as the Village Center. The parkways(s) will include a multi-purpose pathway on one side with an extensive street tree and landscape treatment.

Coordination will continue with the FDOT and the City pursuit to the letter dated July 7, 2021 (attached). The Applicant conducted a traffic impact assessment dated September 2, 2021 (attached) of the existing and expected roadway operating conditions of the immediately surrounding transportation network for the Conceptual Master Plan. The methodologies and assumptions were agreed upon by the City and FDOT.

Coordination will continue with the FFWCC pursuit to the letter dated January 21, 2021 (attached) providing technical assistance information in the design of the Conceptual Master Plan and for future project planning.



## **Traffic Monitoring Reports**

The Master Developer, his successor or assigns, shall be responsible for preparing a Traffic Monitoring Report (the "TMR") for the entire Subject Property biennially (every two years) until build-out. The TMR shall be provided to the City of Jacksonville Planning and Development Department (the "PDD") and Florida Department of Transportation, District 2 Urban Office (the "FDOT"). The TMR shall assess the traffic generated by all development located within the Subject Property, not any individual portion or section.

The first TMR shall be commenced no later than twenty four (24) months from the commencement of Phase 1. All subsequent TMRs shall be due on March 1 biennially thereafter. The following information shall be included in each TMR:

- (i) A description of current development by land use, type, location, number of residential units, and amount of square footage of non-residential, together with the proposed construction schedule for the ensuing reporting period, including AM, PM and Daily trip generation, any applicable trip conversions and all corresponding maps.
- (ii) Traffic counts, turning movements, signal warrants and actual levels of service for the past twenty-four (24) months and projected for the ensuing 24 months, including AM and PM peak hour traffic volume estimates for all internal roads and intersection as well as the following external roads and intersections. Intersection Control Evaluation will be required for all connections of significant impact to the State roadway system. The TMR will distinguish between project-related traffic and total traffic volumes:

#### **Road Segments:**

- US 301 from Primary Entrance to Subject Property to Interstate 10
- US 301 from Primary Entrance to Subject Property to SR 228/Normandy Boulevard
- Interstate 10 from US 301 to SR 228/Fifth Street (in Macclenny)
- Interstate 10 from US 301 to SR 23 (First Coast Expressway)
- Interstate 10 from SR 23 (First Coast Expressway) to Chaffee Road
- Interstate 10 from Chaffee Road to Hammond Boulevard/Greenland Avenue
- Interstate 10 from Hammond Boulevard/Greenland Avenue to Interstate 295

#### Intersections:

- Project entrance(s) at US 301
- US 301 at Interstate 10 interchange

Note: Actual FDOT traffic counts will be used where possible. If actual FDOT counts are not available for a particular road or intersection, the Master Developer, his successors or assigns, will retain, at its expense, a traffic engineering firm to collect the necessary counts. FDOT seasonal adjustment factors will be used when adjusting traffic counts.

- (iii) Based upon the results of Section (ii), the TMR will identify new and/or improved roadways, traffic control devices, pedestrian facilities or other transportation facility improvements to be constructed or provided by Developer or governmental entity to accommodate the total existing and anticipated traffic demands. Roadway and/or intersection improvement options will be evaluated for consideration and discussed between FDOT, PDD and the Master Developer.
  - i. When a roadway/and or intersection improvement project has been identified for an "immediate need" (within the next TMR period) the Master Developer will prepare a



Participation Agreement for execution between the Master Developer, FDOT and the City, that defines: the scope of the proposed work, estimated cost, determination of proportionate impacts (pursuant to the most recent TMR), funding arrangements, and the timing of future improvements.

ii. Transportation improvements that are the responsibility of the Master Developer must be constructed/or funded by the time indicated in the subsequent TMR in order to obtain additional building permits from the City.

## **US 301 Villages Conversion Factor Table**

Created 10/7/2021

			Converting To							
	LUC	Description	Lt Industrial	SF Residential	Mid Apt/Condo	Hotel	Hospital	Gen Office	Commercial	
	110	General Light Industrial	1.00000	0.39633	0.76051	0.45030	0.25872	0.21550	0.09240	
6		Single Family Residential	2.52315	1.00000	1.91887	1.13617	0.65279	0.54373	0.23314	
ء ﷺ	221	Mid-Rise Apartment/Condo	1.31491	0.52114	1.00000	0.59210	0.34020	0.28336	0.12150	
[ § 6		Hotel	2.22075	0.88015	1.68890	1.00000	0.57456	0.47856	0.20520	
§ Æ	610	Hospital	3.86517	1.53188	2.93949	1.74048	1,00000	0.83293	0.35714	
ပြ		General Office	4.64045	1.83915	3.52909	2.08958	1.20058	1.00000	0.42878	
1		Shopping Center	10.82247	4.28928	8.23057	4.87333	2.80000	2.33220	1.00000	

				2.27		Tale Date
LUC	Land Use Type	Proposed	Units	Min	Max	Trip Rate
110	General Light Industrial	300,000	1000 SF GFA	0	600,000	0.29667
210	Single Family Residential	11,250	DU	5,625	11,250	0.74853
221	Mid-Rise Apartment/Condo	3,750	DU	1,875	3,750	0.39009
310	Hotel	340	Room	0	680	0.65882
610	Hospital	375,000	1000 SF GFA	0	750,000	1,14667
710	General Office	300,000	1000 SF GFA	150,000	600,000	1.37667
	Shopping Center	750,000	1000 SF GLA	375,000	1,500,000	3.21067

#### Example:

To convert 50 Single Family Residential Dwelling Units to Shopping Center, multiply 50 \* 0.23314 = 11,657 SF Check: (50\*.74853)= 37 PHT (11.657\*3.21067)= 37 PHT

Source: PM Peak Hour Rates and Equations, "Trip Generation", 11th Edition, ITE. Based on no ITE pass-by or internal capture reduction.

Note: After conversion, revise the Trip Generation calculation using ITE pass-by and internal capture reduction for the entire development.





## Florida Department of Transportation

RON DESANTIS GOVERNOR 2198 Edison Avenue MS 2806 Jacksonville, FL 32204-2730 KEVIN J. THIBAULT, P.E.

July 7, 2021

Kristen Reed, Chief Community Planning Division City of Jacksonville 214 North Hogan Street Edward Ball Building, Suite 300 Jacksonville, FL 32202

SUBJECT: City of Jacksonville Proposed Comprehensive Plan Amendment (20-16ESR)

Dear Ms. Reed,

Per your request, this letter serves as documentation that I did speak with Prosser, Inc regarding the traffic analysis requirements for the above-mentioned Comprehensive Plan Amendment. Per the City's standard procedures for the Mixed Use land use, within one year of adoption of L-5457-20A, a traffic impact assessment will be required and initiated as part of the conceptual master plan. The assessment will include analysis of existing and expected roadway operating conditions of the immediately surrounding transportation network impacted by the development outlined in the Detailed Conceptual Master Plan. The analysis will also include identification of the major internal transportation facilities necessary to serve the future land uses and how the major internal roadways will connect to the external transportation network. Identification of methodologies and assumptions shall be agreed upon by the City and FDOT and the analysis shall be completed within 3 years after it begins.

Thank you.

If you have any questions, please do not hesitate to contact me by email: brian.austin@dot.state.fl.us or call: (904) 360-5664.

Sincerely,

**Brian Austin** 

Transportation Planner

Brian Austin

**FDOT District Two** 

Improve Safety, Enhance Mobility, Inspire Innovation www.fdot.gov





Florida Fish and Wildlife Conservation Commission

Commissioners Rodney Barreto Chairman Coral Gables

Michael W. Sole Vice Chairman Tequesta

Steven Hudson Fort Lauderdale

Gary Lester

Gary Nicklaus Jupiter

Sonya Rood St. Augustine

Robert A. Spottswood Key West

Office of the Executive Director Eric Sutton Executive Director

Thomas H. Eason, Ph.D. Assistant Executive Director

Jennifer Fitzwater Chief of Staff

Division of Habitat and Species Conservation Melissa Tucker Director

(850) 488-3831 (850) 921-7793 FAX

Managing fish and wildlife resources for their long-term well-being and the benefit of people.

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MyFWC.com

January 21, 2021

Kristen Reed
City of Jacksonville
214 North Hogan Street
Edward Ball Building, Suite 300
Jacksonville, FL 32202
kreed@coi.net

Re: Duval-Jacksonville 20-16ESR (2020-598-E), Comprehensive Plan Amendment

Dear Ms. Reed:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the above-referenced comprehensive plan amendment package and provides the following comments and recommendations for your consideration in accordance with Chapter 163.3184, Florida Statutes. While there are no objections to the amendment, the following technical assistance information is provided to assist the Department of Economic Opportunity, the County, and any applicants during the amendment review and future project planning.

#### **Project Description**

This amendment would result in a change to the Future Land Use Map of the City of Jacksonville Comprehensive Plan wherein approximately 7,002 acres of lands currently designated as Agriculture-1, Agriculture-2, and Agriculture-3 will be designated as Multi-Use. This amendment would allow for a planned mixed-use development consisting of 11,250 single family residences, 3,750 multi-family residences, 340 rooms of hotel/lodging, 750,000 square feet of commercial, 300,000 square feet of office, 300,000 square feet of light industrial, and 375,000 square feet of hospital. The project area is located west of and adjacent to US 301 and approximately 1.3 miles south of the US 301 and I-10 interchange. The dominant land covers on the site consist of coniferous plantation (3,573.7 acres), mixed hardwood coniferous swamps (1, 018.2 acres), hydric pine flatwoods (917.3 acres), improved pasture (386.5 acres), field crops (314.1 acres), and mixed wetland hardwoods (284.2 acres).

#### **Potentially Affected Resources**

A Listed Wildlife and Habitat Assessment Report (September 2020) by LG2 Environmental Solutions, Inc. was provided in support of the application. Following a review of online databases, general wildlife surveys were conducted on the project area on September 3-4, 2020, to assess the potential presence of listed and managed wildlife and their associated habitats. Field surveys confirmed the presence of the bald eagle (Haliaeetus leucocephalus) and Florida sandhill crane (Antigone canadensis pratensis, State Threatened [ST]) on-site. The potential for the following species was also addressed:



Kristen Reed Page 2 January 21, 2021

- Gopher tortoise (Gopherus polyphemus, ST),
- Florida sandhill crane (Antigone canadensis pratensis, ST),
- Black Creek crayfish (Procambarus pictus, ST)
- Eastern indigo snake (Drymarchon corais couperi, Federally Threatened [FT])
- Frosted flatwoods salamander (Ambystoma cingulatum, FT)
- Red-cockaded woodpecker (Picoides borealis, Federally Endangered)
- Wood stork (Mycteria americana, FT)
- Rufa red knot (Calidris camutus rufa, FT)

FWC staff conducted a geographic information system analysis of the project area which found that the project area is also located near, within, or adjacent to:

- Potential habitat for state-listed species:
  - o Little blue heron (Egretta caerulea, ST)
  - Tricolored heron (Egretta tricolor, ST)
- Potential habitat for the Florida black bear (Ursus americanus floridanus North Bear Management Unit)

#### **Comments and Recommendations**

#### Gopher Tortoise

The project area has potential habitat for the gopher tortoise and FWC has issued approximately 40 gopher tortoise relocation permits within 2 miles of the project site. The applicant should refer to the FWC's Gopher Tortoise Permitting Guidelines (Revised July 2020) (<a href="https://www.myfwc.com/license/wildlife/gopher-tortoise-permits/">https://www.myfwc.com/license/wildlife/gopher-tortoise-permits/</a>) for survey methodology and permitting guidance prior to any development activity. Specifically, the permitting guidelines include methods for avoiding impacts as well as options and state requirements for minimizing, mitigating, and permitting potential impacts of the proposed activities. If you have any questions regarding gopher tortoise permitting, please contact Eric Seckinger by phone at (850) 921-1029 or at <a href="https://example.com/empty-co

#### Florida Sandhill Crane

The applicant's consultants observed Florida sandhill cranes during the site assessment, which occurred outside of the nesting season. The improved pasture and field crops onsite may provide foraging habitat for Florida sandhill crane and the scrub-shrub wetlands and marshes on-site may provide potential nesting habitat for this species. FWC staff recommends that surveys for nesting Florida sandhill cranes be conducted prior to construction activities and during the December through August breeding season. If construction occurs over several years, it may be necessary to conduct surveys each year as Florida sandhill cranes do not nest in the same location every year. If active nests are identified on-site, the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines recommend that the nest site be buffered by 400 feet to avoid disturbance by human activities. If nesting is discovered after construction has begun or



Kristen Reed Page 3 January 21, 2021

if maintaining the recommended buffer is not possible, the applicant can contact FWC staff identified below to discuss potential permitting needs. Additional information and guidance for conducting Florida sandhill crane surveys can be found in the Florida Sandhill Crane Species Conservation Measures and Permitting Guidelines (https://mvfwc.com/media/11565/final-florida-sandhill-crane-species-guidelines-2016.pdf).

#### State-listed Wading Birds

The potential exists for wading bird nesting activity in the wetlands on the project site. FWC staff recommends that specific surveys be conducted for wading birds in potential nesting areas prior to the commencement of any clearing, grading, or filling activities. Surveys should be conducted during their breeding season, which extends from March through August. Additional information and guidance for conducting surveys can be found in the Species Conservation Measures and Permitting Guidelines for state-threatened wading birds (<a href="https://mvfwc.com/media/18634/threatenedwadingbirds-guidelines.pdf">https://mvfwc.com/media/18634/threatenedwadingbirds-guidelines.pdf</a>). If there is evidence of nesting during this period, FWC staff recommends that any wading bird nest sites be buffered by 100 meters (330 feet) to avoid disturbance by human activities. If nesting is discovered after site activities have begun, if the removal or trimming of trees with active nests is unavoidable, or if maintaining the recommended buffer is not possible, the applicant may contact the FWC staff identified below to discuss potential permitting alternatives.

This project may create or maintain appropriate habitat for wading birds on-site and the following guidelines may be used to help enhance this habitat within the development:

- Maintain vegetated visual buffers around nesting colonies and feeding areas to protect birds from human disturbance,
- Include islands with suitable nesting habitat when constructing new ponds,
- Leave shrubs around the edges of ponds to provide nesting and foraging habitat and for bank stabilization, and
- Minimize fertilizer, herbicide, and pesticide runoff into wetlands.

#### Black Creek Crayfish

Black Creek crayfish inhabit freshwater streams nearby in Duval and Clay Counties. Specifically, there have been 16 documented observations of the species within 5 miles of the project site and the species could also be found within Deep Creek, a stream that is present within the project area. The Black Creek crayfish requires perennial streams that have cool, highly oxygenated water, sufficient streamside vegetation for cover and food, and canopy to regulate water temperature. The presence of vegetation within and along creek banks as well as tree roots and submerged detritus are important shelter and food sources for the crayfish. This species is particularly susceptible to pollution, changes in water temperature, siltation, and other changes in water quality. FWC staff recommends dipnet surveying for Black Creek crayfish if construction activities have the potential to impact areas of suitable habitat within Deep Creek. If Deep Creek is found to have the Black Creek crayfish or suitable habitat, FWC staff recommends the applicant refer to the 2018 Species Conservation Measures and Permitting Guidelines for the Black Creek Crayfish (https://myfwc.com/media/11560/black-creek-crayfish-guidelines.pdf).



Kristen Reed Page 4 January 21, 2021

#### Florida Black Bear

The FWC has received 31 reports of human-bear conflicts within a 5-mile radius of the project site since 2002. Florida black bears are common in this area which is within the North Bear Management Unit identified in the 2019 Bear Management Plan. While black bears tend to shy away from people, they are adaptable and will take advantage of human-provided food sources. This includes sources that are currently available near this site, sources that may be available during construction, and sources available after construction, including unsecured garbage, pet food, and bird seed. Once bears become accustomed to finding food around people, their natural wariness is reduced to the point that there can be an increased risk to public safety or private property.

Proactive planning may help prevent or reduce future conflicts with bears. Site designs for larger developments should locate conservation areas along the borders of developed areas to avoid encouraging bears to forage within developed areas (<a href="http://mvfwe.com/wildlifehabitats/managed/bear/crossings/">http://mvfwe.com/wildlifehabitats/managed/bear/crossings/</a>). If a homeowners' association or community covenants are planned, by-laws that would require residents to take measures to prevent attracting bears into the neighborhood are recommended. Sample by-law language used by other Florida communities is available at (<a href="http://myfwe.com/wildlifehabitats/managed/bear/living/community-group/bylaw/">http://myfwe.com/wildlifehabitats/managed/bear/living/community-group/bylaw/</a>).

During construction, construction sites should be kept clean, with refuse that might attract bears kept separate from construction debris and stored securely in bear-resistant containers or removed daily from the construction site before dark. Refuse that might attract bears includes all food and drink-related materials, as well as any items with strong scents like cleaning agents. Once the development is completed, residents should be provided with bear-resistant garbage cans as part of their regular waste service, and any larger waste storage containers should also be bear-resistant. Providing residents with information on how to avoid human-bear conflicts is also recommended. This information can include:

- Options for keeping garbage secure can include using bear-resistant garbage
  containers, modifying regular containers to be bear-resistant, or keeping
  containers secure in a garage or sturdy shed and then placing garbage on the curb
  the morning of pick-up rather than the night before
  (http://mytwc.com/wildlifehabitats/managed/bear/living/attractants/);
- Removing bird and wildlife feeders, or modifying them to exclude bears (http://myfwc.com/wildlifehabitats/managed/bear/wildlife-feeders/);
- Using electric fencing to secure outdoor attractants like fruiting trees/shrubs, gardens, compost, and small livestock
   (https://myfwc.com/media/1886/electricfence.pdf);
- Proper composting in bear range (https://myfwc.com/media/1888/howtocompostinbearcountry.pdf);
- Keeping pets safe (<a href="https://myfwc.com/wildlifehabitats/wildlife/bear/living/protect-pets/">https://myfwc.com/wildlifehabitats/wildlife/bear/living/protect-pets/</a>); and
- Cleaning and securing barbeque grills.



Kristen Reed Page 5 January 21, 2021

> Information should also include guidelines for how residents should respond to bears in the area, such as

- What to do if they encounter a bear, whether from a distance or at close range,
- How to keep pets and livestock safe in bear range, and
- When and how to contact the FWC regarding a bear issue.

FWC staff is available to assist with residential planning to incorporate the above features. Additional information about Florida black bears can be found on FWC's website at http://www.myfwc.com/wildlifehabitats/managed/bear.

#### Conceptual Master Plan

Based on discussions with the City of Jacksonville staff, the applicant will be required by the Comprehensive Plan to produce a conceptual master plan prior to the start of development. FWC staff provide technical assistance during development of master plans throughout Florida to avoid, minimize, or mitigate for any potential impacts to federally or state-listed species. Early coordination can also reduce the need for listed species permitting. To initiate coordination with FWC regarding the conceptual master plan, the applicant may submit a request to ConservationPlanningServices@MyFWC.com.

#### Lakes and Ponds

Based on the type of development proposed within the application, the applicant will likely create or modify several lakes and ponds for stormwater management, to support conservation lands, or for resident use. The creation of these waterbodies could provide potential wildlife habitat as well as a recreational area for fishing and wildlife viewing. Ponds can be managed for both fish production and wildlife habitat, including wading birds and waterfowl. Pond construction at a 3:1 slope to two (2) feet below normal water levels and with the slope seeded and mulched to minimize erosion is ideal for wildlife use. The addition of native wetland plants along this gradual slope could provide a vegetated littoral fringe which could increase the habitat value of the site and possibly provide foraging or nesting areas for several wading bird species. Littoral fringe habitat may also provide spawning habitat for fish which would enhance future recreational fishing opportunities for the community. FWC staff recommend a commitment to longterm maintenance and development of a plan for managing exotic invasive plant species that can significantly degrade habitat values and impact ponds, wetlands and nearby natural areas. The Florida Wildlife Conservation Guide provides more information on this topic with suggested guidelines for construction and management of stormwater ponds (http://myfwc.com/conservation/vou-conserve/recreation/pond-management/).

#### Federal Species

This site may also contain habitat suitable for the federally listed species identified above. FWC staff recommends that the applicant coordinates with the USFWS North Florida Ecological Services Office (ESO) as necessary for information regarding potential impacts to these species. The USFWS North Florida ESO can be contacted at (904) 731-3336 for additional information.



Kristen Reed Page 6 January 21, 2021

> FWC staff appreciates the opportunity to review these projects and will continue to be available to assist throughout the permitting process. For specific technical questions regarding the content of this letter, please contact Sean Greene at (386) 406-0814 or by email at Sean.Greene@MyFWC.com. All other inquiries may be directed to ConservationPlanningServices@MyFWC.com.

Sincerely,

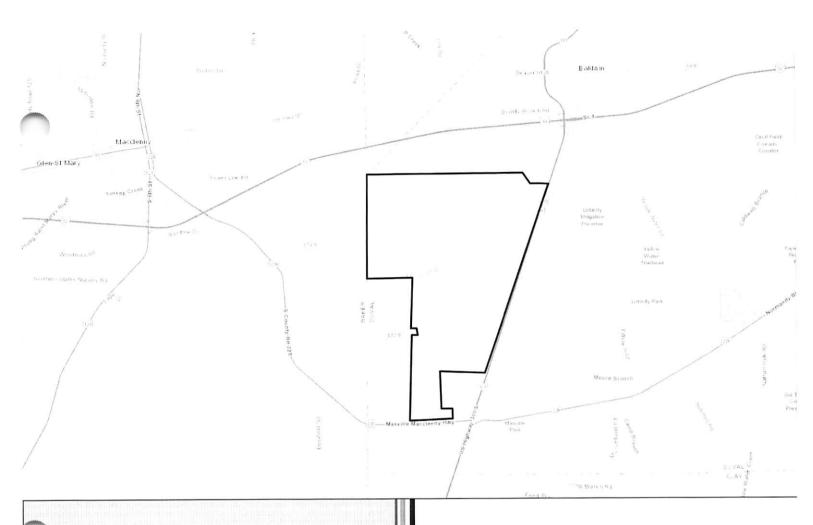
Jason Hight

Land Use Planning Program Administrator Office of Conservation Planning Services

jh/spg Duval-Jacksonville 20-16ESR\_43085\_01212021

Ray Eubanks, Florida Department of Economic Opportunity, cc: DCPexternalagencycomments@deo.myflorida.com





# **Prepared for:**

301 Capital Partners

&



Prepared by:

CTSi\$

Chindalur Traffic Solutions, Inc. 8833 Perimeter Park Boulevard, Suite 103 Jacksonville, FL 32216 904.619.3368 **301 Villages** 

Traffic Impact Assessment

**Duval County, Florida** 

Project No.: 1138-210-039

Date: 09/02/2021

1		
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#### Introduction:

A mixed-use development anticipated to include 11,250 single-family dwelling units, 3,750 multi-Family dwelling units, 750,000 SF commercial/retail, 340 rooms hotel, 300,000 SF light industrial, 300,000 SF office and 375,000 SF hospital/medical office uses is proposed for construction. The project will be built in three (3) phases. The proposed development will be located on the southwest quadrant of I-10 and US 301 interchange. Access to the proposed development will be provided via several driveways and roadways on US 301. **Figure 01** shows the location of the proposed development. A copy of the conceptual site plan provided by Prosser, Inc. is included as **Attachment A**.

The proposed development is seeking Concept Site Plan approved by the City of Jacksonville (COJ). A traffic study determining the project impacts on the roadway segments in the vicinity of the proposed development is required to be submitted to COJ for approvals. This traffic study is consistent with the methodology that was submitted to COJ and Florida Department of Transportation (FDOT) on 07/16/2021. A copy of the methodology is included as **Attachment B.** 

#### **Project Development Plan:**

The proposed development is planned for construction in three (3) phases. **Table 02** shows a summary of the project phasing schedule.

Phase 01 development (2022 – 2026) is anticipated to include the following:

- 150,000 SF of General Light Industrial
- 2,500 Single-family Dwelling Units
- 1,000 Multi-family Dwelling Units
- 150,000 SF Commercial/Retail
- 100,000 SF Office
- 120 Rooms Hotel
- 50.000 SF Medical Office

Phase 02 (2027 – 2031) development is anticipated to include the following:

- 150,000 SF of General Light Industrial
- 5,750 Single-family Dwelling Units
- 1,200 Multi-family Dwelling Units
- 325,000 SF Commercial/Retail
- 100.000 SF Office
- 220 Rooms Hotel
- 150,000 SF Hospital/Medical Office

Phase 03 (2032 – 2037) development is anticipated to include the following:

- 3,000 Single-family Dwelling Units
- 1,550 Multi-family Dwelling Units
- 275,000 SF Commercial/Retail
- 100,000 SF Office
- 175,000 SF Medical Office

#### **Study Area and Existing Conditions:**

As discussed at the methodology meeting and included in the document, the study includes the following roadway segments.

- US 301 South of Normandy Boulevard
- US 301 Normandy Boulevard to I-10
- US 301 I-10 to Beaver Street
- Normandy Boulevard US 301 to CR 217
- Normandy Boulevard CR 217 to Yellow Water Road
- Normandy Boulevard Yellow Water Road to POW-MIA Memorial Parkway
- I-10 West of Baker County Line
- I-10 Baker County Line to Duval County Line
- I-10 Duval County Line to US 301
- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard
- I-10 Hammond Boulevard to I-295

The existing conditions details of the above stated study segments were obtained from the FDOT Traffic Counts Online Portal and FDOT D2 LOS Manual. **Table 02** summarizes the existing conditions for the above stated roadway segments. The FDOT D2 LOS Manual provides the roadway segments adopted LOS Standard and the peak hour Maximum Service Volumes (MSVs). The corresponding Daily MSVs were obtained from the FDOT Q-LOS Generalized Standard Volumes Tables. **Attachment C** includes copies of the traffic counts data obtained from the FDOT Traffic Counts Online Portal, FDOT D2 LOS Manual and the FDOT Q-LOS Generalized Standard Volumes Tables.

#### **Trip Generation:**

Daily, AM peak and PM peak trip generation for the proposed development under each of the development phases was estimated using the rates and equations included in the Trip Generation Manual 10<sup>th</sup> Edition, published by the Institute of Transportation Engineers.

Due to the mixed-use nature of the proposed development, internal capture trips were estimated

using the internal capture rates included in the Trip Generation Manual. Internal capture trips were estimated using the NCHRP Report 684 Internal Capture Estimator for mixed-use developments. Pass-by trips for the commercial development was estimated using the pass-by rates included in the Trip Generation Manual. ITE does not provide daily pass-by trip rates. Hence, the average rate of Mid-Day and PM peak pass-by trip rate was used to determine the daily pass-by trips.

**Tables 03, 04 and 05** summarizes the Daily, AM Peak and PM Peak trip generation, internal capture and pass-by trips for each of the three (3) project development phases. **Attachment D** includes NCHRP 684 Internal Capture Worksheets.

## **Future Background Traffic Volumes:**

The year 2026, 2031 and 2037 background conditions AADT were estimated using the year 2025, 2030, 2035 and 2040 AADT projections included in the FDOT D2 LOS Manual. **Table 06** summarizes the year 2026, 2031 and 2037 background conditions AADT and LOS on each of the study area roadway segments. Previously stated **Attachment C** includes the FDOT D2 LOS summary for each of the study area roadway segments.

## **Project Traffic Distribution and Assignment:**

Project traffic distribution for the proposed development under each of the three (3) phases was determined by running the interim year 2025, year 2030 and year 2035 model sets of the NERPM\_AB travel demand model developed as part of the Year 2045 Long Range Transportation Plan by the North Florida Transportation Planning Organization (NFTPO).

Each of the interim year model sets was verified to ensure the Trails Mixed Use development (on the southside of Normandy Boulevard and east of US 301) was included. Additionally, the proposed 301 Villages development under each of the development phases was included to the travel demand model. **Attachment E** includes the socio-economic variables data that were verified and included in each of the interim year 2025, year 2030 and year 2035 travel demand model sets.

Table 07 summarizes the project traffic distribution and daily traffic assignment on each of the study roadway segments under each of the three (3) project development phases. Attachment F includes copies of the travel demand model plots showing project traffic distribution each of the project development phases. The project traffic distribution for each of the development phases was multiplied by the daily net external trips for each of the project development phases estimated in previously stated Tables 03, 04 and 05 respectively. Figures 02, 03 and 04 summarize the project traffic distribution and daily traffic assignment on each of the study roadway segments.

#### **Build-Out Conditions Roadway Segment Analysis:**

Build-out conditions Roadway Segment Analysis includes the future year background traffic volumes and project traffic assignment on each of the study roadway segments under each of the three (3) development phases.

**Table 08** summarizes the year 2026 Phase 01 development conditions roadway segments analysis. As summarized in this table, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of I-10 between US 301 to SR 23 (First Coast Expressway).

**Table 09** summarizes the year 2031 Phase 02 development conditions roadway segments analysis. As summarized in this table, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of the following roadway segments:

- US 301 301 Villages Project Entrances to I-10
- I-10 West of Baker County Line
- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295
- I-10 Hammond Boulevard/Greenland Avenue to I-295

**Table 10** summarizes the year 2037 Phase 03 development conditions roadway segments analysis. As summarized in this table, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of the following roadway segments:

- US 301 301 Villages Project Entrances to I-10
- I-10 West of Baker County Line
- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295
- I-10 Hammond Boulevard/Greenland Avenue to I-295

Please note that FDOT's Long Range Cost Feasible Plan (FY 2029 -2045) includes widening of I-10 between CR 125 and I-295 between the year 2040 and 2045. **Attachment G** includes a copy of the FDOT D2 Long Range Cost Feasible Plan FY – 2029 – 2045.

Please note that the development quantities used in this analysis is under the maximum development density worst-case scenario and the proposed development density may not be possible.

**Table 11** shows potential mobility fee calculations for the proposed development. These fees could be potentially used to provide some of the impacted roadway segments.

#### **Operational Analysis:**

A detailed operational analysis at all the project access intersections on US 301 will be submitted to both FDOT and COJ at the time of 10-set review submittals.

## **Summary and Conclusions:**

A mixed-use development anticipated to include 11,250 single-family dwelling units, 3,750 multi-Family dwelling units, 750,000 SF commercial/retail, 340 rooms hotel, 300,000 SF light industrial, 300,000 SF office and 375,000 SF hospital/medical office uses is proposed for construction. The project will be built in three (3) phases. The proposed development will be located on the southwest quadrant of I-10 and US 301 interchange. Access to the proposed development will be provided via several driveways and roadways on US 301.

The proposed development is seeking Concept Site Plan approved by the City of Jacksonville (COJ). A traffic study determining the project impacts on the roadway segments in the vicinity of the proposed development is required to be submitted to COJ for approvals.

The existing conditions details of the above stated study segments were obtained from the FDOT Traffic Counts Online Portal and FDOT D2 LOS Manual. The FDOT D2 LOS Manual provides the roadway segments adopted LOS Standard and the peak hour Maximum Service Volumes (MSVs). The corresponding Daily MSVs were obtained from the FDOT Q-LOS Generalized Standard Volumes Tables.

Daily, AM peak and PM peak trip generation, internal capture and pass-by trips for the proposed development under each of the development phases was estimated using the rates and equations included in the Trip Generation Manual 10<sup>th</sup> Edition, published by the Institute of Transportation Engineers.

The year 2026, 2031 and 2037 background conditions AADT were estimated using the year 2025, 2030, 2035 and 2040 AADT projections included in the FDOT D2 LOS Manual.

Project traffic distribution for the proposed development under each of the three (3) phases was determined by running the interim year 2025, year 2030 and year 2035 model sets of the NERPM\_AB travel demand model developed as part of the Year 2045 Long Range Transportation Plan by the North Florida Transportation Planning Organization (NFTPO).

Build-out conditions Roadway Segment Analysis includes the future year background traffic volumes and project traffic assignment on each of the study roadway segments under each of the three (3) development phases.

Under the year 2026 Phase 01 development conditions, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of I-10 between US 301 to SR 23 (First Coast Expressway).

Under the year 2031 Phase 02 development conditions, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of the following roadway segments:

- US 301 301 Villages Project Entrances to I-10
- I-10 West of Baker County Line
- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295
- I-10 Hammond Boulevard/Greenland Avenue to I-295

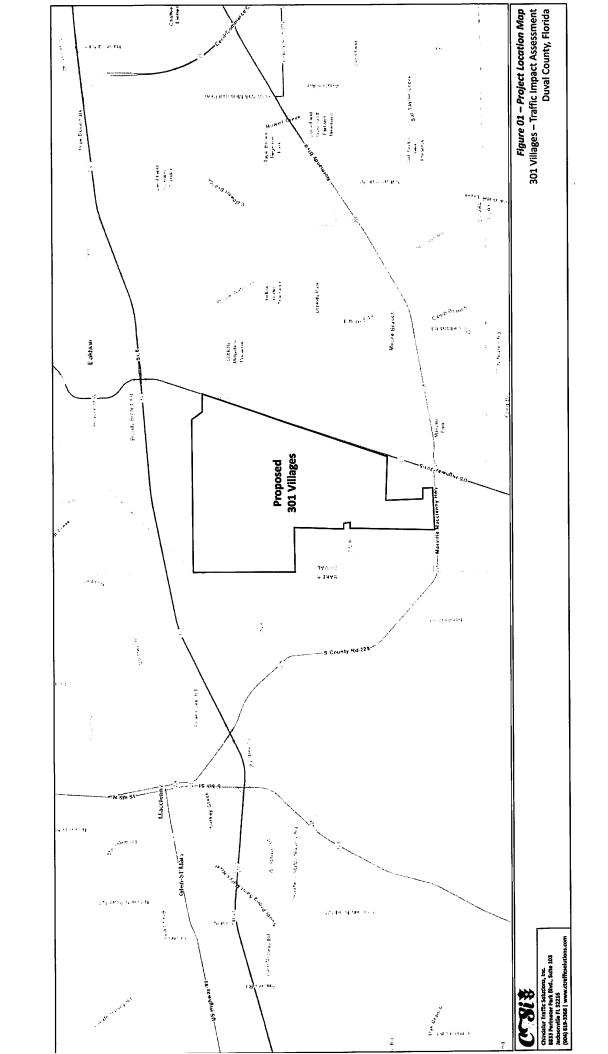
Under the year 2037 Phase 03 development conditions, all of the study roadway segments are anticipated to operate under the adopted level of service with the exception of the following roadway segments:

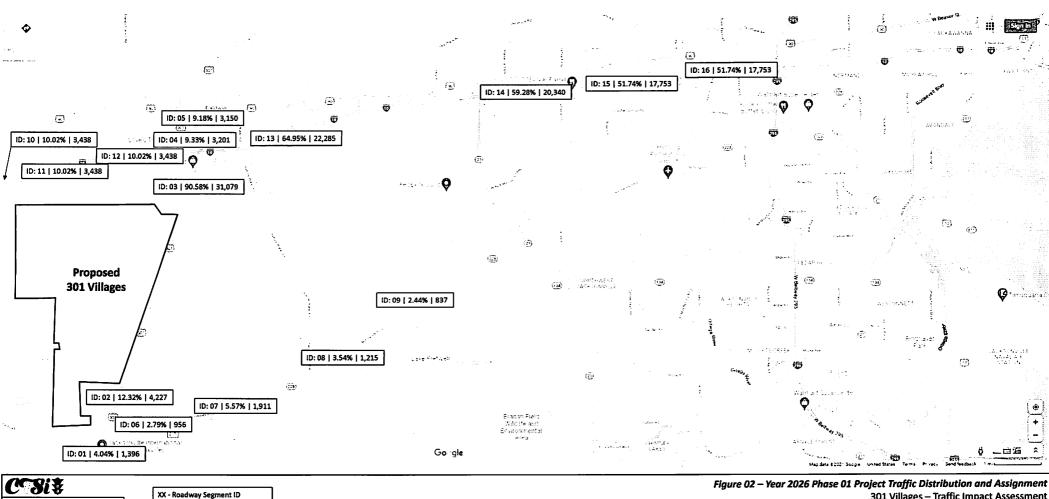
- US 301 301 Villages Project Entrances to I-10
- I-10 West of Baker County Line
- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295
- I-10 Hammond Boulevard/Greenland Avenue to I-295

Please note that FDOT's Long Range Cost Feasible Plan (FY 2029 -2045) includes widening of I-10 between CR 125 and I-295 between the year 2040 and 2045.

