CITY OF TITUSVILLE
PLANNING AND ZONING COMMISSION/LOCAL PLANNING AGENCY
NOTICE OF REGULAR MEETING
September 18, 2024
555 S. Washington Avenue Titusville, Florida 32796
City Hall Council Chamber
6:00 PM

Notice

All persons who anticipate speaking on any Public Hearing item must fill out an Oath Card to be heard on that agenda item and sign the oath contained thereon. These cards are located on the table near the entrance to the Council Chamber or may be obtained from the Recording Secretary. This meeting will be conducted in accordance to the procedures adopted in Resolution #24-1997

Those speaking in favor of a request will be heard first, those opposed will be heard second, and those who wish to make a public comment on the item will speak third. The applicant may make a brief rebuttal if necessary. A representative from either side, for or against, may cross-examine a witness.

Anyone who speaks is considered a witness. If you have photographs, sketches, or documents that you desire for the Commission to consider, they must be submitted into evidence and will be retained by the City. Please submit such exhibits to the Recording Secretary.

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1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. DETERMINATION OF A QUORUM

5. APPROVAL OF MINUTES

A. Minutes August 21, 2024
Approve Minutes

6. QUASI-JUDICIAL CONFIRMATION PROCEDURES

7. CONSENT AGENDA ITEMS

8. OLD BUSINESS

9. NEW BUSINESS

A. Small Scale Amendment (SSA) No.1-2024 - SR405 & Singleton Avenue PD NORTH

Conduct the public hearing and make recommendation on Small Scale Comprehensive Plan Amendment (SSA 1-2024).

Recommend approval of SSA 1-2024 to amend the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 5.01+/- acres of property; Commercial High Intensity to Conservation on 0.49+/- acres of property; and from Conservation to Low Density Residential on 0.63+/- acres of property; and Commercial High Intensity to Low Density Residential on 9.05+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752. This ordinance is a legislative item.

Recommend approval of the rezoning from General Use (GU) zoning district to the Planned Development (PD) zoning district on 8.11+/- acres of property; the Neighborhood Commercial (NC) zoning district to the Planned Development (PD) zoning district on 9.55+/- acres of property; the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.63+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752 and master plan and conditions of approval as described in the rezoning ordinance:

1. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].
2. Side setbacks will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD [1.8(g)].
3. The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(b)].
4. Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].
5. Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].

_This ordinance is quasi-judicial.

The City Council will hear this agenda item on October 8, 2024.

B. Small Scale Amendment (SSA) No.2-2024 - SR405 & Singleton Avenue PD SOUTH

Conduct the public hearing and make recommendation on Small Scale Comprehensive Plan Amendment (SSA 2-2024).

Recommend approval of SSA 2-2024 to amend the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 11.25+/- acres of property and from Conservation to Low Density Residential on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759; and 22-35-05-00-760. This ordinance is a legislative item.

Recommend approval of the rezoning from the General Use (GU) zoning district to the Planned Development (PD) zoning district on 27.99+/- acres of property; and the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760 with master plan and conditions of approval as described in the rezoning ordinance:
1. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].
2. Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers shall be preserved with the submittal of the sketch plat [1.11(a)].
3. The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(c)].
4. Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].
5. Direct Impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].
This ordinance is quasi-judicial.

The City Council will hear this agenda item on October 8, 2024.

C. Comprehensive Plan Amendment (CPA) No. 1-2024 Future Land Use, Transportation and Housing Elements, Downtown and Gateways Objectives, Policies and Strategies and new City-wide Element

Conduct the public hearing and recommend approval of Comprehensive Plan Amendment (CPA) No. 1-2024 Future Land Use, Transportation and Housing Elements, Downtown and Gateways Objectives, Policies and Strategies and new City-wide Element

The public hearing is scheduled to be held by the City Council on October 8, 2024, beginning at 6:30 PM.

D. Titusville Plain Language Initiative

Consider a recommendation to City Council regarding a plain language initiative.

10. PETITIONS AND REQUESTS FROM PUBLIC PRESENT AND PRESS

11. REPORTS

(a) CITY STAFF

(b) CITY ATTORNEY

(c) CHAIRPERSON

(d) MEMBERS

12. ADJOURNMENT

Any person who decides to appeal any decision of the Planning and Zoning Commission with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

The City desires to accommodate persons with disabilities. Accordingly, any physically handicapped person, pursuant to Chapter 286.26 Florida Statutes, should at least 48 hours prior to the meeting, submit a written request to the chairperson of the meeting that the physically handicapped person desires to attend.

City of Titusville

"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Planning and Zoning Commission Members

From: Brad Parrish, Community Development Director

Subject: Minutes August 21, 2024

Department/Office:

Recommended Action:

Approve Minutes

Summary Explanation & Background:

Alternatives:

Item Budgeted:

Source/use of funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

Description	Upload Date	Type
Minutes August 21, 2024	9/12/2024	Backup Material

The Planning and Zoning Commission (P&Z) of the City of Titusville, Florida met in regular session in City Hall Council Chamber located at 555 South Washington Avenue on Wednesday August 21, 2024 at 6:00 p.m.

XXX

Chairman Joseph Richardson called the meeting to order at 6:00 p.m. Present were Secretary Romie Grant, Member Theodore Garrod, Member Megan Moscoso, Member Christopher Childs, Member Erron Fayson, Alternate Member Michael Fendler and Alternate Member John Rogers. Vice Chairman Dan Aton and School Board Member Jaqueline McLaughlin were absent. Also, in attendance were Principle Planner Eddy Galindo, Planner Tabitha Armstrong, Assistant City Attorney Chelsea Farrell and Recording Secretary Laurie Dargie.

XXX

Member Fayson made a motion to approve the minutes from the August 7, 2024 meeting. Member Garrod seconded. There was a unanimous voice vote in favor.

XXX

Quasi-Judicial Confirmation Procedures

XXX

Old Business
None

XXX

New Business

Rezoning REZ#1-2024 – 2300 Columbia Blvd.
Ms. Armstrong gave an overview of this item.

The Planning and Zoning Commission members had brief discussion.

Carla Nettles of Cocoa, Florida came to speak in favor of this item.

XXX

Member Fayson made a motion recommending approval of Rezoning REZ#1-2024 as presented. Secretary Grant seconded.

Roll call was as follows:

Member Garrod Yes

Member Childs	Yes
Member Moscoso	Yes
Secretary Grant	Yes
Member Rogers	Yes
Member Fayson	Yes
Chairman Richardson	Yes

Motion passed.

XXX

Titusville Environmental Commission (TEC) Powers & Duties

Mr. Galindo gave an overview of this item.

Member Rogers brought up his concerns with the language on page 34 of 49 of the agenda from paragraph (7) and feels that this could limit the Titusville Environmental Commission in the future and it should be removed.

Mr. Galindo explained what paragraph seven (7) on page 34 of 39 meant.

Assistant City Attorney Farrell gave further explanation for what Member Rogers brought up regarding his concerns.

XXX

Member Childs made a motion to recommend approval of the changes on the Titusville Environmental Commission's Powers & Duties as presented. Secretary Grant seconded.

Roll call was as follows:

Secretary Grant	Yes
Member Rogers	No
Member Fayson	Yes
Member Childs	Yes
Member Garrod	Yes
Member Moscoso	Yes
Chairman Richardson	Yes

Motion passed with a 6 yes, 1 no vote.

Member Rogers voted no as he feels this language could shackle the Titusville Environmental Commission in the future.

XXX

Planning & Zoning Commission Semi-Annual Report

Mr. Galindo asked if the Planning and Zoning Commission would like this report presented to City Council as a written report or if someone from the Planning and Zoning Commission would like to present the report in person.

Chairman Richardson said it will be presented as a written report.

XXX

Member Garrod made a motion to approve the Planning and Zoning Commission's Semi-Annual report to City Council as presented and to City Council as a written report. Member Moscoso seconded.

Roll call was as follows:

Member Fayson	Yes
Member Moscoso	Yes
Member Garrod	Yes
Member Rogers	Yes
Member Childs	Yes
Secretary Grant	Yes
Chairman Richardson	Yes

Motion passed.

XXX

Planning & Zoning Commission Proposed By-Laws Amendment

Mr. Galindo gave an overview of this item.

XXX

Member Moscoso made a motion to approve the proposed amendment to the Planning and Zoning Commission By-Laws as presented. Member Childs seconded. There was a unanimous voice vote in favor.

Roll call was as follows:

Member Moscoso	Yes
Member Garrod	Yes
Secretary Grant	Yes
Member Childs	Yes
Member Fayson	Yes
Member Rogers	Yes
Chairman Richardson	Yes

Motion passed.

XXX

Petitions & Requests
None

XXX

Reports

Chairman Richardson said he would caution staff to slow down with processing anything in regards to the Comprehensive Plan due to the upcoming changes to City Council members.

Assistant City Attorney Farrell congratulated Kristin Smith-Rodriguez at her winning of the Circuit Court Judge seat. Assistant City Attorney Farrell said that this will leave a vacancy on the Board of Adjustments & Appeals in January 2025.

XXX

Adjournment 6:48pm

DRAFT

City of Titusville

"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Planning and Zoning Commission Members

From: Brad Parrish, Community Development Director

Subject: Small Scale Amendment (SSA) No.1-2024 - SR405 & Singleton Avenue PD NORTH

Department/Office: Planning

Recommended Action:

Conduct the public hearing and make recommendation on Small Scale Comprehensive Plan Amendment (SSA 1-2024).

Recommend approval of SSA 1-2024 to amend the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 5.01+/- acres of property; Commercial High Intensity to Conservation on 0.49+/- acres of property; and from Conservation to Low Density Residential on 0.63+/- acres of property; and Commercial High Intensity to Low Density Residential on 9.05+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752. This ordinance is a legislative item.

Recommend approval of the rezoning from General Use (GU) zoning district to the Planned Development (PD) zoning district on 8.11+/- acres of property; the Neighborhood Commercial (NC) zoning district to the Planned Development (PD) zoning district on 9.55+/- acres of property; the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.63+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752 and master plan and conditions of approval as described in the rezoning ordinance:

1. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].
2. Side setbacks will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD [1.8(g)].
3. The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(b)].
4. Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].
5. Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].

_This ordinance is quasi-judicial.

The City Council will hear this agenda item on October 8, 2024.

Summary Explanation & Background:

The applicant is requesting to change the property to the City's Low Density Residential and Conservation future land use designations and rezone to the Planned Development (PD) zoning district with master plan. The Applicant is requesting a Small-Scale Comprehensive Plan Amendment (SSA) with Rezoning with a Master Plan on 38.65+/- acres for purposes of constructing a townhome community with residential amenities consisting of 70 individually platted townhome units.
The subject property is made up of two (2) parcels. The main parcel is intersected by Poinsettia Ave and the second parcel is intersected by S.R.405 (South Street). The parcels are vacant woodlands and currently have future land use (FLU) designations of Low Density Residential, Commercial High Intensity, and Conservation; and have General Use (GU), Neighborhood Commercial (NC), and Open Space and Recreational (OR) zoning designations.
The 38.65+/- acre property includes 24.73+/- acres of wetlands and has approximately 14.23+/- acres of developable area in which 4.99+/- acres of parks and open space are proposed. The proposed PD ordinance limits the permitted uses on the property to 70 townhome units with a minimum unit living area of 800 square feet with supporting infrastructure and site improvements, including vehicular access and associated parking, sidewalks, residential amenities including multi-use paths and walking trails, benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk and a recreational lawn and grill area. Permitted accessory uses will be limited to recreational amenities.

Alternatives:

1. Recommend approval of the amendment and rezoning ordinances and master plan.
2. Do not recommend approval the amendment and rezoning ordinances and master plan.
3. Other action.

Item Budgeted:

NA

Source/use of funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

Description	Upload Date	Type
Staff Report	9/12/2024	Backup Material
Application FLU	9/11/2024	Backup Material
Application REZ	9/11/2024	Backup Material
Ordinance FLU	9/12/2024	Backup Material
Ordinance REZ	9/12/2024	Backup Material
Master Plan - Exhibit B	9/11/2024	Backup Material
Survey	9/11/2024	Backup Material
Sketches and Descriptions	9/12/2024	Backup Material
Maps	9/11/2024	Backup Material
Concurrency	9/11/2024	Backup Material
Environmental Assessment - Redacted	9/11/2024	Backup Material
Traffic Study	9/11/2024	Backup Material
School Report	9/12/2024	Backup Material

City of Titusville

Planning Department Staff Report

Small Scale Comprehensive Plan Map Amendment (SSA) and Planned Development (PD) Rezoning with Master Plan

SSA#1-2024 SR405 & SINGLETON AVENUE PD NORTH

Meeting Dates:

Commission/Council	Meeting dates
Planning and Zoning Commission	September 18, 2024
City Council First Ordinance Reading	September 24, 2024
City Council Public Hearing	October 8, 2024

Prepared By: Christie Anderson, AICP, Senior Planner

Applicant(s): Alyssa Colby, P.E. with Kimley-Horn & Associates, Inc. on behalf of Singleton Avenue 44 Acre Trust, LLC

Applicant's Request: **SSA:** Amend the Comprehensive Plan Future Land Use Map by changing the future land use designation on 5.01+/- acres of property from the current Low Density Residential to Conservation; 0.49+/- acres of property from the current Commercial High Intensity to Conservation; 0.63+/- acres of property from the current Conservation to Low Density Residential; and 9.05+/- acres of property from Commercial High Intensity to Low Density Residential.

REZ: Amend the zoning map by changing the General Use (GU) zoning district on 8.11+/- acres, the Neighborhood Commercial (NC) zoning district on 9.55+/- acres, and the Open Space Recreational (OR) zoning district on 0.63+/- acres of property to the Planned Development (PD) zoning district.

Staff Recommendation: SSA: Approve the comprehensive plan land use amendment from the Low Density Residential, Commercial High Intensity, Conservation, and Commercial High Intensity land uses to the Conservation and Low Density Residential land uses.

REZ: Approve the Planned Development (PD) rezoning with master plan.

BACKGROUND INFORMATION

The intent of the request is to change the property to the City's Low Density Residential and Conservation future land use designations and rezone to the Planned Development (PD) zoning district with master plan. The Applicant is requesting a Small-Scale Comprehensive Plan Amendment (SSA) with Rezoning with a Master Plan on 38.65+/- acres for purposes of constructing a townhome community with residential amenities consisting of 70 individually platted townhome units.

The subject property is made up of two (2) parcels. The main parcel is intersected by Poinsettia Ave and the second parcel is intersected by S.R.405 (South Street). The parcels are vacant woodlands and currently have future land use (FLU) designations of Low Density Residential, Commercial High Intensity, and Conservation; and have General Use (GU), Neighborhood Commercial (NC), and Open Space and Recreational (OR) zoning designations.

The 38.65+/- acre property includes 24.73+/- acres of wetlands and has approximately 14.23+/- acres of developable area in which 4.99+/- acres of parks and open space are proposed. The proposed PD ordinance limits the permitted uses on the property to 70 townhome units with a minimum unit living area of 800 square feet with supporting infrastructure and site improvements, including vehicular access and associated parking, sidewalks, residential amenities including multi-use paths and walking trails, benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk and a recreational lawn and grill area. Permitted accessory uses will be limited to recreational amenities.

PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Existing Use	Future Land Use	Zoning
Vacant Woodland	-Low Density Residential -Commercial High Intensity -Conservation	-General Use (GU) -Neighborhood Commercial (NC) -Open Space and Recreational (OR)

Proposed Use, Future Land Use, and Zoning

Proposed Use	Future Land Use	Zoning
Townhomes Proposed 70 units	-Conservation -Low Density Residential (Max 5 du/acre)	-Planned Development (PD)

SURROUNDING PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Location	Use	Future Land Use	Zoning
North	Single-family homes / Vacant land	-Low Density Residential -Conservation	Single Family Medium Density (R-1B) / Open Space and Recreational (OR)
South	S.R 405 (South St.) / Vacant land / Single-family home / Church	-Low Density Residential - Conservation	General Use (GU) / Open Space and Recreational (OR)
East	Vacant land	Conservation	Open Space and Recreational (OR)
West	South Singlton Ave./ Vacant land / Single-family homes	-Conservation -Commercial High Intensity -Residential Two	Open Space and Recreational (OR) / Rural Residential (RR) / Neighborhood Commercial (NC)

STAFF ANALYSIS

The applicant's stated purpose for the land use amendment, and rezoning is to construct an individually platted townhome community with residential amenities as a Planned Development (PD). The proposed PD development standards have been provided as Exhibit A, contained within the attached draft rezoning ordinance. The table below sets forth the applicant's proposed PD development standards as compared with the development standards of the current General Use (GU), Neighborhood Commercial (NC), and Open Space and Recreational (OR) zoning districts.

The property is located within the City's Area of Critical Concern (ACC). The ACC limits the coverage of all impervious surfaces to 40% of the full site area, which is consistent with the master plan's maximum impervious surface. The subject property is not located within a well distance radius requiring enhance impervious limitations.

Area, Height, Bulk and Open Space Requirements	Proposed SR405 and Singleton PD – North	Neighborhood Commercial (NC)	General Use (GU)	Open Space and Recreational (OR)
Floor area per dwelling unit, minimum (sq ft)	800	NA	900	None
Height, maximum (ft.)	50	35	35	35
Building coverage, maximum (% of full site)	40%	25%	20	None
Maximum ACC Impervious Coverage (% of full site)	40%	40%	40%	40%
Front yard setback, minimum (ft.)	20	25	50	50
Interior side yard setback, minimum (ft.)	10	10	25	50

Side corner yard setback, minimum (ft.)	10	15	50	50
Rear yard setback, minimum (ft.)	10	20	50	50
Open Space, minimum (% of total gross acreage of the PD)	35% [Sec. 33-5(c)]	None	None	None
Accessory Use Development Standards	Recreational Amenities	See Chapter 28 Article VII	See Chapter 28 Article VII	See Chapter 28 Article VII
***If this PD Ordinance does not address a specific standard, the standards of the Multi Family Medium Density (R-2) zoning district shall apply.*				

In 1993, the existing General Use (GU) and Open Space and Recreational (OR) zoning were placed on the property during the 1993 citywide rezoning (Ord. No. 5-1993). In 1994, the General Use (GU) and Open Space and Recreation (OR) zoning was replaced with the existing Neighborhood Commercial (NC) and Open Space and Recreation (OR) zoning (Ord. 09-1994). The subject property has remained undeveloped woodlands. The subdivision to the north, Forest Hills Estates, was platted in 1958. The homes were generally constructed in the early 1960's.

In the existing General Use (GU) zoning district, single-family dwellings may be permitted at a density of one (1) dwelling for each three (3) acres. In the Open Space and Recreation (OR) zoning district, single-family dwellings outside of wetlands may be permitted at a density of one (1) dwelling unit per five (5) acres. The existing Neighborhood Commercial zoning does not permit residential uses. The proposed development increases the potential buildout of the property from a maximum of 6 residential units to a maximum of 70 units.

Zoning District	**Proposed SR405 and Singleton PD – North**	**Neighborhood Commercial (NC)**	**General Use (GU)**	**Open Space and Recreational (OR)**
Max Density	70 proposed units LDR 14.23+/- ac =**70 units** (5 du/ac)	NA	9.49+/- ac **3 units**	19.71+/- ac **3 units**

A master plan is required with the submittal of a PD rezoning. The applicant is proposing the minimum 30-foot perimeter landscape yard (buffer) and individually platted townhome lots with the following building setbacks; 20-foot front setback, 10-foot side setbacks, and a 10-foot rear setback measured from property boundary. The plan proposes connecting to the existing street stub out located at the southern terminus of Highland Terrace and will also provide one driveway access point along South Singleton Avenue.

The PD zoning requires a minimum of 35% open space. According to Section 30-163(f)(3) of the Code,

> *"Common open space includes both passive recreation (e.g. picnic areas or walking trails) and active recreation (e.g. playgrounds or basketball courts) areas. Private waterbodies and stormwater retention or detention areas that are designed to be used for passive recreation (i.e. improved with fountains, benches, and*

walkways) may be counted towards the common open space minimum requirement."

The applicant's proposed open space illustrated on the master plan identifies stormwater treatment areas, and recreational areas including, multi-use paths and walking trails surrounding proposed stormwater dry retention ponds with benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk, a recreational lawn, and grill area. A final recreational plan shall be submitted with the sketch plat illustrating the proposed recreational amenities within the open space areas and conforms with the minimum required open space.

COMPREHENSIVE PLAN AMENDMENT REVIEW

Future Land Use Map Amendment Sprawl Criteria

The following list is the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to urban sprawl [Section 34-23 of the LDR].

Summary of Staff's findings

1. The extent to which the proposed amendment is contiguous to an existing development area which has developed in a manner providing a compact, contiguous development pattern with the proposed amendment.

   Staff Comment: The subject property lies north of South Street (S.R. 405) adjacent to the single family subdivision of Forest Hills Estates. The PD master plan proposes a connection with the existing street stub out located at the southern terminus of Highland Terrace and will connect to one driveway access point along South Singleton Avenue. The entrance of the Sereno Pointe single family subdivision is located west of South Singleton Avenue adjacent to the proposed driveway connection. The proposed development is contiguous with the surrounding developments in the area. Most of the existing development near this area along South Street (S.R. 405) is not contiguous, which can be attributed to the significant acreage of wetlands in the area.

2. The extent to which population growth and development trends warrant an amendment, including an analysis of vested and approved but unbuilt development.

   Staff Comment: The city has experienced a population growth rate of approximately 1% to 1.2% per year. The land use amendment could result in a population increase of 156+/- residents. Fox Lake Hammock, a single family subdivision, was platted in 2021 and is an indicator of the trend toward residential development in the general area. A townhome development may be considered as a needed and more affordable alternative to detached single family housing.

3. The extent to which adequate infrastructure to accommodate the proposed amendment exists or is programmed and funded through an adopted capital improvement schedule or will be privately financed through a binding executed

agreement or will otherwise be provided at the time of development impacts as required by law.

Staff Comment: The site is adjacent to sanitary sewer and water mains along South Street (S.R. 405) and South Singleton Avenue with adequate water and sewer service to serve a build out scenario of 70 multifamily units. The collector road (South Singleton Avenue) can accommodate the additional volume according to the City's concurrency assessment.

A traffic study dated June 2022 was provided by the applicant which indicates that the buildout of the proposed development will operate within the adopted maximum service volumes. In addition, Space Coast Area Transit Route 2, Stop 8 is located at the intersection of South Singleton Avenue and Sereno Pointe Drive, which is located adjacent to the proposed entrance of the development.

The City's required recreation and open space will not be exceeded with the additional population. The Public Works Department stated that capacity is available to serve the new townhome subdivision with solid waste services. The School District evaluated the land use application for school concurrency and there is enough capacity at nearby schools to accommodate the new residential development.

4. The extent to which the amendment will result in an efficient use of public funds needed for the provision of new infrastructure and services related to it.

Staff Comment: Public infrastructure is available to serve the property, and no additional public funds will be necessary for the provision of new infrastructure.

5. The extent to which the amendment will not result in a sprawl development pattern as deter-mined by Chapter 163, Florida Statutes, and will not discourage infilling of more appropriate areas available for development within existing Development Area Boundaries; and

Staff Comment: The proposed land use change appears consistent with existing residential land uses on this segment of South Street (S.R. 405). The site is located near the intersection of collector and arterial roadways and water and sanitary sewer utilities are available.

6. The extent to which the amendment will result in a sustainable development pattern through a balance of land uses that is internally interrelated, demonstrates an efficient use of land, ensures compatible development adjacent to agriculture lands, protects environmental qualities and characteristics, provides interconnectivity of roadways, supports the use of non-automobile modes of transportation, and appropriately addresses the infrastructure needs of the community.

Staff Comment: The proposed low density residential and conservation land uses will provide a sustainable development pattern within the surrounding area of low density residential and conservation. The proposed townhome development will also be located at the northeast corner of an arterial and collector roadway intersection. Space Coast Area

Transit Route 2, Stop 8 is located at the intersection of South Singleton Avenue and Sereno Pointe Drive, which is located directly adjacent to the proposed entrance of the development. The Florida Department of Transportation (FDOT) will conduct a corridor study to determine the need for, and potential impacts of, widening the road from two to four lanes for South Street (S.R. 405)/Columbia Boulevard from west of S.R. 50 to east of U.S. 1 (5.4+/- miles). This segment of South Street (State Road 405) was also identified within the City's 2019 Multimodal Master Plan as an area recommended for significant multimodal facility upgrades.

FDOT is also milling and resurfacing South Street (State Road 405) from south of Bobbi Lane to north of Swan Lake Drive (south of the subject property) to extend the life of the roadway. Pedestrian safety improvements include replacing the existing 6-foot-wide sidewalk with an 8-foot-wide path along the west side of South Street, which will extend the existing 8-foot-wide path from Fox Lake Road to North of Swan Lake Drive. A new 6-foot-wide sidewalk will also be constructed along the east side of South Street from Fox Lake Road to North of Joe Murell Drive. Other FDOT improvements include upgrades to intersection lighting, improved crosswalks with median refuge areas, upgraded transit stops, and minor widening at turn lanes to provide bicycle through lanes.

7. The extent to which the amendment results in positive market, economic and fiscal benefits of the area as demonstrated through a market demand analysis, economic impact analysis and fiscal impact analysis.

Staff Comment: Established residential developments north of the proposed development include the Forest Hills Estates and Highland Terrace and south of the proposed development along South Street includes the Woodbridge Townhomes, Swan Lake Estates Manufactured Housing Park, Fox Hollow, Fox Lake Manor and Fox Lake Hammock; Sereno Point is a single family residential neighborhood lying west of the subject property. Fox Lake Hammock, a single family subdivision, was platted in 2021 and is an indicator of the trend toward residential development in the general area. A townhome development may be considered as a needed and more affordable alternative to detached single family housing. A market demand analysis was not provided by the applicant.

Consistency with the Comprehensive Plan

The following is an analysis of the consistency of the request with the City's Comprehensive Plan. The request for a Comprehensive Plan Amendment and rezoning is consistent with the Comprehensive Plan and more specifically with the following objectives and policies of the Comprehensive Plan.

Future Land Use Element (FLUE) Policy 1.14.1: Sites for residential development shall be located throughout the City in a variety of residential zoning classifications, which provide for a variety of lot sizes, floor areas, setbacks, and residential densities.

Staff Comment: Within a one mile radius of the subject property, there are existing multifamily, single-family, and manufactured housing communities, which provide a variety of lot sizes, floor areas, setbacks, residential densities and housing types.

FLUE Policy 1.14.8: Negative impacts of residential land uses on environmentally sensitive areas shall be minimized. The Conservation Element objectives and policies shall be utilized in determining the appropriateness of residential land uses designation and the specific intensity of use authorized by land development regulations.

Staff Comment: According to a wetlands survey provided by the applicant approximately 63% of the subject property is designated as wetlands (24.73 acres). This area has been notated on the proposed master plan as Wetland #1 and Wetland #3. The developable area of the site is calculated at 14.23 acres. Efforts to minimize wetland impacts have been taken in the proposed design, limiting impacts to under 0.63 acres and includes a 25-foot average wetland buffer as shown on the proposed master plan.

The applicant provided an environmental impact report prepared by Bio-Tech Consulting Inc. dated November 15, 2023. According to the report an assessment for "listed" floral and faunal species was conducted at the subject property during October 2022, January, August, and September 2023.The environmental assessment indicates that there is the likely presence of listed species. Any impacts to these species will require permitting by Florida Fish and Wildlife Conservation Commission (FWC).

FLUE Policy 1.14.9: Residential development sites shall be accessible to and/or provide essential public services at levels of service adopted by the Comprehensive Plan including transportation, potable water, sewage treatment, solid waste, drainage, recreation and open space, law enforcement and fire protection.

Staff Comment: The site is adjacent to sanitary sewer and water mains along South Street (S.R. 405) and South Singleton Avenue with adequate water and sewer service to serve a build out scenario of 70 townhome units. No concurrency related issues were identified through the review process. Sufficient public infrastructure appears to be available to serve the residential development. The Fire Department did not state any concerns with the land use amendment.

The proposed development increases the potential buildout of the property by 64 additional units over the existing zoning. The existing Neighborhood Commercial zoning (9.54+/- acres) does not permit residential uses. The proposed low density residential development (<5 units per acre) will not reduce the levels of service for potable water, sanitary sewer, recreation and open space, law enforcement, and fire protection. Solid waste needs will be assessed by the Public Works Department at the time of site plan submittal. The drainage level of service will be reviewed and required as

part of the engineering review of the project and will be designed consistent with the minimum level of service standards.

FLUE Policy 1.17.1: The following items shall be addressed in the analysis of the land use changes: Surrounding uses; Surrounding zoning; Acreage; Description of site; Soils and topography; Flood zone; Recharge potential; Traffic counts on adjacent streets; and Impact on adopted levels of service; Water supply availability.

Staff Comment: The zoning in the area is predominantly Open Space and Recreational (OR) as there is a significant acreage of wetlands within the surrounding area. Single Family Medium Density Residential (R-1B), Rural Residential (RR), Neighborhood Commercial (NC), and General Use (GU) are proximate to the proposed development area. The GU and NC zoning within the area has primarily remained undeveloped. The amendment will permit a residential buildout potential of 70 townhome units on 14.23+/- acres of developable land with a maximum impervious surface coverage of 4.79+/- acres (33%). The subject property is located within the Area of Critical Concern (ACC), therefore the maximum impervious surface for the entire development area shall be 40% percent of the total site area pursuant to the ACC performance standards.

The property is primarily located within Flood Zone X (area of minimal flood hazard). The developable area of the site is calculated at 14.23+/- acres. Approximately 63% of the subject property is designated as wetlands (24.73+/- acres). A soils map is included in the agenda item for this request. The site is adjacent to a sanitary sewer and water main along South Street (S.R. 405) and South Singleton Avenue with adequate water and sewer service to serve a build out scenario of 70 multifamily units. The collector road (South Singleton Avenue) can accommodate the additional volume according to the City's concurrency assessment.

Conservation Element (CE) GOAL 1: To preserve and enhance the quality of the natural environment through preservation, conservation, and appropriate management of the vital natural resources, including air, water (both potable and surface), biotic and factors that affect energy conservation.

Staff Comment: New residential developments must address potential impacts to wildlife habitats and protected species and obtain permits through the appropriate state agencies [Objective 1.1]. The 14.23+/- acre development area is primarily uplands with a proposed wetland impact under 0.63 acres and will include a 25-foot average (1.21 acres) wetland buffer. These impacts will require permitting by the appropriate agencies. The City's Code describes the requirements for stormwater systems as part of new development, which will be evaluated at the time of site plan submittal [Objective 1.12].

CE Strategy 1.6.1.2: The development of land under all land uses categories shall take into consideration natural constraints such as flood hazards, wetlands, soil suitability and aquifer recharge potential.

Staff Comment: The developable area is located within Flood Zone X (area of minimal flood hazard). The remainder of the subject property which has been noted as preserved wetlands on the proposed master plan is located within Flood Zone AE (Special Flood Hazard Area). A soils map is included in the agenda item for this request.

CE Strategy 1.6.3.2: At a minimum, wetlands 5 acres or more in size shall be designated as a conservation land use and wetlands less than 5 acres will be subject to review to determine what protection, if any, they should receive from development. Said review shall be based on the functional value criteria specified in Strategy 1.6.4. If based on this determination, protection is warranted, development may be permitted, based upon criteria set forth in the environmental performance standards of the land development regulations.

Staff Comment: Approximately 63% of the subject property is designated as wetlands (24.73+/- acres). The developable area of the site is calculated at 14.23+/- acres. The developable area is primarily upland property. Efforts to minimize wetland impacts have been taken in the proposed design, limiting impacts to under 0.63 acres and includes a 25-foot average wetland buffer (1.63 acres) as shown on the proposed master plan. All wetland and/or other surface water impacts (both direct and secondary) will require permitting by the appropriate agencies. Wetland #1, and Wetland #3 as shown on the proposed master plan with be placed with the Conservation future land use and will be preserved by a conservation easement as part of a Planned Development (PD), and any other upland areas to be permitted for preservation for state and/or federal listed wildlife species [CE Policy 1.16.2]. Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan.

Infrastructure Element (IE) Goal 4 Aquifer Recharge [and subsequent objective and policies]. The Functions of Natural groundwater aquifer recharge areas within the City will be protected and maintained through the implementation of the City's aquifer protection ordinance.

Staff Comment: The subject property is within the ACC which establishes enhanced impervious surface limitations in order to protect the City's groundwater aquifer recharge areas. The ACC allows maximum coverage for all impervious surfaces (i.e. driveways, a/c pads, walkways) of 40% of the site area. The subject property is not within a well distance radius and does not have enhanced impervious coverage limitations. The development proposes a maximum building coverage of 40% of the total site area and a maximum impervious coverage of 40% of the total site area pursuant to the ACC performance standards.

IE Policy 5.2.4: All new developments located in the Area of Critical Concern will be required to connect to the reclaimed water system prior to occupancy, or provide dry lines for future connection.

Staff Comment: Reclaimed water service is not available in the area. Dry lines for future connection will be required.

REZONING REVIEW

Zoning Review Criteria

Section 34-40 of the LDR lists the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to **zoning**.

The following are staff's findings.

1. ***Comprehensive Plan Consistency Statement.*** The proposed rezoning to the PD zoning district is consistent with the proposed Low Density Residential and Conservation land use designations.

   1.1. Public facilities are available and concurrent with the land use change per the Comprehensive Plan and Concurrency provisions of the LDRs.

   Staff Comment: The property is within the City's urban service area. Public facilities are available to serve the site, and no concurrency related issues were identified. Potable water and sewer services are available to serve the property. Reclaimed water service is not available in the area.

   Transportation impact.

   Staff Comment: The subject property has frontages along South Singleton Avenue and S.R.405 (South Street) and is intersected by Poinsettia Avenue. The proposed development plans to tie into the existing Highland Terrace stub out. S.R.405 (South Street) is classified as an arterial roadway, South Singleton Avenue is classified as a collector roadway and Poinsettia Avenue and Highland Terrace are local roadways per Sec. 9.3 of the Transportation Technical Manual. Using procedures published in the 11th Edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual the proposed low density residential use will generate 524 daily trips. According to a traffic study dated June of 2022 provided by the applicant, "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes". A final concurrency determination will be made at the time of site plan submittal.

   Solid Waste.

   Staff Comment: Solid waste services are available to the subject property and can serve a townhome development.

   Schools.

   Staff Comment: Brevard County Public Schools staff have completed a non-binding School Impact Analysis for the proposed townhome development based upon on the Student Generation Multiplier (adopted April 11, 2022). "At this time Oak Park Elementary, Madison Middle School and Astronaut High School are projected to have enough capacity for the total of projected and potential students from the SR405 and Singleton PD-North development". It should be noted that a Concurrency Determination is

required to be performed by the School District prior to issuance of a final development order.

1.2. Public streets are adequate to access the property.

Staff Comment: The subject property has frontages along an arterial roadway S.R.405 (South Street), a collector roadway (South Singleton Avenue) and two local roads (Poinsettia Avenue and Highland Terrace).

1.3. The land will support the proposed development.

Staff Comment: The property appears able to support the proposed development. The property is primarily located within Flood Zone X (area of minimal flood hazard). The developable area of the site is calculated at 14.23 acres. Approximately 63% of the subject property is designated as wetlands (24.73+/- acres). A soils map is included in the agenda item for this request.

1.4. Environmental impact.

Staff Comment: The subject property is currently undeveloped land with dense tree coverage. The applicant has submitted an environmental assessment report and a wetlands survey. According to the wetlands survey approximately 63% of the subject property is designated as wetlands (24.73+/- acres). The developable area of the site is calculated at 14.23+/- acres. The developable area is primarily upland property. Efforts to minimize wetland impacts have been taken in the proposed design, limiting impacts to under 0.63 acres and includes a 25-foot average wetland buffer (1.63 acres) as shown on the proposed master plan. Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan. All wetland and/or other surface water impacts (both direct and secondary) will require permitting by the appropriate agencies. The environmental assessment also noted that the presence of threatened species has been identified, and that the required review and permitting by Florida Fish and Wildlife Conservation Commission (FWC) will be required.

2. The existing zoning, if deemed consistent with the Comprehensive Plan, shall be presumed correct unless substantial change in the area has occurred since the original zoning.

Staff Comment: In 1993, the existing General Use (GU) and Open Space and Recreational (OR) zoning were placed on the property during the 1993 citywide rezoning (Ord. No. 5-1993). In 1994, the General Use (GU) and Open Space and Recreation (OR) zoning was replaced with the existing Neighborhood Commercial (NC) and Open Space and Recreation (OR) zoning (Ord. 09-1994). The existing zoning is consistent with the Comprehensive Plan.

The GU and OR zoning districts are consistent with the existing Low Density Residential and Conservation land uses and the NC zoning district is

consistent with the existing Commercial-High Intensity land use. The NC zoning district allows for neighborhood commercial uses that are intended to serve residential neighborhoods and are generally located along or at the intersection of two collector streets or greater street designation. The subject property has remained undeveloped woodlands. The city has experienced a substantial increase in demand for housing, including demand for additional housing types beyond detached single family residences.

3. The density or intensity of the proposed rezoning and use shall be consistent with:

3.1. The development in the area.

Staff Comment: The area's existing development pattern is predominantly low density single family residential. Most of the existing development near this area along S.R. 405 (South Street) is not contiguous, which can be attributed to the significant acreage of wetlands in the area. A low density residential townhome development with approximately 63% (24.73 acres) of the property designated as preserved wetlands is consistent with existing development in the area.

3.2. Not likely to cause a depreciation of property values in the area.

Staff Comment: The rezoning is unlikely to cause a depreciation of property values in the area. Although much of the property within this area along S.R. 405 (South Street) is undeveloped (potentially due to the presence of wetlands) multifamily, single-family, and residential manufactured housing are established uses.

4. The application is consistent with zoning in the area.

Staff Comment: The zoning in the area is predominantly Open Space and Recreational (OR) as there is a significant acreage of wetlands within the surrounding area. Single Family Medium Density Residential (R-1B), Rural Residential (RR), Neighborhood Commercial (NC), and General Use (GU) are proximate to the proposed development area. The GU and NC zoning within the area has primarily remained undeveloped. The proposed residential townhome development associated with the PD and OR zoning districts are consistent with the general zoning within the area.

5. The application will protect the public health, safety, morals or welfare of the general public.

Staff Comment: A townhome development at this location is not expected to generate any detriment to the public safety and welfare of the general area. A minimum 20-foot landscape yard (buffer) between the development and adjacent single-family subdivisions will help protect the residents from potential noise, glare or visual nuisances.

6. Whether the applicant has sufficiently protected adjacent land uses and zoning districts by adequate buffering and screening.

Staff Comment: The PD's proposed building setbacks are as follows: 20 feet (Front), 10 feet (Rear), 10 feet (Sides). The proposed PD development standards have been provided as Exhibit A, contained within the attached draft ordinance. The proposed master plan indicates that the nearest residential building to South Singleton Avenue is 50+/- feet from the right-of-way. The buildings nearest to S.R. 405 (South Street) will be 55+/- feet from the right-of-way. The townhome building adjacent to the existing single family subdivision (Forest Hills Estates) is 32+/- feet from the property line abutting the rear yard of a single family residence.

The PD proposes a maximum building height of 50 feet. Section 1.13 (d) of the proposed PD development standards note that "Buildings may be relocated or rearranged within the property setbacks without the need for an amendment to the master plan". Although the master plan illustrates a 32-foot building setback from the single family residential subdivision, ***staff recommends the following condition, the side setback will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD*** *in order to further protect the adjacent single family neighborhood. Staff also recommends the following clarification as an additional condition "****Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)]".***

The perimeter of the development is required to meet the minimum 20-foot landscape yard (buffer) requirements of the code. The land development regulations (LDR) also require a minimum arterial/collector landscape buffer along S.R. 405 (South Street) and South Singleton Avenue of 30 feet, which is notated on the proposed master plan.

7. Substantial reasons why the property cannot be used in the existing zoning district.

Staff Comment: There are three zoning districts on the subject property General Use (GU), Neighborhood Commercial (NC), and Open Space Recreational (OR). The requested action is to change the developable area (14.23+/- acres) to Planned Development (PD) to allow a townhome development with the conservation of 24.73+/- acres of wetlands.

There are no substantial reasons why the property cannot be used in the existing zoning districts of General Use (GU), Neighborhood Commercial (NC), and Open Space Recreational (OR).Portions of the subject property have been zoned either General Use (GU), Neighborhood Commercial (NC), and Open Space Recreational (OR) since 1994 and have not yet been developed, possibly due to the layout and combination of multiple zoning districts or could be an indication of a lack of market demand for such uses in the area.

COMMUNITY ENGAGEMENT MEETING

LDR Section 34-14

Staff Comment: A community engagement meeting was held by the applicant on November 2, 2023.

PLANNED DEVELOPMENT (PD) REVIEW CRITERIA

The purpose of a PD district is to provide flexibility in the planning and construction of development projects by allowing a combination of uses developed in accordance with an approved plan that protects adjacent properties; provide an environment within the layout of a site that contributes to a sense of community and coherent living style; encourage the preservation and enhancement of natural amenities and cultural resources, and to provide for a minimum amount of open space; provide for a more efficient arrangement of land uses, buildings, circulation systems, and infrastructure; and, encourage infill projects and the development of sites made difficult for conventionally designed development because of shape, size, abutting development, or natural features [Sec. 34-53]. Sections 33-4, 33-5, 33-6, and 33-8 of the Land Development Regulations list the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to Planned Development (PD) applications.

The following are staff's findings.

1. **The minimum land area shall be five (5) acres.** (Sec. 33-4)

   Staff Comment: The planned development is 39+/- acres which is greater than 5 acres.

2. **The applicant is responsible for demonstrating the project protects the health, safety and welfare of the general public to a greater extent than would have been possible pursuant to the standard zoning regulations.** [Sec. 33-5(a)(1)]

   Staff Comment: A 20-foot interior perimeter landscape yard (buffer) is required consistent with the City's Code. The land development regulations (LDR) also require a minimum arterial/collector landscape buffer along S.R. 405 (South Street) and South Singleton Avenue of 30 feet. The minimum required landscape yards (buffers) have been noted on the proposed master plan.

   The PD proposes a maximum building height of 50 feet. Section 1.13 (d) of the proposed PD development standards note that "Buildings may be relocated or rearranged within the property setbacks without the need for an amendment to the master plan". Although the master plan illustrates a 32-foot building setback from the single family residential subdivision, ***staff recommends the following condition, the side setback will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD*** *in order to further protect the adjacent single family neighborhood. Staff also recommends the following clarification as an additional condition "****Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable***

acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)]".

The PD ordinance and master plan appear to go above and beyond the following standards. The plan proposes buffers around each of the wetlands on site where the City's Code does not require it. According to a wetlands survey provided by the applicant approximately 63% of the subject property is designated as wetlands (24.73+/- acres). Efforts to minimize wetland impacts have been taken in the proposed design, limiting impacts to under 0.63 acres and includes a 25-foot average wetland buffer (1.21 acres) as shown on the proposed master plan. All wetland and/or other surface water impacts (both direct and secondary) will require permitting by the appropriate agencies. 35% of the developable area will also be dedicated to common open space, which includes stormwater treatment areas, and recreational areas including multi-use paths and walking trails surrounding proposed stormwater dry retention ponds with benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk, a recreational lawn, and grill area. ***A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage.***

3. **Provide access without creating traffic along local streets in residential areas or clusters outside the PD.** [Sec. 33-5(a)(2)]

Staff Comment: The PD master plan illustrates a connection with the existing street stub out located at the southern terminus of Highland Terrace and will provide one driveway access point along South Singleton Avenue. South Singleton Avenue is a collector roadway per Sec. 9.4.3 of the City's Transportation Infrastructure Technical Manual. The property has 600+/- linear feet of frontage along South Singleton and a maximum of two driveways are permitted on the roadway per Section 9.11 of the Transportation Technical Manual.

4. **Infrastructure connectivity and reducing the need for increased public cost or earlier public costs.** [Sec. 33-5(a)(3)]

Staff Comment: According to the City's Water Resources Department, water and sewer lines are available to serve the property. A 16-inch water main is available for use along South Street and an 8-inch water main is available on Singleton Ave. There is also a 6-inch force main approximately 670 feet south of Singleton Ave on South Street available for sewer.

Reclaimed water is not available to serve the site; however, dry lines for future connection will be required. ***There may be a significant demand on City resources if potable water is used for irrigation. Sustainable landscape or alternative irrigation methods could be utilized to reduce potential impacts on the City's potable supply.***

5. **The developer shall place all utility lines underground.** [Sec. 33-5(a)(4)]

Staff Comment: This will be required with the submittal of a site plan.

6. **Access.** [Sec. 33-5(b)]

Staff Comment: The PD master plan proposes a connection with the existing street stub out located at the southern terminus of Highland Terrace and will connect to a single driveway access point along South Singleton Avenue. South Singleton Avenue is classified as a collector roadway and Highland Terrace is a local roadway per Sec. 9.3 of the Transportation Technical Manual.

7. **Parks and Open Space.** [Sec. 33-5(c)]

Staff Comment: The minimum percentage of parks and open space required for a PD is 35% of the total gross acreage of the PD. According to Section 30-163(f)(3) of the Code:

> *"Common open space includes both passive recreation (e.g. picnic areas or walking trails) and active recreation (e.g. playgrounds or basketball courts) areas. Private waterbodies and stormwater retention or detention areas that are designed to be used for passive recreation (i.e. improved with fountains, benches, and walkways) may be counted towards the common open space minimum requirement."*

The minimum percentage of parks and open space required for the PD is 4.98 acers (35%). The master plan is proposing 4.99 acres as illustrated on the master plan and identifies stormwater treatment areas, and recreational areas including multi-use paths and walking trails surrounding proposed stormwater dry retention ponds with benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk, a recreational lawn, and grill area. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage.

8. **Minimum lot size.** [Sec. 33-6(a)(1)]

Staff Comment: The PD proposes individually platted townhomes on 20 feet by 100 foot (2,000 sq. ft.) and 30 feet by 100 foot (3,000 sq. ft.) lots. The total amount of maximum impervious surface for each lot must be noted individually on the final plat per Sec. 13.2.13 of the City's Development Review Procedures Technical Manual.

9. **Frontage.** [Sec. 33-6(a)(2)]

Staff Comment: The buildings and ancillary parking and stormwater ponds will be located in excess of 55+/- feet from S.R. 405 (South Street) and 35+/- feet from South Singleton Avenue. The PD master plan illustrates a

maximum of 6 dwelling units within in a single building group of townhome units with a minimum distance between structures of 20 feet.

10. Minimum living areas. [Sec. 33-6(a)(3)]

b. Town homes: Eight hundred (800) square feet.

Staff Comment: The minimum unit living area for a townhome within the PD zoning district is 800 square feet. The PD ordinance proposes a minimum living area of 800 square feet.

11. Maximum building height. [Sec. 33-6(a)(4)]

Staff Comment: The maximum building height within the PD zoning district is 50-feet. The PD ordinance proposes a maximum building height of 50-feet.

12. Time schedule and appropriate surety. [Sec. 33-6(a)(5)]

Staff Comment: The applicant did not propose a specific phasing schedule; however, the time frame shall be consistent with Section 33-9.

13. Maximum residential density. [Sec. 33-6(a)(6)]

Staff Comment: The PD ordinance and master plan proposes 70 units, the maximum allowable density within the Low Density Residential land use category.

14. Consistency with the Comprehensive Plan and any other small area plan. [Sec. 33-8(a)(1)]

Staff Comment: The PD and master plan are consistent with the proposed Low Density Residential and Conservation land use designations. [LDR Sections 33-3 and 33-8]

15. Internal Compatibility and Design. [Sec. 33-8(a)(2)]

a. The streetscape pattern shall provide for pedestrian and bicycle pathways, as well as an interesting vista that includes street trees, sidewalk treatments, and lighting.

Staff Comment: The master plan proposes 70 townhome units with supporting infrastructure and site improvements, including vehicular access, sidewalks, residential amenities, landscaping, utilities, and onsite stormwater management facilities. Existing topography consistent with the Area of Critical Concern requirements and the preservation of tree clusters could be utilized to create interesting vistas which include canopy trees, landscaping, and pedestrian lighting along sidewalks and trails as part of the overall open space and recreation areas. ***Staff recommends the condition that the developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible and heritage trees should to the extent possible be preserved with the submittal of the sketch plat****. All*

new construction requires that sidewalks be constructed along any lot or parcel of ground abutting any public or private street unless a waiver is granted pursuant to LDR Sec. 30-238(a).

b. The overall development shall make use of existing natural features and interesting topography.

Staff Comment: The property is in the Area of Critical Concern (ACC). A site plan will adhere to the City's regulations regarding the maximum impervious and dry retention standards in the ACC, including limitations on the removal of soil and maintaining the natural topography onsite [Sec. 30-207].

c. In commercial and residential PDs, a variety of residential designs and commercial spaces shall be included, and the mix of land uses should be designed to be compatible and complimentary.

Staff Comment: The proposed PD is a single use low density residential townhome development with ancillary recreational amenities.

d. Building designs shall provide for architectural styles that are compatible with surrounding development or design standards that apply to the area.

Staff Comment: There are no specific design standards for this area per the City's Code. Building elevations/architectural plans were not submitted for review by the applicant.

e. Open space shall provide for quality recreational amenities including fountains and passive recreational amenities, such as benches and lighting.

Staff Comment: The open space illustrated on the master plan identifies stormwater treatment areas, and recreational areas including multi-use paths and walking trails surrounding proposed stormwater dry retention ponds with benches and informational placards on native vegetation and wildlife, recreational lawns for multi-use recreation, a mail kiosk, a recreational lawn, and grill area. A final recreational plan shall be submitted with the sketch plat illustrating the proposed recreational amenities within the open space areas and conforms with the minimum required open space.

f. Projects in existing urban contexts shall provide urban amenities, such as structured automobile parking, amenities for bicycle users, and public meeting areas.

Staff Comment: Sidewalks and multi-use pathways are proposed throughout the development which provide connections to the existing sidewalk network located along South Singleton Avenue and S.R. 405 (South Street). Dedicated bicycle lanes are also located along S.R. 405 (South Street).

16. External Compatibility. [Sec. 33-8(a)(3)]

a. The proposed development shall not negatively impact the quality of life for any adjacent residential uses. Negative impacts can include a decrease in property values and any substantial increase in noise or traffic. Any traffic impacts shall be demonstrated with a traffic analysis and the developer, in accordance with the Comprehensive Plan, shall mitigate the impacts.

Staff Comment: The PD master plan illustrates one point of access along South Singleton Avenue and plans to tie into the existing Highland Terrace stub out. South Singleton Avenue is classified as a collector roadway and Highland Terrace is a local roadway per Sec. 9.3 of the Transportation Technical Manual. Using procedures published in the 11th Edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual the proposed low density residential FLU will generate 524 average daily vehicle trips (ADT). According to a traffic study dated June of 2022 provided by the applicant, "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes".

b. The proposed development shall not negatively impact any adjacent conservation lands.

Staff Comment: According to a wetlands survey provided by the applicant approximately 63% of the subject property is designated as wetlands (24.73+/- acres). The developable area of the site is calculated at 14.23+/- acres. The developable area is primarily upland property. Efforts to minimize wetland impacts have been taken in the proposed design, limiting impacts to under 0.63 acres and includes a 25-foot average wetland buffer (1.63 acres) as shown on the proposed master plan. All wetland and/or other surface water impacts (both direct and secondary) will require permitting by the appropriate agencies. Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan.

c. The proposed development shall provide bikeways and trails to be consistent and compatible with the Brevard Metropolitan Planning Organization's overall Greenways and Trails program.

Staff Comment: Sidewalks and multi-use pathways are proposed throughout the development which provide connections to the existing sidewalk network located along South Singleton Avenue and S.R. 405 (South Street. The proposed development is within cycling distance (2.5 miles) of the Florida East Central Regional Rail Trail. The subdivision will not be a gated community. The internal roadway will meet the City's Street standards and will be dedicated to the city.

d. Access and street patterns of the development shall compliment and be compatible with the existing street system of the surrounding development.

Staff Comment: The PD master plan proposes a connection with the existing street stub out located at the southern terminus of Highland Terrace. Highland Terrace will be extended through the proposed development and will connect to a single driveway access point along South Singleton Avenue. South Singleton Avenue is classified as a collector roadway and Highland Terrace is a local roadway per Sec. 9.3 of the Transportation Technical Manual.

e. Commercial and industrial uses within the development shall be adequately buffered from any adjacent residential uses.

Staff Comment: No commercial uses are proposed in the development. Approval of the rezoning will replace the Neighborhood Commercial (NC) and General Use (GU) zoning districts with a residential PD district and Open Space Recreational (OP) district which corresponds with existing wetland areas on the site.

MASTER PLAN REVIEW CRITERIA

a. Master Plan required. A Master Plan is a land-use plan focused on one or more sites within an area that identifies site access and general improvements and is intended to guide growth and development over a number of years or in several phases. A Master Plan is required with a PD rezoning. [Sections 34-51 and 34-52(b)].

Staff Comment: The site plan will be in general conformance with the layout illustrated in the master plan. Substantial modifications require a recommendation from the Planning and Zoning Commission and approval from the City Council [Sec. 6.3.2].

b. Sketch Plat. A Master Plan may take the place of a Sketch Plat approval. Approval of the Sketch Plat by the City Council authorizes the applicant to proceed with the Preliminary Plat, which is processed as a Site Plan. [Sections 34-60 and 34-151]

Staff Comment: The project includes the subdivision of 70 individually platted townhome lots. A sketch plat will be submitted for review and approval by the Planning and Zoning Commission and City Council.

c. Unified control. All land included in a Master Plan shall be under the legal control of the applicant, whether the applicant is an individual, partnership, corporation or group of individuals. [Sec 34-54]

Staff Comment: The property is under single ownership by Singleton Avenue 44 Acre Trust, LLC. The subject parcels will be joined under a Unity of Title.

d. Concurrency. Concurrency for potable water, sewer, stormwater and solid waste are required by the State. Concurrency for transportation, parks and schools are required by the City's comprehensive plan. [Sec 34-55]

Staff Comment: A preliminary concurrency review indicated that the residential use will not exceed the level of service standards of the comprehensive plan for concurrency related facilities; specifically, water, sewer, parks and open space. The project is anticipated to generate a population of 156 new residents. A traffic study provided by the applicant dated June of 2022 indicates that "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes". The City's required recreation and open space will not be exceeded with the additional population. The Public Works Department stated that capacity is available to serve the new townhome subdivision with solid waste services. The School District evaluated the land use application for school concurrency and there is enough capacity at nearby schools to accommodate the new residential development. ***The project will be reviewed for formal City concurrency, including stormwater management and transportation, with the submittal of a site plan.***

FINDINGS:

Comprehensive Plan Amendment

The comprehensive plan future land use small scale map amendment is consistent with the City's comprehensive plan.

Rezoning

The rezoning and conditions of approval are consistent with the proposed land use amendment, City's Comprehensive Plan, and the Land Development Regulations, including PD and rezoning criteria described in Section 33-8 and 34-40 of the Code.

Master Plan

The master plan is consistent with the proposed land use amendment, City's Comprehensive Plan, Land Development Regulations, and Master Plan requirements described in Chapter 34, Article II, Division 3 of the Code.

RECOMMENDATION:

Comprehensive Plan Amendment

Approve the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 5.01+/- acres of property; Commercial High Intensity to Conservation on 0.49+/- acres of property; and from Conservation to Low Density Residential on 0.63+/- acres of property; and Commercial High Intensity to Low Density Residential on 9.05+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752.

Rezoning

Approve the rezoning from General Use (GU) zoning district to the Planned Development (PD) zoning district on 8.11+/- acres of property; the Neighborhood Commercial (NC) zoning district to the Planned Development (PD) zoning district on 9.55+/- acres of property; the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.63+/- acres of property having Parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752 and master plan and conditions of approval as described in the rezoning ordinance:

1. **A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].**
2. **Side setbacks will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD [1.8(g)].**
3. **The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(b)].**
4. **Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].**
5. **Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].**

Titusville
Gateway to Nature & Space

APPLICATION FOR COMPREHENSIVE PLAN AMENDMENT

Please submit electronically a completed application including required submittals to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Annexation	Does the request include an annexation?	☐ Yes ☑ No
2. Regular or Small Scale Amendment	Regular Amendment (CPA) Property **50 acres or greater** ☐	Small Scale Amendment (SSA) Property **less than 50 acres** ☑
3. Project Information	Project Name SR 405 and Singleton PD - North	Property Address/Location Description Near intersection of SR 405 and Singl
4. Applicant / Owner	Name of Applicant/Contact The Singleton Ave 44 Acre Land Trust Dated April 4, 2022 C/O Esquire Trustee Service, LLC	Name of Owner Singleton Avenue 44 Acre Trust LLC
	Street Address 1919 Blanding Blvd.	Street Address 1919 Blanding Blvd.
	City State Zip Jacksonville FL 32210	City State Zip Jacksonville FL 32210
	Telephone # (407) 969-0434 Fax #	Telephone # (407) 969-0434 Fax #
	E-Mail Address lpoutre@dcrlaw.com	E-Mail Address lpoutre@dcrlaw.com
5. Applicant Status	☐ Owner ☐ Tenant ☐ Agent ☑ Other	
6. Parcel ID	22-35-05-00-750; 22-35-05-00-752	**Tax Acct.** 3028882; 2202226
7. Site Size (Attach Legal Description)	Acres: Total: 38.65 Developable: 14.23 Rezone: 18.29 Comp Plan: 15.18	Square Feet: Total: 1683594
8. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.:	
	SUBJECT SITE:	9909 - Vacant Residential Land
	NORTH:	0010 - Vacant Residential Land & 9600 - Waste Land & 0110 - Single Family Residence
	SOUTH:	9909 - Vacant Residential Land & SR 405 & S Singleton Ave
	EAST:	9909 - Vacant Residential Land & SR 405
	WEST:	9600 - Waste Land & 9909 - Vacant Residential Land & 0110 - Single Family Residence & S Singleton Ave

9. Current Designation	Future Land Use: Conservation & Commercial-High Intensity & Low Density Residential		Zoning: OR, NC, and GU	
10. Proposed Designations	Future Land Use: Low Density Residential and Conservation. See proposed acreage breakdown on separate sheet and corresponding individual sketch and legal descriptions.		Zoning: Planned Development (PD)	
11. Subject Property	Current Use: Vacant		Proposed Use: Townhomes	
12. Note any previous amendments on the site	N/A			
13. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☐	Rezoning ☑
	Vacation of Right of Way ☐	Site Plan ☐	Subdivision/ Plat ☐	Other:
14. Narrative	Please provide a brief description of the request and the proposed project: (Attach separate narrative page if necessary) The subject property is a +/- 38.65 AC undeveloped parcel within the City of Titusville, located near the intersection of SR405 (South Street) and Singleton Avenue. The parcel is largely wetland, with +/- 14.23 acres of developable area, per the provided conceptual site plan. The proposed project at full buildout is an individually platted townhome community with residential amenities. The parcel currently has multiple zoning districts and land use designations; zoning districts include zoned Open Space & Recreation (OR), Neighborhood Commercial (NC), and General Use (GU) with future land uses of Low-Density Residential, Commercial High Intensity and Conservation. In discussions with staff, the project will propose a rezoning to Planned Development (PD) and small-scale amendment to change the future land use to Low Density Residential. Please note this is with the exception of some areas of wetlands which propose a land use change of Conservation as they are larger than 5 AC in size and part of a larger wetland that is already zoned appropriately. Individual sketch and legal descriptions for the portions of the parcels with a proposed land use change have been included within this application package, as discussed with staff at the pre-application meeting; the total acreage to be rezoned is 18.29 AC and land use change is 15.18 AC. The SR 405 and Singleton PD - North project proposes 70 townhome units with supporting infrastructure and site improvements, including vehicular access, sidewalks, residential amenities, landscaping, utilities, and onsite stormwater management facilities. The proposed density of the development is 2 dwelling units per acre, which is less than the allowable 5 dwelling units per acre in a Low-Density Residential land use. Additionally, the request for a change to Low Density Residential is compatible with the surrounding existing residential uses. Surrounding land uses are shown on the Existing Conditions plan provided within this submittal package.			

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
- Tentative hearing dates are scheduled approximately 4 months from the time a completed application is submitted.
- Incomplete applications will not be accepted and will not be considered to be officially submitted until the appropriate information and fees are submitted. Meeting dates for incomplete applications will not be set until all required information and fees are submitted.
- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the schedule noted above.
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
4. I understand that I must attend all applicable meetings and have been informed of the meeting date(s) and time(s). I understand that if I fail to appear at an applicable meeting, the appropriate Board or Commission may either table or deny the request.
5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781

/s/ Alyssa J Colby _____ 6/20/2024
(Signature*) (Date)

* *By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

Date Received:_____

Accepted by:_____

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 4)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	☑
2.	Warranty Deed	☑
3.	Notarized Owner Authorization Form (If applicable)	☑
4.	Legal Description (from a certified survey in Microsoft Word format)	☑
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format.	☑
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	☑
7.	Additional site-specific data as necessary to describe any impacts to conservation / wetland areas, and other environmentally sensitive resources, including any mitigation efforts to be proposed or required by these regulations.	☑
8.	Traffic counts and Level of Service (LOS) on streets providing access to subject property may be required by the City. A determination of the needed information will be provided by the City prior to submittal of the request.	☑
9.	Pre-Application Meeting Held – YES Date: 6/28/2023 Staff in Attendance: Eddy Galindo, KB Ofosu, Christie Anderson	☑
10.	Preliminary School Concurrency Determination Submitted. Contact Brevard County Public Schools, David Lindemann to receive this application for completion. Lindemann.David@BrevardSchools.org	☑
11.	Community Meeting per Ordinance 26-2019 – Tentative meeting date 11/2/2023	☑

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 4)

In order to illustrate the proposed use of the property to be rezoned, the applicant is encouraged to submit a conceptual site plan in support of the proposal. If a conceptual site plan or developer's agreement is not provided with the application, the City shall review the application based on the most intensive land use and the maximum intensity and/or density within the zoning district requested within the application. If a conceptual site plan is submitted, the following information shall be provided:

1.	A vicinity map indicating the general location of the abutting streets and utilities.	☑
2.	General information regarding the existing site conditions and physical characteristics, adjacent community facilities and public utilities, and surrounding property conditions.	☑
3.	General description of the proposed development including the total acreage, the proposed number of buildings, or the number of units.	☑
4.	The location of existing buildings and structures including the dimensions.	☑
5.	The means of ingress and egress to the project.	☑
6.	General location and dimension of all existing and proposed parking and/or loading areas.	☑
7.	Information showing approximate location of all structures and major features, setbacks, distance between structures and property lines, floor areas, width of driveways, parking spaces, property or lot lines, percent of property or lot lines, percent of property coverage.	☑

Gateway to Nature & Space

APPLICATION FOR REZONING (REZ) / PLANNED DEVELOPMENT (PD) / MASTER PLAN (MP)

Please submit electronically a completed application including to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Project Information	Project Name SR 405 and Singleton PD - North	Property Address/Location Description Near intersection of SR 405 and Singleton Ave.
2. Type of Request	Rezoning (REZ) ☐ Planned Development (PD) ☑ Master Plan (MP) ☐	
2. Applicant/ Owner	Name of Applicant/Contact The Singleton Ave 44 Acre Land Trust Dated April 4, 2022 C/O Esquire Trustee Service, LLC	Name of Owner Singleton Avenue 44 Acre Trust LLC
	Street Address 1919 Blanding Blvd	Street Address 1919 Blanding Blvd.
	City State Zip Jacksonville FL 32210	City State Zip Jacksonville FL 32210
	Telephone # (407) 969-0434 Fax #	Telephone # (407) 969-0434 Fax #
	E-Mail Address lpoutre@dcrlaw.com	E-Mail Address lpoutre@dcrlaw.com
3. Applicant Status	☐ Owner ☐ Tenant ☐ Agent ☑ Other	
4. Parcel ID	22-35-05-00-750; 22-35-05-00-	**Tax Acct.** 3028882; 2202226
5. Site Size	Acres: Total: 38.65 Developable: 14.23 Rezone: 18.29 Comp Plan: 15.18	Square Feet: Total: 1683594
6. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.:	
	SUBJECT SITE: 9909 - Vacant Residential Land	
	NORTH: 0010 - Vacant Residential Land & 9600 - Waste Land & 0110 - Single Family Residence	
	SOUTH: 9909 - Vacant Residential Land & SR 405 & S Singleton Ave	
	EAST: 9909 - Vacant Residential Land & SR 405	
	WEST: 9600 - Waste Land & 9909 - Vacant Residential Land & 0110 - Single Family Residence & S Singleton Ave	

7. Current Future Land Use Designation	Future Land Use: Conservation & Commercial-High Intensity & Low Density Residential			
8. Existing Zoning District	Open Space & Recreation (OR) & Neighborhood Commercial (NC) & General Use (GU)			
9. Proposed Zoning District	Planned Development (PD)			
10. Building Status	Existing Building(s) on the site? 0	New Buildings Proposed? 70		
11. Note any previous rezonings on the site	N/A			
12. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☐	Rezoning ☐
	Vacation of Right of Way ☐	Site Plan ☐	Subdivision/ Plat ☐	Other: Comprehensive Plan Amendment
13. Narrative	Please provide a brief description of your request and the proposed project: (Attach separate narrative page if necessary) The subject property is a +/- 38.65 AC undeveloped parcel within the City of Titusville, located near the intersection of SR405 (South Street) and Singleton Avenue. The parcel is largely wetland, with +/- 14.23 acres of developable area, per the provided conceptual site plan. The proposed project at full buildout is an individually platted townhome community with residential amenities. The parcel currently has multiple zoning districts and land use designations; zoning districts include zoned Open Space & Recreation (OR), Neighborhood Commercial (NC), and General Use (GU) with future land uses of Low-Density Residential, Commercial High Intensity and Conservation. In discussions with staff, the project will propose a rezoning to Planned Development (PD) and small-scale amendment to change the future land use to Low Density Residential. Please note this is with the exception of some areas of wetlands which propose a land use change of Conservation as they are larger than 5 AC in size and part of a larger wetland that is already zoned appropriately. Individual sketch and legal descriptions for the portions of the parcels with a proposed land use change have been included within this application package, as discussed with staff at the pre-application meeting; the total acreage to be rezoned is 18.29 AC and land use change is 15.18 AC. The SR 405 and Singleton PD - North project proposes 70 townhome units with supporting infrastructure and site improvements, including vehicular access, sidewalks, residential amenities, landscaping, utilities, and onsite stormwater management facilities. The proposed density of the development is 2 dwelling units per acre, which is less than the allowable 5 dwelling units per acre in a Low-Density Residential land use. Additionally, the request for a zoning change to PD for residential uses is compatible with the surrounding existing residential uses. Surrounding zoning districts are shown on the Existing Conditions plan provided within this submittal package.			

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
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- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the originally scheduled date(s).
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
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5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781

/s/ Alyssa J Colby _____ 7/25/2024
(Signature*) (Date)

* *By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

Date received: _____

Accepted by: _____

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 5 and 6)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	☑
2.	Warranty Deed	☑
3.	Notarized Owner Authorization Form (If applicable)	☑
4.	Legal Description (from a certified survey)	☑
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format	☑
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	☑
7.	For **Planned Development and Master Plan** applications, a conceptual site plan (minimum 24" x 36") in electronic PDF format. See table below for requirements.	☑
8.	For **Master Plan** applications, a Unified Control Agreement pursuant to Sec. 34-54 of the Land Development Regulations. N/A	☐
9.	Pre-Application Meeting Date: 6/28/2023 Staff in Attendance: Eddy Galindo, KB Ofosu, Christie Anderson	☑
10.	Community Meeting per Ordinance 26-2019 – Tentative meeting date 11/2/2023	☑

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 5 and 6)

THE CONCEPTUAL SITE PLAN SHALL INCLUDE THE FOLLOWING:

1.	All information required for a sketch plat. (if applicable)	☑
2.	Development plan identifying the location and acreage of each component and district of the project, including the location and placement of proposed land uses by type and density, density, layout of lots, open space designation, location of landscape buffer areas required by these regulations, recreational facilities, commercial uses, other permitted uses, off-street parking and loading locations and refuse collection locations.	☑
3.	Development plans showing access and buffer areas (both external and internal) to the development and how pedestrian and other non-motoring travel will be safely integrated.	☑
4.	Tabulations of acreage devoted to each use and total gross acreage of the project. These tabulations shall include acreage totals for each use, open space designations, recreation facilities, streets, parks, schools and other uses. Within these tabulations, information relative to the total number and type of residential units, the residential density for each type of unit, and the overall residential density of the project shall be provided.	☑
5.	An environmental component, including maps and analyses, which determine the effect of the proposed development upon the conservation/preservation of native habitat, wildlife, floodplains, recreation advantages wetlands and other natural resources.	☑
6.	Documentation as to the impact of the proposed development on the levels of service for roads, potable water, sanitary sewer, solid waste drainage, parks and any other public facilities and services. (Preliminary Concurrency Analysis)	☑
7.	A stormwater management plan with sufficient detail included to demonstrate that the proposed development can comply with the requirements of the Land Development Regulations.	☑
8.	The location of existing buildings and structures including the dimensions.	☑

ORDINANCE NO. __-2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY AMENDING THE FUTURE LAND USE DESIGNATION ON LAND LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SOUTH SINGLETON AVENUE AND S.R. 405/SOUTH STREET FROM LOW DENSITY RESIDENTIAL TO CONSERVATION ON 5.01+/- ACRES OF PROPERTY; COMMERCIAL HIGH INTENSITY TO CONSERVATION ON 0.49+/- ACRES OF PROPERTY; AND FROM CONSERVATION TO LOW DENSITY RESIDENTIAL ON 0.63+/- ACRES OF PROPERTY; AND COMMERCIAL HIGH INTENSITY TO LOW DENSITY RESIDENTIAL ON 9.05+/- ACRES OF PROPERTY HAVING PARCEL ID NOS. 22-35-05-00-750 AND 22-35-05-00-752; PROVIDING FOR SEVERABILITY; REPEAL OF CONFLICTING ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: **RECITALS**. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Small Scale Comprehensive Plan Amendment #1-2024 and amends its Future Land Use Map, by changing the land use designation of on land located at the northeast corner of the intersection of South Singleton Avenue and S.R. 405/South Street from Low Density Residential to Conservation on 5.01+/- acres of property; Commercial High Intensity to Conservation on 0.49+/- acres of property; Conservation to Low Density Residential on 0.63+/- acres of property; and Commercial High Intensity to Low Density Residential on 9.05+/- acres of property having parcel ID Nos. 22-35-05-00-750 and 22-35-05-00-752; as described in Exhibit A.