Please note that the development quantities used in this analysis is under the maximum development density worst-case scenario and the proposed development density may not be possible.

A detailed operational analysis at all the project access intersections on US 301 will be submitted to both FDOT and COJ at the time of 10-set review submittals.

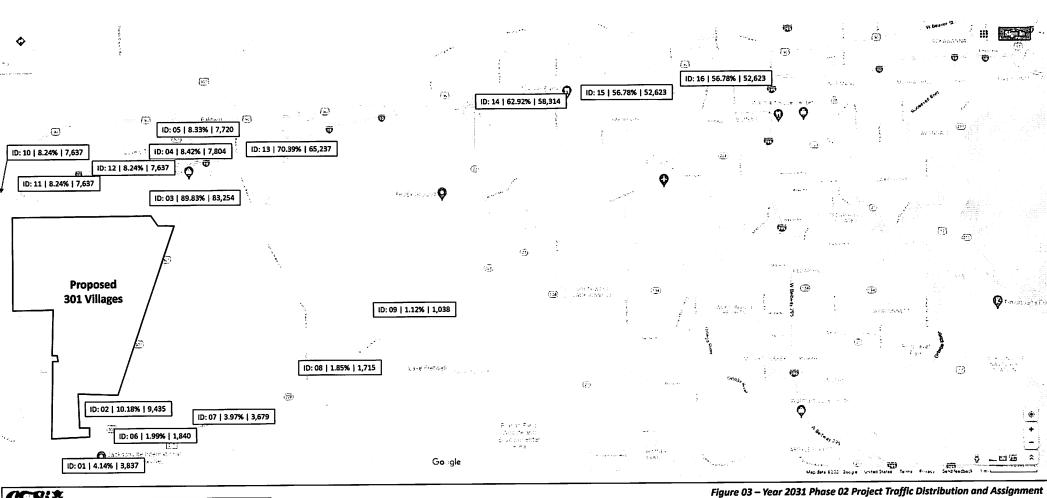




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XX% - Project Traffic Distribution XXXX - Project Traffic Assignment

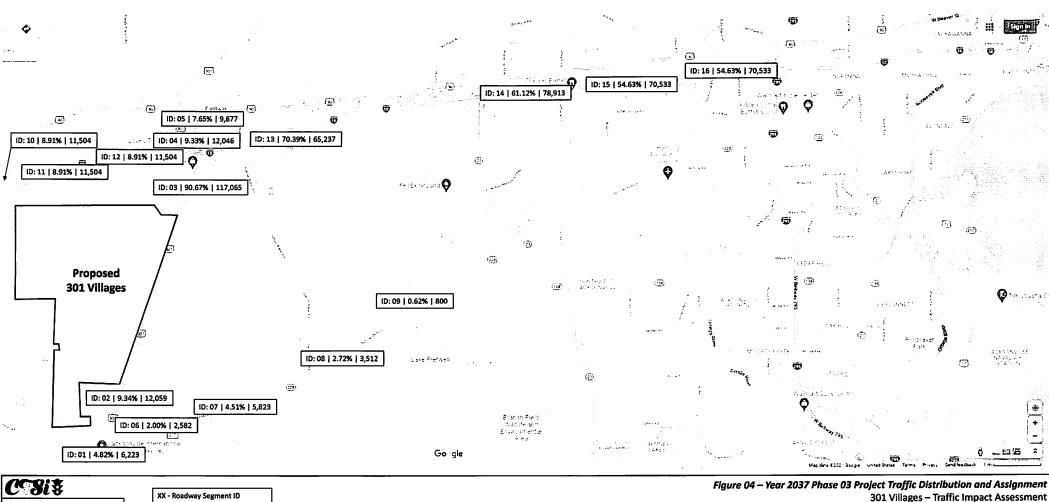
301 Villages - Traffic Impact Assessment **Duval County, Florida** 



CSi\$

Chindalur Traffic Solutions, Inc. 8333 Perimeter Park Blvd., Suite 103 Jacksonville Fl. 32216 (904) 619-3368 | www.ctrafficsolutions.com XX - Roadway Segment ID
XX% - Project Traffic Distribution
XXXX - Project Traffic Assignment

Figure 03 – Year 2031 Phase 02 Project Traffic Distribution and Assignment 301 Villages – Traffic Impact Assessment Duval County, Florida



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XX% - Project Traffic Distribution XXXX - Project Traffic Assignment 301 Villages – Traffic Impact Assessment **Duval County, Florida** 

Table 01
Project Phasing Schedule
301 Villages - Traffic Impact Assessment, Duval County, FL

		Phase 01	Phase 2	Phase 3	
Land Use	Units	2022-2026	2027-2031	2032-2037	Total
Single Family Residential	Dwelling Units	2,500	5,750	3,000	11,250
Multi-family Residential	Dwelling Units	1,000	1,200	1,550	3,750
Commercial	Square Feet	150,000	325,000	275,000	750,000
Hotel	Rooms	120	220	-	340
Light Industrial	Square Feet	150,000	150,000	-	300,000
Office	Square Feet	100,000	100,000	100,000	300,000
Hospital/Medical Office	Square Feet	50,000	150,000	175,000	375,000

Source: Attachment A - Site Plan

Chindalur Traffic Solutions, Inc. 08/15/2021

Table 02 Study Roadway Segments - Existing Conditions and Future Conditions 301 Villages - Traffic Impact Assessment

			Number of	Roadway	Area	FDOT Adopted	Adopted Peak	Adopted	2019	2020	2025	2030	2035	2040
Road ID	Roadway	Termini	Lanes	Classification	Туре	LOS Standard	Hour MSV	Daily MSV	AADT	AADT	AADT	AADT	AADT	AADT
1	US 301	South of Normandy Boulevard	4	Highway	Urban	D	5,960	66,200	19,800	21,500	22,104	24,024	25,945	27,865
2	US 301	Normandy Boulevard to Project Entrance	4	Highway	Urban	D	5,960	66,200	15,100	17,800	17,322	19,174	21,026	22,878
3	US 301	Project Entrance to I-10	4	Highway	Urban	D	5,960	66,200	15,100	17,800	17,322	19,174	21,026	22,878
4	US 301	1-10 to City Limit of Baldwin	4	Arterial	Urban	0	3,580	39,800	7,400	7,900	11,744	12,421	13,098	13,775
5	US 301	City Limit of Baldwin to Beaver Street	4	Arterial	Urban	D	3,580	39,800	8,300	8,200	9,276	10,458	11,639	12,821
6	Normandy Boulevard	US 301 Ramp	2	Highway	Urban	D	2,180	24,200	6,400	5,300	7,027	7,549	8,071	8,593
7	Normandy Boulevard	US 301 Ramp to McClelland Road	2	Highway	Urban	D	2,180	24,200	12,000	11,000	12,519	13,515	14,511	15,507
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	2	Highway	Urban	D	2,180	24,200	13,200	12,400	14,368	15,726	17,083	18,441
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	4	Highway	Urban	١٥	5,960	66,200	13,200	12,400	14,717	16,078	17,439	18,800
10	1-10	West of Baker County Line	4	Freeway	Rural	c	5,040	48,000	38,000	35,000	40,189	42,085	43,980	45,876
11	I-10	Baker County Line to Duval County Line	4	Freeway	Transitioning	c	5,780	59,000	38,000	35,000	40,280	42,180	44,080	45,980
12	1-10	Duval County Line to US 301	4	Freeway	Transitioning	c	5,780	59,000	38,000	35,000	40,280	42,180	44,080	45,980
13	1-10	US 301 to SR 23 (First Coast Expressway)	4	Freeway	Urban	D	6,800	83,200	56,000	52,500	60,378	64,148	67,918	71,689
14	I-10	SR 23 (First Coast Expressway) to Chaffee Road	6	Freeway	Urban	D	10,220	123,600	56,000	52,500	63,695	70,107	76,520	82,932
15	1-10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	6	Freeway	Urban	D	10,220	123,600	82,500	75,500	91,710	100,432	109,154	117,876
16	1-10	Hammond Boulevard/Greenland Avenue to 1-295	6	Freeway	Urban	D	10,220	123,600	102,000	95,500	104,204	105,093	105,982	106,871

Source: FDOT Traffic Counts Online Portal and FDOT D2 LOS Summary Reports (Attachment C)

Table 03

Trip Generation - Phase 01
301 Villages - Traffic Impact Assessment, Duvai County, FL

ITE Land				Time	Rate or	Percen	Traffic	Pr	oject Trips			Interna	Capture		External	Pass-			External To	
Use Code	Description	Quantity	Units	Period	Equation	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Percent	Trips	Percentage	Trips	Total	Entering	Exiting
															-					
110	General Light Industrial	150,000	SF	Daily	T = 3.79(X) + 57.96	50%	50%	626	313	313	-	•	-	0.00%	626	0%	•	626	313	313
210	Single Family Home Detatched	2,500	Dwelling Units	Daily	Ln(T) = 0.92 Ln(X) + 2.71	50%	50%	20,093	10,047	10,046	827	414	413	4.12%	19,266	0%	•	19,266	9,633	9,633
220	Multi-Family Residential (Townhomes)	1,000	<b>Dwelling Units</b>	Daily	T = 7.56(X) - 40.86	50%	50%	7,519	3,760	3,759	309	155	154	4.11%	7,210	0%	•	7,210	3,605	3,605
820	Commercial/Retail	150,000	SF	Daily	Ln(T) = 0.68 Ln(X) + 5.57	50%	50%	7,921	3,961	1,981	1,866	933	933	23.56%	6,055	30%	1,817	4,238	2,119	2,119
710	General Office	100,000	SF	Daily	T = 9.74 (X)	50%	50%	974	487	244	175	88	87	17.93%	799	0%	•	799		399
310	Hotel	120	Rooms	Daily	T = 11.29(X) - 426.97	50%	50%	928	464	232	185	93	92	19.90%	743	0%	•	743	372	371
720	Medical Office Building	50,000	SF	Daily	T = 38.42(X) - 87.62	50%	50%	1,833	917	459	404	202	202	22.06%	1,429	0%		1,429	715	714
	Total							39,894	19,949	17,034	3,766	1,885	1,881	9.44%	36,128		1,817	34,311	17,157	17,154
110	General Light Industrial	150,000	SF	AM Peak	Ln(T) = 0.74 Ln(X) + 0.39	88%	12%	60	53	7	-	-	-	0.00%	60	0%	-	60		
210	Single Family Home Detatched	2,500	<b>Dwelling Units</b>	AM Peak	T = 0.71(X) + 4.80	25%	75%	1,780	445	1,335	27	9	18	1.54%	1,753	0%		1,753	438	1,315
220	Multi-Family Residential (Townhomes)	1,000	<b>Dwelling Units</b>	AM Peak	Ln(T) = 0.95 Ln(X) - 0.51	23%	77%	425	98	327	7	2	5	1.53%	418	0%	•	418	96	322
820	Commercial/Retail	150,000	SF	AM Peak	T = 0.50(X) + 151.78	62%	38%	227	141	86	51	32	19	22.47%	176	26%	46	130	81	49
710	General Office	100,000	SF	AM Peak	T = 1.16 (X)	86%	14%	116	100	16	15	10	4	12.74%	101	0%		101	87	14
310	Hotel	120	Rooms	AM Peak	T = 0.50(X) - 5.34	59%	41%	55	32	23	9	-	9	16.36%	46	0%	•	46	27	19
720	Medical Office Building	50,000	SF	AM Peak	Ln(T) = 0.89 Ln(X) + 1.31	78%	22%	121	94	27	17	10	8	14.24%	104	0%	<u> </u>	104	81	23
	Total					Ĭ		2,784	963	1,821	126	63	63	4.53%	2,658	<u> </u>	46	2,612	863	1,749
110	General Light Industrial	150,000	SF	PM Peak	Ln(T) = 0.69 Ln(X) + 0.43		87%	49	6	43	-	•	-	0.00%	49	0%		49		43
210	Single Family Home Detatched	2,500	Dwelling Units	PM Peak	Ln(T) = 0.96 Ln(X) + 0.20	63%	37%	2,233	1,407	826	149	85	64	6.69%	2,084	0%		2,084		771
220	Multi-Family Residential (Townhomes)	1,000	Dwelling Units	PM Peak	Ln(T) = 0.89 Ln(X) - 0.02	63%	37%	458	289	169	31	18	13	6.69%	427	0%	l :	427	269	158
820	Commercial/Retail	150,000	SF	PM Peak	Ln(T) = 0.74 Ln(X) + 2.89	48%	52%	734	352	382	181	68	113	24.66%	553	34%	188	365		190
710	General Office	100,000	SF	PM Peak	T = 1.15 (X)	16%	84%	115	18	97	27	13	14	23.12%	88	0%		88		74
310	Hotel	120	Rooms	PM Peak	T = 0.75(X) - 26.02	51%	49%	64	33	31	15	10	5	23.44%	49	0%		49	25	24
720	Medical Office Building	50,000	SF	PM Peak	T = 3.39(X) + 2.02	28%	72%	172	48	124	51	33	18	29.89%	121	0%	<u> </u>	121	34	87
	Total							3,825	2,153	1,672	454	227	227	11.87%	3,371	1	188	3,183	1,836	1,347

Mid-Day Peak Pass-by for Commercial PM Peak Pass-by for Commercial Daily Pass-by for Commercial Source: Trip Generation Manual, 10th Edition, ITE Internal Capture Calculations - Attachment C 26% 34% 30%

Table 04
Trip Generation - Phase 02 (Cumulative)
301 Villages - Traffic Impact Assessment, Duval County, FL

ITE Land				Time	Rate or	Percen	t Traffic	P	roject Trips				Capture		External	Pass-			t External Tr	
Use Code	Description	Quantity	Units	Period	Equation	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Percent	Trips	Percentage	Trips	Total	Entering	Exiting
110	General Light Industrial	300,000	SF	Daily	T = 3.79(X) + 57.96	50%	50%	1,195	598	597	•	•	-	0.00%	1,195	0%	·	1,195	598	597
210	Single Family Home Detatched	8,250	Dwelling Units	Daily	Ln(T) = 0.92 Ln(X) + 2.71	50%	50%	60,266	30,133	30,133	1,965	983	982	3.26%	58,301	0%	· •	58,301	29,151	29,150
220	Multi-Family Residential (Townhomes)	2,200	Dwelling Units	Daily	T = 7.56(X) - 40.86	50%	50%	16,591	8,296	8,295	541	271	270	3.26%	16,050	0%	- 1	16,050	8,025	8,025
820	Commercial/Retail	475,000	SF	Daily	Ln(T) = 0.68 Ln(X) + 5.57	50%	50%	17,345	8,673	4,337	5,056	2,528	2,528	29.15%	12,289	30%	3,687	8,602	4,301	4,301
710	General Office	200,000	SF	Daily	T = 9.74 (X)	50%	50%	1,948	974	487	360	180	180	18.48%	1,588	0%	· 1	1,588	794	794
310	Hotel	340	Rooms	Daily	T = 11.29(X) - 426.97	50%	50%	3,412	1,706	853	628	314	314	18.41%	2,784	0%	·	2,784	1,392	1,392
720	Medical Office Building	50,000	SF	Daily	T = 38.42(X) - 87.62	50%	50%	1,833	917	459	410	205	205	22.35%	1,423	0%		1,423	712	711
610	Hospital	150,000	SF	Daily	T = 5.88(X) + 2723.70	50%	50%	3,616	1,808	904	880	440	440	24.34%	2,736	0%		2,736	1,368	1,368
	Total							106,206	53,105	46,065	9,840	4,921	4,919	9.27%	96,386		3,687	92,679	46,341	46,338
		i e																		
110	General Light Industrial	300,000	SF	AM Peak	Ln(T) = 0.74 Ln(X) + 0.39	88%	12%	101	89	12		-	-	0.00%	101	0%		101	89	12
210	Single Family Home Detatched	8,250	Dwelling Units	AM Peak	T = 0.71(X) + 4.80	25%	75%	5,862	1,466	4,396	66	18	48	1.12%	5,796	0%		5,796	1,449	4,347
220	Multi-Family Residential (Townhomes)	2,200	Dwelling Units	AM Peak	Ln(T) = 0.95 Ln(X) - 0.51	23%	77%	899	207	692	10	3	7	1.12%	889	0%	•	889	204	685
820	Commercial/Retail	475,000	SF	AM Peak	T = 0.50(X) + 151.78	62%	38%	389	241	148	128	89	39	32.90%	261	26%	68	193	120	73
710	General Office	200,000	SF	AM Peak	T = 1.16 (X)	86%	14%	232	200	32	29	20	9	12.60%	203	0%	· •	203	174	29
310	Hotel	340	Rooms	AM Peak	T = 0.50(X) - 5.34	59%	41%	165	97	68	24	-	24	14.55%	141	0%		141	83	58
720	Medical Office Building	50,000	SF	AM Peak	Ln(T) = 0.89 Ln(X) + 1.31	78%	22%	121	94	27	17	10	8	14.13%	104	0%	·	104	81	23
610	Hospital	150,000	SF	AM Peak	T = 0.74(X) + 126.36	68%	32%	237	161	76	38	16	21	15.89%	199	0%		199	136	63
	Total							8,006	2,555	5,451	312	156	156	3.90%	7,694		68	7,626	2,335	5,290
110	General Light Industrial	300,000	SF	PM Peak	Ln(T) = 0.69 Ln(X) + 0.43	13%	87%	79	10	69		•	-	0.00%	79	0%	- 1	79	10	69
210	Single Family Home Detatched	8,250	Dwelling Units	PM Peak	Ln(T) = 0.96 Ln(X) + 0.20	63%	37%	7,025	4,426	2,599	379	214	165	5.40%	6,646	0%	- 1	6,646	4,187	2,459
220	Multi-Family Residential (Townhomes)	2,200	Owelling Units	PM Peak	Ln(T) = 0.89 Ln(X) - 0.02	63%	37%	925	583	342	50	28	22	5.40%	875	0%		875	551	324
820	Commercial/Retail	475,000	SF	PM Peak	Ln(T) = 0.74 Ln(X) + 2.89	48%	52%	1,721	826	895	437	166	271	25.39%	1,284	34%	437	847	407	440
710	General Office	200,000	SF	PM Peak	T = 1.15 (X)	16%	84%	230	37	193	56	25	31	24.36%	174	0%	-	174	28	146
310	Hotel	340	Rooms	PM Peak	T = 0.75(X) - 26.02	51%	49%	229	117	112	51	] 34	17	22.27%	178	0%		178	91	87
720	Medical Office Building	50,000	SF	PM Peak	T = 3.39(X) + 2.02	28%	72%	172	48	124	53	33	20	30.56%	119	0%		119	33	86
610	Hospital	150,000	SF	PM Peak	T = 0.84(X) + 100.56	32%	68%	227	73	154	74	50	25	32.78%	153	0%		153	49	104
	Total							10,603	6,120	4,488	1,100	550	550	10.37%	9,508	<u></u>	437	9,071	5,356	3,715

Mid-Day Peak Pass-by for Commercial PM Peak Pass-by for Commercial

Daily Pass-by for Commercial Source: Trip Generation Manual, 10th Edition, ITE Internal Capture Calculations - Attachment C

26% 34% 30%

08/15/2021 Chindalur Traffic Solutions, Inc.

Table 05
Trip Generation - Phase 03 (Cumulative)
301 Villages - Traffic Impact Assessment, Duval County, FL

ITE Land	1			Time	Rate or	Percent	Traffic	P	roject Trips			Internal	Capture		External	Pass-			t External Tri	
Use Code	Description	Quantity	Units	Period	Equation	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting	Percent	Trips	Percentage	Trips	Total	Entering	Exiting
110	General Light Industrial	300,000	SF	Daily	T = 3.79(X) + 57.95	50%	50%	1,195	598	597				0.00%	1,195	0%		1,195	598	597
210	Single Family Home Detatched	11,250	Dwelling Units	Daily	Ln(T) = 0.92 Ln(X) + 2.71	50%	50%	80,168	40,084	40,084	2,703	1,352	1,351	3.37%	77,465	0%	•	77,465	38,733	38,732
220	Multi-Family Residential (Townhomes)	3,750	<b>Dwelling Units</b>	Daily	T = 7.56(X) - 40.86	50%	50%	28,309	14,155	14,154	954	477	477	3.37%	27,355	0%	- 1	27,355	13,678	13,677
820	Commercial/Retail	750,000	SF	Daily	Ln(T) = 0.68 Ln(X) + 5.57	50%	50%	23,663	11,832	5,916	6,950	3,475	3,475	29.37%	16,713	30%	5,014	11,699	5,850	5,849
710	General Office	300,000	SF	Daily	T = 9.74 (X)	50%	50%	2,922	1,461	731	513	257	256	17.56%	2,409	0%	- 1	2,409	1,205	1,204
310	Hotel	340	Rooms	Daily	T = 11.29(X) - 426.97	50%	50%	3,412	1,706	853	708	354	354	20.75%	2,704	0%	-	2,704	1,352	1,352
720	Medical Office Building	100,000	SF	Daily	T = 38.42(X) - 87.62	50%	50%	3,754	1,877	939	804	402	402	21.40%	2,950	0%		2,950	1,475	1,475
610	Hospital	275,000	SF	Daily	T = 5.88(X) + 2723.70	50%	50%	4,351	2,176	1,088	1,017	509	508	23.38%	3,334	0%		3,334	1,667	1,667
	Total							147,774	73,889	64,362	13,649	6,826	6,823	9.24%	134,125	<u> </u>	5,014	129,111	64,558	64,553
																			70	12
110	General Light Industrial	300,000	\$F	AM Peak	Ln(T) = 0.74 Ln(X) + 0.39	88%	12%	101	89	12		•	•	0.00%	101	0%		101	89 1,976	5,927
210	Single Family Home Detatched	11,250	Dwelling Units	AM Peak	T = 0.71(X) + 4.80	25%	75%	7,992	1,998	5,994	89	24	65	1.11%	7,903	0%	. 1	7,903		1,137
220	Multi-Family Residential (Townhomes)	3,750	Dwelling Units	AM Peak	Ln(T) = 0.95 Ln(X) - 0.51	23%	77%	1,492	343	1,149	16	4	12	1.11%	1,476	0%	اء.	1,476	339 160	98
820	Commercial/Retail	750,000	SF	AM Peak	T = 0.50(X) + 151.78	62%	38%	527	327	200	179	123	56	33.97%	348	26%	90	258	262	42
710	General Office	300,000	SF	AM Peak	T = 1.16 (X)	86%	14%	348	299	49	44	30	14	12.56%	304	0%		304	79	55
310	Hotel	340	Rooms	AM Peak	T = 0.50(X) - 5.34	59%	41%	165	97	68	31	•	31	18.79%	134	0%		134	150	42
720	Medical Office Building	100,000	SF	AM Peak	ln(T) = 0.89 ln(X) + 1.31	78%	22%	223	174	49	31	17	14	13.98%	192	0%	-	192	189	89
610	Hospital	275,000	SF	AM Peak	T = 0.74(X) + 126.36	68%	32%	330	224	106	52	22	30	15.79%	278	0%		278	3,244	7,402
	Total							11,178	3,551	7,627	442	221	221	3.95%	10,736		90	10,646	3,244	7,402
											L					T 00/		70	10	69
110	General Light Industrial	300,000	SF	PM Peak	Ln(T) = 0.69 Ln(X) + 0.43	13%	87%	79	10	69	:			0.00%	79	0%	•	79 8,929	5,625	3,304
210	Single Family Home Detatched	11,250	Dwelling Units	PM Peak	Ln(T) = 0.96 Ln(X) + 0.20	63%	37%	9,462	5,961	3,501	533	295	239	5.64%	8,929	0%	•		884	519
220	Multi-Family Residential (Townhomes)	3,750	Dwelling Units	PM Peak	Ln(T) = 0.89 Ln(X) - 0.02	63%	37%	1,487	937	550	84	46	37	5.64%	1,403	0% 34%		1,403 1,199	576	623
820	Commercial/Retail	750,000	SF	PM Peak	Ln(T) = 0.74 Ln(X) + 2.89	48%	52%	2,414	1,159	1,255	598	227	371	24.77%	1,816		617	267	43	224
710	General Office	300,000	SF	PM Peak	T = 1.15 (X)	16%	84%	345	55	290	78	37	41	22.56%	267	0%	•	177	90	87
310	Hotel	340	Rooms	PM Peak	T = 0.75(X) - 26.02	51%	49%	229	117	112	52	34	18	22.71%	177	0%			90 68	175
720	Medical Office Building	100,000	SF	PM Peak	T = 3.39(X) + 2.02	28%	72%	341	95	246	98	63	35	28.83%	243	0%	•	243 229	73	156
610	Hospital	275,000	SF	PM Peak	T = 0.84(X) + 100.56	32%	68%	332	106	226	103	71	32	30.97%	229	1 0%	617	12,526	7.369	5.157
	Total				_			14,689	8,440	6,249	1,546	773	773	10.52%	13,143	<u> </u>	617	12,526	/,389	3,137

Mid-Day Peak Pass-by for Commercial PM Peak Pass-by for Commercial Daily Pass-by for Commercial Source: Trip Generation Manual, 10th Edition, (TE Internal Capture Calculations - Attachment C 26% 34% 30%

08/15/2021

Table 06 Study Roadway Segments - Future Background Traffic Volumes 301 Villages - Traffic Impact Assessment

			Number of	Roadway	Area	FDOT Adopted	Adopted	Year 2026	Year 2026	Year 2031	Year 2031	Year 2037	Year 2037
Road ID	Roadway	Termini	Lanes	Classification	Туре	LOS Standard	Daily MSV	Background AADT	Background LOS	Background AADT	Background LOS	Background AADT	Background LOS
1	US 301	South of Normandy Boulevard	4	Highway	Urban	D	66,200	22,488	В	24,408	8	26,713	В
2	US 301	Normandy Boulevard to Project Entrance	4	Highway	Urban	D	66,200	17,692	В	19,544	8	21,767	В
3	US 301	Project Entrance to I-10	4	Highway	Urban	D	66,200	17,692	В	19,544	В	21,767	В
4	US 301	I-10 to City Limit of Baldwin	4	Arterial	Urban	D	39,800	11,879	С	12,556	С	13,369	С
5	US 301	City Limit of Baldwin to Beaver Street	4	Arterial	Urban	D	39,800	9,512	С	10,694	С	12,112	С
6	Normandy Boulevard	US 301 Ramp	2	Highway	Urban	D	24,200	7,131	В	7,653	В	8,280	В
7	Normandy Boulevard	US 301 Ramp to McClelland Road	2	Highway	Urban	D	24,200	12,718	С	13,714	С	14,909	C
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	2	Highway	Urban	D	24,200	14,640	С	15,997	С	17,626	С
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	4	Highway	Urban	D	66,200	14,989	В	16,350	В	17,983	В
10	l-10	West of Baker County Line	4	Freeway	Rurat	С	48,000	40,568	С	42,464	С	44,738	C
11	1-10	Baker County Line to Duval County Line	4	Freeway	Transitioning	С	59,000		В	42,560	В	44,840	
12	1-10	Duval County Line to US 301	4	Freeway	Transitioning	С	59,000	40,660	В	42,560	8	44,840	8
13	1-10	US 301 to SR 23 (First Coast Expressway)	4	Freeway	Urban	D	83,200	61,132	С	64,902	С	69,426	С
14	1-10	SR 23 (First Coast Expressway) to Chaffee Road	6	Freeway	Urban	D	123,600	64,977	В	71,390	С	79,085	С
15	1-10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	6	Freeway	Urban	D	123,600	93,454	C	102,176	D D	112,643	D
16	1-10	Hammond Boulevard/Greenland Avenue to I-295	6	Freeway	Urban	D	123,600	104,382	D	105,271	D	106,338	D

Year 2026 Traffic Volumes Interpolated from Year 2025 and Year 2030 AADT Year 2031 Traffic Volumes Interpolated from Year 2030 and Year 2035 AADT Year 2037 Traffic Volumes Interpolated from Year 2035 and Year 2040 AADT

Table 07
Study Roadway Segments - Project Traffic Distribution and Daily Traffic Assignment
301 Villages - Traffic Impact Assessment

			A	В	С	34,311	92,679	129,111
			Projec	t Traffic Disti	ibution	Daily	y Project Traffic Assign:	ment
Road ID	Roadway	Termini	2025	2030	2035	Phase 01 Year 2026	Phase 02 Year 2031	Phase 03 Year 2037
	•					A * 34,311	B * 92,679	C * 129,111
1	US 301	South of Normandy Boulevard	4.07%	4.14%	4.82%	1,396	3,837	6,223
2	US 301	Normandy Boulevard to Project Entrance	12.32%	10.18%	9.34%	4,227	9,435	12,059
3	US 301	Project Entrance to I-10	90.58%	89.83%	90.67%	31,079	83,254	117,065
4	US 301	I-10 to City Limit of Baldwin	9.33%	8.42%	9.33%	3,201	7,804	12,046
5	US 301	City Limit of Baldwin to Beaver Street	9.18%	8.33%	7.65%	3,150	7,720	9,877
6	Normandy Boulevard	US 301 Ramp	2.79%	1.99%	2.00%	956	1,840	2,582
7	Normandy Boulevard	US 301 Ramp to McClelland Road	5.57%	3.97%	4.51%	1,911	3,679	5,823
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	3.54%	1.85%	2.72%	1,215	1,715	3,512
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	2.44%	1.12%	0.62%	837	1,038	800
10	I-10	West of Baker County Line	10.02%	8.24%	8.91%	3,438	7,637	11,504
11	I-10	Baker County Line to Duval County Line	10.02%	8.24%	8.91%	3,438	7,637	11,504
12	I-10	Duval County Line to US 301	10.02%	8.24%	8.91%	3,438	7,637	11,504
13	I-10	US 301 to SR 23 (First Coast Expressway)	64.95%	70.39%	69.70%	22,285	65,237	89,990
14	I-10	SR 23 (First Coast Expressway) to Chaffee Road	59.28%	62.92%	61.12%	20,340	58,314	78,913
15	I-10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	51.74%	56.78%	54.63%	17,753	52,623	70,533
16	I-10	Hammond Boulevard/Greenland Avenue to I-295	51.74%	56.78%	54.63%	17,753	52,623	70,533

Source: Attachment F and Tables 03, 04 and 05

Chindalur Traffic Solutions, Inc.

Table 03
Phase 01 Development - Roadway Segment Analysis
301 Villages - Traffic Impact Assessment

	1			ľ				A		В	C	D	
			Number of	Roadway	Area	FDOT Adopted	Adopted	Year 2026	Year 2025	Year 2026 Project	Year 2026 Project	Year 2026 Phase 01	Year 2026 Phase 01
Road ID	Roadway	Termini	Lanes	Classification	Туре	LOS Standard	Daily MSV	Background AADT	Background LOS	Traffic Distribution	Traffic Assignment	Total Traffic AADT	Total Traffic LOS
							Table 02	Table 02		Table 07	B * 34.311	A+C	-
1	US 301	South of Normandy Boulevard	4	Highway	Urban	D	66,200	22,488	В	4.07%	1,396	23,884	В
	US 301	Normandy Boulevard to Project Entrance	4	Highway	Urban	D	66,200	17,692	В	12.32%	4,227	21,919	В
3	US 301	Project Entrance to I-10	4	Highway	Urban	D	66,200	17,692	В ,	90.58%	31,079	48,771	С
4	US 301	I-10 to City Limit of Baldwin	4	Arterial	Urban	D	39,800	11,879	С	9.33%	3,201	15,080	С
5	US 301	City Limit of Baldwin to Beaver Street	4	Arterial	Urban	D	39,800	9,512	С	9.18%	3,150	12,662	C
۱ 6	Normandy Boulevard	US 301 Ramp	2	Highway	Urban	D	24,200	7,131	В	2.79%	956	8,087	В
,	Normandy Boulevard	US 301 Ramp to McClelland Road	2	Highway	Urban	D	24,200	12,718	С	5.57%	1,911	14,629	С
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	2	Highway	Urban	D	24,200	14,640	С	3.54%	1,215	15,855	С
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	4	Highway	Urban	D	66,200	14,989	В	2.44%	837	15,826	В
10	1-10	West of Baker County Line	4	Freeway	Rural	С	48,000	40,568	С	10.02%	3,438	44,006	С
	I-10	Baker County Line to Duval County Line	4	freeway	Transitioning	С	59,000	40,660	В	10.02%	3,438	44,098	8
	I-10	Duval County Line to US 301	4	Freeway	Transitioning	С	59,000	40,660	В	10.02%	3,438	44,098	6
	F10	US 301 to SR 23 (First Coast Expressway)	4	Freeway	Urban	D	83,200	61,132	С	64.95%	22,285	83,417	E
	1-10	SR 23 (First Coast Expressway) to Chaffee Road	6	Freeway	Urban	D	123,600	64,977	В	59.28%	20,340	85,317	С
	1-10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	6	Freeway	Urban	D	123,600	93,454	С	51.74%	17,753	111,207	D
	1-10	Hammond Boulevard/Greenland Avenue to 1-295	6	Freeway	Urban	D	123,600	104,382	D	51.74%	17,753	122,135	D

Source: Tables 02, 06 and 07

08/20/2021

Table 09
Phase 02 Development - Roadway Segment Analysis (Cumulative)
301 Villages - Traffic Impact Assessment

		· · · · · · · · · · · · · · · · · · ·			l			Α		В	С	D	
			Number of	Roadway	Area	FDOT Adopted	Adopted	Year 2031	Year 2031	Year 2031 Project	Year 2031 Project	Year 2031 Phase 02	Year 2031 Phase 02
Road ID	Roadway	Termini	Lanes	Classification	Туре	LOS Standard	Daily MSV	Background AADT	Background LOS	Traffic Distribution	Traffic Assignment	Total Traffic AADT	Total Traffic LOS
							Table 02	Table 02		Table 07	B * 92,679	A+C	
1	US 301	South of Normandy Boulevard	4	Highway	Urban	D	66,200	24,408	В	4.14%	3,837	28,245	
2	US 301	Normandy Boulevard to Project Entrance	4	Highway	Urban	D	66,200	19,544	В	10.18%	9,435	28,979	
3		Project Entrance to I-10	4	Highway	Urban	D	66,200	19,544	В	89.83%	83,254	102,798	
۱ 4	US 301	I-10 to City Limit of Baldwin	4	Arterial	Urban	D	39,800	12,556	С	8.42%	7,804	20,360	
5	US 301	City Limit of Baldwin to Beaver Street	4	Arterial	Urban	D	39,800	10,694	С	8.33%	7,720		1
6	Normandy Boulevard	US 301 Ramp	2	Highway	Urban	D	24,200	7,653	В	1.99%	1,840		
7	Normandy Boulevard	US 301 Ramp to McClelland Road	2	Highway	Urban	D	24,200	13,714	c	3.97%	3,679	17,393	C
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	2	Highway	Urban	D	24,200	15,997	С	1.85%	1,715	17,712	C
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	4	Highway	Urban	D	66,200	16,350	В	1.12%	1,038	17,388	
1 10	I-10	West of Baker County Line	4	Freeway	Rural	С	48,000	42,464	С	8.24%	7,637	50,101	
1 11	H10	Baker County Line to Duval County Line	4	Freeway	Transitioning	С	59,000	42,560	В	8.24%	7,637	50,197	
12	I-10	Duval County Line to US 301	4	Freeway	Transitioning	С	59,000	42,560	В	8.24%	7,637	50,197	
13	1-10	US 301 to SR 23 (First Coast Expressway)	4	Freeway	Urban	0	83,200	64,902	С	70.39%	65,237	130,139	F
14	I-10	5R 23 (First Coast Expressway) to Chaffee Road	6	Freeway	Urban	D	123,600	71,390	С	62.92%	58,314	129,704	
15	1-10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	6	Freeway	Urban	D	123,600	102,176	D	56.78%	52,623	154,799	
16	1-10	Hammond Boulevard/Greenland Avenue to I-295	6	Freeway	Urban	D	123,600	105,271	D	56.78%	52,623	157,894	F

Source: Tables 02, 06 and 07

Chindalur Traffic Solutions, Inc.

Table 10
Phase 03 Development - Roadway Segment Analysis (Cumulative)
301 Villages - Traffic Impact Assessment

		1						A		8	C	0	
		<u> </u>	Number of	Roadway	Area	FDOT Adopted	Adopted	Year 2037	Year 2037	Year 2037 Project	Year 2031 Project	Year 2031 Phase 02	Year 2031 Phase 02
Road ID	Roadway	Termini	Lanes	Classification	Туре	LOS Standard	Daily MSV	Background AADT	Background LOS	Traffic Distribution	Traffic Assignment	Total Traffic AADT	Total Traffic LOS
							Table 02	Table 02		Table 07	B * 129,111	A+C	
1	US 301	South of Normandy Boulevard	4	Highway	Urban	D	66,200	24,408	В	4.82%	6,223	30,631	В
2	US 301	Normandy Boulevard to Project Entrance	4	Highway	Urban	D	66,200	19,544	В	9.34%	12,059	31,603	В
3	US 301	Project Entrance to I-10	4	Highway	Urban	D	66,200	19,544	В	90.67%	117,065	136,609	F
4	US 301	I-10 to City Limit of Baldwin	4	Arterial	Urban	D	39,800	12,556	С	9.33%	12,046	24,602	С
5	US 301	City Limit of Baldwin to Beaver Street	4	Arterial	Urban	D	39,800	10,694	С	7.65%	9,877	20,571	С
6	Normandy Boulevard	US 301 Ramp	2	Highway	Urban	D	24,200	7,653	В	2.00%	2,582	10,235	В
7	Normandy Boulevard	US 301 Ramp to McClelland Road	2	Highway	Urban	D	24,200	13,714	c	4.51%	5,823	19,537	D
8	Normandy Boulevard	McClelland Road to Jax Equestrian Center	2	Highway	Urban	D	24,200	15,997	С	2.72%	3,512	19,509	D
9	Normandy Boulevard	Jax Equestrian Center to POW-MIA Memorial Pkwy	4	Highway	Urban	D	66,200	16,350	В	0.62%	800	17,150	B
10	1-10	West of Baker County Line	4	Freeway	Rural	С	48,000	42,464	С	8.91%	11,504	53,968	D
11	l-10	Baker County Line to Duval County Line	4	Freeway	Transitioning	С	59,000	42,560	В	8.91%	11,504	54,064	С
	<b>⊬10</b>	Duval County Line to US 301	4	Freeway	Transitioning	С	59,000	42,560	В	8.91%	11,504	54,064	c
	<b>⊦10</b>	US 301 to SR 23 (First Coast Expressway)	4	Freeway	Urban	D	83,200	64,902	С	69.70%	89,990	154,892	F
	<b>⊬10</b>	SR 23 (First Coast Expressway) to Chaffee Road	6	Freeway	Urban	D	123,600	71,390	С	61.12%	78,913	150,303	E
	F10	Chaffee Road to Hammond Boulevard/Greenland Avenue/I-295	6	Freeway	Urban	D	123,600	102,176	D	54.63%	70,533	172,709	F
	<b>⊬10</b>	Hammond Boulevard/Greenland Avenue to I-295	6	freeway	Urban	D	123,600	105,271	D	54.63%	70,533	175,804	F

Source: Tables 02, 06 and 07

Chindalur Traffic Solutions, Inc.

Table 11
Preliminary Mobility Fee Calculations
301 Villages - Traffic Impact Assessment

Project Phase	Daily Net External Trip Generation	Mobility Zone	 021 Base Per VMT	Internal VMT Factor	Development Area	VMT Per Development Area	nated Mobility Fees plative (Year 2021 \$)
Phase 01	34,311	6	\$ 79.04	0.61	Rural	7.71	\$ 12,754,803.49
Phase 02 (Cumulative)	92,679	6	\$ 79.04	0.61	Rural	7.71	\$ 34,452,578.84
Phase 03 (Cumulative)	129,111	6	\$ 79.04	0.61	Rural	7.71	\$ 47,995,844.88

A yearly inflaction factor of 3.3% will be applied for future payments

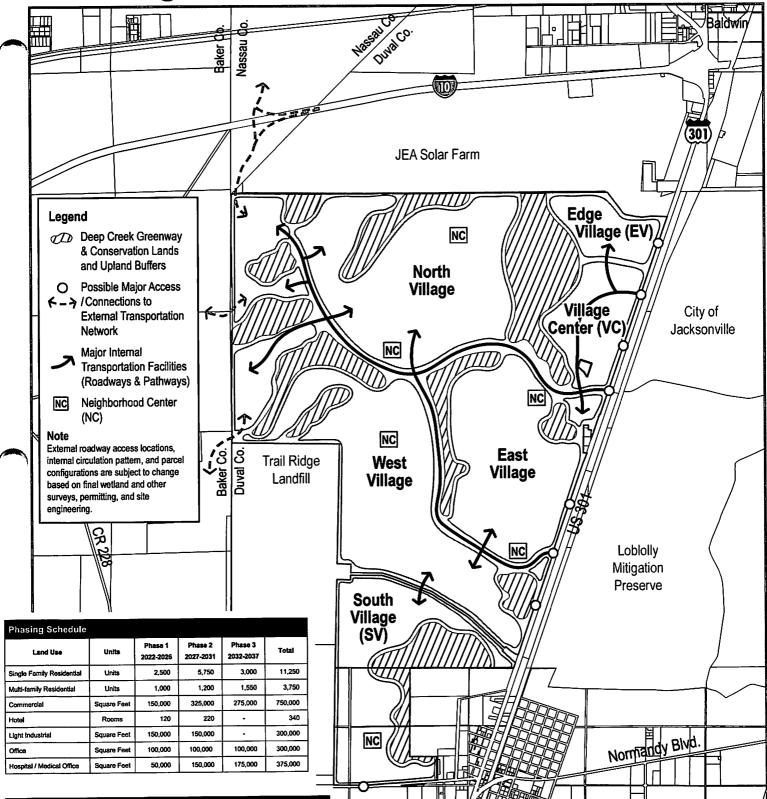
Chindalur Traffic Solutions, Inc. 09/01/2021

# Attachment A

Conceptual Site Plan (Source: Prosser, Inc.)

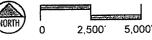
301 Villages

# **Conceptual Master Plan**



1	Permissible	e Develo	oment					
	Land Use	Single Femily (Units)	Multi- family (Units)	Commercial (Sq. Feet)	Office (Sq. Feet)	Flex Industrial (Sq. Fest)	Hotel (Rooms)	Hospital/ Medical (Sq. Feet)
A	Total	11,250	3,750	750,000	300,000	300,000	340	375,000
	Village		•	•		•		
	Village Center	•	•	•	•	•	•	•
	West Village	•	•	•	•	•		
	North Village	•	•	•	•			
	East Village	•	•	•	•		•	
	South Village							1

June 14, 2021





# Attachment B

Study Methodology Document

### **Methodology Memorandum**

301 Villages –Traffic Impact Assessment
Duval County, Florida

### City of Jacksonville

Laurie Santana Chief of Transportation Planning Division LSantana@coj.net

Christopher W. LeDew, P.E. Chief of Traffic Engineering CLedew@coj.net

John Kolczynski E.I. Traffic Technician Senior JohnFK@coj.net

### Florida Department of Transportation

Tom Cavin, P.E.
Jacksonville Studies Engineer/Access Management
Tom.cavin@dot.state.fl.us

Julian McKinley P.E.

Maintenance Program Engineer/D2 Jax Maintenance
Julian.McKinley@dot.state.fl.us

A mixed-use development anticipated to include 11,250 single-family dwelling units, 3,750 multi-Family dwelling units, 750,000 SF commercial/retail, 340 rooms hotel, 300,000 SF light industrial, 300,000 SF office and 375,000 SF hospital/medical office uses is proposed for construction. The project will be built in 3 phases. The proposed development will be located on the southwest quadrant of I-10 and US 301 interchange.

A site location and conceptual master plan (Provided by Prosser, Inc.) is attached. The City of Jacksonville (COJ) Planning Department is requiring a traffic impact memo summarizing an assessment of the currently identified and expected roadway operating conditions of the immediately surrounding transportation network. This memo provides a summary of the methodology that will be adopted in performing the traffic impact assessment.

### Trip Generation:

Trip generation and internal capture for the proposed development will be estimated using the rates, equations and procedures included in the Trip Generation Manual, 10<sup>th</sup> Edition published by the Institute of Transportation Engineers (ITE).

### Study Area:

The study will include the following roadway segments:

- US 301 South of Normandy Boulevard
- US 301 Normandy Boulevard to I-10
- US 301 I-10 to Beaver Street
- Normandy Boulevard US 301 to CR 217
- Normandy Boulevard CR 217 to Yellow Water Road
- Normandy Boulevard Yellow Water Road to POW-MIA Memorial Parkway
- I-10 West of Baker County Line
- I-10 Baker County Line to Duval County Line
- I-10 Duval County Line to US 301

- I-10 US 301 to SR 23 (First Coast Expressway)
- I-10 SR 23 (First Coast Expressway) to Chaffee Road
- I-10 Chaffee Road to Hammond Boulevard
- I-10 Hammond Boulevard to I-295

### Planned and Programmed Improvements:

The Northeast Florida Transportation Planning Organization (NFTPO) Long Range Transportation Plan (LRTP), Priority Projects List (PPL), Transportation Improvement Program (TIP) and the Florida Department of Transportation (FDOT) Work Program will be reviewed to identify any roadway projects within the vicinity of the study area of the proposed development and incorporated in the analysis.

### **Analysis Time Period:**

Analysis for the proposed development will be performed based on daily traffic volumes under existing year 2021, year 2026 (Phase 01), year 2031 (Phase 02) and year 2036 (Phase 03) development conditions.

#### Data Collection:

Existing traffic AADTs will be obtained from the Florida Traffic Online (FTO) website and COJ Planning Department. Future conditions AADT on the study area roadway segments will be obtained from the FDOT LOS Summary Manual

### **Project Traffic Distribution and Assignment:**

Project traffic distribution for the proposed development will be provided using the Northeast Regional Planning Model Activity-Based (NERPMAB) travel demand model. This distribution will be used to determine the project traffic assignment on the study segments. The travel demand model will be validated to include the following projects:

 The Trails PUD: Mixed use development with approximately 4,850 DU and 230,000 square feet commercial located south of Normandy Boulevard (SR 228) between Maxville-Middleburg Road and Solomon Road

### **Background and Build-Out Traffic Volumes:**

Background traffic volumes will be estimated by applying a growth factor obtained from the NERPMAB travel demand model to the existing traffic volumes. Buildout traffic volumes will include background traffic volumes and project traffic assignment for the proposed development.

#### **Roadway Segment Analysis:**

Segment analysis of the above stated roadway segment will include future background conditions traffic plus the project traffic from the proposed development. Any impacts to the study area roadway segments will be identified and summarized.

### **Access and Study Area Intersection Analysis:**

Project access intersections and study area intersection analysis will be provided during project PUD and 10-set submittal process.

### Methodology Memorandum

301 Villages –Traffic Impact Assessment
Duval County, Florida

### **Traffic Study Report:**

A traffic study report summarizing the above tasks and the study findings will be submitted to FDOT and COJ for review and approval.

Thank you and please let me know if you have any questions.

Sincerely,

Chindalur Traffic Solutions, Inc.

Rajesh Chindalur, P.E., PTOE

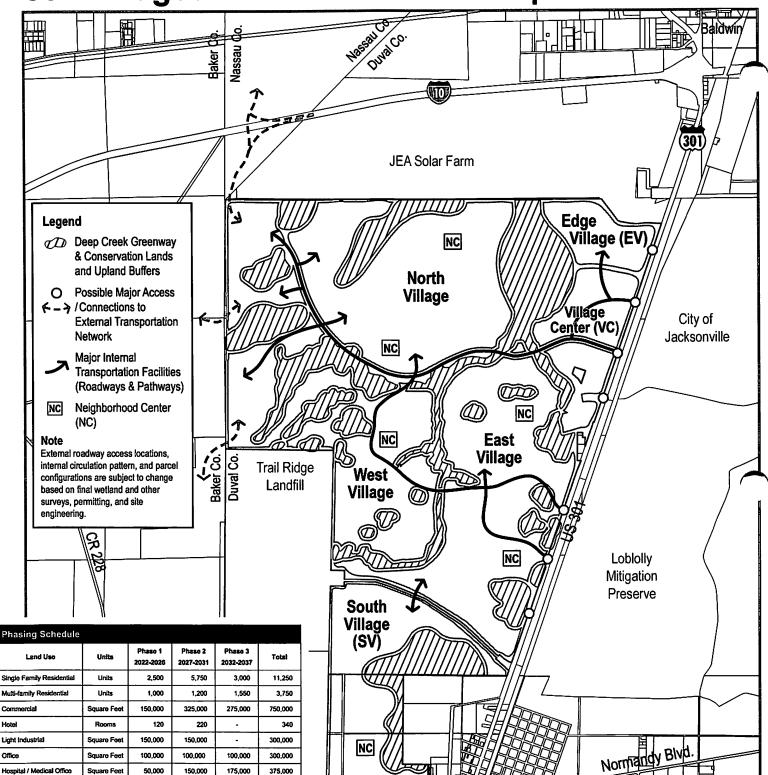
Chindalur Traffic Solutions, Inc.

8833 Perimeter Park Boulevard, Suite 103, Jacksonville, FL 32216

chindalur@ctrafficsolutions.com

301 Villages

# **Conceptual Master Plan**



Permissible	e Develo	oment					
Land Use	Single Family (Units)	Mutti- family (Units)	Commercial (Sq. Feet)	Office (Sq. Feet)	Flex Industrial (Sq. Feet)	Hotel (Rooms)	Hospitzi/ Mediczi (Sq. Feet)
Total	11,250	3,750	750,000	300,000	300,000	340	375,000
Edge Village			•		•		
Village Center	•	•	•	•	•	•	•
West Village	•	•	•	•	•	<u> </u>	
North Village	•	•		•			
East Village		•	•	•		•	
South Village	•	•					

50,000

150,000

175,000

375,000

Denotes land use is permissible within the village

Hospital / Medical Office

August 30, 2021

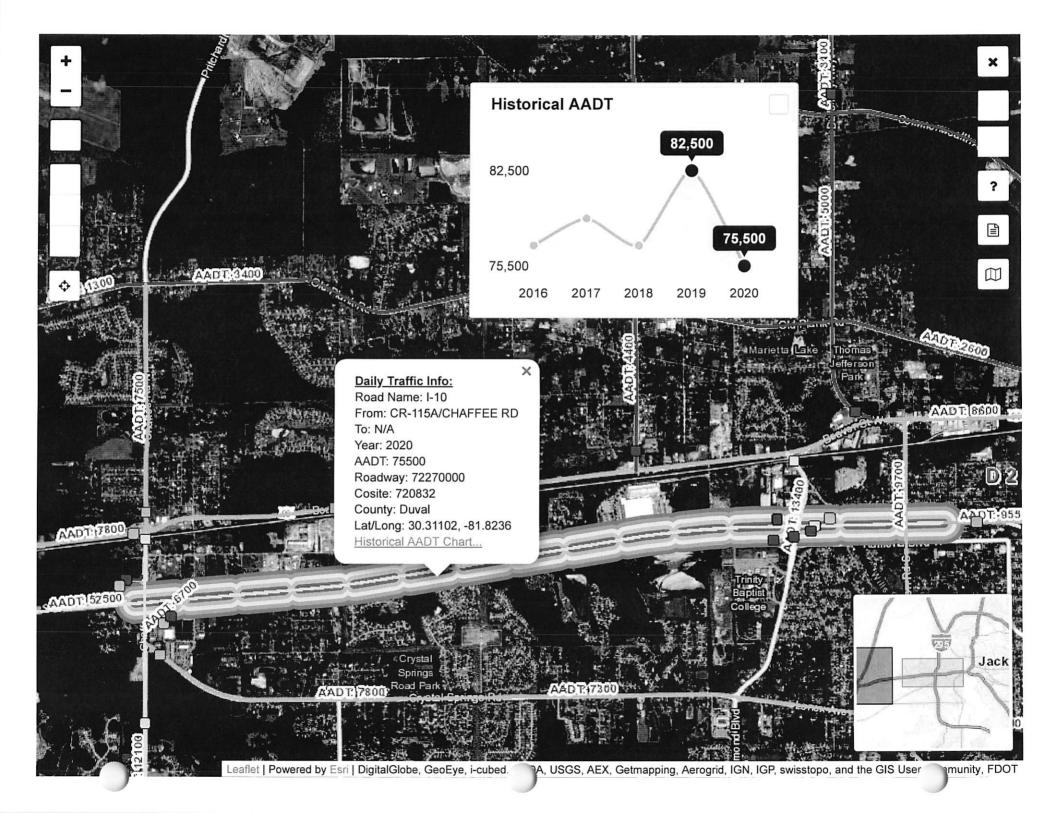


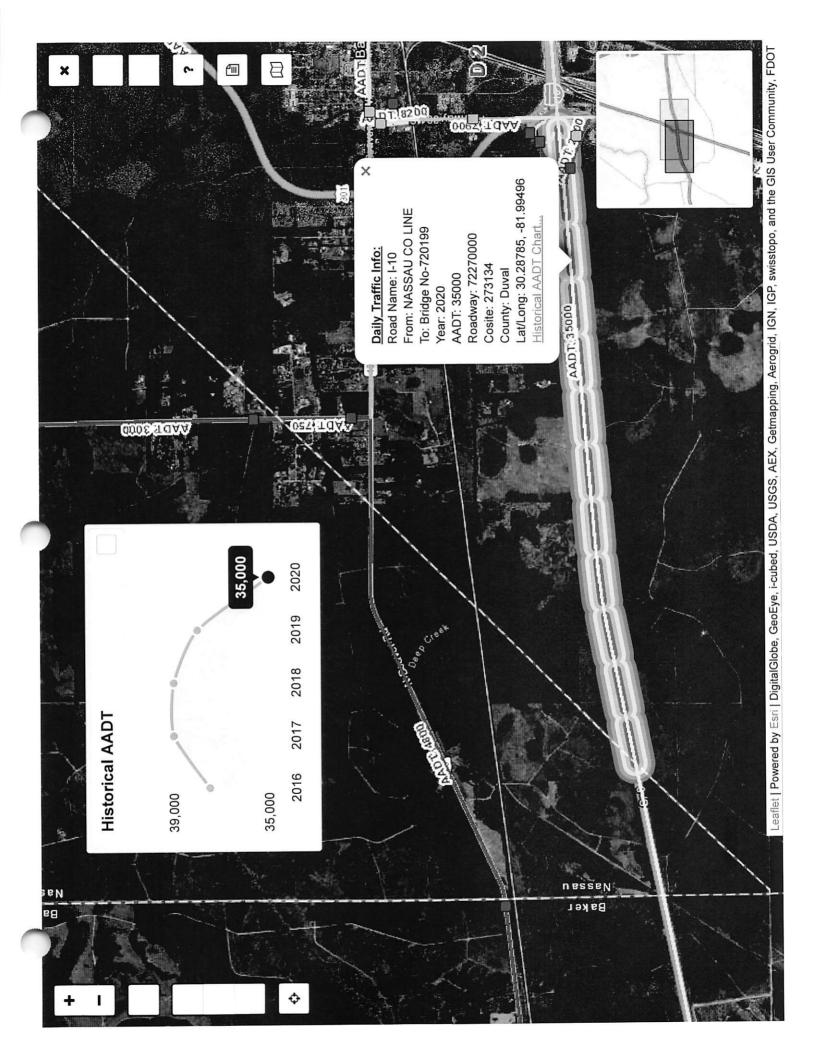


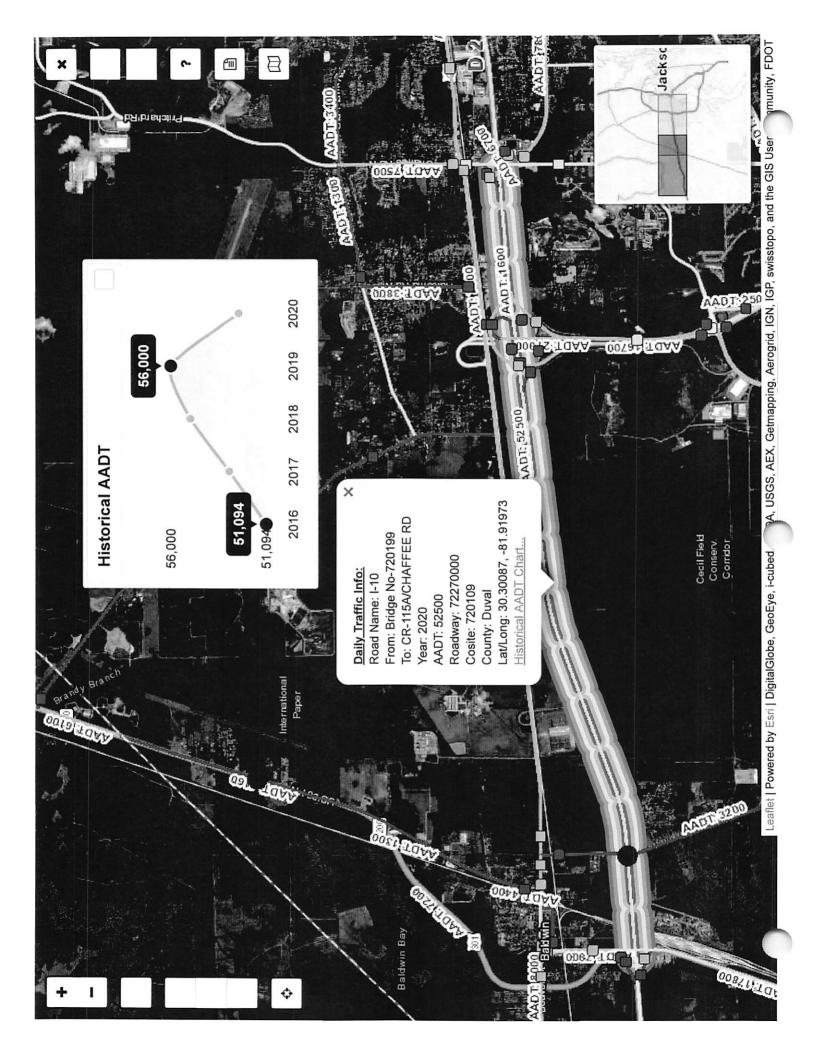
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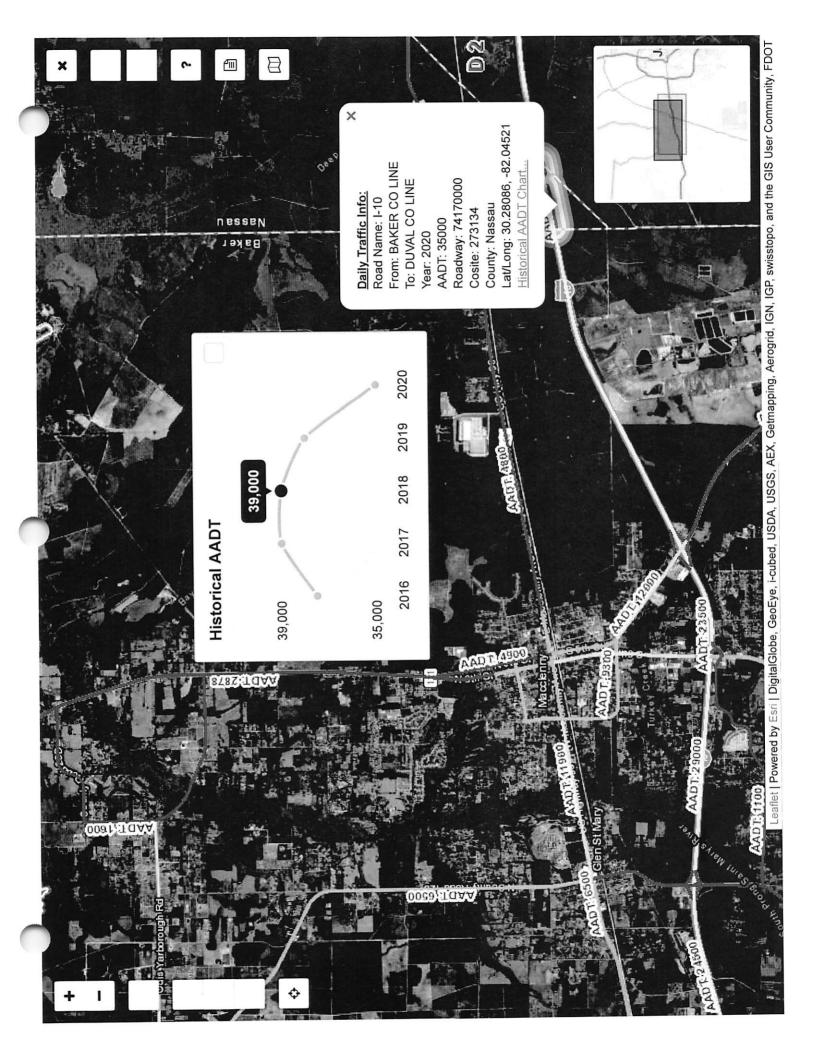
# Attachment C

FDOT Traffic Counts Data, Historical AADT, FDOT D2 LOS Summary Reports, QLOS Generalized Service Volumes Tables









В

В



### I-10 from SR 228 to Nassau Co. Line

Attribute Value Segment ID: 1043 Segment Length (miles): 3.600 mi Location: **Baker County** County: Baker Roadway ID: 27090000 Begin MP: 21.862 End MP: 25.462 SIS: Yes

SIS Type: SIS Highway Corridor

Median Treatment:
Divided
Directionality:
Two-Way
Posted Speed:
70 mph
Facility Type:
Freeway
Area Type:
Rural
Standard K:
10.5%
FDOT LOS Standard:
C
Max. Service Vol. Adj. Factor:
0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Peak Hour Maximum Service Volume at LOS Standard

Google Street View:

Projected Values

Number of Lanes

AADT

http://maps.google.com/maps?q=&layer=c&cbil=30.273993998687,-82.0781764265482

2.15						· · · · · · · · · · · · · · · · · · ·	
			[00]	US Hwy 90			
	Ascelenny Av	0				10	Sr.8
2					The second of th		
	2019	2020	2025	2030	2035	2040	2045
	4	4	4	4	4	8	8
	37,914	38,293	40,189	42,085	43,980	45,876	47,772
	5,040	5,040	5,040	5,040	5,040	9,490	9,490
	3,981	4,021	4,220	4,419	4,618	4,817	5,016

Peak Hour Traffic Volume3,9814,0214,2204,4194,618Peak Hour LOSCCCCCNotes: Eight lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



### I-10 from SR 23 to Chaffee Rd

Attribute Value
Segment ID: 3030

Segment Length (miles): 1.741 mi

Location:

Jacksonville

 County:
 Duval

 Roadway ID:
 72270000

 Begin MP:
 9.514

 End MP:
 11.256

SIS: Yes

SIS Type: SIS Highway Corridor

Median Treatment: Divided
Directionality: Two-Way
Posted Speed: 70 mph
Facility Type: Freeway
Area Type: Urbanized

Standard K: 9.0%
FDOT LOS Standard: D

Max. Service Vol. Adj. Factor: 0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?q=&layer=c&cbll=30.3076369771431,-81.8674131737383

Sr 8	90		ST-8	Chaffee Rd S
	(3)	Halsema Rd S		2045

Projected Values	2019	2020	2025	2030	2035	2040	2045		
Number of Lanes	6	6	6	6	6	10	10		
AADT	56,000	57,282	63,695	70,107	76,520	82,932	89,344		
Peak Hour Maximum Service Volume at LOS Standard	10,220	10,220	10,220	10,220	10,220	17,040	17,040		
Peak Hour Traffic Volume	5,040	5,155	5,733	6,310	6,887	7,464	8,041		
Peak Hour LOS	В	В	В	С	С	В	В		

Notes: Ten lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



### SR 228 / Normandy Blvd. from US 301 to McClelland Rd

Attribute	Value	
Segment ID:	4481	
Segment Length (miles):	0.372 mi	
Location:	Jacksonville	
County:	Duval	
Roadway ID:	72120201	
Begin MP:	0.000	

End MP: 0.000

End MP: 0.373

SIS: Yes

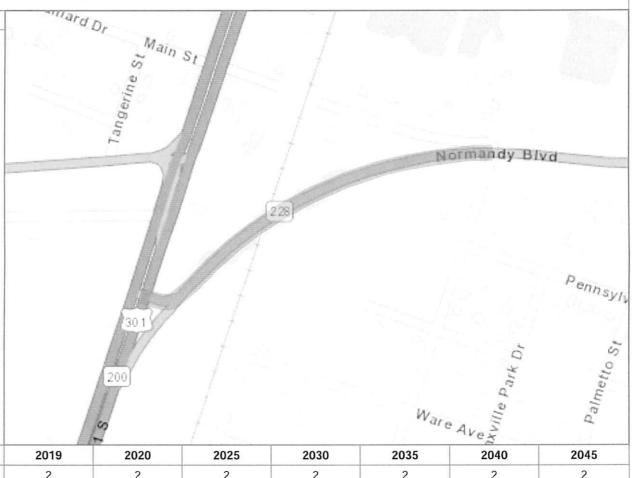
SIS Type: SIS Highway Corridor

Median Treatment: Undivided Directionality: Two-Way Posted Speed: 35 mph Facility Type: Highway Area Type: Urbanized Standard K: 9.0% FDOT LOS Standard: D Max. Service Vol. Adj. Factor: 0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?q=&layer=c&cbll=30.2016255242882,-82.0125828183902



10mg	
2040	2045
2	2
8,593	9,115
2,180	2,180
773	820
В	В



		I-10 from	Greenland A	Ave to I-295				
Attribute	Value	4	Hastings	St <		<b>E</b>		
Segment ID:	4547	Greeland		e o				
Segment Length (miles):	0.586 mi	<u>a</u>	Stuart Av					
Location:	Jacksonville	S. C.	Stuart A	4)				M
County:	Duval			۵				A
Roadway ID:	72270000	Pas	chal St					A
Begin MP:	15.601							A Comment of the Comm
End MP:	16.187							
SIS:	Yes	evoe St					The state of the s	
SIS Type:	SIS Highway Corridor						R-House and a	
Median Treatment:	Divided			57-8	1848 T 3 56			
Directionality:	Two-Way	4	40.000					1
Posted Speed:	55 mph							1
Facility Type:	Freeway	keland St						
Area Type:	Urbanized							
Standard K:	9.0%					Ramona Blvd	W W	
FDOT LOS Standard:	D	Annual of Assessment Control of the						
Max. Service Vol. Adj. Factor:	0.00						her Levil	
Data Sources: RCI; TCI; NERP Google Street View: http://maps.google.com/maps?q=&layer=c&cbl			Ingram	St		Saddle R	d	
Projected Values		2019	2020	2025	2030	2035	2040	2045
Number of Lanes		6	6	6	6	6	10	10
AADT		103,137	103,315	104,204	105,093	105,982	106,871	107,760
Peak Hour Maximum Service V	olume at LOS Standard	10,220	10,220	10,220	10,220	10,220	17,040	17,040
Peak Hour Traffic Volume		9,282	9,298	9,378	9,458	9,538	9,618	9,698
Peak Hour LOS		D	D	D	D	D	В	В

Notes: Ten lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



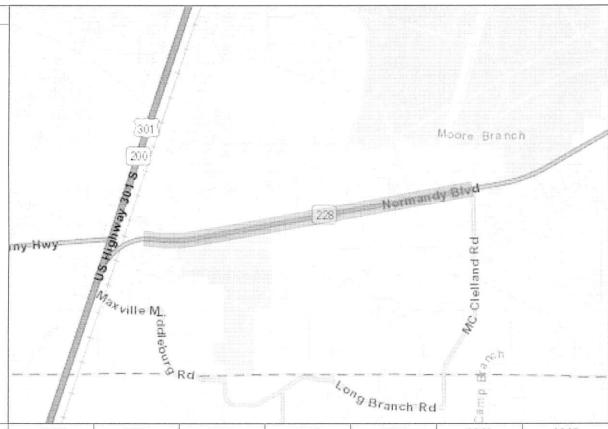
## SR 228 / Normandy Blvd. from US 301 to McClelland Rd

Attribute	Value
Segment ID:	481
Segment Length (miles):	2.652 mi
Location:	Jacksonville
County:	Duval
Roadway ID:	72120000
Begin MP:	2.576
End MP:	5.228
SIS:	No
SIS Type:	Non SIS
Median Treatment:	Undivided
Directionality:	Two-Way
Posted Speed:	45-60 mph
Facility Type:	Highway
Area Type:	Urbanized
Standard K:	9.0%
FDOT LOS Standard:	D
Max. Service Vol. Adj. Factor:	0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?g=&layer=c&cbll=30,2046451400147,-81,9881277824091



Control of the Contro	超头					(3)	
Projected Values	2019	2020	2025	2030	2035	2040	2045
Number of Lanes	2	2	2	2	2	2	2
AADT	11,323	11,522	12,519	13,515	14,511	15,507	16,504
Peak Hour Maximum Service Volume at LOS Standard	2,180	2,180	2,180	2,180	2,180	2,180	2,180
Peak Hour Traffic Volume	1,019	1,037	1,127	1,216	1,306	1,396	1,485
Peak Hour LOS	В	В	С	С	С	С	С



#### SR 228 / Normandy Blvd. from Jax Equestrian Center to SR 134 ive, Brown Value Attribute Regional Segment ID: 482 Park 1.180 mi Segment Length (miles): Jacksonville Location: County: Duval 72120000 Roadway ID: Begin MP: 9.606 10.787 End MP: perimeter Rd W No SIS: Non SIS SIS Type: Median Treatment: Divided Two-Way Directionality: Posted Speed: 50-55 mph Facility Type: Highway Urbanized Area Type: Fiddlers Green 9.0% Standard K: D FDOT LOS Standard: 0.00 Max. Service Vol. Adj. Factor: RONell Cleek Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM Google Street View: 2040 2045 2035 2020 2025 2030 2019 **Projected Values** 4 4 4 4 4 4 4 Number of Lanes 20,161 17,439 18,800 16,078 13,084 13,356 14,717 AADT 5,960 5.960 5,960 5,960 5,960 5,960 5,960 Peak Hour Maximum Service Volume at LOS Standard 1,692 1,814 1,447 1,569 1,178 1,202 1,325 Peak Hour Traffic Volume В В В В В В В Peak Hour LOS



### I-10 from Nassau Co. Line to US 301

Attribute Value

Segment ID: 545

Segment Length (miles): 3.220 mi

Location: Jacksonville

County: Duval

Roadway ID: 72270000

Begin MP: 0.000
End MP: 3.220
SIS: Yes

SIS Type: SIS Highway Corridor

Median Treatment: Divided
Directionality: Two-Way
Posted Speed: 70 mph
Facility Type: Freeway
Area Type: Transition
Standard K: 10.5%
FDOT LOS Standard: C

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

Max. Service Vol. Adj. Factor:

http://maps.google.com/maps?q=&layer=c&cbll=30.2867679698219,-82.0114642985243

0.00

	<u>[90</u>	January Commen		and a shared and an account of	Beaver St W	Baldwi
						10
Sra	B					
2019	2020	2025	2030	2035	2000	2045

Projected Values	2019	2020	2025	2030	2035	2040	2045
Number of Lanes	4	4	4	4	4	8	8
AADT	38,000	38,380	40,280	42,180	44,080	45,980	47,880
Peak Hour Maximum Service Volume at LOS Standard	5,780	5,780	5,780	5,780	5,780	11,220	11,220
Peak Hour Traffic Volume	3,990	4,030	4,229	4,429	4,628	4,828	5,027
Peak Hour LOS	В	В	В	С	С	В	В

Notes: Eight lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.