SECTION 3. SEVERABILITY. If any provisions of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 5. EFFECTIVE DATE. This ordinance shall take effect 31 days after adoption pursuant to Section 163.3187(5)(c) Florida Statutes.

PASSED AND ADOPTED, this _____ day of _____, 2024.

Daniel E. Diesel, Mayor

ATTEST:

WANDA F. WELLS, CITY CLERK

Exhibit A

LOW DENSITY RESIDENTIAL TO CONSERVATION

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 67.75 FEET; THENCE SOUTH 16°40'03" EAST, A DISTANCE OF 19.46 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 33°15'10" EAST, A DISTANCE OF 96.67 FEET; THENCE SOUTH 20°48'01" EAST, A DISTANCE OF 69.77 FEET; THENCE SOUTH 19°47'32" WEST, A DISTANCE OF 54.25 FEET; THENCE SOUTH 33°13'08" WEST, A DISTANCE OF 111.24 FEET; THENCE SOUTH 20°53'51" WEST, A DISTANCE OF 100.38 FEET; THENCE SOUTH 28°56'21" WEST, A DISTANCE OF 61.85 FEET; THENCE NORTH 41°30'05" WEST, A DISTANCE OF 63.70 FEET; THENCE NORTH 31°48'12" EAST, A DISTANCE OF 38.71 FEET; THENCE NORTH 29°07'39" EAST, A DISTANCE OF 46.00 FEET; THENCE NORTH 27°13'50" EAST, A DISTANCE OF 21.80 FEET; THENCE NORTH 24°33'17" EAST, A DISTANCE OF 60.66 FEET; THENCE NORTH 21°28'59" EAST, A DISTANCE OF 38.92 FEET; THENCE NORTH 2E31'04" EAST, A DISTANCE OF 12.96 FEET; THENCE NORTH 22°16'42" EAST, A DISTANCE OF 26.22 FEET; THENCE NORTH 17°54'02" EAST, A DISTANCE OF 19.65 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 183.16 FEET AND A CHORD WHICH BEARS NORTH 07°44'17" EAST AND A DISTANCE OF 71.43 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 71.90 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 359.32 FEET AND A CHORD WHICH BEARS NORTH 08°53'16" WEST A DISTANCE OF 67.40 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 67.49 FEET; THENCE NORTH 14°18'24" WEST, A DISTANCE OF 15.06 FEET; TO THE POINT OF BEGINNING.

CONTAINING 21,850.03 SQUARE FEET OR 0.50 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 81°37'23" WEST, A DISTANCE OF 615.59 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 48°29'55" WEST, A DISTANCE OF 121.62 FEET TO THE WEST LINE OF GOVERNMENT LOT 2; THENCE NORTH 01°34'59" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 77.15 FEET; THENCE NORTH 76°38'49" EAST, A DISTANCE OF 11.40 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 185.76 FEET AND A CHORD WHICH BEARS NORTH 89°25'07" EAST, A DISTANCE 82.13 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 82.81 FEET TO THE POINT OF BEGINNING.

CONTAINING 3,953.85 SQUARE FEET OR 0.09 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 3

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, THE FOLLOWING TWO (2) COURSES: (1) SOUTH 83°04'38" EAST, A DISTANCE OF 260.00 FEET; (2) SOUTH 76°30'19" EAST, A DISTANCE OF 251.12 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 76°30'19" EAST, ALONG SAID LINE, A DISTANCE OF 198.87 FEET; THENCE NORTH 86°53'24" EAST, A DISTANCE OF 168.10 FEET; THENCE NORTH 29°44'57" EAST, A DISTANCE OF 250.00 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "B"; THENCE SOUTH 60°14'58" EAST, A DISTANCE OF 110.78 FEET TO THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 905.73 FEET; THENCE NORTH 17°56'33" WEST, A DISTANCE OF 38.25 FEET; THENCE NORTH 07°08'39" EAST, A DISTANCE OF 47.22 FEET; THENCE NORTH 13°04'30" EAST, A DISTANCE OF 71.83 FEET; THENCE NORTH 28°30'38" EAST, A DISTANCE OF 52.48 FEET; THENCE NORTH 60°00'48" WEST, A DISTANCE OF 40.36 FEET; THENCE NORTH 11°01'19" WEST, A DISTANCE OF 66.34 FEET; THENCE NORTH 27°09'12" WEST, A DISTANCE OF 33.59 FEET; THENCE CONTINUE NORTH 27°09'12" WEST, ALONG SAID LINE, A DISTANCE OF 19.20 FEET; THENCE NORTH 21°07'09" WEST, A DISTANCE OF 50.00 FEET; THENCE NORTH 35°02'16" EAST, A DISTANCE OF 40.16 FEET; THENCE NORTH 07°27'02" EAST, A DISTANCE OF 32.91 FEET; THENCE NORTH 75°39'19" EAST, A DISTANCE OF 127.85 FEET TO THE POINT OF BEGINNING.

CONTAINING 134,845.25 SQUARE FEET OR 3.10 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 4

COMMENCE AT REFERENCE POINT "B"; THENCE NORTH 29°44'57" EAST, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 29°44'57" EAST, ALONG SAID LINE, A DISTANCE OF 312.48 FEET; THENCE NORTH 07°40'34" EAST, A DISTANCE OF 91.86 FEET; THENCE SOUTH 28°44'21" EAST, A DISTANCE OF 291.88 FEET TO THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'45" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 258.79 FEET; THENCE NORTH 60°14'58" WEST, A DISTANCE OF 131.15 FEET TO THE POINT OF BEGINNING.

CONTAINING 57,512.11 SQUARE FEET OR 1.32 ACRES, MORE OR LESS.

COMMERCIAL HIGH INTENSITY TO CONSERVATION

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 05°01'09" WEST, A DISTANCE OF 418.79 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 63.70 FEET; THENCE SOUTH 28°56'21" WEST, A DISTANCE OF 25.50 FEET; THENCE

SOUTH 55°25'52" WEST, A DISTANCE OF 83.19 FEET; THENCE SOUTH 50°54'00" WEST, A DISTANCE OF 74.22 FEET; THENCE SOUTH 87°41'02" WEST, A DISTANCE OF 74.78 FEET; THENCE NORTH 30°35'31" WEST, A DISTANCE OF 43.93 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°53'02" EAST, A DISTANCE OF 23.93 FEET; THENCE NORTH 83°08'45" EAST, A DISTANCE OF 17.79 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 284.09 FEET AND A CHORD WHICH BEARS NORTH 78°27'46" EAST AND A DISTANCE OF 49.25 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 49.31 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 89.31 FEET AND A CHORD WHICH BEARS NORTH 61°57'25" EAST AND A DISTANCE OF 30.98 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 31.14 FEET; THENCE NORTH 49°18'48" EAST, A DISTANCE OF 5.78 FEET; THENCE NORTH 38°33'50" EAST, A DISTANCE OF 60.15 FEET; THENCE NORTH 34°51'09" EAST, A DISTANCE OF 60.15 FEET; TO THE POINT OF BEGINNING.

CONTAINING 11,865.23 SQUARE FEET OR 0.27 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 86°27'38" WEST, A DISTANCE OF 336.32 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 09°36'53" WEST, A DISTANCE OF 12.72 FEET; THENCE SOUTH 25°58'21" WEST, A DISTANCE OF 94.62 FEET; THENCE NORTH 57°13'20" WEST, A DISTANCE OF 63.65 FEET; THENCE NORTH 74°31'26" WEST, A DISTANCE OF 42.95 FEET; THENCE SOUTH 65°25'21" WEST, A DISTANCE OF 35.77 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE NORTH 01°34'59" WEST ALONG SAID EASTERLY RIGHT OF WAY, A DISTANCE OF 4.77 FEET; THENCE NORTH 48°29'55" EAST , A DISTANCE OF 121.62 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 1,446.02 FEET AND A CHORD WHICH BEARS SOUTH 76°47'06" EAST AND A DISTANCE OF 82.22 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 82.24 FEET TO THE POINT OF BEGINNING.

CONTAINING 9,730.74 SQUARE FEET OR 0.22 ACRES, MORE OR LESS.

CONSERVATION TO LOW DENSITY RESIDENTIAL

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 40°22'38" WEST ALONG THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 165.00 FEET; THENCE SOUTH 24°06'27" WEST, A DISTANCE OF 415.06 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 51°07'35" EAST, A DISTANCE OF 53.32 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 9.77 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS SOUTH 88°30'59" WEST AND A DISTANCE OF 71.70 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 71.86 FEET; TO A POINT OF

REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS NORTH 89°30'46" WEST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS NORTH 89°36'21" WEST, AND A DISTANCE OF 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 70.73 FEET; THENCE NORTH 85°06'12" WEST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS NORTH 79°57'07" WEST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 98.75 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 58.45 FEET; THENCE NORTH 53°18'49" WEST, A DISTANCE OF 21.04 FEET; THENCE NORTH 49°24'13" EAST, A DISTANCE OF 67.46 FEET; THENCE SOUTH 60°15'09" EAST, A DISTANCE OF 31.76 FEET; THENCE SOUTH 80°23'47" EAST, A DISTANCE OF 55.17 FEET; THENCE SOUTH 67°21'48" EAST, A DISTANCE OF 176.73 FEET TO THE POINT OF BEGINNING.

CONTAINING 27,261.21 SQUARE FEET OR 0.63 ACRES, MORE OR LESS.

COMMERCIAL HIGH INTENSITY TO LOW DENSITY RESIDENTIAL

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 00°41'13" EAST, A DISTANCE OF 464.93 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 340.25 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 747.41 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE ALONG THE EASTERLY RIGHT OF WAY THE FOLLOWING THREE (3) COURSES: (1) NORTH 41°30'05" WEST, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,309.05 FEET AND A CHORD WHICH BEARS NORTH 35°24'26" WEST, A DISTANCE 277.95 FEET; (2) ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.47 FEET; (3) NORTH 01°34'59" WEST, A DISTANCE OF 121.05 FEET; THENCE NORTH 65°25'21" EAST, A DISTANCE OF 35.77 FEET; THENCE SOUTH 74°31'26" EAST, A DISTANCE OF 42.95 FEET; THENCE SOUTH 57°13'20" EAST, A DISTANCE OF 63.65 FEET; THENCE NORTH 25°58'21" EAST, A DISTANCE OF 94.62 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 12.72 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS SOUTH 79°57'07" EAST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 98.75 FEET; THENCE SOUTH 85°06'12" EAST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS SOUTH 89°36'21" EAST, A DISTANCE 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 70.73 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS SOUTH 89°30'46" EAST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 313.53 FEET AND A

CHORD WHICH BEARS NORTH 88°30'59" EAST, AND A DISTANCE OF 71.70 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 71.86 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 43.93 FEET; THENCE NORTH 87°41'02" EAST, A DISTANCE OF 74.78 FEET; THENCE NORTH 50°54'00" EAST, A DISTANCE OF 74.22 FEET; THENCE NORTH 55°25'52" EAST, A DISTANCE OF 83.19 FEET; THENCE NORTH 28°56'21" EAST, A DISTANCE OF 25.50 FEET TO THE POINT OF BEGINNING.

CONTAINING 394,331.55 SQUARE FEET OR 9.05 ACRES, MORE OR LESS.

ORDINANCE NO. __-2024

AN ORDINANCE AMENDING ORDINANCE NO. 5-1993 OF THE CITY OF TITUSVILLE, FLORIDA, BY AMENDING THE ZONING MAP MADE A PART OF SAID ORDINANCE BY REFERENCE BY CHANGING THE ZONING CLASSIFICATION ON LAND LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SOUTH SINGLETON AVENUE AND S.R. 405/SOUTH STREET FROM THE GENERAL USE (GU) ZONING DISTRICT TO THE PLANNED DEVELOPMENT (PD) ZONING DISTRICT ON 8.11+/- ACRES OF PROPERTY; THE NEIGHBORHOOD COMMERCIAL (NC) ZONING DISTRICT TO THE PLANNED DEVELOPMENT (PD) ZONING DISTRICT ON 9.55+/- ACRES OF PROPERTY; THE OPEN SPACE RECREATIONAL (OR) ZONING DISTRICT TO THE PLANNED DEVELOPMENT (PD) ZONING DISTRICT ON 0.63+/- ACRES OF PROPERTY HAVING PARCEL ID NOS. 22-35-05-00-750 AND 22-35-05-00-752; PROVIDING FOR SEVERABILITY; REPEAL OF CONFLICTING ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Titusville received an application for a rezoning from certain property owners; and

WHEREAS, a first and second public hearing has been held on the rezoning before the Local Planning Agency and the local governing body and considered findings and advice of staff, citizens, and all interested parties submitting written and oral comments and supporting data and analysis, and after complete deliberation, hereby finds the requested change consistent with the Comprehensive Plan and that sufficient, competent, and substantial evidence supports the zoning change set forth hereunder; and

WHEREAS, the City of Titusville finds that said rezoning has been processed in accordance with the applicable law and desires to amend its Zoning Map to change the zoning designation on said properties; and

WHEREAS, the City of Titusville finds that said rezoning has been processed in accordance with the applicable law and desires to amend its Zoning Map to change the zoning designation on said properties; and

WHEREAS, the City Council of the City of Titusville desires to amend its Zoning Map.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF TITUSVILLE, FLORIDA as follows:

SECTION 1. RECITALS. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. Ordinance No. 5-1993 is hereby amended by amending the Zoning Map of the City of Titusville, made a part of said Ordinance by reference, by designating the following property described in Exhibit A with conditions and associated Master Plan in Exhibit B presently zoned General Use (GU), Neighborhood Commercial (NC), and Open Space and Recreational (OR) to Planned Development (PD).

SECTION 3. This ordinance shall take effect simultaneously with the effective date of Small-Scale Amendment (SSA) No. 1-2024 contained in Ordinance __-2024.

SECTION 4. SEVERABILITY. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 6. INCORPORATION INTO CODE. This ordinance shall be incorporated into the City of Titusville Code of Ordinances and any section or paragraph, number or letter, and any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical, and like errors may be corrected and additions, alterations, and omissions, not affecting the construction or meaning of this ordinance and the Code may be made.

PASSED AND ADOPTED this _____day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

Exhibit A – Planned Development Ordinance

SR405 and Singleton PD – North

1.1 DESCRIPTION:

The **SR405 and Singleton PD - North** Planned Development zoned area of approximately 38.65 +/- acres (full site, consisting of Tract #1 and #2 of legal description below) and 14.23 +/- acres of developable area is comprised of townhome units and common open space and recreation areas.

1.2 LEGAL DESCRIPTION

BEING A PART OF GOVERNMENT LOTS 1 & 2, LYING IN SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA;

THE NORTH 1/2 OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LESS AND EXCEPT FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 928, PAGE 918; AND ANY PORTION LYING WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 405 RIGHT OF WAY, ALL OF BREVARD COUNTY, FLORIDA,

TOGETHER WITH:

U.S. GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST EXCEPT FOREST
HILLS ESTATES RECORDED IN PLAT BOOK 12, PAGE 81 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2502, PAGE 46, OF SAID PUBLIC RECORDS, ALL LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

TOGETHER WITH:

SOUTH 1/2 OF GOVERNMENT LOT 1 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRACT #1

COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA FOR A POINT OF BEGINNING THENCE; NORTH 89°45'01" EAST ALONG THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, A DISTANCE OF 608.75 FEET TO THE NORTHEAST CORNER OF GOVERNMENT LOT 1, ALSO BEING THE EST 1/4 CORNER OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG THE EAST BOUNDARY OF SAID GOVERNMENT LOT 1 AND SAID SECTION 5, A DISTANCE OF 485.16 FEET; TO THE NORTH RIGHT OF WAY FOR STATE ROAD #405 AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,996.93 FEET AND A CHORD WHICH BEARS SOUTH 53°29'10" WEST AND A DISTANCE OF 499.41 FEET; THENCE ALONG SAID NORTH

RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 499.99 FEET; THENCE CONTINUE ALONG SAID RIGHT OF WAY SOUTH 48°29'45" WEST, A DISTANCE OF 483.39 FEET TO A POINT ON THE NORTH RIGHT OF WAY FOR POINSETTIA AVENUE AND TO REFERENCE POINT 'A'; THENCE NORTH 60°14'58" WEST ALONG SAID NORTH RIGHT OF WAY, A DISTANCE OF 131.15 FEET TO THE MOST SOUTHERLY CORNER OF LOT 11, BLOCK 10, OF FOREST HILLS ESTATES, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 12, PAGE 81, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE NORTH 29°44'57" EAST ALONG THE EAST BOUNDARY OF SAID BLOCK 10, A DISTANCE OF 312.48 FEET; THENCE CONTINUE ALONG SAID EAST BOUNDARY NORTH 07°40'34" EAST, A DISTANCE OF 770.40 FEET; TO THE POINT OF BEGINNING.

CONTAINING 531,080.96± SQUARE FEET OR 12.19± ACRES, MORE OR LESS.

TRACT #2

COMMENCE AT AFORESAID REFERENCE POINT 'A'; THENCE SOUTH 48°29'45" WEST ALONG THE NORTH RIGHT OF WAY FOR STATE ROAD #405, A DISTANCE OF 63.33 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID RIGHT OF WAY SOUTH 48°29'40" WEST, A DISTANCE OF 1,886.06 FEET TO THE WEST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE; THENCE NORTH 41°30'05" WEST ALONG SAID WEST RIGHT OF WAY, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,300.57 FEET AND A CHORD WHICH BEARS NORTH 35°21'35" WEST, A DISTANCE 278.29 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.82 FEET; THENCE NORTH 01°34'59" WEST, A DISTANCE OF 981.92 FEET; THENCE NORTH 89°54'15" EAST, A DISTANCE OF 80.09 FEET TO A POINT OF THE WEST BOUNDARY OF LOT 13, BLOCK 6, OF FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE SOUTH 26°32'20" WEST ALONG SAID WEST BOUNDARY, A DISTANCE OF 72.04 FEET; THE FOLLOWING (7) COURSES RUN ALONG THE SOUTH BOUNDARIES OF FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59 AND FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; THENCE (1) SOUTH 39°31'11" EAST, A DISTANCE OF 433.00 FEET; THENCE (2) NORTH 89°19'24" EAST, A DISTANCE OF 330.11 FEET; THENCE (3) NORTH 40°22'38" EAST, A DISTANCE OF 165.00 FEET; THENCE (4) SOUTH 83°04'38" EAST, A DISTANCE OF 260.00 FEET; THENCE (5) SOUTH 76°30'19" EAST, A DISTANCE OF 450.00 FEET; THENCE (6) NORTH 86°53'24" EAST, A DISTANCE OF 168.10 FEET; THENCE (7) NORTH 29°44'57" EAST, A DISTANCE OF 250.00 FEET TO THE SOUTH RIGHT OF WAY FOR POINSETTIA AVENUE; THENCE SOUTH 60°14'58" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 110.78 FEET; TO THE POINT OF BEGINNING.

CONTAINING 1,152,532.25± SQUARE FEET OR 26.46± ACRES, MORE OR LESS.

LESS & EXCEPT:

COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA THENCE SOUTH 89°37'32" WEST ALONG THE NORTH BOUNDARY OF FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81 AND FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, A DISTANCE OF 1,787.15 FEET; TO THE POINT OF BEGINNING; THENCE

SOUTH 00°24'09" EAST ALONG THE WEST BOUNDARY OF SAID FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 390.52 FEET TO THE SOUTHWEST CORNER OF LOT 13, BLOCK 4, ALSO BEING ON THE NORTH RIGHT OF WAY FOR NORTH CIRCLE DRIVE IN SAID FOREST HILLS ESTATES FIRST ADDITION THENCE SOUTH 89°56'56" WEST ALONG THE NORTH BOUNDARY OF OFFICIAL RECORD BOOK 1995, PAGE 427 AND OFFICIAL RECORD BOOK 5101, PAGE 46, RECORDED IN THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, A DISTANCE OF 207.40 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 25.00 FEET AND A CHORD WHICH BEARS NORTH 43°10'24" WEST AND A DISTANCE OF 36.63 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 41.11 FEET TO A POINT ON THE EAST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 1,380.00 FEET AND A CHORD WHICH BEARS NORTH 01°04'04" EAST AND A DISTANCE OF 131.30 FEET; THENCE CONTINUE ALONG SAID EAST RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 131.35 FEET; THENCE NORTH 01°30'00" WEST, A DISTANCE OF 231.26 FEET TO A POINT OF THE NORTH BOUNDARY OF AFORESAID GOVERNMENT LOT 2; THENCE NORTH 89°37'32" EAST ALONG SAID NORTH BOUNDARY OF GOVERNMENT LOT 2, A DISTANCE OF 233.33 FEET; TO THE POINT OF BEGINNING.

GENERAL USE TO PLANNED DEVELOPMENT

LEGAL DESCRIPTION

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION AS RECORDED IN PLAT BOOK 17, PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 67.75 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID SOUTH BOUNDARY THE FOLLOWING, SOUTH 83°04'38" EAST, A DISTANCE OF 75.12 FEET TO THE SOUTHWEST CORNER OF SAID FOREST HILLS ESTATES, AS RECORDED IN PLAT BOOK 12, PAGE 81, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA; THENCE CONTINUE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF SAID FOREST HILLS ESTATES, A DISTANCE OF 117.13 FEET; THENCE SOUTH 76°30'19" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 450.00 FEET; THENCE NORTH 86°53'24" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 168.10 FEET; THENCE NORTH 29°44'57" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 250.00 FEET TO A POINT ON THE SOUTHERLY 60 FOOT RIGHT OF WAY FOR POINSETTIA AVENUE AS SHOWN IN FOREST HILLS ESTATES, AS RECORDED IN PLAT BOOK 12, PAGE 81, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA; THENCE SOUTH 60°14'58" EAST, A DISTANCE OF 110.78 FEET TO THE NORTHERLY RIGHT OF WAY FOR STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 1,138.65 FEET; THENCE NORTH 41°30'05" WEST, A DISTANCE OF 403.95 FEET TO A POINT KNOWN AS REFERENCE POINT "A"; THENCE NORTH 31°48'12" EAST, A DISTANCE OF 38.71 FEET; THENCE NORTH 29°07'39" EAST, A DISTANCE OF 46.00 FEET; THENCE NORTH 27°13'50" EAST, A DISTANCE OF 21.80 FEET; THENCE NORTH 24°33'17" EAST, A DISTANCE OF 60.66 FEET; THENCE NORTH 21°28'59" EAST, A DISTANCE OF 38.92 FEET; THENCE NORTH

26°31'04" EAST, A DISTANCE OF 12.96 FEET; THENCE NORTH 22°16'42" EAST, A DISTANCE OF 26.22 FEET; THENCE NORTH 17°54'02" EAST, A DISTANCE OF 19.65 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 183.16 FEET AND A CHORD WHICH BEARS NORTH 07°44'17" EAST AND A DISTANCE OF 71.43 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 71.90 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 359.32 FEET AND A CHORD WHICH BEARS NORTH 08°53'16" WEST A DISTANCE OF 67.40 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 67.49 FEET; THENCE NORTH 14°18'24" WEST, A DISTANCE OF 15.06 FEET; THENCE NORTH 16°40'03" WEST, A DISTANCE OF 19.46 FEET; TO THE POINT OF BEGINNING.

CONTAINING 349,369.58 SQUARE FEET OR 8.02 ACRES, MORE OR LESS.

TOGETHER WITH:

COMMENCING AT THE POINT KNOWN AS REFERENCE POINT "A"; THENCE SOUTH 81°37'23" WEST, A DISTANCE OF 615.59 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 48°29'55" WEST, A DISTANCE OF 121.62 FEET TO A POINT ON THE WEST BOUNDARY OF GOVERNMENT LOT 2; THENCE NORTH 01°34'59" WEST ALONG SAID WEST LINE, A DISTANCE OF 77.15 FEET; THENCE NORTH 76°38'49" EAST, A DISTANCE OF 11.40 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 185.76 FEET AND A CHORD WHICH BEARS NORTH 89°25'07" EAST, A DISTANCE 82.13 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 82.81 FEET; TO THE POINT OF BEGINNING.

CONTAINING 3,953.85 SQUARE FEET OR 0.09 ACRES, MORE OR LESS.

NEIGHBORHOOD COMMERCIAL TO PLANNED DEVELOPMENT

LEGAL DESCRIPTION

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 00°41'13' EAST, A DISTANCE OF 464.93 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05' EAST, A DISTANCE OF 340.25 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40' WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 747.41 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE ALONG THE EASTERLY RIGHT OF WAY THE FOLLOWING TWO (2) COURSES: (1) NORTH 41°30'05' WEST, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,309.05 FEET AND A CHORD WHICH BEARS NORTH 35°24'26' WEST, A DISTANCE 277.95 FEET; (2) ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.47 FEET; NORTH 01°34'59' WEST, A DISTANCE OF 125.82 FEET; THENCE NORTH 48°29'55' EAST, A DISTANCE OF 121.62 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 1,446.02 FEET AND A CHORD WHICH BEARS SOUTH 76°47'06' EAST AND A DISTANCE OF 82.22 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 82.24 FEET;

TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS SOUTH 79°57'07' EAST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 98.75 FEET; THENCE SOUTH 85°06'12' EAST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS SOUTH 89°36'21' EAST, A DISTANCE 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 70.73 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS SOUTH 89°30'46' EAST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS NORTH 88°30'59' EAST, AND A DISTANCE OF 71.70 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 71.86 FEET; THENCE NORTH 83°53'02' EAST, A DISTANCE OF 23.93 FEET; THENCE NORTH 83°08'45' EAST, A DISTANCE OF 17.79 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 284.09 FEET AND A CHORD WHICH BEARS NORTH 78°27'46' EAST AND A DISTANCE OF 49.25 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 49.31 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 89.31 FEET AND A CHORD WHICH BEARS NORTH 61°57'25' EAST AND A DISTANCE OF 30.98 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 31.14 FEET; THENCE NORTH 49°18'48' EAST, A DISTANCE OF 5.78 FEET; THENCE NORTH 38°33'50' EAST, A DISTANCE OF 60.15 FEET; THENCE NORTH 34°51'09' EAST, A DISTANCE OF 60.15 FEET; THENCE SOUTH 41°30'05' EAST, A DISTANCE OF 63.70 FEET; TO THE POINT OF BEGINNING.

CONTAINING 415,927.52 SQUARE FEET OR 9.55 ACRES, MORE OR LESS

OPEN SPACE RECREATIONAL TO PLANNED DEVELOPMENT

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 40°22'38" WEST ALONG THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 165.00 FEET; THENCE SOUTH 24°06'27" WEST, A DISTANCE OF 415.06 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 51°07'35" EAST, A DISTANCE OF 53.32 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 9.77 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS SOUTH 88°30'59" WEST AND A DISTANCE OF 71.70 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 71.86 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS NORTH 89°30'46" WEST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS NORTH 89°36'21" WEST, AND A DISTANCE OF 70.66 FEET; THENCE ALONG

THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 70.73 FEET; THENCE NORTH 85°06'12" WEST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS NORTH 79°57'07" WEST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 98.75 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 58.45 FEET; THENCE NORTH 53°18'49" WEST, A DISTANCE OF 21.04 FEET; THENCE NORTH 49°24'13" EAST, A DISTANCE OF 67.46 FEET; THENCE SOUTH 60°15'09" EAST, A DISTANCE OF 31.76 FEET; THENCE SOUTH 80°23'47" EAST, A DISTANCE OF 55.17 FEET; THENCE SOUTH 67'21'48" EAST, A DISTANCE OF 176.73 FEET TO THE POINT OF BEGINNING.

CONTAINING 27,261.21 SQUARE FEET OR 0.63 ACRES, MORE OR LESS.

1.3 REFERENCE TO GENERAL DEVELOPMENT PLAN

The **SR405 and Singleton PD - North** Planned Development shall be implemented in accordance with the approved Master Plan attached as Exhibit B.

1.4 PERMITTED USES

(a) Townhome units
(b) Common recreational areas

1.4.1. PERMITTED ACCESSORY USES

(a) Recreational amenities including recreation areas, grill areas, mail kiosk, walking trails with benches and informational placards, stormwater management features, and nature trails.

1.5 DENSITY/INTENSITY MINIMUMS AND MAXIMUMS

Maximum of **seventy (70) residential dwelling units**.

1.6 CRITICAL DESIGN FEATURES

(a) The critical design features for this project include the preservation of wetlands, preservation of uplands, maintaining required landscape yards (buffers), providing stormwater treatment and proposed passive recreational open space. Recreational amenities include designated recreation areas, grill areas, mail kiosk, interconnected and stabilized walking trails with benches and informational placards surrounding the stormwater management features, and nature trails. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage.

(b) Preservation of existing large canopy trees, upland scrub pine and oaks in common areas where feasible.

(c) Low impact development techniques are encouraged with the site plan.

1.7 LAND USE ALLOCATION TABLE

(a)	TOTAL PROJECT ACREAGE:	38.65 Acres
	TOTAL DEVELOPABLE ACREAGE:	14.23 Acres
	Minimum Required Open Space: *(Includes Wetlands Stormwater Ponds)*	4.98 Acres

1.8 AREA, HEIGHT, BULK & OPEN SPACE REQUIREMENTS

(a) The Development and all amenities will be in general conformance with the master plan.
(b) Minimum Unit Living Area: 800 square feet per Section 33-6(a)(3)b of the Code.

(c)	Maximum Building Height:	50 feet
(d)	Maximum Building Coverage (% of full site)	40%
(e)	Maximum Impervious Coverage (% of full site):	40% *(Site within Area of Critical Concern)*
(f)	Building Setbacks (per lot):	20 feet (Front) 10 feet (Rear) 10 feet (Side) 10 feet (Side Corner)

(g) Side setbacks will be increased by one (1) foot for every two (2) feet of building height over thirty-five (35) feet measured from the boundary of the PD.
(h) If this PD Ordinance does not address a specific standard, the standards of the Multi Family Medium Density (R-2) zoning district shall apply.

1.9 ROADWAY DESIGN/TRAFFIC CIRCULATION

(a) A maximum of one vehicular access driveways may be granted onto South Singelton Avenue unless a waiver is approved consistent with the Code.

(b) The internal sidewalk network shall be stabilized with a minimum of 5-feet in width and provide direct access to the adjacent public sidewalk network.

1.10 UTILITIES

(a) The potable water and sanitary sewer service will be provided by the City of Titusville. Electricity will be supplied by the local power company/companies. Gas will be provided by the local gas company/companies. All utilities will be placed underground consistent with Chapter 33 - Development Options, Article I. - Planned Development (PD), Section 33-5(a)(4) of the City's Land Development Regulations.

(b) The lift station will be fenced and gated with locking mechanism and generally screened from view with landscape materials, such as bushes, hedges, and small trees, except where the operational requirements limit such screening. An emergency generator shall be installed with the lift station.

1.11 NATURAL RESOURCES

(a) Conservation Areas designated as Wetland #1, Wetland #3, and the designated Wetland Buffers are to be owned and maintained by the Homeowner Association in accordance

with the requirements of the St. Johns River Water Management District consistent with Chapter 30 - Development Standards, Article I - General Provisions, Division 3 - Operations and Maintenance of the City's Land Development Regulations. Additionally, wetlands protection shall adhere to the regulations set forth in Chapter 29 - Special Districts and Overlays, Article IV - Wetland and Conservation Area (WCA), of the City's Land Development Regulations. Wetland #1, Wetland #3, and Wetland Buffers shall be preserved with the submittal of the sketch plat.

(b) Open Space Areas, including buffers and recreation areas, designated as Tree Canopy Preservation, Landscape/Yard Buffers, and Open Green Space are to be owned and maintained by the Homeowner Association in accordance with the requirements of the City of Titusville consistent with Chapter 30 - Development Standards, Article I - General Provisions, Division 3 - Operations and Maintenance of the City's Land Development Regulations; and Chapter 33 Development Options, Article VIII Conservation Subdivision Design, Section 33-104(a)(6).

(c) The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat. The removal of protected trees shall be consistent with the criteria and requirements of Chapter 30, Article II, Division 2 Trees and Vegetation (Preservation and Mitigation) of the Land Development Regulations.

1.12 BUFFERING/SCREENING

(a) The required landscape yard (buffers) consistent with Chapter 30, Article III, Division 10, Subdivision 3 of the Code, will be provided. A minimum twenty (20) foot landscape yard (buffer) shall be installed along the perimeter of the property boundary and a minimum thirty (30) foot landscape yard (buffer) shall be installed along the perimeter of the property boundary adjacent to SR405 (South Street) to meet the buffer requirements for an arterial/collector roadway as shown in Section 9.3, Roadway Classification Map of the City of Titusville. The required landscape yard (buffers) will be comprised of existing vegetation and additional trees and shrubs. The existing vegetation within this area will be maintained to the greatest extent possible. Invasive trees shall be removed.

1.13 AMENDMENT PROCEDURES AND APPROVAL TIMEFRAME

(a) Amendment procedures shall be in accordance with City of Titusville Land Development Regulations Chapter 33 - Development Options, Article I - Planned Development (PD).

(b) The timeframe for the approval of this Planned Development (PD) shall be consistent with the regulations established in Chapter 33 - Development Options, Article I - Planned Development, Sec. 33-9 - Procedure for securing approval of a Planned Development.

(c) Modifications to this Planned Development (PD) ordinance or master plan shall be reviewed consistent with Table 6.3.3 of the Development Review Procedures Manual.

(d) Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of this ordinance and as illustrated on the master plan in Exhibit B.

(e) Direct impacts to Wetland #1 or Wetland #3 in addition to that which is illustrated on the master plan will require an amendment to the Planned Development (PD) ordinance and master plan.

SR 405 AND SINGLETON PD - NORTH

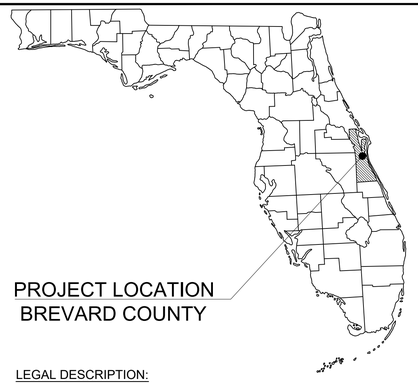
FOR

THE SINGLETON AVE 44 ACRE LAND TRUST, LLC

LOCATED IN

TITUSVILLE, FLORIDA

SECTION 5, TOWNSHIP 22, RANGE 35E



LEGAL DESCRIPTION:

BEING A PART OF GOVERNMENT LOTS 1 & 2, LYING IN SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA;

THE NORTH 1/2 OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LESS AND EXCEPT FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 928, PAGE 918; AND ANY PORTION LYING WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 405 RIGHT OF WAY, ALL OF BREVARD COUNTY, FLORIDA,

TOGETHER WITH:
U.S. GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST EXCEPT FOREST HILLS ESTATES RECORDED IN PLAT BOOK 12, PAGE 81 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2502, PAGE 46, OF SAID PUBLIC RECORDS, ALL LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

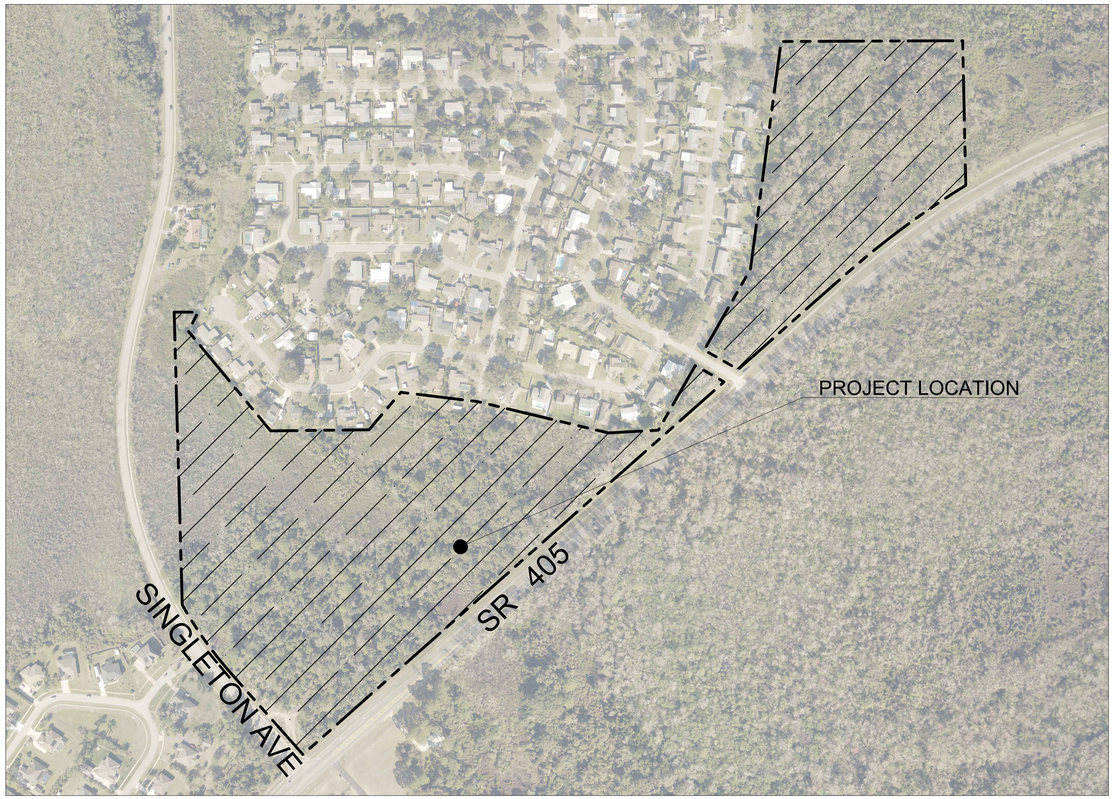
TOGETHER WITH:
SOUTH 1/2 OF GOVERNMENT LOT 1 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRACT #1
COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA FOR A POINT OF BEGINNING THENCE; NORTH 89°45'01" EAST ALONG THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, A DISTANCE OF 608.75 FEET TO THE NORTHEAST CORNER OF GOVERNMENT LOT 1, ALSO BEING THE EST 1/4 CORNER OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG THE EAST BOUNDARY OF SAID GOVERNMENT LOT 1 AND SAID SECTION 5, A DISTANCE OF 485.16 FEET; TO THE NORTH RIGHT OF WAY FOR STATE ROAD #405 AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,996.93 FEET AND A CHORD WHICH BEARS SOUTH 53°29'10" WEST AND A DISTANCE OF 499.41 FEET; THENCE ALONG SAID NORTH RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 499.99 FEET; THENCE CONTINUE ALONG SAID RIGHT OF WAY SOUTH 48°29'45" WEST, A DISTANCE OF 483.39 FEET TO A POINT ON THE NORTH RIGHT OF WAY FOR POINSETTIA AVENUE AND TO REFERENCE POINT 'A'; THENCE NORTH 60°14'58" WEST ALONG SAID NORTH RIGHT OF WAY, A DISTANCE OF 131.15 FEET TO THE MOST SOUTHERLY CORNER OF LOT 11, BLOCK 10, OF FOREST HILLS ESTATES, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 12, PAGE 81, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE NORTH 29°44'57" EAST ALONG THE EAST BOUNDARY OF SAID BLOCK 10, A DISTANCE OF 312.48 FEET; THENCE CONTINUE ALONG SAID EAST BOUNDARY NORTH 07°40'34" EAST, A DISTANCE OF 770.40 FEET; TO THE POINT OF BEGINNING.
CONTAINING 531,080.96± SQUARE FEET OR 12.19± ACRES, MORE OR LESS.

TRACT #2
COMMENCE AT AFORESAID REFERENCE POINT 'A'; THENCE SOUTH 48°29'45" WEST ALONG THE NORTH RIGHT OF WAY FOR STATE ROAD #405, A DISTANCE OF 63.33 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID RIGHT OF WAY SOUTH 48°29'40" WEST, A DISTANCE OF 1,886.06 FEET TO THE WEST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE; THENCE NORTH 41°30'05" WEST ALONG SAID WEST RIGHT OF WAY, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,300.57 FEET AND A CHORD WHICH BEARS NORTH 35°21'35" WEST, A DISTANCE 278.29 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.82 FEET; THENCE NORTH 01°34'59" WEST, A DISTANCE OF 981.92 FEET; THENCE NORTH 89°54'15" EAST, A DISTANCE OF 80.09 FEET TO A POINT OF THE WEST BOUNDARY OF LOT 13, BLOCK 6, OF FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE SOUTH 26°32'20" WEST ALONG SAID WEST BOUNDARY, A DISTANCE OF 72.04 FEET; THE FOLLOWING (7) COURSES RUN ALONG THE SOUTH BOUNDARIES OF FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59 AND FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; THENCE (1) SOUTH 39°31'11" EAST, A DISTANCE OF 433.00 FEET; THENCE (2) NORTH 89°19'24" EAST, A DISTANCE OF 330.11 FEET; THENCE (3) NORTH 40°22'38" EAST, A DISTANCE OF 165.00 FEET; THENCE (4) SOUTH 83°04'38" EAST, A DISTANCE OF 260.00 FEET; THENCE (5) SOUTH 76°30'19" EAST, A DISTANCE OF 450.00 FEET; THENCE (6) NORTH 86°53'24" EAST, A DISTANCE OF 168.10 FEET; THENCE (7) NORTH 29°44'57" EAST, A DISTANCE OF 250.00 FEET TO THE SOUTH RIGHT OF WAY FOR POINSETTIA AVENUE; THENCE SOUTH 60°14'58" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 110.78 FEET; TO THE POINT OF BEGINNING.
CONTAINING 1,152,532.25± SQUARE FEET OR 26.46± ACRES, MORE OR LESS.

LESS & EXCEPT:
COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA THENCE SOUTH 89°37'32" WEST ALONG THE NORTH BOUNDARY OF FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81 AND FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, A DISTANCE OF 1,787.15 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 00°24'09" EAST ALONG THE WEST BOUNDARY OF SAID FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 390.52 FEET TO THE SOUTHWEST CORNER OF LOT 13, BLOCK 4, ALSO BEING ON THE NORTH RIGHT OF WAY FOR NORTH CIRCLE DRIVE IN SAID FOREST HILLS ESTATES FIRST ADDITION THENCE SOUTH 89°56'56" WEST ALONG THE NORTH BOUNDARY OF OFFICIAL RECORD BOOK 1995, PAGE 427 AND OFFICIAL RECORD BOOK 5101, PAGE 46, RECORDED IN THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, A DISTANCE OF 207.40 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 25.00 FEET AND A CHORD WHICH BEARS NORTH 43°10'24" WEST AND A DISTANCE OF 36.63 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 41.11 FEET TO A POINT ON THE EAST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 1,380.00 FEET AND A CHORD WHICH BEARS NORTH 01°04'04" EAST AND A DISTANCE OF 131.30 FEET; THENCE CONTINUE ALONG SAID EAST RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 131.35 FEET; THENCE NORTH 01°30'00" WEST, A DISTANCE OF 231.26 FEET TO A POINT OF THE NORTH BOUNDARY OF AFORESAID GOVERNMENT LOT 2; THENCE NORTH 89°37'32" EAST ALONG SAID NORTH BOUNDARY OF GOVERNMENT LOT 2, A DISTANCE OF 233.33 FEET; TO THE POINT OF BEGINNING.



VICINITY
N.T.S.

PREPARED BY:
Kimley»Horn

PROJECT TEAM

OWNER/DEVELOPER
SINGLETON AVENUE 44 ACRE TRUST, LLC
1919 BLANDING BLVD.
JACKSONVILLE, FL 32210
PHONE: (407) 969-0434

CIVIL ENGINEER
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(321) 430-1138

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HAMILTON ENGINEERING & SURVEYING, INC.
775 WARNER LANE
ORLANDO, FL 32803
PHONE: (407) 362-5929

ENVIRONMENTAL CONSULTANT
BIO-TECH CONSULTING, INC.
3025 EAST SOUTH STREET
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TRAFFIC ENGINEER
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GEOTECHNICAL CONSULTANT
UNIVERSAL ENGINEERING SCIENCES, LLC
820 BREVARD AVENUE
ROCKLEDGE, FL 32955
PHONE: (321) 638-0808

LANDSCAPE ARCHITECT
SUSAN HALL LANDSCAPE ARCHITECTURE
244 MCLEOD STREET
MERRITT ISLAND, FL 32953
PHONE: (321) 449-0790

LIST OF CONTACTS

STORMWATER
ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT
525 COMMUNITY COLLEGE PKWY SE
PALM BAY, FL 32909
PHONE: (321) - 987-7940
CONTACT:

ENGINEERING
CITY OF TITUSVILLE
PUBIC WORKS DEPT.
2910 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 567-3846

WATER
CITY OF TITUSVILLE
WATER RESOURCES DEPT.
2836 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 383-5791

BUILDING DIVISION
CITY OF TITUSVILLE
BUILDING DEPT.
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3760
CONTACT: STEVE ADAMS, CBO

SANITARY SEWER
CITY OF TITUSVILLE
WATER RESOURCES DEPT.
2836 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 383-5791

COMMUNITY DEVELOPMENT
DEVELOPMENT SERVICES DEPT.
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3757
CONTACT:MANDY LAMOTHE

FIRE PREVENTION
CITY OF TITUSVILLE
FIRE DEPARTMENT
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3800

FDOT
DISTRICT 5
719 S WOODLAND BLVD
DELAND, FL 32720
PHONE: (386) 943-5185

PLANNING AND ZONING
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3757
CONTACT: EDDY GALINDO

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Sunshine811
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

No.	REVISIONS	DATE	BY

Kimley»Horn
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7341 OFFICE PARK PLACE, SUITE 102, MELBOURNE, FL 32940
PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
DRAWN BY ----
CHECKED BY AC

COVER SHEET

SR 405 AND SINGLETON PD - NORTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FLORIDA

SHEET NUMBER
E-000

Plotted By:Anderson, Zach Sheet Set:SR 405 AND SINGLETON PD - NORTH Layout:E-000 COVER SHEET September 09, 2024 08:40:52pm K:\ORL_LDEV\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\North\E-000 COVER SHEET.dwg
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GRAPHIC SCALE IN FEET
0 40 80 160

NOTES
1. SUBSURFACE SOIL TYPE PER NRCS SOILS MAP

S SINGLETON AVENUE

NOTTINGHAM CT

YORKSHIRE DRIVE

SHERWOOD DRIVE

HIGHLAND TERR

HILLCREST AVE

POINSETTIA AVE

TOMOKA MUCK

WL 1
12.54 ACRES

MYAKKA SAND

WL 2
0.32 ACRES

FLOOD ZONE
ZONE X

25' WETLAND BUFFER

CANDLER FINE SAND

ORSINO FINE SAND

SERENO POINTE
FLU: RESIDENTIAL TWO
BREVARD COUNTY
ZONING: RR, NC

FOREST HILLS ESTATES
FLU: LOW DENSITY
RESIDENTIAL
BREVARD COUNTY
ZONING: R-1B

ZONING: NC

STATE ROAD NO. 405/SOUTH STREET

ZONING: GU

ZONING: GU

FLU: LOW DENSITY RESIDENTIAL,
CONSERVATION
BREVARD COUNTY
ZONING: OR, GU

No.	REVISIONS	DATE	BY

Kimley»Horn
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7341 OFFICE PARK PLACE, SUITE 102, MELBOURNE, FL 32940
PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ---
DRAWN BY ---
CHECKED BY AC

EXISTING CONDITIONS

SR 405 AND SINGLETON PD - NORTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FLORIDA

SHEET NUMBER
E-050

Plotted By: Anderson, Zach Sheet Set: SR 405 AND SINGLETON PD - NORTH Layout: E-050 EXISTING CONDITIONS September 09, 2024 08:41:21pm K:\VRB_LDEV\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\North\E-000 EXISTING CONDITIONS.dwg
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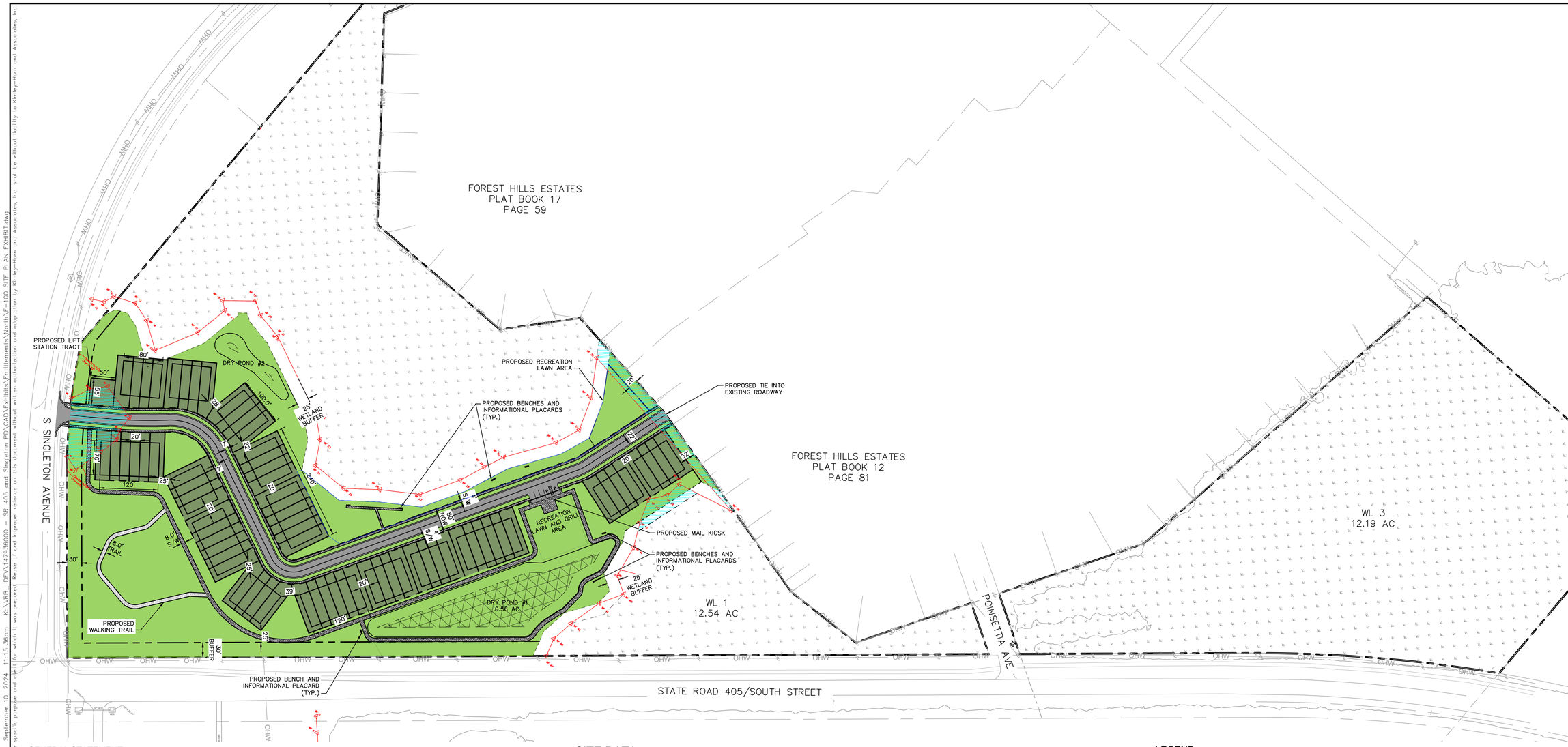


GENERAL STATEMENT:

THE SUBJECT PROPERTY IS A 38.65 AC UNDEVELOPED PARCEL WITHIN THE CITY OF TITUSVILLE, LOCATED ON THE NORTHEAST SIDE OF THE INTERSECTION OF SR405/SOUTH STREET AND SINGLETON AVENUE. THE PROPOSED PROJECT INCLUDES THE CONSTRUCTION OF 70 TOWNHOME UNITS (20' IN WIDTH), WHICH ARE TO BE INDIVIDUALLY PLATTED AND OWNED, AND ASSOCIATED ROADWAYS, INFRASTRUCTURE, SITE IMPROVEMENTS, LANDSCAPING, UTILITIES AND STORMWATER MANAGEMENT SYSTEMS TO SERVICE THE DEVELOPMENT. THE PARCEL CURRENTLY HAS MULTIPLE EXISTING ZONING DISTRICTS AND LAND USES WITHIN ITS LEGAL LIMITS; EXISTING ZONING DISTRICTS INCLUDE NEIGHBORHOOD COMMERCIAL (NC), OPEN SPACE/RECREATION (OR) AND GENERAL USE (GU), AND THE EXISTING LAND USES ARE COMMERCIAL IGH INTENSITY, CONSERVATION AND LOW DENSITY RESIDENTIAL. WITH THIS PROJECT, THE PROPOSED ZONING DISTRICT WILL BE PLANNED DEVELOPMENT (PD) AND THE PROPOSED LAND USES WILL BE LOW DENSITY RESIDENTIAL AND CONSERVATION. PLEASE REFER TO THE REZONING AND LAND USE EXHIBITS FOR ADDITIONAL INFORMATION AND SPECIFICS.

THE MAXIMUM DENSITY ALLOWED FOR THIS PROJECT IS GOVERNED BY THE PROPOSED LOW DENSITY RESIDENTIAL LAND USE, WHICH IS 5 DU/AC, AND THE PROJECT CURRENTLY PROPOSES 2 DU/AC.

A LARGE MAJORITY OF THE FULL PARCEL ACREAGE IS DESIGNATED AS WETLANDS, AND THE DEVELOPALE ACREAGE IS CALCULATED TO BE 14.23 AC. THE PROJECT WAS DESIGNED IN EFFORTS TO MINIMIZE WETLAND IMPACTS, LIMITNG IMPACTS TO UNDER 0.63 AC AND PROVIDING AN AVERAGE 25' BUFFER (MINIMUM 15' BUFFER) AS SHOWN ON THIS CONCEPTUAL SITE PLAN WHICH MITIGATE AGAINST SECONDARY IMPACTS FOR DEVELOPING NEAR WETLANDS (PER THE ST. JOHNS WATER MANAGEMENT DISTRICT REQUIREMENTS). THE PROPOSED IMPACTS ARE TO FULLY IMPACT WL2 (0.32 AC) TO LINE UP THE DRIVEWAY CONNECTION TO SINGLETON AVENUE WITH THE EXISTING CONNECTION TO THE SUBDIVISION ACROSS THE STREET, AND SMALL AREAS OF THE EXISTING WETLAND TO ACCOMODATE THE RIGHT-OF-WAY CONNECTION TO THE ADJACENT FOREST HILLS ESTATE SUBDIVISION ROADWAY STUB.

STORMWATER AND UTILITIES STATEMENT:

THE PROPOSED PROJECT WILL BE SERVICED BY CITY OF TITUSVILLE WATER RESOURCES DEPARTMENT AND WILL CONNECT TO EXISTING WATER AND SEWER INFRASTRUCTURE LOCATED WITHIN THE ADJACENT RIGHT-OF-WAYS. THE ONSITE POTABLE WATER SYSTEM WILL CONNECT TO THE CITY'S EXISTING 8" PVC WATER MAIN LOCATED ON THE WEST SIDE OF SINGLETON AVENUE, A HYDRAULIC ANALYSIS WILL BE REQUIRED TO DETERMINE IF THE CONNECTION TO THE 8" PVC WATER MAIN ALONG SINGLETON AVE WILL PROVIDE SUFFICIENT FLOWS TO SERVICE THE DEVELOPMENT. A SECOND CONNECTION MAY BE REQUIRED TO PROVIDE ADEQUATE FLOW. DISCUSSIONS WITH THE CITY ON THE SECOND CONNECTION POINT WILL OCCUR DURING FULL DESIGN.

ONSITE SANITARY SEWER WILL BE COLLECTED THROUGH A GRAVITY SEWER SYSTEM FEEDING TO A LIFT STATION, AND WILL EXIT THROUGH A FORCE MAIN, ULTIMATELY CONNECTING TO THE EXISTING 6" FM ALONG SR 405/ SOUTH STREET. A PROPOSED FM EXTENSION WITHIN SR 405 RIGHT-OF-WAY FROM THE CURRENT STUB WEST OF THIS PROJECT WILL BE REQUIRED TO PROVIDE SANITARY SERVICE TO THE DEVELOPMENT, AND WILL BE DESIGNED AND PERMITTED CONCURRENTLY. NO RECLAIM INFRASTRUCTURE IS AVAILABLE IN THE AREA AT THIS TIME. AS THE PROJECT FALLS WITHIN THE AREA OF CRITICAL CONCERN, DRY IRRIGATION LINES WILL BE REQUIRED TO BE INSTALLED.

AS THE SITE IS WITHIN THE AREA OF CRITICAL CONCERN, ALL STORMWATER MANAGEMENT SYSTEMS ONSITE WILL BE DRY RETENTION PONDS. THE SITE IS ALSO LIMITED IN THIS DESIGNATION TO A MAXIMUM IMPERVIOUS AREA OF 40%, AND EXPORT OF ONSITE FILL IS PROHIBITED. PERVIOUS PAVERS, PERVIOUS PAVEMENT OR OTHER APPROVED EQUIVALENT MAY BE USED IN AREAS APPROVED BY THE CITY OF TITUSVILLE IN ORDER TO LIMIT THE AMOUNT OF PROPOSED IMPERVIOUS AREA. STORMWATER TREATMENT AND ATTENUATION WILL BE PROVIDED THROUGH DRY RETENTION PONDS, AND ONCE TREATMENT IS ACHIEVED, STORMWATER ULTIMATELY DISCHARGES TO AN ONSITE WETLAND. PROPOSED DRY POND LOCATIONS, DELINEATED WETLAND LOCATIONS AND APPROXIMATE ACREAGES ARE SHOWN ON THE MASTER CONCEPTUAL SITE PLAN. BASED ON EXISTING GRADES ON THE PROVIDED SURVEY, WATER CURRENTLY DISCHARGES TO THE ONSITE WETLANDS, WHICH ESTABLISHES A LEGAL POSITIVE OUTFALL FOR THE PROJECT.

SITE DATA:

PARCEL ID: 22-35-05-00-750, 22-35-05-00-752
TAX ID: 3028882, 2202226
SECTION 5, TOWNSHIP 22, RANGE 35E
LOCATED IN AN AREA OF CRITICAL CONCERN (ACC)

TOTAL SITE AREA:	38.65 AC
DEVELOPABLE SITE AREA:	14.23 AC
DEVELOPMENT TYPE:	MULTI-FAMILY RESIDENTIAL (TOWNHOMES)
EXISTING ZONING(S):	NEIGHBORHOOD COMMERCIAL (NC), OPEN SPACE/RECREATION (OR), AND GENERAL USE (GU)
EXISTING LAND USE(S):	COMMERCIAL-HIGH INTENSITY, CONSERVATION, LOW DENSITY RESIDENTIAL
PROPOSED ZONING(S):	PLANNED DEVELOPMENT (PD)
PROPOSED LAND USE(S):	LOW DENSITY RESIDENTIAL, CONSERVATION
ALLOWABLE DENSITY:	5 DU/AC
PROPOSED PROJECT DENSITY:	2 DU/AC*
PROPOSED FLU DENSITY (LOW DENSITY RES):	5 DU/AC**
MAX. ALLOWABLE BUILDING HEIGHT:	50'
EXISTING IMPERVIOUS AREA:	0.00 AC (0%)
PROPOSED IMPERVIOUS AREA:	4.79 AC (34%)
PROPOSED LOTS:	70 UNITS
MINIMUM LOT SIZE:	N/A WITHIN PD
PROPOSED LOT SIZE:	20'X100', 30'X100'
PROPOSED WETLAND IMPACTS:	0.63 AC

*PROJECT DENSITY BASED ON TOTAL GROSS PROJECT ACREAGE (+/- 38.65 AC) PER CITY OF TITUSVILLE CODE.
**FLU DENSITY BASED ON TOTAL ACREAGE PROPOSED AS LOW DENSITY RESIDENTIAL WITHIN PD (+/- 14.23 AC).

PARCEL BREAKDOWN

TOTAL PARCEL	38.65 AC
WETLAND	24.73 AC
TOTAL DEVELOPABLE AREA:	14.23 AC
TOTAL IMPERVIOUS AREA:	4.79 AC
TOTAL PERVIOUS AREA:	9.44 AC
RIGHT-OF-WAY	0.79 AC
LOTS	4.25 AC
WETLAND BUFFER	1.21 AC

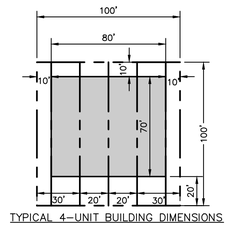
USEABLE OPENSPACE

REQUIRED (35% OF DEVELOPABLE SITE AREA)	4.98 AC
PROVIDED	4.99 AC

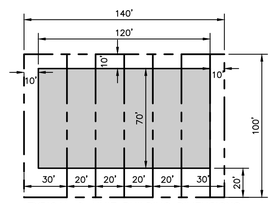
LEGEND

PROPOSED WETLAND IMPACT AREA

GRAPHIC SCALE IN FEET
0 50 100 200



TYPICAL 4-UNIT BUILDING DIMENSIONS



TYPICAL 6-UNIT BUILDING DIMENSIONS

No.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
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SITE PLAN EXHIBIT

SR 405 AND SINGLETON PD - NORTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FLORIDA

SHEET NUMBER
E-100

Plotted By: Anderson, Zach Sheet Set: SR 405 AND SINGLETON PD - NORTH Layout: E-100 SITE PLAN EXHIBIT September 10, 2024 11:15:36am K:\VRB_LDEV\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\North\E-100 SITE PLAN EXHIBIT.dwg
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USEABLE OPENSPACE

REQUIRED (35% OF DEVELOPABLE SITE AREA)	4.98 AC
PROVIDED	4.99 AC


GRAPHIC SCALE IN FEET
0 40 80 160
N
S
E
W
APPROXIMATE EDGE OF WATER
WL 1
12.54 AC
WL 3
12.19 AC
DRY POND #2
DRY POND #1
0.56 AC
RECREATION LAWN AND GRILL AREA
PROPOSED RECREATION LAWN AREA
PROPOSED TIE INTO EXISTING ROADWAY
PROPOSED BENCHES AND INFORMATIONAL PLACARDS (TYP.)
PROPOSED MAIL KIOSK
PROPOSED BENCHES AND INFORMATIONAL PLACARDS (TYP.)
PROPOSED WALKING TRAIL
PROPOSED BENCH AND INFORMATIONAL PLACARD (TYP.)
8.0' TRAIL
8.0' S/W
30'
30' BUFFER
S SINGLETON AVENUE
POINSETTIA AVE
STATE ROAD 405/SOUTH STREET
EDGE OF PAVEMENT
ASPHALT PAVEMENT
SIDEWALK
MHO
OHW
OHW
OHW

Legal Description: (AS REQUESTED)

BEING A PART OF GOVERNMENT LOTS 1 & 2, LYING IN SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA;

THE NORTH 1/2 OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LESS AND EXCEPT FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 928, PAGE 918; AND ANY PORTION LYING WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 405 RIGHT OF WAY, ALL OF BREVARD COUNTY, FLORIDA,

TOGETHER WITH:
U.S. GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST EXCEPT FOREST HILLS ESTATES RECORDED IN PLAT BOOK 12, PAGE 81 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 2502, PAGE 46, OF SAID PUBLIC RECORDS, ALL LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

TOGETHER WITH:
SOUTH 1/2 OF GOVERNMENT LOT 1 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING NORTH OF STATE ROAD NO. 405 RIGHT OF WAY.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TRACT #1
COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA FOR A POINT OF BEGINNING THENCE; NORTH 89°45'01" EAST ALONG THE NORTH LINE OF AFORESAID GOVERNMENT LOT 1, A DISTANCE OF 608.75 FEET TO THE NORTHEAST CORNER OF GOVERNMENT LOT 1, ALSO BEING THE EST 1/4 CORNER OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG THE EAST BOUNDARY OF SAID GOVERNMENT LOT 1 AND SAID SECTION 5, A DISTANCE OF 485.16 FEET; TO THE NORTH RIGHT OF WAY FOR STATE ROAD #405 AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,996.93 FEET AND A CHORD WHICH BEARS SOUTH 53°29'10" WEST AND A DISTANCE OF 499.41 FEET; THENCE ALONG SAID NORTH RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 499.99 FEET; THENCE CONTINUE ALONG SAID RIGHT OF WAY SOUTH 48°29'45" WEST, A DISTANCE OF 483.39 FEET TO A POINT ON THE NORTH RIGHT OF WAY FOR POINSETTIA AVENUE AND TO REFERENCE POINT 'A'; THENCE NORTH 60°14'58" WEST ALONG SAID NORTH RIGHT OF WAY, A DISTANCE OF 131.15 FEET TO THE MOST SOUTHERLY CORNER OF LOT 11, BLOCK 10, OF FOREST HILLS ESTATES, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 12, PAGE 81, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE NORTH 29°44'57" EAST ALONG THE EAST BOUNDARY OF SAID BLOCK 10, A DISTANCE OF 312.48 FEET; THENCE CONTINUE ALONG SAID EAST BOUNDARY NORTH 07°40'34" EAST, A DISTANCE OF 770.40 FEET; TO THE POINT OF BEGINNING.

CONTAINING 531,080.96± SQUARE FEET OR 12.19± ACRES, MORE OR LESS.

TRACT #2

COMMENCE AT AFORESAID REFERENCE POINT 'A'; THENCE SOUTH 48°29'45" WEST ALONG THE NORTH RIGHT OF WAY FOR STATE ROAD #405, A DISTANCE OF 63.33 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID RIGHT OF WAY SOUTH 48°29'40" WEST, A DISTANCE OF 1,886.06 FEET TO THE WEST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE; THENCE NORTH 41°30'05" WEST ALONG SAID WEST RIGHT OF WAY, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,300.57 FEET AND A CHORD WHICH BEARS NORTH 35°21'35" WEST, A DISTANCE 278.29 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.82 FEET; THENCE NORTH 01°34'59" WEST, A DISTANCE OF 981.92 FEET; THENCE NORTH 89°54'15" EAST, A DISTANCE OF 80.09 FEET TO A POINT OF THE WEST BOUNDARY OF LOT 13, BLOCK 6, OF FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE SOUTH 26°32'20" WEST ALONG SAID WEST BOUNDARY, A DISTANCE OF 72.04 FEET; THE FOLLOWING (7) COURSES RUN ALONG THE SOUTH BOUNDARIES OF FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59 AND FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; THENCE (1) SOUTH 39°31'11" EAST, A DISTANCE OF 433.00 FEET; THENCE (2) NORTH 89°19'24" EAST, A DISTANCE OF 330.11 FEET; THENCE (3) NORTH 40°22'38" EAST, A DISTANCE OF 165.00 FEET; THENCE (4) SOUTH 83°04'38" EAST, A DISTANCE OF 260.00 FEET; THENCE (5) SOUTH 76°30'19" EAST, A DISTANCE OF 450.00 FEET; THENCE (6) NORTH 86°53'24" EAST, A DISTANCE OF 168.10 FEET; THENCE (7) NORTH 29°44'57" EAST, A DISTANCE OF 250.00 FEET TO THE SOUTH RIGHT OF WAY FOR POINSETTIA AVENUE; THENCE SOUTH 60°14'58" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 110.78 FEET; TO THE POINT OF BEGINNING.

CONTAINING 1,152,532.25± SQUARE FEET OR 26.46± ACRES, MORE OR LESS.

LESS & EXCEPT:

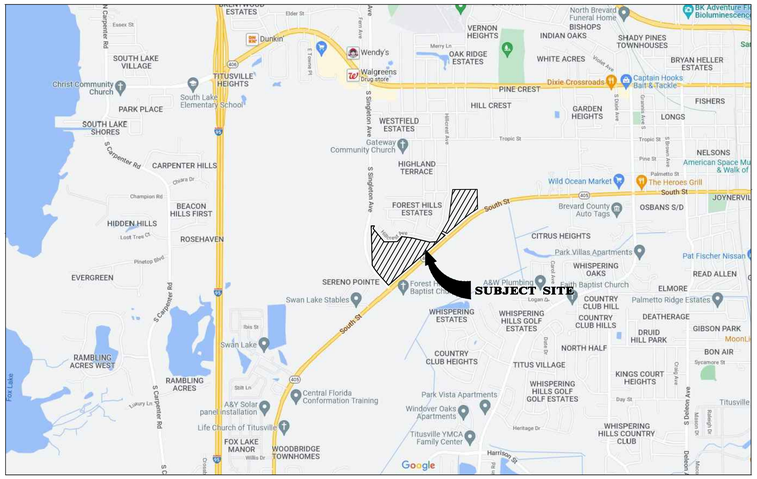
COMMENCING AT THE POINT OF BEGINNING FOR FOREST HILLS ESTATES FIRST ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 17, PAGE 59, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA THENCE SOUTH 89°37'32" WEST ALONG THE NORTH BOUNDARY OF FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81 AND FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, A DISTANCE OF 1,787.15 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 00°24'09" EAST ALONG THE WEST BOUNDARY OF SAID FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 390.52 FEET TO THE SOUTHWEST CORNER OF LOT 13, BLOCK 4, ALSO BEING ON THE NORTH RIGHT OF WAY FOR NORTH CIRCLE DRIVE IN SAID FOREST HILLS ESTATES FIRST ADDITION THENCE SOUTH 89°56'56" WEST ALONG THE NORTH BOUNDARY OF OFFICIAL RECORD BOOK 1995, PAGE 427 AND OFFICIAL RECORD BOOK 5101, PAGE 46, RECORDED IN THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, A DISTANCE OF 207.40 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 25.00 FEET AND A CHORD WHICH BEARS NORTH 43°10'24" WEST AND A DISTANCE OF 36.63 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 41.11 FEET TO A POINT ON THE EAST RIGHT OF WAY FOR SOUTH SINGLETON AVENUE AND TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 1,380.00 FEET AND A CHORD WHICH BEARS NORTH 01°04'04" EAST AND A DISTANCE OF 131.30 FEET; THENCE CONTINUE ALONG SAID EAST RIGHT OF WAY AND ALONG SAID CURVE TO THE LEFT A DISTANCE OF 131.35 FEET; THENCE NORTH 01°30'00" WEST, A DISTANCE OF 231.26 FEET TO A POINT OF THE NORTH BOUNDARY OF AFORESAID GOVERNMENT LOT 2; THENCE NORTH 89°37'32" EAST ALONG SAID NORTH BOUNDARY OF GOVERNMENT LOT 2, A DISTANCE OF 233.33 FEET; TO THE POINT OF BEGINNING.