Cecil Field Conserv. Corridor

BeaverSt



## I-10 from US 301 to SR 23

Baldwin

Attribute	Value
Segment ID:	546
Segment Length (miles):	6.293 mi
Location:	Jacksonville
County:	Duval
Roadway ID:	72270000
Begin MP:	3.220
End MP:	9.514
SIS:	Yes
SIS Type:	SIS Highway Corridor
Median Treatment:	Divided
Directionality:	Two-Way
Posted Speed:	70 mph
Facility Type:	Freeway
Area Type:	Urbanized
Standard K:	9.0%
FDOT LOS Standard:	D
Max. Service Vol. Adj. Factor:	0.00
Data Sources: RCI; TCI; NERP	M AB; GUATS; FLSWM

Google Street View:

Google Street View: http://maps.google.com/maps?q=&layer=c&cbll=30,298797229445,-81.9337018700864	Preserve			M.			
Projected Values	2019	2020	2025	2030	2035	2040	2045
Number of Lanes	4	4	4	4	4	8	8
AADT	55,854	56,608	60,378	64,148	67,918	71,689	75,459
Peak Hour Maximum Service Volume at LOS Standard	6,800	6,800	6,800	6,800	6,800	13,620	13,620
Peak Hour Traffic Volume	5,027	5,095	5,434	5,773	6,113	6,452	6,791
Peak Hour LOS	С	С	С	D	D	В	В

Lobolly Mitigation

Notes: Eight lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



#### I-10 from Chaffee Rd. to Greenland Ave Attribute Value Old Plank Po Segment ID: 547 Segment Length (miles): 4.345 mi Location: Jacksonville County: Duval Roadway ID: 72270000 Begin MP: 11.256 End MP: 15.601 90 Beaver StW SIS: Yes SIS Type: SIS Highway Corridor Ramona Blvd W Median Treatment: Divided Cahoon Rd S Directionality: Two-Way Posted Speed: 55-70 mph Facility Type: Freeway Area Type: Urbanized Crystal Springs Rd Lenox Ave Standard K: 9.0% Hammond Blvd FDOT LOS Standard: Max. Service Vol. Adj. Factor: 0.00 Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM Google Street View: Rd **Projected Values** 2019 2030 2035 2040 2045 2020 2025 Number of Lanes 6 6 10 6 6 6 10 AADT 81,244 91,710 126,598 82,988 100,432 109,154 117,876 Peak Hour Maximum Service Volume at LOS Standard 10,220 10,220 10,220 10,220 10,220 17,040 17,040 Peak Hour Traffic Volume 7,312 7,469 8,254 9,039 9,824 10,609 11,394 Peak Hour LOS C C С D D C С

Notes: Ten lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



# US 301 from Clay Co. Line to SR 228 / Normandy Blvd

Attribute Value

Segment ID: 602

Segment Length (miles): 0.989 mi

Location: Jacksonville

County: Duval

Roadway ID: 72140000

Begin MP: 0.000

End MP: 0.989

SIS: Yes

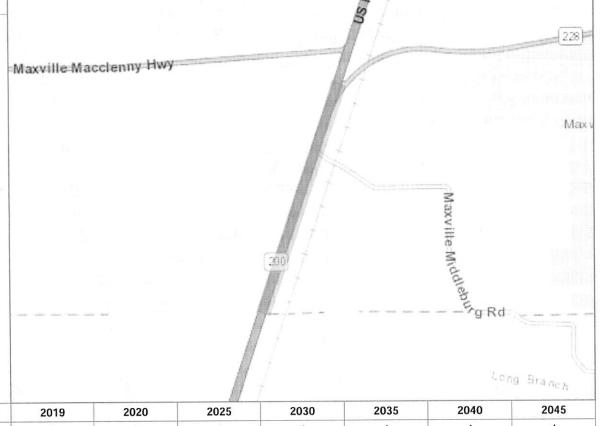
SIS Type: SIS Highway Corridor

Median Treatment: Divided Directionality: Two-Way 45-60 mph Posted Speed: Highway Facility Type: Urbanized Area Type: 9.0% Standard K: FDOT LOS Standard: D Max. Service Vol. Adj. Factor: 0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?g=&layer=c&cbll=30.1935032531446,-82.0176799449741



map/maps/geogretommaps/q stays	All							
Projected Values	2019	2020	2025	2030	2035	2040	2045	
Number of Lanes	4	4	4	4	4	4	4	
AADT	19,800	20,184	22,104	24,024	25,945	27,865	29,785	
Peak Hour Maximum Service Volume at LOS Standard	5,960	5,960	5,960	5,960	5,960	5,960	5,960	
Peak Hour Traffic Volume	1,782	1,817	1,989	2,162	2,335	2,508	2,681	
Peak Hour LOS	В	В	В	В	В	В	В	



## US 301 from SR 228 / Normandy Blvd to I-10

Attribute Value Segment ID: 603 Segment Length (miles): 6.424 mi Location: Jacksonville County: Duval Roadway ID: 72140000 Begin MP: 0.989 End MP: 7.413 SIS: Yes

SIS Type: SIS Highway Corridor

Divided Median Treatment: Directionality: Two-Way Posted Speed: 45-65 mph Facility Type: Highway Area Type: Urbanized Standard K: 9.0% FDOT LOS Standard: D Max. Service Vol. Adj. Factor: 0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?q=&layer=c&cbll=30.2445622422753,-81.9980365123601

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				Yellow Water Ad	100 100 100 100 100 100 100 100 100 100
	The second of th		Lobiolly Mitigation Preserve	"Pd	
S Cou	Вакет				
S County Rd 100	The second secon				
228			and Rd	228	

Projected Values	2019	2020	2025	2030	2035	2040	2045
Number of Lanes	4	4	4	4	4	4	4
AADT	15,100	15,470	17,322	19,174	21,026	22,878	24,729
Peak Hour Maximum Service Volume at LOS Standard	5,960	5,960	5,960	5,960	5,960	5,960	5,960
Peak Hour Traffic Volume	1,359	1,392	1,559	1,726	1,892	2,059	2,226
Peak Hour LOS	В	В	В	В	В	В	В



# US 301 from I-10 to S. City Limit of Baldwin

Attribute	Value
Segment ID:	604
Segment Length (miles):	0.435 mi
Location:	Jacksonville
County:	Duval
Roadway ID:	72140000
Begin MP:	7.413
End MP:	7.849
SIS:	Yes
SIS Type:	SIS Highway Corridor
Median Treatment:	Divided
Directionality:	Two-Way
Posted Speed:	45 mph
Facility Type:	Arterial
Area Type:	Urbanized
Standard K:	9.0%
FDOT LOS Standard:	D
Max. Service Vol. Adj. Factor:	0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

http://maps.google.com/maps?q=&layer=c&cbll=30,2922491230002,-81.982828396909

	h Rd	Const St	301 Sr-8	301 S 20E-SN	F.D. Higginbotham St		Baldwin Jacksonville Rebar
09				S	Dxcar.		
	2019	2020	2025	2030	2035	2040	2045
	4	4	4	4	4	4 13,775	4 14,452
	10,932	11,067	11,744	12,421	13,098		

**Projected Values** Number of Lanes AADT 3,580 3,580 3,580 3,580 3,580 Peak Hour Maximum Service Volume at LOS Standard 3,580 3,580 1,240 1,301 1,179 996 1,057 1,118 984 Peak Hour Traffic Volume C C C C C C C Peak Hour LOS



#### I-10 from Baker Co. Line to Duval Co. Line Attribute Value Segment ID: 746 Segment Length (miles): 0.675 mi Location: Nassau County County: Nassau Roadway ID: 74170000 Begin MP: 0.000 End MP: 0.676 SIS: Yes SIS Type: SIS Highway Corridor Median Treatment: Divided Directionality: Two-Way Posted Speed: 70 mph Facility Type: Freeway Area Type: Transition Standard K: 10.5% FDOT LOS Standard: C Max. Service Vol. Adj. Factor: 0.00 Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM Google Street View: http://maps.google.com/maps?q=&layer=c&cbll=30.2823775647025,-82.0436267562776 **Projected Values** 2045 2019 2020 2025 2030 2035 2040 8 8 Number of Lanes 4 4 4 4 4 47,880 AADT 38,000 38,380 40,280 42,180 44,080 45,980 Peak Hour Maximum Service Volume at LOS Standard 11,220 5,780 5,780 5,780 5,780 5,780 11,220 Peak Hour Traffic Volume 3,990 4,030 4,229 4,429 4,628 4,828 5,027 C В В Peak Hour LOS В В В C

Notes: Eight lanes by 2040 per CFP (add four lanes); Managed lanes were treated as general purpose lanes to simplify the capacity.



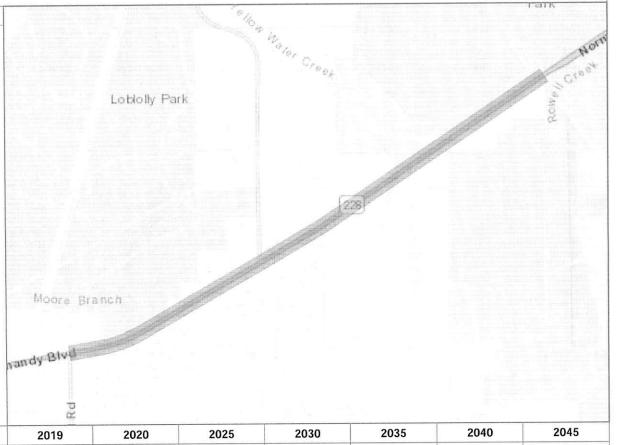
### SR 228 / Normandy Blvd. from McClelland Rd to Jax Equestrian Center

Attribute	Value
Segment ID:	7481
Segment Length (miles):	4.377 mi
Location:	Jacksonville
County:	Duval
Roadway ID:	72120000
Begin MP:	5.228
End MP:	9.606
SIS:	No
SIS Type:	Non SIS
Median Treatment:	Undivided
Directionality:	Two-Way
Posted Speed:	55-60 mph
Facility Type:	Highway
Area Type:	Urbanized
Standard K:	9.0%
FDOT LOS Standard:	D
Max. Service Vol. Adj. Factor:	0.00

Data Sources: RCI; TCI; NERPM AB; GUATS; FLSWM

Google Street View:

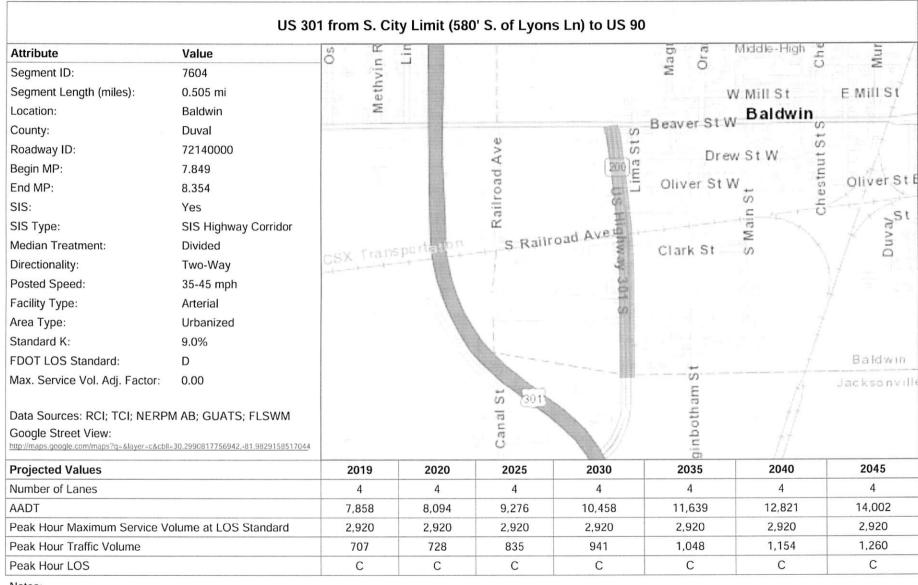
http://maps.google.com/maps?q=&layer=c&cbll=30.2219480710645,-81.9336434914948



	E CONTRACTOR OF THE PARTY OF TH						
Projected Values	2019	2020	2025	2030	2035	2040	2045
Number of Lanes	2	2	2	2	2	2	2
AADT	12,739	13,011	14,368	15,726	17,083	18,441	19,799
Peak Hour Maximum Service Volume at LOS Standard	2,180	2,180	2,180	2,180	2,180	2,180	2,180
Peak Hour Traffic Volume	1,147	1,171	1,293	1,415	1,538	1,660	1,782
Peak Hour LOS	С	С	С	С	С	D	D

Notes:





Notes:

- DUVAL COUNTY: 72

.1 MI. N. OF BRANDY BRANCH RD. - SR 200 SITE: 0002

T FACTOR	1111111	33.10	30.50	29.30	26.10	28.90	29.50	28.20	30.30	33.00	29.40	27.80	29.50	31.00	31.80	27.90	26.00	
D FACTOR	1 1 1 1 1 1 1	54.00	53.60	53.50	54.20	53.90	54.00	54.30	56.10	54.60	55.90	59.82	58.40	58.89	58.88	59.47		00.00
*K FACTOR	1 1 1 1 1 1	9.00	9.00	9.00	00.6	9.00	9.00	9.00	9.00	9.00	9.00	10.26	10.44	10.42	10.41	10.57	09 01	70.00
DIRECTION 2		S 4000	3600	\$ 4600	S 4800	S 4600	3500	S 4200	3600	S 3700	\$ 4000	3500	3600	3 3700	S 4500	3900		S 4/00
DIRECTION 1	1 1 1 1 1 1 1 1	006E N	3800 N		N 4800	N 5200	006E N	N 4400	N 4200	N 4100	N 4500	006E	N 4000	N 5700	5100	N 4200		N 5000
AADT		2 0006	7400	0,000	0096	0000	7400	00098	7800	7800	י כ כי כי מ	0000	7600	0 0000	2 0096	200	) (	9700 C
YEAR		0000	0100	2107	2010	2016	2015	2010	2014	2010	1100	100	9000	000	2000	000	000	2005

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

\*K FACTOR:

COUNTY: 72 - DUVAL

SITE: 0109 - SR-8/I-10,@CR-217 OVERPASS, E. OF BALDWIN, DUVAL CO.

YEAR	AADT	DI	RECTION 1	DI	RECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	52500 X 56000 E		0		0	8.00 8.00	54.70 54.60	15.20 13.50
2018 2017	55000 E 55000 S 53000 F		0		0	9.00 9.00	54.80 54.20	20.80
2016 2015	51094 C 50626 C	E E	25151 25213	W W	25943 25413	9.00	54.20 54.20	20.80 20.80
2014 2013	47284 C 44500 F	E	23570	W W	23714	9.00	54.10 54.20	19.10 20.60
2012 2011	43700 C 43827 C	E	21717 21758	W W	21983 22069	9.00 9.00	54.20 54.50	20.60 19.80
2010 2009	44967 C 44483 C	E	22329 22158	W W	22638 22325	9.58 9.53	54.22 55.46	20.00
2008 2007	43854 C 48745 C	E	21629 24298	W W	22225 24447	9.27 9.27	54.92 54.92	21.00 20.50
2006 2005	49337 C 47674 C	E E	24665 24036	W W	24672 23638	9.27 9.10	54.92 60.80	22.40 23.00

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

- DUVAL COUNTY: 72

.1 MI. W. OF YELLOW WATER RD. SR 228 SITE: 0736

T FACTOR		6.70	6.80	7.00	9.90	6.00	5.70	5.30	5.60		9.00	4.80	•	4.30
D FACTOR	1 1 1 1 1 1	55.40	55.90	55.80	56.10	56.20	56.30	56.40	57.10		57.80	26.60		56.38
*K FACTOR	111111	9.00	9.00	9.00	9.00	9.00	9.00	00.6	000		9.00	9.00		4.75
DIRECTION 2		0	0	0	0	0	0	: 3	<b>C</b>	<b>&gt;</b>	0	0	: :	0
DIRECTION 1	1 1 1 1 1 1 1 1 1	C	16	16	16	) C	) E	) [	c a c	<b>-</b>	0	C	,	0
AADT		11000 C	12000	00201	0 00011	2 0000	2 0000			2 0008	7100 C	7800	)	8100 C
YEAR		2020	0100	2018	2010	7100	2010	1 5	7 C C C C C C C C C C C C C C C C C C C	20T3	2012	ורכו ברכונ	1107	2010

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 FRACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

<sup>\*</sup>K FACTOR:

COUNTY: 72 - DUVAL

SITE: 0140 - SR 228 W. OF PINE ST.

YEAR	AADT	DIRE	CTION 1	DIRE	CTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	6000 C	E	0	W	0	9.00	55.40	6.70
2019	7300 C	E	0	W	0	9.00	55.90	6.80
2018	6500 C	E	0	W	0	9.00	55.80	7.00
2017	6200 C	E	0	W	0	9.00	56.10	6.60
2016	5400 C	E	0	W	0	9.00	56.20	6.00
2015	4700 C	E	0	W	0	9.00	56.30	5.70
2014	4600 C	E		W		9.00	56.40	5.30
2013	4500 C	E	0	W	0	9.00	57.10	5.60
2012	4300 C	E	0	W	0	9.00	57.80	6.00
2011	4600 C	E	0	W	0	9.00	56.60	4.80
2010	4800 C	E	0	W	0	9.75	56.38	4.90
2009	5300 C	E	0	W	0	9.48	57.48	4.60
2008	4900 C	E	0	W	0	9.68	57.27	6.20
2007	5600 C	E	0	W	0	9.26	57.87	5.70
2006	6600 C	E	0	W	0	9.52	57.03	1.50
2005	5300 C	E		W		9.00	56.50	5.30

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

COUNTY: 72 - DUVAL

SITE: 1006 - SR 228 E. OF JAX EQUESTRIAN CENTER

T FACTOR	6.70	6.80	7.00	09.9	6.00	5.70	5.30	5.60	6.00	4.80	4.90	4.60	6.20	5.70	1.50		5.30
D FACTOR	55.40	55.90	55.80	56.10	56.20	56.30	56.40	57.10	57.80	26.60	56.38	57.48	57.27	57.87	57.03	1 (	56.50
*K FACTOR	9.00	9.00	00.6	9.00	00.6	9.00	9.00	9.00	9.00	9.00	9.75	9.48	9.68	9.26	9 52	1 * * * * * * * * * * * * * * * * * * *	9.00
DIRECTION 2	W 6100	W 6000	W 6100	W 6400	W 6100	W 5000	W 4800	W 4800	W 4600	M 6000	W 5100	W 5400	W 5000	W 5600	W 6200	0000	W 6100
DIRECTION 1	E 6300	E 7200	E 6700	E 7000	臣 6400	E 5200		1 E			E 5400	E 5800	5500	700	1000	0000	E 6500
AADT	12400 C	13200 C	12800 C	13400 C	12500 C	00001	) CC86	) C C C C C C C C C	0400	ט טטעוו	10500	11200 C	2 CCRC	7 00011	000	1,00021	12600 C
YEAR	2020	2019	2018	2017	2016	2010	2010	2014	2013	1100	2010	0100	α 0 C C	7000	000	2006	2005

: 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 STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES AADT FLAGS:

<sup>\*</sup>K FACTOR:

COUNTY: 72 - DUVAL

SITE: 0612 - SR 200/US 301 .3 MI. N. OF SR 228

YEAR	AADT	DI	RECTION 1	DI	RECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020 2019	17800 C 15100 C	N N	9000 8100	S	8800 7000	9.00	54.00 53.60	32.20 31.10
2018	16200 C	N	8600	S	7600	9.00	53.50	30.10
2017 2016	18000 C 15800 C	N N	8900 7700	s s	9100 8100	9.00 9.00	54.20 53.90	25.80 29.50
2015 2014	14100 C 14000 C	N N	8200 7100	s s	5900 6900	9.00 9.00	54.00 54.30	29.50 28.20
2013 2012	13700 C 12600 C	N N	7300 6200	S	6400 6400	9.00 9.00	56.10 54.60	30.30
2011	12300 C	N	6200	S	6100	9.00	55.90	31.00
2010 2009	13400 C 14300 C	N N	6700 7600	s s	6700 6700	10.26 10.44	59.82 58.40	31.60 29.50
2008 2007	15700 C 16500 C	N N	8500 8800	S S	7200 7700	10.42 10.41	58.89 58.88	31.00 31.80
2006	16700 C	N	8200	S	8500	10.57	59.47	27.90
2005	15400 F	N	8100	s	7300	10.60	58.50	35.10

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

COUNTY: 27 - BAKER

SITE: 3134 - I-10 200' E. OF SR 228

ціщ
00061
19500
19500
18000 W
10000 W
3 10500 W
3 11000 W
• •
E 16000 W
• •
3 12500 W
3 14500 W
₹ 21500 W
3 13500 W

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

\*K FACTOR:

COUNTY: 72 - DUVAL

SITE: 3547 - SR 200 .1 MI. S. OF SR 228 (NORMANDY BLVD)

YEAR	AADT	DIRECTION 1	DI	RECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	21500 C	N 11000	s	10500	9.00	54.00	32.20
2019	19800 C	N 9900	S	9900	9.00	53.60	31.10
2018	21500 C	N 11000	S	10500	9.00	53.50	30.10
2017	22500 C	N 11500	S	11000	9.00	54.20	25.80
2016	20500 C	N 10500	S	10000	9.00	53.90	29.50
2015	15000 C	N 8200	S	6800	9.00	54.00	29.50
2014	16300 C	N 8500	S	7800	9.00	54.30	28.20
2013	17100 C	N 9000	S	8100	9.00	56.10	30.30
2012	14900 C	N 7500	S	7400	9.00	54.60	33.00
2011	15600 C	N 8100	S	7500	9.00	55.90	31.00
2010	16200 C	N 8500	S	7700	10.26	59.82	31.60
2009	17800 C	N 9400	S	8400	10.44	58.40	29.50
2008	15900 C	N 8500	s	7400	10.42	58.89	31.00
2007	19400 C	N 9900	S	9500	10.41	58.88	31.80
2006	18800 C	N 8300	S	10500	10.57	59.47	27.90
2005	21000 F	N 11000	S	10000	10.60	58.50	5.30

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

COUNTY: 72 - DUVAL

SITE: 5020 - I-10 500' WEST OF I-295 RAMPS

T FACTOR	15.20	13.50	13.70	13.60	17.10	17.10	16.40	10.60	15.00	16.30	16.40	16.70	17.80	20.50	22.40	23.00
D FACTOR	54.70	54.60	54.80	55.00	54.20	54.20	54.10	54.70	54.20	54.00	53.09	57.31	59.86	61.76	53.93	60.40
*K FACTOR	8.00	8.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	10.99	10.82	12.29	11.44	10.39	10.50
DIRECTION 2	W 48500	W 51000	W 50000	W 49000	W 48000	W 36000	W 33000	W 31500	W 31500	0	W 35000	W 36000	W 37000	W 38500	W 43500	W 36000
DIRECTION 1	E 47000	E 51000	E 50000	E 49500	E 48500	E 36500	E 33500	E 31000	E 32500	0	E 37000	E 38000	E 39500	E 40500	E 44000	E 31500
AADT	95500 C	102000 C	100000 C	2 00586 0 C	96500 C	72500 C	56500 C	62500 C	64000 C	72000 T	72000 S	74000 F	76500 C	2 0006Z	87500 C	67500 C
YEAR	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2002	2008	2007	2006	2005

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 \*K FACTOR:

**Urbanized Areas** 

68,100

January 2020

-		INTERRU	PTED F	LOW FACI	LITIES		
		STATE SIC	SNALI	ZED ART	ERIALS		
		Class I (40 mp	h or hig	her posted	speed limit	)	
1	Lanes	Median	В	C	D	E	Lar
ı	2	Undivided	*	16,800	17,700	**	
1	4	Divided	*	37,900	39,800	**	(
1	6	Divided	*	58,400	59,900	**	8
ı	8	Divided	*	78,800	80,100	**	1
		Class II (35 m)	oh or slo	wer posted	speed limi	t)	1
1	Lanes	Median	В	C	D	E	
1	2	Undivided	*	7,300	14,800	15,600	Lar
	4	Divided	*	14,500	32,400	33,800	4
1	6	Divided	*	23,300	50,000	50,900	(

### Non-State Signalized Roadway Adjustments

32,000

67,300

(Alter corresponding state volumes by the indicated percent.) Non-State Signalized Roadways - 10

### Median & Turn Lane Adjustments

		Exclusive	Exclusive	Adjustment
Lanes	Median	Left Lanes	Right Lanes	Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
_	_	_	Yes	+ 5%

### **One-Way Facility Adjustment**

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

### Paved Shoulder/Bicycle

Divided

Lane Coverage	В	C	D	Е
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9.300	19,700	>19.700	**

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	В	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

### BUS MODE (Scheduled Fixed Route)3

(Buses in peak hour in peak direction)

Sidewalk Coverage	В	C	D	Е
0-84%	> 5	$\geq 4$	$\geq 3$	$\geq 2$
85-100%	> 4	$\geq 3$	$\geq 2$	$\geq 1$

### UNINTERRUPTED FLOW FACILITIES

FREEWAYS							
Core Urbanized							
Lanes	В	C	D	E			
4	47,600	66,400	83,200	87,300			
6	70,100	97,800	123,600	131,200			
8	92,200	128,900	164,200	174,700			
10	115,300	158,900	203,600	218,600			
12	136,500	192,400	246,200	272,900			
		Urbanized	i				
Lanes	В	C	D	Е			
4	45,900	62,700	75,600	85,400			
6	68,900	93,900	113,600	128,100			
8	91,900	125,200	151,300	170,900			
10	115,000	156,800	189,300	213,600			

### Freeway Adjustments

Auxiliary Lanes	Ramp
Present in Both Directions	Metering
+ 20,000	+ 5%

### UNINTERRUPTED FLOW HIGHWAYS

CHILLET LED I EO II MIGHTINI					
Lanes	Median	В	C	D	E
2	Undivided	11,700	18,000	24,200	32,600
4	Divided	36,300	52,600	66,200	75,300
6	Divided	54,600	78,800	99,400	113,100

### Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>&</sup>lt;sup>1</sup>Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

### Source.

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

<sup>&</sup>lt;sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

<sup>&</sup>lt;sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

<sup>\*</sup> Cannot be achieved using table input value defaults.

<sup>\*\*</sup> Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

TABLE 1 (continued)

# Generalized **Annual Average Daily** Volumes for Florida's Urbanized Areas

January 2020

			Interrupted Flow Facilities							
INPUT VALUE	Uninterrupted Flow Facilities				State A	rterials		Cla	ss I	
ASSUMPTIONS	Freeways	Core Freeways	Highv	vays	Cla	ss I	Cla	ss II	Bicycle	Pedestrian
ROADWAY CHARACTERISTICS										
Area type (urban, rural)	urban	urban								
Number of through lanes (both dir.)	4-10	4-12	2	4-6	2	4-8	2	4-8	4	4
Posted speed (mph)	70	65	50	50	45	50	30	30	45	45
Free flow speed (mph)	75	70	55	55	50	55	35	35	50	50
Auxiliary Lanes (n,y)	n	n					_			
Median (d, twlt, n, nr, r)			Î	d	n	r	n	r	r	r
Terrain (l,r)	1	1	1	ı	1	1	1	1	1	1
% no passing zone			80							
Exclusive left turn lane impact (n, y)			[n]	у	у	у	у	у	У	у
Exclusive right turn lanes (n, y)					n	n	n	n	n	n
Facility length (mi)	3	3	5	5	2	2	1.9	1.8	2	2
TRAFFIC CHARACTERISTICS	· · · · · · · · · · · · · · · · · · ·									
Planning analysis hour factor (K)	0.090	0.085	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
Directional distribution factor (D)	0.55	0.55	0.55	0.55	0.550	0.560	0.565	0.560	0.565	0.565
Peak hour factor (PHF)	0.95	0.95	0.95	0.95	1.000	1.000	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	2,400	1,700	2,200	1,950	1,950	1,950	1,950	1,950	1,950
Heavy vehicle percent	4.0	4.0	2.0	2.0	1.0	1.0	1.0	1.0	2.5	2.0
Speed Adjustment Factor (SAF)	0.975	0.975		0.975						
Capacity Adjustment Factor (CAF)	0.968	0.968	_	0.968						
% left turns	0.700	0.700		- 01700	12	12	12	12	12	12
% right turns	_				12	12	12	12	12	12
CONTROL CHARACTERISTICS		<u> </u>				<u> </u>	<u>.                                    </u>	<u>'</u>		
Number of signals					4	4	10	10	4	6
Arrival type (1-6)	<del> </del>				3	3	4	4	4	4
Signal type (a, c, p)					С	С	С	С	С	С
Cycle length (C)					120	150	120	120	120	120
Effective green ratio (g/C)					0.44	0.45	0.44	0.44	0.44	0.44
MULTIMODAL CHARACTERIST	ıcs	<u>.                                    </u>					L		<u> </u>	
Paved shoulder/bicycle lane (n, y)	T	1	_		Γ				n, 50%, y	n
	ļ	<del> </del>			<del> </del>				t	t
Outside lane width (n, t, w)  Pavement condition (d, t, u)		<del>                                     </del>					<del> </del>		t	
On-street parking (n, y)		<del> </del>			<del> </del>				<del>                                     </del>	_
					<del></del>					n, 50%,
Sidewalk (n, y) Sidewalk/roadway separation(a, t, w)	<del> </del>	<u> </u>			<del>                                     </del>					t
Sidewalk protective barrier (n, y)	<del> </del>	<del> </del>			<del> </del>	<del>                                     </del>	<del>                                     </del>	<b> </b>		n
Sidewark protective barrier (ii, y)	L	LEVEL	OF SERV	ICE THE	ESHOLD	S	L		·	
	E					rials	<del></del>	Bicycle	Ped	Bus
Level of	Freeways		ways Multilane	CI	ass I		es II	210,000	<del> </del>	
Service	Density	%ffs	Density		its	Class II ats		Score	Score	Buses/hr
P	<u> </u>	> 83.3	Density ≤ 17		mph		mph	≤ 2.75	≤ 2.75	≤6
В	≤ 17				_ <del>-</del>		mph mph	≤ 3.50	≤3.50	<u>-</u>
C	≤24	> 75.0	≤24		mph			≤ 4.25	≤ 4.25	< 3
D	≤31	> 66.7	≤31		mph		mph	+	≤ 5.00	< 2
E	≤ 39	> 58.3	≤35	<u>  &gt; 15</u>	mph	> 10	) mph	≤ 5.00	≥ 3.00	

% ffs = Percent free flow speed ats = Average travel speed

### Generalized Annual Average Daily Volumes for Florida's

### Transitioning Areas and

Areas Over 5,000 Not In Urbanized Areas<sup>1</sup>

January 2020

### **INTERRUPTED FLOW FACILITIES**

### STATE SIGNALIZED ARTERIALS

	Class I (40 m	ph or hig	gher posted s	peed limit)	
Lanes	Median	В	C	D	Е
2	Undivided	*	14,400	16,200	**
4	Divided	*	34,000	35,500	**
6	Divided	*	52,100	53,500	**
	Class II (35 n	nph or slo	ower posted s	speed limit)	
Lanes	Median	В	C	D	E
2	Undivided	*	6,500	13,300	14,200
4	Divided	*	9,900	28,800	31,600
6	Divided	*	16,000	44,900	47,600

### Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

### Median & Turn Lane Adjustments

		Exclusive	Exclusive	Adjustment	
Lanes	Median	Left Lanes	Right Lanes	Factors	
2	Divided	Yes	No	+5%	
2	Undivided	No	No	-20%	
Multi	Undivided	Yes	No	-5%	
Multi	Undivided	No	No	-25%	
_	_	_	Yes	+ 5%	

### **One-Way Facility Adjustment**

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved

Shoul	der	Bicy	vcle
DIIOU	uci	DIC	CIC

Lane Coverage	В	C	D	E
0-49%	*	2,600	6,100	19,500
50-84%	1,900	5,500	18,400	>19,500
85-100%	7,500	19,500	>19,500	**

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	В	C	D	E
0-49%	*	*	2,800	9,400
50-84%	*	1,600	8,600	15,600
85-100%	3.800	10.500	17.100	>19.500

### BUS MODE (Scheduled Fixed Route)3

(Buses in peak hour in peak direction)

( and an point note in point uncorrent)						
Sidewalk Coverage	В	C	D	E		
0-84%	> 5	$\geq 4$	$\geq 3$	$\geq 2$		
85-100%	> 4	$\geq 3$	$\geq 2$	$\geq 1$		

### UNINTERRUPTED FLOW FACILITIES

		FREEWAY	YS	
Lanes	В	C	D	E
4	45,100	59,000	70,300	72,600
6	65,300	86,600	104,100	108,900
8	85,900	114,500	138,100	145,300
10	101,600	135,600	161,900	181,800

### Freeway Adjustments

Auxiliary Lanes	Ramp
Present in Both Directions	Metering
+ 20,000	+ 5%

### UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	В	C	D	E
2	Undivided	11,300	17,300	23,400	31,600
4	Divided	34,600	49,900	63,000	71,700
6	Divided	51,700	74,800	94,600	107,400

### **Uninterrupted Flow Highway Adjustments**

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>&</sup>lt;sup>1</sup>Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

Source:

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

<sup>&</sup>lt;sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

<sup>&</sup>lt;sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic

<sup>\*</sup> Cannot be achieved using table input value defaults.

<sup>\*\*</sup> Not applicable le for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

### Generalized Annual Average Daily Volumes for Florida's

Transitioning Areas and

Areas Over 5,000 Not In Urbanized Areas

January 2020

	Aleas	Over 5,0	IOO NOL II	ii Oi Daiii	zeu /	ıı Cu			Ja	nuary 2020
	The state of the s		Interrupted Flow Facilities							
INPUT VALUE	Uninterru	Uninterrupted Flow Facilities Freeways Highways			Sta	ate A	rterials		Clas	ss I
ASSUMPTIONS	Freeways			Cla	ıss I		Clas	s II	Bicycle	Pedestrian
ROADWAY CHARACTERISTICS				_			-			
Area type (urban, rural)	urban	Ī								
Number of through lanes (both dir.)	4-10	2	4-6	2	4-6	,	2	4-6	4	4
Posted speed (mph)	70	50	50	45	50		30	30	45	45
Free flow speed (mph)	75	55	55	50	55		35	35	50	50
Auxiliary lanes (n,y)	n									
Median (d, n, nr, r)			d	n	у		n	у	r	r
Terrain (l,r)	1	i	1	1	1		1	1	1	1
% no passing zone		60								_
Exclusive left turn lane impact (n, y)		[n]	у	у	у		у	у	у	У
Exclusive right turn lanes (n, y)				n	n		n	n	n	n
Facility length (mi)	6	5	5	1.8	2		2	2	2	2
TRAFFIC CHARACTERISTICS										_
Planning analysis hour factor (K)	0.098	0.090	0.090	0.090	0.09		0.090	0.090	0.090	0.090
Directional distribution factor (D)	0.55	0.55	0.55	0.550	0.57	70	0.570	0.565	0.570	0.570
Peak hour factor (PHF)	0.92	0.92	0.92	1.000	1.00	0	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	1,700	2,200	1,950	1,95		1,950	1,950	1,950	1,950
Heavy vehicle percent	9.0	4.0	4.0	2.0	3.0	)	2.0	3.0	3.0	3.0
Speed Adjustment Factor (SAF)	0.975		0.975							
Capacity Adjustment Factor (CAF)	0.968		0.968							
% left turns				12	12		12	12	12	12
% right turns				12	12	<u>.                                    </u>	12	12	12	12
CONTROL CHARACTERISTICS					_					
Number of signals				5	4		10	10	4	6
Arrival type (1-6)				4	3		4	4	4	4
Signal type (a, c, p)				С	С		С	С	С	С
Cycle length (C)				120	15	0	120	150	120	120
Effective green ratio (g/C)				0.44	0.4	5	0.44	0.45	0.44	0.44
MULTIMODAL CHARACTERISTICS	3		_	-						
Paved shoulder/bicycle lane (n, y)									n, 50%, y	n
Outside lane width (n, t, w)									t	t
Pavement condition (d, t, u)									t	
On-street parking (n, y)			-						n	n
Sidewalk (n, y)		<del>                                     </del>								n, 50%,
Sidewalk/roadway separation (a, t, w)					$\vdash$					t
Sidewalk protective barrier (n, y)		<del>                                     </del>					<del>                                     </del>			n
Sidewalk protective barrier (ii, j)	LEV	EL OF SE	RVICE T	HRESHO	LDS					
	Freeways		ıways	<u> </u>	Arte	rials		Bicycle	Ped	Bus
Level of	<u> </u>	Two-Lane		Class	I		Class II	Score	Score	Buses/h
Service	Density	%ffs	Density	ats				Score	Score	Duses/II
В	≤ 17	> 83.3	≤ 17	> 31 m	ıph	>	22 mph	≤ 2.75	≤ 2.75	≤6
C	≤ 24	> 75.0	<u>≤ 24</u>	> 23 m	nph	>	17 mph	≤ 3.50	≤ 3.50	≤ 4
D	≤31	> 66.7	≤31	> 18 m	ıph	>	13 mph	≤ 4.25	≤ 4.25	< 3
E	≤39	> 58.3	≤35	> 15 m	nph	>	10 mph	≤ 5.00	≤ 5.00	< 2
<u>-</u>		1	1							

### Generalized Annual Average Daily Volumes for Florida's

### Rural Undeveloped Areas and

Developed Areas Less Than 5,000 Population<sup>1</sup>

January 2020

### **INTERRUPTED FLOW FACILITIES**

STATE SIGNALIZED ARTERIALS							
Lanes	Median	В	C	D	E		
2	Undivided	*	12,900	14,200	**		
4	Divided	*	29,300	30,400	**		
6	Divided	*	45,200	45,800	**		

### Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.) Non-State Signalized Roadways - 10%

### Median & Turn Lane Adjustments

		Exclusive	Exclusive	Adjustment
Lanes	Median	Left Lanes	Right Lanes	Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
_	-	_	Yes	+ 5%

### **One-Way Facility Adjustment**

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

### Rural Undeveloped

Shoulder/Bicycle				
Lane Coverage	В	C	D	E
0-49%	*	1,300	2,000	3,200
50-84%	1,000	2,100	3,200	10,600
85-100%	2,600	3,900	18,500	>18,500
	Develop	ed Areas		
Paved				
Shoulder/Bicycle				
Lane Coverage	В	C	D	E
0-49%	*	2,300	4,900	15,600
50-84%	1,700	4,500	13,300	18,500
85-100%	5,900	18,500	>18,500	**
			-	

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

		32-0-0-10-0-K-0		
Sidewalk Coverage	В	C	D	E
0-49%	*	*	2,700	9,200
50-84%	*	1,500	8,400	14,900
85-100%	3,600	10,200	16,700	>19,200

### UNINTERRUPTED FLOW FACILITIES

FREEWAYS							
Lanes	В	C	D	E			
4	34,800	48,000	56,700	63,200			
6	48,900	69,000	82,600	94,800			
8	62,900	90,400	108,400	126,400			

### Freeway Adjustments

Auxiliary Lanes Present in Both Directions + 20,000

### UNINTERRUPTED FLOW HIGHWAYS

Rural Undeveloped							
Lanes	Median	В	Č	D	E		
2	Undivided	4,600	8,600	14,000	28,500		
4	Divided	31,200	44,900	55,700	62,700		
6	Divided	46,800	67,600	83,500	94,200		
		Develope	ed Areas				
Lanes	Median	В	C	D	E		
2	Undivided	10,300	15,700	21,300	28,500		
4	Divided	29,300	42,300	54,000	61,600		
6	Divided	44,000	63,600	81,200	92,400		

### **Passing Lane Adjustments**

Alter LOS B-D volumes in proportion to the passing lane length to the highway segment length

### Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>1</sup>Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

<sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

\* Cannot be achieved using table input value defaults.

\*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

Paved

# TABLE 3 (continued)

### Generalized Annual Average Daily Volumes for Florida's

Rural Undeveloped Areas and

**Developed Areas Less Than 5,000 Population** 

January 2020

<u></u>		evelope	u Aleas i	ess ma		- Opulation	, iii			anuary 2020
INPUT VALUE	Uninterrupted Flow Facilities				Interrupted Flow Facilities				_	
ASSUMPTIONS	Freeways		High		Arter		rials	Bic	ycle	Pedestrian
ROADWAY CHARACTERISTICS		Undev	eloped	Deve	ореа					L
						· · · · ·			_	<del> </del>
Area type (urban, rural)	rural		4-6	2	4-6	2	4-6	4	4	2
Number of through lanes (both dir.)	4-8	55	55	50	50	45	45	55	45	45
Posted speed (mph)	70	60	60	55	55	50	50	60	50	50
Free flow speed (mph)	75	00	- 00	33	33	- 30		00	30	- 50
Auxiliary lanes (n,y)	n		-	_	d	n	r	r	r	n
Median (d, n, nr, r)		1	d	1	<u>u</u>	1	1	1	i	1
Terrain (l,r)	1	20	<u> </u>	60		<del></del>	1		- '	<del>                                     </del>
% no passing zone				[n]	v	у	y	у	у	y
Exclusive left turn lanes (n, y)	_	[n]	У	[III]	у	n	n	n	n	n
Exclusive right turn lanes (n, y)	10	10	10	5	5	1.9	2.2	4	2	2
Facility length (mi)	18	10	10	<u> </u>		1	2.2			
TRAFFIC CHARACTERISTICS										
Planning analysis hour factor (K)	0.105	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Directional distribution factor (D)	0.55	0.55	0.55	0.55	0.55	0.550	0.550	0.570	0.570	0.550
Peak hour factor (PHF)	0.88	0.88	0.88	0.88	0.88	1.000	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	1,700	2,200	1,700	2,200	1,950	1,950	1,950	1,950	1,950
Heavy vehicle percent	12.0	5.0	12.0	5.0	8.0	3.0	3.0	6.0	3.5	3.0
Speed Adjustment Factor (SAF)	0.975		0.975		0.975				<u> </u>	<u> </u>
Capacity Adjustment Factor (CAF)	0.968		0.968		0.968				10	
% left turns						12	12		12	12
% right turns			<u> </u>		L	12	12		12	12
CONTROL CHARACTERISTICS	3									
Number of signals						5	6	2	4	4
Arrival type (1-6)						3	3	3	3	3
Signal type (a, c, p)						С	С	a	a	a
Cycle length (C)						90	90	60	90	90
Effective green ratio (g/C)						0.44	0.44	0.37	0.44	0.44
MULTIMODAL CHARACTERIS	TICS									
	1		Τ	1			T	n,50%,y	n,50%,y	n
Paved shoulder/bicycle lane (n, y)			<del>                                      </del>			<del> </del>	<del> </del>	t	t	t
Outside lane width (n, t, w)			<del> </del>			<del>                                     </del>	-	t	t	
Pavement condition (d, t, u)			-	-		<del>                                      </del>		<del> </del> -	<u> </u>	n,50%,
Sidewalk (n, y)	<del>                                     </del>		<del>                                     </del>	-				<del> </del>		t
Sidewalk/roadway separation(a, t,w	<del>' </del>			<del>                                     </del>			<u> </u>	<del>                                     </del>	<u> </u>	n
Sidewalk protective barrier (n, y)	L			LUCE TH	DECHOI	DC	1	1	1	
		LEVE	L OF SER	VICE TH	RESHUL					
I and of	Free	eways					hways		T	
Level of Service	Fiee		+	Lane ru		Lane rd		ilane ru		ilane rd
Service		nsity	%tsf	ats		6ffs		nsity		nsity
В		14	≤50	≤ 55		83.3		14		14
С		22	≤65	≤ 50		75.0		22	+	22
D		29	≤80	≤ 45		66.7		29		29
Е	<u> </u>	36	> 80	≤ 40	<u> </u>	58.3	≦	34		34
							<del></del>		odestria-	
Level of		Arteria				cycle		<u>r</u>	edestrian	
Service	M	lajor City/				core			Score ≤ 2.75	
В		> 31 m				2.75	-+		$\leq 2.75$ $\leq 3.50$	
С	<u> </u>	> 23 m				3.50			≤ 3.30 ≤ 4.25	
D		> 18 m				4.25			≤ 4.23 ≤ 5.00	
E	1	> 15 m	ph			5.00		rolomod rd :		·olonod

%tsf = Percent time spent following %ffs = Percent of free flow speed ats = Average travel speed ru = Rural undeveloped rd = Rural developed

Urbanized Areas<sup>1</sup>

January 2020

### **INTERRUPTED FLOW FACILITIES**

### STATE SIGNALIZED ARTERIALS

Lanes	Median	В	C	D	E
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

			6	150	
	Class II (35 mp	oh or slo	wer posted:	speed limit	()
Lanes	Median	В	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2.880	6.060	6.130

### Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.) Non-State Signalized Roadways - 10%

### Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
-	-	_	Yes	+ 5%

### One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved				
Shoulder/Bicycle				
Lane Coverage	В	C	D	E
0-49%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1.700	>1.770	**

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	В	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1.560	>1.770

### BUS MODE (Scheduled Fixed Route)3

(Buses in peak hour in peak direction)

		1390		
Sidewalk Coverage	В	C	D	E
0-84%	> 5	$\geq 4$	$\geq 3$	$\geq 2$
85-100%	> 4	$\geq 3$	$\geq 2$	$\geq 1$

### **UNINTERRUPTED FLOW FACILITIES**

FREEWAYS							
Core Urbanized							
Lanes	В	C	D	E			
4	4,050	5,640	6,800	7,420			
6	5,960	8,310	10,220	11,150			
8	7,840	10,960	13,620	14,850			
10	9,800	13,510	17,040	18,580			
12	11,600	16,350	20,930	23,200			
		Urbanized					
Lanes	В	C	D	E			
4	4,130	5,640	7,070	7,690			
6	6,200	8,450	10,510	11,530			
8	8,270	11,270	13,960	15,380			
10	10,350	14,110	17,310	19,220			

### Freeway Adjustments

Auxiliary Lanes	Ramp
Present in Both Directions	Metering
+ 1,800	+ 5%

### UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	В	C	D	E
2	Undivided	1,050	1,620	2,180	2,930
4	Divided	3,270	4,730	5,960	6,780
6	Divided	4,910	7,090	8,950	10,180

### Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>1</sup>Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

<sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

<sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow

\* Cannot be achieved using table input value defaults.

\*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source.

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

**Urbanized Areas** 

January 2020

						Inte	errunted F	Now Facili		nuary 2020
**************************************	Uninterrupted Flow Facilities		Interrupted Flow Facil State Arterials			HOW Pacifi	Cla	ss I		
INPUT VALUE ASSUMPTIONS	1	Core		_	3440 - 346144					
	Freeways	Freeways	Highv	vays	Cla	ss I	Cla	ss II	Bicycle	Pedestrian
ROADWAY CHARACTERISTICS										
Area type (urban, rural)	urban	urban								
Number of through lanes (both dir.)	4-10	4-12	2	4-6	2	4-8	2	4-8	4	4
Posted speed (mph)	70	65	50	50	45	50	30	30	45	45
Free flow speed (mph)	75	70	55	55	50	55	35	35	50	50
Auxiliary Lanes (n,y)	n	n								
Median (d, twlt, n, nr, r)				d	n		n	r	r	r
Terrain (l,r)	1	1	1	1	1	<u>i</u>	1	1	1	<u>l</u>
% no passing zone			80							
Exclusive left turn lane impact (n, y)			[n]	у	у	у	у	у	у	у
Exclusive right turn lanes (n, y)					n	n	n	n	n	n
Facility length (mi)	3	3	5	5	2	2	1.9	1.8	2	2
TRAFFIC CHARACTERISTICS									·	
Planning analysis hour factor (K)	0.090	0.085	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
Directional distribution factor (D)	0.55	0.55	0.55	0.55	0.550	0.560	0.565	0.560	0.565	0.565
Peak hour factor (PHF)	0.95	0.95	0.95	0.95	1.000	1.000_	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	2,400	1,700	2,200	1,950_	1,950	1,950	1,950	1,950	1,950
Heavy vehicle percent	4.0	4.0	2.0	2.0	1.0	1.0	1.0	1.0	2.5	2.0
Speed Adjustment Factor (SAF)	0.975	0.975		0.975						
Capacity Adjustment Factor (CAF)	0.968	0.968		0.968						
% left turns					12	12	12	12	12	12
% right turns	_				12	12	12	12	12	12
CONTROL CHARACTERISTICS										
Number of signals					4	4	10	10	4	6
Arrival type (1-6)					3	3	4	4	4	4
Signal type (a, c, p)					С	С	c	c	C 100	C
Cycle length (C)					120	150	120	120	120	120
Effective green ratio (g/C)					0.44	0.45	0.44	0.44	0.44	0.44
MULTIMODAL CHARACTERIST	ICS									
Paved shoulder/bicycle lane (n, y)									n, 50%, y	n_
Outside lane width (n, t, w)									t	t
Pavement condition (d, t, u)							ļ		t _	
On-street parking (n, y)										
Sidewalk (n, y)							ļ	ļ		n, 50%, y
Sidewalk/roadway separation(a, t, w)								<del>                                     </del>	<u> </u>	l t
Sidewalk protective barrier (n, y)					<u> </u>	L		<u> </u>	<u> </u>	n
LEVEL OF SERVICE THRESHOLDS										
	Freeways	High	ways		Arte	rials		Bicycle	Ped	Bus
Level of Service	Density		Multilane	Cl	ass I		iss II	Score	Score	Buses/hr
Sel vice		%ffs	Density		nts		ats			
В	≤ 17	> 83.3	≤ 17		mph		2 mph	≤ 2.75	≤ 2.75	≤6
С	≤ 24	> 75.0	≤ 24		mph		7 mph	≤ 3.50	≤ 3.50	≤4
D	≤31	> 66.7	≤31		mph		3 mph	≤ 4.25	≤ 4.25	< 3
E	≤ 39	> 58.3	≤35	> 15	mph	> 10	) mph	≤ 5.00	≤ 5.00	< 2

% ffs = Percent free flow speed ats = Average travel speed

### Transitioning Areas and

Areas Over 5,000 Not In Urbanized Areas<sup>1</sup>

January 2020

### **INTERRUPTED FLOW FACILITIES**

### STATE SIGNALIZED ARTERIALS

	Class I (40 m	ph or hig	her posted sp	eed limit)	
Lanes	Median	В	C	D	E
2	Undivided	*	1,300	1,460	**
4	Divided	*	3,060	3,200	**
6	Divided	*	4,690	4,820	**
	Class II (35 m	ph or slo	wer posted sp	peed limit)	
Lanes	Median	В	C	D	E
2	Undivided	*	580	1,200	1,280
4	Divided	*	890	2,590	2,850
6	Divided	*	1,440	4,040	4,280

### Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

### Median & Turn Lane Adjustments

		Exclusive	Exclusive	Adjustment
Lanes	Median	Left Lanes	Right Lanes	Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
_	_	_	Yes	+ 5%

### One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved	
Shoulder/Bicycle	

Lane Coverage	В	C	D	E
0-49%	*	140	550	1,760
50-84%	170	500	1,650	>1,760
85-100%	670	1,760	>1,760	**

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	В	C	D	E
0-49%	*	*	250	850
50-84%	*	150	780	1,410
85-100%	340	950	1.540	>1.760

### BUS MODE (Scheduled Fixed Route)3

(Buses in peak hour in peak direction)

	1		,	
Sidewalk Coverage	В	C	D	E
0-84%	> 5	$\geq 4$	$\geq 3$	$\geq 2$
85-100%	> 4	> 3	> 2	> 1

### UNINTERRUPTED FLOW FACILITIES

		FREEWAY	YS	
Lanes	В	C	D	E
4	4,420	5,780	6,890	7,110
6	6,400	8,490	10,200	10,670
8	8,420	11,220	13,530	14,240
10	9,960	13,290	15,870	17,820

### Freeway Adjustments

Auxiliary Lanes	Ramp
Present in Both Directions	Metering
+ 1,800	+ 5%

### UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	В	C	D	E
2	Undivided	1,020	1,560	2,110	2,840
4	Divided	3,110	4,490	5,670	6,450
6	Divided	4,650	6,730	8,510	9,670

### Uninterrupted Flow Highway Adjustments

		8	J
Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>1</sup>Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

<sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.

<sup>3</sup> Buses per hour shown are only for the peak hour in the single direction of the higher traffic

\* Cannot be achieved using table input value defaults.

\*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

Transitioning Areas and

Areas Over 5,000 Not In Urbanized Areas

January 2020

	Aicas	Over 5,0	OU NOT II	- Olbain					nuary 202
	Uninterrupted Flow Facilities			Interrupted Flow Facilities					
INPUT VALUE ASSUMPTIONS				State Arterials				Clas	ss I
ASSUM HONS	Freeways	Highv	vays	Cla	ss I	Cla	ss II	Bicycle	Pedestria
ROADWAY CHARACTERISTICS									
Area type (urban, rural)	urban								
Number of through lanes (both dir.)	4-10	2	4-6	2	4-6	2	4-6	4	4
Posted speed (mph)	70	50	50	45	50	30	30	45	45
Free flow speed (mph)	75	55	55	50	55	35	35	50	50_
Auxiliary lanes (n,y)	n								
Median (d, n, nr, r)			d	n	у	n	у	r	r
Terrain (l,r)	1	1	1	1	1	1	I	1	<u>l</u>
% no passing zone		60							
Exclusive left turn lane impact (n, y)		[n]	у	у	у	у	у	у	у_
Exclusive right turn lanes (n, y)				n	n	n	n	n	n
Facility length (mi)	6	5	5	1.8	2	2	2	2	2
TRAFFIC CHARACTERISTICS									
Planning analysis hour factor (K)	0.098	0.090	0.090	0.090	0.090		0.090	0.090	0.090
Directional distribution factor (D)	0.55	0.55	0.55	0.550	0.570		0.565	0.570	0.570
Peak hour factor (PHF)	0.92	0.92	0.92	1.000	1.000	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	1,700	2,200	1,950	1,950		1,950	1,950	1,950
Heavy vehicle percent	9.0	4.0	4.0	2.0	3.0	2.0	3.0	3.0	3.0
Speed Adjustment Factor (SAF)	0.975		0.975						
Capacity Adjustment Factor (CAF)	0.968		0.968						
% left turns				12	12	12	12	12	12
% right turns				12	12	12	12	12	12_
CONTROL CHARACTERISTICS									
Number of signals				5	4	10	10	4	6
Arrival type (1-6)				4	3	4	4	4	4
Signal type (a, c, p)				С	С	С	С	С	С
Cycle length (C)				120	150	120	150	120	120
Effective green ratio (g/C)				0.44	0.45	0.44	0.45	0.44	0.44
MULTIMODAL CHARACTERISTICS	-								
Paved shoulder/bicycle lane (n, y)								n, 50%, y	n
Outside lane width (n, t, w)								t	t
Pavement condition (d, t, u)								t	
On-street parking (n, y)								n	n
Sidewalk (n, y)									n, 50%,
Sidewalk/roadway separation (a, t, w)									t
Sidewalk protective barrier (n, y)					İ -				n
Sideman protective carrier (1777)	LEV	EL OF SE	RVICE T	HRESHO	LDS				
	Freeways		ways		Arteri	als	Bicycle	Ped	Bus
Level of Service	Density	Two-Lane		Class ats	I	Class II	Score	Score	Buses/l
n	≤ 17	> 83.3	<u> ≤ 17</u>	> 31 m	ınh	> 22 mph	≤ 2.75	≤ 2.75	≤6
B		> 75.0	<u>≤17</u> ≤24	> 23 m		> 17 mph	≤3.50	≤3.50	<u>-                                    </u>
С	≤ 24	<del></del>		> 18 m		> 17 mph > 13 mph	≤4.25	≤ 4.25	< 3
D	≤31	> 66.7	≤31		-	> 10 mph	≤ 5.00	≤ 5.00	< 2
E	≤ 39	> 58.3	≤35	> 15 m	ibu	/ 10 mpn	1 > 3.00		1

### Rural Undeveloped Areas and

Developed Areas Less Than 5,000 Population<sup>1</sup>

January 2020

### **INTERRUPTED FLOW FACILITIES**

	STATE SIG	NALIZ	ZED ART	ERIALS	
Lanes	Median	В	C	D	E
2	Undivided	*	1,220	1,350	**
4	Divided	*	2,790	2,890	**
6	Divided	*	4,300	4,350	**

### Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.) Non-State Signalized Roadways - 10%

### Median & Turn Lane Adjustments

		Exclusive	Exclusive	Adjustment
Lanes	Median	Left Lanes	Right Lanes	Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
_	_	_	Yes	+ 5%

### **One-Way Facility Adjustment**

Multiply the corresponding two-directional volumes in this table by 0.6

### BICYCLE MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

### Rural Undeveloped

В	C	D	E
*	120	190	300
100	200	310	1,010
250	370	1,760	>1,760
Develope	ed Areas		
-			
В	C	D	E
*	220	460	1,480
170	430	1,270	>1,760
560	1,760	>1,760	**
	* 100 250  Develope  B * 170	* 120 100 200 250 370 <b>Developed Areas</b> B C * 220 170 430	* 120 190 100 200 310 250 370 1,760  Developed Areas  B C D * 220 460 170 430 1,270

### PEDESTRIAN MODE<sup>2</sup>

(Multiply vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	В	C	D	E
0-49%	*	*	220	840
50-84%	*	120	780	1,390
85-100%	320	940	1.560	>1.820

### UNINTERRUPTED FLOW FACILITIES

		FREEWAY	YS	
Lanes	В	C	D	Е
4	3,650	5,040	5,950	6,640
6	5,130	7,250	8,670	9,950
8	6,600	9,490	11,380	13,270

### Freeway Adjustments

Auxiliary Lanes
Present in Both Directions
+ 1,800

### UNINTERRUPTED FLOW HIGHWAYS

	1	Rural Un	developed		
Lanes	Median	В	C	D	E
2	Undivided	440	820	1,330	2,710
4	Divided	2,960	4,270	5,290	5,960
6	Divided	4,450	6,420	7,930	8,950
		Develop	ed Areas		
Lanes	Median	В	C	D	E
2	Undivided	980	1,490	2,020	2,710
4	Divided	2,780	4,020	5,130	5,850
6	Divided	4,180	6,040	7,710	8,780

### **Passing Lane Adjustments**

Alter LOS B-D volumes in proportion to the passing lane length to the highway segment length

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

<sup>1</sup>Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the HCM and the Transit Capacity and Quality of Service Manual.

- <sup>2</sup> Level of service for the bicycle and pedestrian modes in this table is based on number of vehicles, not number of bicyclists or pedestrians using the facility.
- \* Cannot be achieved using table input value defaults.
- \*\* Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

### Source:

Florida Department of Transportation Systems Implementation Office https://www.fdot.gov/planning/systems/

Paved

### Rural Undeveloped Areas and

**Developed Areas Less Than 5,000 Population** 

January 2020

INPUT VALUE	Uninterrupted Flow Facilities					Interrupted Flow Facilities				
ASSUMPTIONS	Freeways Highways Undeveloped				Developed Arter		terials Bic		ycle	Pedestrian
ROADWAY CHARACTERISTICS	 S	Undev	егореа	Deve	iopea		_			l
Area type (urban, rural)	rural									Γ
Number of through lanes (both dir.)	4-8	2	4-6	2	4-6	2	4-6	4	4	2
Posted speed (mph)	70	55	55	50	50	45	45	55	45	45
Free flow speed (mph)	75	60	60	55	55	50	50	60	50	50
Auxiliary lanes (n,y)	n		- 00			<del></del>				
Median (d, n, nr, r)			d		d	n	r	r	r	n
Terrain (l,r)	1	1	1	1	1	1	1	1	1	1
% no passing zone	<u> </u>	20	<del></del>	60						
Exclusive left turn lanes (n, y)		[n]	у	[n]	у	У	у	у	у у	у
Exclusive right turn lanes (n, y)						n	n	n	n	n
Facility length (mi)	18	10	10	5	5	1.9	2.2	4	2	2
TRAFFIC CHARACTERISTICS			1							
Planning analysis hour factor (K)	0.105	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Directional distribution factor (D)	0.103	0.093	0.055	0.095	0.55	0.550	0.550	0.570	0.570	0.550
Peak hour factor (PHF)	0.88	0.88	0.88	0.88	0.88	1.000	1.000	1.000	1.000	1.000
Base saturation flow rate (pcphpl)	2,400	1,700	2,200	1,700	2,200	1,950	1,950	1,950	1,950	1,950
Heavy vehicle percent	12.0	5.0	12.0	5.0	8.0	3.0	3.0	6.0	3.5	3.0
Speed Adjustment Factor (SAF)	0.975		0.975	3.0	0.975					
Capacity Adjustment Factor (CAF)	0.968		0.968		0.968					
% left turns	0.700	_	0.700			12	12		12	12
% right turns						12	12		12	12
CONTROL CHARACTERISTICS				<u> </u>	<u>.                                    </u>		•			
Number of signals	<u> </u>				Γ	5	6	2	4	4
Arrival type (1-6)			<u> </u>		<u> </u>	3	3	3	3	3
Signal type (a, c, p)	<del>                                     </del>	_	<u> </u>			c	c	a	a	a
Cycle length (C)			<del>                                     </del>		<u></u>	90	90	60	90	90
Effective green ratio (g/C)			-			0.44	0.44	0.37	0.44	0.44
MULTIMODAL CHARACTERIS	TICS	<u> </u>								
			т	r	Γ	T	1	n,50%,y	n,50%,y	n
Paved shoulder/bicycle lane (n, y)			<del> </del>				<del> </del>	t	t t	t
Outside lane width (n, t, w)						<del> </del>		t	t	<u> </u>
Pavement condition (d, t, u)					<del> </del>		<del> </del>	<del>                                     </del>	<del>  '</del>	n,50%,y
Sidewalk (n, y)		<u> </u>	-			<del>                                     </del>			<del>                                     </del>	t
Sidewalk/roadway separation(a, t,w			<del> </del>	<u> </u>	<u> </u>			<del>                                     </del>	<u> </u>	n
Sidewalk protective barrier (n, y)		T 1937/19	L OF CED	VICE TH	DECHOL	De	.L	l	<u> </u>	
		LEVE	L OF SER	VICE IH	KESHUL.		L			
Level of	Free	ways			Т	Lane rd	hways	ilane ru	Mult	ilane rd
Service		<del>.</del>		Lane ru		offs	+	nsity		ensity
		nsity 14	%tsf ≤50	ats ≤ 55		83.3		14		14
B		22				75.0		22		22
		<u>22</u> 29			66.7		29		<u>29</u>	
D E		<del>29</del> 36	> 80	≤ 40		58.3		34		<u>34</u>
E	<u> </u>		1 - 00 _	<u> 'V</u>	<u> </u>					
Level of		Arteria	als		Bie	cycle		P	edestrian	
Service	M	ajor City/				core			Score	
В	<del></del>	> 31 m				2.75			≤ 2.75	
C		> 23 m			<u> </u>	3.50			≤ 3.50	
D		> 18 m			≤	4.25			≤ 4.25	
E %tsf = Percent time spent following %	1	> 15 m	ph			5.00			≤ 5.00	<del></del>

# Attachment D

Internal Capture Worksheets

## Attachment D1

Phase 01 Year 2026 Development Internal Capture Worksheets

•	NCHRP 684 Internal Trip Capture Estimation Tool								
Project Name:	301 Villages		Organization:	Chindalur Traffic Solutions					
Project Location:	Duval County, FL		Performed By:	Rajesh Chindalur					
Scenario Description:	Phase 01		Date:	8/15/2021					
Analysis Year:	2022 - 2026		Checked By:						
Analysis Period:	AM Street Peak Hour		Date:						

	Table 1	-A: Base Vehicl	e-Trip Generation Est	mates (Single-Use Site	Estimate)		
Land Use	Developme	ent Data (For Info	ormation Only)		Estimated Vehicle-Trips <sup>3</sup>		
	ITE LUCs1	Quantity	Units	Total	Entering	Exiting	
Office	710 & 720	150,000	SF	237	194	43	
Retail	820	150,000	SF	227	141	86	
Restaurant				0			
Cinema/Entertainment				0			
Residential	210 & 220	3,500	Dwelling Units	2,205	543	1,662	
Hotel	210	120	Rooms	55	32	23	
All Other Land Uses <sup>2</sup>	110	150,000	SF	60	53	7	
	1898	J-155.		2.784	963	1,821	

Table 2-A: Mode Split and Vehicle Occupancy Estimates										
1 411		Entering Trips			Exiting Trips					
Land Use	Veh, Occ.⁴	% Transit	% Non-Motorized		Veh. Occ.4	% Transit	% Non-Motorized			
Office										
Retail										
Restaurant										
Cinema/Entertainment				Г						
Residential										
Hotel										
All Other Land Uses <sup>2</sup>										

	Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)										
Origin (Frans)		Destination (To)									
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel					
Office											
Retail	111111111111111111111111111111111111111	11111									
Restaurant					Mean and						
Cinema/Entertainment						1.75					
Residential											
Hotel											

Table 4-A: Internal Person-Trip Origin-Destination Matrix*										
0:::- (5)		Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office		12	0	0	0	0				
Retail	8		0	0	11	0				
Restaurant	0	0		0	0	0				
Cinema/Entertainment	0	0	0		0	0				
Residential	6	17	0	0	0.03 (%)	0				
Hotel	6	3	0	0	0					

Table 5-A: Computations Summary										
	Total	Entering	Exiting							
All Person-Trips	2,784	963	1,821							
Internal Capture Percentage	5%	7%	3%							
External Vehicle-Trips <sup>5</sup>	2,658	900	1,758							
External Transit-Trips <sup>6</sup>	0	0	0							
External Non-Motorized Trips <sup>6</sup>	0	0	0							

Table 6-A: Internal Trip Capture Percentages by Land Use								
Land Use	Entering Trips	Exiting Trips						
Office	10%	28%						
Retail	23%	22%						
Restaurant	N/A	N/A						
Cinema/Entertainment	N/A	N/A						
Residential	2%	1%						
Hotel	0%	39%						

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	AM Street Peak Hour

		Table 7-A: Conv	ersion of Vehicle-	Trip Ends to Person-Trip	Ends			
	Tab	le 7-A (D): Enter	ing Trips		Table 7-A (O): Exiting Trips			
Land Use	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*		
Office	1.00	194	194	1.00	43	43		
Retail	1.00	141	141	1.00	86	86		
Restaurant	1.00	0	0	1.00	0	0		
Cinema/Entertainment	1.00	0	0	1.00	0	0		
Residential	1.00	543	543	1.00	1662	1662		
Hotel	1.00	32	32	1.00	23	23		

	Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)										
		Destination (To)									
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel					
Office		12	27	0	0	0					
Retail	25	To Feel of	11	0	12	0					
Restaurant	0	0		0	0	0					
Cinema/Entertainment	0	0	0		0	0					
Residential	33	17	332	0		0					
Hotel	17	3	2	0	0						

		Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)  Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office		45	0	0	0	0				
Retail	8		0	0	11	0				
Restaurant	27	11		0	27	1				
Cinema/Entertainment	0	0	0		0	0				
Residential	6	24	0	0		00				
Hotel	6	6	0	0	0					

	Ta	ble 9-A (D): Int	ernal and External	Trips Summary (Entering	Trips)			
	F	Person-Trip Esti	mates		External Trips by Mode*			
Destination Land Use	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>		
Office	20	174	194	174	0	0		
Retail	32	109	141	109	0	0		
Restaurant	0	0	0	0	0	0		
Cinema/Entertainment	0	0	0	0	0	0		
Residential	11	532	543	532	0	0		
Hotel	0	32	32	32	0	0		
All Other Land Uses <sup>3</sup>	0	53	53	53	0	0		

	Ta	able 9-A (O): In	ternal and External	Trips Summary (Exiting 1	rips)			
Origin Land Use		Person-Trip Esti			External Trips by Mode*			
	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>		
Office	12	31	43	31	0	0		
Retail	19	67	86	67	0	0		
Restaurant	0	0	0	0	0	0		
Cinema/Entertainment	0	0	0	0	0	0		
Residential	23	1639	1662	1639	0	0		
Hotel	9	14	23	14	0	0		
All Other Land Uses <sup>3</sup>	0	7	7	7	0	0		

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator \*Indicates computation that has been rounded to the nearest whole number.