TRACT 3 REMOVAL:

TRACT WAS REMOVED FROM DRAWING ON 06/19/2024, THERE WAS NOT TITLE COMMITMENT TO BACK UP THE REMOVAL SAID TRACT:

OFFICIAL RECORD BOOK NOTE:

OFFICIAL RECORD BOOK 928, PAGE 918 WAS NOT AVAILABLE ON-LINE FOR REVIEW AT TIME FOR DRAWING.



VICINITY MAP - NOT TO SCALE

Notes Regarding Optional ALTA Table A:

1. MONUMENTS ARE SHOWN.

2. PER THE BREVARD COUNTY PROPERTY APPRAISER WEB SITE, THERE IS NO ASSIGNED ADDRESS FOR THIS SITE.

3. THE FLOOD ZONE IS ZONES "AE" & "X".

4. THE AREA OF THE PROPERTY IS TRACT #1: 531,078.99± SQUARE FEET & TRACT #2: 1,152,549.95± SQUARE FEET
1,683,628.94± TOTAL SQUARE FEET AND/OR 38.651± TOTAL ACRES

8. SUBSTANTIAL FEATURES ARE SHOWN.

13. THE ADJACENT OWNERS ARE SHOWN ACCORDING TO THE BREVARD COUNTY PROPERTY APPRAISER'S WEB SITE.

16. THERE IS NO OBSERVABLE EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS.

17. THERE IS NO OBSERVABLE EVIDENCE OF CHANGE TO STREET RIGHTS-OF-WAY OR STREET AND SIDEWALK CONSTRUCTION.

18. NO PLOTTABLE OFFSITE EASEMENTS PROVIDED.

19. HAMILTON ENGINEERING AND SURVEYING INC. CARRIES $1,000,000.00 OR MORE OF PROFESSIONAL LIABILITY INSURANCE.

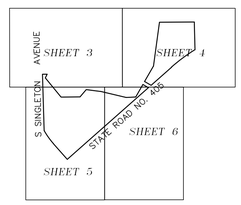
Sheet Key :

SHEET 1 = COVER/INFORMATION SHEET

SHEET 2 = OVERALL BOUNDARY SHEET

SHEETS 3-8 = BOUNDARY, TOPO, TREE, AND WETLAND SHEETS

Map Key:



Notes Regarding Schedule BII Exceptions:

(AS PER TITLE COMMITMENT AGENT FILE NUMBER 21-1479, ISSUED BY CHICAGO TITLE INSURANCE COMPANY BEARING AN EFFECTIVE DATE OF 01/18/2022 AT 05:00 P.M.)

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS FORM. NOT A SURVEY MATTER
2. TAXES AND ASSESSMENTS FOR THE YEAR 2022 AND SUBSEQUENT YEARS, WHICH ARE NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
3. STANDARD EXCEPTIONS:
   a. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NOTHING TO PLOT
   b. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
   c. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIALS HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
   d. TAXES OR ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS IN THE PUBLIC RECORDS. NOT A SURVEY MATTER
4. ANY CLAIM THAT ANY PORTION OF THE INSURED LAND IS SOVEREIGN LANDS OF THE STATE OF FLORIDA, INCLUDING SUBMERGED, FILLED OR ARTIFICIALLY EXPOSED LANDS ACCRETED TO SUCH LAND. NOT A SURVEY MATTER
5. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, FLORIDA STATUTES, IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY FOR UNPAID SERVICE CHARGES FOR SERVICE BY ANY WATER, SEWER OR GAS SYSTEM SUPPLYING THE INSURED LAND. NOT A SURVEY MATTER
6. RIGHT OF WAY DEED RECORDED IN OFFICIAL RECORDS BOOK 1995, PAGE 427, RE-RECORDED IN OFFICIAL RECORDS BOOK 5101, PAGE 46. (PLOTTED HEREON)
7. THE NATURE, EXTENT OR EXISTENCE OF RIPARIAN RIGHTS OR LITTORAL RIGHTS IS NOT INSURED. NOT A SURVEY MATTER
8. RIGHTS OF OTHERS TO USE THE WATERS OF ANY WATER BODY EXTENDING FROM THE INSURED LAND ONTO OTHER LANDS. NOT A SURVEY MATTER
9. RESTRICTIONS, COVENANTS, CONDITIONS, EASEMENTS AND OTHER MATTERS AS CONTAINED ON THE PLAT OF JONES ESTATES, RECORDED IN PLAT BOOK 7, PAGE 39, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA.

Basis of Bearings Note:

SHOWN SURVEY FIELD BEARINGS (STATE PLANE-GRID NORTH)
FOREST HILLS ESTATES PLAT BOOK 12, PAGE 81. (BEARINGS ARE ASSUMED)
FOREST HILLS ESTATES FIRST ADDITION PLAT BOOK 17, PAGE 59. (BEARINGS ARE ASSUMED)
(FDOT) RIGHT OF WAY MAPS (TRUE NORTH)

RIGHT OF WAY INFORMATION:

STATE ROAD #405 DERIVED FROM: FLORIDA DEPARTMENT OF TRANSPORTATION MAP 70160-2503, DATED 06/11/1963.

SINGLETON AVENUE DERIVED FROM: OFFICIAL RECORD BOOK 5101, PAGE 46.

WETLANDS INFORMATION:

WETLANDS LINE AS FLAGGED BY BIO-TECH CONSULTING INC

BOUNDARY, TOPOGRAPHIC, TREE LOCATION & WETLANDS INFORMATION:

ALL FIELD INFORMATION DERIVED FROM PREVIOUS SURVEY BY: HAMILTON ENGINEERING & SURVEYING, PROJECT #04016.0003, DATED 02/22/2022 SIGNED BY: GREGORY S. LOCKLIN, PSM (BOUNDARY WAS UPDATED ON 12/14/2022)

Surveyor's Notes: (AS APPLICABLE)

ACCORDING TO CURRENT FLOOD INSURANCE MAPS ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY SHOWN APPEARS TO LIE WITHIN ZONES "AE"(18.7') & "X" PANEL NO. 12009C0205H DATED 01/29/2021, THE APPROXIMATE FLOOD ZONE TRANSITION, IF APPLICABLE, HAS BEEN OBTAINED AND PLOTTED FROM LARGE SCALE MAPS AND IS DEPICTED AS ACCURATELY AS POSSIBLE. THIS SURVEY BY NO MEANS REPRESENTS A DETERMINATION ON WHETHER PROPERTIES WILL OR WILL NOT FLOOD. LAND WITHIN THE BOUNDARIES OF THIS SURVEY MAY OR MAY NOT BE SUBJECT TO FLOODING; THE BUILDING DEPARTMENT OR OTHER CUSTODIAL AGENCY FOR FLOOD DETERMINATION WITHIN THIS MUNICIPALITY MAY HAVE ADDITIONAL INFORMATION REGARDING FLOODING AND RESTRICTIONS ON DEVELOPMENT.

1) BEARINGS SHOWN HEREON ARE BASED ON EAST BOUNDARY OF GOVERNMENT LOT 1, IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 32 EAST, HAVING A GRID BEARING OF SOUTH 01°14'43" EAST (2011 ADJUSTED)
2) ELEVATIONS SHOWN HEREON ARE BASED ON BREVARD COUNTY BENCHMARK C5A17-2004 HAVING A PUBLISHED ELEVATION OF 23.17 FEET NAVD88.(SHOWN ON SURVEY)
3) THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS AFFECTING THIS PROPERTY THAT MAY NOT BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
4) NO INFORMATION ON ADJACENT PROPERTY OWNERS OR ADJOINING PROPERTY RECORDING INFORMATION WAS PROVIDED TO THIS SURVEYOR.
5) THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
6) THE BOUNDARY CORNERS AND LINES DEPICTED BY THIS SURVEY WERE ESTABLISHED PER INFORMATION AS FURNISHED.
7) UNLESS OTHERWISE SHOWN HEREON, NO JURISDICTIONAL WETLAND AREAS OR OTHER PHYSICAL TOPOGRAPHIC FEATURES HAVE BEEN LOCATED.
8) UNDERGROUND ENCROACHMENTS, SUCH AS UTILITIES, STRUCTURES, INSTALLATIONS, IMPROVEMENTS AND FOUNDATIONS THAT MAY EXIST, HAVE NOT BEEN FIELD LOCATED EXCEPT AS SHOWN.
9) THIS MAP DOES NOT DETERMINE OR REFLECT OWNERSHIP OF PROPERTY, BOUNDARY LINES AFFECTED BY ADVERSE USE, LINES OF CONFLICTING DEEDS, OR OTHER LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW.
10) UNDERGROUND UTILITY LOCATIONS AND IDENTIFICATIONS SHOWN HEREON ARE BASED UPON VISIBLE ABOVE GROND APPURTENANCES AND DO NOT NECESSARILY SHOW ALL UTILITY LOCATIONS. NO SUBTERRANEAN EXCAVATION HAS BEEN MADE TO DETERMINE UNDERGROUND UTILITY LOCATIONS.
11) THE MEASURED MATHEMATICAL CLOSURE OF THE SURVEYED BOUNDARY EXCEEDS THE ACCURACY STANDARDS FOR AN URBAN CLASS SURVEY AS DEFINED BY THE AMERICAN LAND TITLE ASSOCIATION AND AND THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
12) TIES FROM BUILDING CORNERS, FENCE CORNERS, SHED CORNERS, ETC., ARE NOT TO BE USED TO REESTABLISH PROPERTY BOUNDARIES.
13) ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS MADE BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
14) THIS SURVEY HAS BEEN PREPARED EXPRESSLY FOR THE NAMED ENTITIES AND IS NOT TRANSFERABLE. NO OTHER PERSON OR ENTITY IS ENTITLED TO RELY UPON AND/OR REUSE THIS SURVEY FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN CONSENT OF HAMILTON ENGINEERING & SURVEYING AND THE CERTIFYING PROFESSIONAL SURVEYOR AND MAPPER.
15) NOTHING HEREIN SHALL BE CONSTRUED TO GIVE ANY RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO ON THIS SURVEY.
16) FENCE OWNERSHIP NOT DETERMINED.
17) PRINTED DIMENSIONS SHOWN ON THE MAP OF SURVEY SUPERSEDE SCALED DIMENSIONS. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
18) REPRODUCTION OF THIS SURVEY IS EXPRESSLY FORBIDDEN WITHOUT THE WRITTEN PERMISSION FROM THE SIGNING SURVEYOR.
19) THE WORD "CERTIFIED" IS UNDERSTOOD TO BE AN EXPRESSION OF THE PROFESSIONAL SURVEYOR'S OPINION BASED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF, AND THAT IT THUS CONSTITUTES NEITHER A GUARANTEE NOR A WARRANTY, EITHER EXPRESSED OR IMPLIED.
20) THIS SURVEY IS A REPRESENTATION OF EXISTING FIELD CONDITIONS AT THE TIME OF THE FIELD SURVEY DATE AND IS BASED ON FOUND EXISTING MONUMENTATION IN THE FIELD.
21) THE TREES SHOWN HEREON WERE LOCATED UTILIZING METHODS ADEQUATE FOR THEIR ACCURATE LOCATION AND IDENTIFICATION. HOWEVER, THIS COMPANY AND THE SIGNING SURVEYOR RESERVES THE RIGHT TO VERIFY THE LOCATION OF ALL TREES CRITICAL TO THE DESIGN OF BUILDINGS, PARKING AND OTHER PERMANENT FEATURES. IT IS THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL TO INFORM THIS COMPANY AND/OR SIGNING SURVEYOR OF ANY TREES CRITICAL TO THEIR DESIGN SO THAT THOSE TREES CAN BE VERIFIED PRIOR TO THE COMPLETION OF THE DESIGN.
22) ALL GROUND ELEVATIONS ARE TO BE INTERPRETED TO THE NEAREST ONE TENTH OF A FOOT.
23) THE DATE OF SIGNATURE DOES NOT UPDATE OR SUPERSEDE THE DATE OF SURVEY.

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CERTIFIED TO:

THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 10, 13, 16, 17, 18, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON: 02/22/2022 AND THE BOUNDARY UPDATED 12/14/2022.

DATE OF PLAT OR MAP: 10/06/2023

Harry B. Rogers III 06/21/2024
Harry B. Rogers III, PSM — Signature Date
Florida License No. PSM#6418
CERTIFICATE OF AUTHORIZATION LB #8405
Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.
HARRYR@HAMILTONENGINEERING.US

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ENGINEERING & SURVEYING, LLC
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8340 CONSUMER CIRCLE | SUITE 1 | SARASOTA, FL 34240 | TEL: 941.377.9178
www.HamiltonEngineering.US
LB #8405 CA #8474

SHEET TITLE: **MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS**

TITUSVILLE NORTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

BY	DATE	REVISIONS
HBR	06/19/2024	REMOVED TRACT #3

PREPARED FOR: THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022
FIELD BOOK/PAGE: DIGITAL
QUALITY CONTROL FIELD: GL
QUALITY CONTROL OFFICE: HBR
DRAWN BY: HBR | PARTY CHIEF: LM
JOB #: 4225.0001
SEC TWP RNG: 05-22S-35E
SURVEY DATE: 12/14/2022
NOT VALID WITHOUT ALL SHEETS

1 OF 6

J:\Projects\2022\04016.0003 - Titusville North\Survey\Drawings\Titusville North.dwg (ALTA) harryr Jun 20, 2024 - 11:45am

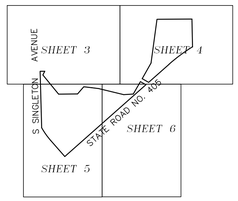
OVERALL BOUNDARY

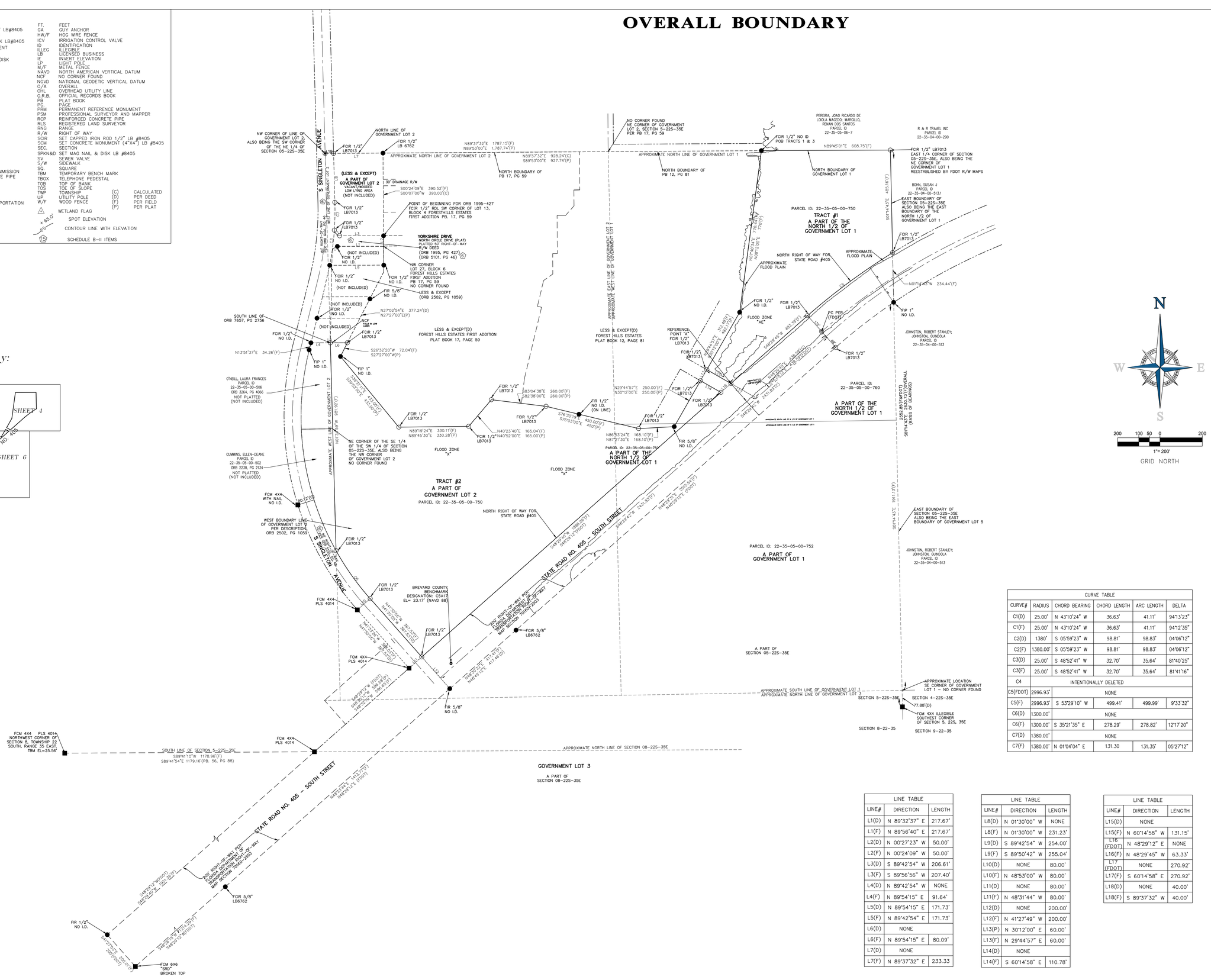
Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405
○	SET CAPPED IRON ROD LB#8405
◎	SET PARKER-KALON NAIL & DISK LB#8405
■	FOUND 4"X4" CONCRETE MONUMENT
●	FOUND AS NOTED
◉	FOUND PARKER-KALON NAIL & DISK
FOC	FIBER OPTIC CABLE MARKER
FOC RSR	FIBER OPTIC CABLE RISER
GM	GAS MARKER
WM	WATER METER
BW/F	BARBED-WIRE FENCE
BDRY	BOUNDARY
CATV	CABLE TELEVISION VAULT
C.C.R.	CERTIFIED CORNER RECORD
CI	CURB INLET
CL/F	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
EBX	ELECTRIC BOX
EL	ELEVATION
EPC	ENVIRONMENTAL PROTECTION COMMISSION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
FCIP	FOUND CAPPED IRON PIPE
FCIR	FOUND CAPPED IRON ROD
FCM	FOUND CONCRETE MONUMENT
FDC	FIRE DEPARTMENT CONNECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FFE	FINISH FLOOR ELEVATION
FIP	FOUND IRON PIPE
FIR	FOUND IRON ROD
FPIP	FOUND PINCHED IRON PIPE
F.N&D	FOUND NAIL & DISK
FRRS	FOUND RAILROAD SPIKE
FT.	FEET
GA	GUY ANCHOR
HW/F	HOG WIRE FENCE
ICV	IRRIGATION CONTROL VALVE
ID	IDENTIFICATION
ILLEG	ILLEGIBLE
LB	LICENSED BUSINESS
IE.	INVERT ELEVATION
LP	LIGHT POLE
M/F	METAL FENCE
NAVD	NORTH AMERICAN VERTICAL DATUM
NCF	NO CORNER FOUND
NGVD	NATIONAL GEODETIC VERTICAL DATUM
O/A	OVERALL
OHL	OVERHEAD UTILITY LINE
O.R.B.	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG.	PAGE
PRM	PERMANENT REFERENCE MONUMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
RCP	REINFORCED CONCRETE PIPE
RLS	REGISTERED LAND SURVEYOR
RNG	RANGE
R/W	RIGHT OF WAY
SCIR	SET CAPPED IRON ROD 1/2" LB #8405
SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
SEC.	SECTION
SPKN&D	SET MAG NAIL & DISK LB #8405
SV.	SEWER VALVE
S/W	SIDEWALK
SQ.	SQUARE
TBM	TEMPORARY BENCH MARK
TBOX	TELEPHONE PEDESTAL
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TWP	TOWNSHIP
UP	UTILITY POLE
W/F	WOOD FENCE
△	WETLAND FLAG
45' ± 65.0'	SPOT ELEVATION
45'	CONTOUR LINE WITH ELEVATION
(15)	SCHEDULE B-II ITEMS

(C)	CALCULATED	
(D)	PER DEED	
(F)	PER FIELD	
(P)	PER PLAT	

Map Key:





CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1(D)	25.00'	N 43°10'24" W	36.63'	41.11'	94°13'23"
C1(F)	25.00'	N 43°10'24" W	36.63'	41.11'	94°12'35"
C2(D)	1380'	S 05°59'23" W	98.81'	98.83'	04°06'12"
C2(F)	1380.00'	S 05°59'23" W	98.81'	98.83'	04°06'12"
C3(D)	25.00'	S 48°52'41" W	32.70'	35.64'	81°40'25"
C3(F)	25.00'	S 48°52'41" W	32.70'	35.64'	81°41'16"
C4	INTENTIONALLY DELETED				
C5(FDOT)	2996.93'	NONE			
C5(F)	2996.93'	S 53°29'10" W	499.41'	499.99'	9°33'32"
C6(D)	1300.00'	NONE			
C6(F)	1300.00'	S 35°21'35" E	278.29'	278.82'	12°17'20"
C7(D)	1380.00'	NONE			
C7(F)	1380.00'	N 01°04'04" E	131.30	131.35'	05°27'12"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1(D)	N 89°32'37" E	217.67'
L1(F)	N 89°56'40" E	217.67'
L2(D)	N 00°27'23" W	50.00'
L2(F)	N 00°24'09" W	50.00'
L3(D)	S 89°42'54" W	206.61'
L3(F)	S 89°56'56" W	207.40'
L4(D)	N 89°42'54" W	NONE
L4(F)	N 89°54'15" E	91.64'
L5(D)	N 89°54'15" E	171.73'
L5(F)	N 89°42'54" E	171.73'
L6(D)	NONE	
L6(F)	N 89°54'15" E	80.09'
L7(D)	NONE	
L7(F)	N 89°37'32" E	233.33

LINE TABLE		
LINE#	DIRECTION	LENGTH
L8(D)	N 01°30'00" W	NONE
L8(F)	N 01°30'00" W	231.23'
L9(D)	S 89°42'54" W	254.00'
L9(F)	S 89°50'42" W	255.04'
L10(D)	NONE	80.00'
L10(F)	N 48°53'00" W	80.00'
L11(D)	NONE	80.00'
L11(F)	N 48°31'44" W	80.00'
L12(D)	NONE	200.00'
L12(F)	N 41°27'49" W	200.00'
L13(P)	N 30°12'00" E	60.00'
L13(F)	N 29°44'57" E	60.00'
L14(D)	NONE	
L14(F)	S 60°14'58" E	110.78'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L15(D)	NONE	
L15(F)	N 60°14'58" W	131.15'
L16 (FDOT)	N 48°29'12" E	NONE
L16(F)	N 48°29'45" W	63.33'
L17 (FDOT)	NONE	270.92'
L17(F)	S 60°14'58" E	270.92'
L18(D)	NONE	40.00'
L18(F)	S 89°37'32" W	40.00'

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www.HamiltonEngineering.US | LB #8405 | CA #8474

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE NORTH STATE ROAD 405 & SINGLETON AVE. TITUSVILLE, FLORIDA 32796 BREVARD COUNTY, FLORIDA

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

PREPARED FOR:
THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE:	DIGITAL
QUALITY CONTROL FIELD:	GL
QUALITY CONTROL OFFICE:	HBR
DRAWN BY:	HBR
PARTY CHIEF:	LM
JOB #:	4225.0001
SEC TWP RNG:	05-22S-35E & 08-22S-35E
SURVEY DATE:	12/14/2022

NOT VALID WITHOUT ALL SHEETS

2 OF 6

ELEVATIONS SHOWN HEREON ARE NAVD 1988

N

W E

S

60 30 15 0 60

1"= 60'

GRID NORTH

Legend (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405	FT.	FEET		
○	SET CAPPED IRON ROD LB#8405	GA	GUY ANCHOR		
◎	SET PARKER-KALON NAIL & DISK LB#8405	HW/F	HOG WIRE FENCE		
■	FOUND 4"X4" CONCRETE MONUMENT	ICV	IRRIGATION CONTROL VALVE		
●	FOUND AS NOTED	ID	IDENTIFICATION		
◉	FOUND PARKER-KALON NAIL & DISK	ILLEG	ILLEGIBLE		
		LB	LICENSED BUSINESS		
FOC○	FIBER OPTIC CABLE MARKER	IE	INVERT ELEVATION		
		LP	LIGHT POLE		
FOC○ RSR	FIBER OPTIC CABLE RISER	M/F	METAL FENCE		
		NAVD	NORTH AMERICAN VERTICAL DATUM		
GM○	GAS MARKER	NCF	NO CORNER FOUND		
		NGVD	NATIONAL GEODETIC VERTICAL DATUM		
WM□	WATER METER	O/A	OVERALL		
		OHL	OVERHEAD UTILITY LINE		
BW/F	BARBED-WIRE FENCE	O.R.B.	OFFICIAL RECORDS BOOK		
BDRY	BOUNDARY	PB	PLAT BOOK		
CATV	CABLE TELEVISION VAULT	PG.	PAGE		
C.C.R.	CERTIFIED CORNER RECORD	PRM	PERMANENT REFERENCE MONUMENT		
CI	CURB INLET	PSM	PROFESSIONAL SURVEYOR AND MAPPER		
CL/F	CHAIN LINK FENCE	RCP	REINFORCED CONCRETE PIPE		
CMP	CORRUGATED METAL PIPE	RLS	REGISTERED LAND SURVEYOR		
CONC	CONCRETE	RNG	RANGE		
CPP	CORRUGATED PLASTIC PIPE	R/W	RIGHT OF WAY		
EBX	ELECTRIC BOX	SCIR	SET CAPPED IRON ROD 1/2" LB #8405		
EL	ELEVATION	SCM	SET CONCRETE MONUMENT (4"X4") LB #8405		
EPC	ENVIRONMENTAL PROTECTION COMMISSION	SEC	SECTION		
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	SPKN&D	SET MAG NAIL & DISK LB #8405		
FCIP	FOUND CAPPED IRON PIPE	SV	SEWER VALVE		
FCIR	FOUND CAPPED IRON ROD	S/W	SIDEWALK		
FCM	FOUND CONCRETE MONUMENT	SQ.	SQUARE		
FDC	FIRE DEPARTMENT CONNECTION	TBM	TEMPORARY BENCH MARK		
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	TBOX	TELEPHONE PEDESTAL		
FFE	FINISH FLOOR ELEVATION	TOB	TOP OF BANK		
FIP	FOUND IRON PIPE	TOS	TOE OF SLOPE		
FIR	FOUND IRON ROD	TWP	TOWNSHIP	(C)	CALCULATED
FIPP	FOUND PINCHED IRON PIPE	UP	UTILITY POLE	(D)	PER DEED
F.N&D	FOUND NAIL & DISK	W/F	WOOD FENCE	(F)	PER FIELD
FRRS	FOUND RAILROAD SPIKE			(P)	PER PLAT

△ WETLAND FLAG

+ 65.0' SPOT ELEVATION

65 CONTOUR LINE WITH ELEVATION

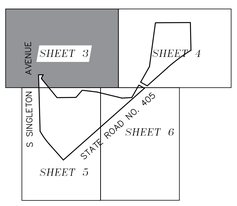
(15) SCHEDULE B-II ITEMS

Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

Map Key:



WILLIAM S WILKENS REVOCABLE TRUST
PARCEL ID
22-35-05-00-026
NOT PLATTED

(NO CORNER FOUND)
NW CORNER OF LINE OF GOVERNMENT LOT 2, ALSO BEING THE SW CORNER OF THE NE 1/4 OF SECTION 05-22S-35E

FCIR 1/2" LB7013

APPROXIMATE NORTH LINE OF GOVERNMENT LOT 2

L7

N89°37'32"E 1787.15'(F)
N89°53'00"E 1,787.74'(P)

N89°37'32"E 928.24'

NO CORNER FOUND
NE CORNER OF GOVERNMENT LOT
SECTION 5-22S-35E PER PB 17,

FCIR 1/2" LB 6762 TBM EL=20.08'

LOT 12

BLOCK 1

30' DRAINAGE R/W

LESS & EXCEPT(D)
FOREST HILLS ESTATES FIRST ADDITION
PLAT BOOK 17, PAGE 59

LOT 14

BLOCK 4

LOT 13

FCIR 1/2" RDL
POINT OF BEGINNING
FOR ORB 1995-427
SW CORNER OF LOT 13,
BLOCK 4
FORESTHILLS ESTATES
FIRST ADDITION
PB. 17, PG 59

NORTH CIRCLE DRIVE (PLAT)
YORKSHIRE DRIVE (KNOWN AS)
PLATTED 50' RIGHT-OF-WAY

NW CORNER
LOT 27, BLOCK 6
FOREST HILLS ESTATES
FIRST ADDITION
PB 17, PG 59
NO CORNER FOUND

FCIR 1/2" NO ID

TBM EL=20.29'

S SINGLETON AVENUE
EDGE OF PAVEMENT

APPROXIMATE WEST LINE OF GOVERNMENT LOT 2

L8

VACANT/WOODED
LOW LYING AREA
STANDING WATER

APPROXIMATE EDGE OF WATER

LESS & EXCEPT

80' RIGHT-OF-WAY
PER ORB 5101, PG 46

C7

FCIR 1/2" LB7013

FCIR 1/2" LB7013

L3

R/W DEED
(ORB 1995, PG 427)
(ORB 5101, PG 46)

L1

C3

FCIR 1/2" NO ID

NOT PLATTED
JERRY W SOLOMAN & VIOLET
SHIRLEY SOLOMON REVOCABLE TRUST
PARCEL ID
22-35-05-00-757

S89°50'42"W 255.04'(F)

NOT PLATTED
JERRY W SOLOMAN & VIOLET
SHIRLEY SOLOMON REVOCABLE TRUST
PARCEL ID
22-35-05-00-503

NOT PLATTED
JERRY W SOLOMAN & VIOLET
SHIRLEY SOLOMON REVOCABLE TRUST
PARCEL ID
22-35-05-00-504

N27°09'24"E 377.24'(C)
S27°00'54"W 377.24'(D)

JERRY W SOLOMAN & VIOLET
SHIRLEY SOLOMON REVOCABLE TRUST
PARCEL ID
22-35-05-00-505

NOT PLATTED

FCIR 1/2" NO ID

NCF FALLS IN LOW LANDS

FCIR 1/2" LB7013

L5 L4 L6

S13°51'37"W 34.26'(F)
FCIP 1" NO I.D.

S26°32'20"W 72.04'(F)
S27°27'00"W(P)

FIP 1" NO I.D.

ROBESON, VICTORIA A
PARCEL ID
22-35-05-76-7-13

LOT 13

HEBERT, RUTH G
PARCEL ID
22-35-05-76-7-12

LOT 12

APPROXIMATE EDGE OF WATER

WETLAND AREA:
546,245.54± SQ. FT.
OR 12.54± ACRES

O'NEILL, LAURA FRANCES
PARCEL ID
22-35-05-00-506
ORB 3264, PG 4066

JACKSON, GLORIA B
PARCEL ID
22-35-05-76-7-11

LOT 11

SCIACCHITANO, SALVATORE E;
SCIACCHITANO, MELISSA T
PARCEL ID
22-35-05-76-7-10

LOT 10

S39°31'11"E 433.00'(C)
S39°03'00"E 433.00'(D)

NOT PLATTED

MATCH LINE B
SHEET 5 OF 6

LESS & EXCEPT(D)
FOREST HILLS ESTATES FIRST ADDITION
PLAT BOOK 17, PAGE 59

LESS & EXCEPT(D)
FOREST HILLS ESTATES
PLAT BOOK 12, PAGE 81

MATCH LINE A
SHEET 4 OF 6

APPROXIMATE EAST LINE OF GOVERNMENT LOT 2

APPROXIMATE WEST LINE OF GOVERNMENT LOT 1

PHILPOT, RONALD W;
PHILPOT, LESLIE J PARCEL ID
22-35-05-76-7-4

LOT 4

DECESS, DAVID J;
DECESS, PEGGY W
PARCEL ID
22-35-05-76-7-3

LOT 3

MUSTARD FAMILY TRUST
PARCEL ID
22-35-05-76-7-2

LOT 2

HOOKS, EVELYN TRUSTEE
PARCEL ID
22-35-05-76-7-1

LOT 1

S83°04'38"E 260.00'(F)
S82°38'00"E 260.00'(P)

BAIR, CLARA;
BAIR, JAMES
PARCEL ID
22-35-05-75-11-1

LESS & EXCEPT(D)
FOREST HILLS ESTATES
PLAT BOOK 12, PAGE 81

FCIP 1/2" NO I.D.

S76°30'10"E 209.94'(F)
S76°03'E 210(P)

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1(D)	N 89°32'37" E	217.67'
L1(F)	N 89°56'40" E	217.67'
L2(D)	N 00°27'23" W	50.00'
L2(F)	N 00°24'09" W	50.00'
L3(D)	S 89°42'54" W	206.61'
L3(F)	S 89°56'56" W	207.40'
L4(D)	N 89°42'54" W	NONE
L4(F)	N 89°54'15" E	91.64'
L5(D)	N 89°54'15" E	171.73'
L5(F)	N 89°42'54" E	171.73'
L6(D)	NONE	
L6(F)	N 89°54'15" E	80.09'
L7(D)	NONE	
L7(F)	N 89°37'32" E	233.33

LINE TABLE		
LINE#	DIRECTION	LENGTH
L8(D)	N 01°30'00" W	NONE
L8(F)	N 01°30'00" W	231.23'
L9(D)	S 89°42'54" W	254.00'
L9(F)	S 89°50'42" W	255.04'
L10(D)	NONE	80.00'
L10(F)	N 48°53'00" W	80.00'
L11(D)	NONE	80.00'
L11(F)	N 48°31'44" W	80.00'
L12(D)	NONE	200.00'
L12(F)	N 41°27'49" W	200.00'
L13(P)	S30°12'00" W	60.00'
L13(F)	S 29°44'57" W	60.00'
L14(D)	NONE	
L14(F)	S 60°14'58" E	110.78'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L15(D)	NONE	
L15(F)	N 60°14'58" W	131.15'
L16 (FDOT)	N 48°29'12" E	NONE
L16(F)	N 48°29'45" W	63.33'
L17 (FDOT)	NONE	270.92'
L17(F)	S 60°14'58" E	270.92'
L18(D)	NONE	40.00'
L18(F)	S 89°37'32" W	40.00'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1(D)	25.00'	N 43°10'24" W	36.63'	41.11'	94°13'23"
C1(F)	25.00'	N 43°10'24" W	36.63'	41.11'	94°12'35"
C2(D)	1380'	S 05°59'23" W	98.81'	98.83'	04°06'12"
C2(F)	1380.00'	S 05°59'23" W	98.81'	98.83'	04°06'12"
C3(D)	25.00'	S 48°52'41" W	32.70'	35.64'	81°40'25"
C3(F)	25.00'	S 48°52'41" W	32.70'	35.64'	81°41'16"
C4	INTENTIONALLY DELETED				
C5(FDOT)	2996.93'	NONE			
C5(F)	2996.93'	S 53°29'10" W	499.41'	499.99'	9°33'32"
C6(D)	1300.00'	NONE			
C6(F)	1300.00'	S 35°21'35" E	278.29'	278.82'	12°17'20"
C7(D)	1380.00'	NONE			
C7(F)	1380.00'	N 01°04'04" E	131.30	131.35'	05°27'12"

HAMILTON
ENGINEERING & SURVEYING, LLC
3409 W LEMON ST | TAMPA, FL 33609 | TEL: 813.250.3535
2400 N. FORSYTH RD. | ORLANDO, FL 32807 | TEL: 407.362.5929
8340 CONSUMER CIRCLE | SARASOTA, FL 34240 | TEL: 941.377.9178
www.HamiltonEngineering.US | LB #8405 | CA #8474

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE NORTH

STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

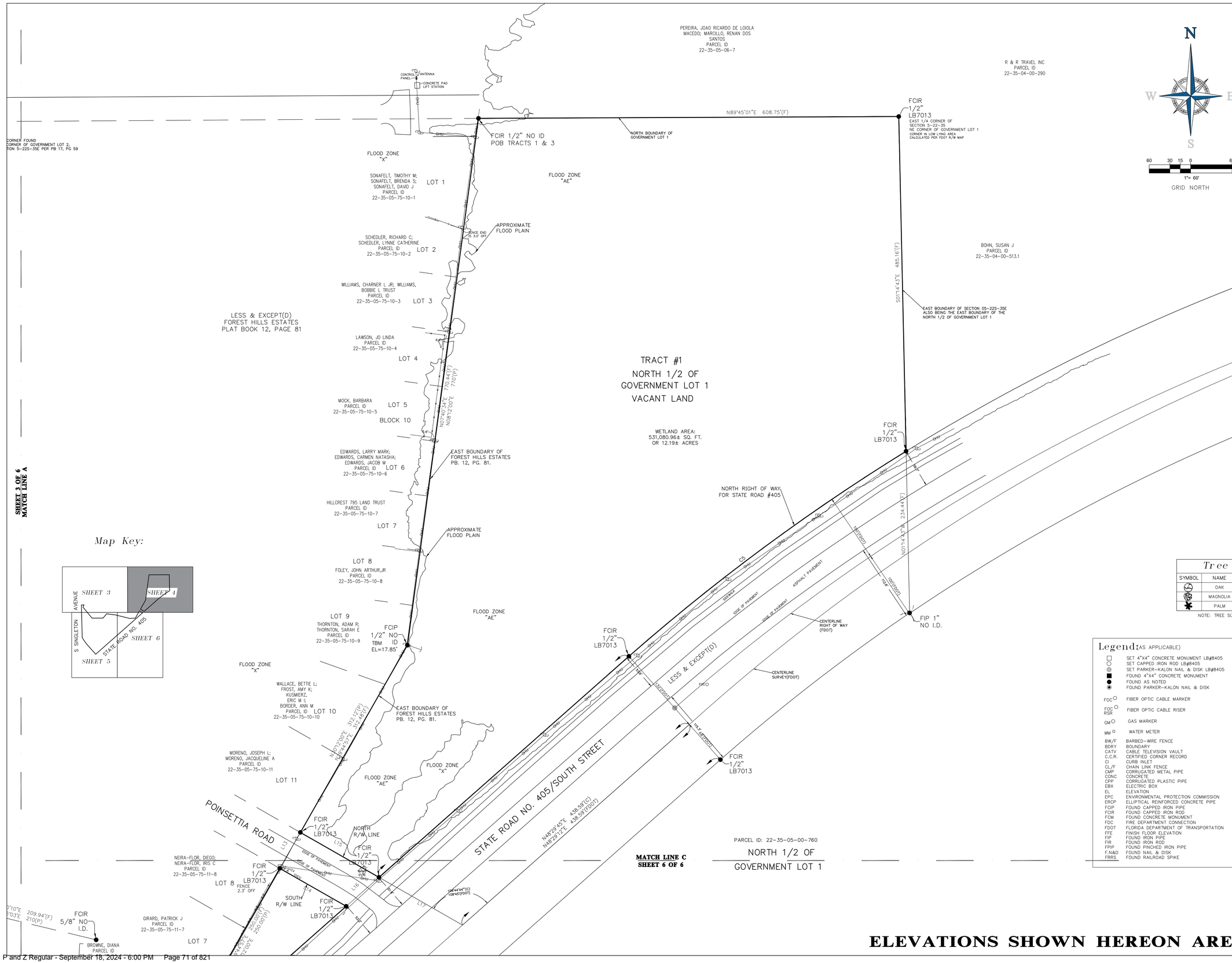
SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

PREPARED FOR:
THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE:	DIGITAL
QUALITY CONTROL FIELD:	GL
QUALITY CONTROL OFFICE:	HBR
DRAWN BY: HBR	PARTY CHIEF: LM
JOB #:	4225.0001
SEC TWP RNG:	05-22S-35E & 08-22S-35E
SURVEY DATE:	12/14/2022

NOT VALID WITHOUT ALL SHEETS

3 OF 6



SHEET 3 OF 6
MATCH LINE A

Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405	FT.	FEET
○	SET CAPPED IRON ROD LB#8405	GA	GUY ANCHOR
◎	SET PARKER-KALON NAIL & DISK LB#8405	HW/F	HOG WIRE FENCE
■	FOUND 4"X4" CONCRETE MONUMENT	ICV	IRRIGATION CONTROL VALVE
●	FOUND AS NOTED	ID	IDENTIFICATION
◉	FOUND PARKER-KALON NAIL & DISK	ILLEG	ILLEGIBLE
FOC○	FIBER OPTIC CABLE MARKER	LB	LICENSED BUSINESS
FOC○ RSR	FIBER OPTIC CABLE RISER	IE	INVERT ELEVATION
GM○	GAS MARKER	LP	LIGHT POLE
WM□	WATER METER	M/F	METAL FENCE
BW/F	BARBED-WIRE FENCE	NAVD	NORTH AMERICAN VERTICAL DATUM
BDRY	BOUNDARY	NCF	NO CORNER FOUND
CATV	CABLE TELEVISION VAULT	NGVD	NATIONAL GEODETIC VERTICAL DATUM
C.C.R.	CERTIFIED CORNER RECORD	O/A	OVERALL
CI	CURB INLET	OHL	OVERHEAD UTILITY LINE
CL/F	CHAIN LINK FENCE	O.R.B.	OFFICIAL RECORDS BOOK
CMP	CORRUGATED METAL PIPE	PB	PLAT BOOK
CONC	CONCRETE	PG.	PAGE
CPP	CORRUGATED PLASTIC PIPE	PRM	PERMANENT REFERENCE MONUMENT
EBX	ELECTRIC BOX	PSM	PROFESSIONAL SURVEYOR AND MAPPER
EL	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EPC	ENVIRONMENTAL PROTECTION COMMISSION	RLS	REGISTERED LAND SURVEYOR
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	RNG	RANGE
FCIP	FOUND CAPPED IRON PIPE	R/W	RIGHT OF WAY
FCIR	FOUND CAPPED IRON ROD	SCIR	SET CAPPED IRON ROD 1/2" LB #8405
FCM	FOUND CONCRETE MONUMENT	SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
FDC	FIRE DEPARTMENT CONNECTION	SEC.	SECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	SPKN&D	SET MAG NAIL & DISK LB #8405
FFE	FINISH FLOOR ELEVATION	SV	SEWER VALVE
FIP	FOUND IRON PIPE	S/W	SIDEWALK
FIR	FOUND IRON ROD	SQ.	SQUARE
FPIP	FOUND PINCHED IRON PIPE	TBM	TEMPORARY BENCH MARK
F.N&D	FOUND NAIL & DISK	TBOX	TELEPHONE PEDESTAL
FRRS	FOUND RAILROAD SPIKE	TOB	TOP OF BANK
		TOS	TOE OF SLOPE
		TWP	TOWNSHIP
		UP	UTILITY POLE
		W/F	WOOD FENCE

(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

△ WETLAND FLAG

x 65.0' — SPOT ELEVATION

65 — CONTOUR LINE WITH ELEVATION

15 — SCHEDULE B-II ITEMS

ELEVATIONS SHOWN HEREON ARE NAVD 1988

HAMILTON
ENGINEERING & SURVEYING, LLC
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SHEET TITLE:
MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

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STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

PREPARED FOR:
THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE: DIGITAL
QUALITY CONTROL FIELD: GL
QUALITY CONTROL OFFICE: HBR
DRAWN BY: HBR | PARTY CHIEF: LM
JOB #: 4225.0001
SEC TWP RNG: 05-22S-35E & 08-22S-35E
SURVEY DATE: 12/14/2022

NOT VALID WITHOUT ALL SHEETS
4 OF 6

O'NEILL, LAURA FRANCES
PARCEL ID
22-35-05-00-506
ORB 3264, PG 4066

NOT PLATTED
(NOT INCLUDED)

CUMMINS, ELLEN-DEANE
PARCEL ID
22-35-05-00-502
ORB 2238, PG 2134

NOT PLATTED
(NOT INCLUDED)

OR 12.54± ACRES

FENCE CORNER IS 1.2' OFF

JACKSON, GLORIA B
PARCEL ID
22-35-05-76-7-11

LOT 11

SCIACCHITANO, SALVATORE E;
SCIACCHITANO, MELISSA T
PARCEL ID
22-35-05-76-7-10

LOT 10

S39°31'11"E 433.01'(F)
S39°03'00"E 433.00'(P)

NO DATA FOUND
PARCEL ID
22-35-05-76-7-9

LOT 9

LESS & EXCEPT(D)
FOREST HILLS ESTATES FIRST ADDITION
PLAT BOOK 17, PAGE 59

SOUTH BOUNDARY OF
FOREST HILLS ESTATES
FIRST ADDITION
PB. 17, PG. 59.

BROSSMAN, ROBYN
PARCEL ID
22-35-05-76-7-8

LOT 8

LEDFORD, STEPHEN C;
LEDFORD, TRUDY R
PARCEL ID
22-35-05-76-7-7

LOT 7

WARE, HERMAN LEE JR
PARCEL ID
22-35-05-76-7-6

LOT 6

BLOCK 7

N89°19'24"E 330.11'(F)
N89°45'30"E 330.28'(P)

FCIR 1/2" LB7013
FIR 1/2" 0.98'S & 0.36'W

INMAN, DELBERT C B;
INMAN, SHARON L
PARCEL ID
22-35-05-76-7-5

LOT 5

PHILPOT, RONALD W;
PHILPOT, LESLIE JPARCEL ID
22-35-05-76-7-4

LOT 4

N40°23'40"E 165.04'(F)
N40°52'00"E 165.00'(P)

FENCE CORNER IS 0.0' ON

FCIR 1/2" LB7013

DECESS, DAVID J;
DECESS, PEGGY W
PARCEL ID
22-35-05-76-7-3

LOT 3

MUSTARD FAMILY TRUST
PARCEL ID
22-35-05-76-7-2

LOT 2

HOOKS, EVELYN TRUSTEE
PARCEL ID
22-35-05-76-7-1

LOT 1

BLOCK 7

S83°04'38"E 260.00'(F)
S82°38'00"E 260.00'(P)

FENCE CORNER IS 0.4' ON

FENCE CORNER IS 0.1' OFF

FENCE CORNER IS 0.2' ON

FCIR 1/2" LB7013

S82°38'39"E 417.26'

(NO CORNER FOUND)
NE CORNER OF SE 1/4 OF SW 1/4
CORNER OF SECTION 5-22-35 NW
CORNER OF S 1/2 OF GOVERNMENT
LOT 2

APPROXIMATE WEST LINE OF GOVERNMENT LOT 2
N01°34'59"W 981.92'(F)

FLOOD ZONE
"X"

VACANT LAND

TRACT #2
A PART OF
GOVERNMENT LOT 2

WETLAND AREA:
546,245.54± SQ. FT.
OR 12.54± ACRES

UPLAND AREA:
592,364.961± SQ. FT.
OR 13.60± ACRES

WETLANDS LINE AS FLAGGED
BY BIO-TECH CONSULTING INC

WETLAND AREA:
13,926.64± SQ. FT.
OR 0.32± ACRES

80' RIGHT-OF-WAY
PER ORB 5101, PG 46
80.12'(C) 80'(D)

FCM W/
NAIL NO
TBM
EL=17.43'

FCIR 1/2" LB7013

CB=S31°51'15"E
CH=114.62'

S-SINGLETON AVENUE

BRICK PAVERS

WETLANDS LINE AS FLAGGED
BY BIO-TECH CONSULTING INC

CB=S40°40'53"E
CH=44.55'

FCIR 1/2" LB7013

N48°53'00"E 80.00'(F)
80' RIGHT-OF-WAY
PER ORB 5101, PG 46

FCM 4X4
PLS
4014
TBM EL=21.00'

N41°33'26"W 368.03'(F)
N41°30'05"W 367.53'(D)

15" DIAMETER OBSCY
SIGNAL POLE

SIDEWALK
EDGE OF PAVEMENT

FCM 4X4
LS #4014
TBM EL=22.31'

FCIR 1/2" LB7013

S41°27'49"E 200.00'(F) Rad
200'(FDOT)

FCIR 5/8" NO ID

TBM EL=28.90'
FCIR 1/2"
LB7013

TBM EL=27.26'
FCIR 1/2"
LB7013

FCIR 5/8"
LB6762

BREVARD COUNTY BENCHMARK
DESIGNATION: CSAT7 (NAVD 88)
ELEVATION: 23.17

INV.=20.57
INV.=20.44
24" RCP
MES
SIGN

STATE ROAD NO. 405
SOUTH STREET

ASPHALT PAVEMENT
EDGE OF PAVEMENT
SIDEWALK
GRAVEL DRIVE
DIRT TRAIL

STATE ROAD NO. 405/SOUTH STREET

LESS & EXCEPT(

FOC

N

W E

S

60 30 15 0 60
1"= 60'
GRID NORTH

Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405
○	SET CAPPED IRON ROD LB#8405
◎	SET PARKER-KALON NAIL & DISK LB#8405
■	FOUND 4"X4" CONCRETE MONUMENT
●	FOUND AS NOTED
◉	FOUND PARKER-KALON NAIL & DISK
FOC ○	FIBER OPTIC CABLE MARKER
FOC RSR ○	FIBER OPTIC CABLE RISER
GM ○	GAS MARKER
WM □	WATER METER
BW/F	BARBED-WIRE FENCE
BDRY	BOUNDARY
CATV	CABLE TELEVISION VAULT
C.C.R.	CERTIFIED CORNER RECORD
CI	CURB INLET
CL/F	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
EBX	ELECTRIC BOX
EL	ELEVATION
EPC	ENVIRONMENTAL PROTECTION COMMISSION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
FCIP	FOUND CAPPED IRON PIPE
FCIR	FOUND CAPPED IRON ROD
FCM	FOUND CONCRETE MONUMENT
FDC	FIRE DEPARTMENT CONNECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FFE	FINISH FLOOR ELEVATION
FIP	FOUND IRON PIPE
FIR	FOUND IRON ROD
FPIP	FOUND PINCHED IRON PIPE
F.N&D	FOUND NAIL & DISK
FRRS	FOUND RAILROAD SPIKE

FT.	FEET
GA	GUY ANCHOR
HW/F	HOG WIRE FENCE
ICV	IRRIGATION CONTROL VALVE
ID	IDENTIFICATION
ILLEG	ILLEGIBLE
LB	LICENSED BUSINESS
IE	INVERT ELEVATION
LP	LIGHT POLE
M/F	METAL FENCE
NAVD	NORTH AMERICAN VERTICAL DATUM
NCF	NO CORNER FOUND
NGVD	NATIONAL GEODETIC VERTICAL DATUM
O/A	OVERALL
OHL	OVERHEAD UTILITY LINE
O.R.B.	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG.	PAGE
PRM	PERMANENT REFERENCE MONUMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
RCP	REINFORCED CONCRETE PIPE
RLS	REGISTERED LAND SURVEYOR
RNG	RANGE
R/W	RIGHT OF WAY
SCIR	SET CAPPED IRON ROD 1/2" LB #8405
SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
SEC.	SECTION
SPKN&D	SET MAG NAIL & DISK LB #8405
SV	SEWER VALVE
S/W	SIDEWALK
SQ.	SQUARE
TBM	TEMPORARY BENCH MARK
TBOX	TELEPHONE PEDESTAL
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TWP	TOWNSHIP
UP	UTILITY POLE
W/F	WOOD FENCE
△	WETLAND FLAG
+ 65.0' / -65'	SPOT ELEVATION / CONTOUR LINE WITH ELEVATION
(15)	SCHEDULE B-II ITEMS

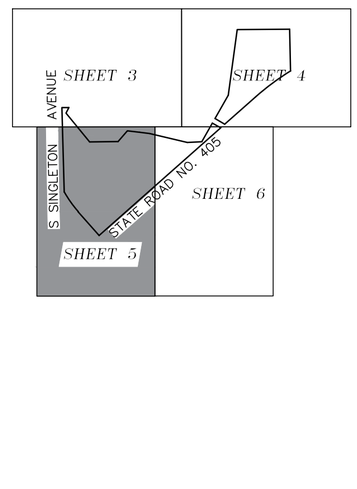
(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

Map Key:



ELEVATIONS SHOWN HEREON ARE NAVD 1988

MATCH LINE D
SHEET 6 OF 6

5 OF 6
NOT VALID WITHOUT ALL SHEETS
SURVEY DATE: 12/14/2022
SEC TWP RNG: 05-22S-35E & 08-22S-35E
JOB #: 4225.0001
DRAWN BY: HBR
PARTY CHIEF: LM
QUALITY CONTROL OFFICE: HBR
QUALITY CONTROL FIELD: GL
FIELD BOOK/PAGE: DIGITAL
PREPARED FOR: THE SINGLETON AVE. 44 ACRE LAND TRUST DATED APRIL 4, 2022

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE NORTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

HAMILTON
ENGINEERING & SURVEYING, LLC
3409 W LEMON ST
TAMPA, FL 33609
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2400 N. FORSYTH RD.
ORLANDO, FL 32807
TEL: 407.362.5929
8340 CONSUMER CIRCLE
SARASOTA, FL 32807
TEL: 941.377.9178
www.HamiltonEngineering.US LB #8405 CA #8474

SHEET 4 OF 8
MATCH LINE E

SHEET 5 OF 6
MATCH LINE D

LESS & EXCEPT(D)
FOREST HILLS ESTATES
PLAT BOOK 12, PAGE 81

FCIP 1/2" NO I.D.

S76°30'10"E 209.94'(F)
S76°03'E 210(P)

FCIR 5/8" NO I.D.

FCIR 1/2" NO ID ONLINE

FCIR 1/2" LB7013

FCIR 5/8" NO ID

FCIR 1/2" LB7013

FCIR 1/2" LB7013

FCIR 1/2" LB7013

FENCE CORNER IS 0.2' IN

FENCE CORNER IS 0.1' OFF

FENCE CORNER IS 0.7' OFF

FENCE CORNER IS 1.6' OFF

FENCE CORNER IS 0.7' N & 0.2' W

WALL IS ON LINE

WALL IS 0.6' OFF

FENCE 2.3' OFF

SOUTH R/W LINE

HOOKS, EVELYN TRUSTEE
PARCEL ID
22-35-05-76-7-1

AMILY TRUST
CEL ID
5-76-7-2

T 2

S83°04'38"E 260.00'(F)
S82°38'00"E 260.00'(P)

LOT 1
BLOCK 7

BAIR, CLARA;
BAIR, JAMES
PARCEL ID
22-35-05-75-11-1

LOT 1
BLOCK 11

CABRAL, ALEX MATTHEW;
ALLISON, KAITLYN
PARCEL ID
22-35-05-75-11-2

LOT 2

S76°30'19"E 450.00'(F)
S76°03'00"E 450'(P)

LOT 3

HOOKS, MONICA
PARCEL ID
22-35-05-75-11-3.01

LOT 4

PENDER, JANE T
PARCEL ID
22-35-05-75-11-5

LOT 5

BROWNE, DIANA
PARCEL ID
22-35-05-75-11-5.01

WAREHAM, PATRICIA P
PARCEL ID
22-35-05-75-11-6

BLOCK 11
LOT 6

GIRARD, PATRICK J
PARCEL ID
22-35-05-75-11-7

LOT 7

NEIRA-FLOR, DIEGO;
NEIRA-FLOR, IRIS C
PARCEL ID
22-35-05-75-11-8

LOT 8

N23°44'57"E 250.00'(F)
N30°12'00"E 250.00'(P)

S82°38'39"E 417.26'

S76°39'19"W 119.32'

N86°53'24"E 168.10'(F)
N87°21'30"E 168.10'(P)

SOUTH BOUNDARY OF
FOREST HILLS ESTATES
PB. 12, PG. 81.

FLOOD ZONE
"X"

PARCEL ID: 22-35-05-00-752
SOUTH 1/2 OF
GOVERNMENT LOT 1

A PART OF
GOVERNMENT LOT 2

NORTH RIGHT OF WAY
FOR STATE ROAD #405

WETLAND AREA:
546,245.54± SQ. FT.
OR 12.54± ACRES

WETLANDS LINE AS FLAGGED
BY BIO-TECH CONSULTING INC

APPROXIMATE SOUTH LINE OF N 1/2 OF GOVERN
APPROXIMATE NORTH LINE OF S 1/2 OF GOVERN

ASPHALT PAVEMENT

EDGE OF PAVEMENT

DIRT TRAIL

LESS & EXCEPT(D)

S48°29'40"W 1886.06'(F)
S48°29'12"(FDOT)

N48°29'12"E(FDOT)
N48°29'31"E 2015.54'(F)

S48°29'42"W 2431.83'(C)

STATE ROAD NO. 405/SOUTH STREET

APPROXIMATE EAST LINE OF GOVERNMENT LOT 2

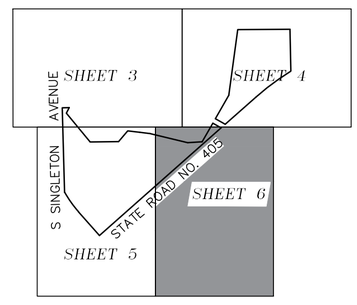
APPROXIMATE WEST LINE OF GOVERNMENT LOT 1

SOUTH 1/2 OF
GOVERNMENT LOT 1

N
W E
S

60 30 15 0 60
1"= 60'
GRID NORTH

Map Key:



Tree Legend			
SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

ELEVATIONS SHOWN HEREON ARE NAVD 1988

Legend (AS APPLICABLE)

- SET 4"X4" CONCRETE MONUMENT LB#8405
- SET CAPPED IRON ROD LB#8405
- SET PARKER-KALON NAIL & DISK LB#8405
- FOUND 4"X4" CONCRETE MONUMENT
- FOUND AS NOTED
- FOUND PARKER-KALON NAIL & DISK
- FOC — FIBER OPTIC CABLE MARKER
- FOC RSR — FIBER OPTIC CABLE RISER
- GM — GAS MARKER
- WM — WATER METER
- BW/F — BARBED-WIRE FENCE
- BDRY — BOUNDARY
- CATV — CABLE TELEVISION VAULT
- C.C.R. — CERTIFIED CORNER RECORD
- CI — CURB INLET
- CL/F — CHAIN LINK FENCE
- CMP — CORRUGATED METAL PIPE
- CONC — CONCRETE
- CPP — CORRUGATED PLASTIC PIPE
- EBX — ELECTRIC BOX
- EL — ELEVATION
- EPC — ENVIRONMENTAL PROTECTION COMMISSION
- ERCP — ELLIPTICAL REINFORCED CONCRETE PIPE
- FCIP — FOUND CAPPED IRON PIPE
- FCIR — FOUND CAPPED IRON ROD
- FCM — FOUND CONCRETE MONUMENT
- FDC — FIRE DEPARTMENT CONNECTION
- FDOT — FLORIDA DEPARTMENT OF TRANSPORTATION
- FFE — FINISH FLOOR ELEVATION
- FIP — FOUND IRON PIPE
- FIR — FOUND IRON ROD
- FPIP — FOUND PINCHED IRON PIPE
- F.N&D — FOUND NAIL & DISK
- FRRS — FOUND RAILROAD SPIKE
- FT. — FEET
- GA — GUY ANCHOR
- HW/F — HOG WIRE FENCE
- ICV — IRRIGATION CONTROL VALVE
- ID — IDENTIFICATION
- ILLEG — ILLEGIBLE
- LB — LICENSED BUSINESS
- IE — INVERT ELEVATION
- LP — LIGHT POLE
- M/F — METAL FENCE
- NAVD — NORTH AMERICAN VERTICAL DATUM
- NCF — NO CORNER FOUND
- NGVD — NATIONAL GEODETIC VERTICAL DATUM
- O/A — OVERALL
- OHL — OVERHEAD UTILITY LINE
- O.R.B. — OFFICIAL RECORDS BOOK
- PB — PLAT BOOK
- PG. — PAGE
- PRM — PERMANENT REFERENCE MONUMENT
- PSM — PROFESSIONAL SURVEYOR AND MAPPER
- RCP — REINFORCED CONCRETE PIPE
- RLS — REGISTERED LAND SURVEYOR
- RNG — RANGE
- R/W — RIGHT OF WAY
- SCIR — SET CAPPED IRON ROD 1/2" LB #8405
- SCM — SET CONCRETE MONUMENT (4"X4") LB #8405
- SEC. — SECTION
- SPKN&D — SET MAG NAIL & DISK LB #8405
- SV — SEWER VALVE
- S/W — SIDEWALK
- SQ. — SQUARE
- TBM — TEMPORARY BENCH MARK
- TBOX — TELEPHONE PEDESTAL
- TOB — TOP OF BANK
- TOS — TOE OF SLOPE
- TWP — TOWNSHIP (C) CALCULATED
- UP — UTILITY POLE (D) PER DEED
- W/F — WOOD FENCE (F) PER FIELD
- (P) PER PLAT
- WETLAND FLAG
- x 65.0' — SPOT ELEVATION
- CONTOUR LINE WITH ELEVATION
- 15 — SCHEDULE B-II ITEMS

PREPARED FOR: THE SINGLETON AVE. 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE: DIGITAL

QUALITY CONTROL FIELD: GL

QUALITY CONTROL OFFICE: HBR

DRAWN BY: HBR | PARTY CHIEF: LM

JOB #: 4225.0001

SEC TWP RNG: 05-22S-35E & 08-22S-35E

SURVEY DATE: 12/14/2022

NOT VALID WITHOUT ALL SHEETS

6 OF 6

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE NORTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

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www.HamiltonEngineering.US LB #8405 CA #8474

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 67.75 FEET; THENCE SOUTH 16°40'03" EAST, A DISTANCE OF 19.46 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 33°15'10" EAST, A DISTANCE OF 96.67 FEET; THENCE SOUTH 20°48'01" EAST, A DISTANCE OF 69.77 FEET; THENCE SOUTH 19°47'32" WEST, A DISTANCE OF 54.25 FEET; THENCE SOUTH 33°13'08" WEST, A DISTANCE OF 111.24 FEET; THENCE SOUTH 20°53'51" WEST, A DISTANCE OF 100.38 FEET; THENCE SOUTH 28°56'21" WEST, A DISTANCE OF 61.85 FEET; THENCE NORTH 41°30'05" WEST, A DISTANCE OF 63.70 FEET; THENCE NORTH 31°48'12" EAST, A DISTANCE OF 38.71 FEET; THENCE NORTH 29°07'39" EAST, A DISTANCE OF 46.00 FEET; THENCE NORTH 27°13'50" EAST, A DISTANCE OF 21.80 FEET; THENCE NORTH 24°33'17" EAST, A DISTANCE OF 60.66 FEET; THENCE NORTH 21°28'59" EAST, A DISTANCE OF 38.92 FEET; THENCE NORTH 26°31'04" EAST, A DISTANCE OF 12.96 FEET; THENCE NORTH 22°16'42" EAST, A DISTANCE OF 26.22 FEET; THENCE NORTH 17°54'02" EAST, A DISTANCE OF 19.65 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 183.16 FEET AND A CHORD WHICH BEARS NORTH 07°44'17" EAST AND A DISTANCE OF 71.43 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 71.90 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 359.32 FEET AND A CHORD WHICH BEARS NORTH 08°53'16" WEST A DISTANCE OF 67.40 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 67.49 FEET; THENCE NORTH 14°18'24" WEST, A DISTANCE OF 15.06 FEET; TO THE POINT OF BEGINNING.

CONTAINING 21,850.03 SQUARE FEET OR 0.50 ACRES, MORE OR LESS.

CONTINUED ON SHEET 2

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
10:28:26 2024.08.08
'00'04-

HARRY B. ROGERS III License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405, HAVING A GRID BEARING OF S 48°29'40" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 32807

FUTURE LAND USE
LOW DENSITY TO CONSERVATION
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	24225.0001	GCT	07/25/2024	1/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch) harryr Aug 08, 2024 - 10:23am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY
EXHIBIT "A"

CONTINUED FROM SHEET 1

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 81°37'23" WEST, A DISTANCE OF 615.59 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 48°29'55" WEST, A DISTANCE OF 121.62 FEET TO THE WEST LINE OF GOVERNMENT LOT 2; THENCE NORTH 01°34'59" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 77.15 FEET; THENCE NORTH 76°38'49" EAST, A DISTANCE OF 11.40 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 185.76 FEET AND A CHORD WHICH BEARS NORTH 89°25'07" EAST, A DISTANCE 82.13 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 82.81 FEET TO THE POINT OF BEGINNING.

CONTAINING 3,953.85 SQUARE FEET OR 0.09 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 3

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, THE FOLLOWING TWO (2) COURSES: (1) SOUTH 83°04'38" EAST, A DISTANCE OF 260.00 FEET; (2) SOUTH 76°30'19" EAST, A DISTANCE OF 251.12 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 76°30'19" EAST, ALONG SAID LINE, A DISTANCE OF 198.87 FEET; THENCE NORTH 86°53'24" EAST, A DISTANCE OF 168.10 FEET; THENCE NORTH 29°44'57" EAST, A DISTANCE OF 250.00 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "B"; THENCE SOUTH 60°14'58" EAST, A DISTANCE OF 110.78 FEET TO THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 905.73 FEET; THENCE NORTH 17°56'33" WEST, A DISTANCE OF 38.25 FEET; THENCE NORTH 07°08'39" EAST, A DISTANCE OF 47.22 FEET; THENCE NORTH 13°04'30" EAST, A DISTANCE OF 71.83 FEET; THENCE NORTH 28°30'38" EAST, A DISTANCE OF 52.48 FEET; THENCE NORTH 60°00'48" WEST, A DISTANCE OF 40.36 FEET; THENCE NORTH 11°01'19" WEST, A DISTANCE OF 66.34 FEET; THENCE NORTH 27°09'12" WEST, A DISTANCE OF 33.59 FEET; THENCE CONTINUE NORTH 27°09'12" WEST, ALONG SAID LINE, A DISTANCE OF 19.20 FEET; THENCE NORTH 21°07'09" WEST, A DISTANCE OF 50.00 FEET; THENCE NORTH 35°02'16" EAST, A DISTANCE OF 40.16 FEET; THENCE NORTH 07°27'02" EAST, A DISTANCE OF 32.91 FEET; THENCE NORTH 75°39'19" EAST, A DISTANCE OF 127.85 FEET TO THE POINT OF BEGINNING.

CONTAINING 134,845.25 SQUARE FEET OR 3.10 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 4

COMMENCE AT REFERENCE POINT "B"; THENCE NORTH 29°44'57" EAST, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE NORTH 29°44'57" EAST, ALONG SAID LINE, A DISTANCE OF 312.48 FEET; THENCE NORTH 07°40'34" EAST, A DISTANCE OF 91.86 FEET; THENCE SOUTH 28°44'21" EAST, A DISTANCE OF 291.88 FEET TO THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'45" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 258.79 FEET; THENCE NORTH 60°14'58" WEST, A DISTANCE OF 131.15 FEET TO THE POINT OF BEGINNING.