	NCHRP 684 Internal Trip Capture Estimation Tool									
Project Name:	Project Name: 301 Villages Organization: Chindalur Traffic Solutions									
Project Location:	Project Location: Duval County, FL		Performed By:	Rajesh Chindalur						
Scenario Description:	Phase 01	1	Date:	8/15/2021						
Analysis Year:	2022 - 2026		Checked By:							
Analysis Period:	PM Street Peak Hour		Date:							

	Table 1	-P: Base Vehici	e-Trip Generation Est	imates (Single-Use Sit	e Estimate)	
Land Use	Developme	ent Data (For Info	ormation Only)		Estimated Vehicle-Trips <sup>3</sup>	
Land Ose	ITE LUCs1	Quantity	Units	Total	Entering	Exiting
Office	710 & 720	150,000	SF	287	66	221
Retail	820	150,000	SF	734	352	382
Restaurant				0		
Cinema/Entertainment				0		
Residential	210 & 220	3,500	Dwelling Units	2,691	1,696	995
Hotel	210	120	Rooms	64	33	31
All Other Land Uses <sup>2</sup>	110	150,000	SF	49	6	43
and the second	10 March 1981			3,825	2,153	1,672

		Table 2-P:	Mode Split and Venicie	Occupancy Estimates		
		Entering Tr	ips		Exiting Trips	
Land Use	Veh. Occ.4	Veh. Occ.4 % Transit % N		Veh. Occ.⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses <sup>2</sup>						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)												
Orinin (France)		Destination (To)										
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel						
Office	in the second											
Retail			100									
Restaurant	11 444	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1										
Cinema/Entertainment		1150	4.116									
Residential						ri sa in						
Hotel												

Table 4-P: Internal Person-Trip Origin-Destination Matrix*												
Origin (From)		Destination (To)										
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel						
Office	1.00	28	0	0	4	0						
Retail	8	11.04.11	0	0	99	6						
Restaurant	0	0	1. 15.1844 (Fig. )	0	0	0						
Cinema/Entertainment	0	0	0	the best day	0	0						
Residential	38	35	0	0		4						
Hotel	0	5	0	0	0							

Table 5-P: Computations Summary									
·	Total	Entering	Exiting						
All Person-Trips	3,825	2,153	1,672						
Internal Capture Percentage	12%	11%	14%						
External Vehicle-Trips <sup>5</sup>	3,371	1,926	1,445						
External Transit-Trips <sup>6</sup>	0	0	0						
External Non-Motorized Trips <sup>6</sup>	0	0	0						

Table 6-P: Internal Trip Capture Percentages by Land Use							
Land Use	Entering Trips	Exiting Trips					
Office	70%	14%					
Retail	19%	30%					
Restaurant	N/A	N/A					
Cinema/Entertainment	N/A	N/A					
Residential	6%	8%					
Hotel	30%	16%					

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	PM Street Peak Hour

	T	able 7-P: Conver	sion of Vehicle-Tri	p En	ds to Person-Trip En	ds	
Land Use	Table	7-P (D): Entering	Trips			Table 7-P (O): Exiting Trips	•
	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	66	66		1.00	221	221
Retail	1.00	352	352		1.00	382	382
Restaurant	1.00	0	0		1.00	0	0
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	1696	1696		1,00	995	995
Hotel	1.00	33	33		1.00	31	31

	Table 8-P	(O): Internal Pe	rson-Trip Origin-De	estination Matrix (Computed a	t Origin)					
		Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office	44	44	9	0	4	0				
Retail	8	11000	111	15	99	19				
Restaurant	0	0		0	0	0				
Cinema/Entertainment	0	0	0		0	0				
Residential	40	418	209	0	0.05	30				
Hotel	0	5	21	0	1	Augusta esta esta esta esta esta esta esta e				

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)											
		Destination (To)									
Origin (From)	Office	Office Retail		Cinema/Entertainment	Residential	Hotel					
Office	28	28	0	0	68	0					
Retail	20		0	0	780	6					
Restaurant	20	176	Character and	0	271	23					
Cinema/Entertainment	4	14	0		68	0					
Residential	38	35	0	0		4					
Hotel	0	7	0	0	0	The second					

	Tab	le 9-P (D): Intern	al and External T	rips S	ummary (Entering Tri	ps)		
Destination Land Use	Pe	erson-Trip Estimat	es	П	External Trips by Mode*			
	Internal	External	Total	1 F	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>	
Office	46	20	66	1 🗆	20	0	0	
Retail	68	284	352	1 [	284	0	0	
Restaurant	0	0	0	1 F	0	0	0	
Cinema/Entertainment	0	0	0	1 F	0	0	0	
Residential	103	1593	1696	1 F	1593	0	0	
Hotel	10	23	33	7 F	23	0	0	
All Other Land Uses <sup>3</sup>	0	6	6		6	0	0	

	Ta	ble 9-P (O): Interr	al and External T	rips S	ummary (Exiting Trip	98)	
	Person-Trip Estimates				External Trips by Mode*		
Origin Land Use	Internal	External	Total	i 🗀	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	32	189	221		189	0	0
Retail	113	269	382	1	269	0	0
Restaurant	0	0	0	$\Gamma$	0	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	77	918	995	1	918	0	0
Hotel	5	26	31	1	26	0	0
All Other Land Uses <sup>3</sup>	0	43	43	1 $\Gamma$	43	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

## Attachment D2

Phase 02 Year 2031 Development Internal Capture Worksheets

	NCHRP 684 Internal Trip Capture Estimation Tool								
Project Name:	301 Villages	П	Organization:	Chindalur Traffic Solutions					
Project Location:	Duval County, FL	7 F	Performed By:	Rajesh Chindalur					
Scenario Description:	Phase 01		Date:	8/15/2021					
Analysis Year:	2022 - 2026	1 [	Checked By:						
Analysis Period:	AM Street Peak Hour		Date:						

	Development Data (For Information Only)				Estimated Vehicle-Trips <sup>3</sup>		
Land Use	ITE LUCs1	Quantity	Units	Total	Entering	Exiting	
Office	610, 710 & 720	400,000	SF	590	455	135	
Retail	820	475,000	SF	389	241	148	
Restaurant				0			
Cinema/Entertainment				0			
Residential	210 & 220	10,450	Dwelling Units	6,761	1,673	5,088	
Hotel	210	340	Rooms	165	97	68	
All Other Land Uses <sup>2</sup>	110	300,000	SF	101	89	12	
Control of the second of the s				8,006	2,555	5,451	

		Entering Tri	ps	Exiting Trips			
Land Use	Veh. Occ.⁴	% Transit	% Non-Motorized	Veh. Occ.4	% Transit	% Non-Motorized	
Office							
Retail							
Restaurant							
Cinema/Entertainment							
Residential							
Hotel							
All Other Land Uses <sup>2</sup>							

				ge Distances (Feet Walking D Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office			and the second second	gramma and the state of the sta	anger ender e	. applicación constitu
Retail		1.5				
Restaurant						
Cinema/Entertainment		0.500				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Residential	N. 44					
Hotel			un date in Table			

		Table 4-A:	Internal Person-Trip	Origin-Destination Matrix	·						
	Destination (To)										
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel					
Office		38	0	0	0	0					
Retail	18	The second	0	0	21	0					
Restaurant	0	0		0	0	0					
Cinema/Entertainment	0	0	0		0	0					
Residential	14	41	0	0		0					
Hotel	14	10	0	0	0	GREAT STATE					

Table 5-A: Computations Summary									
	Total	Entering	Exiting						
All Person-Trips	8,006	2,555	5,451						
Internal Capture Percentage	4%	6%	3%						
External Vehicle-Trips <sup>5</sup>	7,694	2,399	5,295						
External Transit-Trips <sup>6</sup>	0	0	0						
External Non-Motorized Trips <sup>6</sup>	0	0	0						

Table 6-A: Internal Trip Capture Percentages by Land Use							
Land Use	Entering Trips	Exiting Trips					
Office	10%	28%					
Retail	37%	26%					
Restaurant	N/A	N/A					
Cinema/Entertainment	N/A	N/A					
Residential	1%	1%					
Hotel	0%	35%					

Land Use Codes (LUCs) from Trip Generation Manual, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	AM Street Peak Hour

<del></del>	•	Table 7-A: Conv	ersion of Vehicle-	Trip I	nds to Person-Trip	Ends		
	Tab	le 7-A (D): Enter	ing Trips		Table 7-A (O): Exiting Trips			
Land Use	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*	
Office	1.00	455	455		1.00	135	135	
Retail	1.00	241	241		1.00	148	148	
Restaurant	1.00	0	0		1.00	0	0	
Cinema/Entertainment	1.00	0	0		1.00	0	0	
Residential	1.00	1673	1673		1.00	5088	5088	
Hotel	1.00	97	97		1.00	68	68	

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)											
Origin (France)		Destination (To)									
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel					
Office	34 TA	38	85	0	1	0					
Retail	43		19	0	21	0					
Restaurant	0	0		0	0	0					
Cinema/Entertainment	0	0	0		0	0					
Residential	102	51	1018	0		0					
Hotel	51	10	6	0	0	Salar Salar					

Origin (5)	Destination (To)									
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office		77	0	0	0	0				
Retail	18	HII.	0	0	33	0				
Restaurant	64	19		0	84	4				
Cinema/Entertainment	0	0	0		0	0				
Residential	14	41	0	0		0				
Hotel	14	10	0	0	0					

	Ta	ble 9-A (D): Inte	rnal and External	Trip	s Summary (Entering	j Trips)	
Destination Land Use	F	Person-Trip Estin	nates	П	External Trips by Mode*		
	Internal	External	Total		Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	46	409	455	П	409	0	0
Retail	89	152	241		152	0	0
Restaurant	0	0	0	ΙГ	0	0	0
Cinema/Entertainment	0	0	0		0	0	0
Residential	21	1652	1673	П	1652	0	0
Hotel	0	97	97	ΙГ	97	0	0
All Other Land Uses <sup>3</sup>	0	89	89	ΙГ	89	0	0

	T	able 9-A (O): Int	ernal and Externa	al Trips	Summary (Exiting	Trips)	
Origin Land Use		Person-Trip Estin	nates		External Trips by Mode*		
	Internal	External	Total	] [	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	38	97	135	1 🗆	97	0	0
Retail	39	109	148		109	0	0
Restaurant	0	0	0	1	0	0	0
Cinema/Entertainment	0	0	0	1	0	0	0
Residential	55	5033	5088	1 $\sqcap$	5033	0	0
Hotel	24	44	68	1	44	0	0
All Other Land Uses <sup>3</sup>	0	12	12	1 🗀	12	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

\*Indicates computation that has been rounded to the nearest whole number.

	NCHRP 684 Internal Trip Capture Estimation Tool									
Project Name:	301 Villages	Organization:	Chindalur Traffic Solutions							
Project Location:	Duval County, FL	Performed By:	Rajesh Chindalur							
Scenario Description:	Phase 01	Date:	8/15/2021							
Analysis Year:	2022 - 2026	Checked By:								
Analysis Period:	PM Street Peak Hour	Date:								

	Developme	ent Data (For Info	ormation Only)		Estimated Vehicle-Trips <sup>3</sup>	
Land Use	ITE LUCs1	Quantity	Units	Total	Entering	Exiting
Office	510, 710 & 720	400,000	SF	629	158	471
Retail	820	475,000	SF	1,721	826	895
Restaurant				0		
Cinema/Entertainment				0		
Residential	210 & 220	10,450	Dwelling Units	7,950	5,009	2,941
Hotel	210	340	Rooms	229	117	112
All Other Land Uses <sup>2</sup>	110	300,000	SF	79	10	69
				10,608	6,120	4,488

Land Use		Entering Tri	ps		Exiting Trips	
	Veh. Occ.4	% Transit	% Non-Motorized	Veh. Occ.4	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential			<u>                                     </u>			
Hotel						
All Other Land Uses <sup>2</sup>						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)									
	Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel			
Office									
Retail	5-1		elekalis.						
Restaurant	500								
Cinema/Entertainment									
Residential	01 a 45 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			20 20 20 20 20 20 20 20 20 20 20 20 20 2					
Hotel	"								

		Table 4-P:	Internal Person-Tr	ip Origin-Destination Matrix*						
		Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office		66	0	0	9	0				
Retail	18		0	0	233	20				
Restaurant	0	0	and the first	0	0	0				
Cinema/Entertainment	0	0	0		0	0				
Residential	90	83	0	0	The second second	14				
Hotel	0	17	0	0	0					

Table 5-P: Computations Summary									
	Total	Entering	Exiting						
All Person-Trips	10,608	6,120	4,488						
Internal Capture Percentage	10%	9%	12%						
External Vehicle-Trips <sup>5</sup>	9,508	5,570	3,938						
External Transit-Trips <sup>6</sup>	0	0	0						
External Non-Motorized Trips <sup>6</sup>	0	0	0						

Table 6-P: Internal Trip Capture Percentages by Land Use								
Land Use	Entering Trips	Exiting Trips						
Office	68%	16%						
Retail	20%	30%						
Restaurant	N/A	N/A						
Cinema/Entertainment	N/A	N/A						
Residential	5%	6%						
Hotel	29%	15%						

Land Use Codes (LUCs) from Trip Generation Manual, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual).

Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

Subjectives computed using the mode split and vehicle occupancy values provided in Table 2-P.

Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	PM Street Peak Hour

•	Т	able 7-P: Conven	sion of Vehicle-Trip	Ends to Person-Trip En	ds	
	Table	e 7-P (D): Entering	Trips		Table 7-P (O): Exiting Trips	8
Land Use	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	158	158	1.00	471	471
Retail	1.00	826	826	1.00	895	895
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	5009	5009	1.00	2941	2941
Hotel	1.00	117	117	1.00	112	112

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)									
Origin (From)		Destination (To)							
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel			
Office	All All Maria	94	19	0	9	0			
Retail	18	ung graffe	260	36	233	45			
Restaurant	0	0	1750/1445 W	0	0	0			
Cinema/Entertainment	0	0	0		0	0			
Residential	118	1235	618	0		88			
Hotel	0	18	76	0	2				

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)									
Origin (Farm)		Destination (To)							
Origin (From)	Office	Retail	Restaurant	Residential	Hotel				
Office		66	0	0	200	0			
Retail	49		0	0	2304	20			
Restaurant	47	413		0	801	83			
Cinema/Entertainment	9	33	0		200	1			
Residential	90	83	0	0		14			
Hotel	0	17	0	0	0				

	Tat	le 9-P (D): Intern	nal and External T	rips :	Summary (Entering Tr	ips)	
Destination Land Line	Po	erson-Trip Estima	tes	П	External Trips by Mode*		
Destination Land Use	Internal	External	Total	1 [	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	108	50	158	1 [	50	0	0
Retail	166	660	826	1Г	660	0	0
Restaurant	0	0	0	1 Г	0	0	0
Cinema/Entertainment	0	0	0	1Г	0	0	0
Residential	242	4767	5009	1 [	4767	0	0
Hotel	34	83	117	1 [	83	0	0
All Other Land Uses <sup>3</sup>	0	10	10	1 [	10	0	0

	Ta	ble 9-P (O): Inter	nal and External T	<b>Trips</b>	Summary (Exiting Tri	ps)	
Odein Land Has	Person-Trip Estimates				External Trips by Mode*		
Origin Land Use	Internal	External	Total	1 [	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	75	396	471	] [	396	0	0
Retail	271	624	895	] [	624	0	0
Restaurant	0	0	0	1 [	0	0	0
Cinema/Entertainment	0	0	0	ΙΓ	0	0	0
Residential	187	2754	2941	1 [	2754	0	0
Hotel	17	95	112	1 Г	95	0	0
All Other Land Uses <sup>3</sup>	0	69	69	1 [	69	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

2Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator \*Indicates computation that has been rounded to the nearest whole number.

## **Attachment D3**

Phase 03 Year 2037 Development Internal Capture Worksheets

	NCHRP 684 Internal Trip Capture Estimation Tool						
Project Name:	301 Villages		Organization:	Chindalur Traffic Solutions			
Project Location:	Duval County, FL		Performed By:	Rajesh Chindalur			
Scenario Description:	Phase 01	1	Date:	8/15/2021			
Analysis Year:	2022 - 2026	]	Checked By:				
Analysis Period:	AM Street Peak Hour		Date:				

	Table 1	-A: Base Vehic	e-Trip Generation	Estimates (Single-Use	Site Estimate)	
1 111	Developme	nt Data (For Infe	ormation Only)		Estimated Vehicle-Trips <sup>3</sup>	
Land Use	ITE LUCs1	Quantity	Units	Total	Entering	Exiting
Office	510, 710 & 720	675,000	SF	901	697	204
Retail	820	750,000	SF	527	327	200
Restaurant				0		
Cinema/Entertainment				0		
Residential	210 & 220	15,000	Dwelling Units	9,484	2,341	7,143
Hotel	210	340	Rooms	165	97	68
All Other Land Uses <sup>2</sup>	110	300,000	SF	101	89	12
The state of the s				11,178	3,551	7,627

			Mode Split and Vehicle	Occupancy Estimates		
Land Use		Entering Tri	ips		Exiting Trips	
Land Use	Veh. Occ.⁴	% Transit	% Non-Motorized	Veh. Occ.⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses <sup>2</sup>						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)							
011.65				Destination (To)			
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel	
Office	1 5, 1 10	48.5	1.37				
Retail		3	. Praisi i				
Restaurant		3.41			100		
Cinema/Entertainment		270 <b>)</b> (12		The state of the s	Will Service	and the state of	
Residential		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					
Hotel		43857					

Table 4-A: Internal Person-Trip Origin-Destination Matrix*									
Origin (From)		Destination (To)							
Oligin (Floin)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel			
Office	5.2-11-50	57	0	0	0	0			
Retail	28	e e Meseye	0	0	28	0			
Restaurant	0	0	100	0	0	0			
Cinema/Entertainment	0	0	0		0	0			
Residential	21	56	0	0		0			
Hotel	21	10	0	0	0				

Table 5-A: Computations Summary							
	Total	Entering	Exiting				
All Person-Trips	11,178	3,551	7,627				
Internal Capture Percentage	4%	6%	3%				
External Vehicle-Trips <sup>5</sup>	10,736	3,330	7,406				
External Transit-Trips <sup>6</sup>	0	0	0				
External Non-Motorized Trips <sup>6</sup>	0	0	0				

Table 6-A: Internal Trip Capture Percentages by Land Use						
Land Use	Entering Trips	Exiting Trips				
Office	10%	28%				
Retail	38%	28%				
Restaurant	N/A	N/A				
Cinema/Entertainment	N/A	N/A				
Residential	1%	1%				
Hotel	0%	46%				

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	AM Street Peak Hour

	•	Table 7-A: Conv	ersion of Vehicle-1	rip Ends to Person-Trip	Ends		
	Tab	le 7-A (D): Enter	ing Trips		Table 7-A (O): Exiting Trips		
Land Use	Veh. Occ.			Veh. Occ. Vehicle-Trips P		Person-Trips*	
Office	1.00	697	697	1.00	204	204	
Retail	1.00	327	327	1.00	200	200	
Restaurant	1.00	0	0	1.00	0	0	
Cinema/Entertainment	1.00	0	0	1.00	0	0	
Residential	1.00	2341	2341	1.00	7143	7143	
Hotel	1.00	97	• 97	1.00	-68	68	

	Table 8-A (	O): Internal Pe	rson-Trip Origin-	Destination Matrix (Compute	d at Origin)	
				Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		57	129	0	2	0
Retail	58		26	0	28	0
Restaurant	0	0	- things	0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	143	71	1429	0		0
Hotel	51	10	6	0	0	

	Table 8-A (D):	Internal Perso	n-Trip Origin-De	stination Matrix (Computed	at Destination)					
		Destination (To)								
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel				
Office	11,56,465	105	0	0	0	0				
Retail	28	1.40 (364.)	0	0	47	0				
Restaurant	98	26	11 11 11 11 11	0	117	4				
Cinema/Entertainment	0	0	0	du distribution	0	0				
Residential	21	56	0	0		0				
Hotel	21	13	0	0	0					

	Ta	ble 9-A (D): Int	ernal and External	Trips Summary (Entering	Trips)		
		Person-Trip Esti	mates		External Trips by Mode*		
Destination Land Use	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>	
Office	70	627	697	627	0	0	
Retail	123	204	327	204	0	0	
Restaurant	0	0	0	0	0	0	
Cinema/Entertainment	0	0	0	0	0	0	
Residential	28	2313	2341	2313	0	0	
Hotel	0	97	97	97	0	0	
All Other Land Uses <sup>3</sup>	0	89	89	89	0	0	

	T	able 9-A (O): Int	ernal and External	Trips Summary (Exiting 1		
		Person-Trip Estin	nates		External Trips by Mode	*
Origin Land Use	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	57	147	204	147	0	0
Retail	56	144	200	144	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	77	7066	7143	7066	0	0
Hotel	31	37	68	37	0	0
All Other Land Uses <sup>3</sup>	0	12	12	12	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

<sup>2</sup>Person-Trips
<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator \*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool								
Project Name:	301 Villages	Organization:	Chindalur Traffic Solutions					
Project Location:	Duval County, FL	Performed By:	Rajesh Chindalur					
Scenario Description:	Phase 01	Date:	8/15/2021					
Analysis Year:	2022 - 2026	Checked By:						
Analysis Period:	PM Street Peak Hour	Date:						

	Developme	nt Data (For Infe	ormation Only)		Estimated Vehicle-Trips <sup>3</sup>	
Land Use	ITE LUCs1	Quantity	Units	Total	Entering	Exiting
Office	510, 710 & 720	675,000	SF	1,018	256	762
Retail	820	750,000	SF	2,414	1,159	1,255
Restaurant				• 0		
Cinema/Entertainment				0		
Residential	210 & 220	15,000	Dwelling Units	10,949	6,898	4,051
Hotel	210	340	Rooms	229	117	112
All Other Land Uses <sup>2</sup>	110	300,000	SF	79	10	69
	anii Bire	100	1990K	14,689	8,440	6,249

Table 2-P: Mode Split and Vehicle Occupancy Estimates									
		Entering Tr	ps		Exiting Trips				
Land Use	Veh. Occ.4	% Transit	% Non-Motorized	Veh. Occ.4	% Transit	% Non-Motorized			
Office									
Retail									
Restaurant									
Cinema/Entertainment									
Residential									
Hotel									
All Other Land Uses <sup>2</sup>									

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)								
				Destination (To)		·		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel		
Office						e de la companya della companya della companya de la companya della companya dell		
Retail		antshila i i						
Restaurant	50746 july 1		200 miles					
Cinema/Entertainment	13/100	11119		S. March		1000 (C)		
Residential								
Hotel						1 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		

		Table 4-P: In	ternal Person-Tri	p Origin-Destination Matrix	(*	
				Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office	7.55	93	0	0	15	0
Retail	25	4.0032	0	0	326	20
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0	1999	0	0
Residential	146	116	0	0		14
Hotel	0	18	0	0	0	1 2 2 2 2 2 2

Table 5-P: Computations Summary										
	Total	Entering	Exiting							
All Person-Trips	14,689	8,440	6,249							
Internal Capture Percentage	11%	9%	12%							
External Vehicle-Trips <sup>5</sup>	13,143	7,667	5,476							
External Transit-Trips <sup>6</sup>	0	0	0							
External Non-Motorized Trips <sup>6</sup>	0	0	0							

Table 6-P: Internal	Trip Capture Percentag	ges by Land Use
Land Use	Entering Trips	Exiting Trips
Office	67%	14%
Retail	20%	30%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	5%	7%
Hotel	29%	16%

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual).

Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>8</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	301 Villages
Analysis Period:	PM Street Peak Hour

	Ŧ	able 7-P: Conver	sion of Vehicle-Tri	p En	ds to Person-Trip En	ds	
	Table	7-P (D): Entering	Trips			Table 7-P (O): Exiting Trips	3
Land Use	Veh. Occ.	Vehicle-Trips	Person-Trips*		Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	256	256		1.00	762	762
Retail	1.00	1159	1159		1.00	1255	1255
Restaurant	1.00	0	0		1.00	0	0
Cinema/Entertainment	1.00	0	0		1.00	0	0
Residential	1.00	6898	6898		1.00	4051	4051
Hotel	1.00	117	117	Г	1.00	112	112

. =	Table 8-P (C	)): Internal Pers	on-Trip Origin-De:	stination Matrix (Computed	at Origin)	
				Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office	3.4	152	30	0	15	0
Retail	25		364	50	326	63
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	162	1701	851	0		122
Hotel	0	18	76	0	2	

	Table 8-P (D):	Internal Person	-Trip Origin-Desti	nation Matrix (Computed at	Destination)	
				Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		93	0	0	276	0
Retail	79	113,447,411	0	0	3173	20
Restaurant	77	580		0	1104	83
Cinema/Entertainment	15	46	0		276	1
Residential	146	116	0	0	ng ang ng n	14
Hotel	0	23	0	0	0	dauth.

	Tab	le 9-P (D): Intern	al and External Tr	ips S	ummary (Entering Tri	ps)	
	Po	erson-Trip Estimat	es			External Trips by Mode	·
Destination Land Use	Internal	External	Total	ΙT	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	171	85	256		85	0	0
Retail	227	932	1159		932	0	0
Restaurant	0	0	0	ΙΓ	0	0	0
Cinema/Entertainment	0	0	0	1 [	0	0	0
Residential	341	6557	6898	1 [	6557	0	0
Hotel	34	83	117	1 🗀	83	0	0
All Other Land Uses <sup>3</sup>	0	10	10	lГ	10	0	0

	Ta	ble 9-P (O): Interr	nal and External T	rips Summary (Exiting Tri	ps)	
	Pe	erson-Trip Estimat	es		External Trips by Mode	·
Origin Land Use	Internal	External	Total	Vehicles <sup>1</sup>	Transit <sup>2</sup>	Non-Motorized <sup>2</sup>
Office	108	654	762	654	0	0
Retail	371	884	1255	884	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	276	3775	4051	3775	0	0
Hotel	18	94	112	94	0	0
All Other Land Uses <sup>3</sup>	0	69	69	69	0	0

<sup>1</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

<sup>2</sup>Person-Trips

<sup>3</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator \*Indicates computation that has been rounded to the nearest whole number.

# Attachment E

Socio-Economic Data Variables

Appendix - E
301 Villages - Documentation of ZDATA Variables Used for Project Traffic Distribution

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Tre Trails Trip Generation

Parcel	LUC	Size	Unit	ADT					AM					PM				NE	W PM PH	Г
					Passby		Enter (%)	Exit (%)	Enter	Exit	Total	Enter (%)	Exit (%)	Enter	Exit	Total	Passby	Enter	Exit	Total
Α	210	48	SFDU	529	0%	529	25%	75%	10	29	39	63%	0%	31	19	50	0%	31	19	50
В	820	180,000	SF	8,966	34%	5,918	62%	38%	150	92	242	48%	52%	402	437	839	34%	265	288	554
C	820	30,000	SF	2,651	34%	1,750	62%	38%	103	64	167	48%	52%	107	116	223	34%	71	77	147
D	210	744	SFDU	6,588	0%	6,588	25%	75%	133	400	533	63%	0%	439	259	698	0%	439	259	698
Ε	210	804	SFDU	7,076	0%	7,076	25%	75%	144	432	576	63%	0%	473	278	751	0%	473	278	751
F	820	20,000	SF	2,012	34%	1,328	62%	38%	100	62	162	48%	52%	79	86	165	34%	52	57	109
G	210	222	SFDU	2,166	0%	2,166	25%	75%	40	122	162	63%	0%	137	81	218	0%	137	81	218
Н	210	1,850	SFDU	15,231	0%	15,231	25%	75%	329	989	1318	63%	0%	1053	619	1672	0%	1,053	619	1,672
1	210	1,097	SFDU	9,417	0%	9,417	25%	75%	196	588	784	63%	0%	638	375	1013	0%	638	375	1,013
J	210	78	SFDU	827	0%	827	25%	75%	15	45	60	63%	0%	50	30	80	0%	50	30	80
K	210	7	SFDU	90	0%	90	25%	75%	2	8	10	63%	0%	5	3	8	0%	5	3	8
				55,553		50,919			1,222	2,831	4,053			3,414	2,303	5,717		3,214	2,086	5,300

Source: City of Jacksonville, Planning Department





### **MEETING SUMMARY**

### The Trails PUD | SR 228 Corridor Study

December 7, 2020 2:00 PM - 2:31 PM

COJ: Laurie Santana, Soliman Salem, John Kolczynski

FDOT: Scott Clem, Brian Austin

Attendees: Benesch: Martha Moore

Absent: Chris LeDew, Tom Cavin

#### **DISCUSSION ITEMS:**

### 1. Status of data collection and study

Martha Moore: The study limits are SR 228 from US 301 to SR 23. At the request of Scott Clem, we also included the intersection of SR 134 (103<sup>rd</sup> St) at POW-MIA Pkwy (fka New World Ave) and at SR 23.

The turning movement counts (TMCs) were conducted on September 23, 2020. Pre Covid volume counts (February 2020) on SR 228 were obtained from FDOT. These counts were in proximity to the proposed count locations in the scope and were used in lieu of new counts.

A TMC was taken at the SR 228 and Winding Mare Blvd intersection, which is the entrance to the Winchester Ridge subdivision. The directional distribution will be used to assign traffic from The Trails project; counts indicate that 85%-90% of trips will originate to the east.

Scott Clem stated that he is comfortable with the study area, which focuses on SR 228 and not US 301. He also stated that traffic from The Trails will head east to reach I-10 rather than west.

### 2. Covid adjustment for traffic counts

Martha Moore: The date of the TMCs is after the start of school and two days prior to the declaration by Governor Ron DeSantis of the beginning of the Phase 3 of the Reopening Plan on September 25, 2020. As per a prior discussion with Tom Cavin, FDOT is not requiring Covid adjustment in Phase 3. This means that the study counts are likely close to baseline. As a check for the validity of the count data, Benesch compared the peak hours and volumes from the pre-Covid FDOT SR 228 counts to the study counts.



- AM The AM peak hours counted occurred 15-30 minutes later than the pre-Covid AM peaks. The Benesch counts were an average of 16% lower than the FDOT pre-Covid counts so all the AM counts will be adjusted up by 16%.
- PM The Benesch SR 228 counts were an average of 7% higher than the FDOT pre-Covid counts. The PM peak hour was similar as well. No adjustment is proposed in the PM.

Laurie Santana: Summarize and discuss the methodology with Chris LeDew, since he is not in the meeting.

[UPDATE FROM MARTHA] Martha and Chris discussed the methodology on December 31, 2020. Chris is agreeable to it.

#### 3. Socioeconomic data included in NERPM.

Soliman Salem confirmed that The Trails data is in the NERPM-AB.

### 4. Status of I-10/US 301 development (301 Capital Partners) FLUM

Soliman Salem confirmed that the Prosser plan (attached) is not in the NERPM-AB.

Scott Clem: Some level of development, maybe not all, for 301 Villages should be included in the socioeconomic data. How much is the decision of the City.

Laurie Santana will check with Bill Killingsworth and forward the information. Soliman has a tool to edit the DAYSIM files and will coordinate with Benesch on how to use it.