CONTAINING 57,512.11 SQUARE FEET OR 1.32 ACRES, MORE OR LESS.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

HAMILTON
ENGINEERING & SURVEYING, LLC
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3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 32807

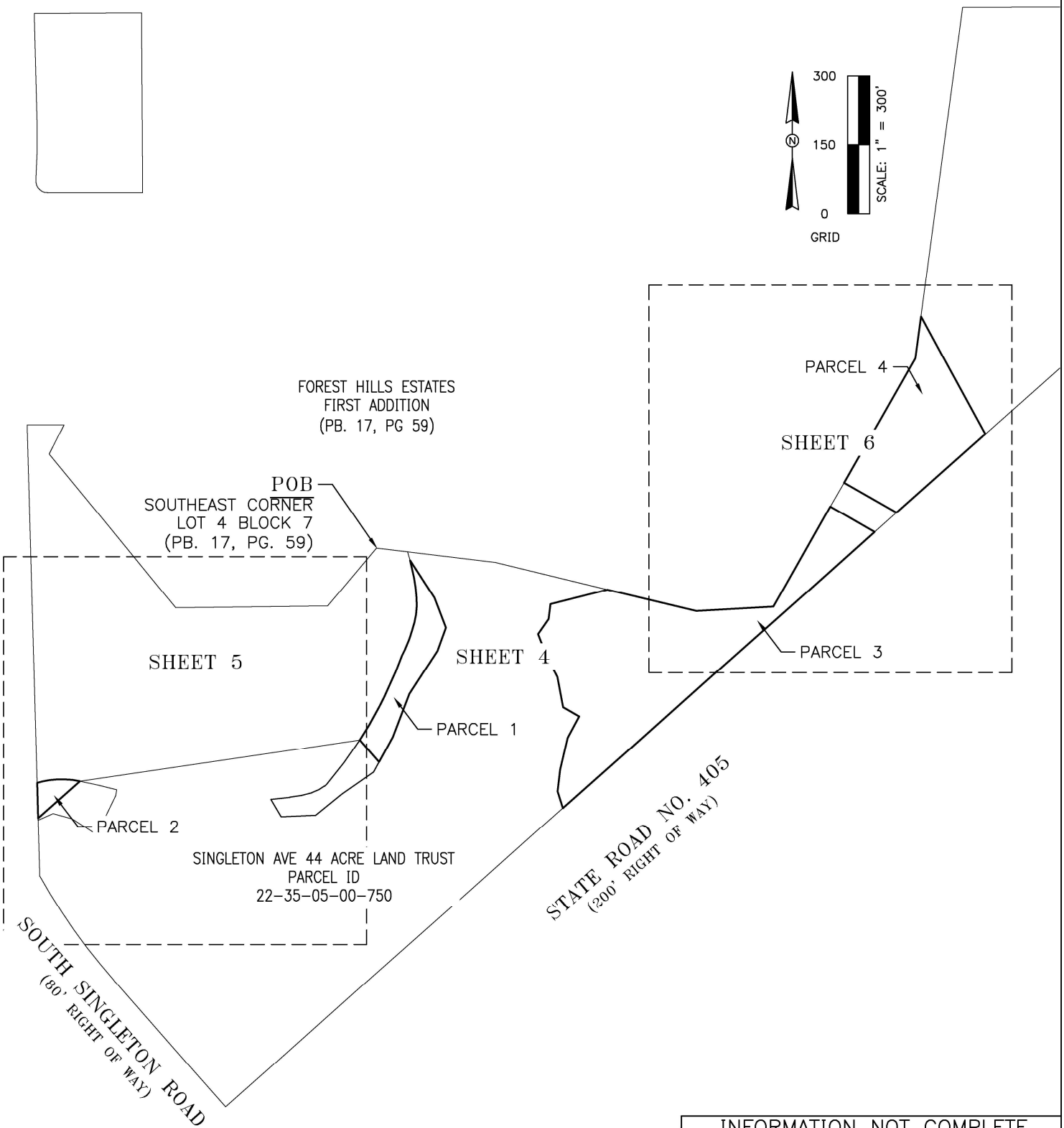
FUTURE LAND USE
LOW DENSITY TO CONSERVATION
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
07 22S 35E	04225.0001	GCT	07/25/2024	2/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (2)) harryr Aug 08, 2024 - 10:22am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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(941) 922-4478

FUTURE LAND USE
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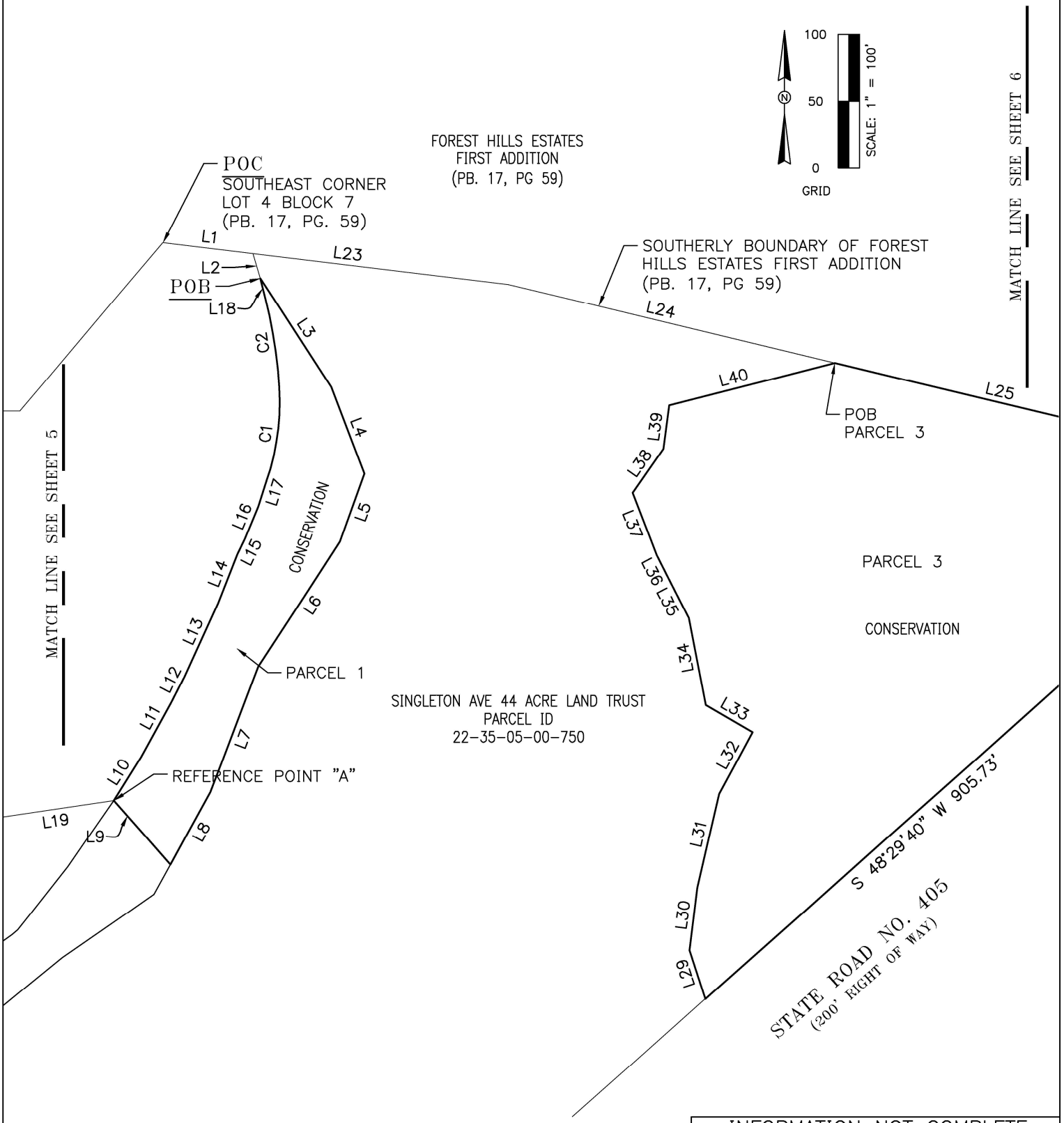
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225.0001	GCT	07/25/2024	3/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (3)) harryr Aug 08, 2024 - 10:23am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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FUTURE LAND USE
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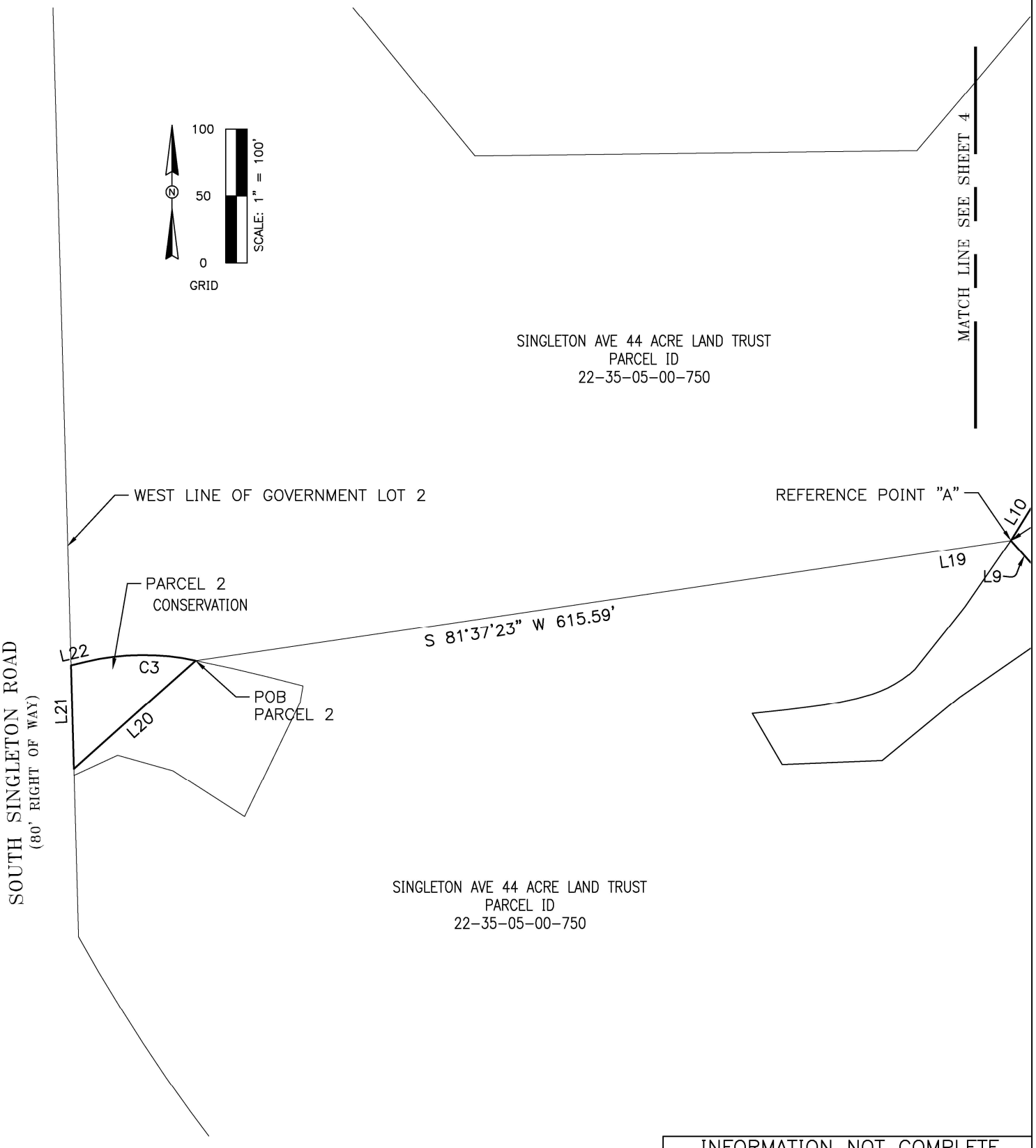
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225.0001	GCT	07/25/2024	4/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (4)) harryr Aug 08, 2024 - 10:24am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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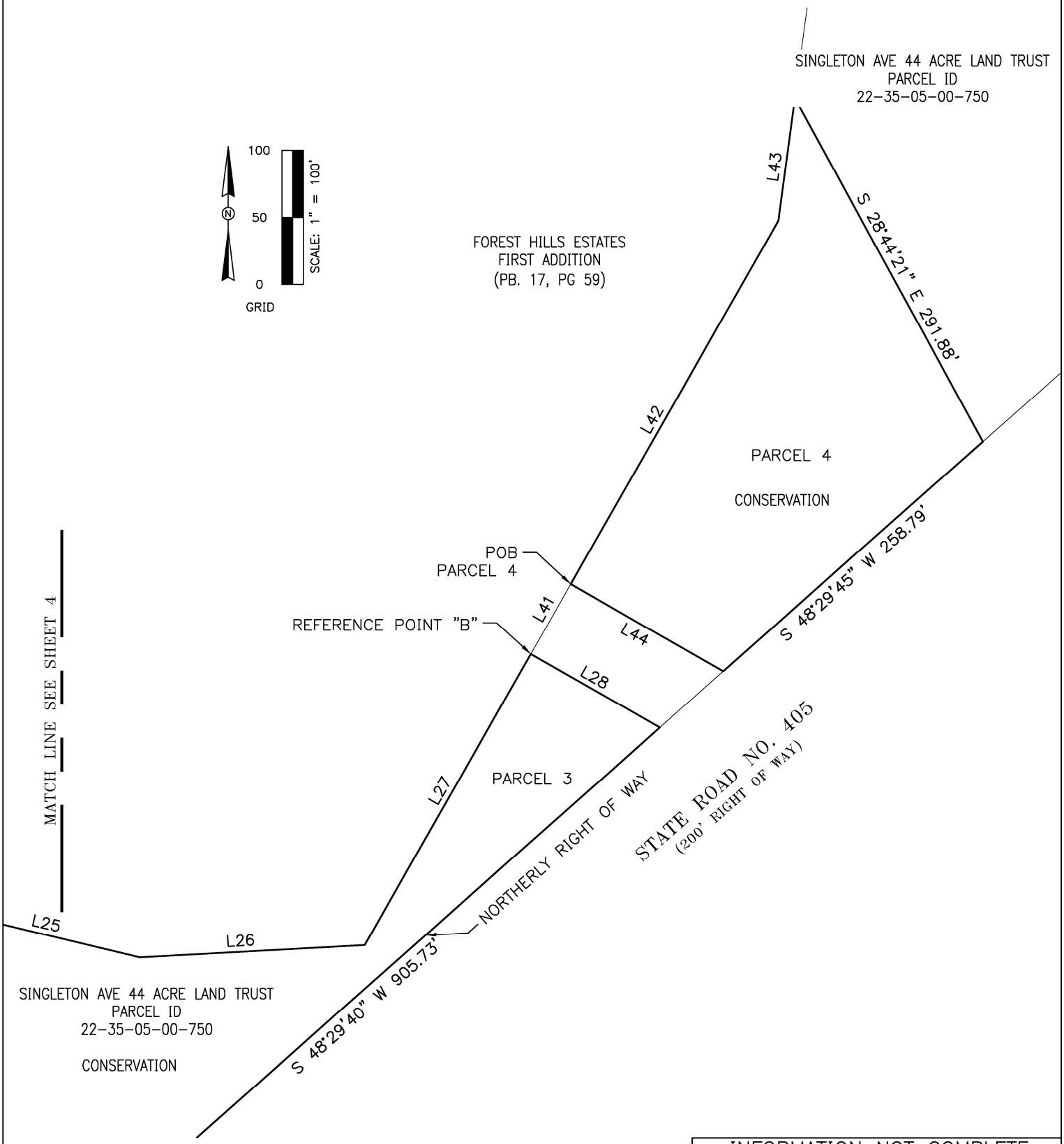
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
SEE SHEET 2	04225.0001	GCT	07/25/2024	5/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (5)) harryr Aug 08, 2024 - 10:24am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225.0001	GCT	07/25/2024	6/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (6)) harryr Aug 08, 2024 - 10:24am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 83°04'38" E	67.75'
L2	S 16°40'03" E	19.46'
L3	S 33°15'10" E	96.67'
L4	S 20°48'01" E	69.77'
L5	S 19°47'32" W	54.25'
L6	S 33°13'08" W	111.24'
L7	S 20°53'51" W	100.38'
L8	S 28°56'21" W	61.85'
L9	N 41°30'05" W	63.70'
L10	N 31°48'12" E	38.71'
L11	N 29°07'39" E	46.00'
L12	N 27°13'50" E	21.80'
L13	N 24°33'17" E	60.66'
L14	N 21°28'59" E	38.92'
L15	N 26°31'04" E	12.96'
L16	N 22°16'42" E	26.22'
L17	N 17°54'02" E	19.65'
L18	N 14°18'24" W	15.06'
L19	S 81°37'23" W	615.59'
L20	S 48°29'55" W	121.62'
L21	N 01°34'59" W	77.15'
L22	N 76°38'49" E	11.40'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L23	S 83°04'38" E	260.00'
L24	S 76°30'19" E	251.12'
L25	S 76°30'19" E	198.87'
L26	N 86°53'24" E	168.10'
L27	N 29°44'57" E	250.00'
L28	S 60°14'58" E	110.78'
L29	N 17°56'33" W	38.25'
L30	N 07°08'39" E	47.22'
L31	N 13°04'30" E	71.83'
L32	N 28°30'38" E	52.48'
L33	N 60°00'48" W	40.36'
L34	N 11°01'19" W	66.34'
L35	N 27°09'12" W	33.59'
L36	N 27°09'12" W	19.20'
L37	N 21°07'09" W	50.00'
L38	N 35°02'16" E	40.16'
L39	N 07°27'02" E	32.91'
L40	N 75°39'19" E	127.85'
L41	N 29°44'57" E	60.00'
L42	N 29°44'57" E	312.48'
L43	N 07°40'34" E	91.86'
L44	N 60°14'58" W	131.15'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	183.16'	N 07°44'17" E	71.43'	71.90'	22°29'23"
C2	359.32'	N 08°53'16" W	67.40'	67.49'	10°45'44"
C3	185.76'	S 89°25'07" W	82.13'	82.81'	25°32'36"

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474

3409 W LEMON ST | TAMPA, FL 33609 | 813.250.3535
2400 N. FORSYTH 106 | ORLANDO, FL 32807 | 407.926.5022
8340 CONSUMER CIRCLE | SARASOTA, FL 32807 | 941.922.5478

FUTURE LAND USE
LOW DENSITY TO CONSERVATION
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
04 22S 35E	04225.0001	GCT	07/25/2024	7/7

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\North\North- Low Denisty to Conservation.dwg (Sketch (7)) harryr Aug 08, 2024 - 10:25am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 05°01'09" WEST, A DISTANCE OF 418.79 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 63.70 FEET; THENCE SOUTH 28°56'21" WEST, A DISTANCE OF 25.50 FEET; THENCE SOUTH 55°25'52" WEST, A DISTANCE OF 83.19 FEET; THENCE SOUTH 50°54'00" WEST, A DISTANCE OF 74.22 FEET; THENCE SOUTH 87°41'02" WEST, A DISTANCE OF 74.78 FEET; THENCE NORTH 30°35'31" WEST, A DISTANCE OF 43.93 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°53'02" EAST, A DISTANCE OF 23.93 FEET; THENCE NORTH 83°08'45" EAST, A DISTANCE OF 17.79 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 284.09 FEET AND A CHORD WHICH BEARS NORTH 78°27'46" EAST AND A DISTANCE OF 49.25 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 49.31 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 89.31 FEET AND A CHORD WHICH BEARS NORTH 61°57'25" EAST AND A DISTANCE OF 30.98 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 31.14 FEET; THENCE NORTH 49°18'48" EAST, A DISTANCE OF 5.78 FEET; THENCE NORTH 38°33'50" EAST, A DISTANCE OF 60.15 FEET; THENCE NORTH 34°51'09" EAST, A DISTANCE OF 60.15 FEET; TO THE POINT OF BEGINNING.

CONTAINING 11,865.23 SQUARE FEET OR 0.27 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 86°27'38" WEST, A DISTANCE OF 336.32 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 09°36'53" WEST, A DISTANCE OF 12.72 FEET; THENCE SOUTH 25°58'21" WEST, A DISTANCE OF 94.62 FEET; THENCE NORTH 57°13'20" WEST, A DISTANCE OF 63.65 FEET; THENCE NORTH 74°31'26" WEST, A DISTANCE OF 42.95 FEET; THENCE SOUTH 65°25'21" WEST, A DISTANCE OF 35.77 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE NORTH 01°34'59" WEST ALONG SAID EASTERLY RIGHT OF WAY, A DISTANCE OF 4.77 FEET; THENCE NORTH 48°29'55" EAST , A DISTANCE OF 121.62 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 1,446.02 FEET AND A CHORD WHICH BEARS SOUTH 76°47'06" EAST AND A DISTANCE OF 82.22 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 82.24 FEET TO THE POINT OF BEGINNING.

CONTAINING 9,730.74 SQUARE FEET OR 0.22 ACRES, MORE OR LESS.

Legend:

INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
'00'05- 11:02:14 2024.01.04

HARRY B. ROGERS License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD, HAVING A GRID BEARING OF N 01°34'59" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 (813) 250-3535
2400 N. FORSYTH 106 ORLANDO, FL 32807 (407) 926-0020
8340 CONSUMER CIRCLE SARASOTA, FL 32807 (941) 922-4478

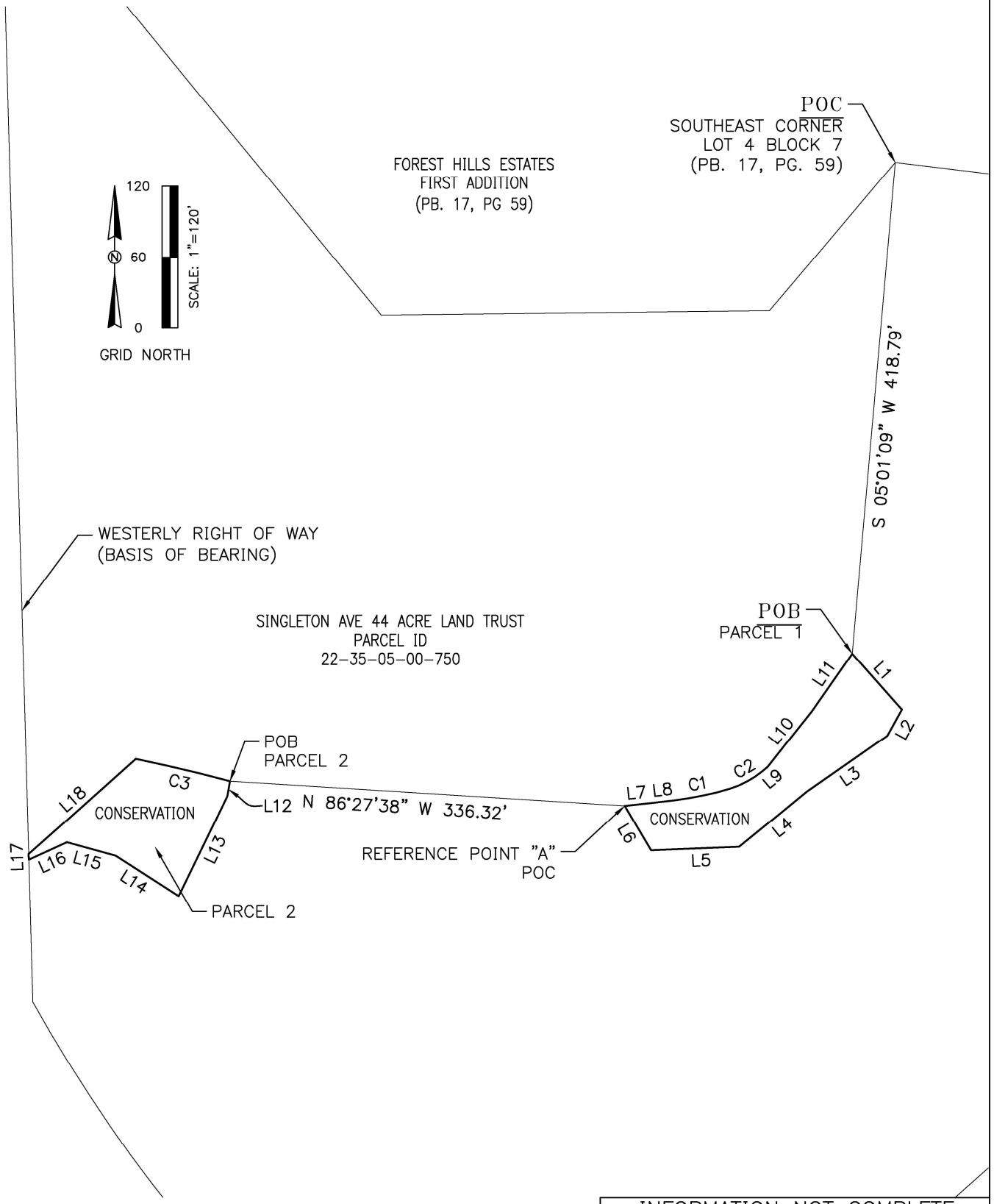
FUTURE LAND USE
COMMERCIAL TO CONSERVATION
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	1/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Commercial to Conservation.dwg (Sketch) harryr Nov 14, 2023 - 10:39am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	2/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\North\North- Commercial to Conservation.dwg (Sketch (2)) harryr Nov 14, 2023 - 10:39am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY
EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 41°30'05" E	63.70'
L2	S 28°56'21" W	25.50'
L3	S 55°25'52" W	83.19'
L4	S 50°54'00" W	74.22'
L5	S 87°41'02" W	74.78'
L6	N 30°35'31" W	43.93'
L7	N 83°53'02" E	23.93'
L8	N 83°08'45" E	17.79'
L9	N 49°18'48" E	5.78'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L10	N 38°33'50" E	60.15'
L11	N 34°51'09" E	60.15'
L12	S 09°36'53" W	12.72'
L13	S 25°58'21" W	94.62'
L14	N 57°13'20" W	63.65'
L15	N 74°31'26" W	42.95'
L16	S 65°25'21" W	35.77'
L17	N 01°34'59" W	4.77'
L18	N 48°29'55" E	121.62'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	284.09'	N 78°27'46" E	49.25'	49.31'	9°56'41"
C2	89.31'	N 61°57'25" E	30.98'	31.14'	19°58'29"
C3	1446.02'	S 76°47'06" E	82.22'	82.24'	3°15'30"

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

HAMILTON
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LB #8405 CA #8474
3409 W LEMON ST | TAMPA, FL 33609 | 813.250.3535
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FUTURE LAND USE
COMMERCIAL TO CONSERVATION
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	3/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Commercial to Conservation.dwg (Sketch (3)) harryr Nov 14, 2023 - 10:40am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 40°22'38" WEST ALONG THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 165.00 FEET; THENCE SOUTH 24°06'27" WEST, A DISTANCE OF 415.06 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 51°07'35" EAST, A DISTANCE OF 53.32 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 9.77 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS SOUTH 88°30'59" WEST AND A DISTANCE OF 71.70 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 71.86 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS NORTH 89°30'46" WEST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS NORTH 89°36'21" WEST, AND A DISTANCE OF 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 70.73 FEET; THENCE NORTH 85°06'12" WEST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS NORTH 79°57'07" WEST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 98.75 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 58.45 FEET; THENCE NORTH 53°18'49" WEST, A DISTANCE OF 21.04 FEET; THENCE NORTH 49°24'13" EAST, A DISTANCE OF 67.46 FEET; THENCE SOUTH 60°15'09" EAST, A DISTANCE OF 31.76 FEET; THENCE SOUTH 80°23'47" EAST, A DISTANCE OF 55.17 FEET; THENCE SOUTH 67°21'48" EAST, A DISTANCE OF 176.73 FEET TO THE POINT OF BEGINNING.

CONTAINING 27,261.21 SQUARE FEET OR 0.63 ACRES, MORE OR LESS.

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
11:03:08 2024.01.04
'00'05-

HARRY B. ROGERS III License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA, PLAT BOOK 17. PAGE 59, HAVING A GRID BEARING OF S 40°22'38" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 32807

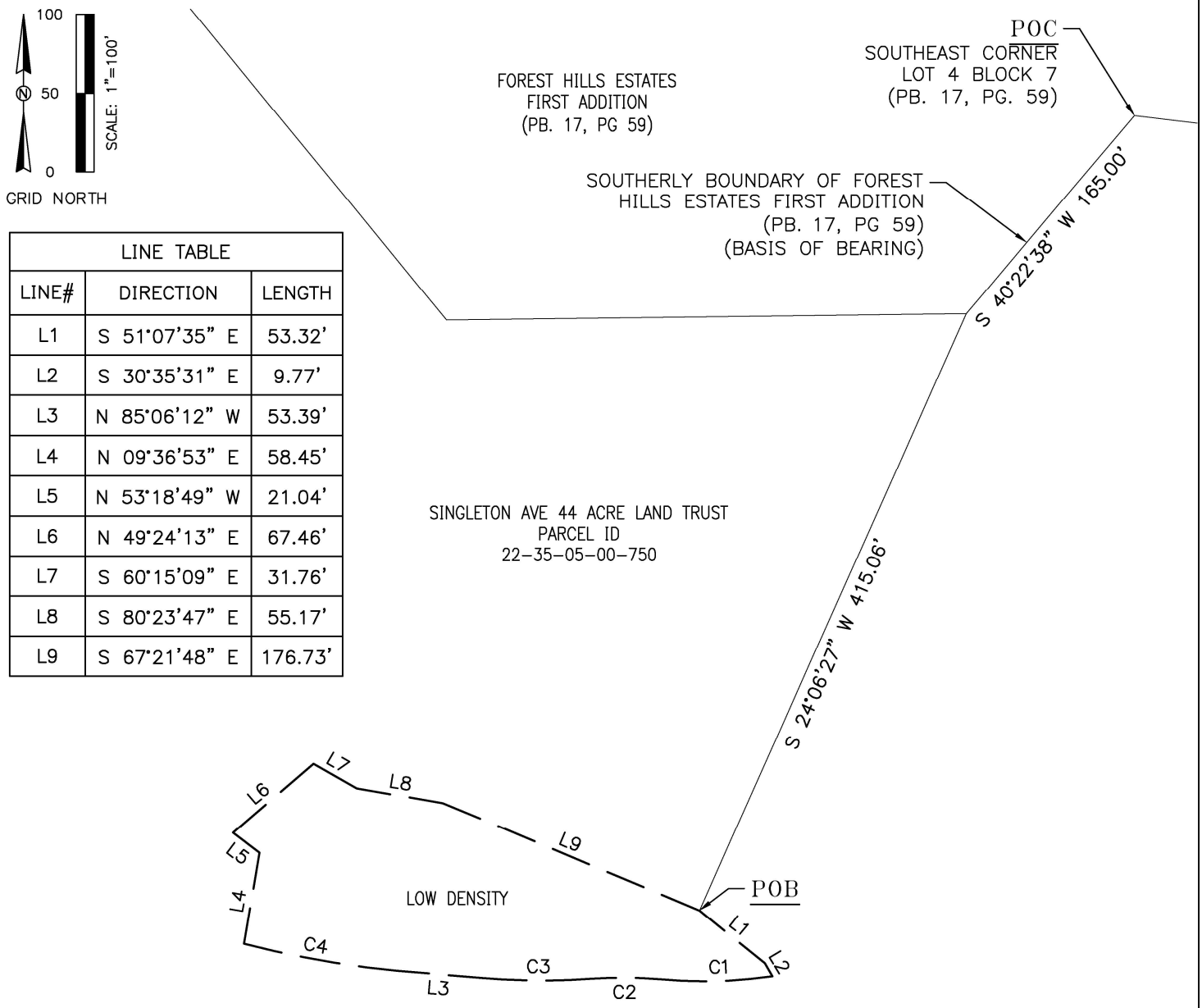
FUTURE LAND USE
CONSERVATIVE TO LOW DENSITY
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	1/2

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Conservation to Low Deniaty.dwg (Sketch) harryr Nov 14, 2023 - 10:36am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 51°07'35" E	53.32'
L2	S 30°35'31" E	9.77'
L3	N 85°06'12" W	53.39'
L4	N 09°36'53" E	58.45'
L5	N 53°18'49" W	21.04'
L6	N 49°24'13" E	67.46'
L7	S 60°15'09" E	31.76'
L8	S 80°23'47" E	55.17'
L9	S 67°21'48" E	176.73'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	313.53'	S 88°30'59" W	71.70'	71.86'	13°07'56"
C2	268.52'	N 89°30'46" W	43.02'	43.07'	9°11'25"
C3	450.06'	N 89°36'21" W	70.66'	70.73'	9°00'17"
C4	606.04'	N 79°57'07" W	98.64'	98.75'	9°20'10"

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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CONSERVATIVE TO LOW DENSITY
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	2/2

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Conservation to Low Deniaty.dwg (Sketch (2)) harryr Nov 14, 2023 - 10:37am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 00°41'13" EAST, A DISTANCE OF 464.93 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 340.25 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 747.41 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE ALONG THE EASTERLY RIGHT OF WAY THE FOLLOWING THREE (3) COURSES: (1) NORTH 41°30'05" WEST, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,309.05 FEET AND A CHORD WHICH BEARS NORTH 35°24'26" WEST, A DISTANCE 277.95 FEET; (2) ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.47 FEET; (3) NORTH 01°34'59" WEST, A DISTANCE OF 121.05 FEET; THENCE NORTH 65°25'21" EAST, A DISTANCE OF 35.77 FEET; THENCE SOUTH 74°31'26" EAST, A DISTANCE OF 42.95 FEET; THENCE SOUTH 57°13'20" EAST, A DISTANCE OF 63.65 FEET; THENCE NORTH 25°58'21" EAST, A DISTANCE OF 94.62 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 12.72 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS SOUTH 79°57'07" EAST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 98.75 FEET; THENCE SOUTH 85°06'12" EAST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS SOUTH 89°36'21" EAST, A DISTANCE 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 70.73 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS SOUTH 89°30'46" EAST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS NORTH 88°30'59" EAST, AND A DISTANCE OF 71.70 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 71.86 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 43.93 FEET; THENCE NORTH 87°41'02" EAST, A DISTANCE OF 74.78 FEET; THENCE NORTH 50°54'00" EAST, A DISTANCE OF 74.22 FEET; THENCE NORTH 55°25'52" EAST, A DISTANCE OF 83.19 FEET; THENCE NORTH 28°56'21" EAST, A DISTANCE OF 25.50 FEET TO THE POINT OF BEGINNING.

CONTAINING 394,331.55 SQUARE FEET OR 9.05 ACRES, MORE OR LESS.

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
11:02:38 2024.01.04
'00'05-

HARRY B. ROGERS License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405, HAVING A GRID BEARING OF S 48°29'40" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

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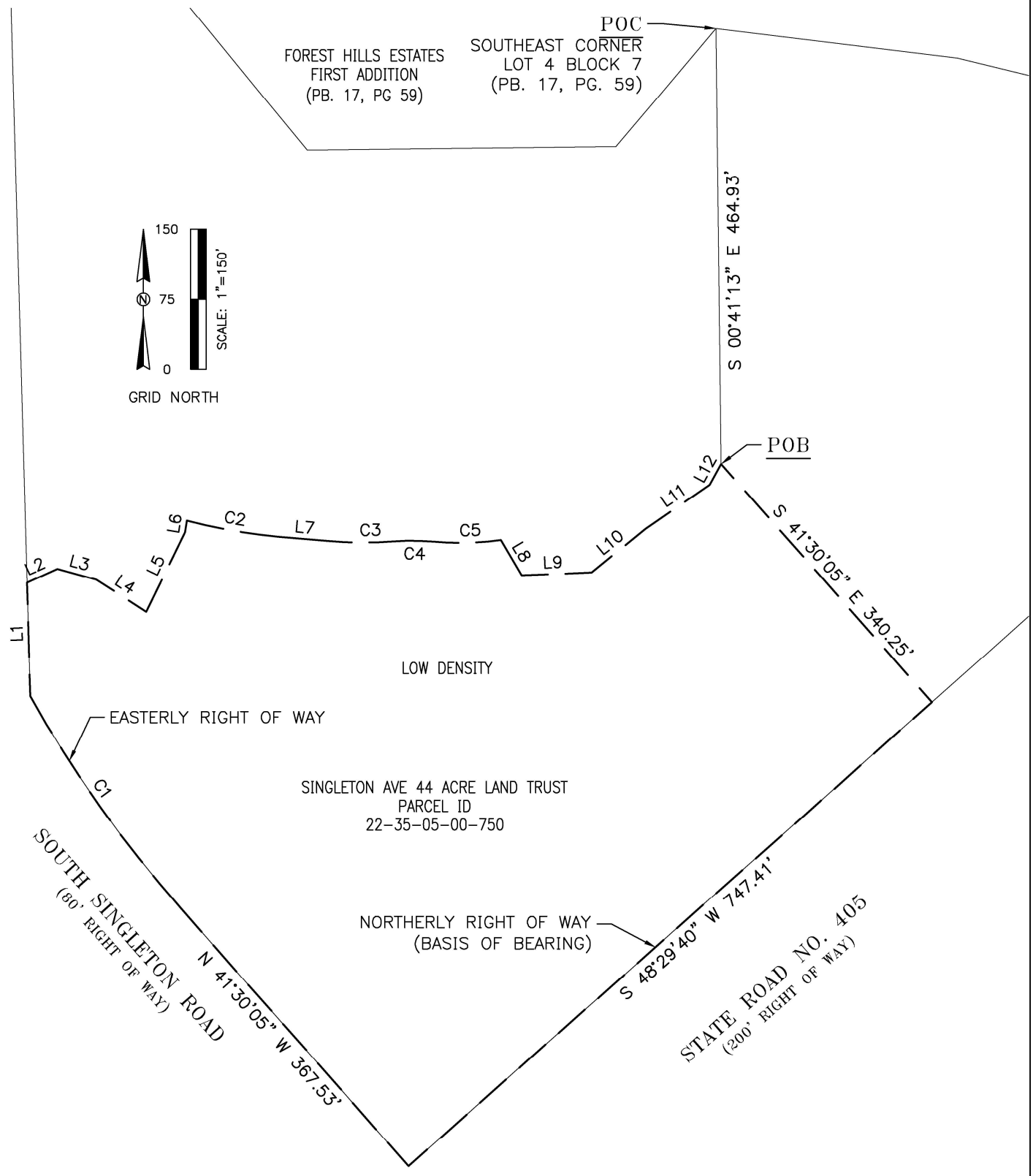
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	1/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Commercial to Low Denisty.dwg (Sketch) harryr Nov 14, 2023 - 10:41am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US
LB #8405 CA #8474

3409 W LEMON ST
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8340 CONSUMER CIRCLE
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(941) 922-4478

FUTURE LAND USE
COMMERCIAL TO LOW DENSITY
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	2/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Commercial to Low Denisty.dwg (Sketch (2)) harryr Nov 14, 2023 - 10:42am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY
EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	N 01°34'59" W	121.05'
L2	N 65°25'21" E	35.77'
L3	S 74°31'26" E	42.95'
L4	S 57°13'20" E	63.65'
L5	N 25°58'21" E	94.62'
L6	N 09°36'53" E	12.72'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L7	S 85°06'12" E	53.39'
L8	S 30°35'31" E	43.93'
L9	N 87°41'02" E	74.78'
L10	N 50°54'00" E	74.22'
L11	N 55°25'52" E	83.19'
L12	N 28°56'21" E	25.50'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	1309.05'	N 35°24'26" W	277.95'	278.47'	12°11'18"
C2	606.04'	S 79°57'07" E	98.64'	98.75'	9°20'10"
C3	450.06'	S 89°36'21" E	70.66'	70.73'	9°00'17"
C4	268.52'	S 89°30'46" E	43.02'	43.07'	9°11'25"
C5	313.53'	N 88°30'59" E	71.70'	71.86'	13°07'56"

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8340 CONSUMER CIRCLE | SARASOTA, FL 34240 | 941.907.2478

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TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	11/13/2023	3/3

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketchea\North\North- Commercial to Low Denisty.dwg (Sketch (3)) harryr Nov 14, 2023 - 10:42am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION AS RECORDED IN PLAT BOOK 17, PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 67.75 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG SAID SOUTH BOUNDARY THE FOLLOWING, SOUTH 83°04'38" EAST, A DISTANCE OF 75.12 FEET TO THE SOUTHWEST CORNER OF SAID FOREST HILLS ESTATES, AS RECORDED IN PLAT BOOK 12, PAGE 81, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA; THENCE CONTINUE SOUTH 83°04'38" EAST ALONG THE SOUTH BOUNDARY OF SAID FOREST HILLS ESTATES, A DISTANCE OF 117.13 FEET; THENCE SOUTH 76°30'19" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 450.00 FEET; THENCE NORTH 86°53'24" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 168.10 FEET; THENCE NORTH 29°44'57" EAST ALONG SAID SOUTH BOUNDARY, A DISTANCE OF 250.00 FEET TO A POINT ON THE SOUTHERLY 60 FOOT RIGHT OF WAY FOR POINSETTIA AVENUE AS SHOWN IN FOREST HILLS ESTATES, AS RECORDED IN PLAT BOOK 12, PAGE 81, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA; THENCE SOUTH 60°14'58" EAST, A DISTANCE OF 110.78 FEET TO THE NORTHERLY RIGHT OF WAY FOR STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 1,138.65 FEET; THENCE NORTH 41°30'05" WEST, A DISTANCE OF 403.95 FEET TO A POINT KNOWN AS REFERENCE POINT "A"; THENCE NORTH 31°48'12" EAST, A DISTANCE OF 38.71 FEET; THENCE NORTH 29°07'39" EAST, A DISTANCE OF 46.00 FEET; THENCE NORTH 27°13'50" EAST, A DISTANCE OF 21.80 FEET; THENCE NORTH 24°33'17" EAST, A DISTANCE OF 60.66 FEET; THENCE NORTH 21°28'59" EAST, A DISTANCE OF 38.92 FEET; THENCE NORTH 26°31'04" EAST, A DISTANCE OF 12.96 FEET; THENCE NORTH 22°16'42" EAST, A DISTANCE OF 26.22 FEET; THENCE NORTH 17°54'02" EAST, A DISTANCE OF 19.65 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 183.16 FEET AND A CHORD WHICH BEARS NORTH 07°44'17" EAST AND A DISTANCE OF 71.43 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 71.90 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 359.32 FEET AND A CHORD WHICH BEARS NORTH 08°53'16" WEST A DISTANCE OF 67.40 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 67.49 FEET; THENCE NORTH 14°18'24" WEST, A DISTANCE OF 15.06 FEET; THENCE NORTH 16°40'03" WEST, A DISTANCE OF 19.46 FEET; TO THE POINT OF BEGINNING.

CONTAINING 349,369.58 SQUARE FEET OR 8.02 ACRES, MORE OR LESS.

TOGETHER WITH:

COMMENCING AT THE POINT KNOWN AS REFERENCE POINT "A"; THENCE SOUTH 81°37'23" WEST, A DISTANCE OF 615.59 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 48°29'55" WEST, A DISTANCE OF 121.62 FEET TO A POINT ON THE WEST BOUNDARY OF GOVERNMENT LOT 2; THENCE NORTH 01°34'59" WEST ALONG SAID WEST LINE, A DISTANCE OF 77.15 FEET; THENCE NORTH 76°38'49" EAST, A DISTANCE OF 11.40 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 185.76 FEET AND A CHORD WHICH BEARS NORTH 89°25'07" EAST, A DISTANCE 82.13 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 82.81 FEET; TO THE POINT OF BEGINNING.

CONTAINING 3,953.85 SQUARE FEET OR 0.09 ACRES, MORE OR LESS.

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405, HAVING A GRID BEARING OF S 48°29'40" W.

Harry B. Rogers III 06/21/24

Harry B. Rogers III, PSM Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON ENGINEERING & SURVEYING, LLC
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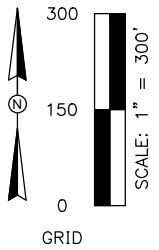
ZONING CHANGE
GENERAL USE to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225.0001	HBR	06/18/2024	1/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch) harryr Jun 18, 2024 - 1:34pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



FOREST HILLS ESTATES
FIRST ADDITION
(PB. 17, PG 59)

SHEET 5

POB
SOUTHEAST CORNER
LOT 4 BLOCK 7
(PB. 17, PG. 59)

SHEET 3

PLANNED
DEVELOPMENT

SHEET 4

PLANNED
DEVELOPMENT

SINGLETON AVE 44 ACRE LAND TRUST
PARCEL ID
22-35-05-00-750

STATE ROAD NO. 405
(200' RIGHT OF WAY)

SOUTH SINGLETON ROAD
(80' RIGHT OF WAY)

INFORMATION NOT COMPLETE
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SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	HBR	06/18/2024	2/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch (2)) harryr Jun 18, 2024 - 1:34pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

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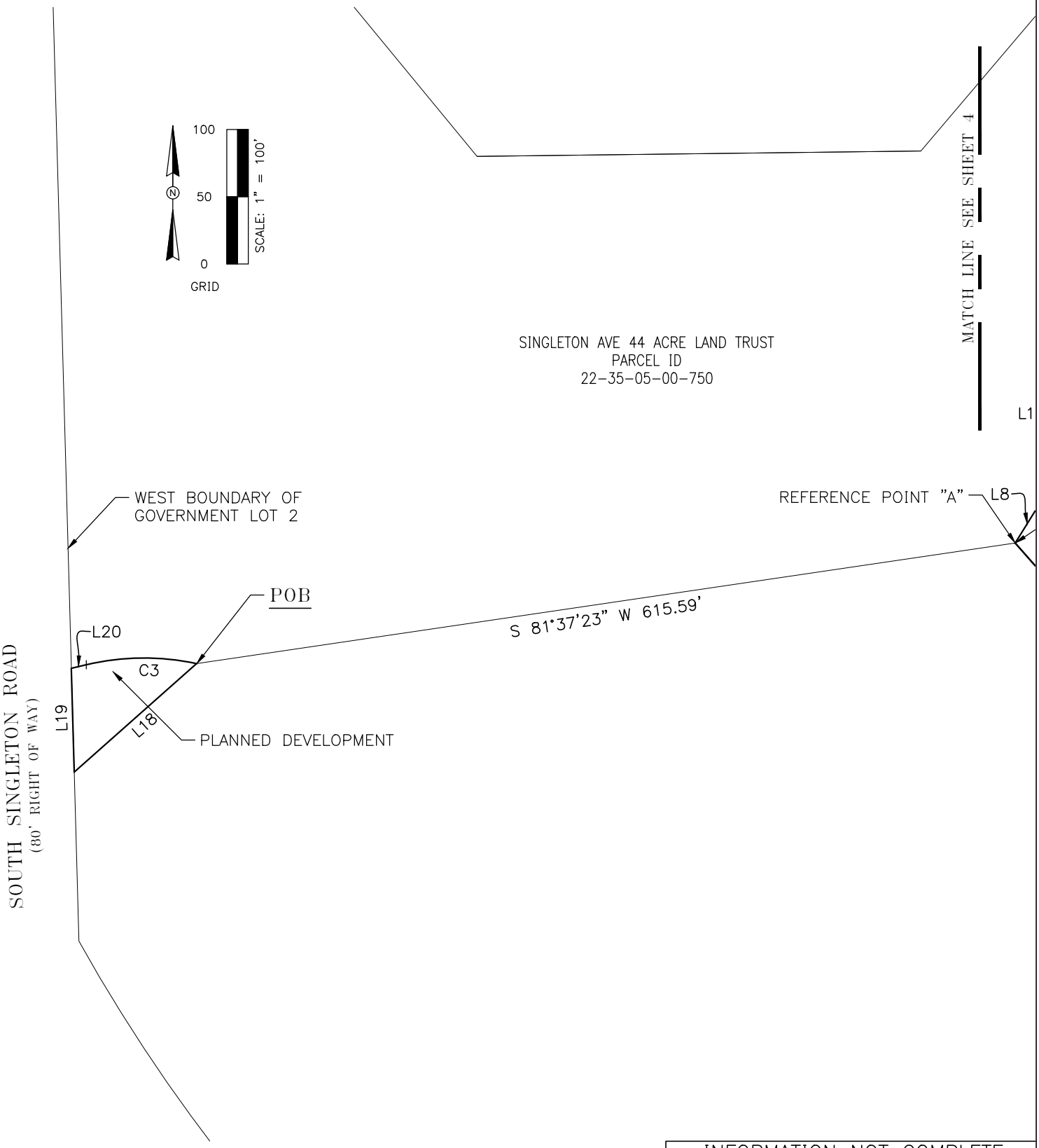

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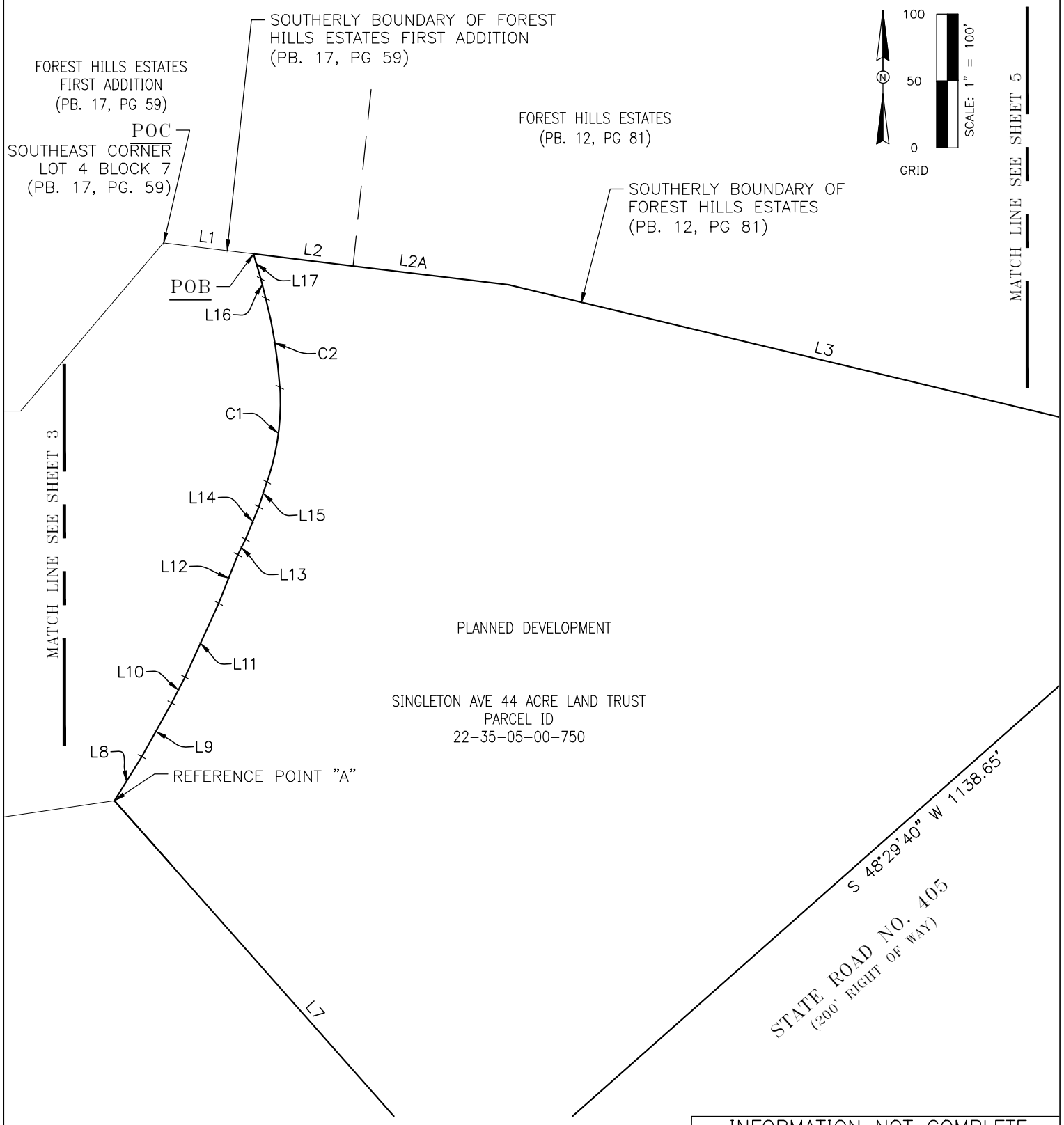
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	HBR	06/18/2024	3/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch (3)) harryr Jun 18, 2024 - 1:37pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

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3409 W LEMON ST | 2400 N. FORSYTH 106 | 8340 CONSUMER CIRCLE
TAMPA, FL 33609 | ORLANDO, FL 32804 | SARASOTA, FL 34243

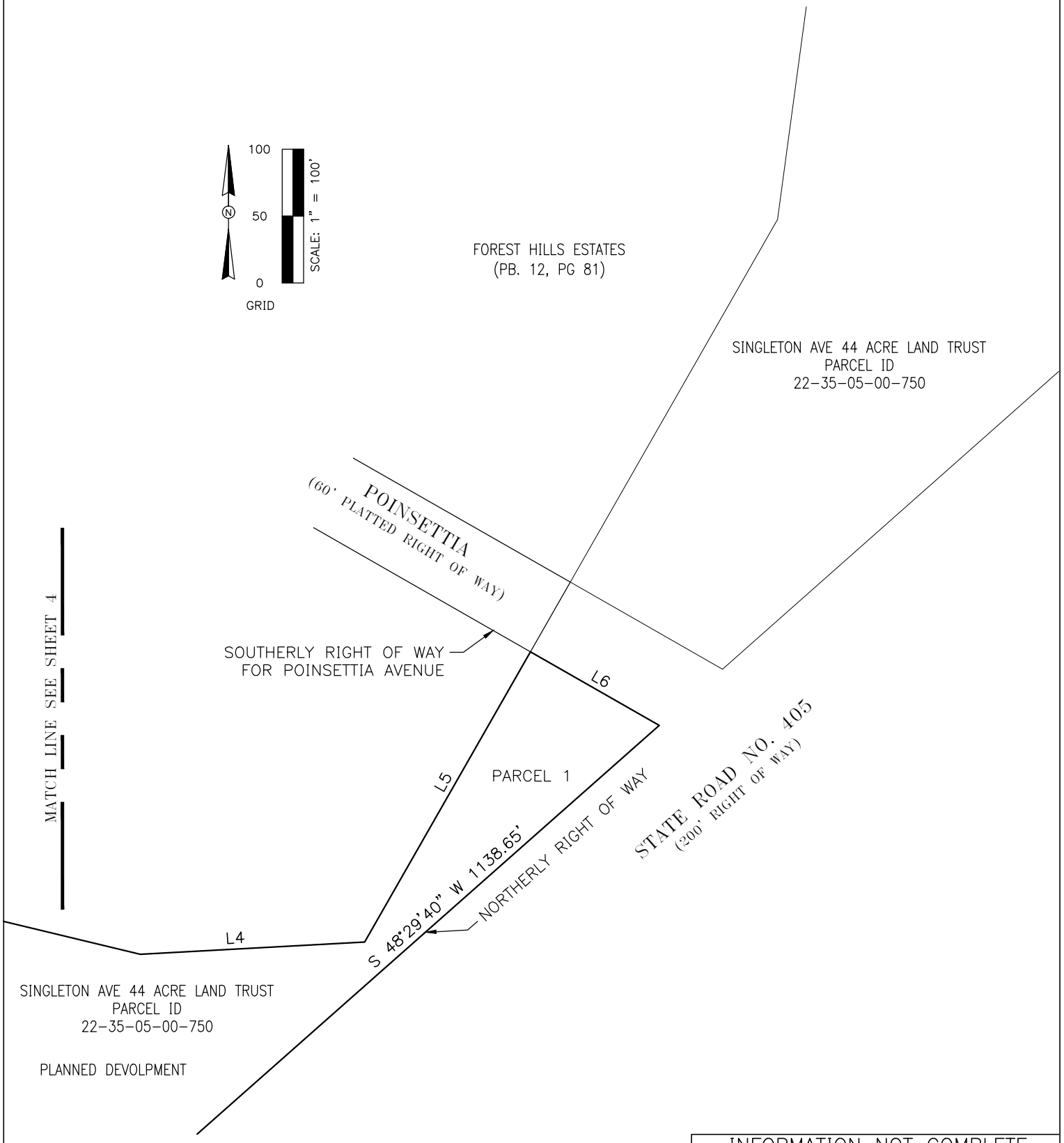
ZONING CHANGE
GENERAL USE to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22-35	04225.0001	HBR	06/18/2024	4/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch (4)) harryr Jun 18, 2024 - 1:35pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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ZONING CHANGE
GENERAL USE to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22-35	04225.0001	HBR	06/18/2024	5/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch (5)) harryr Jun 18, 2024 - 1:36pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 83°04'38" E	67.75'
L2	S 83°04'38" E	75.12'
L3	S 76°30'19" E	450.00'
L4	N 86°53'24" E	168.10'
L5	N 29°44'57" E	250.00'
L6	S 60°14'58" E	110.78'
L7	N 41°30'05" W	403.95'
L8	N 31°48'12" E	38.71'
L9	N 29°07'39" E	46.00'
L10	N 27°13'50" E	21.80'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L11	N 24°33'17" E	60.66'
L12	N 21°28'59" E	38.92'
L13	N 26°31'04" E	12.96'
L14	N 22°16'42" E	26.22'
L15	N 17°54'02" E	19.65'
L16	N 14°18'24" W	15.06'
L17	S 16°40'03" E	19.46'
L18	S 48°29'55" W	121.62'
L19	N 01°34'59" W	77.15'
L20	N 76°38'49" E	11.40'

L2A	S 83°04'38" E	117.13'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	183.16'	N 07°44'17" E	71.43'	71.90'	22°29'23"
C2	359.32'	S 08°53'16" E	67.40'	67.49'	10°45'44"
C3	185.76'	N 89°25'07" E	82.13'	82.81'	25°32'36"

INFORMATION NOT COMPLETE
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ZONING CHANGE
GENERAL USE to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
03-22S-35E	04225.0001	HBR	06/18/2024	6/6

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- GU to PD.dwg (Sketch (6)) harryr Jun 18, 2024 - 1:36pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 00°41'13" EAST, A DISTANCE OF 464.93 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 340.25 FEET TO A POINT ON THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE SOUTH 48°29'40" WEST ALONG SAID RIGHT OF WAY, A DISTANCE OF 747.41 FEET TO THE EASTERLY RIGHT OF WAY OF SOUTH SINGLETON ROAD; THENCE ALONG THE EASTERLY RIGHT OF WAY THE FOLLOWING TWO (2) COURSES: (1) NORTH 41°30'05" WEST, A DISTANCE OF 367.53 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 1,309.05 FEET AND A CHORD WHICH BEARS NORTH 35°24'26" WEST, A DISTANCE 277.95 FEET; (2) ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 278.47 FEET; NORTH 01°34'59" WEST, A DISTANCE OF 125.82 FEET; THENCE NORTH 48°29'55" EAST, A DISTANCE OF 121.62 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 1,446.02 FEET AND A CHORD WHICH BEARS SOUTH 76°47'06" EAST AND A DISTANCE OF 82.22 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 82.24 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS SOUTH 79°57'07" EAST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 98.75 FEET; THENCE SOUTH 85°06'12" EAST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS SOUTH 89°36'21" EAST, A DISTANCE 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 70.73 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS SOUTH 89°30'46" EAST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS NORTH 88°30'59" EAST, AND A DISTANCE OF 71.70 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 71.86 FEET; THENCE NORTH 83°53'02" EAST, A DISTANCE OF 23.93 FEET; THENCE NORTH 83°08'45" EAST, A DISTANCE OF 17.79 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 284.09 FEET AND A CHORD WHICH BEARS NORTH 78°27'46" EAST AND A DISTANCE OF 49.25 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 49.31 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 89.31 FEET AND A CHORD WHICH BEARS NORTH 61°57'25" EAST AND A DISTANCE OF 30.98 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 31.14 FEET; THENCE NORTH 49°18'48" EAST, A DISTANCE OF 5.78 FEET; THENCE NORTH 38°33'50" EAST, A DISTANCE OF 60.15 FEET; THENCE NORTH 34°51'09" EAST, A DISTANCE OF 60.15 FEET; THENCE SOUTH 41°30'05" EAST, A DISTANCE OF 63.70 FEET; TO THE POINT OF BEGINNING.

CONTAINING 415,927.52 SQUARE FEET OR 9.55 ACRES, MORE OR LESS.

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE NORTHERLY RIGHT OF WAY OF STATE ROAD 405, HAVING A GRID BEARING OF S 48°29'40" W.

Harry B. Rogers III _____ 06.21.24

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

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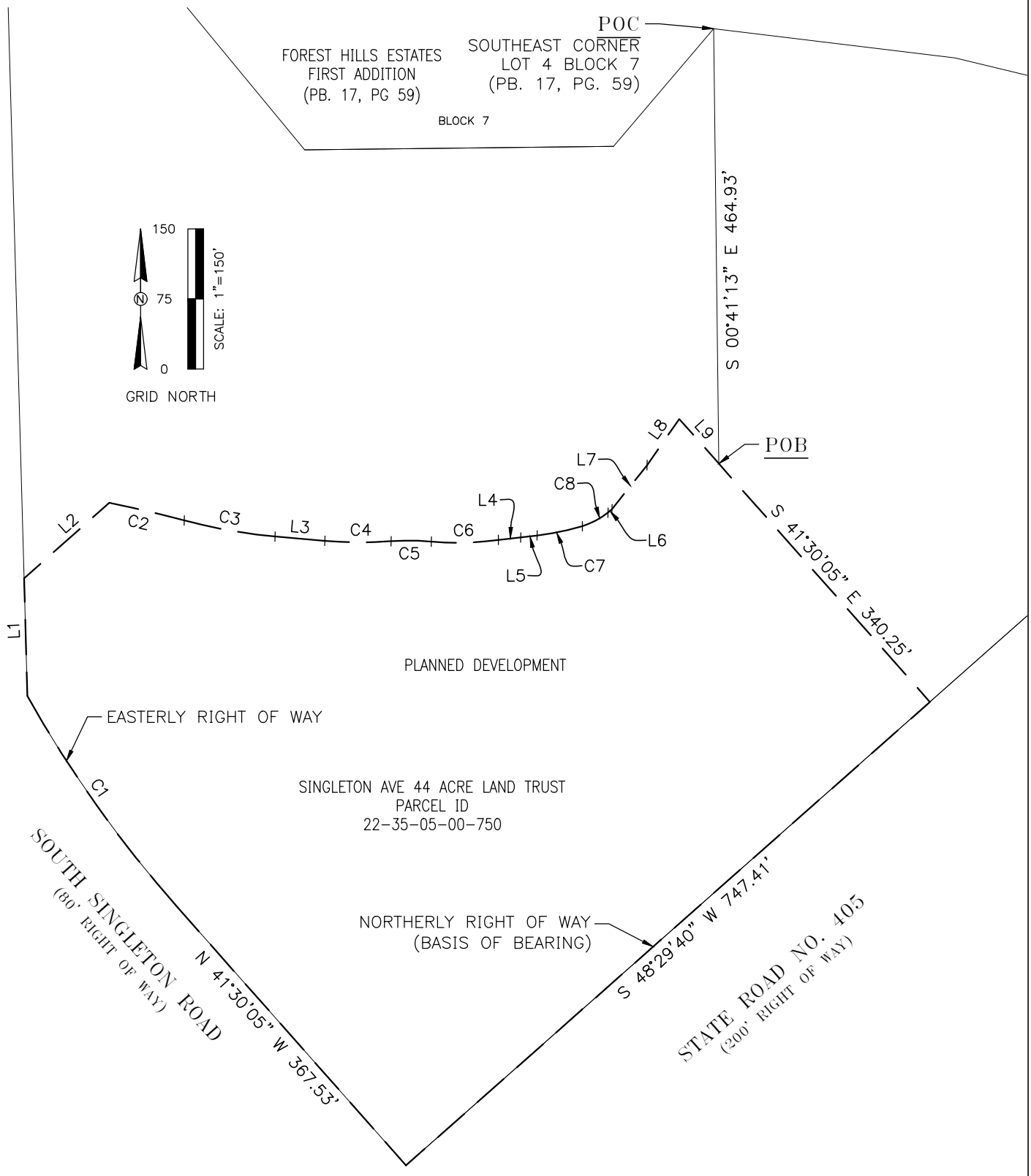
ZONING CHANGE
NEIGHBORHOOD COMMERCIAL to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225.0001	HBR	06/18/2024	1/3

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- NC to PD.dwg (Sketch) harryr Jun 18, 2024 - 1:42pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- NC to PD.dwg (Sketch (2)) harryr Jun 18, 2024 - 1:43pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	N 01°34'59" W	125.82'
L2	N 48°29'55" E	121.62'
L3	S 85°06'12" E	53.39'
L4	N 83°53'02" E	23.93'
L5	N 83°08'45" E	17.79'
L6	N 49°18'48" E	5.78'
L7	N 38°33'50" E	60.15'
L8	N 34°51'09" E	60.15'
L9	S 41°30'05" E	63.70'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	1309.05'	N 35°24'26" W	277.95'	278.47'	12°11'18"
C2	1446.02'	S 76°47'06" E	82.22'	82.24'	3°15'30"
C3	606.04'	S 79°57'07" E	98.64'	98.75'	9°20'10"
C4	450.06'	S 89°36'21" E	70.66'	70.73'	9°00'17"
C5	268.52'	S 89°30'46" E	43.02'	43.07'	9°11'25"
C6	313.53'	N 88°30'59" E	71.70'	71.86'	13°07'56"
C7	284.09'	N 78°27'46" E	49.25'	49.31'	9°56'41"
C8	89.31'	N 61°57'25" E	30.98'	31.14'	19°58'29"

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US
LB #8405 CA #8474

3409 W LEMON ST
TAMPA, FL 33609
(813) 250-3535

2400 N. FORSYTH 106
ORLANDO, FL 32807
(407) 426-8028

8340 CONSUMER CIRCLE
SARASOTA, FL 34240
(941) 907-1778

ZONING CHANGE
NEIGHBORHOOD COMMERCIAL to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05 22S 35E	04225001	HBR	06/18/2024	3/3

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- NC to PD.dwg (Sketch (3)) harryr Jun 18, 2024 - 1:43pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER LOT 4, BLOCK 7, FOREST HILLS ESTATES FIRST ADDITION, AS RECORDED IN PLAT BOOK 17. PAGE 59, OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA,; THENCE SOUTH 40°22'38" WEST ALONG THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION, A DISTANCE OF 165.00 FEET; THENCE SOUTH 24°06'27" WEST, A DISTANCE OF 415.06 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 51°07'35" EAST, A DISTANCE OF 53.32 FEET; THENCE SOUTH 30°35'31" EAST, A DISTANCE OF 9.77 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 313.53 FEET AND A CHORD WHICH BEARS SOUTH 88°30'59" WEST AND A DISTANCE OF 71.70 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 71.86 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 268.52 FEET AND A CHORD WHICH BEARS NORTH 89°30'46" WEST, AND A DISTANCE OF 43.02 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 43.07 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 450.06 FEET AND A CHORD WHICH BEARS NORTH 89°36'21" WEST, AND A DISTANCE OF 70.66 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 70.73 FEET; THENCE NORTH 85°06'12" WEST, A DISTANCE OF 53.39 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 606.04 FEET AND A CHORD WHICH BEARS NORTH 79°57'07" WEST AND A DISTANCE OF 98.64 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 98.75 FEET; THENCE NORTH 09°36'53" EAST, A DISTANCE OF 58.45 FEET; THENCE NORTH 53°18'49" WEST, A DISTANCE OF 21.04 FEET; THENCE NORTH 49°24'13" EAST, A DISTANCE OF 67.46 FEET; THENCE SOUTH 60°15'09" EAST, A DISTANCE OF 31.76 FEET; THENCE SOUTH 80°23'47" EAST, A DISTANCE OF 55.17 FEET; THENCE SOUTH 67°21'48" EAST, A DISTANCE OF 176.73 FEET TO THE POINT OF BEGINNING.

CONTAINING 27,261.21 SQUARE FEET OR 0.63 ACRES, MORE OR LESS.

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE SOUTHERLY BOUNDARY OF FOREST HILLS ESTATES FIRST ADDITION OF THE PUBLIC RECORDS OF BREVARD COUNTY FLORIDA, PLAT BOOK 17. PAGE 59, HAVING A GRID BEARING OF S 40°22'38" W.

Harry B. Rogers III_____ 06/21/24

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 34240

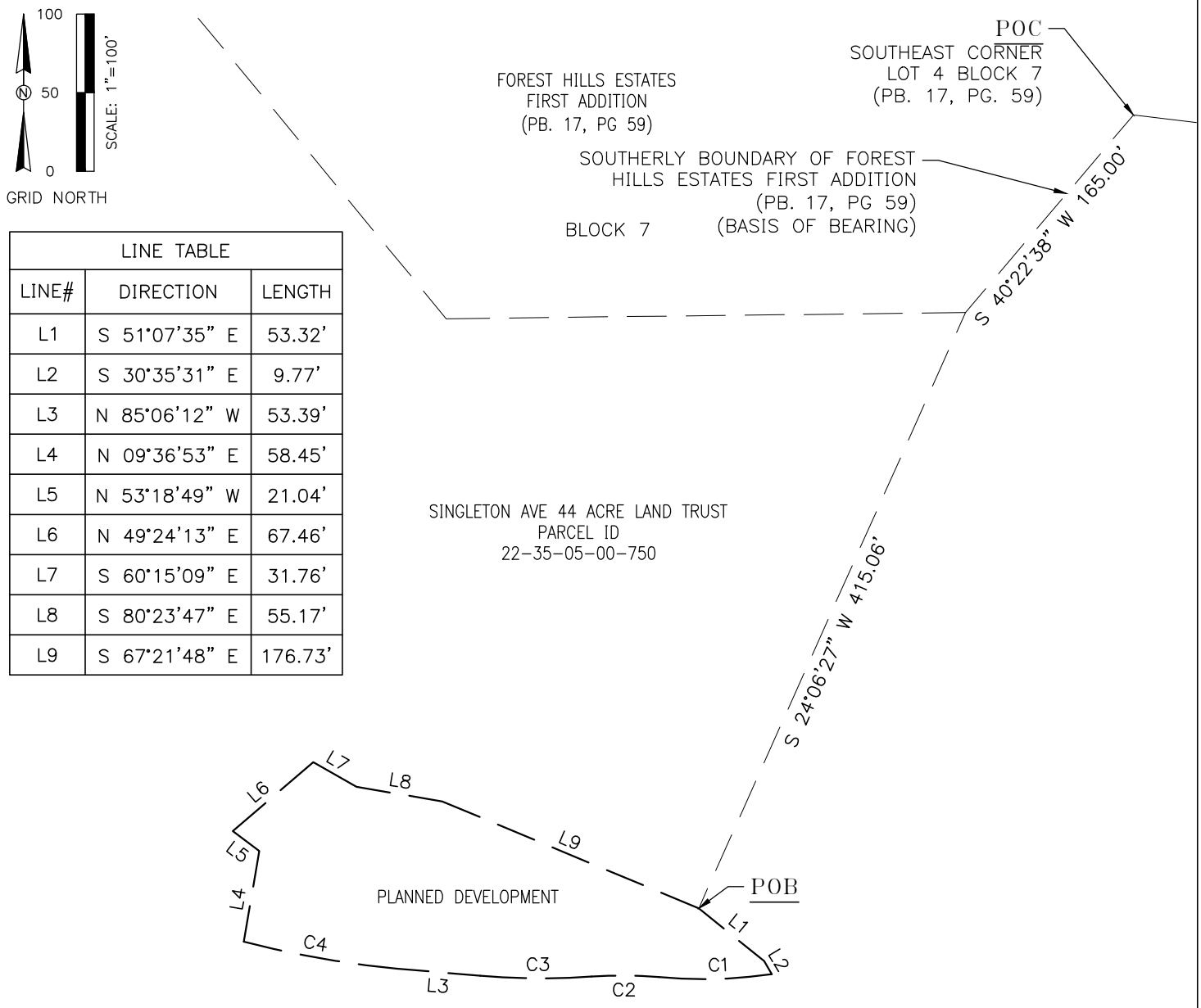
ZONING CHANGE
OPEN SPACE & RECREATION to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0002	HBR	06/17/2024	1/2

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- OR to PD.dwg (Sketch) harryr Jun 17, 2024 - 9:41am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 51°07'35" E	53.32'
L2	S 30°35'31" E	9.77'
L3	N 85°06'12" W	53.39'
L4	N 09°36'53" E	58.45'
L5	N 53°18'49" W	21.04'
L6	N 49°24'13" E	67.46'
L7	S 60°15'09" E	31.76'
L8	S 80°23'47" E	55.17'
L9	S 67°21'48" E	176.73'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	313.53'	S 88°30'59" W	71.70'	71.86'	13°07'56"
C2	268.52'	N 89°30'46" W	43.02'	43.07'	9°11'25"
C3	450.06'	N 89°36'21" W	70.66'	70.73'	9°00'17"
C4	606.04'	N 79°57'07" W	98.64'	98.75'	9°20'10"

INFORMATION NOT COMPLETE
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OPEN SPACE & RECREATION to PLANNED DEVELOPMENT
SR 405 AND SINGLETON - NORTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0002	HBR	06/17/2024	2/2

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\NORTH\North- OR to PD.dwg (Sketch (2)) harryr Jun 17, 2024 - 9:41am

EXISTING LAND USE	PROPOSED LAND USE
CONSERVATION	LOW DENSITY RESIDENTIAL
COMMERCIAL HIGH INTENSITY	LOW DENSITY RESIDENTIAL
COMMERCIAL HIGH INTENSITY	CONSERVATION
LOW DENSITY RESIDENTIAL	CONSERVATION



4N

SR 405 AND SINGLETON

TITUSVILLE

FUTURE LAND USE EXHIBIT - NORTH

11/16/23 - CONTACT: (321) 335-6692

GRAPHIC SCALE IN FEET
0 50 100 200

W N S E

Kimley»Horn

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

EXISTING ZONING

- OPEN SPACE AND RECREATION (OR)
- NEIGHBORHOOD COMMERCIAL (NC)
- GENERAL USE (GU)

PROPOSED ZONING

- PLANNED DEVELOPMENT (PD)
- PLANNED DEVELOPMENT (PD)
- PLANNED DEVELOPMENT (PD)



4N

SR 405 AND SINGLETON

TITUSVILLE

ZONING EXHIBIT - NORTH

06/07/24 - CONTACT: (321) 335-6692

GRAPHIC SCALE IN FEET
0 50 100 200

W N S E

Kimley»Horn

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Aerial 2024

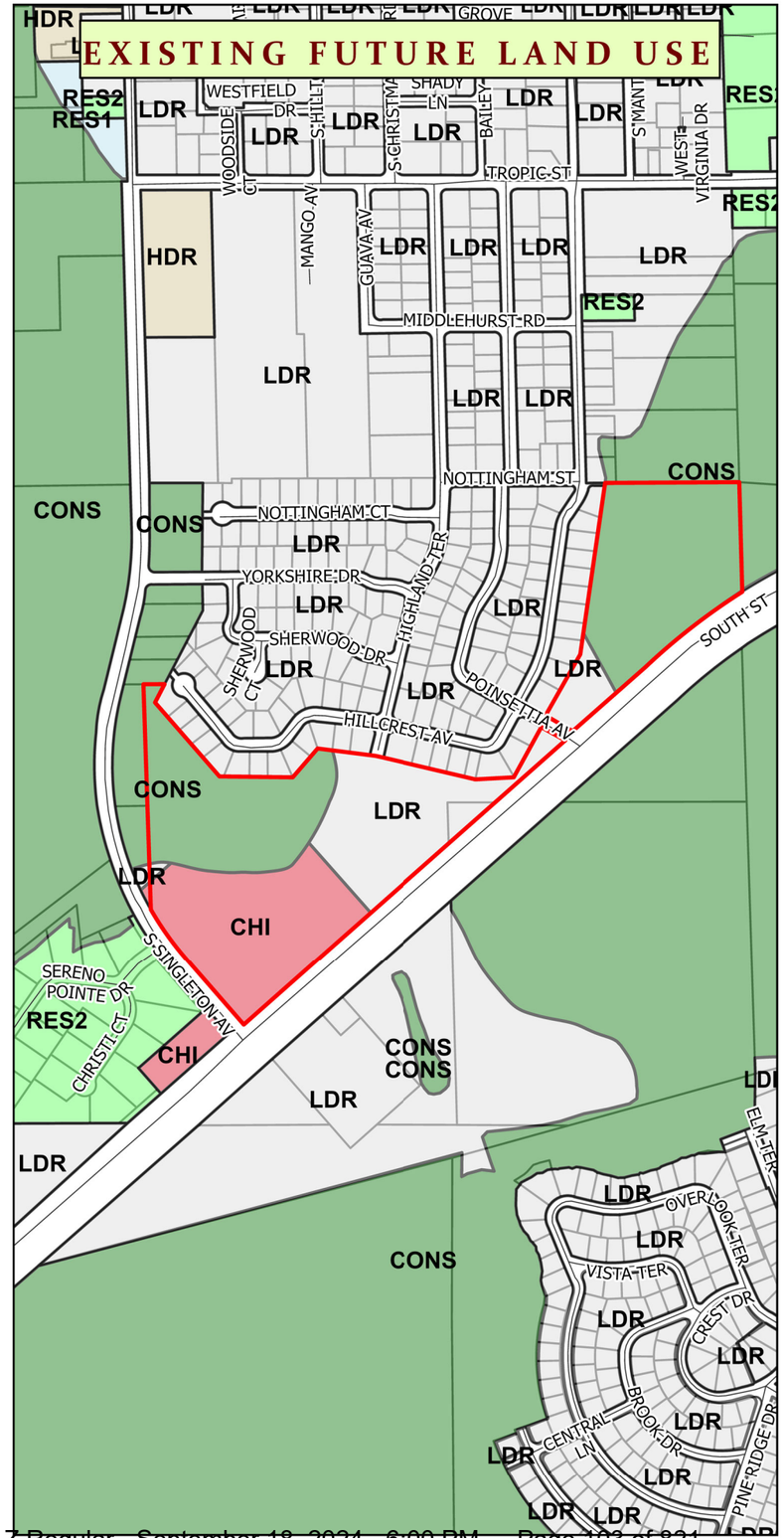
SSA_1-2024

0 470 940 1,880 Feet

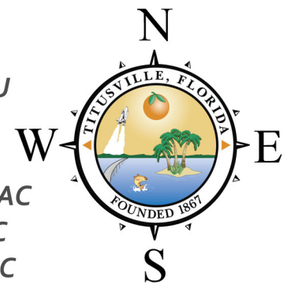
Community Development Department

Aerial photography provided by the Brevard County Property Appraiser's Office

8/21/2024



SSA 1-2024



EXISTING FLU ACREAGE

CONS: 19.65 AC
LDR: 9.76 AC
CHI: 9.60 AC

PROPOSED FLU ACREAGE

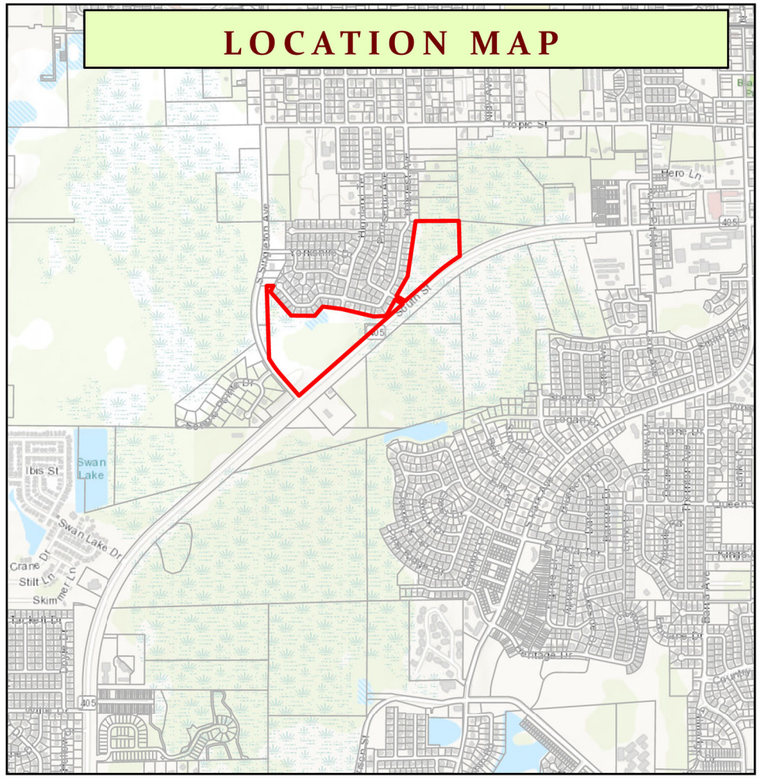
CONS: 24.51 AC
LDR: 14.18

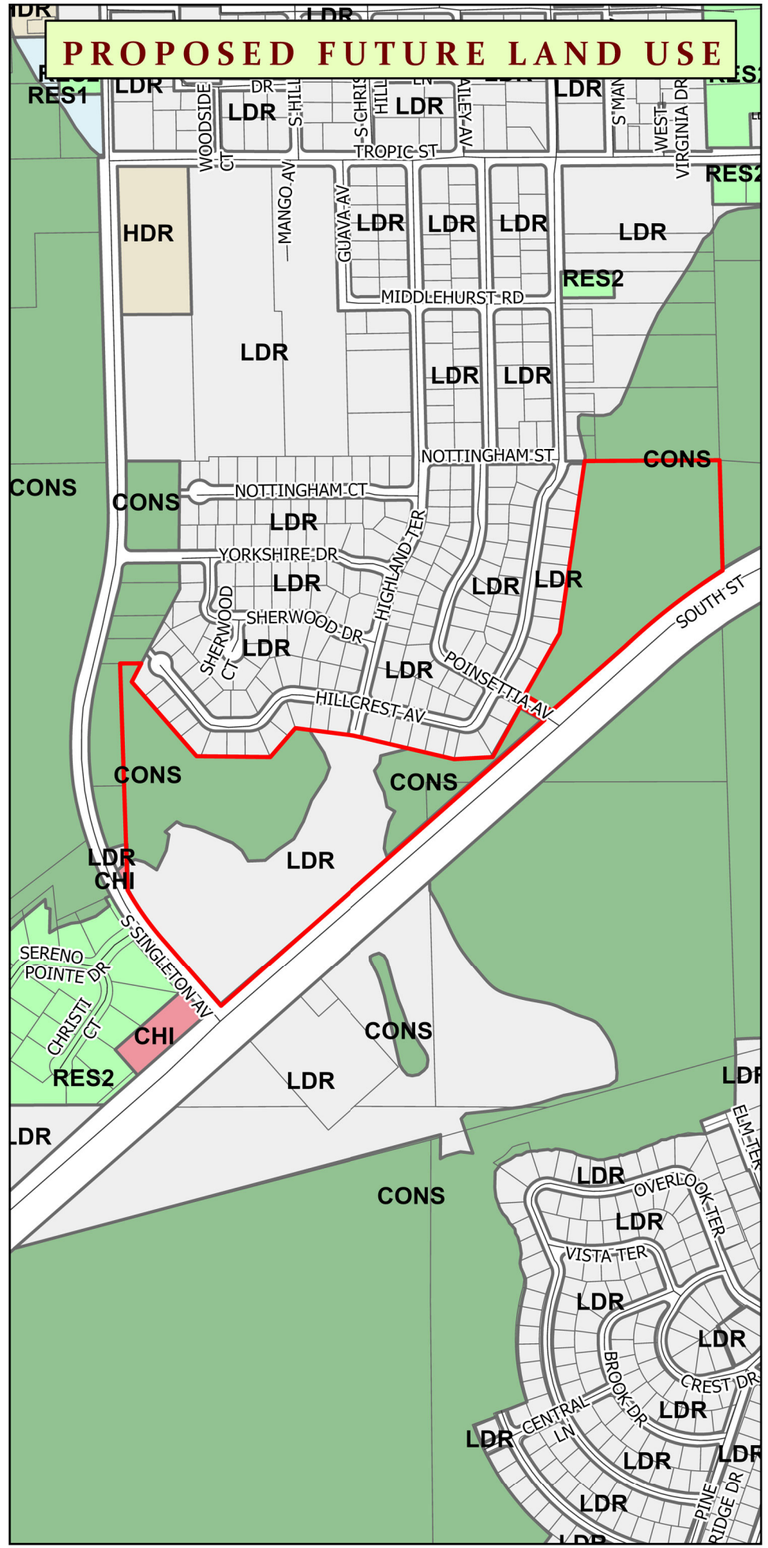
FUTURE LAND USE

- COMMERCIAL HIGH INTENSITY
- CONSERVATION
- HIGH-DENSITY RESIDENTIAL
- LOW-DENSITY RESIDENTIAL
- Residential One
- Residential Two

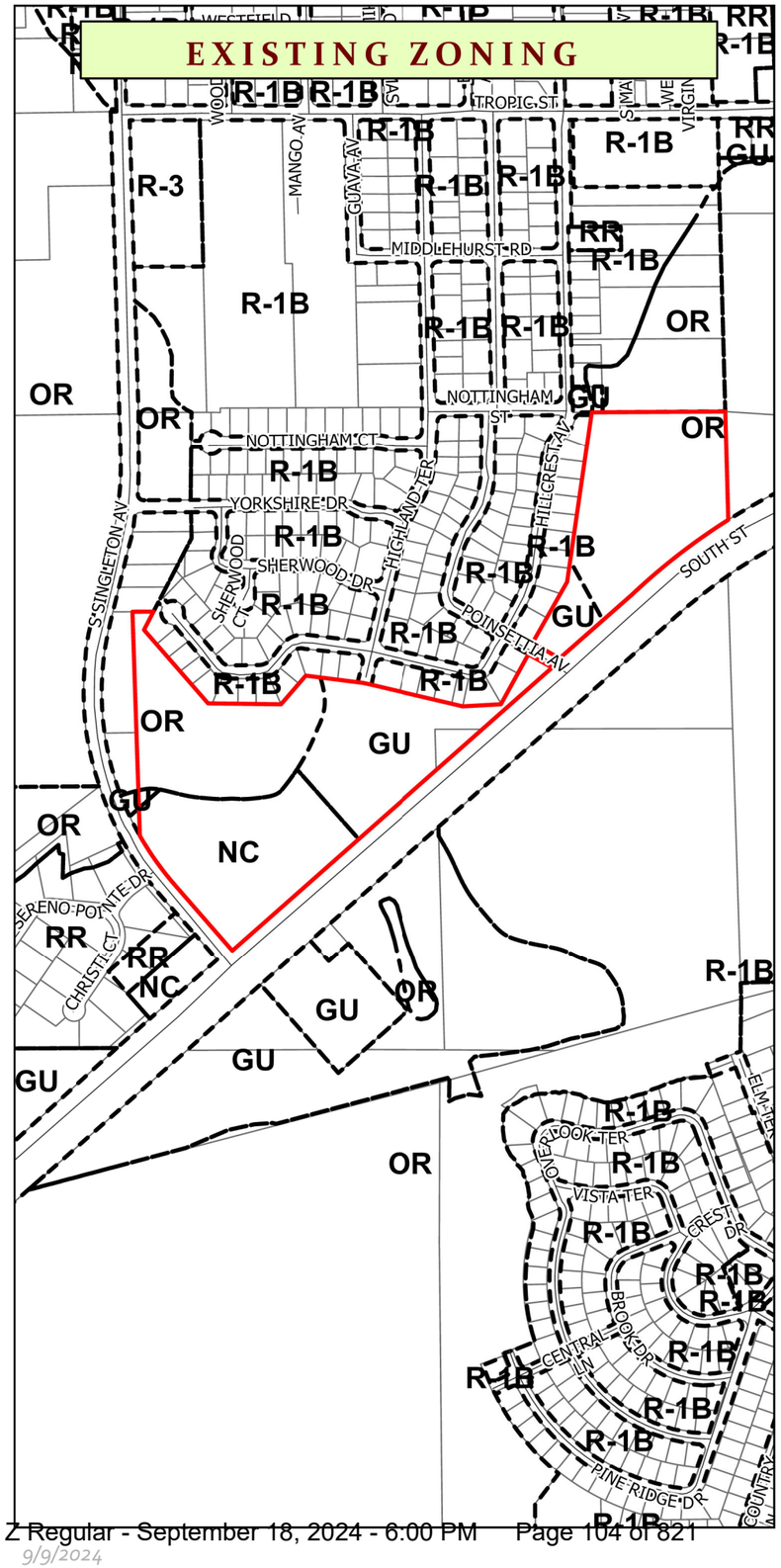
0 420 840 1,680 Feet

LOCATION MAP





EXISTING ZONING



SSA 1-2024

EXISTING ZONING ACREAGE

OR 19.71 AC
GU 9.49 AC
NC 9.55

PROPOSED ZONING ACREAGE

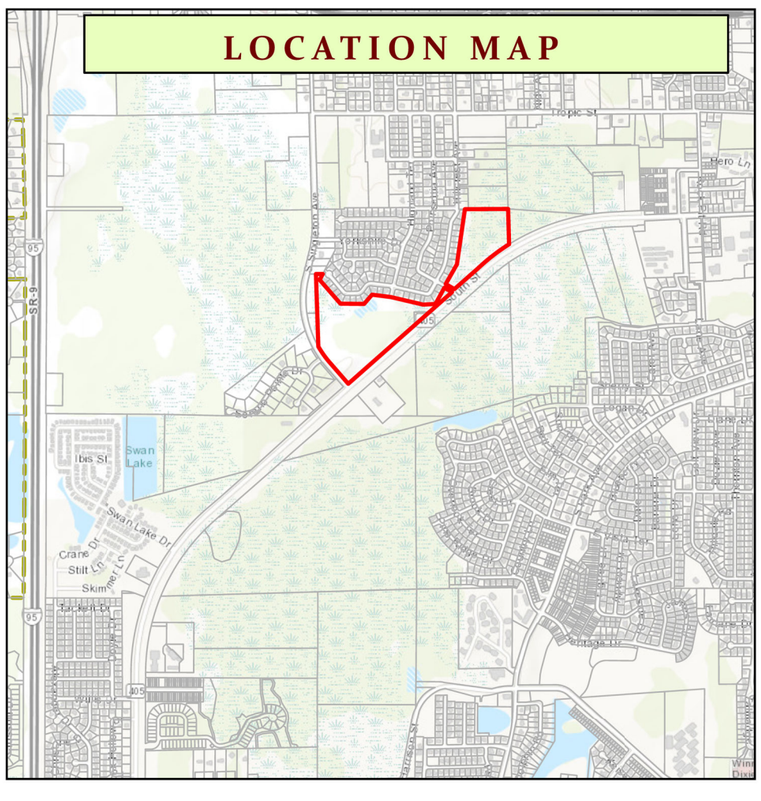
OR 19.08 AC
GU 1.38 AC
PD 18.29 AC

N
W E
S

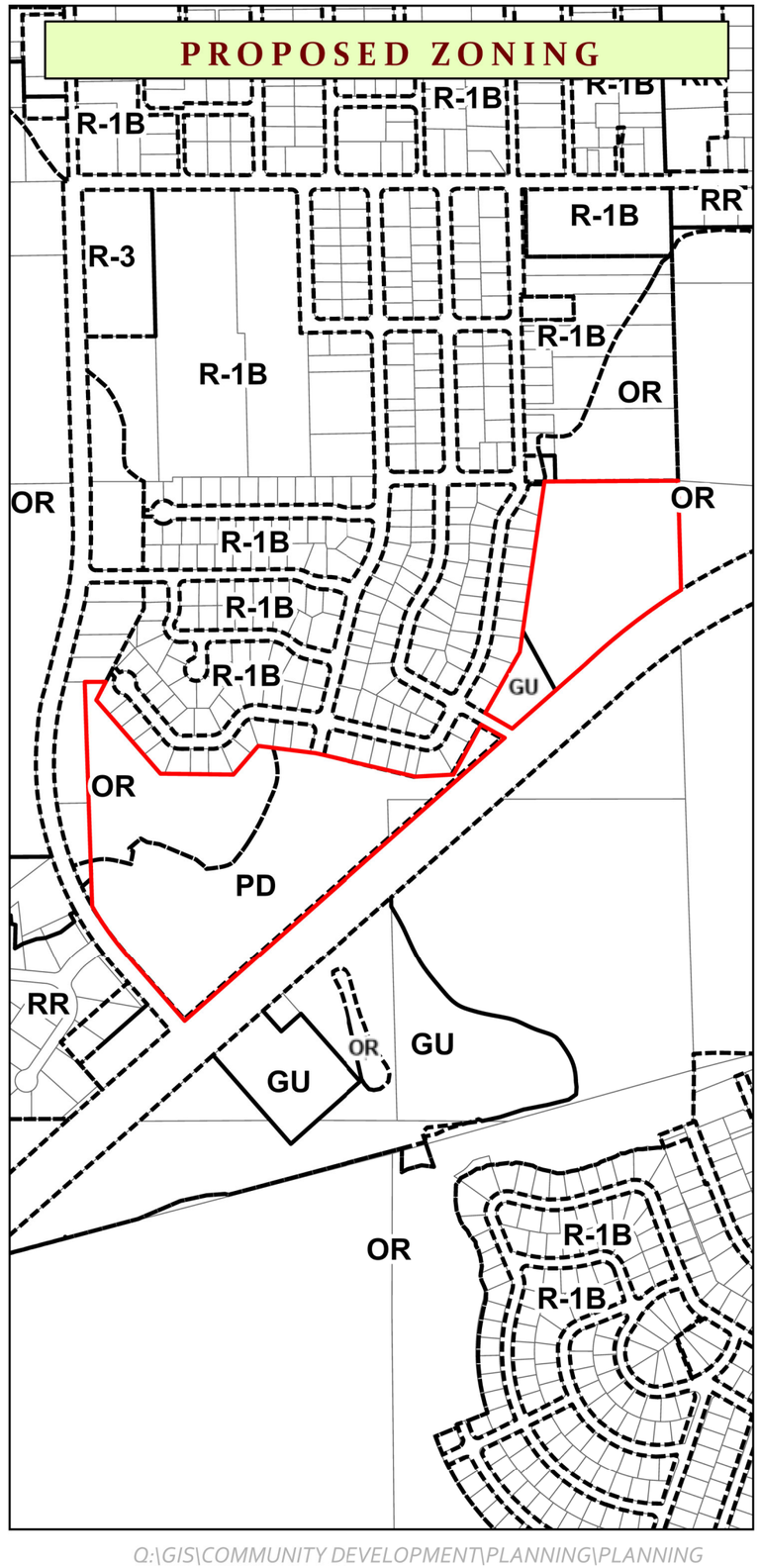
TITUSVILLE, FLORIDA
FOUNDED 1867

0 487.5 975 1,950 Feet

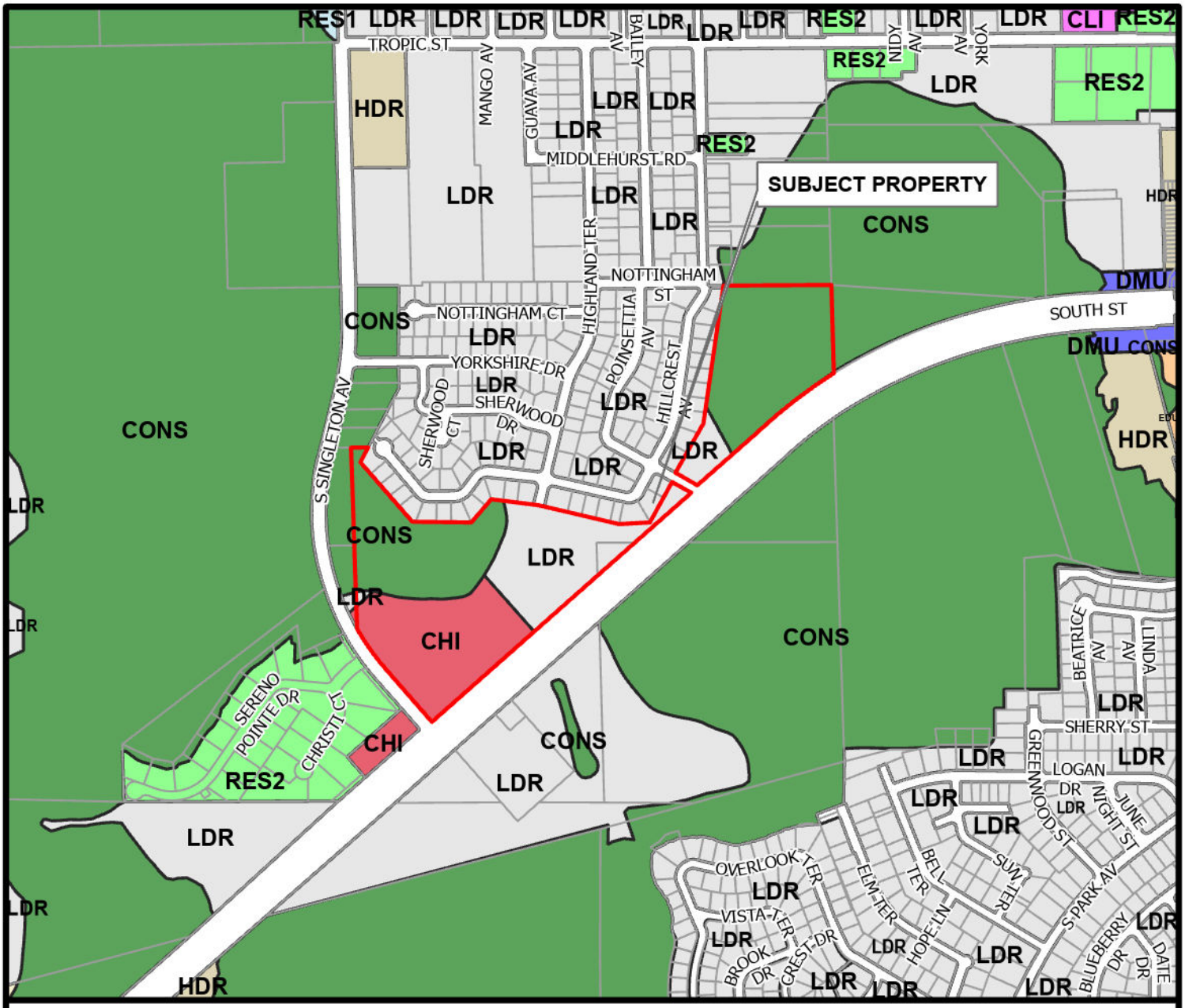
LOCATION MAP



PROPOSED ZONING



Q:\GIS\COMMUNITY DEVELOPMENT\PLANNING\PLANNING



LOCATION OF PROPERTY AND FUTURE LAND USE MAP

CHI	COMMERCIAL HIGH INTENSITY	ED	EDUCATIONAL	PIP	PLANNED INDUSTRIAL PARK	RES-2	RESIDENTIAL-2
CLI	COMMERCIAL LOW INTENSITY	IND	INDUSTRIAL	PSP	PUBLIC/ SEMI-PUBLIC	RMU	REGIONAL MIXED USE
CONS	CONSERVATION	HDR	HIGH-DENSITY RESIDENTIAL	PUD	PLANNED UNIT DEVELOPMENT	SMU	SHORELINE MIXED-USE
DMU	DOWNTOWN MIXED-USE	MDR	MEDIUM-DENSITY RESIDENTIAL	REC	RECREATIONAL	UMU	URBAN MIXED-USE
		LDR	LOW-DENSITY RESIDENTIAL	RES-1	RESIDENTIAL-1	US1	US-1 CORRIDOR

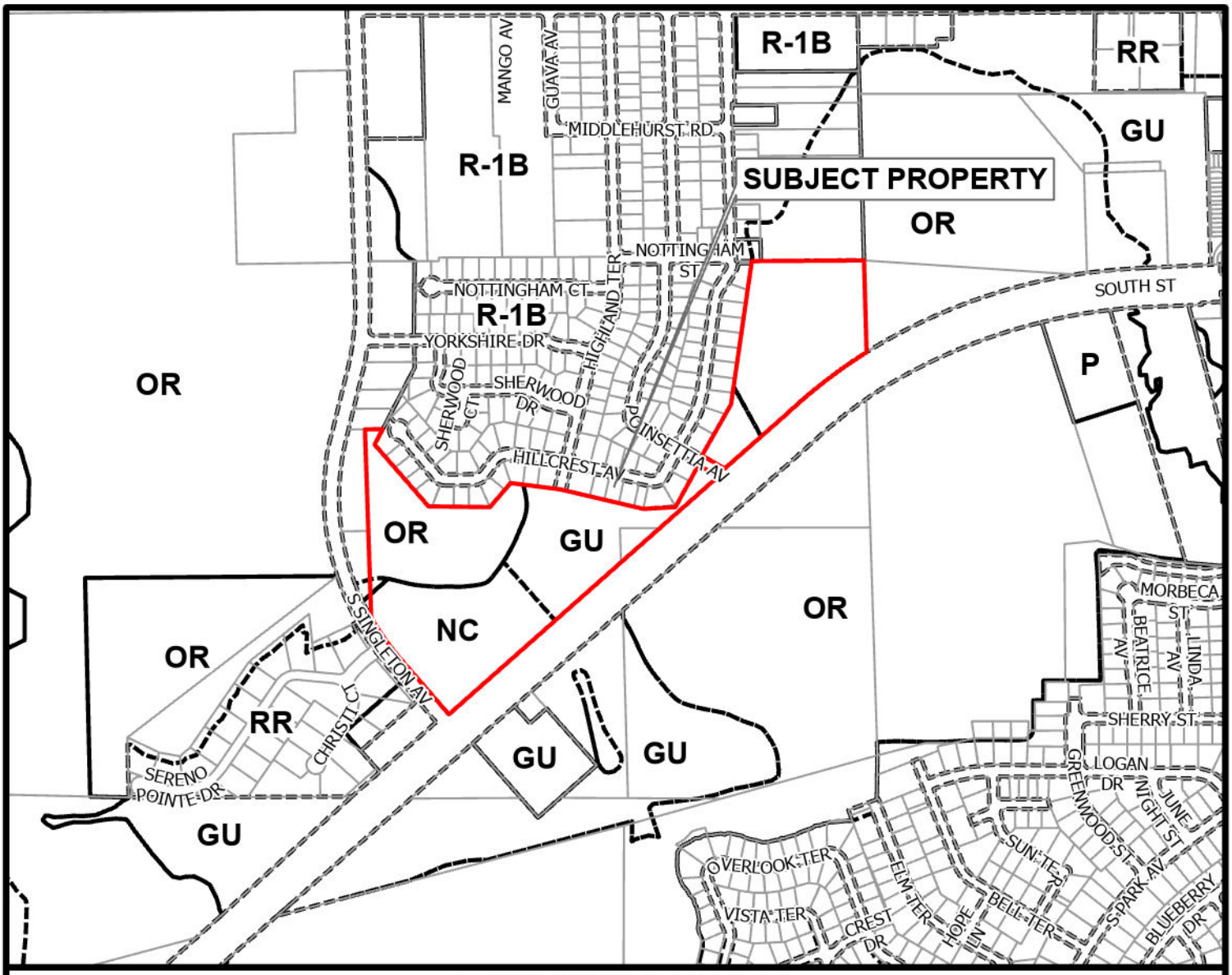
Subject

N W E S

0 500 1,000 2,000 Feet

Community Development Department

8/21/2024



ZONING MAP

RESIDENTIAL DISTRICTS

RE	RESIDENTIAL ESTATES
RR	RURAL RESIDENTIAL
R-1A	SINGLE FAMILY, LOW DENSITY
R-1B	SINGLE FAMILY, MEDIUM DENSITY
R-1C	SINGLE FAMILY, HIGH DENSITY
R-2	MULTIFAMILY, MEDIUM DENSITY
R-3	MULTIFAMILY, HIGH DENSITY
RMH-1	RESIDENTIAL MANUFACTURED HOUSING SUBDIVISION
RMH-2	RESIDENTIAL MANUFACTURED HOUSING PARK

COMMERCIAL DISTRICTS

HM	HOSPITAL MEDICAL
T	TOURIST
NC	NEIGHBORHOOD COMMERCIAL
CC	COMMUNITY COMMERCIAL
RC	REGIONAL COMMERCIAL
OP	OFFICE PROFESSIONAL

INDUSTRIAL DISTRICTS

M-1	LIGHT INDUSTRIAL SERVICES AND WAREHOUSING
M-2	HEAVY INDUSTRIAL
M-3	HIGHWAY INDUSTRIAL INFILL
PID	PLANNED INDUSTRIAL DEVELOPMENT

OVERLAY DISTRICTS

TSA	TITUSVILLE SHORELINE AREA
AIA	AIRPORT IMPACT AREA
WCA	WETLAND AND CONSERVATIONA AREA
ACC	AREA OF CRITICAL CONCERN
HPA	HISTORIC PRESERVATION AREA

SPECIAL DISTRICTS

GU	GENERAL USE
OR	OPEN SPACE AND RECREATION
UMU	URBAN MIXED USE
SMU	SHORELINE MIXED USE
RHP	RESIDENTIAL HISTORIC PRESERVATION
RMU	REGIONAL MIXED USE
PD	PLANNED DEVELOPMENT
P	PUBLIC
UV	URBAN VILLAGE
DMU	DOWNTOWN MIXED USE
IRCN-R	INDIAN RIVER CITY NEIGHBORHOOD RESIDENTIAL
IRCN-C	INDIAN RIVER CITY NEIGHBORHOOD COMMERCIAL

N W E S

TITUSVILLE, FLORIDA FOUNDED 1867

Base Map

City Limits

Zoning

Subject

SSA_1-2024

0 400 800 1,600 Feet

Community Development Department

8/21/2024

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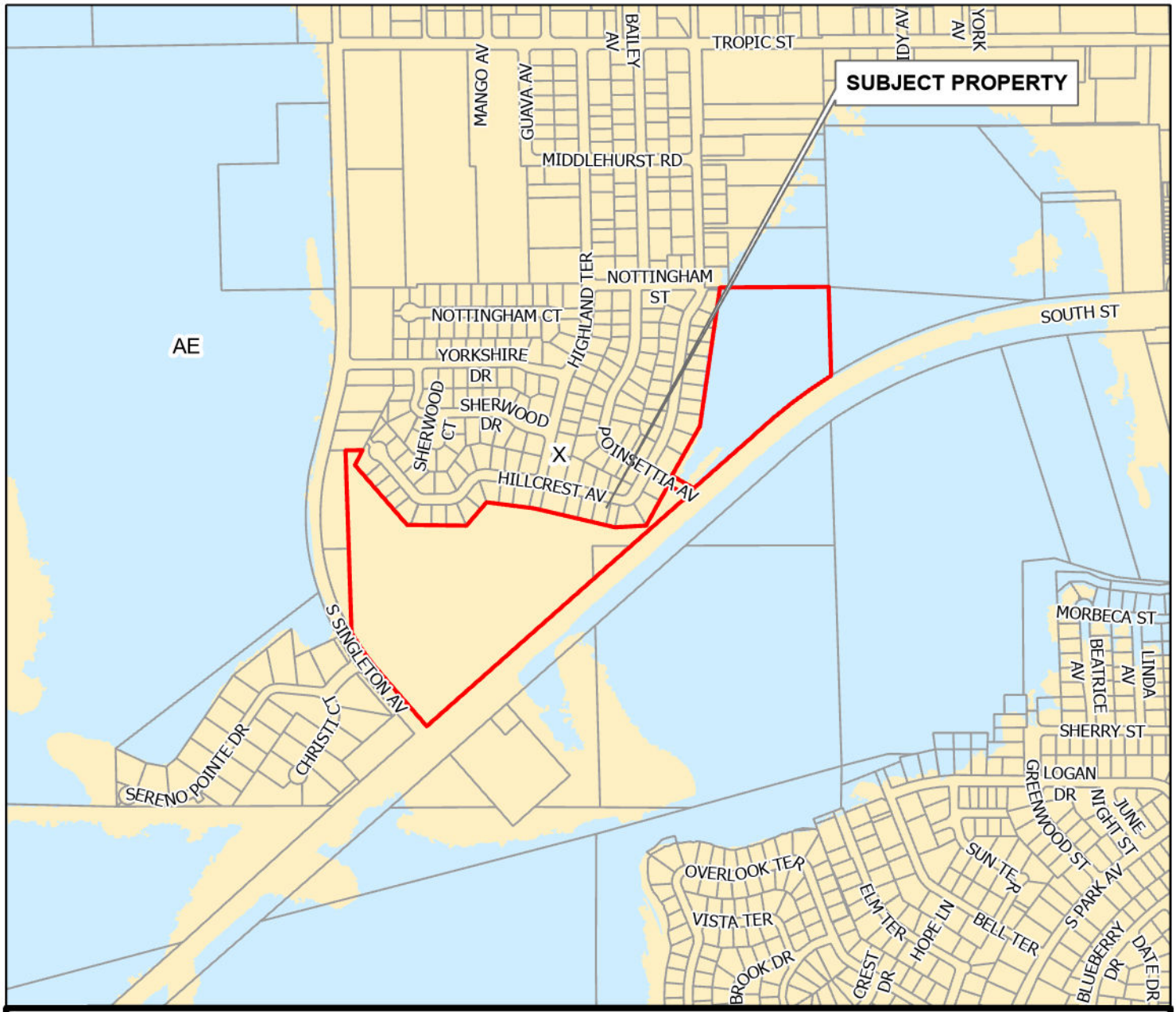

FEMA FLOOD HAZARD AREAS

SSA_1-2024

Special Flood Hazard Area Zones

- A
- A0
- AE
- AO
- VE

Moderate Flood Hazard Area Zone

- X5

Minimal Flood Hazard Zones

- C
- X
- X .2 PCT

Other Flood Zone Areas

- D
- FW

N W E S

0 405 810 1,620 Feet

Community Development Department

Source: FEMA FHA Update, 01/29/2021

8/21/2024

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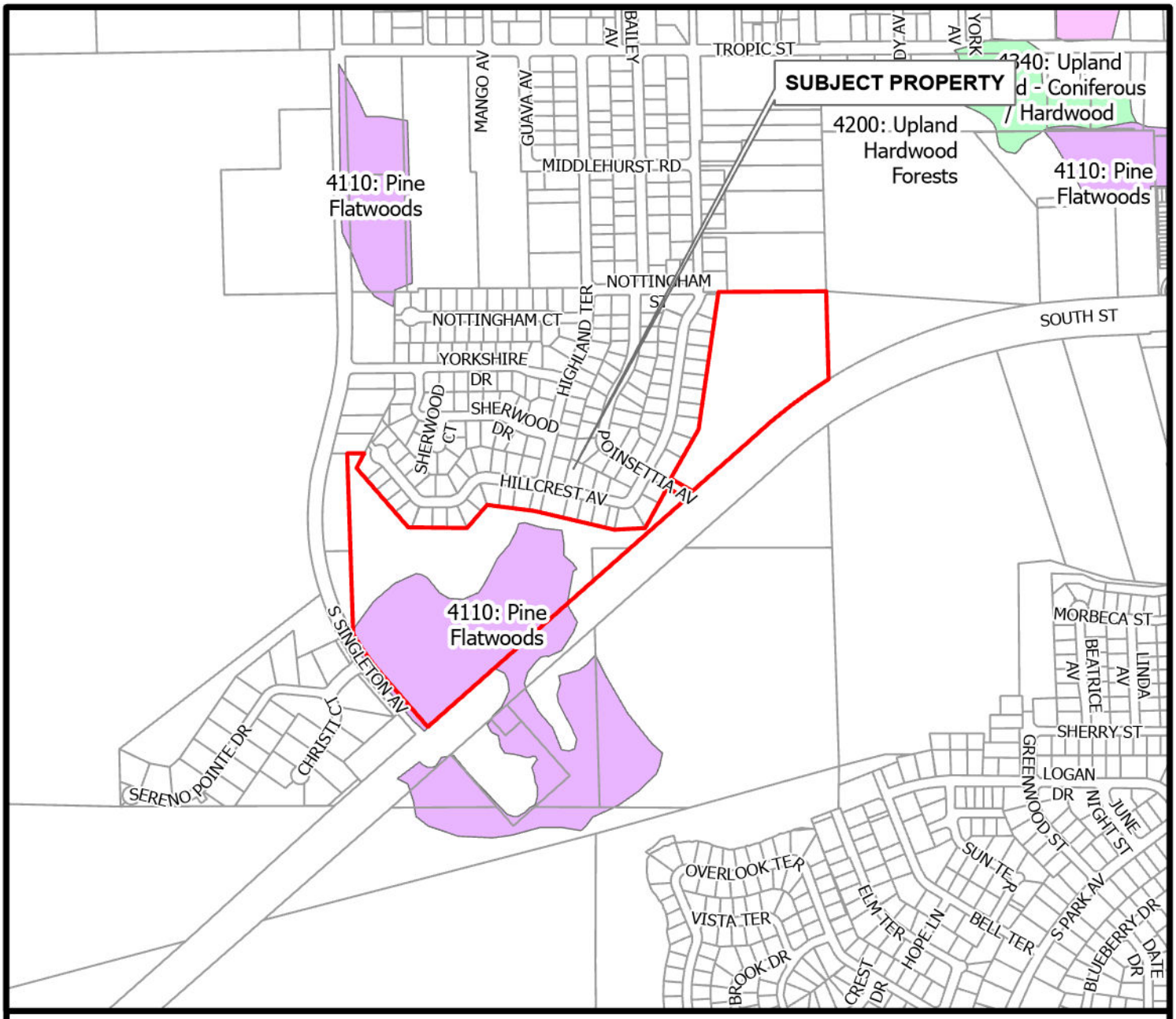


SJRWMD Florida Land Use Cover Classification System
Upland Forests - 4000 Series
SSA_1-2024

LANDCOVER DESCRIPTION

- 4110: Pine Flatwoods
- 4200: Upland Hardwood Forests
- 4340: Upland Mixed - Coniferous / Hardwood

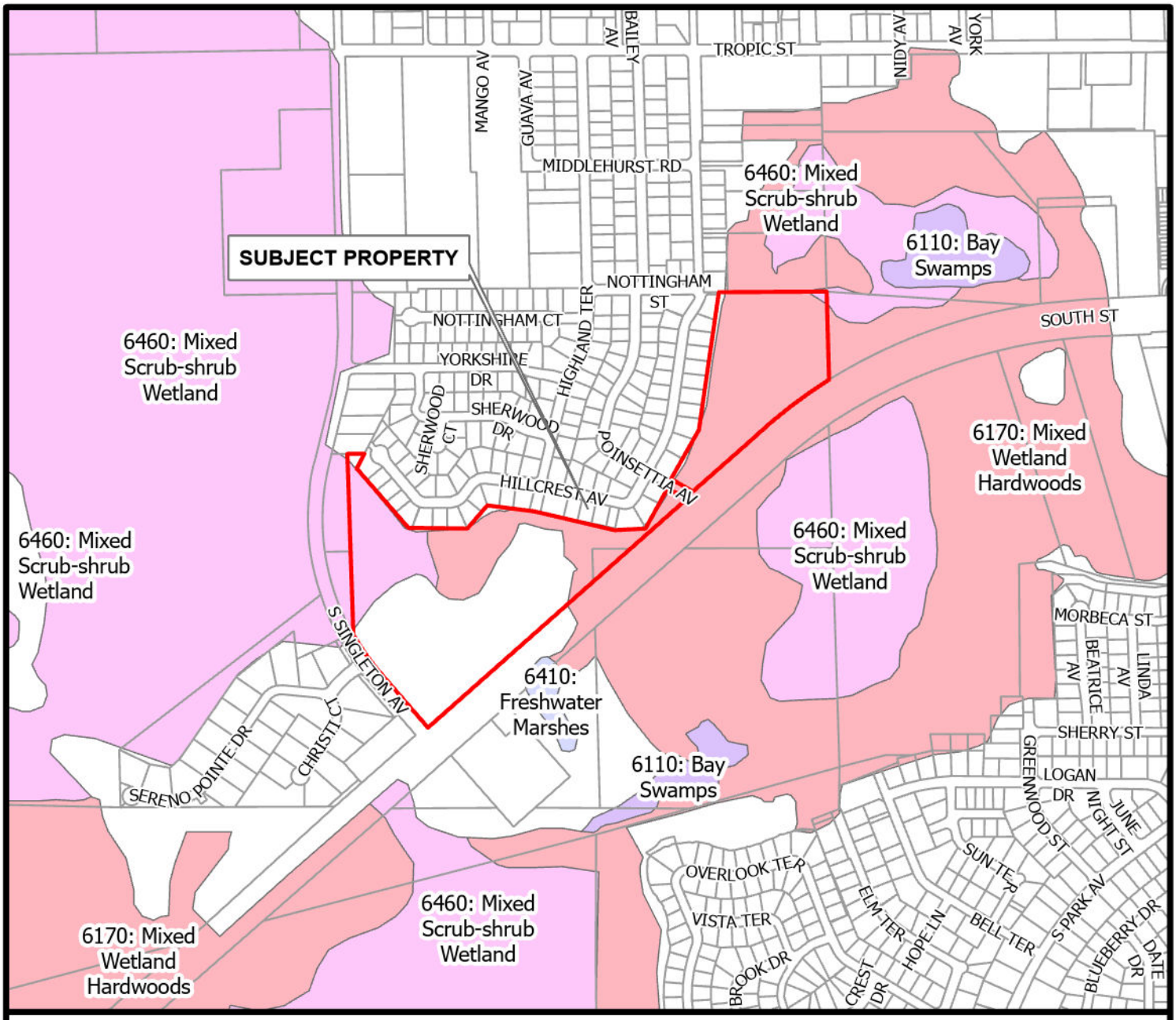
N W E S

Community Development Department

0 410 820 1,640 Feet

8/21/2024

This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District



SJRWMD Florida Land Use Cover Classification System
Wetlands - 6000 Series

SSA_1-2024

SJRWMD Land Cover 6000 Series

6460: Mixed Scrub-shrub Wetland

LANDCOVER DESCRIPTION

- 6110: Bay Swamps
- 6170: Mixed Wetland Hardwoods
- 6410: Freshwater Marshes

Base Map

- Parcels
- Subject

N W E S

Community Development Department

0 410 820 1,640 Feet

8/21/2024

This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District

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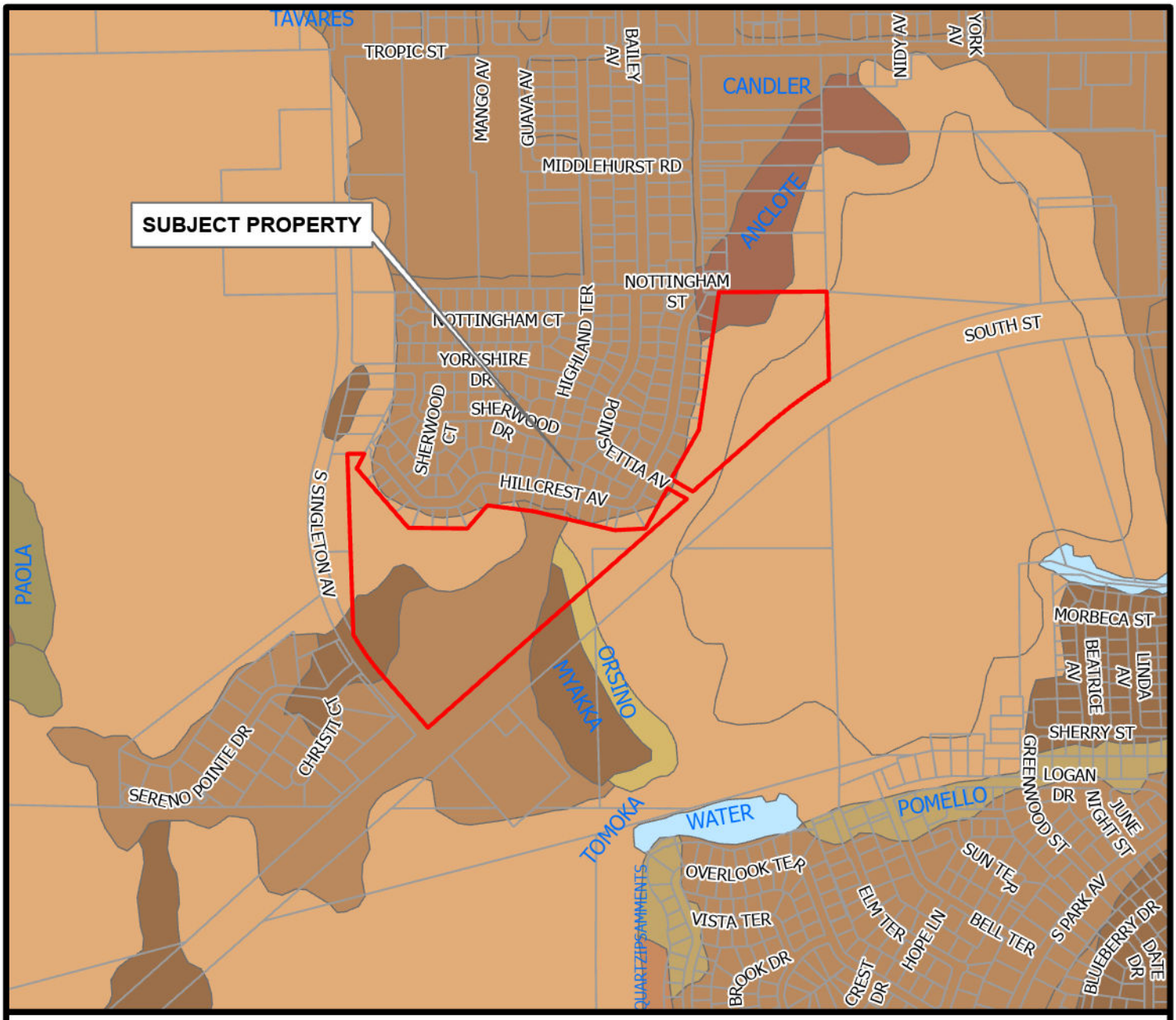


SOILS IN THE VICINITY OF SUBJECT PROPERTY
SSA_1-2024

SoilName

- ANCLOTE
- CANDLER
- MYAKKA
- ORSINO
- PAOLA
- POMELLO
- QUARTZIPSAMMENTS
- TAVARES
- TOMOKA
- WATER

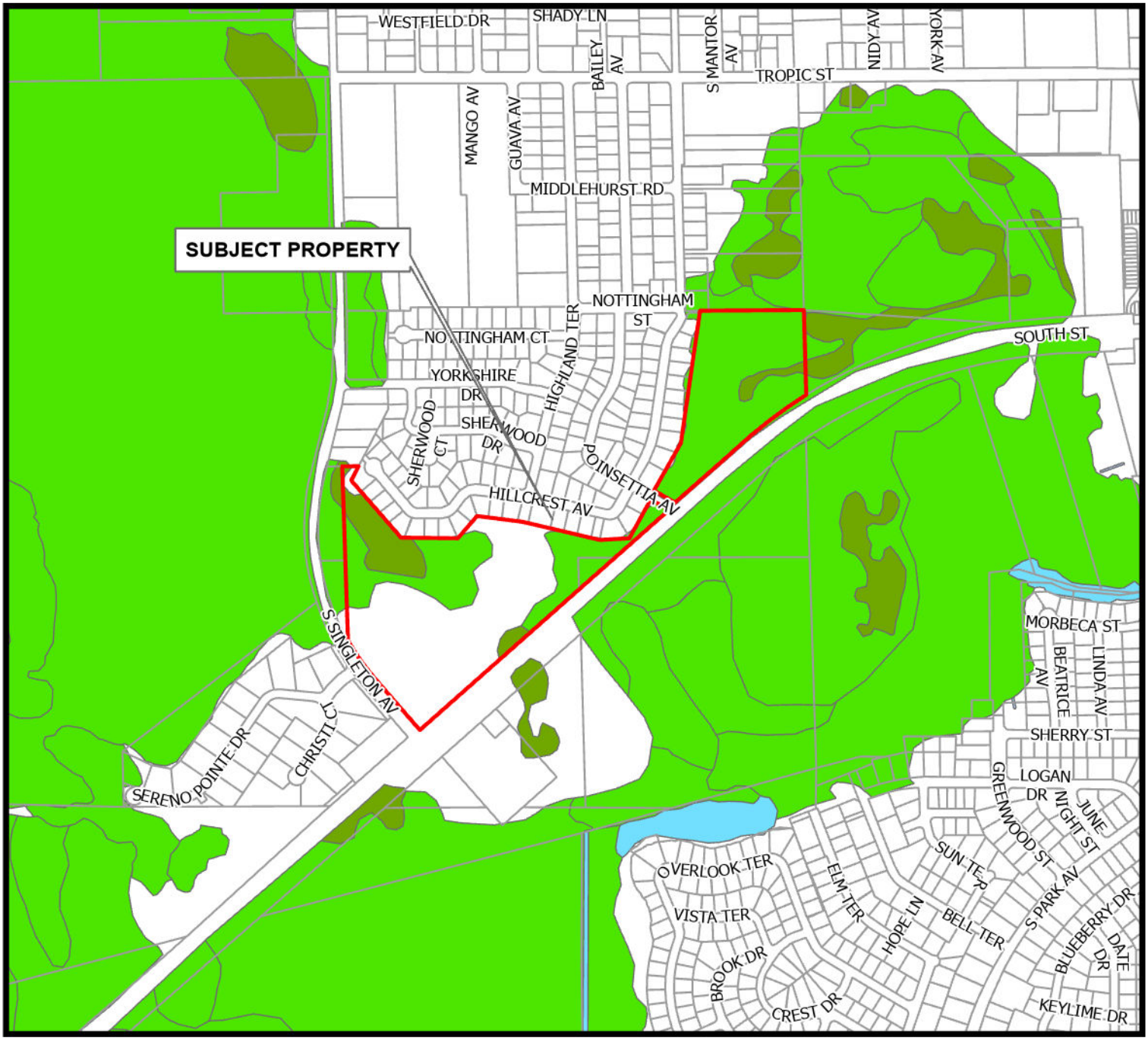
N W E S

0 410 820 1,640 Feet

Community Development Department

Soils data source: The U.S. Department of Agriculture, Natural Resources Conservation Service. (2019)

8/21/2024



WETLANDS IN VICINITY OF PROPERTY

SSA_1-2024

N
W
E
S

WETLAND_TY

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

8/21/2024

Scale:1:10,000

Community Development Department
Source: USFWS NWI (2023)

This data set represents the approximate location and type of wetlands and deepwater habitats. The primary intended use is for regional and watershed data display and analysis, rather than specific project data analysis.

G:\GIS\Community Development\PLANNING\Planning Templates\ArcPro\PlanningMaps\PlanningMaps.aprx

City of Titusville Preliminary Concurrency Assessment

Project Name: SR 405 and Singleton - PD - North - 3028882 & 2202226 **Date:** June 19, 2024

Project Description: Townhomes: 70 units

Residential Density (dwelling units): 70 **Non-Residential Intensity (1,000 s.f.):**

Total Water Capacity*			6.010 MGD
Less Current Demand**			4.491 MGD
Less Future Commitments (FDEP/Water Supply Allocation permits)			0.789 MGD
Remaining Capacity***			0.730 MGD
Estimated Unit Based Water Demand****	70 ERU		0.0210 MGD

*Total Water Capacity permitted flow is 6.01 MGD minus 10% reservation
**12 Month Rolling Average
***Remaining capacity subject to change without notice - This is neither a commitment nor a reservation of this capacity.
****Based on 100 gallons/capita/day or 250 gallons/unit/day in accordance with Section 10 of the City's Concurrency Technical Manual
Water is reserved for this project only upon issuance of a Water Supply Capacity Allocation Permit in accordance with City Code Section 21-50.

Wastewater

Total Wastewater Capacity*			6.750 MGD
Less Current Demand**			5.130 MGD
Less Future Commitments (FDEP Permits)			0.592 MGD
Remaining Capacity***			1.012 MGD
Estimated Unit Based Wastewater Demand****	70 ERU		0.0158 MGD

*Total Wastewater Capacity based on Design capacity of Blue Heron and Osprey Treatment Facilities
**12 Month Rolling Average
***Remaining capacity subject to change without notice - This is neither a commitment nor a reservation of this capacity.
****Based on 75 gallons/capita/day or 225 gallons/unit/day in accordance with Section 10 of the City's Concurrency Technical Manual

Traffic Circulation

Primary Access

Street Name: Singleton Ave **Adopted LOS:** E **Max Capacity:** 14,000 ADT

Current Conditions

Roadway Segment: SR 405 (South St.) - Garden St **2023 E+C Count:** 7,200 ADT
Volume/Count Ratio: 0.51

Future Conditions

Roadway Segment: **Existing + New Count:** 7,724 ADT
Volume/Count Ratio: 0.55

Secondary Access

Street Name: **Adopted LOS:** **Max Capacity:** - ADT

Current Conditions

Roadway Segment: **2022 E+C Count:** - ADT
Volume/Count Ratio:

Future Conditions

Roadway Segment: **Existing + New Count:** ADT
Volume/Count Ratio:

Institute of Transportation Engineers (ITE) Index Number*:	220	Index
Average Vehicle Trips per Unit on a Weekday:	6.74	ADT
Total Average Vehicle Trips for this Development on a Weekday:	524	ADT

* Institute of Transportation Engineers Trip Generation rates or Latest Edition. [Sec. 10.3.1.2 of the Transportation Technical Manual]

Recreation/Open Space

City Population:	49,085	**Required Recreation/Open Space:**	392.68 AC
Adopted LOS (acres/1,000 population):	8	**Current Recreation/Open Space:**	566.60 AC
		Existing Available Recreation/Open Space Capacity:	173.92 AC
Project Population:	**156**	**Required Recreation/Open Space:**	1.25 AC
		Remaining Recreation/Open Space Capacity:	172.67 AC

Staff Comments

Traffic Study is required

Evaluated By: CA, KO, JF **Evaluation Expiration Date:** 12/16/2024

Bio-Tech Consulting Inc.
Environmental and Permitting Services

November 15, 2023

John Gilbert
Standard Investments & Holdings, LLC
609 East Pine Street
Orlando, Florida 32809

Proj: Titusville South Street - Titusville, Brevard County, Florida
Sections 4,5,8 & 9, Township 22 South, Range 35 East
(BTC File #303-28)
Re: Environmental Assessment Report

Dear Mr. Gilbert:

During October of 2022, January, August and September of 2023, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 107-acre Titusville South Street site. This site is located on the north and south sides of South Street (405), east of I-95, within Sections 4, 5, 8 & 9, Township 22 South, Range 35 East, Brevard County, Florida (**Figures 1 and 2**). This environmental assessment includes the following elements:

- **general review of site topography;**
- **review of soil types mapped within the site boundaries;**
- **evaluation of land use types/vegetative communities present;**
- **field review for occurrence of protected flora and fauna; and,**
- **an overview of potential development constraints.**

TOPOGRAPHY

Based upon review of the USGS Topographic Map present in **Figure 3** (Titusville, Florida Quadrangle), elevations on the subject property range from +20 feet above the National Geodetic Vertical Datum of 1929 (NGVD) to +45 feet NGVD. Overall, the property drains to the north, west, and south.

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Jacksonville Office
11235 St Johns Industrial Pkwy N
Suite 2
Jacksonville, FL 32246

Tampa Office
6011 Benjamin Road
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Tampa, FL 33634

Vero Beach Office
4445 North A1A
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Vero Beach, FL 32963

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Land & Aquatic Management
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

info@bio-techconsulting.com www.bio-techconsulting.com

SOILS

According to the Soil Survey of Brevard County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), seven (7) soil type exists within the subject property (**Figure 4**). These soil types include the following:

- **Candler fine sand (#4)**
- **Candler – Urban land complex (5)**
- **Myakka sand, 0 to 2 percent slopes (#36)**
- **Orsino fine sand (#41)**
- **Tomoka muck, undrained (#67)**
- **Tomoka muck, drained (#68)**
- **Anclote sand (#91)**

The following presents a brief description of each of the soil types mapped for the subject property:

Candler fine sand (#4) is a nearly level to gently sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of very dark grayish brown fine sand about 5 inches thick. The seasonal high water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler-Urban land complex (#5) is a nearly level to gently sloping, excessively drained soil found on the uplands that has been altered by earthmoving machines. Many areas have been modified by grading and shaping, and may have thin layers of dark topsoil spread over the surface. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Myakka sand, 0 to 2 percent slopes (#36) is a nearly level, poorly drained sandy soil on broad areas on the flatwoods and on areas between sand ridges and sloughs and ponds. The surface layer of this soil type consists of very dark gray and dark gray sand about 8 inches thick. During most years, the water table for this soil type is within a depth of 10 inches of the surface for 1 to 4 months and between 10 and 40 inches of the surface for more than 6 months. The permeability of this soil type is rapid in the sandy layers to a depth of 22 inches, moderate from about 22 to 46 inches, and rapid from about 46 to 63 inches.

Orsino fine sand (#41) is a nearly level, moderately well drained sandy soil on moderately low ridges and between high ridges and poorly drained areas. In most years the water table is at a depth of 40 to 60 inches for 6 months or more. During prolonged dry periods it is below a depth of 60 inches, and during wet periods it is between 20 and 40 inches for 7 days to 1 month.

Tomoka muck, undrained (#67) is a nearly level, very poorly drained muck soil in broad flat marshes, small depressions, and swamps. Sandy and loamy layers are at a depth of 16 to 40 inches. The water table is within a depth of 10 inches for 9 to 12 months in most years, and water is frequently above the surface. In dry periods it is between 10 and 30 inches.

Tomoka muck, drained (#68) is a nearly level, very poorly drained muck soil in broad flat marshes, small depressions, and swamps. The parent material consists of herbaceous organic matter over sandy and loamy marine deposits. Sandy and loamy layers are at a depth of 1 to 3 feet. Being drained, the depth to water table for this soil type has an average rating of 8 cm in comparison to the undrained soil onsite and is just below the soil surface for most of the year (6-9 months). The water table upper limit is within a depth of 0 to 15 cm for most months during the year. In dry periods it is between 15 and 90 cm (March through May). Organic-matter content is very high. This soil type is not frequently flooded, but frequently ponded from June to October, and meets hydric criteria.

Anclote sand (#91) is a nearly level, very poorly drained sandy soil found in marshy depressions in the flatwoods, in broad areas on the flood plains, and in poorly defined drainageways. In most years, the water table is within 10 inches for 6 months of the year. During the dry season, the water depth ranges between 10 inches and 40 inches.

The Florida Association of Environmental Soil Scientists (FAESS) considers the main components and inclusions of Tomoka muck, undrained (#67) and Tomoka muck, drained (#68) to be hydric. This Association also considers inclusions present within Anclote sand (#91) to be hydric. This information can be found in the Hydric Soils of Florida Handbook, Fourth Edition (March, 2007).

LAND USE TYPES/VEGETATIVE COMMUNITIES

The subject site currently supports four (4) land use types/vegetative communities within its boundaries. These areas were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 1999) (**Figure 5**). The upland land use types/vegetative communities on the site are classified as Temperate Hardwoods (425) and Upland Scrub, Pine and Hardwoods (436). The wetland/surface water land use types/vegetative communities on the site are classified as Wetland Forested Mixed (630) and Freshwater Marsh (641). The following provides a brief description of the on-site land use types/vegetative communities

Uplands:

425 – Temperate Hardwoods

A small portion of uplands in the southern portion of the property are consistent with the Temperate Hardwoods (425) FLUCFCS classification. Vegetation observed within this community type includes live oak (*Quercus virginiana*), southern red cedar (*Juniperus virginiana*), cabbage palm (*Sabal palmetto*), saw palmetto (*Serenoa repens*), blackberry (*Rubus* sp.), American beautyberry (*Callicarpa americana*), winged sumac (*Rhus copallinum*), and muscadine (*Vitis rotundifolia*).

436 – Upland Scrub, Pine and Hardwoods

The majority of the upland areas found on the site are consistent with the Upland Scrub, Pine and Hardwoods (436) FLUCFCS classification. Vegetation observed within this community type includes slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustaris*), sand live oak (*Quercus geminata*), live oak (*Quercus virginiana*), myrtle oak (*Quercus myrtifolia*), saw palmetto (*Serenoa repens*), blackberry (*Rubus* sp.), American beautyberry (*Callicarpa americana*), winged sumac (*Rhus copallinum*), wiregrass (*Aristida stricta*), gopher apple (*Licania michauxii*), muscadine (*Vitis rotundifolia*), gallberry (*Ilex glabra*), reindeer lichen (*Cladonia rangiferina*), blueberry (*Vaccinium darrowii*), tuberous sword fern (*Nephrolepis cordifolia*), air potato (*Dioscorea bulbifera*), and bracken fern (*Pteridium aquilinum*).

Wetlands

630 – Wetland Forested Mixed

The majority of wetlands found on the site are consistent with the Wetland Forested Mixed (630) FLUCFCS classification. Vegetation observed within this community type includes red maple (*Acer rubrum*), loblolly bay (*Gordonia lasianthus*), American elm (*Ulmus americana*), dahoon holly (*Ilex cassine*), water oak (*Quercus nigra*), Chinese tallowtree (*Triadica sebifera*), primrose willow (*Ludwigia peruviana*), elderberry (*Sambucus canadensis*), cattail (*Typha* sp.), spikerush (*Eleocharis* sp.), arrowhead (*Sagittaria lancifolia*), wild taro (*Colocasia esculenta*), marsh fern (*Thelypteris palustaris*), cinnamon fern (*Osmundastrum cinnamomea*), royal fern (*Osmunda regalis*), lizard's tail (*Saururus cernuus*), sawgrass (*Cladium jamaicense*), water hyssop (*Bacopa monnieri*), buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Morella cerifera*), soft rush (*Juncus effusus*), dotted smartweed (*Persicaria punctata*), old world climbing fern (*Lygodium microphyllum*), and poison ivy (*Toxicodendron radicans*).

641 – Freshwater Marsh

The herbaceous wetlands associated with the site are consistet with the Freshwater Marsh (641) FLUCFCS classification. Vegetation observed within this community includes spikerush (*Eleocharis* sp.), arrowhead (*Sagittaria lancifolia*), marsh fern (*Thelypteris palustaris*), cinnamon fern (*Osmundastrum cinnamomea*), royal fern (*Osmunda regalis*), sawgrass (*Cladium jamaicense*), water hyssop (*Bacopa monnieri*), buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Morella cerifera*), soft rush (*Juncus effusus*), and dotted smartweed (*Persicaria punctata*).

PROTECTED SPECIES

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001) and Florida Fish and Wildlife Conservation Commission's (FFWCC) Gopher Tortoise Permitting Guidelines (July 2021); an assessment for "listed" floral and faunal species was conducted at the subject property during October 2022, January, August and September 2023. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings and birdcalls that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered and Threatened Species (December 2022) that have the potential to occur in Brevard County.

Reptiles and Amphibians
American toad (*Anaxyrus americanus*)
black racer (*Coluber constrictor*)
brown anole (*Anolis sagrei*)
cricket frog (*Acris crepitans*)
green anole (*Anolis caroliniana*)
gopher tortoise (*Gopherus polyphemus*)
six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*)

Birds
Bald Eagle (*Haliaeetus leucocephalus*)
Black Vulture (*Coragyps atratus*)
Blue Jay (*Cyanocitta cristata*)
Common Nighthawk (*Chordeiles minor*)
Eastern Phoebe (*Sayornis phoebe*)
Mourning Dove (*Zenaida macroura*)
Northern Mockingbird (*Mimus polyglottos*)
Northern Cardinal (*Cardinalis cardinalis*)
Pileated Woodpecker (*Drycocpus pileatus*)
Red-Tailed Hawk (*Buteo jamaicensis*)

Mammals
eastern gray squirrel (*Sciurus carolinensis*)
marsh rabbit (*Sylvilagus palustris*)
nine-banded armadillo (*Dasypus novemcinctus*)
raccoon (*Procyon lotor*)
Virginia opossum (*Didelphis virginiana*)

Two (2) of the above wildlife species are identified in the FFWCC's Official Lists - Florida's Endangered Species and Threatened Species (December 2022).

The following provides a brief description of additional species as they relate to the development of the project site.

Bald Eagle (*Haliaeetus leucocephalus*)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940).

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (Haliaeetus leucocephalus).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under the USFWS's management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C. A USFWS Bald Eagle "Non-Purposeful Take Permit" is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the on-site evaluation for "listed" species, BTC conducted a review for any FFWCC recorded Bald Eagle nests (2016-2017 nesting season) and Audubon Florida EagleWatch (2020-2021 nesting season) recorded Bald Eagle nests on or within the vicinity of the site. This review revealed one (1) Bald Eagle nest within the [redacted]. According to the FFWCC nest locator, nest ID BE071 was last observed active in 2016. This nest was not monitored by the Audubon Eagle Watch Program last season (2021). BTC did not observe a Bald Eagle nest at the recorded location or within the subject property during the October 2021 study or during a subsequent drone survey during January 2023. An updated ground survey was conducted during August 2023. No further action is required in regards to the Bald Eagle, unless a new nest is constructed.

Gopher Tortoise (*Gopherus polyphemus*)
State Listed as "Threatened" by USFWS

Currently the gopher tortoise (*Gopherus polyphemus*) is classified as a "Category 2 Candidate Species" by the USFWS, and as of September 2007 is now classified as "Threatened" by FFWCC, and as "Threatened" by FCREPA. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with the pine flatwoods, pastures and abandoned orange groves. Several other protected species known to occur in Osceola County have a possibility of occurring in this area, as they are gopher tortoise commensal species. These species include the eastern indigo snake (*Drymarchon corais couperi*), Florida mouse (*Podomys floridanus*) and the gopher frog (*Rana capito*). However, none of these species were observed during the survey conducted.

The site was surveyed for the existence of gopher tortoises through the use of pedestrian transects. The survey observed several potentially occupied burrows in [redacted]. The on-site tortoise population will be re-located to an approved recipeient site through permitting with the FFWCC.

WETLANDS

The extent of all wetlands and surface waters on the subject site were delineated by in accordance with the Chapter 62-340, F.A.C and have been verified by the Florida Department of Environmental Protection. The on-site wetlands are located within the St. Johns River (Canaveral Marshes to Wekiva).

St. Johns River Water Management District

An Environmental Resource Permit (ERP) will be required through the St. Johns River Water Management District (SJRWMD) for all wetland and/or other surface water impacts (both direct and secondary) in association with the proposed development. Impacts to the project's wetland and/or other surface water communities would be permittable by the SJRWMD as long as the issues of elimination and reduction of wetland impacts have been addressed and as long as the mitigation offered is sufficient to offset the functional losses incurred via the proposed impacts.

Florida Department of Environmental Protection

In December of 2020, the FDEP "assumed" federal permitting authority for all wetland and surface water resources under Section 404 of the Clean Water Act (CWA). For those project's whose wetland and surface water resources are associated with tidal waters or traditional navigable waters, under Section 10 of the Rivers and Harbors Act, the US Army Corps of Engineers (USACE) will "retain" federal permitting authority. These "retained" resources also include wetlands and/or other surface waters that fall within the 300' guide line established from the ordinary high water mark or mean high tide line of the retained waters

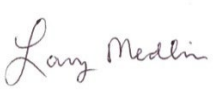
With respect to the subject property, it is anticipated that the on-site wetlands and/or other surface waters would fall under the regulatory authority of the FDEP, as these resources are not Section 10 waters. Currently, FDEP considers all wetland and/or surface water resources to be federally jurisdictional unless the applicant provides documentation proving otherwise.