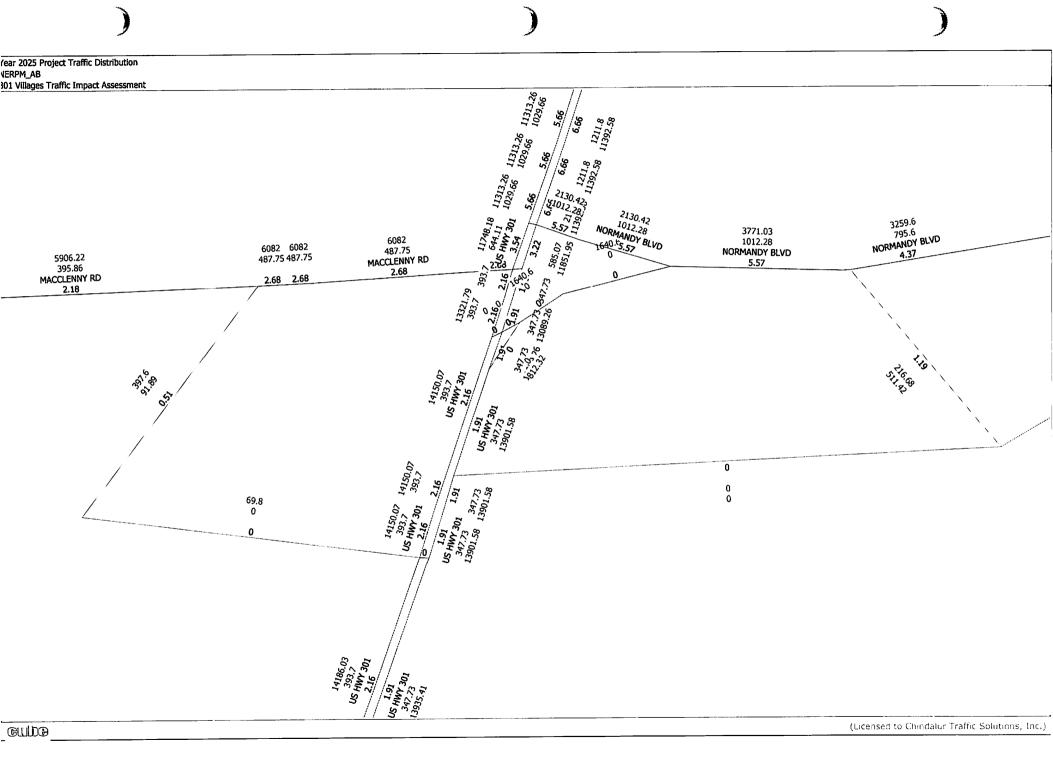
[UPDATE FROM LAURIE] Bill Killingsworth wants all the 301 Village development included. As per Scott Clem, the interchange with I-10 will not be added to the model.

# Attachment F

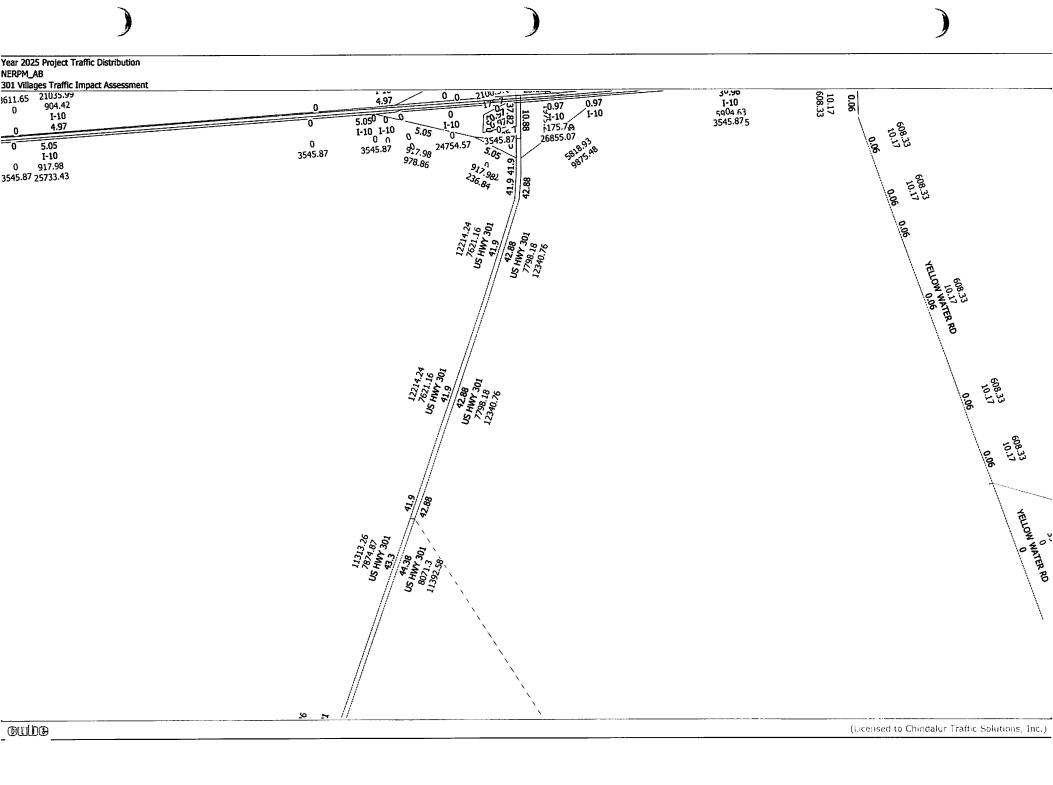
NERPM\_Abv3 Travel Demand Model Plots

## Attachment F1

Year 2025 NERPM\_Abv3 Travel Demand Model Plots

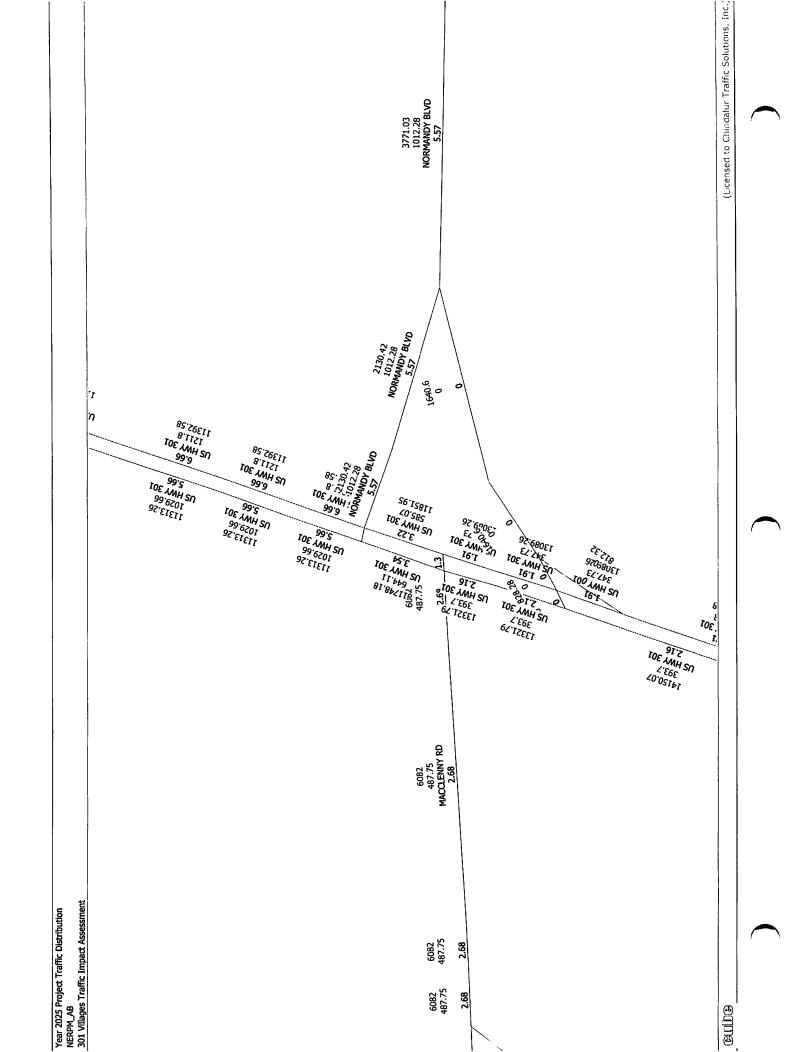


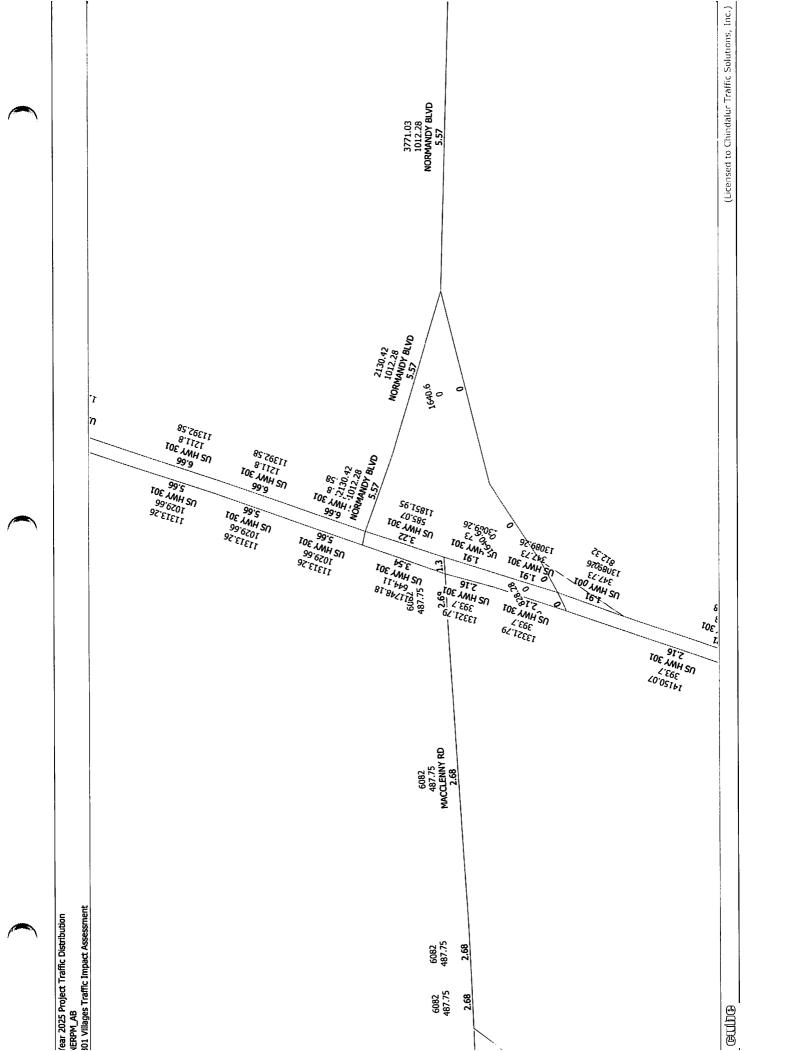
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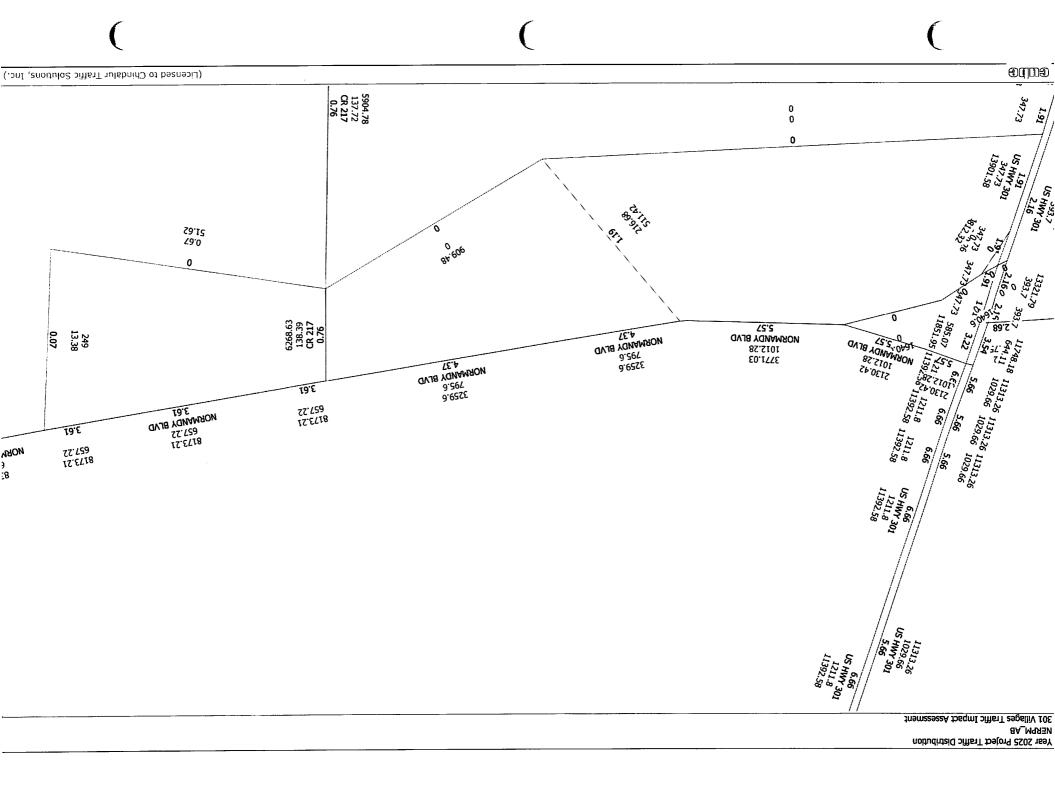


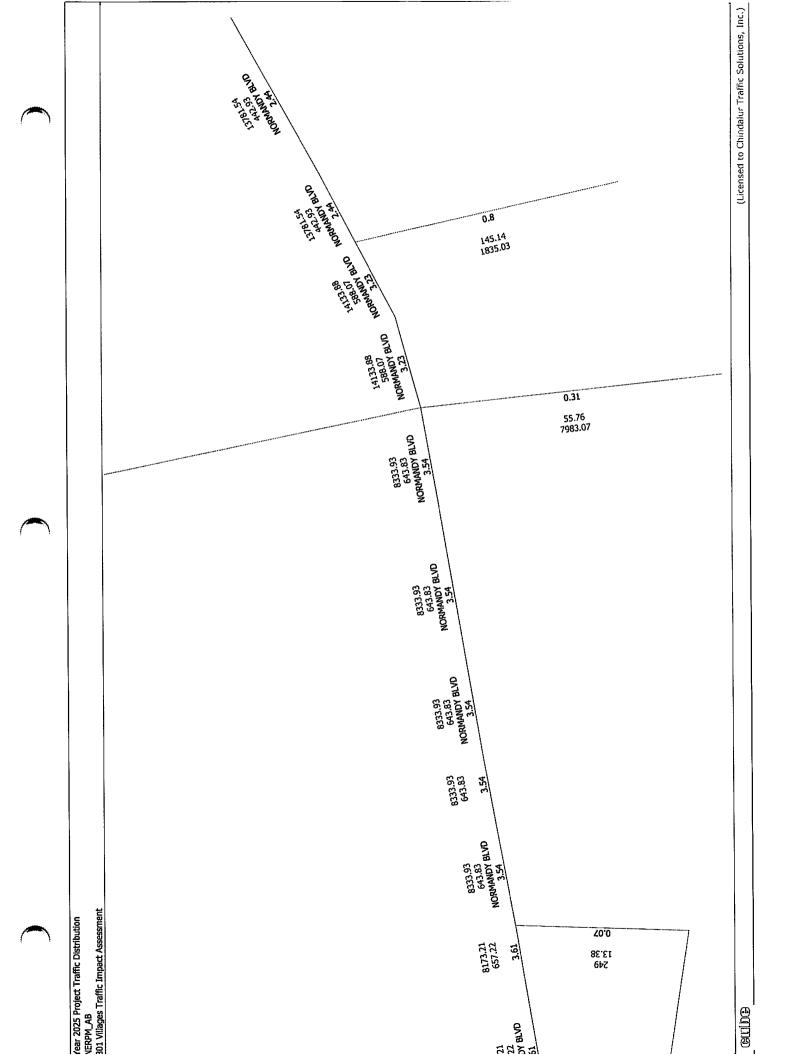
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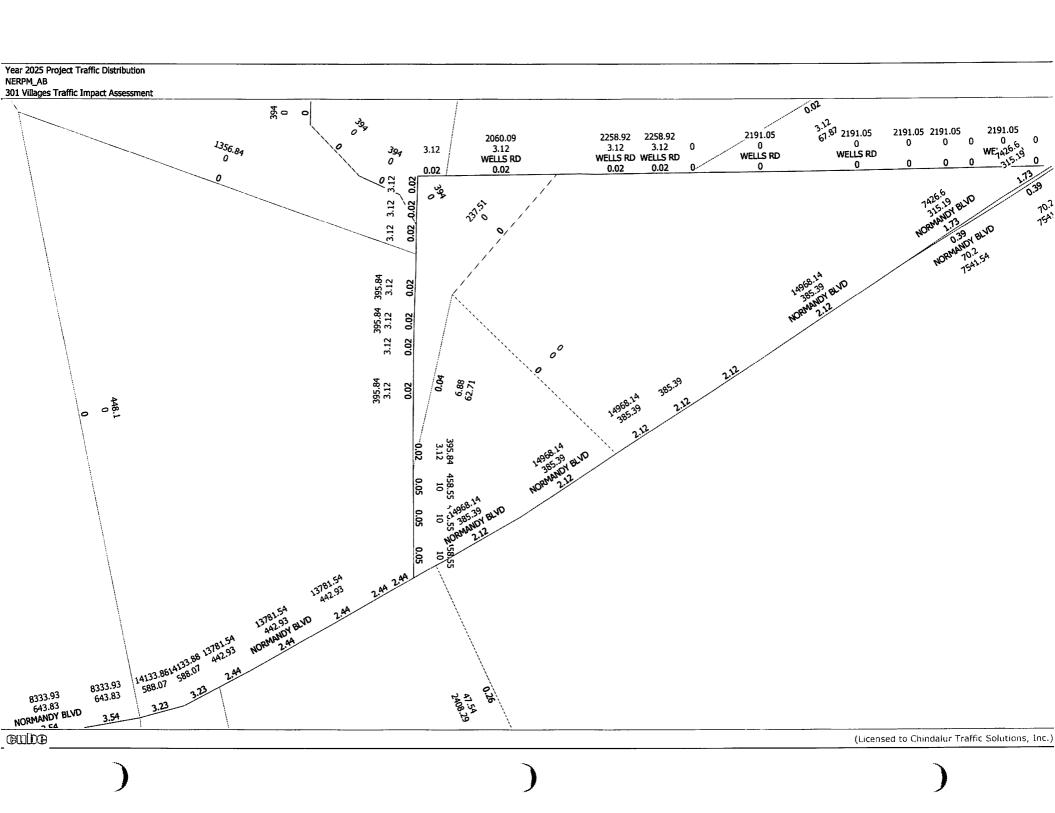
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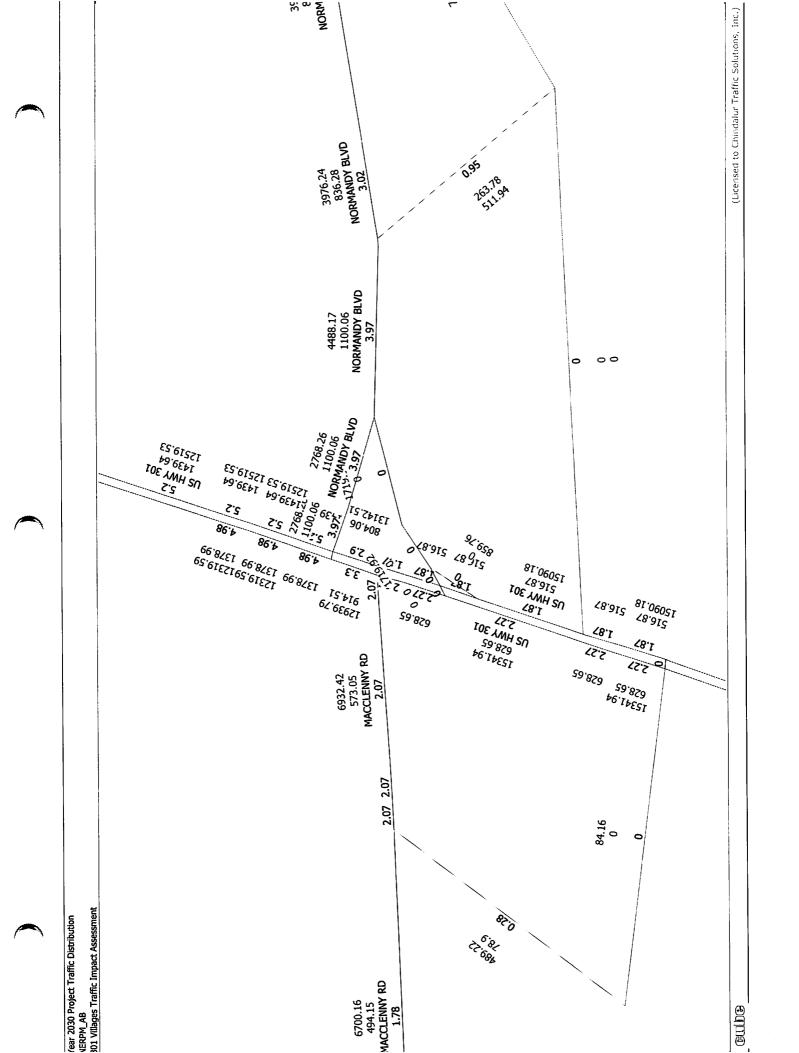
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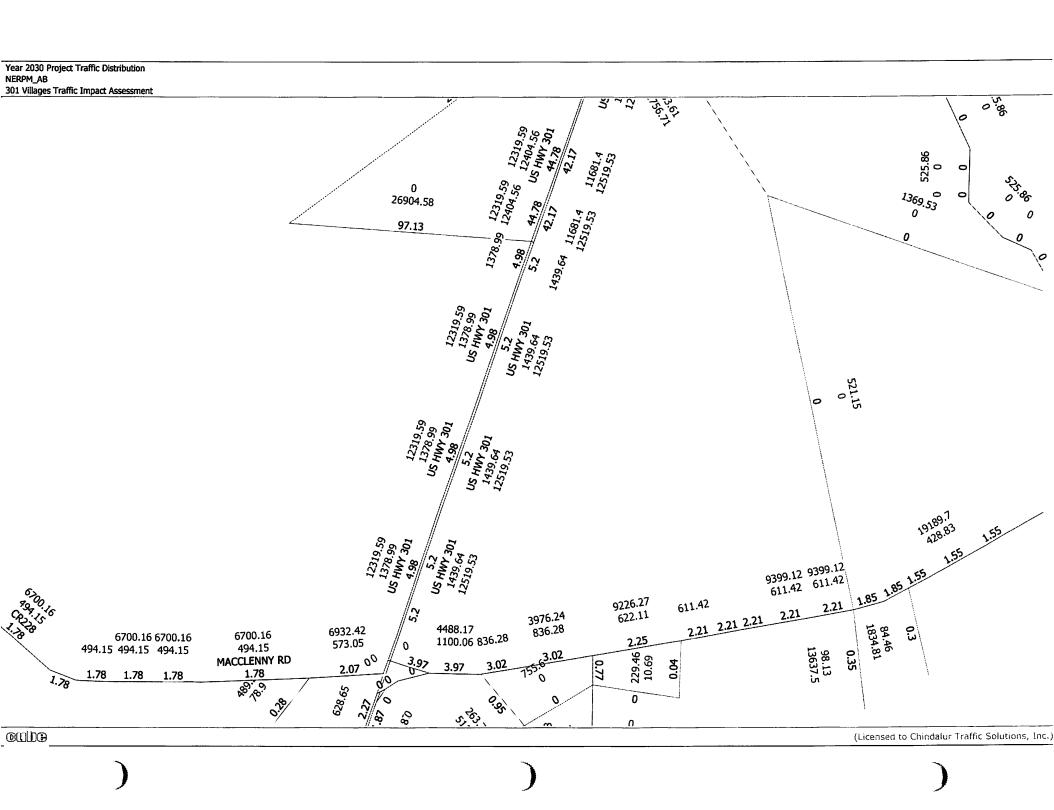
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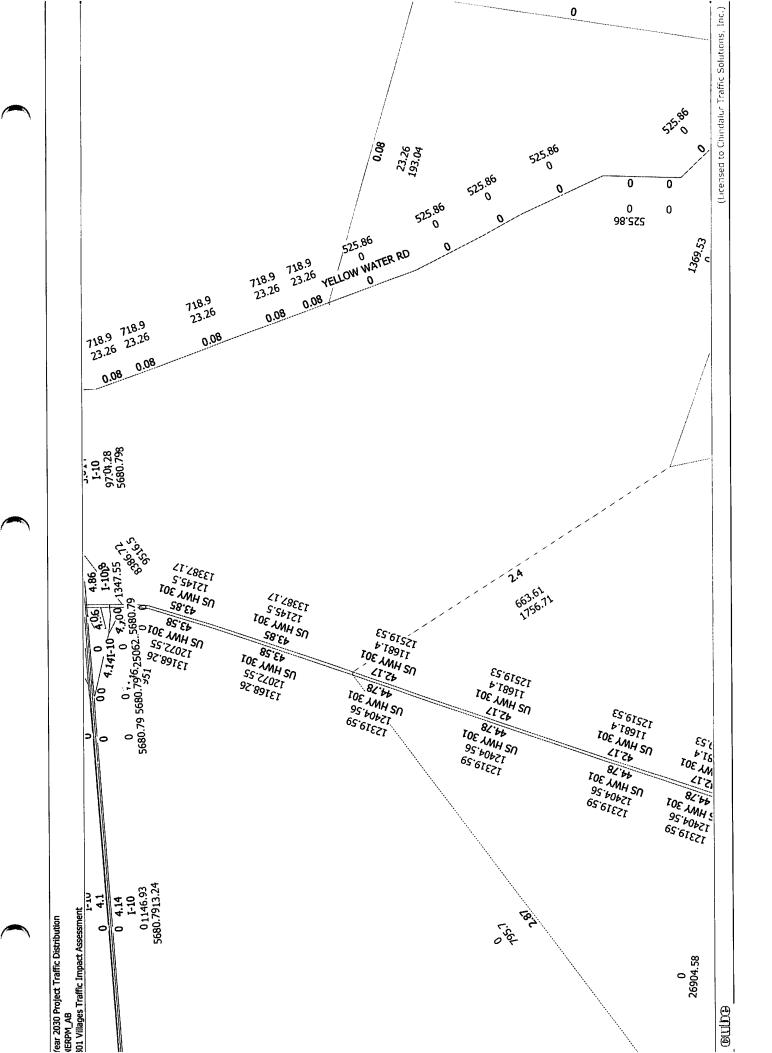
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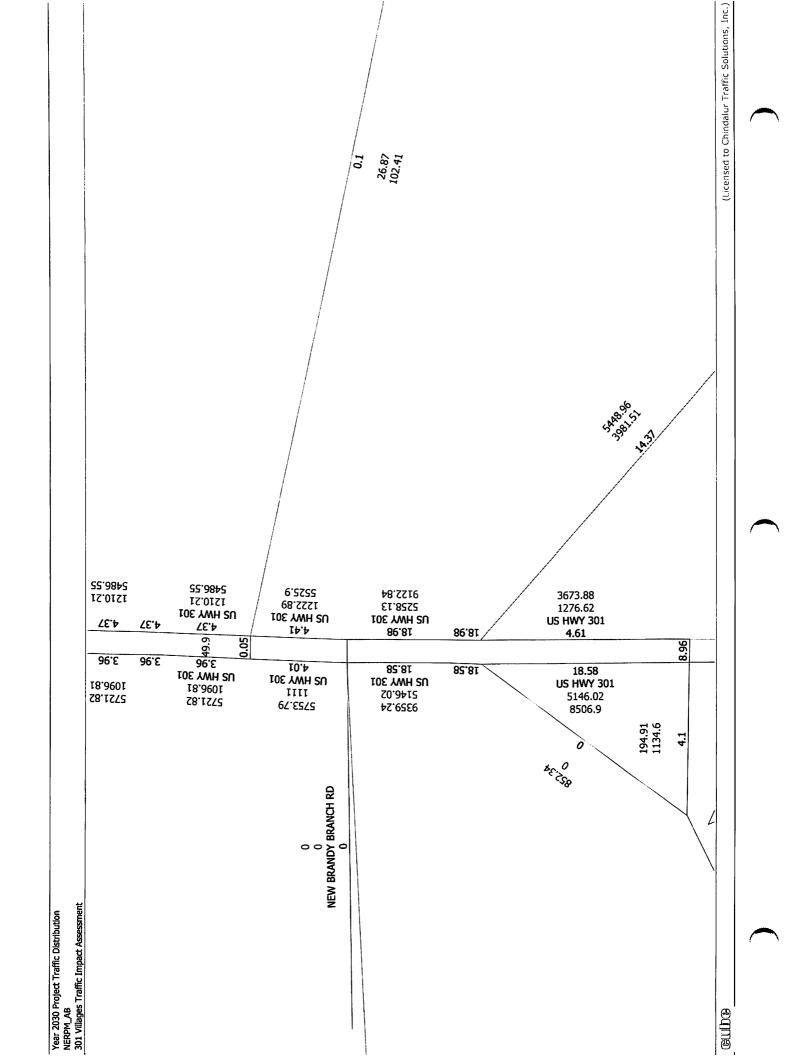
# Attachment F2

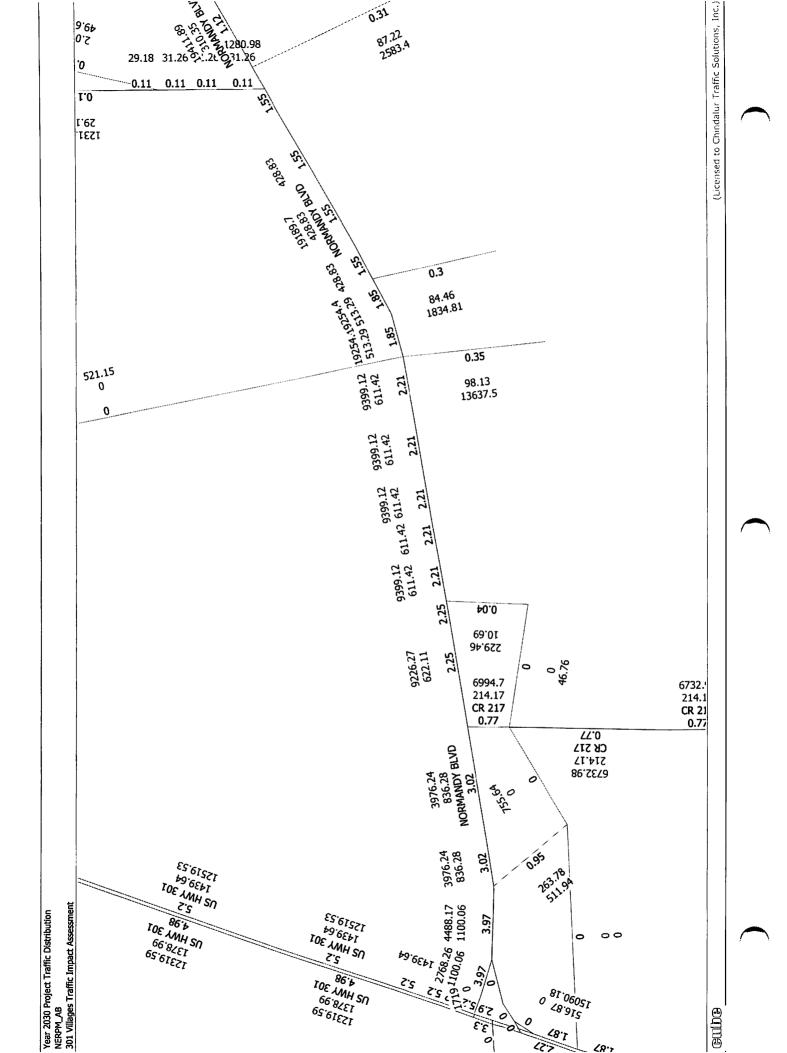
Year 2030 NERPM\_Abv3 Travel Demand Model Plots