A State 404 Permit Individual application (DEP Application No: 0434155-001-SFI) is currently under review by the FDEP. Informal consultation with the FWC and USFWS is complete.

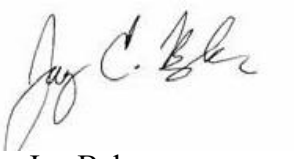
The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

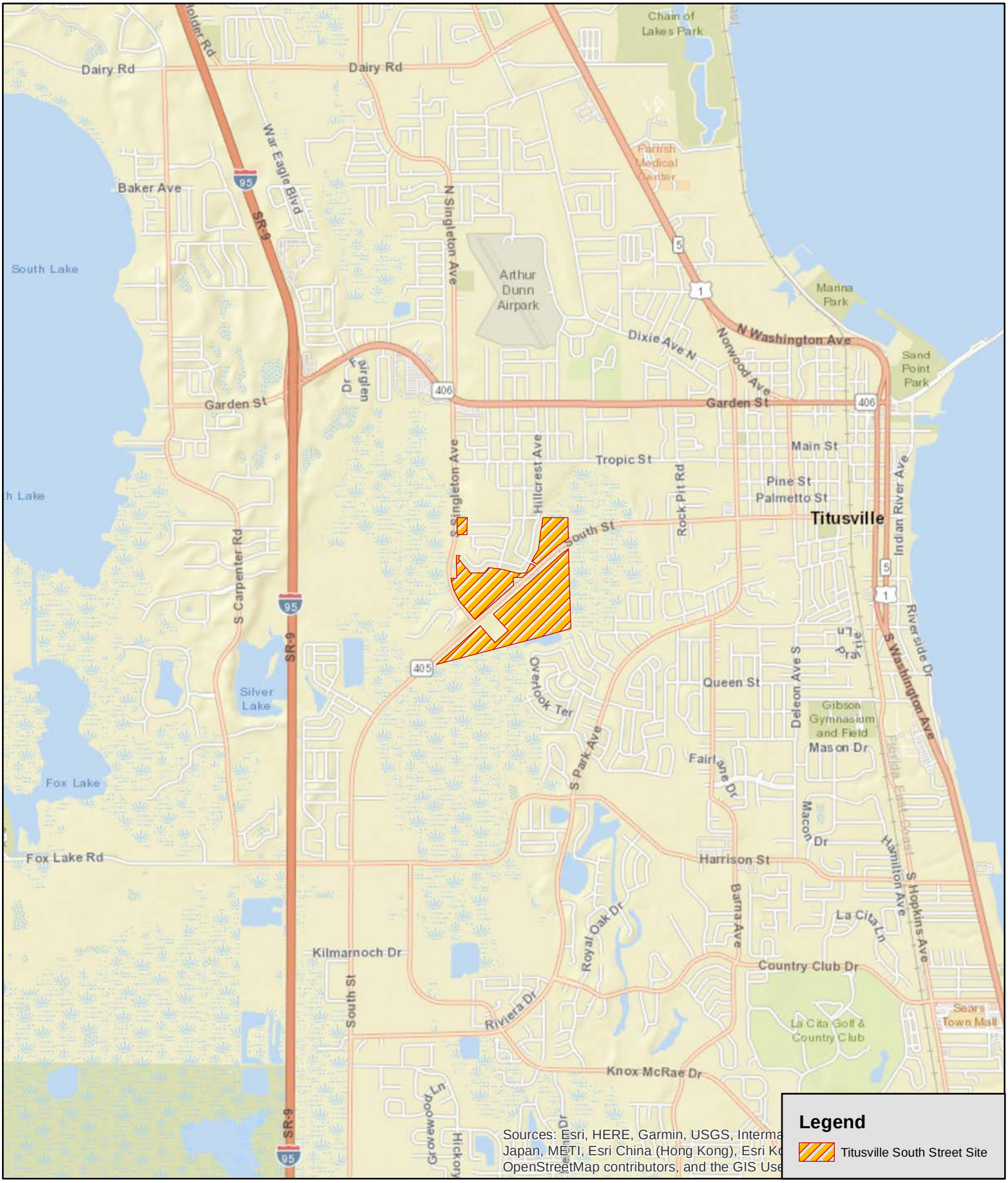


Larry Medlin
Project Manager



Jay Baker
Director

Attachments



Sources: Esri, HERE, Garmin, USGS, Interma
Japan, METI, Esri China (Hong Kong), Esri K
OpenStreetMap contributors, and the GIS Use

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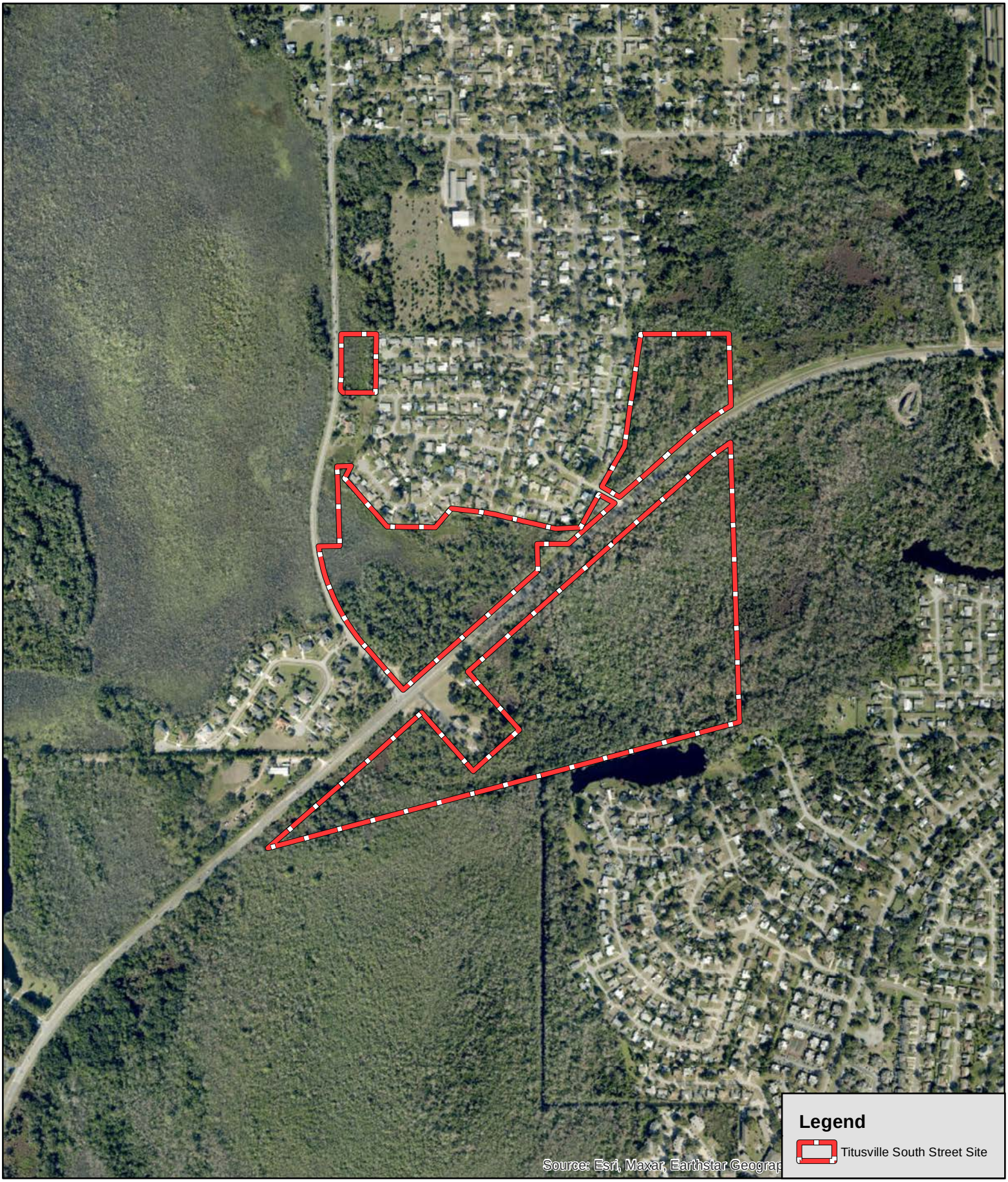
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Titusville South Street
Brevard County, Florida
Figure 1
Location Map

N

0.5
Miles

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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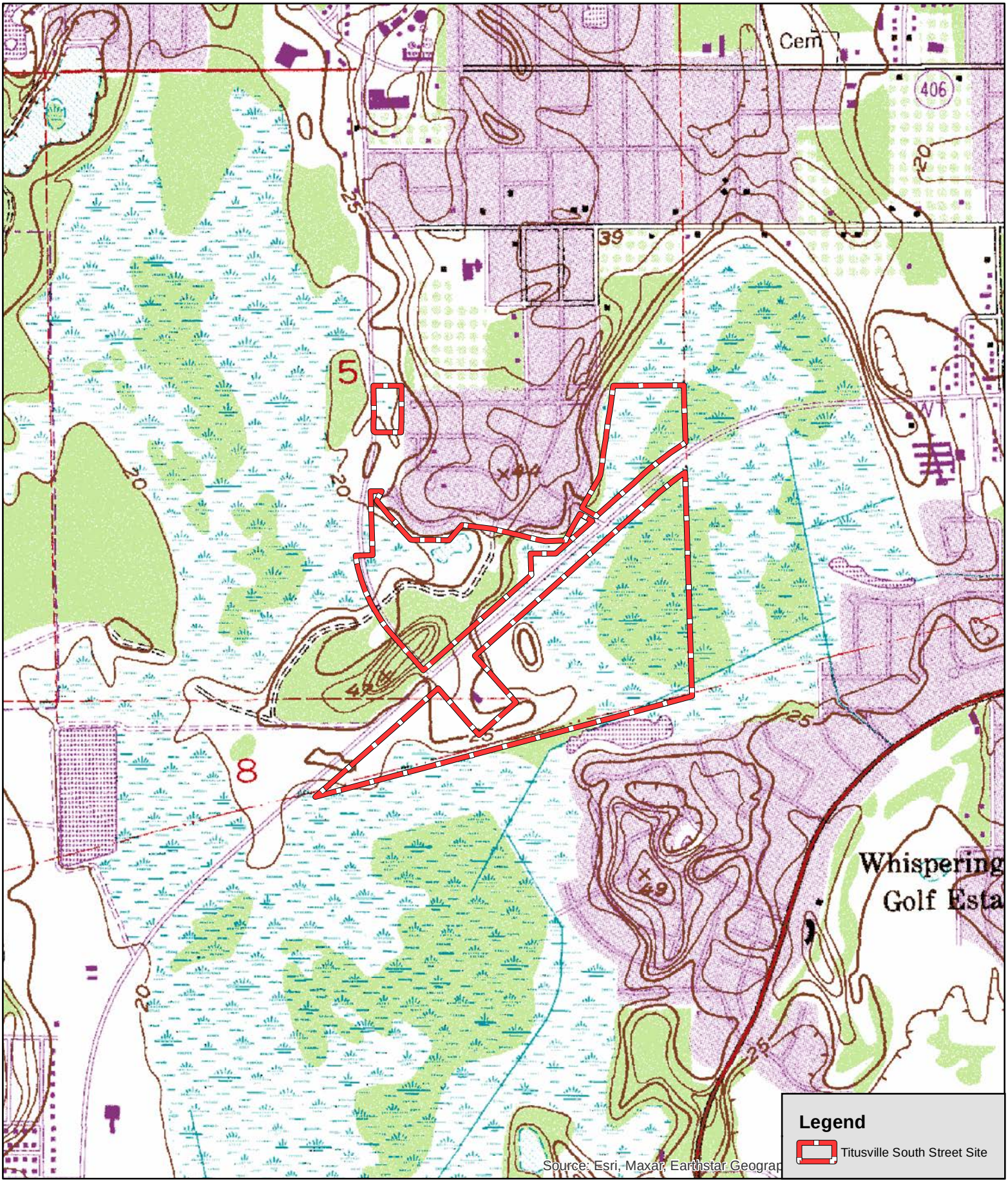
Titusville South Street
Brevard County, Florida
Figure 2
2021 Aerial Photograph

N

1,000 Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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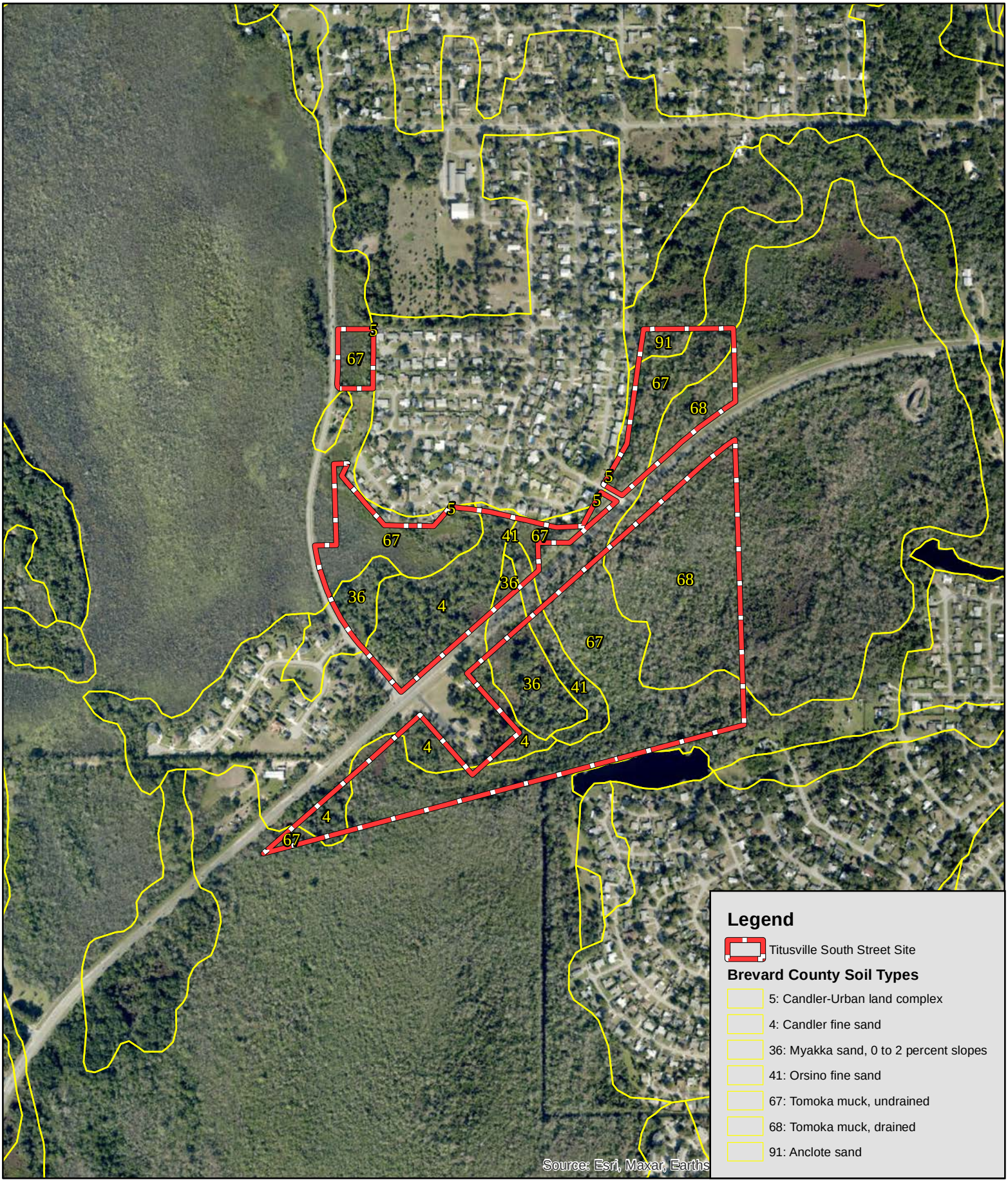
Titusville South Street
Brevard County, Florida
Figure 3
USGS Topographic Map

N

1,000
Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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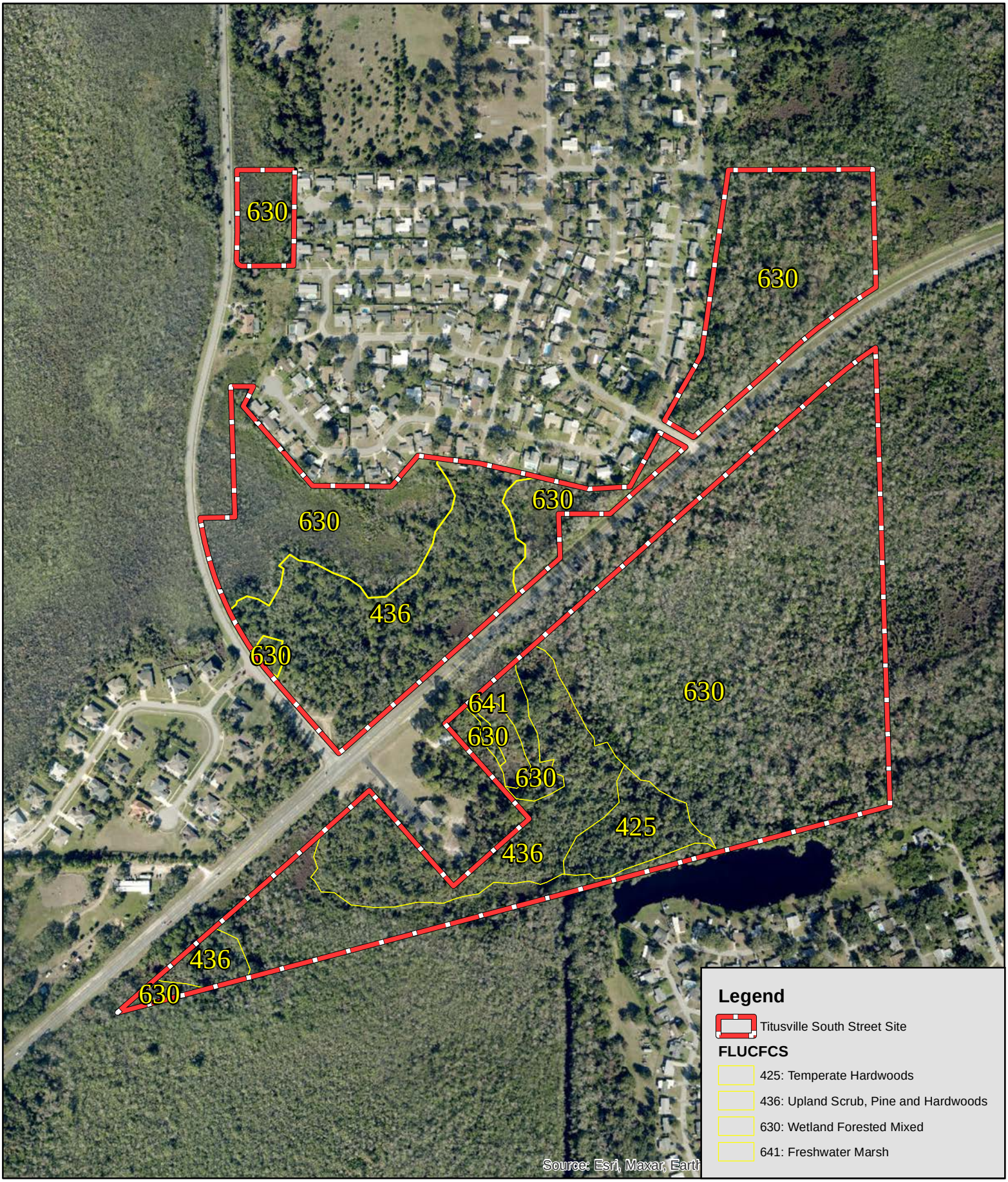
Titusville South Street
Brevard County, Florida
Figure 4
USGS Soils Map

800
Feet

N

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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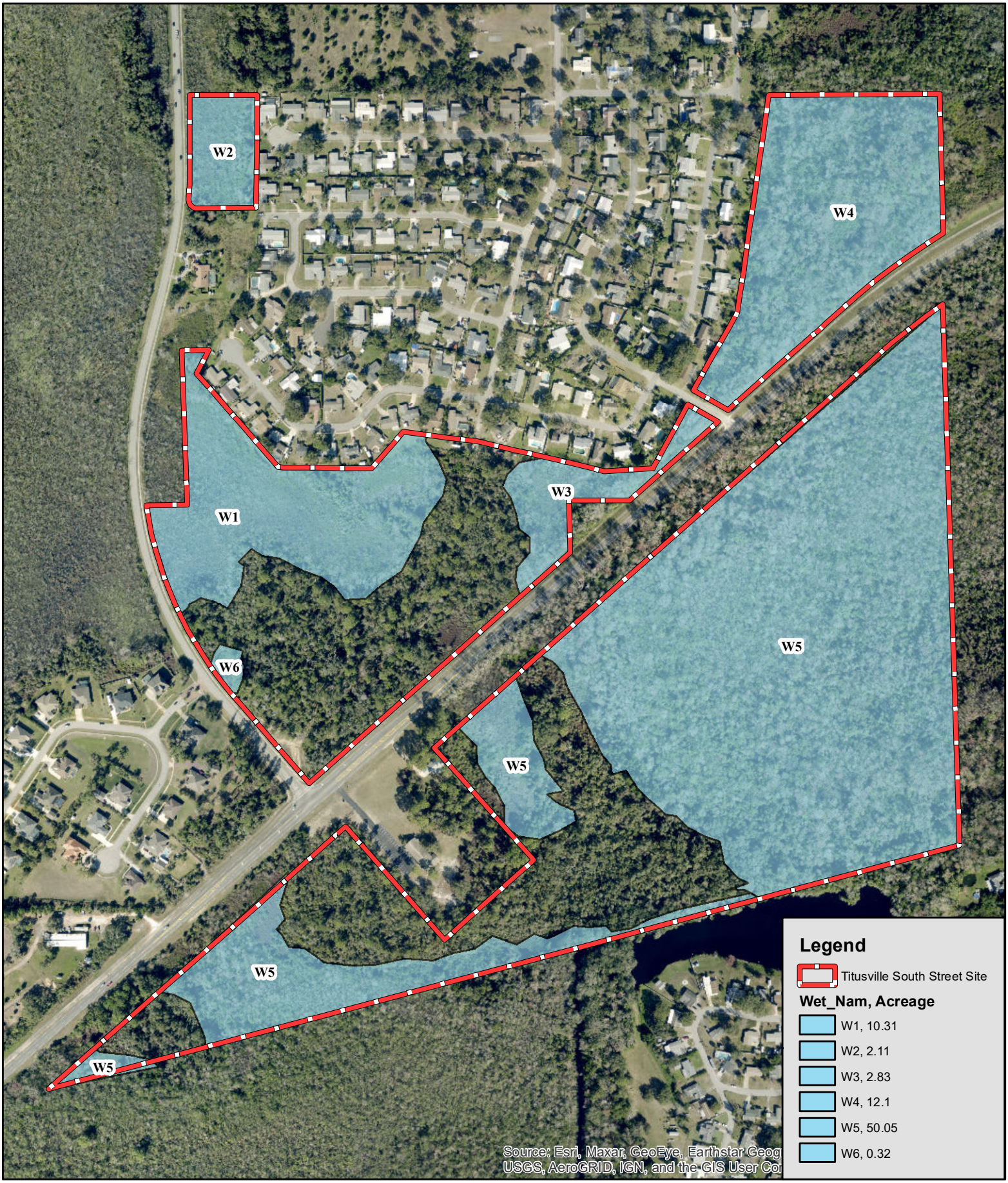
Titusville South Street
Brevard County, Florida
Figure 5
FLUCFCS Map

N

500
Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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Titusville South Street
Brevard County, Florida
Figure 6
Wetland Map

N

420
Feet

Project #: 303-28
Produced By: RAB
Date: 4/18/2023

Titusville South Street

Traffic Impact Study

City of Titusville, FL

June 2022

Kimley»Horn

Titusville South Street

Traffic Impact Study

City of Titusville, FL

Prepared by:

Kimley-Horn and Associates, Inc.

June 2022

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Kimley»Horn

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1.0 INTRODUCTION

1.1 INTRODUCTION

Kimley-Horn and Associates, Inc. was retained by Standard Investments + Holdings, LLC. to analyze and document the transportation impacts associated with the proposed Titusville South Street residential development in the City of Titusville, Florida. The following Traffic Impact Study (TIS) generally conforms to the methodology provided in **Appendix A**.

The ±107-acre site is generally located to the north and south of State Road 405/South Street and east of South Singleton Avenue, bound by wetlands to the north of the north parcel and to the east and west of the south parcel. The site will consist of ±76 single-family homes and ±120 townhomes. Access to the north portion of the site will be provided via one (1) full-access connection on Singleton Avenue and one (1) full access connection on South Street east of Singleton Avenue Access to the site will be provided via two (2) full access connections on South Street and one (1) full access connection on Singleton Avenue. The proposed development and its access points are shown on the conceptual site plan included in **Appendix B**.

As part of the permitting process, the Future Land Use (FLU) of the project site will need to be amended to reflect the proposed development type. An analysis of the existing and proposed FLU maximum trip generation potential is included in this TIA.

1.2 STUDY AREA

From discussions with City staff and per guidelines in the City of Titusville Land Development Code, the resulting study area was determined, as shown on **Figure 1**:

Study Area Roadway Segments

- South Street (SR405), from Fox Lake Road to Singleton Avenue
- South Street (SR405), from Singleton Avenue to Park Avenue
- Singleton Avenue, from South Street (SR405) to Garden Street

Study Area Intersections

- South Street/SR405 (N/S) & Fox Lake Road (E/W)
- South Street/SR405 (N/S) & Singleton Avenue (E/W)
- South Street/SR405 (E/W) & Park Avenue (N/S)
- Singleton Avenue (E/W) & Project Driveway (N/S)
- South Street/SR405 (N/S) & Project Driveway (E/W)

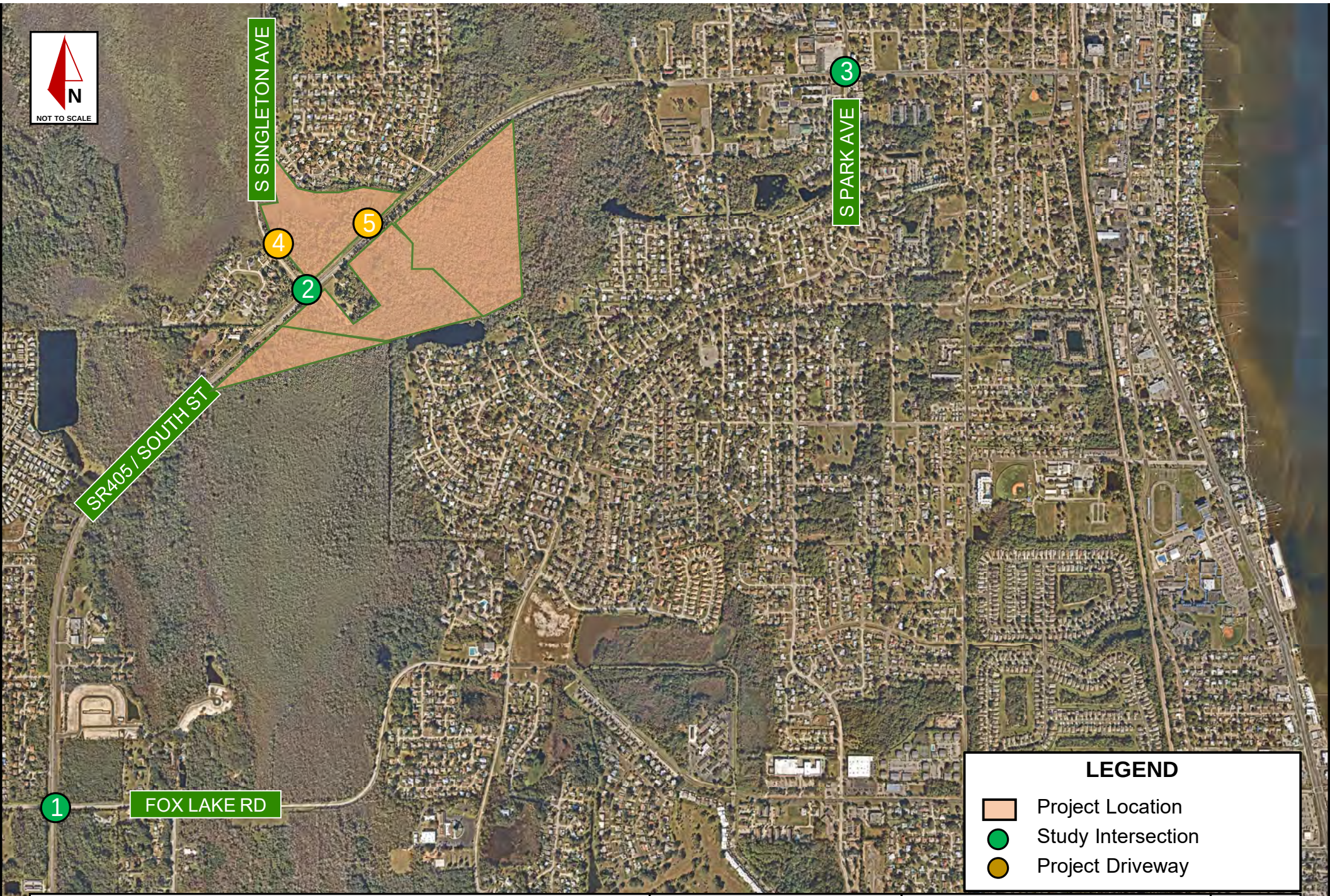

Figure 1: Project Location & Study Area

June 2022
Project No.: 249192000

Kimley»Horn

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189 S Orange Ave, Suite 1000, Orlando, FL, 32801
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2.0 FUTURE LAND USE AMENDMENT

As part of the FLU Amendment Evaluation process, a transportation assessment is needed to determine the potential impact the change in FLU will have on the surrounding roadway network. The maximum trip generation potential was calculated for the existing and proposed FLU at maximum intensity. This assessment was performed per procedures established in the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, the City of Titusville Land Development Regulations Chapter 27 Article III and Chapter 28 Article VI, and the Brevard County Land Development Regulations Article VI.

The project site has the following existing FLU designation: ±9.80-acres of Commercial High Intensity Use (CHI), ±59.60 acres of Conservation (CONS), and ±37.60 acres of Low Density Residential (LDR). The proposed FLU designation is Planned Unit Development (PUD), which allows for the proposed development of single-family attached and detached housing.

Per both the Titusville and Brevard County Land Development Regulations, each FLU category has regulations for maximum density for development. This determines the maximum intensity of development that each FLU designation allows on the project site. The CHI FLU designation has maximum intensity with the Community Commercial (CC) zoning. The City of Titusville permits a maximum building coverage of 30% with CC zoning so the maximum development potential of the +/- 9.80 acres of CHI FLU designation is 128.07 KSF of commercial space. The LDR FLU designation has a maximum intensity of 5.8 dwelling units per acre in the Single-Family Medium Density (R1-B) zoning. Therefore, a maximum of 218 dwelling units could be developed on LDR portion of the project site. Even at maximum intensity, no development is anticipated on the conservation (CONS) portion of the project site as the allowed zoning districts in the CONS FLU designation have little to no development potential.

The proposed PUD FLU designation will have a maximum development potential of 76 single-family homes and 120 townhomes.

From this, the trip generation potential for each FLU designation was determined using procedures published in the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* for the maximum intensity of each FLU designation. ITE Excerpts are provided in **Appendix C**. The following Land Use Codes (LUC) were used:

- LUC 210 – Single-Family Detached Housing
- LUC 215 – Single-Family Attached Housing
- LUC 821 – Shopping Plaza (40 – 150K)

Table 1 provides the maximum trip generation for the existing and proposed FLU. The existing FLU is anticipated to generate 14,168 daily trips and 1,363 (685 In / 678 Out) PM Peak Hour trips. The proposed FLU is anticipated to generate a maximum of 1,648 daily trips and 145 (88 In / 57 Out) PM Peak Hour trips.

The proposed FLU at maximum intensity will generate fewer trips than the existing FLU designation at maximum intensity. Therefore, no additional transportation analysis is needed.

Table 1: Trip Generation Comparison for Existing and Proposed FLU

Existing FLU Allowance												
Daily	Land Use	Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	Daily Trip Generation					
							Total	In[1]		Out[1]		
	Commercial, High Intensity (CHI)	9.80	821	**128.07**	KSF	94.49	12,101	50%	6,051	50%	6,050	
	Low Density Residential (LDR)	37.60	210	**218**	DU	9.48	2,067	50%	1,034	50%	1,033	
	Conservation	59.60	-	**59.60**	AC	0.00	0	50%	0	50%	0	
	Total Generated Trips						**14,168**	**7,085**		**7,083**		
PM Peak	Land Use	Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	PM Peak Hour Trip Generation					
							Total	In[1]		Out[1]		
	Commercial, High Intensity (CHI)	9.80	821	**128.07**	KSF	9.03	1,156	48%	555	52%	601	
	Low Density Residential (LDR)	37.60	210	**218**	DU	0.95	207	63%	130	37%	77	
	Conservation	59.60	-	**59.60**	AC	0.00	0	48%	0	52%	0	
	Total Generated Trips						**1,363**	**685**		**678**		

Proposed FLU Allowance												
Daily	Land Use	Total Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	Daily Trip Generation					
							Total	In[1]		Out[1]		
	Planned Unit Developmet (PUD): Single-Family Detached Housing	-	210	**76**	DU	10.32	784	50%	392	50%	392	
	Planned Unit Developmet (PUD): Single-Family Attached Housing	-	215	**120**	DU	7.20	864	50%	432	50%	432	
	Total Generated Trips						**1,648**	**824**		**824**		
PM Peak	Land Use	Total Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	PM Peak Hour Trip Generation					
							Total	In[1]		Out[1]		
	Planned Unit Developmet (PUD): Single-Family Detached Housing	-	210	**76**	DU	1.01	77	63%	49	37%	28	
	Planned Unit Developmet (PUD): Single-Family Attached Housing	-	215	**120**	DU	0.57	68	57%	39	43%	29	
	Total Generated Trips						**145**	**88**		**57**		

Maximum Additional Trips			
Daily New External Trips (Proposed - Existing)	**-12,520**	**-6,261**	**-6,259**
PM Peak New External Trips (Proposed - Existing)	**-1,218**	**-597**	**-621**

Notes: [1] Vehicle trip rates and directional splits per data and procedures outlined in ITE Trip Generation Manual, 11th Edition

3.0 EXISTING CONDITIONS ANALYSIS

3.1 EXISTING ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour roadway segment capacity analysis was performed for the roadways segments adjacent to the development for existing conditions. Average Annual Daily Traffic (AADT) and the adopted MSV were obtained for each segment from the Space Coast Transportation Planning Organization Traffic Counts document, provided in **Appendix D**. The provided 2020 AADT was converted to a peak hour, peak direction (PHPD) volume using the segment's D-factor and K-factor. The most applicable FDOT Florida Traffic Online count station historical AADT report is provided in **Appendix F** with the seasonal factor data. The provided 2020 AADT and calculated PHPD was grown to the existing year, 2022, by applying a 3% annual growth rate. The existing Daily and PM peak hour segment capacity analyses are shown in **Tables 2 and 3**.

As shown in the following table, all segments in the study area are operating with existing Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 2: Existing (2022) Daily Capacity Analysis

Roadway From	To	Roadway Attributes [1] Functional Classification	Adopted LOS	Number of Lanes	Daily MSV	Daily - Existing (2022) 2020 AADT[1]	Annual Growth Rate	2022 AADT[2]	V/C Ratio	LOS
South Steet (SR405)										
Fox Lake Rd	*Singleton Ave*	Urban Minor Arterial	D	2	17,700	12,471	3%	13,230	0.75	C
Singleton Ave	*Park Ave*	Urban Minor Arterial	D	2/4	37,810	6,303	3%	6,687	0.18	C
Singleton Ave										
South Street (SR405)	*Garden St*	Urban Major Collector	D	2	17,700	7,231	3%	7,671	0.43	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. 2022 ADDT derived by applying a 3% annual growth rate to 2020 AADT volumes.

Table 3: Existing (2022) PM Peak Hour Capacity Analysis

Roadway From	To	Roadway Attributes [1] Functional Classification	Adopted LOS	Number of Lanes	PHPD MSV [2]	Daily - Existing (2022) 2020 AADT[1]	2020 PHPD Volume[3]	Annual Growth Rate	2022 PHPD Volume[4]	V/C Ratio	LOS
South Steet (SR405)											
Fox Lake Rd	*Singleton Ave*	Urban Minor Arterial	D	2	880	12,471	617	3%	655	0.74	C
Singleton Ave	*Park Ave*	Urban Minor Arterial	D	2/4	1,900	6,303	312	3%	331	0.17	C
Singleton Ave											
South Street (SR405)	*Garden St*	Urban Major Collector	D	2	880	7,231	358	3%	380	0.43	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. PHPD Maximum Service Volume obtained from the 2020 FDOT Q/LOS Handbook.
3. PHPD Volume determined by applying the historic K-factor and D-factor from most applicable FDOT traffic monitoring site.
4. 2022 PHPD Volume derived by applying a 3% annual growth rate to 2020 PHPD Volumes.

3.2 EXISTING TRAFFIC COUNTS

Turning movement counts (TMCs) were collected at the study intersections on Wednesday, May 11, 2022, and are provided in **Appendix E**. Data was collected during the PM Peak Period (4:00 PM to 6:00 PM).

The counts were adjusted using the seasonal factor (SF) from FDOT's Florida Traffic Online (FTO) publication. SF data is provided in **Appendix F**. Turning movement volume development worksheets for all study area intersections are provided in **Appendix G.**

3.3 EXISTING INTERSECTION CONDITIONS

An intersection operational analysis was performed for existing (2022) conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. Existing signal timings were provided by the City of Titusville, provided in **Appendix H**, for the following signalized intersections:

- SR405/South Street & Fox Lake Road
- South Park Avenue & SR405/South Street

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour existing conditions are provided in **Table 4**. Synchro outputs are included in **Appendix I**.

As shown in **Table 4**, all study area intersections currently operate with acceptable overall LOS in existing (2022) PM peak hour conditions.

Table 4: Existing (2022) PM Peak Hour Intersection Conditions

Existing Condition - 2022						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	B	EBL/T/R	0.41
			WB	B	WBL/T/R	0.53
			NB	B	NBR	0.81
			SB	B	SBR	0.68
			Overall	**B (13.9 s)**	**NBR**	**0.81**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	C	EBR	0.42
			WB	-	-	-
			NB(L)	A	NBL	0.31
			SB(L)	-	-	-
			Overall	**-**	**EBR**	**0.42**
3	South Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.27
			WB	B	WBT/R	0.40
			NB	A	NBT/R	0.51
			SB	A	SBT/R	0.53
			Overall	**A (9.1 s)**	**SBT/R**	**0.53**

4.0 BACKGROUND CONDITIONS ANALYSIS

Traffic conditions were evaluated for Year 2024 background conditions, without the impact of project trips on the roadway network. Background volumes at study area intersections were derived by applying a 3% annual growth rate and vested trips from two developments – South Carpenter Estates and Step by Step Learning Center – to existing turning movement volumes. Information about these projects is provided in **Appendix J.**

Background growth and vested trips are shown in the intersection turning movement volume development worksheets, provided in **Appendix G**.

4.1 BACKGROUND ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour capacity analysis was performed for the roadway segments adjacent to the development for background conditions. Background segment volumes were determined by applying a 3% annual growth rate and vested trips.

The background Daily and PM peak hour segment capacity analysis are shown in **Tables 5 and 6**.

As shown in the following table, all segments in the study area are operating with background Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 5: Background (2024) Daily Capacity Analysis

Roadway		Daily MSV [1]	Daily - Background (2024)					
From	To		Existing 2022 AADT	Annual Growth Rate [2]	Vested Trips[2]	Background 2024 AADT[3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	13,230	3.0%	200	14,236	0.80	C
Singleton Ave	*Park Ave*	37,810	6,687	3.0%	643	7,737	0.20	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	7,671	3.0%	0	8,139	0.46	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Annual Growth Rate and Vested Trips coordinated and agreed upon with City staff. Vested trips are from South Carpenter Estates and Step by Step Learning Center developments.
3. Background (2024) AADT volumes derived by applying a 3% annual growth rate to 2022 AADT volumes and adding vested trips.

Table 6: Background (2024) PM Peak Hour Capacity Analysis

Roadway		PHPD MSV [1]	Daily - Background (2024)					
From	To		Existing 2022 PHPD Volume	Annual Growth Rate [2]	Vested Trips[2]	Background 2024 PHPD Volume[3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	880	655	3.0%	10	704	0.80	C
Singleton Ave	*Park Ave*	1,900	331	3.0%	32	383	0.20	C
Singleton Ave								
South Street (SR405)	*Garden St*	880	380	3.0%	0	403	0.46	C

Notes:
1. PHPD Maximum Service Volume obtained from the 2020 FDOT Q/LOS Handbook.
2. Annual Growth Rate and Vested Trips coordinated and agreed upon with City staff. Vested trips are from South Carpenter Estates and Step by Step Learning Center developments.
3. Background (2024) PHPD Volumes derived by applying a 3% annual growth rate to 2022 PHPD Volumes and adding vested trips

4.2 BACKGROUND INTERSECTION CONDITIONS

An intersection operational analysis was performed for background conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. The existing (2022) volumes were grown to Year 2024 background volumes by applying a growth rate of three percent (3%) over two (2) years and adding trips from the vested projects.

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour background conditions are provided in **Table 7**. Synchro outputs are provided in **Appendix I**.

As shown in **Table 7**, all study area intersections are expected to operate at an acceptable LOS overall and with v/c ratios less than one (1.0) during background (2024) PM peak hour conditions.

Table 7: Background (2024) PM Peak Hour Intersection Conditions

Background Condition - 2024						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	C	EBL/T/R	0.47
			WB	C	WBL/T/R	0.56
			NB	B	NBR	0.83
			SB	B	SBR	0.71
			Overall	**B (14.8 s)**	**NBR**	**0.83**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	A	EBR	0.47
			WB	-	-	-
			NB	B	NB(L)	0.34
			SB	-	SB(L)	-
			Overall	**A (7.1 s)**	**EBR**	**0.47**
3	South Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.33
			WB	B	WBT/R	0.42
			NB	A	NBT/R	0.56
			SB	A	SBT/R	0.61
			Overall	**A (9.9 s)**	**SBT/R**	**0.61**

5.0 DEVELOPMENT TRAFFIC

The applicant is proposing to develop the site to consist of ±76 single-family homes and ±120 townhomes. Buildout of the project is anticipated in Year 2024. The latest industry standards were referenced to evaluate the amount of new external trips to be generated by the site at buildout. The latest adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

5.1 TRIP GENERATION

Trip generation for the proposed site was calculated using procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*.

Table 8 provides the daily and PM peak hour trip generation summary for the project. As shown in the table, the proposed site is anticipated to generate 1,648 daily trips and 145 PM peak hour trips (88 inbound and 57 outbound).

Table 8: Trip Generation

Daily	**Land Use**	**ITE LUC[1]**	**Size**	**Units**	**ITE Trip Rate[1]**	**Daily**				
						Total	**In[1]**		**Out[1]**	
	Single-Family Detached Housing	210	**76**	DU	10.32	784	50%	392	50%	392
	Single-Family Attached Housing	215	**120**	DU	7.20	864	50%	432	50%	432
	Total Generated Trips					**1,648**	**824**		**824**	
PM Peak Hour	**Land Use**	**ITE LUC[1]**	**Size**	**Units**	**ITE Trip Rate[1]**	**PM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
	Single-Family Detached Housing	210	**76**	DU	1.01	77	63%	49	37%	28
	Single-Family Attached Housing	215	**120**	DU	0.57	68	57%	39	43%	29
	Total Generated Trips					**145**	**88**		**57**	

Notes: [1]Vehicle trip rate and directional splits per ITE Trip Generation, 11th Edition

5.2 TRIP DISTRIBUTION

Projected traffic patterns on study area facilities were developed using the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) set and situated within the existing roadway network to appropriately represent project access. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plot showing the percent of daily project distribution is provided in **Appendix K**.

Daily model project distribution was referenced to manually assign project distribution at the study area in general accordance with daily model output. **Figure 2** shows the project distribution at the study intersection for use in forecasting project trips.

5.3 TRIP ASSIGNMENT

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 3** shows the anticipated peak hour project trip assignments at study area intersections during the PM peak hour.

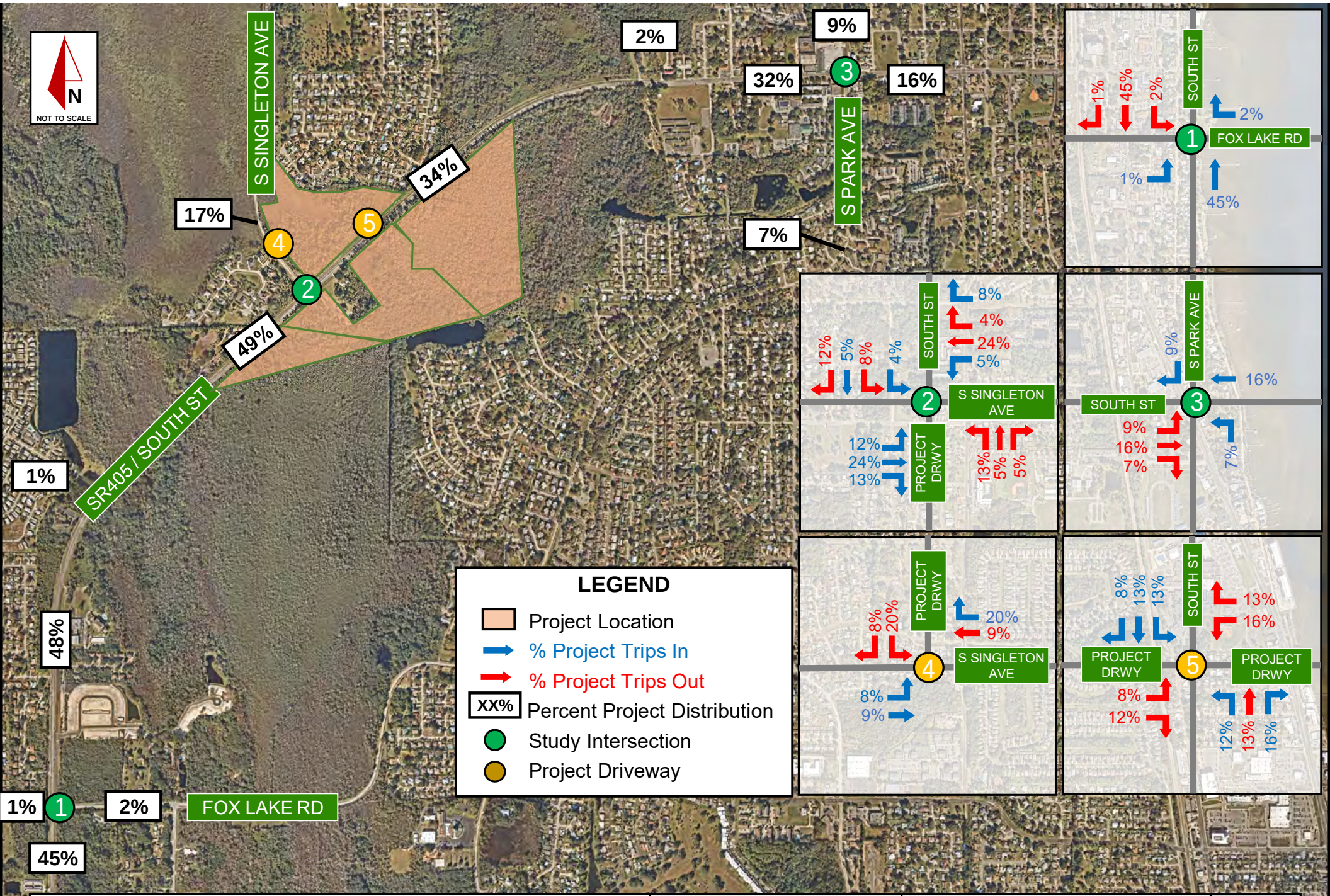

Figure 2: Project Trip Distribution

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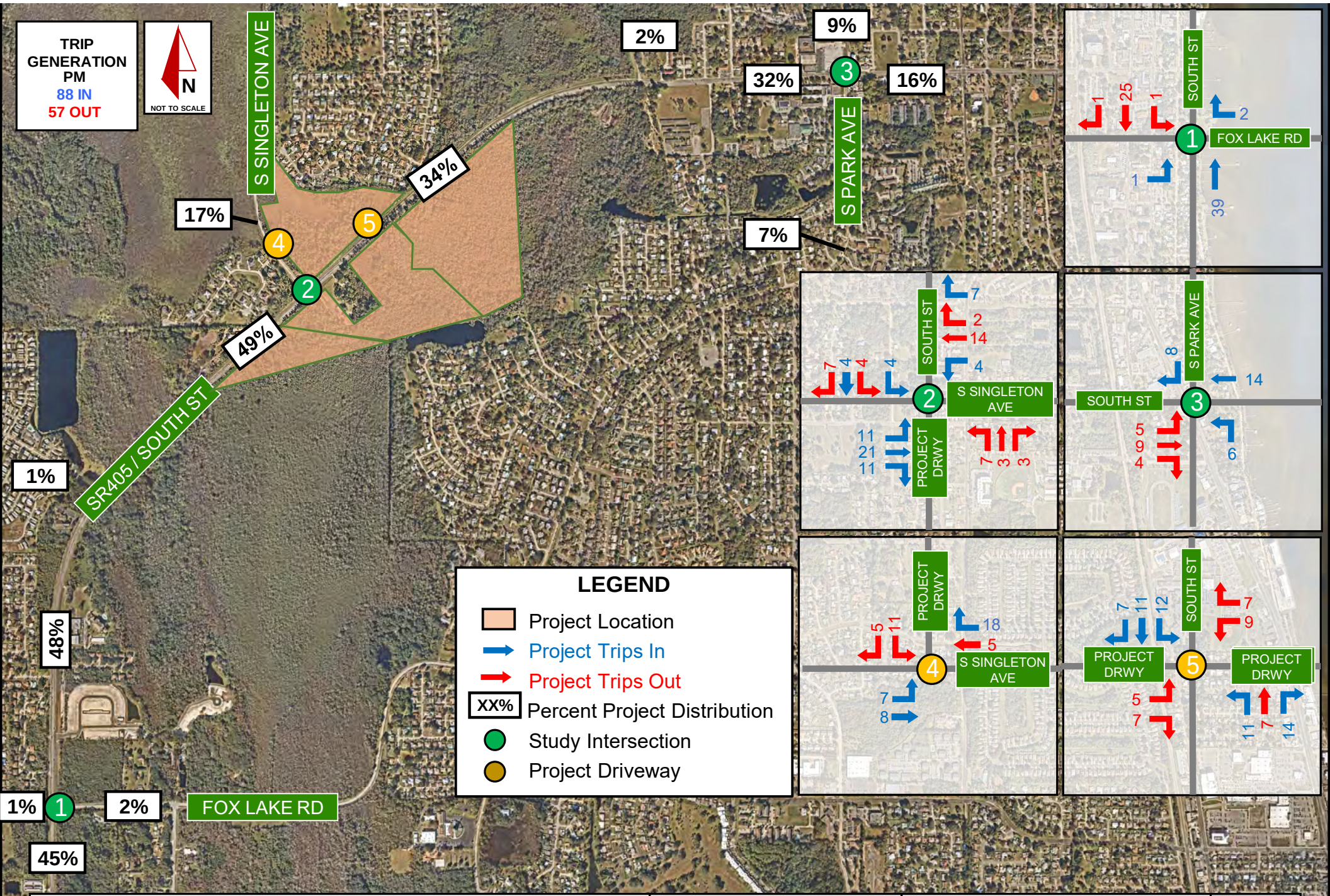

Figure 3: PM Peak Hour Trip Assignment

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6.0 BUILDOUT CONDITIONS ANALYSIS

Buildout volumes were developed by adding anticipated project trips to background volumes. A determination of the impact of project traffic on the roadway network was made, including LOS conditions for the intersections and roadway segments within the study area. Turning movement volume worksheets for all intersections and driveways are provided in **Appendix G.**

6.1 BUILDOUT ROADWAY SEGMENT ANALYSIS

A Daily and PM peak hour capacity analysis was performed for the roadway segments adjacent to the development for buildout conditions. The anticipated project trip volumes on each segment were added to the background volumes. The buildout Daily and PM peak hour capacity analysis are shown in **Tables 9 and 10**.

As shown in the following tables, all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 9: Buildout (2024) Daily Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Buildout (2024) Background 2024 AADT	1,648 Daily Trips % Assign [2]	1,648 Daily Trips Project Trips	Buildout AADT [3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	14,236	49%	808	15,044	0.85	C
Singleton Ave	*Park Ave*	37,810	7,737	34%	560	8,297	0.22	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	8,139	17%	280	8,419	0.48	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Percent project traffic assignment was calculated as the maximum across the segment.
3. Buildout AADT = background AADT + project trips.

Table 10: Buildout (2024) PM Peak Hour Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Buildout (2024) Background 2024 AADT	1,648 Daily Trips % Assign [2]	1,648 Daily Trips Project Trips	Buildout AADT [3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	14,236	49%	808	15,044	0.85	C
Singleton Ave	*Park Ave*	37,810	7,737	34%	560	8,297	0.22	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	8,139	17%	280	8,419	0.48	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Percent project traffic assignment was calculated as the maximum across the segment.
3. Buildout PHPD = background PHPD volume + project trips.

6.2 BUILDOUT INTERSECTION ANALYSIS

An intersection operational analysis was performed for Year 2024 buildout conditions during the PM peak hours using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. Intersection level of service (LOS), delay, and maximum volume to capacity (v/c) ratios for the PM peak hour buildout conditions are provided in **Table 11.** Synchro outputs are provided in **Appendix I**. **Figure 4** illustrates turning movement buildout volumes at the study area intersections for the PM peak hour

As shown in **Table 11**, the study area intersections are anticipated to operate at an acceptable LOS under buildout (2024) PM peak hour conditions with the exception of the project driveway (westbound approach) at the unsignalized intersection of South Street and Singleton Avenue. This approach operates with LOS F but with a v/c ratio less than one (1.0). It is common for minor street approaches to operate with high delay at unsignalized intersections.

No operational deficiencies were identified as a result of the proposed residential development.

Table 11: Buildout (2024) PM Peak Hour Intersection Conditions

Buildout Condition - 2024						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	C	EBL/T/R	0.48
			WB	C	WBL/T/R	0.58
			NB	B	NBT/R	0.84
			SB	B	SBT/R	0.72
			Overall	**B (15.3 s)**	**NBT/R**	**0.84**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	E	EBL/T	0.80
			WB	F	WBL/T/R	0.43
			NB(L)	A	NBL	0.35
			SB(L)	A	SBL	0.01
			Overall	**-**	**EBL/T**	**0.80**
3	Sout Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.33
			WB	B	WBT/R	0.43
			NB	A	NBT/R	0.57
			SB	A	SBT/R	0.62
			Overall	**B (10.0s)**	**SBT/R**	**0.62**
4	South Singleton Ave & Project Driveway 1	Unsignalized	EB(L)	A	EBL	0.01
			WB(L)	-	-	-
			NB	-	-	-
			SB	B	SBL/R	0.04
			Overall	**-**	**SBL/R**	**0.04**
5	SR405/South Street & Project Driveway 2	Unsignalized	EB	B	EBL/T/R	0.03
			WB	B	WBL/T/R	0.04
			NB(L)	A	NBL	0.01
			SB(L)	A	SBL	0.01
			Overall	**-**	**SBL/R**	**0.04**

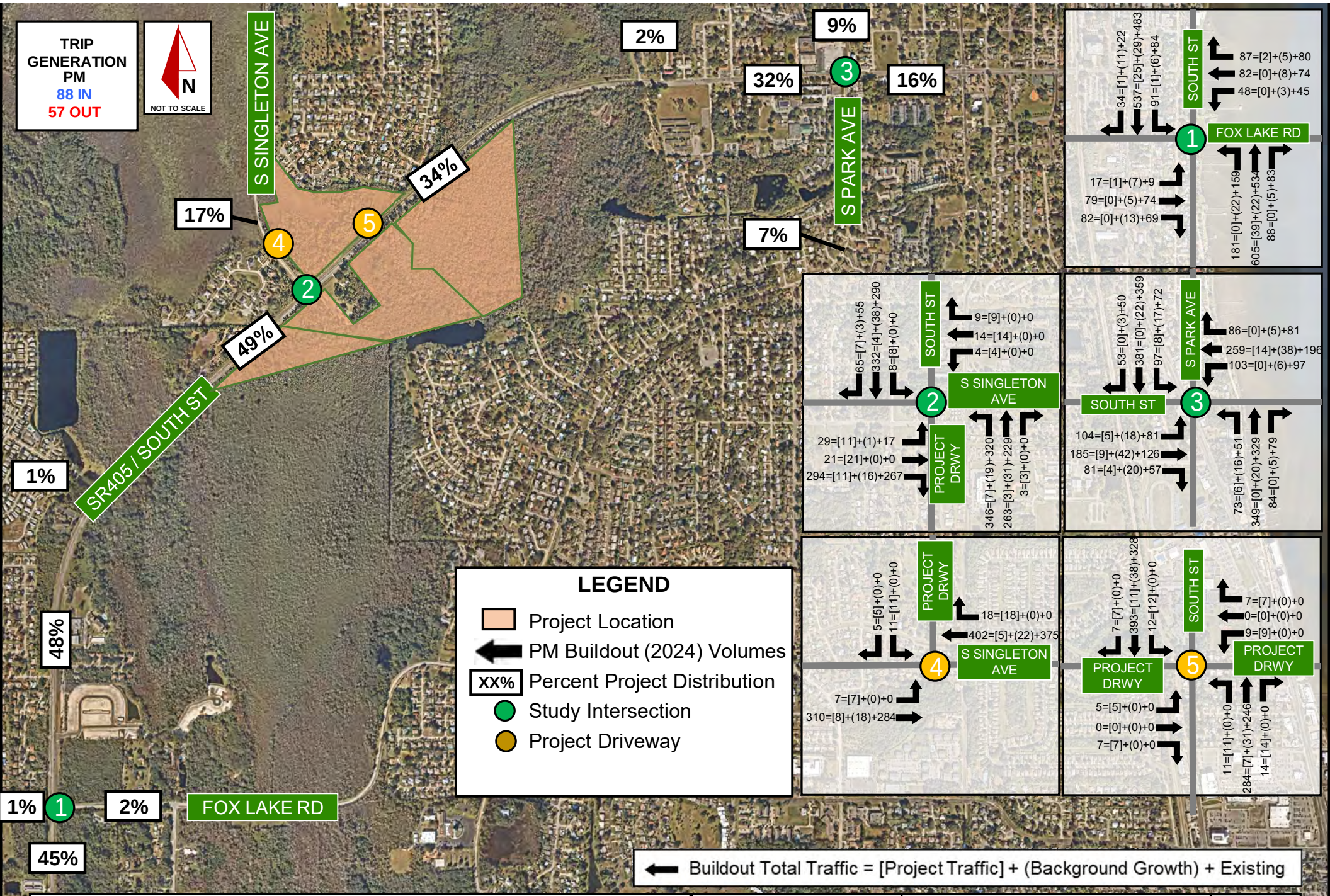

Figure 4: Intersection Volumes (2024) – PM Peak Hour

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6.3 BUILDOUT INGRESS TURN LANE ANALYSIS

The need for exclusive ingress right-turn and left-turn lanes at the proposed project driveways on South Singleton Avenue and South Street were evaluated using the National Cooperative of Highway Research Program (NCHRP) Report 457 thresholds.

The need for an exclusive right-turn lane at the project driveways on South Singleton Avenue and South Street was determined by comparing the right turning volumes with the approach volume. Based on the project volumes shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress right-turn lane is not warranted at any of the project driveways.

The need for an exclusive left-turn lane at the project driveways on Singleton Avenue (Intersection #4) and South Street (Intersection #5) were determined by comparing the left turning volumes with the approach and opposing volumes. Based on the project volumes shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress left-turn lane is not warranted at any of the project driveways.

NCHRP outputs are provided in **Appendix L.**

7.0 CONCLUSION

This traffic impact analysis was performed to analyze and document the traffic impacts associated with the development of Titusville South Street residential in the City of Titusville, Florida. The ±107-acre site is generally located to the north and south of State Road 405/South Street and east of South Singleton Avenue. The applicant is proposing to develop the site to consist of ±76 single-family homes and ±120 townhomes. Access to the site will be provided via two (2) full access connections on South Street and one (1) full access connection on Singleton Avenue.

A FLU analysis was performed to determine the potential transportation impacts associated with the proposed FLU amendment. The proposed FLU designation of Planned Unit Development (PUD) at maximum intensity generates fewer trips than the existing FLU designation at maximum intensity. Therefore, no additional traffic impacts are anticipated as a result of the proposed FLU amendment.

The proposed development is anticipated to generate 1,648 daily trips and 145 PM peak hour trips (88 inbound and 57 outbound) based on the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*. Project trips were distributed onto the surrounding network using the latest adopted regional travel demand model and manually assigned at the study area intersections.

A roadway segment capacity analysis was performed for the roadway segments in the study area for existing, background, and buildout conditions. The analysis identifies no roadway segment capacity deficiencies.

An operational analysis was performed for existing, background, and buildout conditions at all driveways and intersections within the study area. The study area intersections are anticipated to operate at an acceptable LOS under buildout (2024) PM peak hour conditions with the exception of the project driveway (westbound approach) at the unsignalized intersection of South Street and Singleton Avenue. This approach operates with LOS F but with a v/c ratio less than one (1.0). It is common for minor street approaches to operate with high delay at unsignalized intersections. Therefore, no operational deficiencies were identified as a result of the proposed development.

The need for exclusive ingress left-turn and right-turn lanes at the proposed project driveways were evaluated based on the NCHRP Report 457 thresholds for the proposed project driveways on South Singleton Avenue and SR405/South Street. Ingress right-turn lane nor left-turn lanes are warranted at the project driveways.

APPENDIX A
Methodology Statement

Viteri, Sabrina

From:	Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent:	Monday, May 2, 2022 11:37 AM
To:	Shellenberger, Erika
Cc:	Taylor, James
Subject:	RE: Titusville South Street Methodology
Categories:	External

You don't often get email from kwabena.ofosu@titusville.com. Learn why this is important

Hello,

Please consider the following:

7. Perform turning movement counts from PM peak hour turning movement counts at the following intersection in the study area:

    a. South Street & Singleton Avenue
    b. South Street and Park Ave
    c. South Street and Fox Lake Road

The Vested trips include:

- South Carpenter Estates subdivision, traffic study by LTG Inc.
- Step by Step Learning Center, traffic study by TPD Inc.
- Brookshire subdivision, Civil Engineer was Honeycutt and Associates
- Fox Lake Hammock subdivision, Civil Engineer was Honeycutt and Associates

I would also like to draw your attention to the South Street Small Area Plan that was adopted by the City.

I have created a link to access the above documents that are currently handy, others may be added in due course or you may reach out to the consultants that were involved.
https://titusville.sharefile.com/d-sa5847c3b5a1d48d69024d6d6968710c0

Thanks.
KB

Kwabena “KB” Ofosu, P.E.
Community Development Engineer
City of Titusville, FL

Please provide feedback on our service. The Community Development customer service survey is available at https://www.titusville.com/FormCenter/Community-Development-7/Customer-Satisfaction-Survey-55.

Do you live in a flood zone or concerned about flooding? Go to City of Titusville Flood Information.

From: Shellenberger, Erika <Erika.Shellenberger@kimley-horn.com>
Sent: Thursday, April 28, 2022 12:12 PM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Taylor, James <James.Taylor@kimley-horn.com>
Subject: Titusville South Street Methodology

Kwabena,

See below the traffic impact analysis methodology for the Titusville South Street residential development proposed to be generally located on the north and south side of South St. (SR 405) at its intersection with Singleton Avenue in the City of Titusville, Florida. The residential development will consist of approximately 120 townhome units and 76 single-family homes (concept sketch attached). Access to the single-family homes on the north side of South Street will be provided via one (1) full access connection on Singleton Avenue and one (1) full access connection on South Street east of Singleton Avenue. Access to the south parcel will be provided via two (2) full access connections on South Street – one (1) aligned with Singleton Avenue and one (1) aligned with the proposed north parcel driveway on South Street.

Comprehensive Plan Amendment (CPA) Transportation Evaluation

The goal of this study is to determine the impact of the change in Future Land Use on study area Cost Feasible roadway capacity. As part of the CPA transportation evaluation, the following assumptions and analysis will be conducted:

1. Existing Future Land Use
    a. Commercial, High Intensity (CHI) – maximum development of 30% building coverage (RC)
    b. Conservation (CONS) – No Anticipated Development
    c. Low Density Residential (LDR) – maximum development of 5.8 DU/AC (R-1B)
2. Proposed Future Land Use
    a. PUD – 76 Single Family Homes and 120 Townhomes
3. It is anticipated that the maximum development trip intensity will be reduced by the FLU amendment.

Traffic Impact Analysis

The basis for this study will be to evaluate the traffic operations of the adjacent roadway segments and intersections. As part of the traffic impact analysis for the proposed development, we will perform the following tasks:

1. Calculate Daily & PM peak hour trip generation calculations based on ITE's Trip Generation Manual (11th Edition).
2. Determine project traffic distribution and assignment using transportation modeling software and traffic volumes on the adjacent roadway segments.
3. Obtain available traffic data from the Space Coast Transportation Planning Organization, Brevard County, City of Titusville, and FDOT for roadway segments within the project study area (unless the City provides additional data).
4. Calculate background growth (review of historical count data and any vested trip data to be provided by the City).
5. Perform PM peak hour intersection LOS analysis of the study area intersections and project driveways.
    a. South Street & Singleton Avenue
    b. South Street & Proposed Aligned Full Access Driveways
    c. Singleton Avenue & Full Access Driveway
6. Perform roadway segment analysis for:
    a. Singleton Avenue, from South Street (SR 405) to Garden Street
    b. South Street (SR 405), from Fox Lake Road to Singleton Avenue

    c. South Street (SR 405), from Singleton Avenue to Park Avenue
7. Perform turning movement counts from PM peak hour turning movement counts at the following intersection in the study area:
    a. South Street & Singleton Avenue
8. Prepare a traffic impact analysis report summarizing the analysis to the City of Titusville.

Please let me know if you have any other information to provide. You mentioned the City may have a concurrency management database with vested trips. Otherwise, we will use historical growth rates.

Thank you for your time and let me know if a phone call is preferred.

Erika Shellenberger, E.I.
Kimley-Horn | 189 S. Orange Ave. Suite 1000, Orlando, FL 32801
Direct: 689 206 9002 **|** Mobile: 317 549 5337

APPENDIX B
Site Plan



BENGE DEVELOPMENT CORPORATION
Development Consulting Brokerage

gai consultants

COMMUNITY SOLUTIONS GROUP

TITUSVILLE SOUTH STREET

0' 200' 400' 800' N

DRAWING NO.	00 of 00
DATE OF ISSUE	October 06, 2021
REVISION	#

CONCEPT PLAN A

APPENDIX C
ITE Excerpts

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing – single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

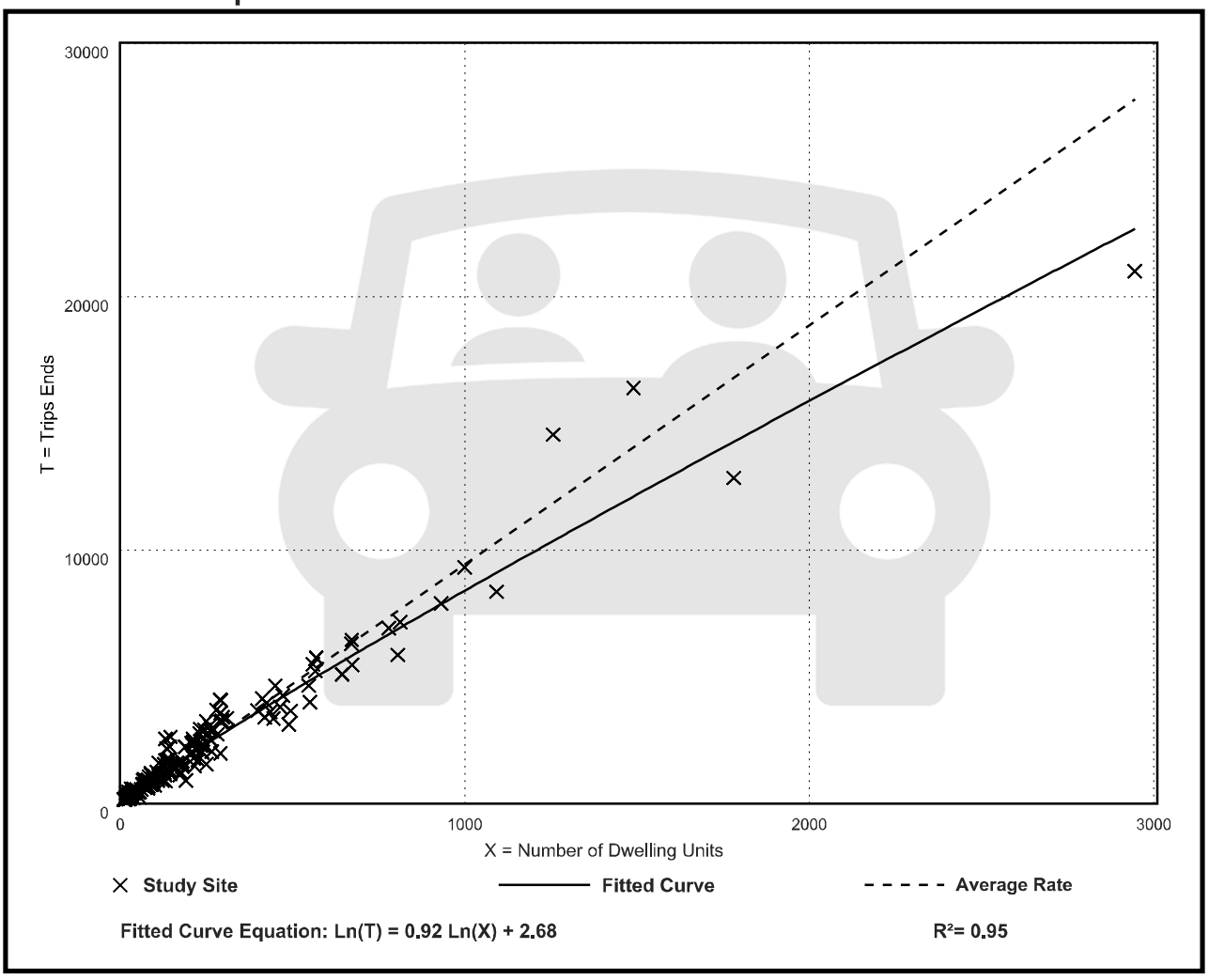
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

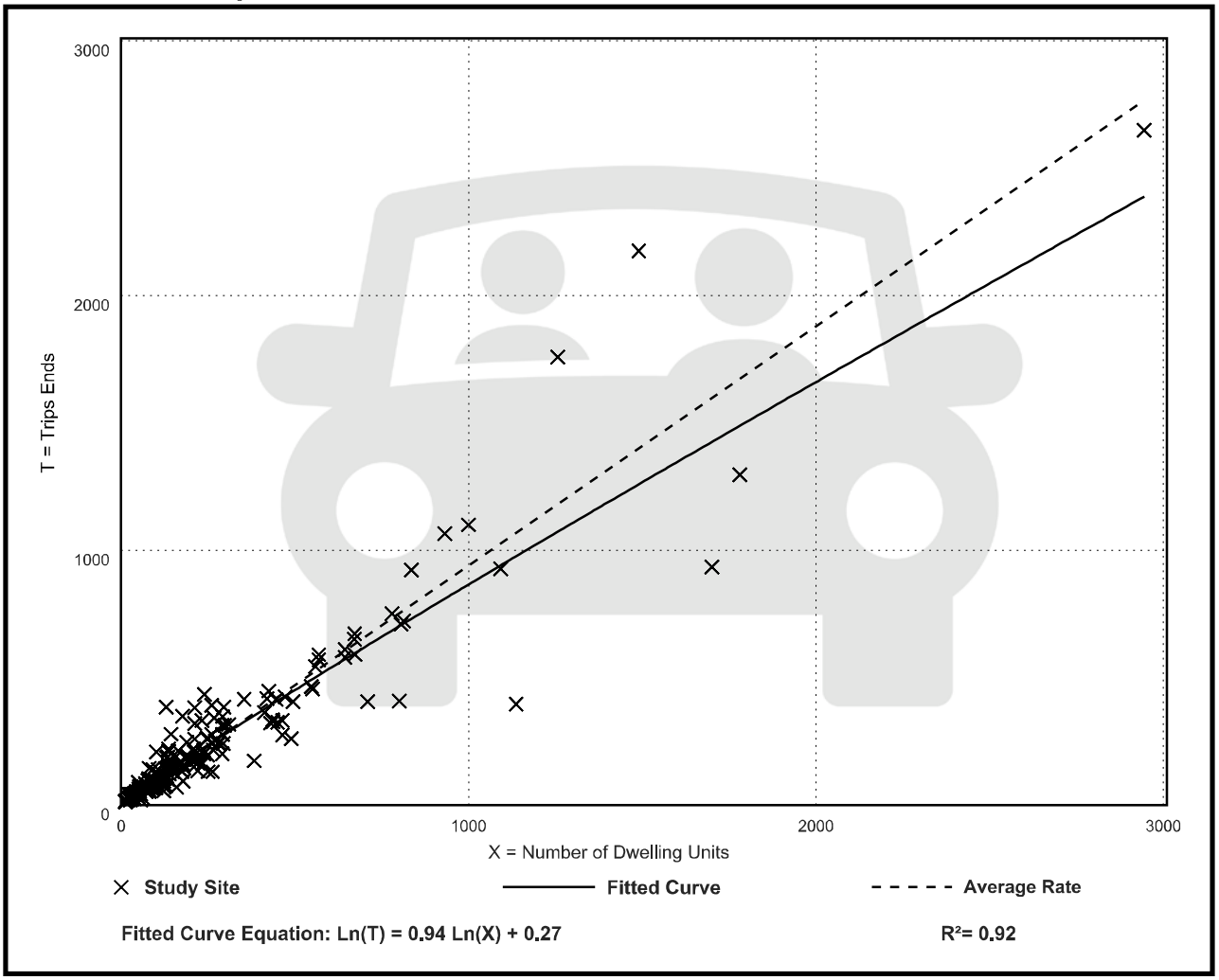
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 215
Single-Family Attached Housing

Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

Single-Family Attached Housing
(215)

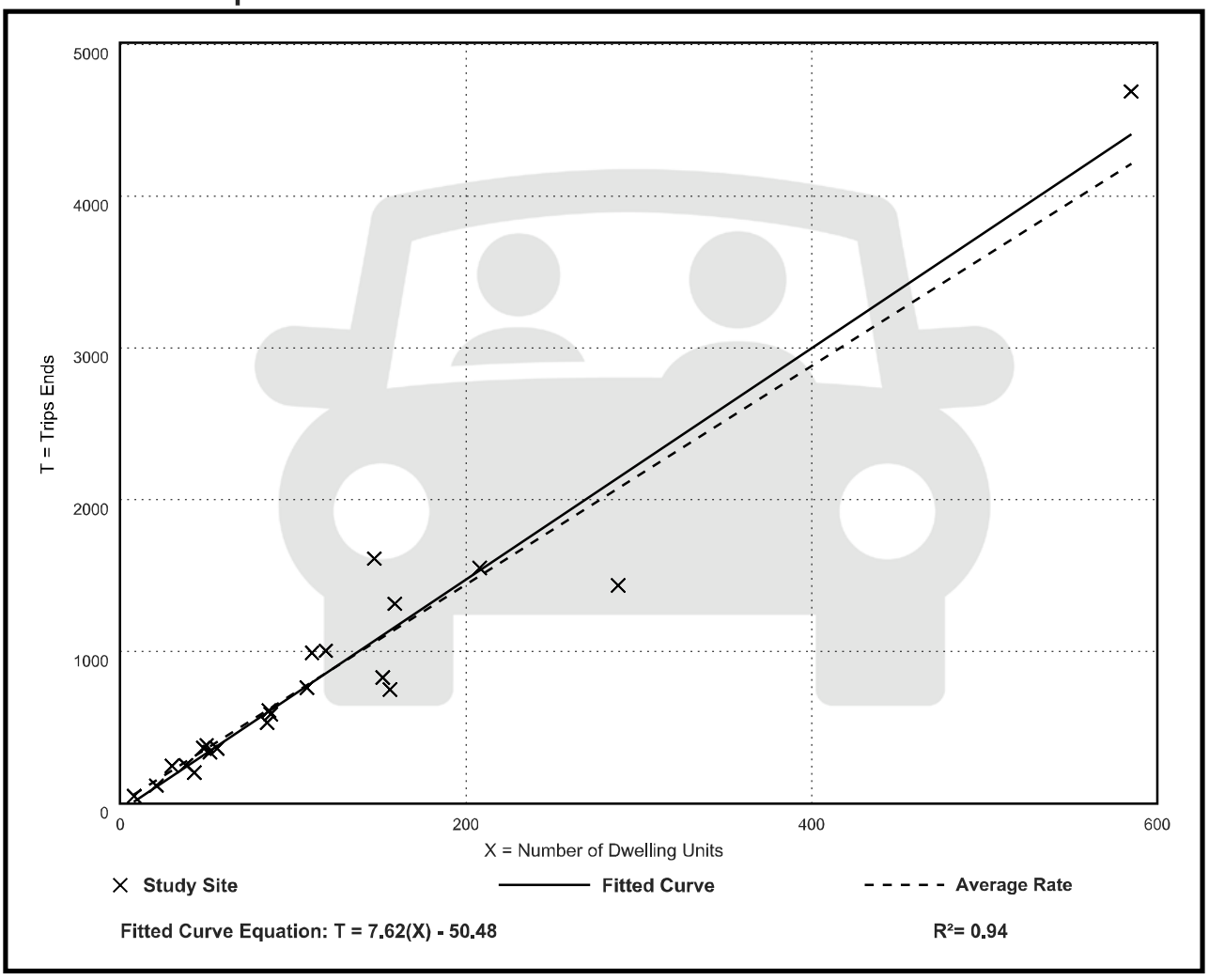
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



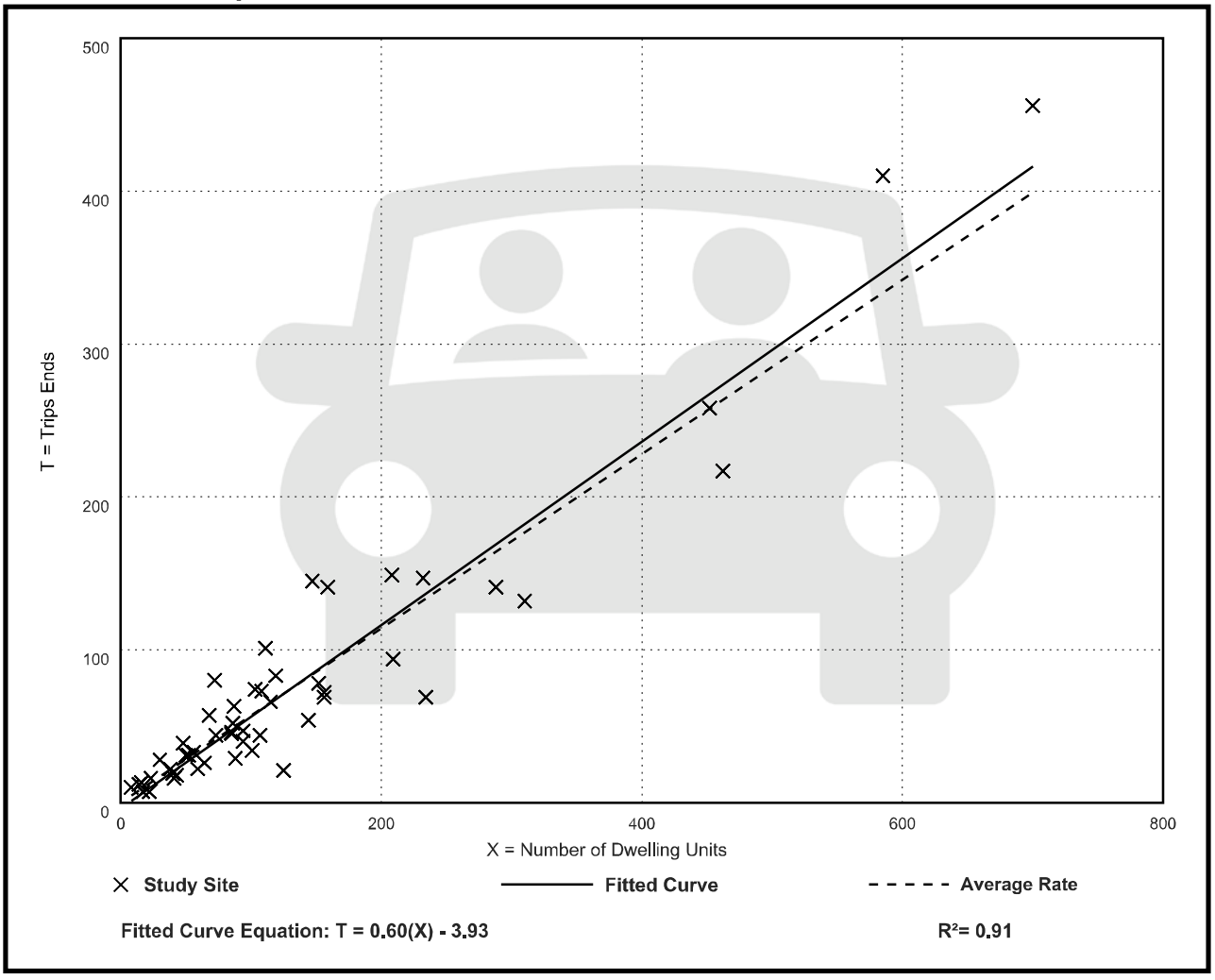
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Land Use: 821
Shopping Plaza (40-150k)

Description

A shopping plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has between 40,000 and 150,000 square feet of gross leasable area (GLA). The term "plaza" in the land use name rather than "center" is simply a means of distinction between the different shopping center size ranges. Various other names are commonly used to categorize a shopping plaza within this size range, depending on its specific size and tenants, such as neighborhood center, community center, and fashion center.

Its major tenant is often a supermarket but many sites are anchored by home improvement, discount, or other stores. A shopping plaza typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants. A shopping plaza is almost always open-air and the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between shopping plaza and shopping center (Land Use 820) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

The 40,000 square feet GFA threshold between shopping plaza and strip retail plaza (Land Use 822) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land Use 820), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

Land Use Subcategory

The presence or absence of a supermarket in a shopping plaza has been determined to have a measurable effect on site trip generation. Therefore, data are presented for two subcategories for this land use: sites with a supermarket anchor and sites without a supermarket.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

105, 110, 156, 159, 186, 198, 204, 211, 213, 239, 259, 260, 295, 301, 304, 305, 307, 317, 319, 358, 376, 390, 400, 404, 437, 444, 446, 507, 580, 598, 658, 728, 908, 926, 944, 946, 960, 973, 974, 1004, 1009, 1025, 1069

P and Z Regular - September 18, 2024 - 6:00 PM Page 168 of 821

Shopping Plaza (40-150k) - Supermarket - Yes (821)

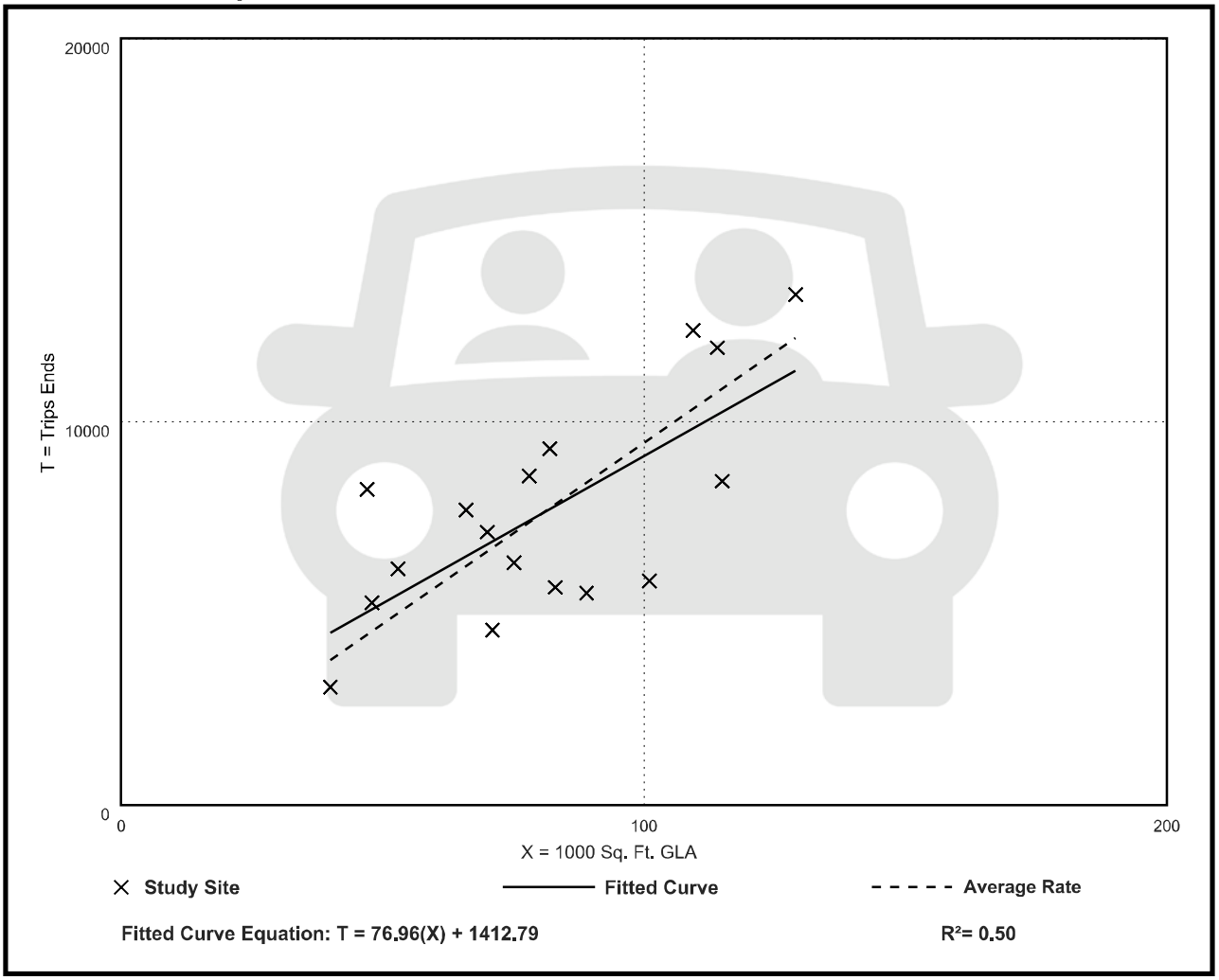
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: **General Urban/Suburban**
Number of Studies: 17
Avg. 1000 Sq. Ft. GLA: 81
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
94.49	57.86 - 175.32	26.55

Data Plot and Equation



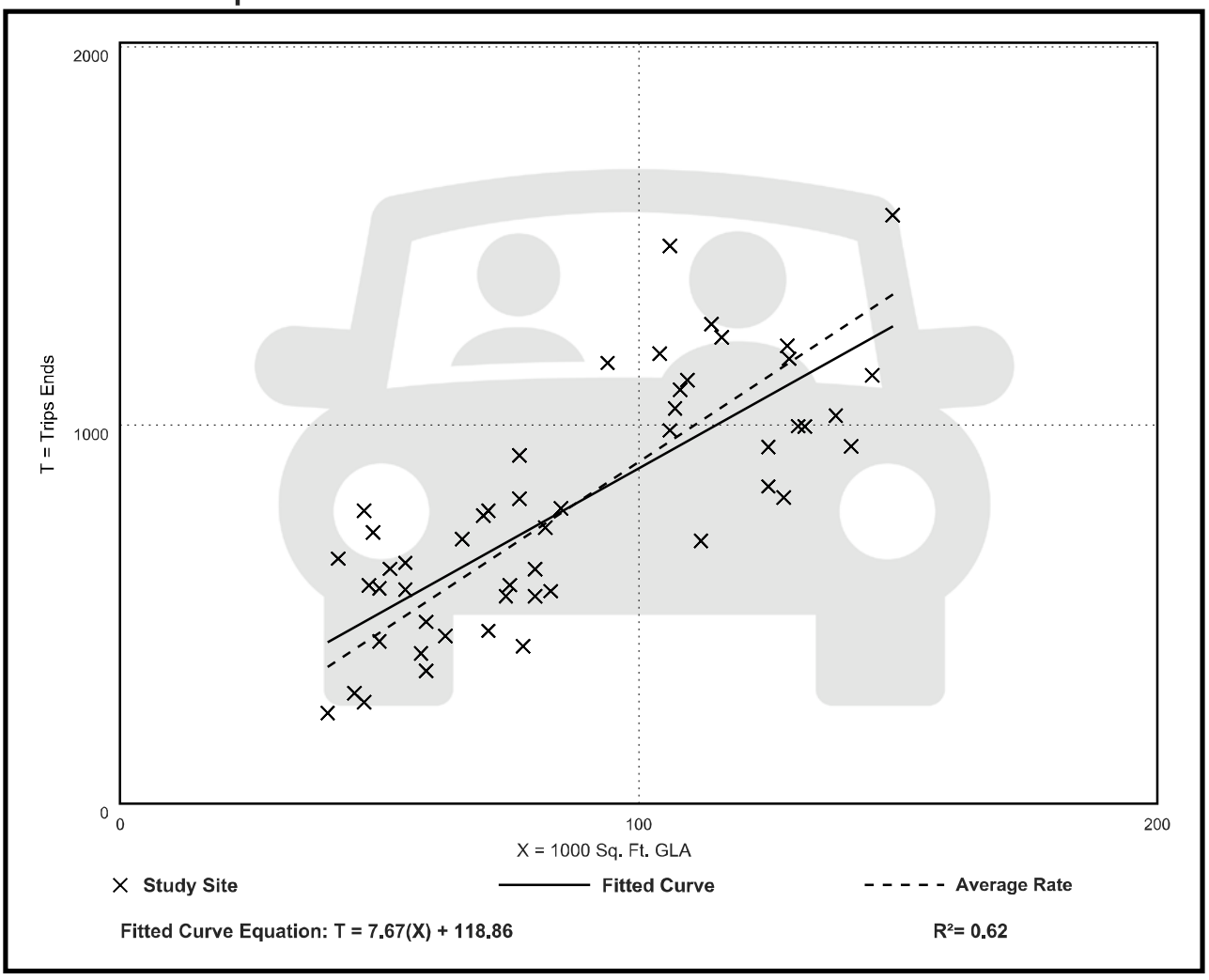
Shopping Plaza (40-150k) - Supermarket - Yes (821)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. 1000 Sq. Ft. GLA: 87
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
9.03	5.35 - 16.45	2.37

Data Plot and Equation



Fitted Curve Equation: T = 7.67(X) + 118.86

R^2= 0.62

APPENDIX D
Space Coast TPO Traffic Counts

SPACE COAST
TRANSPORTATION PLANNING ORGANIZATION
TRAFFIC COUNTS

Historical Counts from
2011 - 2020

2725 Judge Fran Jamieson Way

Melbourne, FL 32940

P: 321-690-6890

F: 321-690-6827

chelsea.forgenie@brevardfl.gov

June 11, 2021

View Traffic Counts on Interactive Map: https://brevard.ms2soft.com/tcds/tsearch.asp?loc=Brevard&mod=

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2011 - 2020

ID	ROAD	SEGMENT (Sections)	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH															
239	OLD DIXIE	GARDEN-DAIRY	NC	1,320	NC	1,190	NC	NC	NC	1,350	NC	1,060	15,600	12/1/2020	Urban Major Collector
240	OLD DIXIE	DAIRY-PARKER	960	NC	910	NC	860	NC	940	NC	820	NC	15,600	12/4/2019	Urban Major Collector
	PARRISH	HOLDER-US 1	1,320	690	1,340	780	1,240	850	1,210	840	1,110	690			
242	PARRISH	HOLDER-SINGLETON	NC	690	NC	780	NC	840	NC	840	NC	690	15,600	12/1/2020	Urban Major Collector
241	PARRISH	SINGLETON-US 1	1,320	NC	1,340	NC	1,240	NC	1,210	NC	1,110	NC	15,600	12/11/2019	Urban Major Collector
211	PT ST JOHN PKWY	I-95-GRISSOM	8,570	8,210	8,890	9,960	10,550	10,370	10,990	11,030	10,940	10,960	39,800	11/17/2020	Urban Minor Arterial
	SINGLETON	SR 405 (SOUTH ST)-SR 46	7,830	4,270	7,730	1,680			8,180	4,570	9,140	4,360			
578	SINGLETON	SR 405 (SOUTH ST)-GARDEN		6,970	NC	NC	NC	NC	7,570	7,510	NC	7,230	17,700	11/16/2020	Urban Major Collector
238	SINGLETON	GARDEN-DAIRY	7,830	NC	7,730	NC	NC	NC	8,790	NC	9,140	NC	15,600	11/13/2019	Urban Major Collector
547	SINGLETON	DAIRY-SR 46	NC	1,570	NC	1,680	NC	NC	NC	1,630	NC	1,490	15,600	12/1/2020	Urban Major Collector
	SISSON	SR 405-SR 50	6,365	6,025	6,150	6,770	6,825	7,500	7,905	7,070	7,810	7,545			
234	SISSON	SR 405-SAN MATEO BLVD	5,650	5,340	5,300	5,870	5,980	6,450	6,980	7,330	6,810	6,570	15,600	11/18/2020	Urban Major Collector
550	SISSON	SAN MATEO BLVD-SR 50	7,080	6,710	7,000	7,670	7,670	8,550	8,830	6,810	8,810	8,520	15,600	11/18/2020	Urban Major Collector
201	SR 46	VOLUSIA CO-FAWN LAKE	5,760	5,640	5,750	5,970	5,680	7,230	7,070	7,660	8,520	6,130	8,400	12/1/2020	Rural Principal Arterial Other
	SR 46	FAWN LAKE-US 1	9,420	9,140	9,325	9,605	11,000	10,755	11,040	10,440	10,780	10,400			
200	SR 46	FAWN LAKE-I-95	8,960	8,580	8,970	9,080	NC	9,930	10,360	10,440	10,050	9,380	14,160	12/1/2020	Urban Principal Arterial-Other
199	SR 46	I-95-US 1	9,880	9,700	9,680	10,130	11,000	11,580	11,720	NC	11,510	11,420	14,160	12/1/2020	Urban Principal Arterial-Other
231	SR 50	ORANGE CO-I-95	10,290	UC	9,160	10,190	10,270	10,470	11,500	12,370	13,260	11,160	40,300	11/17/2020	Rural Principal Arterial Other
	SR 50	I 95-US 1	20,004	UC	18,923	18,487	21,715	20,268	21,568	24,043	23,148	20,598			
232	SR 50	I-95-SR 405	25,080	UC	24,260	UC	27,980	23,810	30,320	34,830	31,190	29,760	41,790	11/17/2020	Urban Principal Arterial-Other
164	SR 50	SR 405-BARNA	20,580	UC	19,220	NC	24,080	NC	23,350	NC	23,940	NC	41,790	12/4/2019	Urban Minor Arterial
163	SR 50	BARNA-SISSON	20,280	UC	NC	20,800	NC	21,360	NC	23,450	NC	18,740	41,790	11/18/2020	Urban Minor Arterial
162	SR 50	SISSON-HOPKINS	19,680	UC	18,620	20,460	20,240	20,900	16,660	21,580	21,500	20,170	34,020	11/16/2020	Urban Minor Arterial
161	SR 50	HOPKINS-US 1	14,400	UC	13,590	14,200	14,560	15,000	15,940	16,310	15,960	13,720	34,020	11/18/2020	Urban Minor Arterial
	SR 405 (COLUMBIA)	SR 50-US 1	17,338	16,786	16,330	16,710	17,004	17,604	18,292	19,163	19,590	16,258			
218	SR 405 (COLUMBIA)	SR 50-BARNA	18,920	18,510	17,090	19,070	19,500	19,110	20,210	20,330	20,540	18,790	41,790	11/17/2020	Urban Principal Arterial-Other
219	SR 405 (COLUMBIA)	BARNA-SR 407	18,820	18,350	17,220	16,850	17,740	17,950	18,510	19,530	19,870	17,220	41,790	11/17/2020	Urban Principal Arterial-Other
220	SR 405 (COLUMBIA)	SR 407-GRISSOM	20,110	19,550	19,660	19,730	20,020	21,110	21,370	22,430	23,250	19,140	41,790	11/17/2020	Urban Principal Arterial-Other
221	SR 405 (COLUMBIA)	GRISSOM-SISSON	15,880	15,060	15,200	16,080	15,730	17,140	17,060	NC	18,920	14,940	41,790	11/17/2020	Urban Principal Arterial-Other
222	SR 405 (COLUMBIA)	SISSON-US 1	12,960	12,460	12,480	11,820	12,030	12,710	14,310	14,360	15,370	11,200	41,790	12/7/2020	Urban Principal Arterial-Other
	SR 405 (SOUTH)	SR 50-SINGLETON(END 2L)	15,750	15,040	14,605	15,095	14,265	15,690	16,130	16,110	16,075	14,770			
217	SR 405 (SOUTH)	SR 50-FOX LAKE	18,440	17,550	16,940	17,720	16,910	18,210	18,840	18,770	18,950	17,070	18,590	12/7/2020	Urban Minor Arterial
216	SR 405 (SOUTH)	FOX LAKE-SINGLETON	13,060	12,530	12,270	12,470	11,620	13,170	13,420	13,450	13,200	12,470	17,700	11/16/2020	Urban Minor Arterial
	SR 405 (SOUTH)	SINGLETON(END 2L)-US 1	6,245	5,830	6,480	6,070	6,930	6,480	6,630	6,240	6,800	5,610			
215	SR 405 (SOUTH)	SINGLETON-PARK	6,910	6,440	6,480	6,660	6,930	6,960	6,630	7,010	6,800	6,300	37,810	11/16/2020	Urban Minor Arterial
214	SR 405 (SOUTH)	PARK-US 1	5,580	5,220	NC	5,290	NC	5,520	NC	5,470	NC	4,920	34,020	11/18/2020	Urban Minor Arterial
595	SR 406 (GARDEN)	CARPENTER-I-95				6,260	NC	6,960	NC	7,290	NC	7,240	15,600	11/16/2020	Urban Major Collector
	SR 406 (GARDEN)	I-95-WASHINGTON	11,920	11,698	11,345	11,890	12,833	13,613	13,243	13,763	14,050	12,443			
202	SR 406 (GARDEN)	I-95-SINGLETON	12,960	12,530	11,670	12,800	13,850	14,510	14,730	16,310	15,700	14,820	41,790	11/16/2020	Urban Principal Arterial-Other
203	SR 406 (GARDEN)	SINGLETON-PARK	15,700	15,410	14,980	15,690	18,060	16,180	16,930	17,390	17,230	14,980	39,800	12/7/2020	Urban Principal Arterial-Other
204	SR 406 (GARDEN)	PARK-HOPKINS	10,510	10,480	10,080	10,960	10,940	13,780	10,930	11,480	12,910	11,210	39,800	11/18/2020	Urban Principal Arterial-Other
205	SR 406 (GARDEN)	HOPKINS-WASHINGTON	8,510	8,370	8,650	8,110	8,480	9,980	10,380	9,870	10,360	8,760	32,400	11/18/2020	Urban Principal Arterial-Other
233	SR 406 (GARDEN)	WASHINGTON-BLACK POINT RD.	4,370	4,800	4,510	4,030	4,900	5,960	5,290	6,120	6,530	4,980	14,800	12/7/2020	Urban Principal Arterial-Other
	SR 407	SR 528-SR 405	6,380	6,070	5,867	6,833	7,210	8,550	8,693	9,433	12,110	8,023			
225	SR 407	SR 528-I-95	6,990	6,340	6,140	6,830	7,220	8,750	9,150	9,970	12,640	7,520	8,820	11/17/2020	Rural Principal Arterial - Freeways & Expressways
548	SR 407	I-95-SHEPARD DR	6,500	6,320	6,290	7,460	7,660	9,190	8,980	10,090	12,850	9,370	24,200	12/7/2020	Urban Principal Arterial - Freeways & Expressways
224	SR 407	SHEPARD DR-SR 405	5,650	5,550	5,170	6,210	6,750	7,710	7,950	8,240	10,840	7,180	24,200	11/17/2020	Urban Principal Arterial - Freeways & Expressways

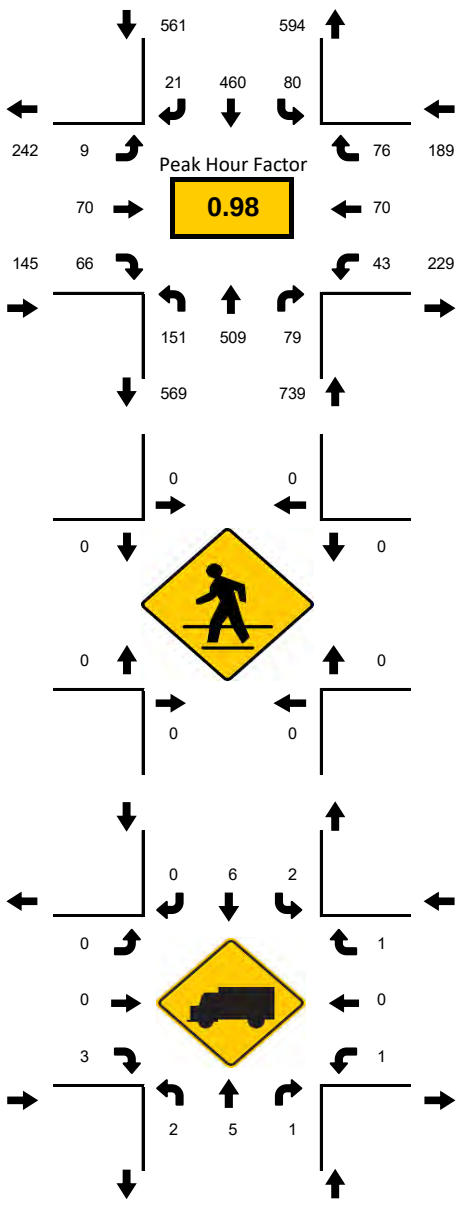
**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

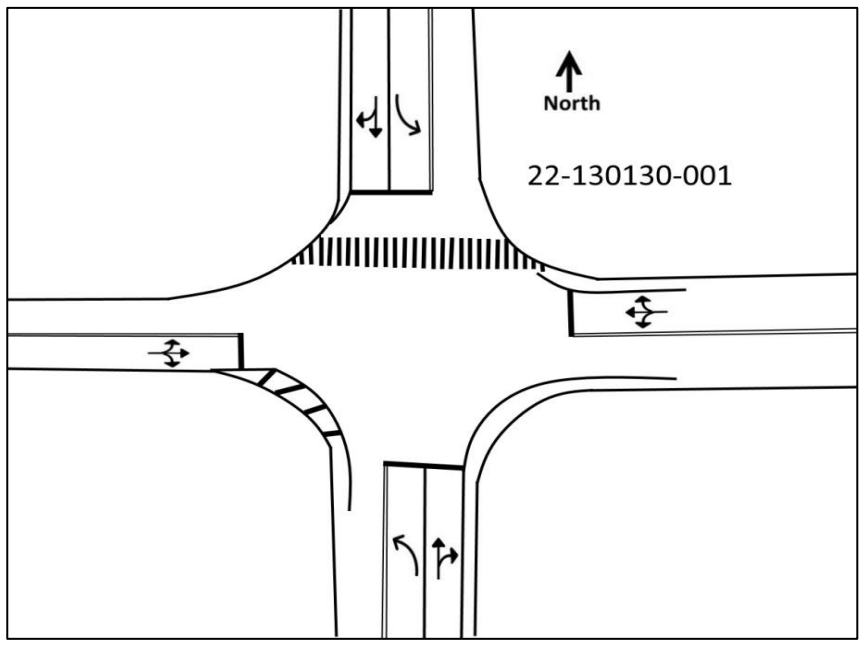
APPENDIX E
Turning Movement Counts

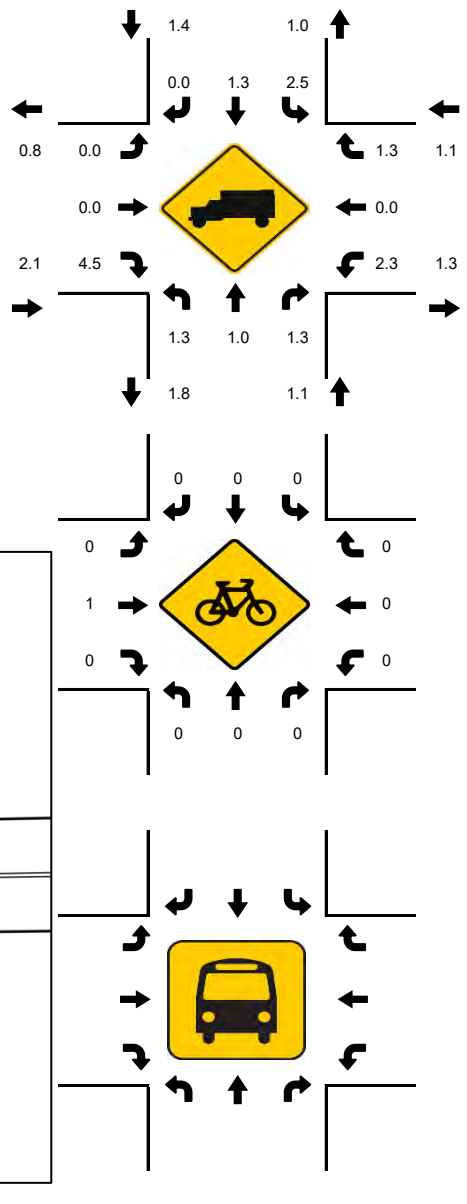
LOCATION: SR 405/South St & Fox Lake Rd
CITY/STATE: Titusville, FL

PROJECT ID: 22-130130-001
DATE: Wed, May 11, 2022

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM





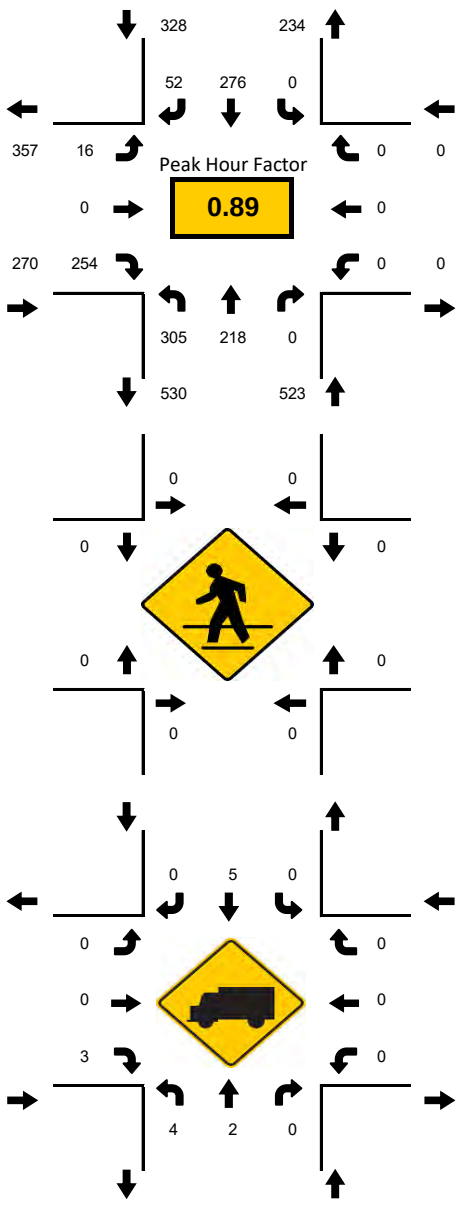


15-Min Count Period Beginning At	SR 405/South St Northbound					SR 405/South St Southbound					Fox Lake Rd Eastbound					Fox Lake Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	20	110	17	0		12	104	4	0		1	10	23	0		16	21	17	0		355	1493
04:15 PM	34	102	19	0		23	81	3	0		3	10	19	0		10	17	12	0		333	1553
04:30 PM	32	123	25	0		25	131	2	0		0	12	15	0		8	21	20	0		414	1634
04:45 PM	36	124	20	0		19	99	5	0		1	18	23	0		13	13	20	0		391	1575
05:00 PM	38	134	13	0		23	119	9	0		4	14	15	0		8	27	11	0		415	1542
05:15 PM	45	128	21	0		13	111	5	0		4	26	13	0		14	9	25	0		414	1127
05:30 PM	39	106	17	0		16	99	1	0		3	17	13	0		12	20	12	0		355	713
05:45 PM	25	113	20	0		22	74	3	0		2	29	20	0		16	11	23	0		358	358
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	180	536	100	0		100	524	36	0		16	104	92	0		56	108	100	0		**1952**	
Heavy Trucks	4	8	4	0		8	8	0	0		0	0	8	0		4	0	4	0		**48**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	4	0	0		0	0	0	0		**4**	
Buses																						
Stopped Buses																						

LOCATION: SR 405/South St & S Singleton Ave
CITY/STATE: Titusville, FL

PROJECT ID: 22-130130-002
DATE: Wed, May 11, 2022

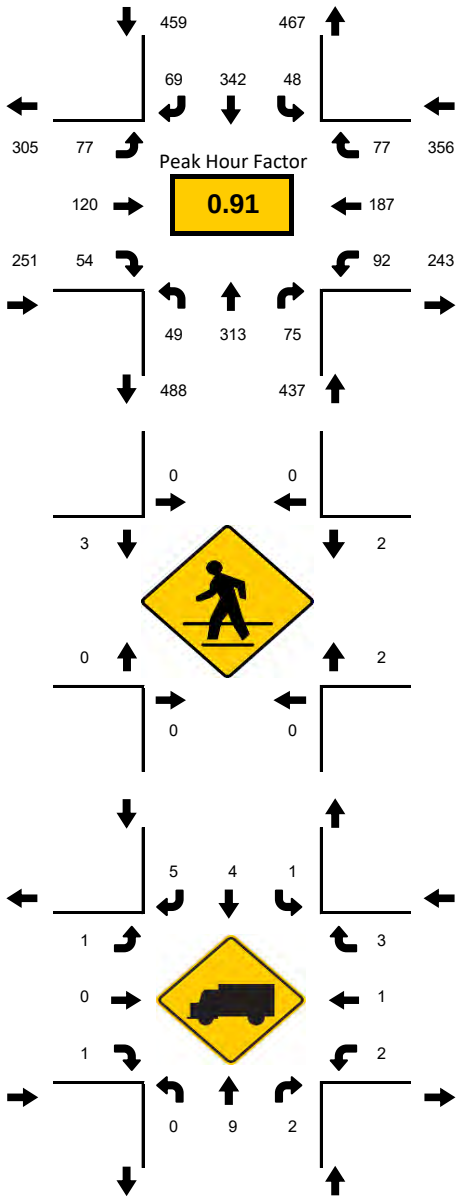
Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM


328
234
52
276
0
357
16
Peak Hour Factor
0.89
0
0
270
254
0
0
305
218
0
530
523
0
0
0

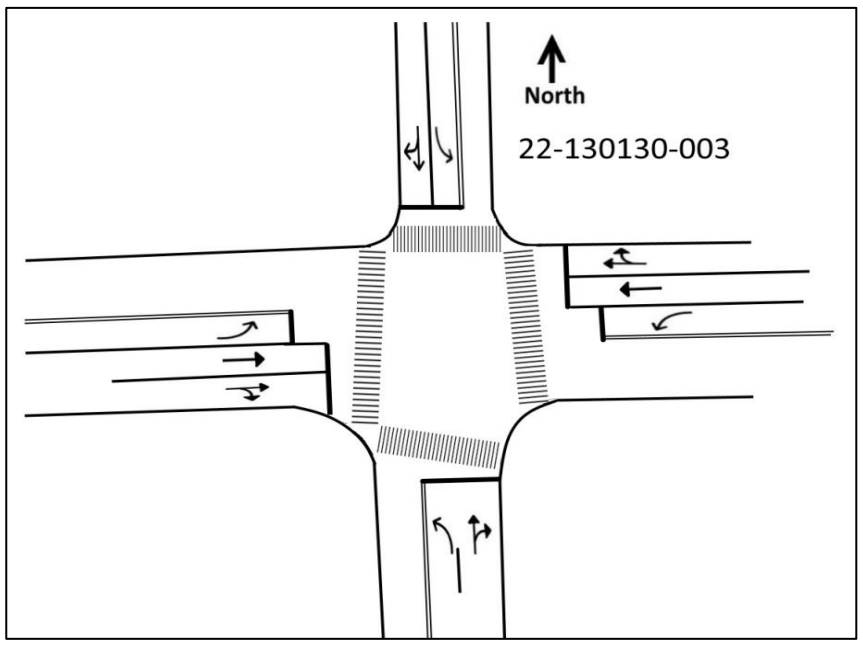
LOCATION: S Park Ave & SR 405/South St
CITY/STATE: Titusville, FL

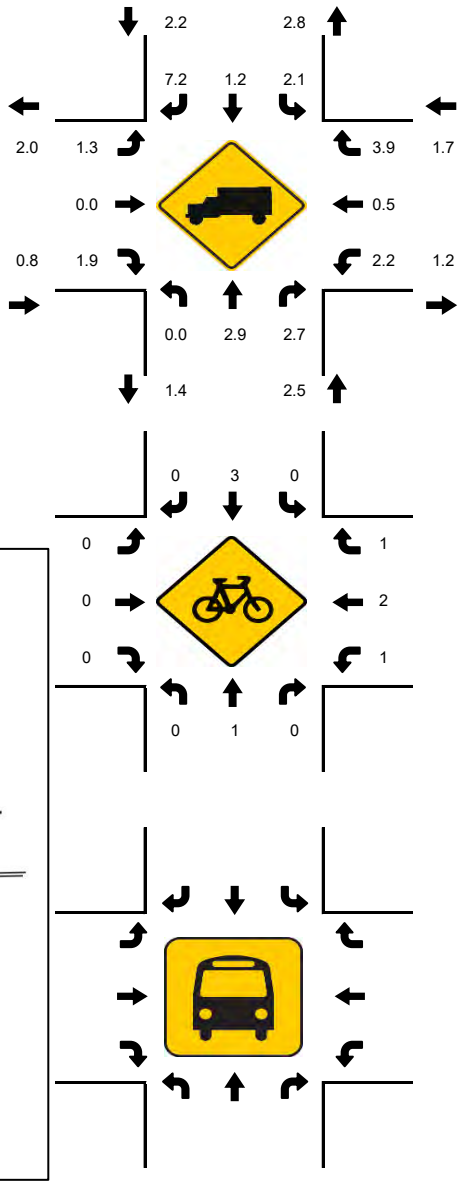
PROJECT ID: 22-130130-003
DATE: Wed, May 11, 2022

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM



National Data & Surveying Services





15-Min Count Period Beginning At	S Park Ave Northbound					S Park Ave Southbound					SR 405/South St Eastbound					SR 405/South St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	17	78	18	0		16	80	14	0		19	32	18	0		16	29	17	0		354	1402
04:15 PM	11	68	16	0		14	79	22	0		13	14	14	0		20	42	23	0		336	1461
04:30 PM	13	88	22	0		12	74	17	0		20	16	15	0		23	51	15	0		366	1503
04:45 PM	7	73	15	0		10	98	17	0		13	30	11	0		17	32	23	0		346	1474
05:00 PM	16	73	22	0		10	82	16	0		28	36	14	0		30	65	21	0		413	1447
05:15 PM	13	79	16	0		16	88	19	0		16	38	14	0		22	39	18	0		378	1034
05:30 PM	11	70	15	0		22	78	12	0		15	26	14	0		18	41	15	0		337	656
05:45 PM	9	66	17	0		11	77	13	0		19	34	12	0		15	30	16	0		319	319
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	64	352	88	0		64	392	76	0		112	152	60	0		120	260	92	0		**1832**	
Heavy Trucks	0	16	4	0		4	12	8	0		4	0	4	0		8	4	8	0		**72**	
Pedestrians		0					0					8					8				**16**	
Bicycles	0	4	0	0		0	8	0	0		0	0	0	0		4	8	4	0		**28**	
Buses																						
Stopped Buses																						

APPENDIX F
FDOT's Florida Traffic Online (FTO) Data

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.92

WEEK	DATES	SF	PSCF
* 1	01/01/2020 - 01/04/2020	1.00	1.09
* 2	01/05/2020 - 01/11/2020	0.95	1.03
* 3	01/12/2020 - 01/18/2020	0.90	0.98
* 4	01/19/2020 - 01/25/2020	0.88	0.96
* 5	01/26/2020 - 02/01/2020	0.87	0.95
* 6	02/02/2020 - 02/08/2020	0.85	0.92
* 7	02/09/2020 - 02/15/2020	0.84	0.91
* 8	02/16/2020 - 02/22/2020	0.86	0.93
* 9	02/23/2020 - 02/29/2020	0.89	0.97
*10	03/01/2020 - 03/07/2020	0.91	0.99
*11	03/08/2020 - 03/14/2020	0.94	1.02
*12	03/15/2020 - 03/21/2020	0.96	1.04
*13	03/22/2020 - 03/28/2020	1.05	1.14
14	03/29/2020 - 04/04/2020	1.14	1.24
15	04/05/2020 - 04/11/2020	1.23	1.34
16	04/12/2020 - 04/18/2020	1.33	1.45
17	04/19/2020 - 04/25/2020	1.26	1.37
18	04/26/2020 - 05/02/2020	1.19	1.29
19	05/03/2020 - 05/09/2020	1.12	1.22
20	05/10/2020 - 05/16/2020	1.05	1.14
21	05/17/2020 - 05/23/2020	1.04	1.13
22	05/24/2020 - 05/30/2020	1.03	1.12
23	05/31/2020 - 06/06/2020	1.02	1.11
24	06/07/2020 - 06/13/2020	1.02	1.11
25	06/14/2020 - 06/20/2020	1.01	1.10
26	06/21/2020 - 06/27/2020	1.02	1.11
27	06/28/2020 - 07/04/2020	1.02	1.11
28	07/05/2020 - 07/11/2020	1.03	1.12
29	07/12/2020 - 07/18/2020	1.04	1.13
30	07/19/2020 - 07/25/2020	1.04	1.13
31	07/26/2020 - 08/01/2020	1.04	1.13
32	08/02/2020 - 08/08/2020	1.04	1.13
33	08/09/2020 - 08/15/2020	1.04	1.13
34	08/16/2020 - 08/22/2020	1.03	1.12
35	08/23/2020 - 08/29/2020	1.03	1.12
36	08/30/2020 - 09/05/2020	1.02	1.11
37	09/06/2020 - 09/12/2020	1.02	1.11
38	09/13/2020 - 09/19/2020	1.01	1.10
39	09/20/2020 - 09/26/2020	1.01	1.10
40	09/27/2020 - 10/03/2020	1.00	1.09
41	10/04/2020 - 10/10/2020	1.00	1.09
42	10/11/2020 - 10/17/2020	0.99	1.08
43	10/18/2020 - 10/24/2020	1.00	1.09
44	10/25/2020 - 10/31/2020	1.00	1.09
45	11/01/2020 - 11/07/2020	1.01	1.10
46	11/08/2020 - 11/14/2020	1.01	1.10
47	11/15/2020 - 11/21/2020	1.02	1.11
48	11/22/2020 - 11/28/2020	1.01	1.10
49	11/29/2020 - 12/05/2020	1.01	1.10
50	12/06/2020 - 12/12/2020	1.00	1.09
51	12/13/2020 - 12/19/2020	1.00	1.09
52	12/20/2020 - 12/26/2020	0.95	1.03
53	12/27/2020 - 12/31/2020	0.90	0.98

* PEAK SEASON

27-FEB-2021 10:30:04 830UPD 5_7000_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 70 - BREVARD

SITE: 7109 - ON SOUTH STREET, 0.95 MILES NORTH OF FOX LAKE ROAD (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	10000 C	N 5300	S 4700	9.00	55.00	4.10
2019	16200 S	N 8200	S 8000	9.00	54.70	3.70
2018	16000 F	N 8100	S 7900	9.00	54.10	3.70
2017	15600 C	N 7900	S 7700	9.00	54.30	3.70
2016	13100 S	N 6600	S 6500	9.00	53.40	1.80
2015	12500 F	N 6300	S 6200	9.00	53.80	1.80
2014	12100 C	N 6100	S 6000	9.00	53.80	1.80
2013	12600 F	N 6200	S 6400	9.00	54.20	2.30
2012	12600 C	N 6200	S 6400	9.00	53.60	2.30

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

APPENDIX G
Turning Movement Volume Worksheets

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	N/S	***Buildout Year:***	2024	
Minor Street:	Fox Lake Rd	E/W	***Seasonal Factor:***	1.05	

PHF: 0.98

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								Fox Lake Rd							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	151	509	79	0	80	460	21	0	9	70	66	0	43	70	76
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	1%	1%	1%	0%	3%	1%	0%	0%	0%	0%	5%	0%	2%	0%	1%
Existing (2022)	**0**	**159**	**534**	**83**	**0**	**84**	**483**	**22**	**0**	**9**	**74**	**69**	**0**	**45**	**74**	**80**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]		22						11		7	5	13			8	
Background (2024)	**0**	**181**	**566**	**88**	**0**	**90**	**512**	**33**	**0**	**16**	**79**	**82**	**0**	**48**	**82**	**85**
Project Assignment																
Ingress			45%							1%						2%
Egress						2%	45%	1%								
Project Trips	0	0	39	0	0	1	25	1	0	1	0	0	0	0	0	2
Project Buildout	**0**	**181**	**605**	**88**	**0**	**91**	**537**	**34**	**0**	**17**	**79**	**82**	**0**	**48**	**82**	**87**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	2		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	S Singleton Ave	E/W	***Buildout Year:***	2024	
Minor Street:	SR405/South St	N/S	***Seasonal Factor:***	1.05	

PHF: 0.89

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								S Singleton Ave							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	305	218	0	0	0	276	52	0	16	0	254	0	0	0	0
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing (2022)	**0**	**320**	**229**	**0**	**0**	**0**	**290**	**55**	**0**	**17**	**0**	**267**	**0**	**0**	**0**	**0**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]			31				38									
Background (2024)	**0**	**339**	**260**	**0**	**0**	**0**	**328**	**58**	**0**	**18**	**0**	**283**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress						4%	5%			12%	24%	13%		5%		8%
Egress		13%	5%	5%		8%		12%							24%	4%
Project Trips	0	7	3	3	0	8	4	7	0	11	21	11	0	4	14	9
Project Buildout	**0**	**346**	**263**	**3**	**0**	**8**	**332**	**65**	**0**	**29**	**21**	**294**	**0**	**4**	**14**	**9**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	3		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	E/W	***Buildout Year:***	2024	
Minor Street:	S Park Ave	N/S	***Seasonal Factor:***	1.05	

PHF: 0.91

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	S Park Ave								SR405/South St							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	49	313	75	0	48	342	69	0	77	120	54	0	92	187	77
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	0%	3%	3%	0%	2%	1%	7%	0%	1%	1%	2%	0%	2%	1%	4%
Existing (2022)	**0**	**51**	**329**	**79**	**0**	**50**	**359**	**72**	**0**	**81**	**126**	**57**	**0**	**97**	**196**	**81**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]		16						17		18	42	20			38	
Background (2024)	**0**	**67**	**349**	**84**	**0**	**53**	**381**	**89**	**0**	**99**	**176**	**77**	**0**	**103**	**245**	**86**
Project Assignment																
Ingress		7%						9%							16%	
Egress										9%	16%	7%				
Project Trips	0	6	0	0	0	0	0	8	0	5	9	4	0	0	14	0
Project Buildout	**0**	**73**	**349**	**84**	**0**	**53**	**381**	**97**	**0**	**104**	**185**	**81**	**0**	**103**	**259**	**86**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	4		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	Project Drwy	N/S	***Buildout Year:***	2024	
Minor Street:	S Singleton Ave	E/W	***Seasonal Factor:***	1.05	
PHF:	0.92				

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	Project Drwy								S Singleton Ave							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	0	0	0	0	0	0	0	0	0	270	0	0	0	357	0
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%
Existing (2022)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**284**	**0**	**0**	**0**	**375**	**0**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]																
Background (2024)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**302**	**0**	**0**	**0**	**397**	**0**
Project Assignment																
Ingress										8%	9%					20%
Egress						20%		8%							9%	
Project Trips	0	0	0	0	0	11	0	5	0	7	8	0	0	0	5	18
Project Buildout	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**5**	**0**	**7**	**310**	**0**	**0**	**0**	**402**	**18**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	5		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	N/S	***Buildout Year:***	2024	
Minor Street:	Project Drwy	E/W	***Seasonal Factor:***	1.05	

PHF: 0.92

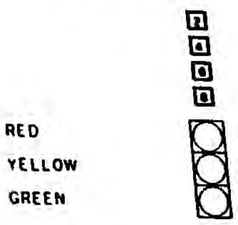
PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								Project Drwy							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	0	234	0	0	0	328	0	0	0	0	0	0	0	0	0
Seasonal Factor			1.05				1.05				1.05				1.05	
Heavy Vehicle (%)	0%	0%	1%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing (2022)	**0**	**0**	**246**	**0**	**0**	**0**	**344**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Growth Factor			*1.00*				*1.00*				*1.00*				*1.00*	
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips[1]			31				38									
Background (2024)	**0**	**0**	**277**	**0**	**0**	**0**	**382**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress		12%		16%		13%	13%	8%								
Egress			13%							8%		12%		16%		13%
Project Trips	0	11	7	14	0	12	11	7	0	5	0	7	0	9	0	7
Project Buildout	**0**	**11**	**284**	**14**	**0**	**12**	**393**	**7**	**0**	**5**	**0**	**7**	**0**	**9**	**0**	**7**

APPENDIX H
Signal Timings

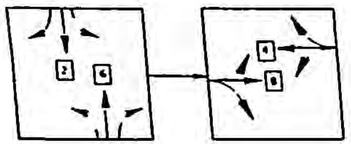
STATE PROJ. NO.	SHEET NO.
70160-3501	T-4

DETAIL OF SIGNAL HEADS



NO. REQ'D 8 AS.
ITEM NO. 650-1-131

MOVEMENT DIAGRAM



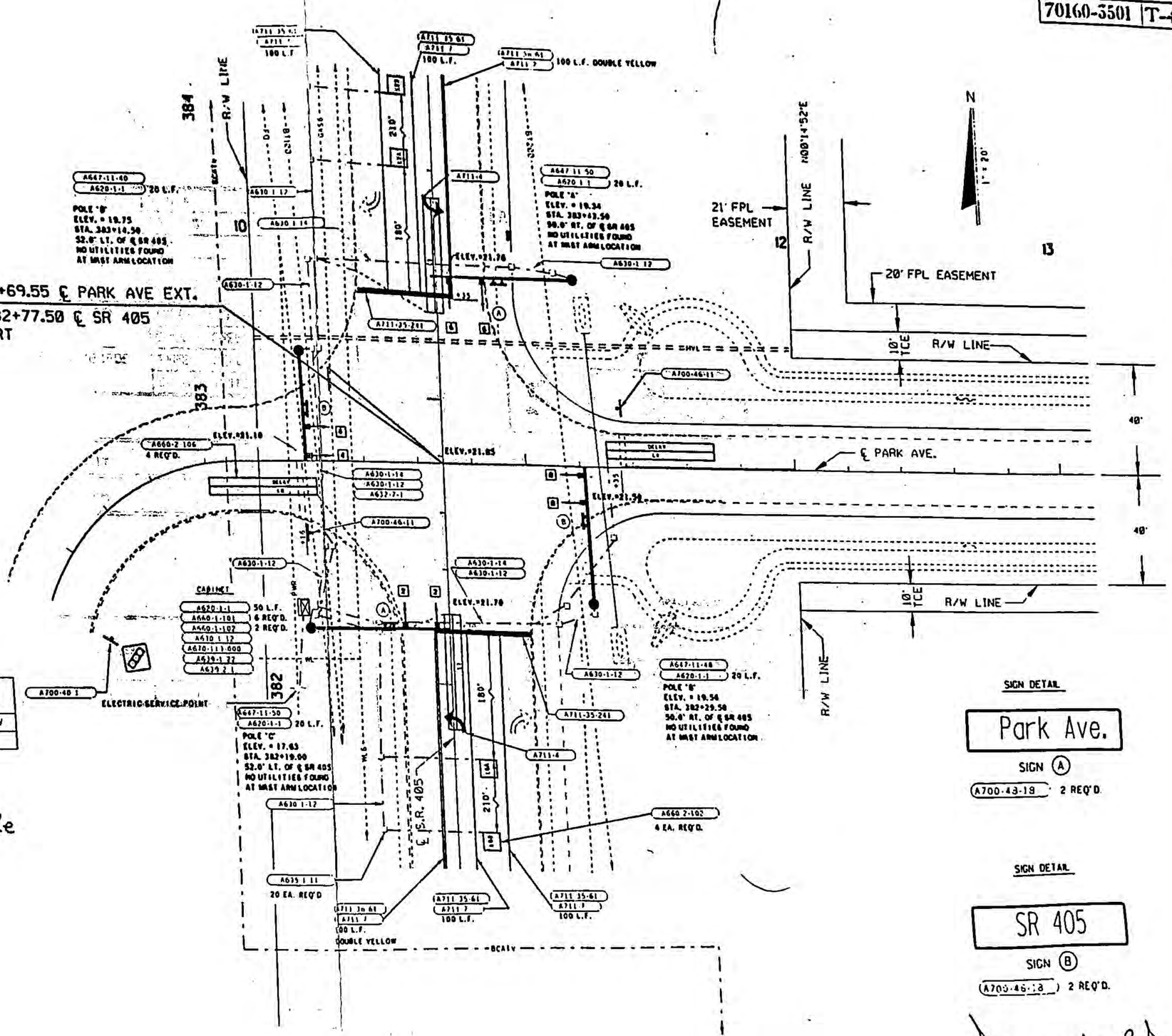
CONTROLLER TIMINGS

MOVEMENT	MIN	EXT	MAX	CL	ALL RED	WALK	FDW	RECALL	DETECTOR FUNCTION	FLASH
2+6	17	3	50	4	1	-	-	MIN.	LOCK	YELLOW
4+8	6	3	15	4	1	-	-	OFF	NL	RED

SR 405 + PARK South of Fox lake

UTILITY CONTACTS:

BELLSOUTH TELECOMUNICATIONS, INC.	407-455-7133.
CONTACT FLORIDA POWER AND LIGHT COMPANY	407-726-4820.
TIME WARNER CABLE	407-631-3770.
CITY GAS COMPANY OF FLORIDA	407-632-1735.
CITY OF TITUSVILLE COMPANY	407-268-6050.
BREVARD COUNTY	407-633-2841.