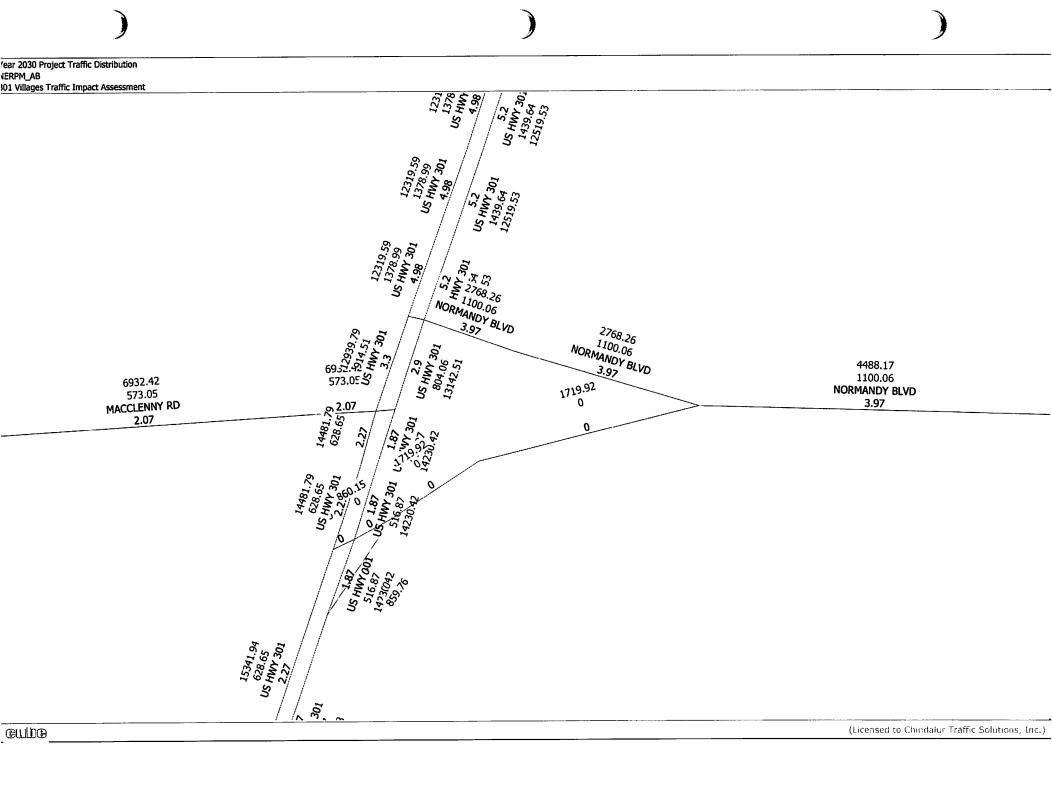


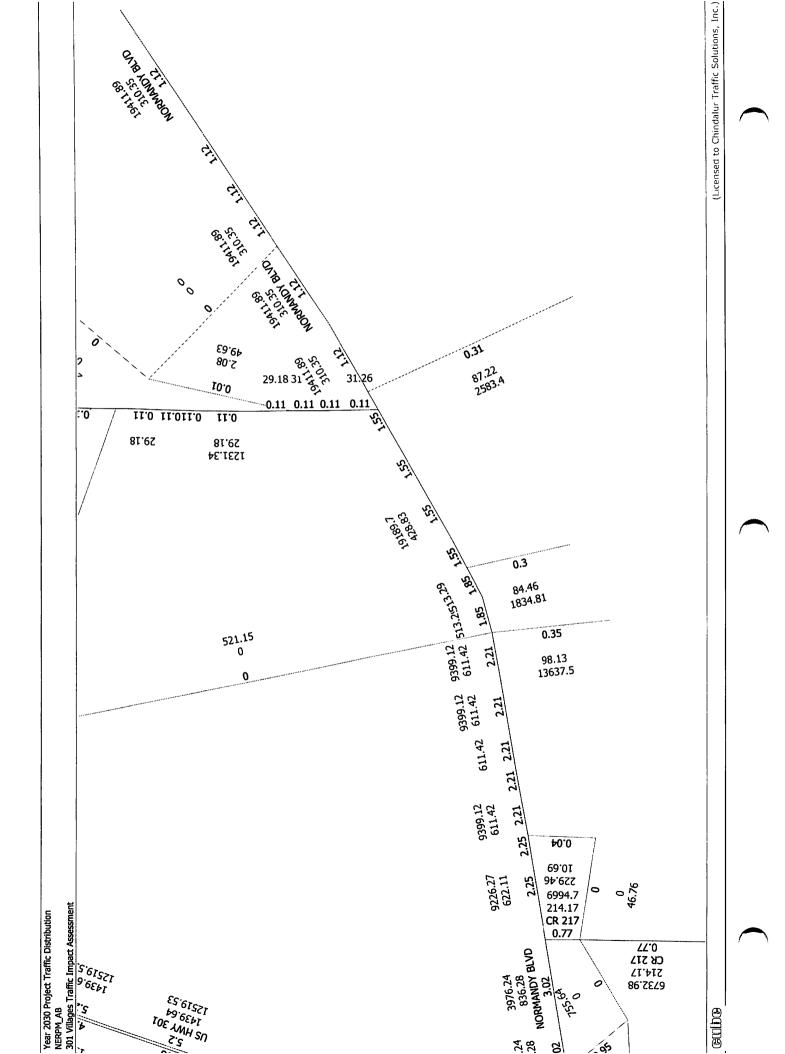


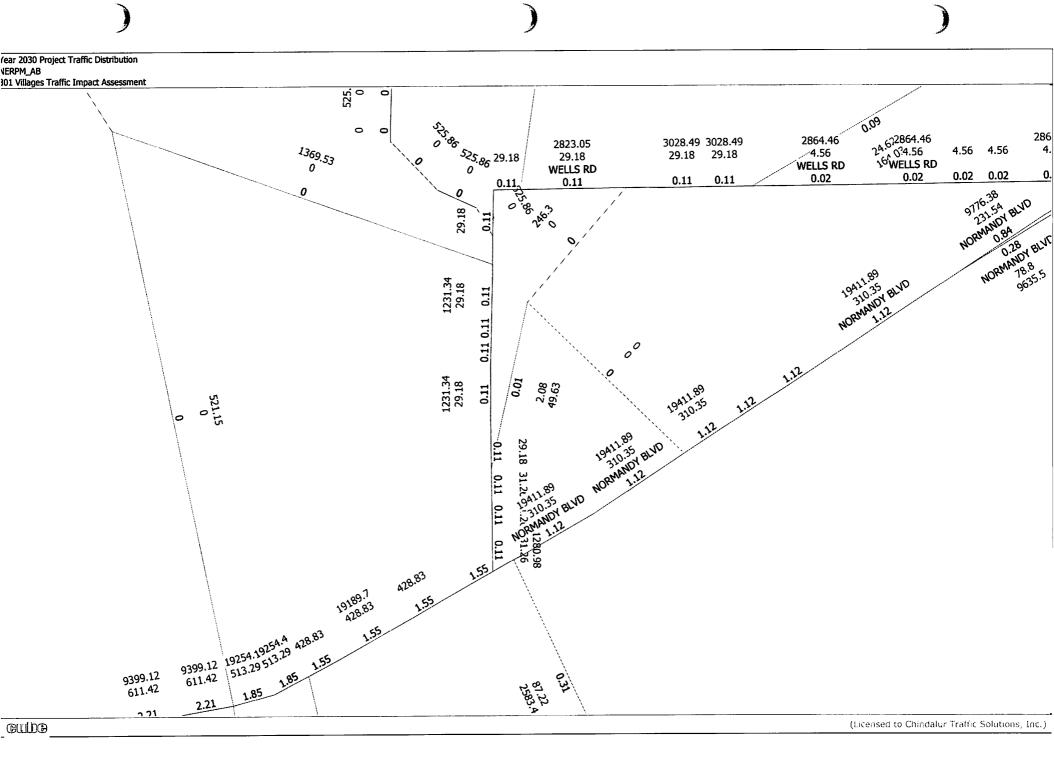












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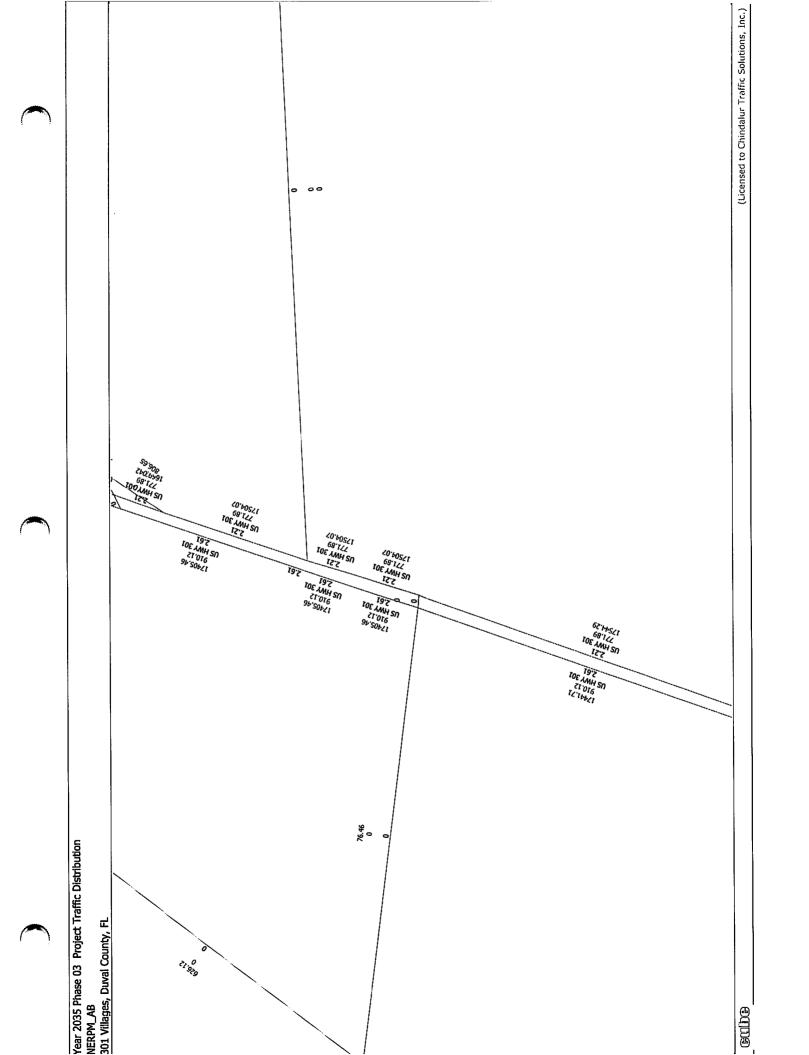
2006 52 1200 73 1200 7	2030 Project Traffic Distribution	
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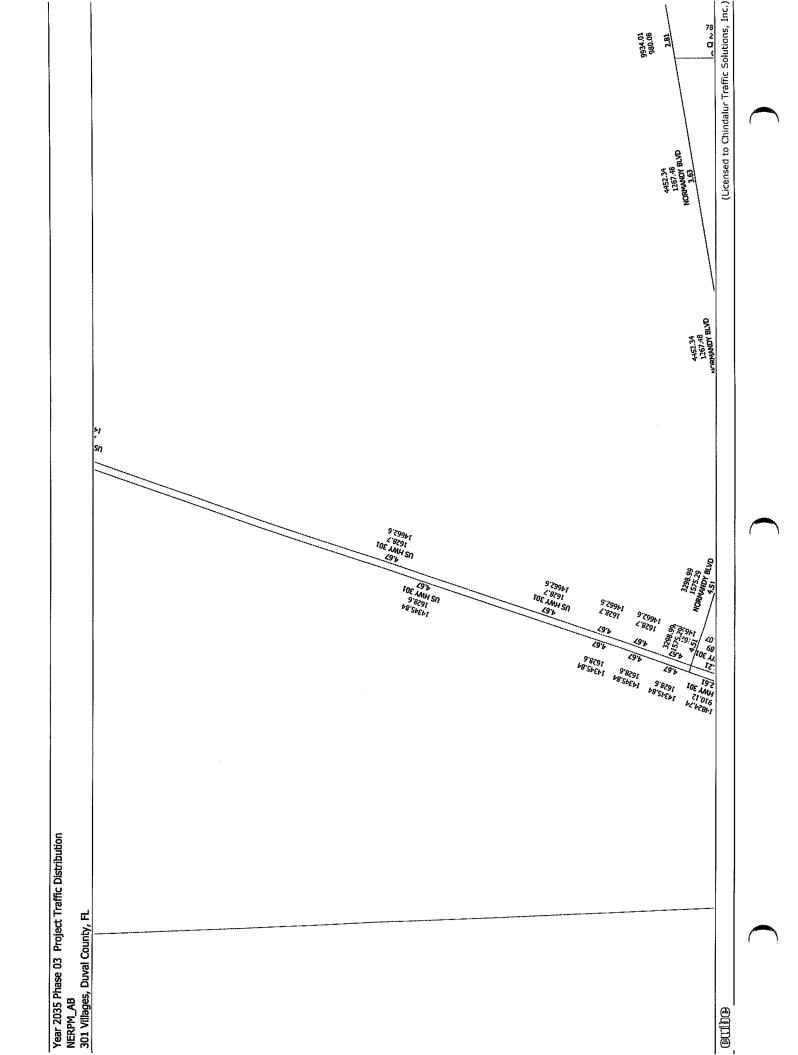
Year 2030 Project Traffic Distribution NERPM_AB 301 Villages Traffic Impact Assessment		
9359.58 986.63 3,56	5.61 1552.83 15127.99	41872.05 7798.56 1-10 28.15 25.6 1-10 7092.25 3807.14
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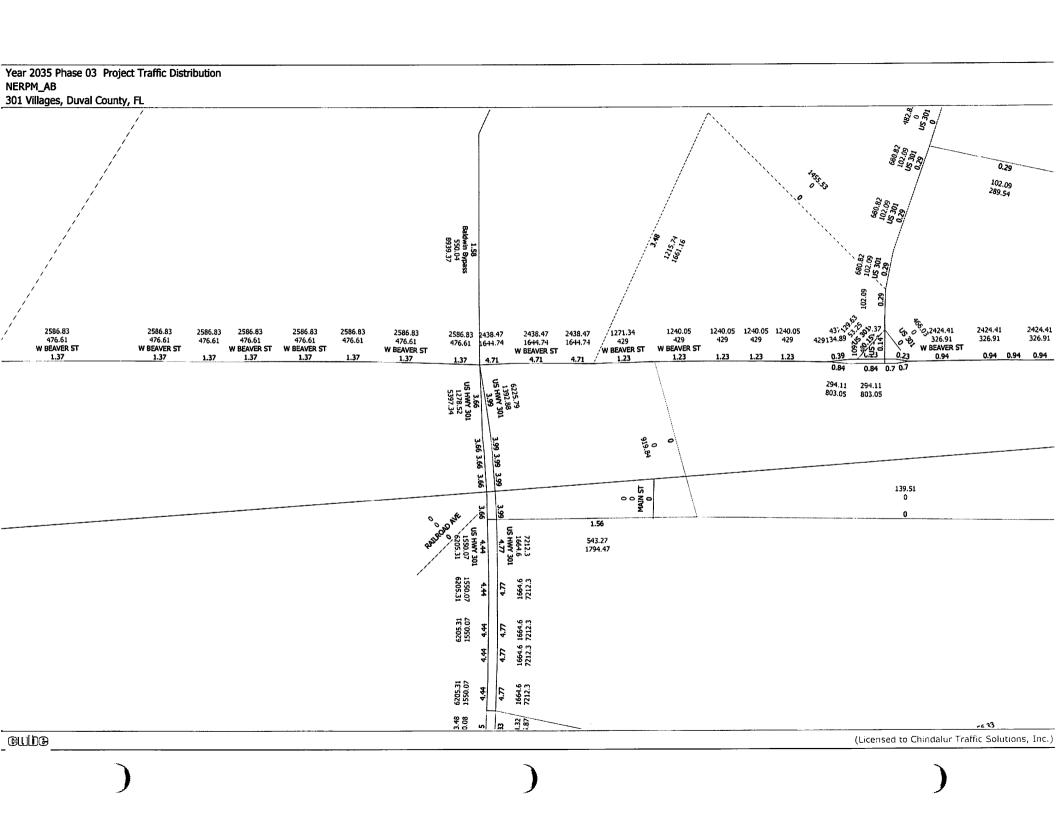
## Attachment F3

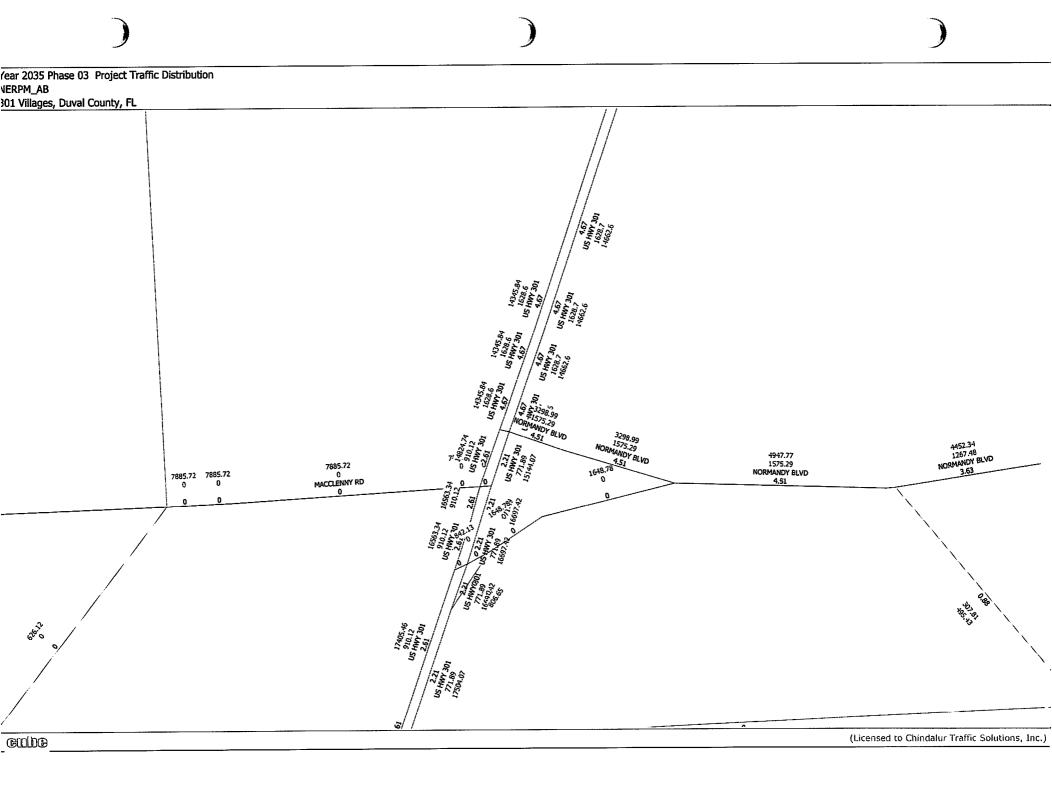
Year 2037 NERPM\_Abv3 Travel Demand Model Plots

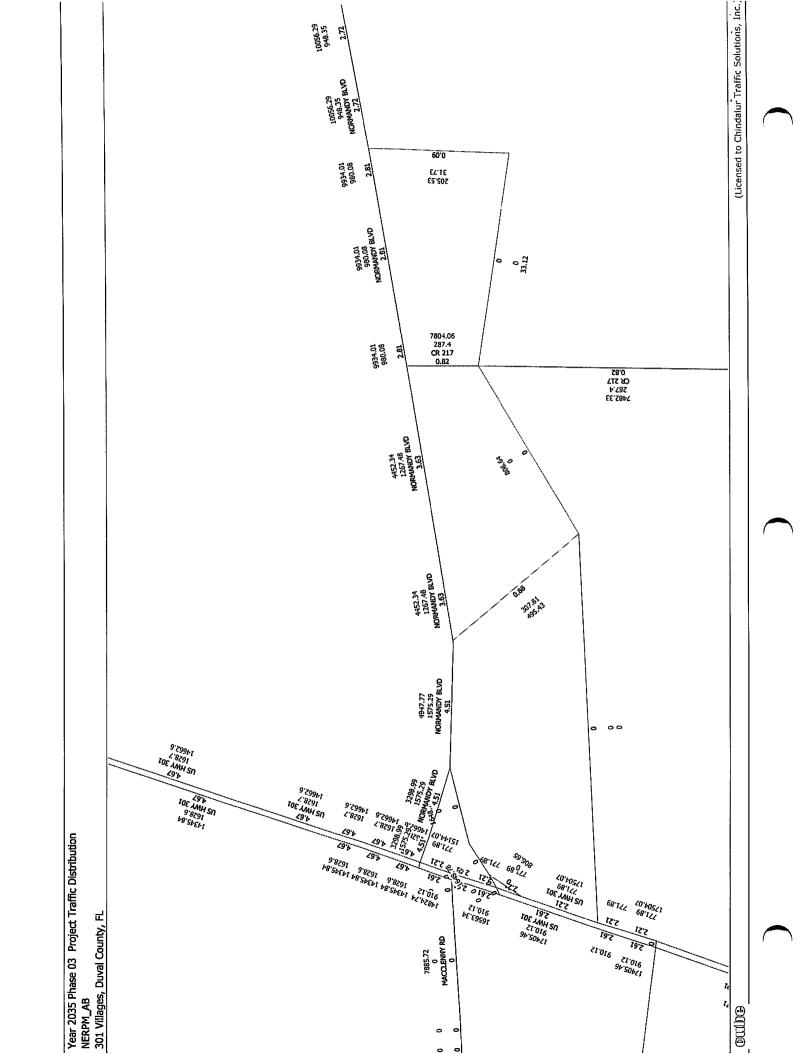


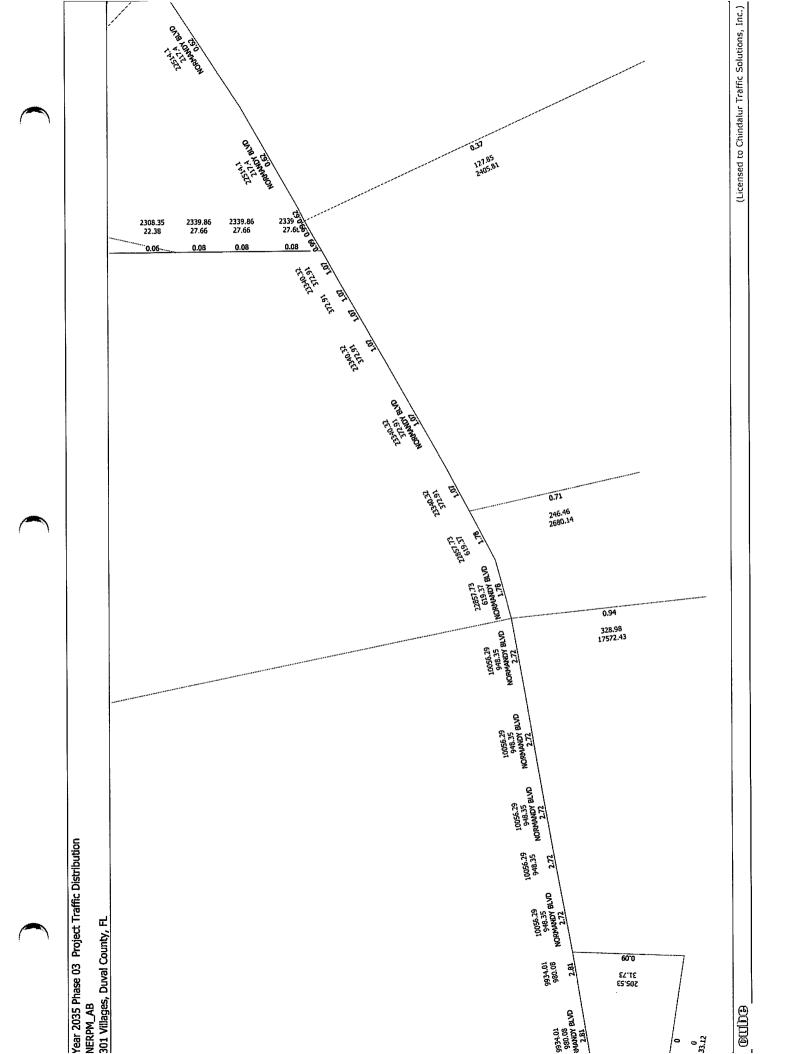


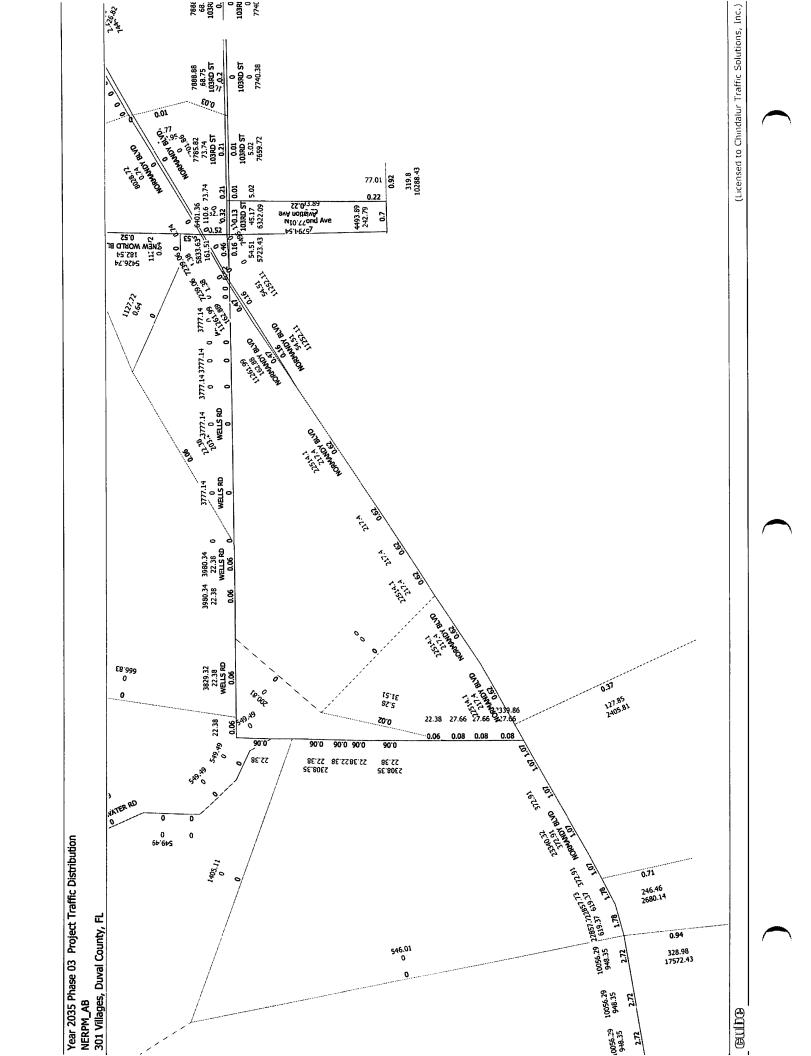
Year 2035 Phase 03 Project Traffic Distribution NERPM_AB		
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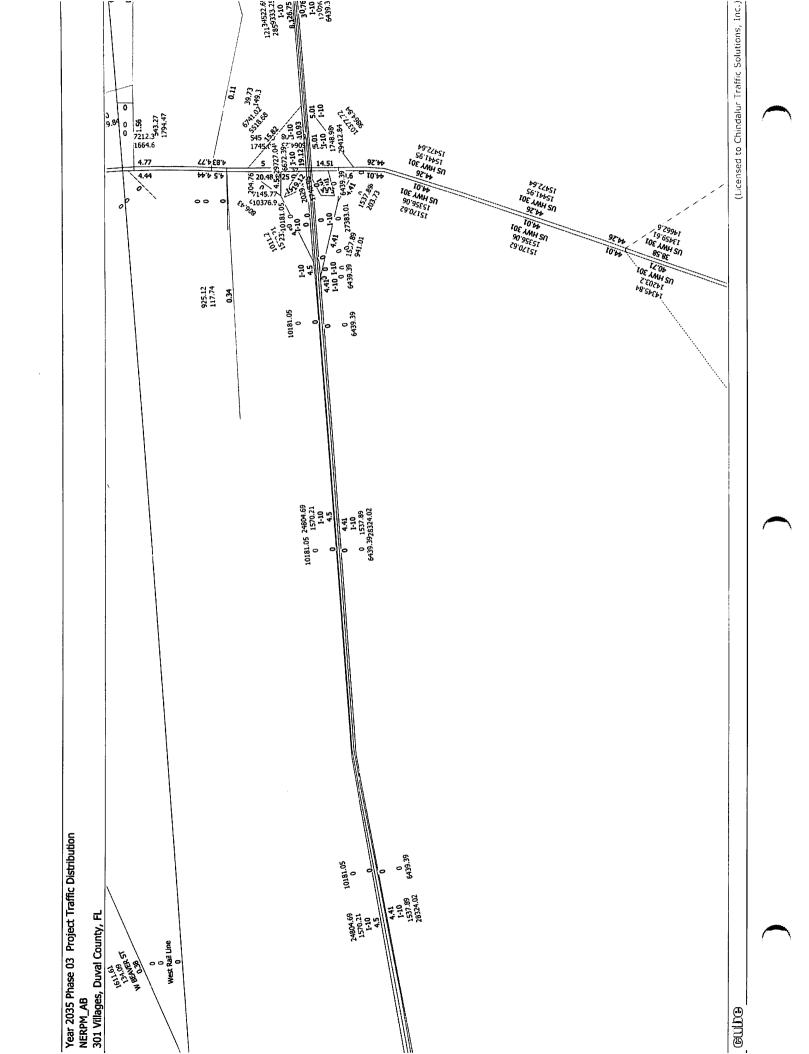








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Vear 2035 Phase 03 Project Traffic Distribution NERPM_AB 301 Willages, Duval County, FL  1915 State of	GILLIO	



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	10181.05 24804.69 1570.21 0 1-570.21 0 4.5 0 4.41 0 1-10 0 1537.89 6439.3928324.02		
Year 2035 Phase 03 Project Traffic Distribution NERPM_AB 301 Villages, Duval County, FL  191,61 191,64 191,	24804.69 10181.05 1570.21 1570.0 4.5 0 4.4 141 1571.39 6439.39	28324,02	

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		)
Year 2035 Phase 03 Project Traffic Distribution NERPM_AB 301 Villages, Duval County, FL		
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enthe		(Licensed to Chindalur Traffic Solutions, Inc.)

# Attachment G

FDOT D2 Long Range Cost Feasible Plan FY 2029 - 2045





### STRATEGIC INTERMODAL SYSTEM · Long Range Cost Feasible Plan · FY 2029 · 2045



			Design			Right of Way / Construction			P3 Funds			Other Funds	IMPRV
ID FACIL	ITY FROM	то	PDE	PE	TOTAL	ROW	CON	TOTAL	COST	Begin Yr	#Yrs	TOTAL	TYPE
965 I-10	W of SR-121	Nassau C/L		4,250	4,250	921	135,510	136,431					MGLANE
3303 1-10	SR-23	1-295		21,250	21,250	3,950	433,542	437,492				- 69	MGLANE
950 I-10	US-301	SR 23-Cecil Commerce Ctr Pkwy		10,250	10,250	- 0	266,968	266,968				- 69	MGLANE
3309 1-10	at SR-121			5,000	5,000	5,000	29,932	34,932					M-INCH
946 1-10	W of CR-125	W of SR-121		5,050	5,050	5,391	125,873	131,264				- 0	MGLANE
947 1-10	Baker C/L	Duval C/L		860	860	2,900	31,287	34,187					MGLANE
948 1-10	Duval C/L	US-301		- 0		3,588	128,645	132,233				- 0	MGLANE
1167 1-295	N of Commonwealth	N of New Kings Rd		3,450	3,450	2,699	90,268	92,967					MGLANE
3261 1-295	1-95	Southside Connector/SR-113		126,781	126,781								MGLANE
1169 1-295	N of Collins Rd Interchange	N of Commonwealth	750	3,765	4,515	16,204	486,269	502,473					MGLANE
1168 1-295	N of New Kings Rd	S of I-95 N Interchange		16,538	16,538	3,785	382,345	386,130					MGLANE
1154 1-75	at SR-121 (Williston Rd)					8,136	14,629	22,765					M-INCH
3419 I-75	N of US-90	N of I-10 Interchange	1,515	15,523	17,038								MGLANE
3301 1-75	SR-222 (NW 39th Ave)	US-441 (Alachua)	1,515	13,159	14,674	5,365		5,365					MGLANE
3418 1-75	SR-121 (Williston Rd)	SR-222 (NW 39th Ave)		33,096	33,096	5,789	802,843	808,632					MGLANE
3312 1-75	US 441 (Alachua)	US-41/US-441 Ellisville	1,515	17,936	19,451	1,856		1,856					MGLANE
3314 1-75	US-41/US-441 (Ellisville)	N of US-90	1,515	36,690	38,205	12,055		12,055					MGLANE
3305 1-75	Marion/Alachua County Line	SR-121/Williston Rd		21,253	21,253	5,278	534,742	540,020					MGLANE
3445 1-95	N of SR-115 (MLK)	S of SR-105	1,515	20,937	22,452								MGLANE
3308 1-95	S of Duval Co Line	SR-202 (JT Butler Blvd)		•		11,602	670,829	682,431					MGLANE
3311 1-95	I-10	S of SR-115 (MLK)		12,184	12,184		202,046	202,046					A4-12
3310 1-95	at SR-16	,,		750	750		11,462	11,462					M-INCH
911 SR 26	Gilchrist C/L- CR-337	CR-26A-Newberry Lane					29,454	29,454					A2-4
3302 US 17	Collins Rd	NAS Birmingham Gate		1,125	1,125	1,250	40,052	41,302					A1-AUX

Total CFP Funds= 4,890,637 378,172 4,512,465 **Funded CFP Totals** 

#### LEGEND

FY 2028/2029 - 2034/2035 FY 2035/2036 - 2039/2040 FY 2040/2041 - 2044/2045 Mega Projects Phased Over Time INFLATION FACTORS

FY 2031/32 - 1.474 FY 2037/38 - 1.791

FY 2042/43 - 2.107

#### NOTES

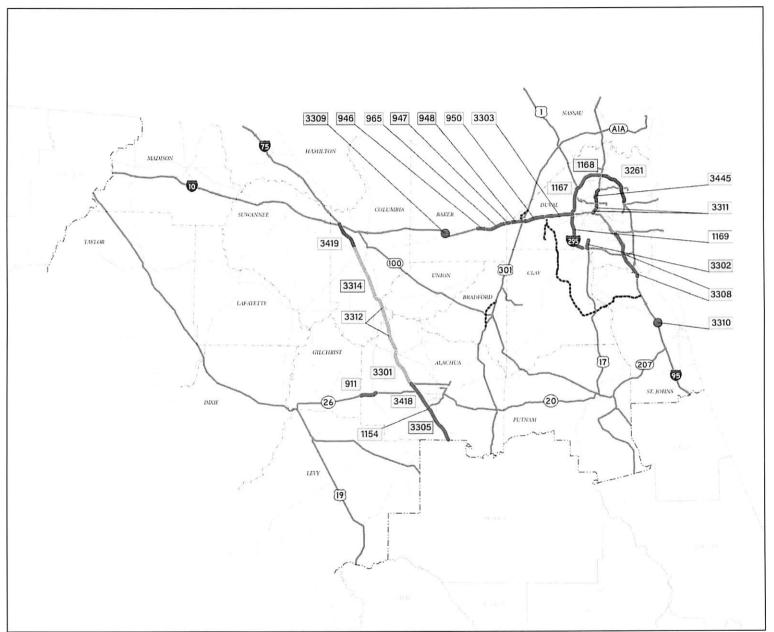
- (1) Values in thousands of dollars in the year of expenditure, inflated to the middle year of each band.
- (2) All phase costs shown as supplied by each District.
  (3) CON includes both Construction (CON52) and Construction Support (CEI).
  (4) ROW includes both Right-of-Way Acquisition/Mitigation (ROW43/45) and Right-of-Way Support.
- "P3 Funds" Used to fund Public-Private Partnership projects over a specified number of years. Revenue forecast provides separate values for PDE and PE than for ROW and CON.
- (7) Other Funds assumed to be toll revenue or partner funded.

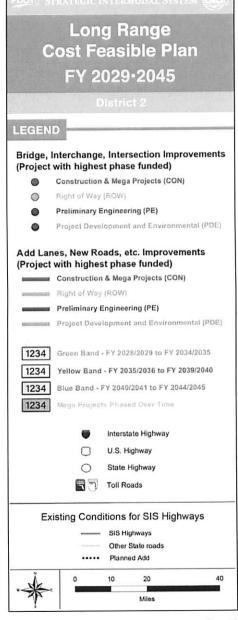
#### IMPROVEMENT TYPES

A1-3: Add 1 Lane to Build 3 A2-4: Add 2 Lanes to Build 4 A2-6: Add 2 Lanes to Build 6 A2-8: Add 2 Lanes to Build 8 A4-12: Add 4 Lanes to Build 12 A1-AUX: Add 1 Auxilliary Lane A4-SUL: Add 4 Special Use Lanes

ACCESS: Access BRIDGE: Bridge FRTCAP: Freight Capacity GRASEP: Grade Separation HWYCAP: Highway Capacity PTERM: Passenger Terminal ITS: Intelligent Transp. Sys MGLANE: Managed Lanes

M-INCH: Modify Interchange N-INCH: New Interchange NR: New Road PDE: Project Dev. Env. SERVE: Add Svc/Front/CD System STUDY: Study UP: Ultimate Plan





Florida Department of Transportation • Systems Implementation Office