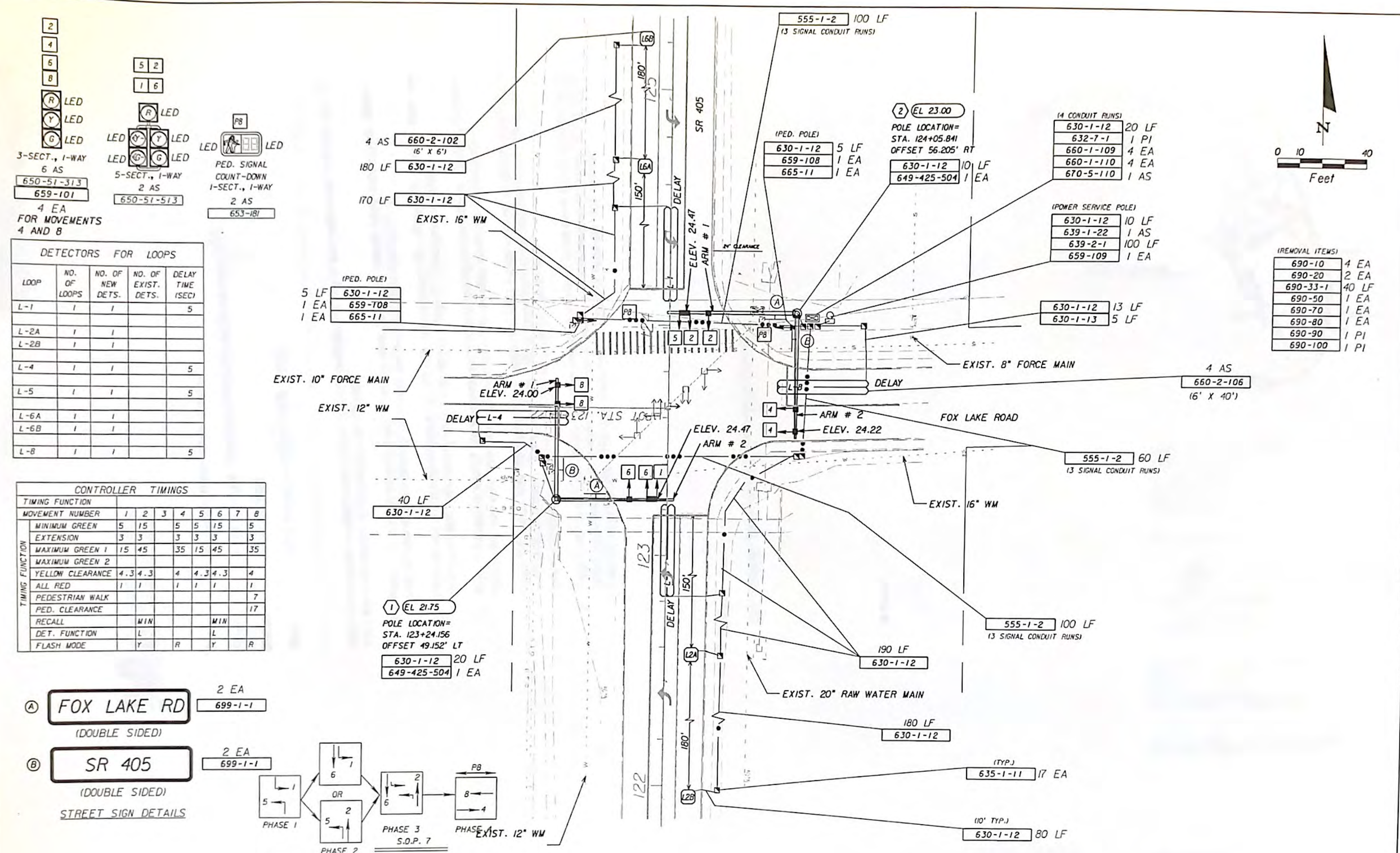


2/21/97

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

INTERSECTION DETAILS



DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	NO. OF EXIST. DETS.	DELAY TIME (SEC)
L-1	1	1		5
L-2A	1	1		
L-2B	1	1		
L-4	1	1		5
L-5	1	1		5
L-6A	1	1		
L-6B	1	1		
L-8	1	1		5

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15		5	5	15		5
EXTENSION	3	3		3	3	3		3
MAXIMUM GREEN 1	15	45		35	15	45		35
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.3	4.3		4	4.3	4.3		4
ALL RED	1	1		1	1	1		1
PEDESTRIAN WALK								7
PED. CLEARANCE								17
RECALL		MIN				MIN		
DET. FUNCTION		L				L		
FLASH MODE		Y		R		Y		R

TIMING FUNCTION

A FOX LAKE RD — 2 EA 699-1-1
(DOUBLE SIDED)

B SR 405 — 2 EA 699-1-1
(DOUBLE SIDED)

STREET SIGN DETAILS

NOTE:
SIGNAL OPERATION PLAN IS S.O.P. 7 HOWEVER, CABINET SHALL BE WIRED TO S.O.P. 10.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

SANJIV S. CHOKSHI
P.E. LICENCE NO. 55854
Ghyabi & Associates, Inc.
214 East New York Avenue
DeLand, FL 32724
Phone: 386/469-0006
Fax: 386/469-0017
C.A. # 7311

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 405	BREVARD	413764-1-52-01

SIGNALIZATION PLAN

SHEET NO. T-5

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

prowathe 11/8/2005 2:58:50 PM n:\2563-04\413764\PDP\Signals\Plans01.dgn

APPENDIX I

Synchro Outputs

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	9	74	45	74	159	534	84	483
Future Volume (vph)	9	74	45	74	159	534	84	483
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 64.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	74	69	45	74	80	159	534	83	84	483	22
Future Volume (veh/h)	9	74	69	45	74	80	159	534	83	84	483	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	9	76	70	46	76	82	162	545	85	86	493	22
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	87	157	136	138	129	117	473	675	105	376	721	32
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.43	0.43	0.07	0.41	0.41
Sat Flow, veh/h	44	901	778	262	738	672	1781	1580	246	1767	1777	79
Grp Volume(v), veh/h	155	0	0	204	0	0	162	0	630	86	0	515
Grp Sat Flow(s),veh/h/ln	1722	0	0	1673	0	0	1781	0	1826	1767	0	1856
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	2.4	0.0	14.4	1.3	0.0	10.9
Cycle Q Clear(g_c), s	3.9	0.0	0.0	5.3	0.0	0.0	2.4	0.0	14.4	1.3	0.0	10.9
Prop In Lane	0.06		0.45	0.23		0.40	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	381	0	0	385	0	0	473	0	780	376	0	753
V/C Ratio(X)	0.41	0.00	0.00	0.53	0.00	0.00	0.34	0.00	0.81	0.23	0.00	0.68
Avail Cap(c_a), veh/h	1144	0	0	1100	0	0	670	0	1519	609	0	1544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	0.0	18.4	0.0	0.0	8.1	0.0	12.0	9.0	0.0	11.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	0.0	0.4	0.0	2.0	0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.9	0.0	0.0	0.6	0.0	4.3	0.3	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	19.5	0.0	0.0	8.6	0.0	14.0	9.3	0.0	12.8
LnGrp LOS	B	A	A	B	A	A	A	A	B	A	A	B
Approach Vol, veh/h		155			204			792			601	
Approach Delay, s/veh		18.6			19.5			12.9			12.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	24.7		13.3	8.7	25.7		13.3				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.4	12.9		7.3	3.3	16.4		5.9				
Green Ext Time (p_c), s	0.2	3.1		1.1	0.1	4.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	267	320	229	290	55
Future Vol, veh/h	17	267	320	229	290	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	170	410	-	-	400
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	300	360	257	326	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1303	326	388	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	177	715	1170	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	122	715	1170	-	-	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	365	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	5.5	0
HCM LOS	C		

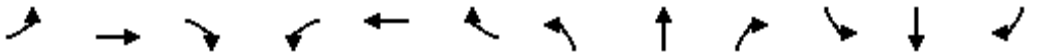
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1170	-	122	715	-	-
HCM Lane V/C Ratio	0.307	-	0.157	0.42	-	-
HCM Control Delay (s)	9.4	-	39.9	13.6	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	1.3	-	0.5	2.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	81	126	97	196	51	329	50	359
Future Volume (vph)	81	126	97	196	51	329	50	359
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 36.2
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	126	57	97	196	81	51	329	79	50	359	72
Future Volume (veh/h)	81	126	57	97	196	81	51	329	79	50	359	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	89	138	63	107	215	89	56	362	87	55	395	79
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	364	535	233	411	550	220	492	708	170	508	741	148
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1075	2410	1049	1181	2477	992	920	1446	347	941	1513	303
Grp Volume(v), veh/h	89	100	101	107	152	152	56	0	449	55	0	474
Grp Sat Flow(s),veh/h/ln	1075	1777	1682	1181	1777	1692	920	0	1793	941	0	1816
Q Serve(g_s), s	2.7	1.6	1.7	2.9	2.5	2.7	1.6	0.0	5.9	1.5	0.0	6.3
Cycle Q Clear(g_c), s	5.3	1.6	1.7	4.6	2.5	2.7	7.8	0.0	5.9	7.4	0.0	6.3
Prop In Lane	1.00		0.62	1.00		0.59	1.00		0.19	1.00		0.17
Lane Grp Cap(c), veh/h	364	395	373	411	395	376	492	0	878	508	0	889
V/C Ratio(X)	0.24	0.25	0.27	0.26	0.39	0.40	0.11	0.00	0.51	0.11	0.00	0.53
Avail Cap(c_a), veh/h	435	512	484	489	512	487	1234	0	2325	1267	0	2354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	11.1	11.2	13.1	11.5	11.5	8.8	0.0	6.0	8.5	0.0	6.1
Incr Delay (d2), s/veh	0.3	0.3	0.4	0.3	0.6	0.7	0.1	0.0	0.5	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.5	0.6	0.8	0.8	0.2	0.0	1.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	11.5	11.6	13.4	12.1	12.2	8.9	0.0	6.5	8.6	0.0	6.6
LnGrp LOS	B	B	B	B	B	B	A	A	A	A	A	A
Approach Vol, veh/h		290			411			505			529	
Approach Delay, s/veh		12.3			12.5			6.8			6.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		12.7		22.0		12.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		9.8		7.3		9.4		6.6				
Green Ext Time (p_c), s		3.4		0.4		3.6		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			9.1									
HCM 6th LOS			A									

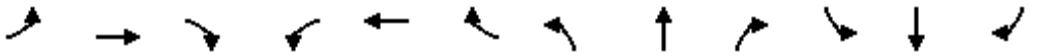
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	79	48	82	181	566	90	512
Future Volume (vph)	16	79	48	82	181	566	90	512
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 68.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	79	82	48	82	85	181	566	88	90	512	33
Future Volume (veh/h)	16	79	82	48	82	85	181	566	88	90	512	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	16	81	84	49	84	87	185	578	90	92	522	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	90	153	144	134	137	121	453	700	109	360	733	48
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.09	0.44	0.44	0.07	0.42	0.42
Sat Flow, veh/h	77	846	799	264	757	668	1781	1580	246	1767	1737	113
Grp Volume(v), veh/h	181	0	0	220	0	0	185	0	668	92	0	556
Grp Sat Flow(s),veh/h/ln	1722	0	0	1689	0	0	1781	0	1826	1767	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	2.9	0.0	16.4	1.4	0.0	12.7
Cycle Q Clear(g_c), s	4.9	0.0	0.0	6.0	0.0	0.0	2.9	0.0	16.4	1.4	0.0	12.7
Prop In Lane	0.09		0.46	0.22		0.40	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	387	0	0	391	0	0	453	0	809	360	0	781
V/C Ratio(X)	0.47	0.00	0.00	0.56	0.00	0.00	0.41	0.00	0.83	0.26	0.00	0.71
Avail Cap(c_a), veh/h	1060	0	0	1030	0	0	627	0	1419	569	0	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	19.6	0.0	0.0	8.7	0.0	12.5	9.5	0.0	12.2
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.3	0.0	0.0	0.6	0.0	2.2	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	2.3	0.0	0.0	0.8	0.0	5.1	0.4	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	0.0	0.0	20.9	0.0	0.0	9.3	0.0	14.7	9.9	0.0	13.4
LnGrp LOS	C	A	A	C	A	A	A	A	B	A	A	B
Approach Vol, veh/h		181			220			853			648	
Approach Delay, s/veh		20.0			20.9			13.6			12.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.9		14.2	8.9	27.9		14.2				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.9	14.7		8.0	3.4	18.4		6.9				
Green Ext Time (p_c), s	0.2	3.4		1.2	0.1	4.2		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	283	339	260	328	58
Future Vol, veh/h	18	283	339	260	328	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	170	410	-	-	400
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	318	381	292	369	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1423	369	434	0	-	0
Stage 1	369	-	-	-	-	-
Stage 2	1054	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	150	677	1126	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	99	677	1126	-	-	-
Mov Cap-2 Maneuver	99	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	335	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	5.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1126	-	99	677	-	-
HCM Lane V/C Ratio	0.338	-	0.204	0.47	-	-
HCM Control Delay (s)	9.8	-	50.5	14.9	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	1.5	-	0.7	2.5	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	176	103	245	67	349	53	381
Future Volume (vph)	99	176	103	245	67	349	53	381
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 38.2
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	176	77	103	245	86	67	349	84	53	381	89
Future Volume (veh/h)	99	176	77	103	245	86	67	349	84	53	381	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	109	193	85	113	269	95	74	384	92	58	419	98
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	365	612	260	403	653	225	429	681	163	456	690	161
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1018	2431	1031	1101	2592	894	884	1447	347	918	1466	343
Grp Volume(v), veh/h	109	139	139	113	182	182	74	0	476	58	0	517
Grp Sat Flow(s),veh/h/ln	1018	1777	1685	1101	1777	1709	884	0	1793	918	0	1809
Q Serve(g_s), s	3.6	2.3	2.4	3.4	3.1	3.2	2.4	0.0	6.9	1.8	0.0	7.6
Cycle Q Clear(g_c), s	6.8	2.3	2.4	5.8	3.1	3.2	10.1	0.0	6.9	8.7	0.0	7.6
Prop In Lane	1.00		0.61	1.00		0.52	1.00		0.19	1.00		0.19
Lane Grp Cap(c), veh/h	365	448	424	403	448	431	429	0	845	456	0	852
V/C Ratio(X)	0.30	0.31	0.33	0.28	0.41	0.42	0.17	0.00	0.56	0.13	0.00	0.61
Avail Cap(c_a), veh/h	391	492	467	431	492	474	1115	0	2236	1169	0	2255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	11.0	11.0	13.4	11.3	11.3	10.8	0.0	6.9	10.0	0.0	7.1
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.4	0.6	0.7	0.2	0.0	0.6	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.8	0.7	1.0	1.0	0.4	0.0	1.6	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	11.3	11.5	13.7	11.8	12.0	11.0	0.0	7.5	10.1	0.0	7.8
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		387			477			550			575	
Approach Delay, s/veh		12.3			12.3			7.9			8.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		14.1		22.0		14.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		12.1		8.8		10.7		7.8				
Green Ext Time (p_c), s		3.8		0.3		4.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			9.9									
HCM 6th LOS			A									

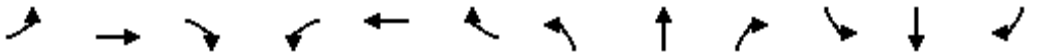
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	79	48	82	181	605	91	537
Future Volume (vph)	17	79	48	82	181	605	91	537
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 70
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	79	82	48	82	87	181	605	88	91	537	34
Future Volume (veh/h)	17	79	82	48	82	87	181	605	88	91	537	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	17	81	84	49	84	89	185	617	90	93	548	35
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	88	152	143	129	134	122	446	734	107	346	766	49
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.09	0.46	0.46	0.07	0.44	0.44
Sat Flow, veh/h	82	846	796	263	750	678	1781	1596	233	1767	1739	111
Grp Volume(v), veh/h	182	0	0	222	0	0	185	0	707	93	0	583
Grp Sat Flow(s),veh/h/ln	1725	0	0	1691	0	0	1781	0	1828	1767	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	2.9	0.0	18.3	1.5	0.0	13.8
Cycle Q Clear(g_c), s	5.1	0.0	0.0	6.4	0.0	0.0	2.9	0.0	18.3	1.5	0.0	13.8
Prop In Lane	0.09		0.46	0.22		0.40	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	383	0	0	385	0	0	446	0	841	346	0	815
V/C Ratio(X)	0.48	0.00	0.00	0.58	0.00	0.00	0.41	0.00	0.84	0.27	0.00	0.72
Avail Cap(c_a), veh/h	1009	0	0	982	0	0	609	0	1353	542	0	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	0.0	0.0	20.7	0.0	0.0	8.9	0.0	12.7	9.9	0.0	12.3
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.4	0.0	0.0	0.6	0.0	2.7	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	2.5	0.0	0.0	0.8	0.0	5.8	0.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	0.0	0.0	22.0	0.0	0.0	9.5	0.0	15.5	10.4	0.0	13.4
LnGrp LOS	C	A	A	C	A	A	A	A	B	B	A	B
Approach Vol, veh/h		182			222			892			676	
Approach Delay, s/veh		21.1			22.0			14.2			13.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	28.9		14.6	9.0	30.0		14.6				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.9	15.8		8.4	3.5	20.3		7.1				
Green Ext Time (p_c), s	0.2	3.6		1.2	0.1	4.4		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	13.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	21	294	4	14	9	346	263	3	8	332	65
Future Vol, veh/h	29	21	294	4	14	9	346	263	3	8	332	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	170	-	-	-	410	-	-	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	24	330	4	16	10	389	296	3	9	373	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1480	1468	373	1681	1540	298	446	0	0	299	0	0
Stage 1	391	391	-	1076	1076	-	-	-	-	-	-	-
Stage 2	1089	1077	-	605	464	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	104	128	673	75	115	741	1114	-	-	1262	-	-
Stage 1	633	607	-	266	296	-	-	-	-	-	-	-
Stage 2	261	295	-	485	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	82	673	22	74	741	1114	-	-	1262	-	-
Mov Cap-2 Maneuver	63	82	-	22	74	-	-	-	-	-	-	-
Stage 1	412	601	-	173	193	-	-	-	-	-	-	-
Stage 2	154	192	-	235	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.7	91.1	5.6	0.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1114	-	-	70	673	70	1262	-	-
HCM Lane V/C Ratio	0.349	-	-	0.803	0.491	0.433	0.007	-	-
HCM Control Delay (s)	10	-	-	155.3	15.4	91.1	7.9	-	-
HCM Lane LOS	A	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	3.8	2.7	1.7	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	104	185	103	259	73	349	53	381
Future Volume (vph)	104	185	103	259	73	349	53	381
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 38.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	185	81	103	259	86	73	349	84	53	381	97
Future Volume (veh/h)	104	185	81	103	259	86	73	349	84	53	381	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	114	203	89	113	285	95	80	384	92	58	419	107
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	365	630	266	403	682	222	414	675	162	449	671	171
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1003	2433	1029	1087	2633	859	877	1447	347	918	1437	367
Grp Volume(v), veh/h	114	146	146	113	190	190	80	0	476	58	0	526
Grp Sat Flow(s),veh/h/ln	1003	1777	1685	1087	1777	1716	877	0	1793	918	0	1804
Q Serve(g_s), s	3.9	2.4	2.6	3.4	3.2	3.4	2.8	0.0	7.0	1.8	0.0	8.0
Cycle Q Clear(g_c), s	7.2	2.4	2.6	6.0	3.2	3.4	10.7	0.0	7.0	8.8	0.0	8.0
Prop In Lane	1.00		0.61	1.00		0.50	1.00		0.19	1.00		0.20
Lane Grp Cap(c), veh/h	365	460	436	403	460	444	414	0	837	449	0	842
V/C Ratio(X)	0.31	0.32	0.33	0.28	0.41	0.43	0.19	0.00	0.57	0.13	0.00	0.62
Avail Cap(c_a), veh/h	381	488	463	420	488	471	1088	0	2215	1155	0	2229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	10.9	11.0	13.4	11.2	11.2	11.4	0.0	7.1	10.3	0.0	7.3
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.4	0.6	0.7	0.2	0.0	0.6	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.8	0.8	0.7	1.0	1.0	0.4	0.0	1.6	0.3	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	11.3	11.4	13.8	11.8	11.9	11.6	0.0	7.7	10.4	0.0	8.1
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		406			493			556			584	
Approach Delay, s/veh		12.3			12.3			8.2			8.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		14.4		22.0		14.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		12.7		9.2		10.8		8.0				
Green Ext Time (p_c), s		3.8		0.2		4.1		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	310	402	18	11	5
Future Vol, veh/h	7	310	402	18	11	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	337	437	20	12	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	457	0	-	0	800	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1104	-	-	-	354	612
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1104	-	-	-	351	612
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1104	-	-	-	405
HCM Lane V/C Ratio	0.007	-	-	-	0.043
HCM Control Delay (s)	8.3	0	-	-	14.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	0	7	9	0	7	11	284	14	12	393	7
Future Vol, veh/h	5	0	7	9	0	7	11	284	14	12	393	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	8	10	0	8	12	309	15	13	427	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	802	805	431	802	802	317	435	0	0	324	0	0
Stage 1	457	457	-	341	341	-	-	-	-	-	-	-
Stage 2	345	348	-	461	461	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	302	316	624	302	317	724	1125	-	-	1236	-	-
Stage 1	583	568	-	674	639	-	-	-	-	-	-	-
Stage 2	671	634	-	581	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	307	624	292	308	724	1125	-	-	1236	-	-
Mov Cap-2 Maneuver	293	307	-	292	308	-	-	-	-	-	-	-
Stage 1	575	560	-	665	631	-	-	-	-	-	-	-
Stage 2	655	626	-	566	557	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	14.5	0.3	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	424	395	1236	-	-
HCM Lane V/C Ratio	0.011	-	-	0.031	0.044	0.011	-	-
HCM Control Delay (s)	8.2	0	-	13.8	14.5	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

APPENDIX J

Vested Trips Developments

South Carpenter Estates
City of Titusville, Florida

Traffic Impact Study

Prepared for South Carpenter Estates LLC.
By LTG, Inc.
February 2018

LTG Engineering & Planning

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with LTG, Inc., a corporation authorized to operate as an engineering business, EB 0009227, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: South Carpenter Estates

LOCATION: City of Titusville, Florida

CLIENT: South Carpenter Estates, LLC.

JOB #: 4511.02

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

Prepared by:
LTG, Inc.
1970 Dairy Road,
W. Melbourne, FL 32904
Certificate of Authorization 9227
321/499-4679

This item has been electronically signed and sealed by: Gil Ramirez, PE on date shown using a digital signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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INTRODUCTION

LTG Inc. has been retained by South Carpenter Estates, LLC. to prepare a Traffic Impact Study (TIS) for the proposed South Carpenter Estates Subdivision located in the northeast corner of Carpenter Road and Fox Lake Road in the City of Titusville, Florida. The proposed development consists of 70 single family lots and has an anticipated build-out year of 2018. Figure 1 shows the location of the project relative to the surrounding road network. A preliminary site plan showing the site layout is attached as Appendix A.

Study Area

The study area includes the following intersections as approved in the submitted methodology. The methodology is included as Appendix B.

Intersections:

- Carpenter Road at Fox Lake Road
- Carpenter Road at Project Driveway
- Fox Lake Road at SR 405/South Street
- SR 405/South Street at Park Avenue

Roadway Segments:

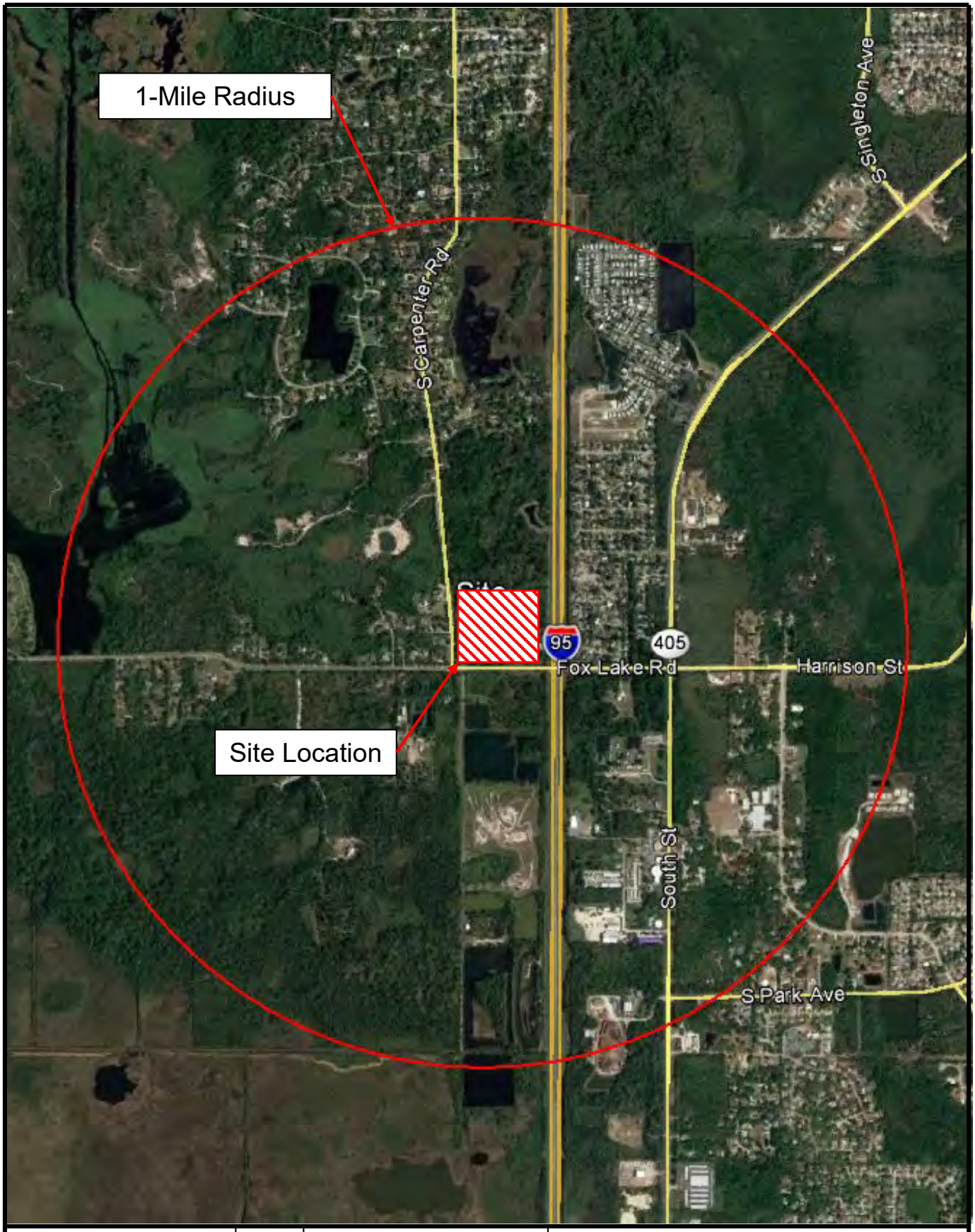
- Carpenter Road from Fox Lake Road to Garden Street
- Fox Lake Road from Carpenter Road to SR405/South Street
- Harrison Street from SR 405/South Street to 0.57 Mile east of South Street
- SR 405/South Street from SR 50 to Fox Lake Road
- SR 405/South Street from Fox Lake Road to Singleton Avenue

Study Procedures

Standard engineering and planning procedures were used to determine the impacts of this project. Reference data was obtained from the Florida Department of Transportation (FDOT), the City of Titusville, the Space Coast Transportation Planning Organization (TPO), and the Brevard County Planning Department.

Planned Roadway Improvements

FDOT's Five Year Work Program, Space Coast TPO Transportation Improvement Program, and the City of Titusville Capital Improvement Program were reviewed to ascertain if there were any programmed or planned roadway improvements within the area of interest. Based on information obtained, there are no completions of planned capacity enhancing improvements scheduled within the area before the end of 2021.



South Carpenter Estates	N NTS	**Site Location Map**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 1	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2

EXISTING ROADWAY ANALYSIS

Peak-period turning movement counts for the a.m. and p.m. peak-hours were conducted at the study area intersections on a typical weekday. Figures 2 and 3 graphically show the existing a.m. and p.m. peak-hour turning movements at the study area intersections. The raw traffic counts are provided in Appendix C.

Unsignalized Intersection Analysis

The Level of Service (LOS) at an unsignalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the unsignalized intersection were evaluated using *Highway Capacity Software 2010 version 7.4 (HCS).* This software utilizes the procedures outlined in Chapter 20 of the *Highway Capacity Manual 6th Edition*, titled "Two-Way Stop-Controlled Intersections". Table 1 shows the existing a.m. and p.m. peak-hour LOS at the unsignalized study area intersection. The HCS summary sheet is located in Appendix D. As indicated in the table, the unsignalized intersection currently operates within the adopted LOS.

Table 1
Existing A.M. and P.M. Peak-Hour LOS - Unsignalized Intersection
South Carpenter Estates

Intersections	Adopted LOS	Existing Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.2	B	SB	10.9	B

Signalized Intersection Analysis

The LOS at a signalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the signalized intersections were evaluated using the agencies' signal timings, optimized signal timings and HCS. This software utilizes the procedures outlined in Chapter 19 of the *Highway Capacity Manual, 6th Edition*. Table 2 shows the existing a.m. and p.m. peak-hour LOS at the signalized intersection. As indicated in the table, the signalized intersection is currently operating out within the adopted LOS with v/c ratio less than 1.0. The HCS worksheets are located in Appendix E. The signal timing is included in Appendix F.

Table 2
Existing A.M. and P.M. Peak-Hour LOS - Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Existing Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	13.7	B	No	13.4	B	No
South St. at Park Ave.	E	11.1	B	No	11.2	B	No

Roadway Segment Analysis

Roadway level of service describes the operating condition determined from the number of vehicles passing over a given section of roadway during a specified time period. It is a qualitative measure of several factors which include: speed, travel time, traffic interruptions, freedom to maneuver, driver comfort, convenience, safety and vehicle operating costs. Six levels of service have been established as standards by which to gauge roadway performance, designated by the letters A through F. The level of service categories are defined as follows**:**

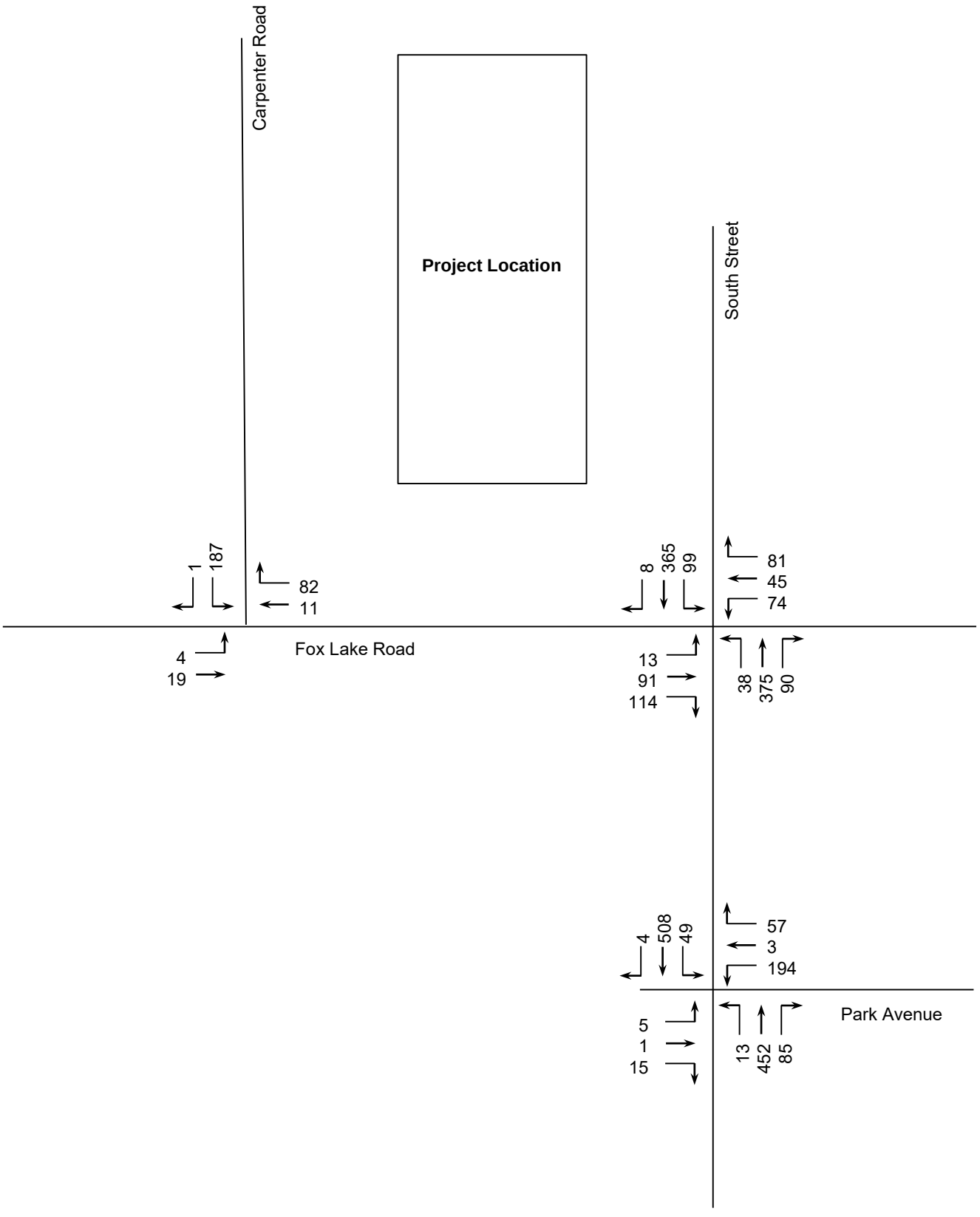
Level of Service A: Free flow, individual users virtually unaffected by the presence of others
Level of Service B: Stable flow with a high degree of freedom to select operating conditions
Level of Service C: Flow remains stable, but with significant interactions with others
Level of Service D: High-density stable flow in which the freedom to maneuver is severely restricted
Level of Service E: This condition represents the capacity level of the road
Level of Service F: Forced flow in which the traffic exceeds the amount that can be served

The AADT for the study roadway segments were obtained from the Space Coast TPO Segment Counts database. The existing p.m. peak-hour two-way LOS for the study area road segments are shown in Table 3. As indicated in the table, the study roadway segments are currently operating within the adopted levels of service D

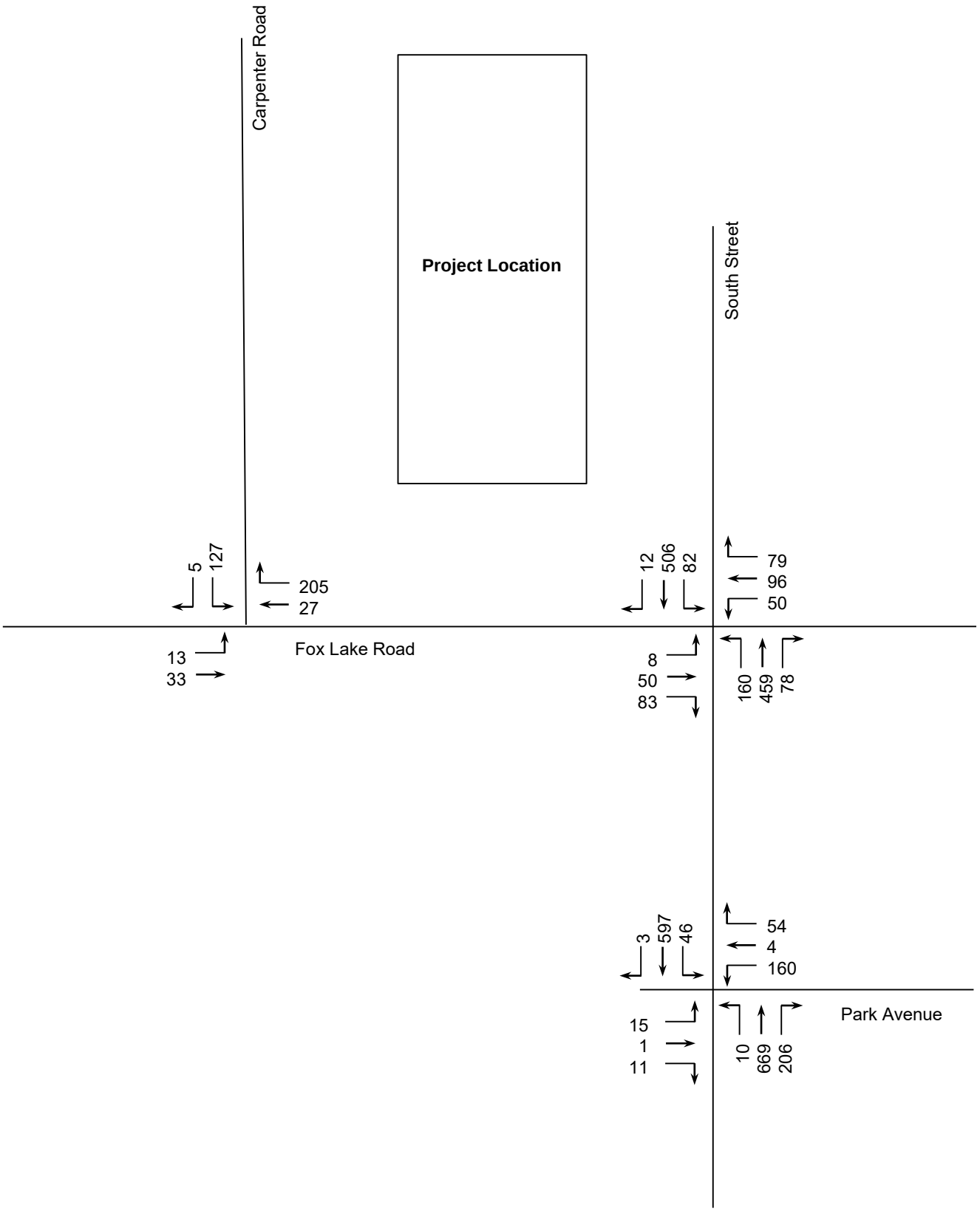
Table 3
Existing P.M. Peak-Hour Two-Way LOS – Roadway Segments
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing AADT	MAV	K Factor	Existing Peak-Hour Two-Way Volume	LOS
	From	To								
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1,152	3,480	15,600	0.09	313	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1,152	3,920	17,700	0.09	353	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1,152	3,900	17,700	0.09	351	C
SR 405/South St.	SR 50	Fox Lake Rd.	2	D	1,680	18,210	18,590	0.09	1,639	D
	Fox Lake Rd.	Singleton Ave	2	D	1,680	13,170	17,700	0.09	1,185	C

**Taken from Space Coast Transportation Planning Organization Traffic Counts: 2007-2016*



South Carpenter Estates	N NTS	**Existing A.M. Peak-Hour Turning Movement Counts**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 2	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



South Carpenter Estates	N NTS	**Existing P.M. Peak-Hour Turning Movement Counts**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 3	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

3

FUTURE TRAFFIC CONDITIONS

The next step in the analysis was to determine the future traffic conditions on the study area roadways at the time of project completion. The critical intersections and roadway segments were analyzed to determine potential impacts based on the background conditions. The following documents the procedures used to determine the future traffic.

Background Traffic Growth Rates

Historical growth rates were used to determine the background traffic. *FDOT Traffic Trends* software was used to calculate historical growth rates using the past five years of data obtained from the Space Coast Transportation Planning Organization (see Appendix G). When existing growth rates fall below 2%, a minimum growth rate of 2% was applied to the existing traffic volumes. The historical and applied growth rates used in the analysis are provided in Table 4.

Table 4
Historical Growth Rates
South Carpenter Estates

Roadway	Segment		Average Growth Rate	Applied Growth Rate	Growth Factor
	From	To			
Carpenter Rd.	Fox Lake Rd.	Garden St.	0.00%	2.00%	1.020
Fox Lake Rd.	Carpenter Rd.	South St.	-1.90%	2.00%	1.020
Harrison St.	South St.	0.75 Mile East of South St.	-5.85%	2.00%	1.020
SR 405/South St.	SR 50	Fox Lake Rd.	0.73%	2.00%	1.020
	Fox Lake Rd.	Singleton Ave	0.61%	2.00%	1.020

Background Unsignalized Intersection Analysis

The unsignalized intersection was analyzed to determine the operational LOS under the background conditions during the a.m. and p.m. peak-hours. Table 5 shows the project background conditions. As indicated in Table 5, the intersection is anticipated to operate within the adopted LOS at the background conditions with only background growth. The HCS summary sheets are located in Appendix H for the unsignalized intersection.

Table 5
Background A.M. and P.M. Peak Hour LOS – Unsignalized Intersection
South Carpenter Estates

Intersections	Adopted LOS	Background Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.2	B	SB	10.9	B

Background Signalized Intersection Analysis

The signalized intersections were analyzed to determine the operational LOS under background conditions during the a.m. and p.m. peak-hours in 2018. As indicated in Table 6, all signalized intersections are expected to operate at an acceptable LOS. The HCS summary sheets are located in Appendix I.

Table 6
Background A.M. and P.M. Peak Hour LOS – Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Background Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	13.9	B	No	13.7	B	No
South St. at Park Ave.	E	11.2	B	No	11.4	B	No

Roadway Segment Analysis

The background p.m. peak-hour two-way LOS for the study area road segments are shown in Table 7. As indicated in Table 7, the study roadway segments are expected to operate within the adopted level of service under 2018 background conditions.

Table 7
Background P.M. Peak Hour Two-Way LOS – Roadway Segments
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	MVA	Growth Factor	Back-ground Traffic	LOS
	From	To								
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1152	313	15600	1.020	319	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1152	353	17700	1.020	353	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1152	351	17700	1.020	351	C
SR 405 / South St.	SR 50	Fox Lake Rd.	2	D	1680	1,639	18590	1.020	1639	D
	Fox Lake Rd.	Singleton Ave	2	D	1680	1,185	17700	1.020	1185	C

4

BUILD-OUT ROADWAY ANALYSIS

The study intersections were analyzed based on the build-out roadway conditions in 2018 to determine potential impacts and to investigate mitigation requirements.

Trip Generation

Trip generation for the build-out of the development was determined using the trip generation rates published by the Institute of Transportation Engineers (ITE) in the document *Trip Generation Manual, 10th Edition*. The total daily, a.m. and p.m. peak-hour trip generation is presented in Table 8 for the proposed development.

Table 8
Trip Generation
South Carpenter Estates

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (x) Dus	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Single-Family	210	Ln(T) = 0.92 Ln(X) + 2.72	70	756	50%	50%	378	378
A.M. Peak-hour	Single-Family	210	T = 0.70 (X) + 9.74	70	59	25%	75%	15	44
P.M. Peak-hour	Single-Family	210	Ln(T) = 0.90 Ln(X) + 0.51	70	76	63%	37%	48	28

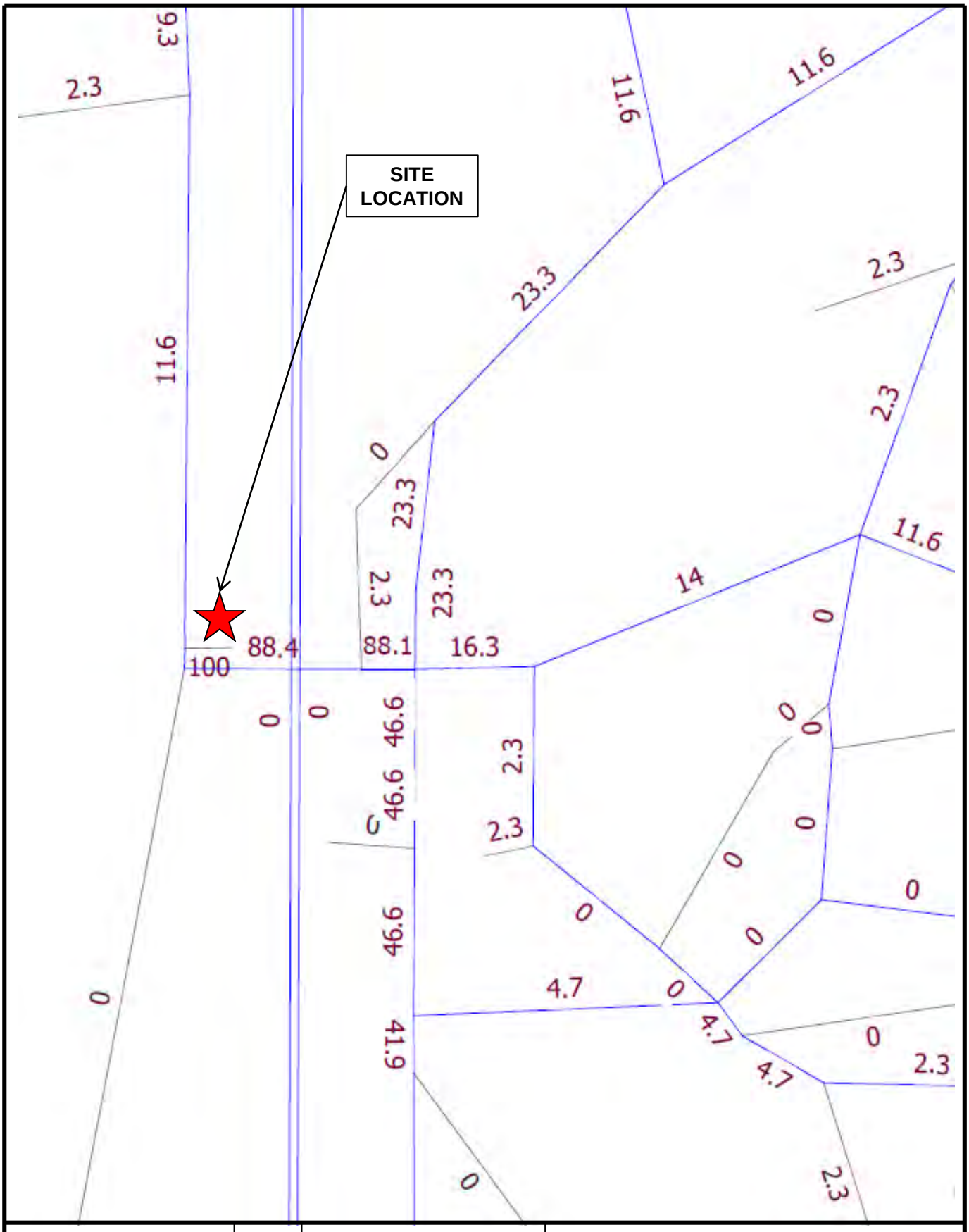
Source: ITE, Trip Generation 10th Edition

Trip Distribution

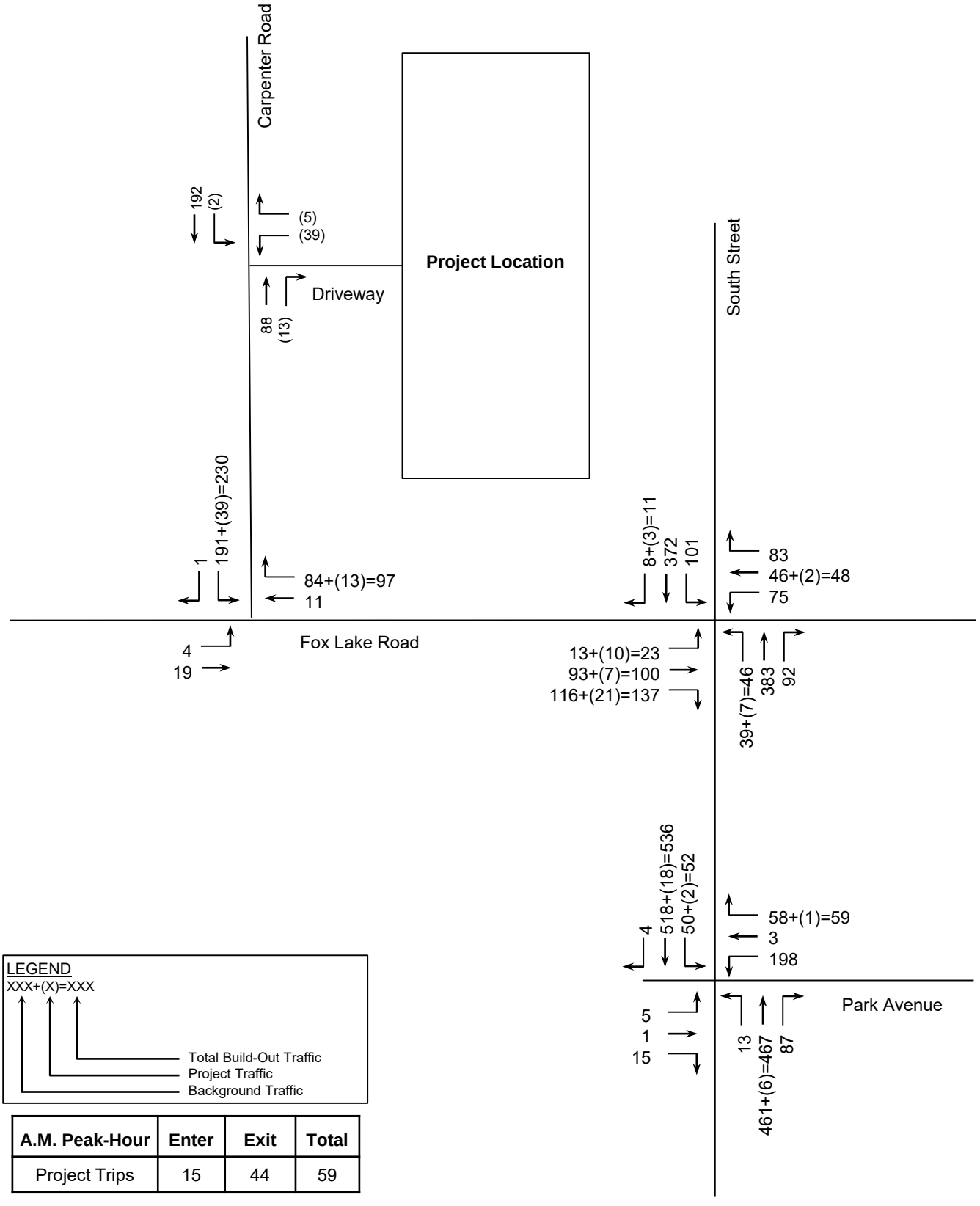
The process of determining the directional flow of traffic associated with a new development is called trip distribution. The Central Florida Regional Planning Model version 6.1 was used to obtain trip distribution and was manually modified where appropriate. The project TAZ is 3682. The anticipated distribution is illustrated in Figure 4.

Trip Assignment

The final step in the analysis was to assign the project traffic to the road network. Figures 5 and 6 graphically depict the a.m. and p.m. peak-hour traffic assignment for the proposed development.



South Carpenter Estates	N NTS	**Trip Distribution**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 4	1970 Dairy Road – W. Melbourne, Florida 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



A.M. Peak-Hour	Enter	Exit	Total
Project Trips	15	44	59

South Carpenter Estates

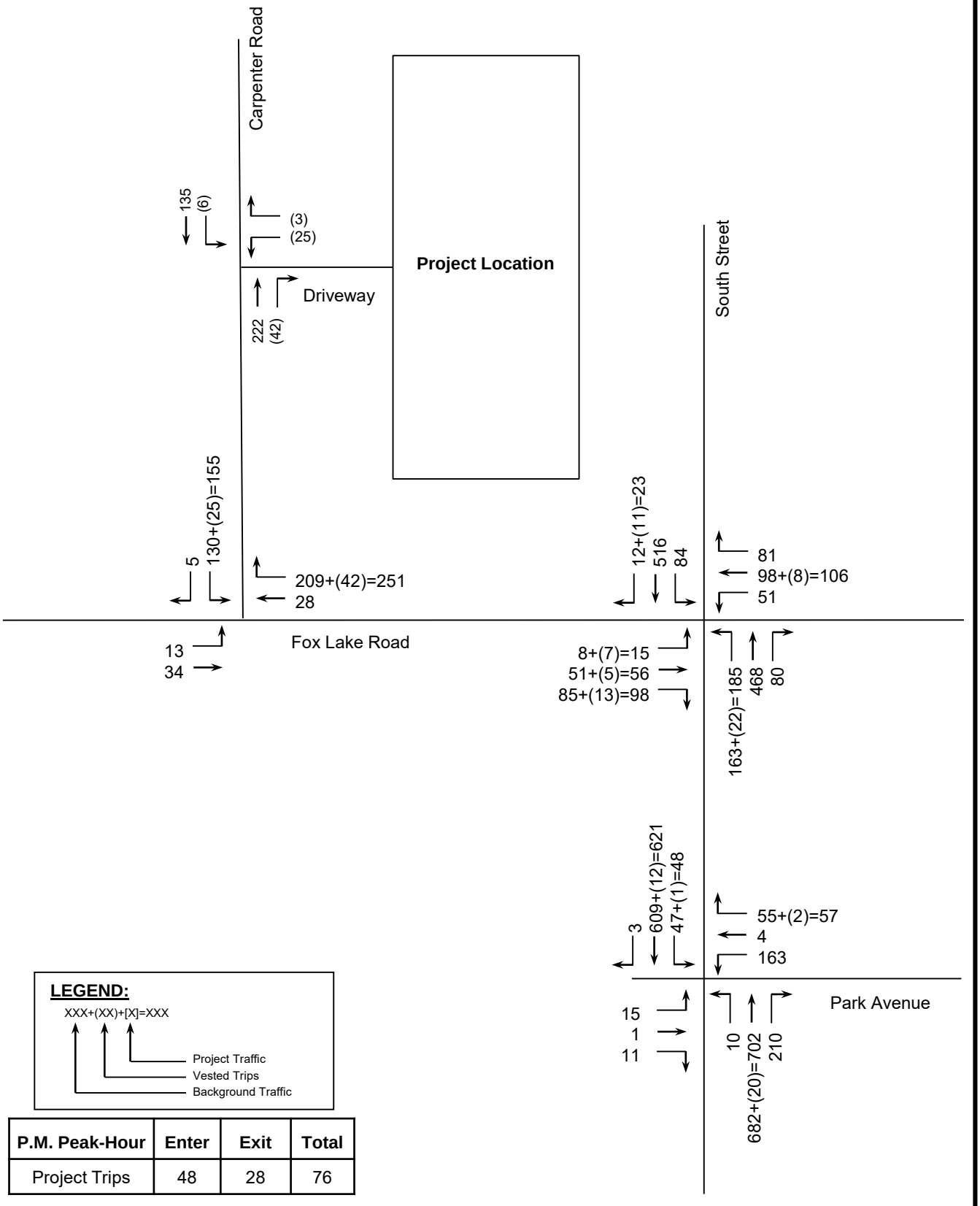
N

NTS

2018 Build-Out A.M. Peak-Hour Trip Assignment

Project No.: 4511.02 | Figure: 5

LTG Engineering & Planning
1970 Dairy Road, W. Melbourne. FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



P.M. Peak-Hour	Enter	Exit	Total
Project Trips	48	28	76

South Carpenter Estates

N

NTS

2018 Build-Out P.M. Peak-Hour Trip Assignment

Project No.: 4511.02 | Figure: 6

LTG Engineering & Planning

1970 Dairy Road, W. Melbourne. FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Build-Out Unsignalized Intersection Analysis

The unsignalized intersections were analyzed to determine the operational LOS at the time of build-out. Table 9 shows the projected LOS for the study unsignalized intersections at build-out conditions. As indicated in the table, the study unsignalized intersections are anticipated to operate within the adopted LOS in 2018. The HCS worksheets are included in Appendix J

Table 9
Build-Out A.M. and P.M. Peak-Hour LOS - Unsignalized Intersections
South Carpenter Estates

Intersections	Adopted LOS	Build-Out Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.6	B	SB	11.5	B
Carpenter Rd. at Project Driveway	E	WB	10.5	B	WB	11.3	B

Build-Out Signalized Intersection Analysis

The signalized intersections were analyzed to determine the operational LOS at the time of build-out. Table 10 shows the projected LOS for the study intersections under build-out conditions. The HCS worksheets are contained in Appendix K. As indicated in the table, the study signalized intersections are anticipated to operate within the adopted level of services and with v/c ratio less than 1.0 under 2018 build-out conditions.

Table 10
Build-Out A.M. and P.M. Peak-Hour LOS – Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Build-Out Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	14.8	B	No	14.2	B	No
South St. at Park Ave.	E	11.2	B	No	11.7	B	No

5

BUILD-OUT ROADWAY SEGMENT ANALYSIS

The traffic analysis for the roadway segments involves the comparison of the future peak-hour two-way volumes to available capacity. The roadway segments were analyzed based on the build-out roadway conditions to determine potential impacts in 2018 and to investigate mitigation requirements.

Generalized Arterial Segment Analysis

A generalized arterial segment analysis was conducted in first accordance with industry standard and procedures recommended by the State of Florida Department of Transportation. The existing AADT for the study roadway segments were obtained from Space Coast TPO Transportation Data Management System. The existing peak-hour two-way volume and capacity at the adopted LOS along the study-area roadway segments were determined using the generalized service volume tables shown in the FDOT 2013 Quality/Level of Service (Q/LOS) Handbook.

Table 11 presents the results of the p.m. peak-hour two-way road segment analyses for the study area roadways under 2018 build-out conditions. As indicated in the table, all the study roadway segments are anticipated to operate within the adopted LOS except the segment of SR 405/ South Street from SR 50 to Fox Lake Road. The FDOT generalized roadway segment capacity of SR 405/ South Street from SR 50 to Fox Lake Road indicates a concurrency failure.

Table 11
Build-Out General Arterial Segment P.M. Peak-Hour Two-Way LOS – Roadway Segment
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	MVA	Growth Factor	Back-ground Traffic	Project Trip Distribution	Build-Out		
	From	To									Project Trips	Traffic	LOS
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1,152	313	15,600	1.020	319	11.6%	9	328	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1,152	353	17,700	1.020	360	88.4%	67	427	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1,152	351	17,700	1.020	358	16.3%	12	370	C
SR 405/ South St.	SR 50	Fox Lake Rd.	2	D	1,680	1,639	18,590	1.020	1,672	46.6%	35	1,707	F
	Fox Lake Rd.	Singleton Ave	2	D	1,680	1,185	17,700	1.020	1,209	23.3%	18	1,227	C

Specific Arterial Segment Analysis

Per industry standards and the guidance provided by the FDOT, when the generalized tables appear to show a failure a specific segment analysis should be conducted to provide a detailed analysis of the segments. The FDOT 2012 version of the ArtPlan software was used to determine the corridor automobile capacity and LOS based on the FDOT Q/LOS Handbook and 2010 Highway Capacity Manual (HCM) methodologies. The arterial segments, critical intersections, and peak direction LOS along the study area roadway segments inputs were determined according to the procedures in the FDOT Q/LOS Handbook.

The results of the build-out specific arterial segment analysis are shown in Table 12. As indicated in Table 12 below, the study arterial segments operate within the adopted LOS under build-out conditions. The details of the ArtPlan result are attached as Appendix L.

Table 12
Build-Out Specific Arterial Segment P.M. Peak-Hour Two-Way LOS – Roadway Segment
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	Build-Out AADT	Growth Factor	Back-ground Traffic	Project Trip Distribution	Build-Out		
	From	To									Project Trips	Traffic	LOS
SR 405/ South St.	SR 50	Fox Lake Rd.	2	D	1,970	1,639	18,968	1.020	1,672	46.6%	35	1,707	B

Access Review

The project access to the development will be provided via a full access driveway on S Carpenter Road. The need and geometry for turn lanes was evaluated using National Cooperative Highway Research Program (NCHRP) Report 457, FDOT standard index 301 and HCS output. The summary worksheets are included as Appendix M. The results of the turn lane evaluation are provided below:

Project Driveway 1 at S Carpenter Road

The recommended geometry of the ingress and egress at the intersection will consist of:

- Northbound: One through/right shared lane
- Southbound: One through/left/ shared lane
- Westbound: One left/right shared lane

Based on NCHRP Report 457, no turn lanes are warranted under build-out conditions.

6

CONCLUSION AND RECOMMENDATIONS

This study was conducted to evaluate the impact of the proposed South Carpenter Estates development. The results of the study are summarized below:

- The proposed subdivision consists of 70 single-family lots. The proposed development is located in the northeast corner of Fox Lake Road and S Carpenter Road in City of Titusville, Florida
- This development is anticipated to generate 59 total trips in the a.m. peak-hour and 76 total trips in the p.m. peak-hour.

Existing

- Under existing conditions, the unsignalized intersection of Fox Lake Road and S Carpenter Road currently operates within the adopted LOS during the a.m. and p.m. peak-hours.
- Under existing conditions, the signalized intersections of South Street at Fox Lake Road and Park Avenue currently operate within the adopted LOS with v/c ratio less than 1.0 during the a.m. and p.m. peak-hours.
- Under existing conditions, the roadway segments within the study area currently operate within the adopted LOS

Background

- Under background conditions, the unsignalized intersection operates within the adopted LOS during the a.m. and p.m. peak-hours.
- Under background conditions, the signalized intersections operate within the adopted LOS and v/c ratio less than1.0 during the a.m. and p.m. peak-hours.
- Under background conditions, the roadway segments are expected to operate within the adopted LOS

2018 Build-Out

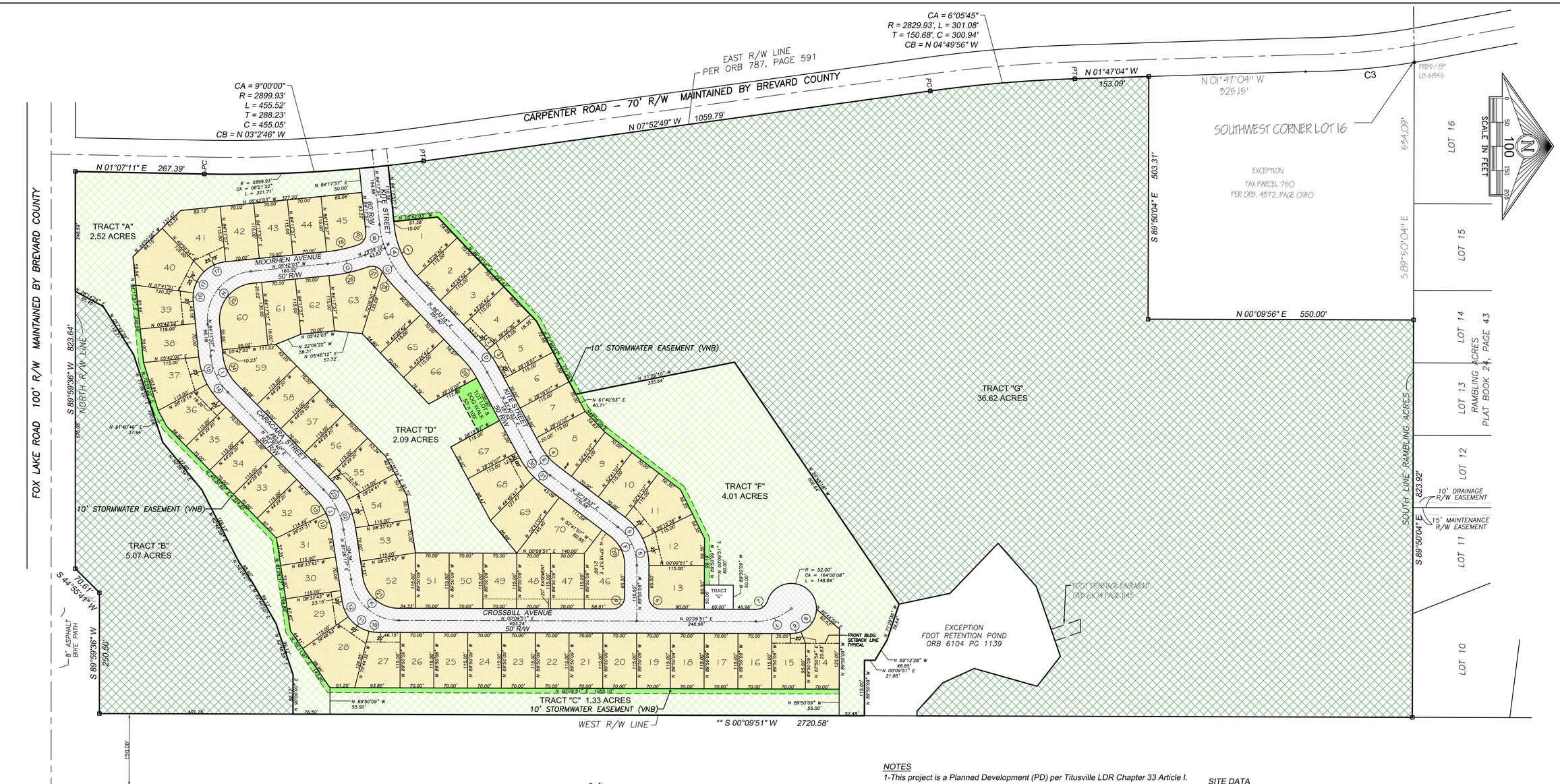
- Under 2018 build-out conditions, the unsignalized intersection is anticipated to operate within the adopted LOS.
- Under 2018 build-out conditions, the signalized intersections are anticipated to operate within the adopted LOS and v/c ratio less than 1.0.
- Under 2018 build-out conditions, the generalized arterial segment analysis of SR 405/South Street from SR 50 to Fox Lake Road will operate outside the adopted LOS.
- Under 2018 build-out conditions, the specific arterial segment analysis of SR 405/South Street from SR 50 to Fox Lake Road is anticipated to operate within the adopted LOS.

- The access review indicates that an exclusive left-turn lane and exclusive right-turn lane are not warranted under build-out conditions.

Appendices

APPENDIX A

Preliminary Site Plan



CURVE TABLE								
ID	RADIUS	CENTRAL ANGLE Deg	Min	Sec	LENGTH	CHORD	TANGENT
A	200.00	37	44	40	131.75	129.38	68.37
B	200.00	14	17	7	49.86	49.74	25.06
C	200.00	23	27	33	81.89	81.32	41.53
D	200.00	15	7	36	52.80	52.65	26.56
E	150.00	24	22	0	63.79	63.31	32.39
F	100.00	52	50	58	92.24	89.00	49.69
G	319.20	14	17	7	79.59	79.38	40.00
H	100.00	90	0	0	157.08	141.42	100.00
I	125.00	38	47	17	84.62	83.02	44.00
J	150.00	35	55	37	94.06	92.52	48.63
K	100.00	81	16	26	141.85	130.25	85.82
L	113.50	40	20	57	79.93	78.29	41.70
1	175.00	37	44	40	115.28	113.21	59.82
2	225.00	4	30	6	17.68	17.67	8.84
3	225.00	10	37	29	41.72	41.66	20.92
4	125.00	24	22	0	53.16	52.76	26.99
5	125.00	26	26	29	57.65	57.14	29.35
6	25.00	90	0	0	39.27	35.36	25.00
7	25.00	72	37	13	31.69	29.61	18.37
8	52.00	66	18	8	60.17	56.87	33.96
9	52.00	22	18	57	20.25	20.13	10.26
10	75.00	14	5	37	18.45	18.40	9.27
11	75.00	40	55	39	53.57	52.44	27.99
12	75.00	26	15	11	34.37	34.07	17.49
13	125.00	17	57	48	39.19	39.03	19.76
14	150.00	16	10	5	42.33	42.19	21.31
15	150.00	22	37	12	59.22	58.84	30.00
16	75.00	13	23	54	17.54	17.50	8.81
17	75.00	38	18	3	50.14	49.21	26.05
18	294.20	12	53	25	66.19	66.05	33.23
19	25.00	77	6	35	33.65	31.16	19.93
20	75.00	52	50	58	69.18	66.76	37.27
21	75.00	81	16	26	106.39	97.69	64.37
22	175.00	19	50	58	60.63	60.32	30.62
23	175.00	16	4	39	49.11	48.94	24.72
24	100.00	38	47	17	67.70	66.41	35.20
25	75.00	90	0	0	117.81	106.07	75.00
26	344.20	13	51	46	83.28	83.08	41.84
27	25.00	76	16	59	33.28	30.88	19.63
28	225.00	10	9	53	39.92	39.86	20.01
29	175.00	15	7	36	46.20	46.07	23.24
30	175.00	16	30	34	50.43	50.26	25.39
31	175.00	7	51	26	24.00	23.98	12.02

LEGAL DESCRIPTION: (TAX PARCEL 22-35-07-00-00750.0-0000.00)

All of the land in the South ½ of Section 7, Township 22 South, Range 35 East, North of Fox Lake Road Right of Way, lying between the West Right of Way of Interstate 95 and the East Right of Way of Carpenter Road, Brevard County, Florida.

LESS AND EXCEPT
A part of the South half of Section 7, Township 22 South, Range 35 East, Brevard County, Florida lying South of Rambling Acres, as recorded in Plat Book 24, Page 43, of the Public Records of Brevard County, Florida and East of Carpenter Road(a 70' r/w) per Official Records Book 787, Page 591 of the aforesaid public records, being more particularly described as follows:
Begin at the Southwest Corner of Lot 16 of said RAMBLING ACRES SUBDIVISION, run thence South 89 degrees 47 minutes 20 seconds East along the south line of said Subdivision, a distance of 534.09 feet;
Thence South 00 degrees 12 minutes 40 seconds West perpendicular to said South line, a distance of 550.00 feet;
thence North 89 degrees 47 minutes 20 seconds West parallel with said South line, a distance of 503.31 feet to a point on the Easterly Right-of-Way line of the aforesaid Carpenter Road;
THENCE North 01 degrees 44 minutes 27 seconds West along said Easterly Right-of-Way line, a distance of 325.15 feet to the point of curvature of a circular curve to the left;
THENCE along said Easterly Right-of-Way line and said curve to the left having a radius of 1438.61 feet, a delta of 09 degrees 00 minutes 22 seconds, an arc length 226.13 feet and a chord which bears north 04 degrees 47 minutes 34 seconds West and having a chord distance of 225.90 feet to the Point of Beginning.

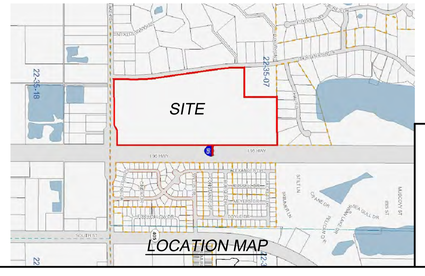
AND ALSO LESS AND EXCEPT FDOT I-95 Retention Area as described in Official Records Book 6104, at Page 1139 of the aforesaid Public Records.
Containing 69.96 Acres more or less.
SUBJECT TO: Drainage Easement as described in Official Records Book 6104 at Page 1143.

PD ZONING AREAS

Lots:	*14.40 Acres*
Rights-of-Way:	*3.87 Acres*
Tract "E":	*0.07 Acres*
Open Space	
Tract "A":	*2.52 Acres*
Tract "C":	*1.33 Acres*
Tract "D":	*2.09 Acres*
Tract "F":	*4.01 Acres*
Open Space Total:	*9.95 Acres*
PD Zoning Total:	*28.29 Acres*

PROJECT AREAS

PD Zoning:	*28.29 Acres*
Tract "B":	*5.07 Acres*
Tract "G":	*36.62 Acres*
TOTAL SITE:	*69.98 Acres*



NOTES

1-This project is a Planned Development (PD) per Titusville LDR Chapter 33 Article I.
2-Tracts "A", "C" "D" & "F" are Open Space per COT LDRs.
3-Tract "D" will also be used for Stormwater Treatment.
4-Tract "E" is for a Sanitary Sewer Lift Station which will be dedicated to the Public and maintained by the City of Titusville.
5-Tracts "A", "B", "C", "D", "F" & "G" will be owned and maintained by the Homeowners Association.
6-Tracts "B" & "G" are for Conservation.
7-Tracts "A", "B", "C", "F", & "G" will be subject to a Conservation Easement in favor of the St. Johns River Water Management District.
8- Roadway ownership and maintenance to be determined.
9-Lot width is defined as the distance between side lot lines at the front yard setback as shown on the Record Plat.
10-All lots have 5' side lot line and 10' rear lot line public drainage & utility easements unless otherwise shown.

SITE DATA

Existing Land Use	*LDR & Conservation*
Existing Zoning	*PD & OR*
PD Zoning Area	*28.29 Acres*
Open Space Required	*35 % (9.90 Acres)*
Open Space Provided	*35.2 % (9.95 Acres)*
PD Density Allowed	*70 Lots*
PD Density Proposed	*70 Lots*
Min. Lot Size Allowed	*8000 SF*
Min. Lot Size Proposed	*8050 SF*
Minimum Dwelling Size	*2000 SF*
Building Setbacks	*20' Front, Rear & Side Corner*
	5' Side

DEVELOPER & OWNER
EKS Development, Inc.
516 Delannoy Avenue
Cocoa, Florida
Attn: Jim Swan
321-631-2022
jim@eksdevelopment.com

SURVEYOR & LAND PLANNER
B.L.Ward
528 Poinsettia Avenue
Titusville, Florida 32796
321-271-0717
loysward@gmail.com

DATE	REVISION

B.L. WARD, PLS
State of Florida License Number LS 2396
Surveying ~ Mapping ~ Land Planning ~ Site Design
528 Poinsettia Avenue, Titusville, FL 32796
Phone: 321-271-0717 ~ Email: loysward@cfl.rr.com

Certified By:

B.L. Ward, PLS
FL. Reg. No. 2396
Date:

PRELIMINARY PLAT
South Carpenter Estates

A Single Family Residential Planned Development
City of Titusville, Brevard County, Florida

Date: 11/20/17

PL

Drawn by: BLW

FN: 22-35-07-00-750

APPENDIX B
Methodology Letter

LTG Engineering & Planning

Via Email: (kwabena.Ofosu @Titusville.com)

Ref: 4511.01

January 11, 2018

Kwabena KB Ofosu
The City of Titysville
P.O. Box 2806, (32781-2806)
555 S. Washington Avenue
Titusville, FL 32796

RE: South Carpenter Estates - Traffic Impact Study Methodology
City of Titusville, Florida

Dear Mr. Ofosu:

LTG, Inc. (LTG) has been retained by South Carpenter Estates, LLC Consultants to prepare a Traffic Impact Study for the proposed South Carpenter Estates. The subdivision will consist of 70 single-family units located on the northeast corner of Carpenter Road and Fox Lake Road with one access driveway on Carpenter Road in the City of Titusville, Florida. The project build-out year is 2018. Figure 1 shows the location and influence area of the project relative to the surrounding road network. A concept site plan showing the layout of the site is attached as Appendix A.

Trip Generation

The daily, a.m. and p.m. peak-hour trip generation for the build-out of the development was determined using the Institute of Transportation Engineers (ITE) 10th edition of the *Trip Generation Manual*. The trip generation for the development is summarized in Table 1.

Table 1
Trip Generation
Palmer Property Residential Development

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (x) Dus	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Single-Family	210	Ln(T) = 0.92 Ln(X) + 2.72	70	756	50%	50%	378	378
A.M. Peak-hour	Single-Family	210	T = 0.70 (X) + 9.74	70	59	25%	75%	15	44
P.M. Peak-hour	Single-Family	210	Ln(T) = 0.90 Ln(X) + 0.51	70	76	63%	37%	48	28

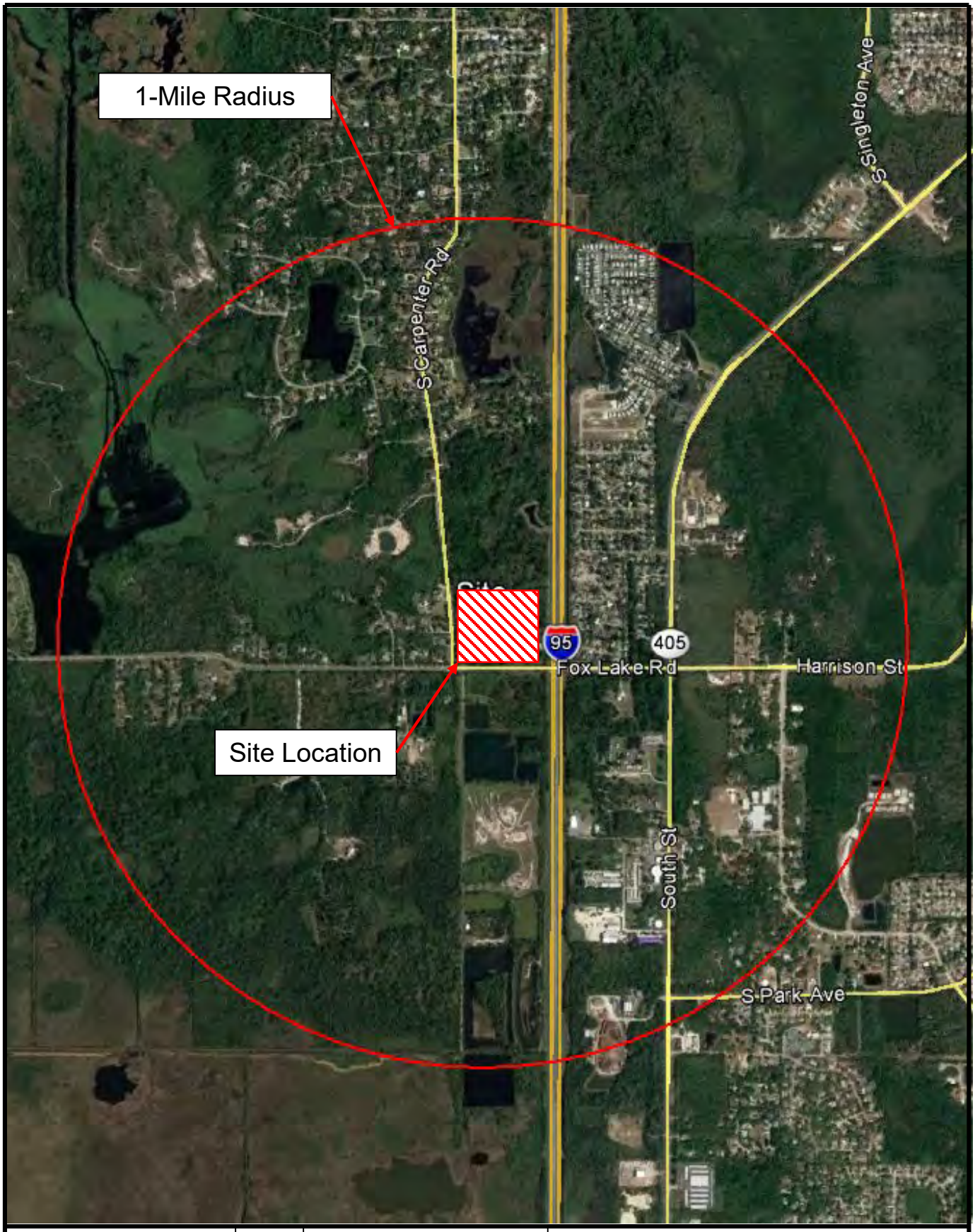
Source: ITE, Trip Generation 10th Edition

Trip Distribution

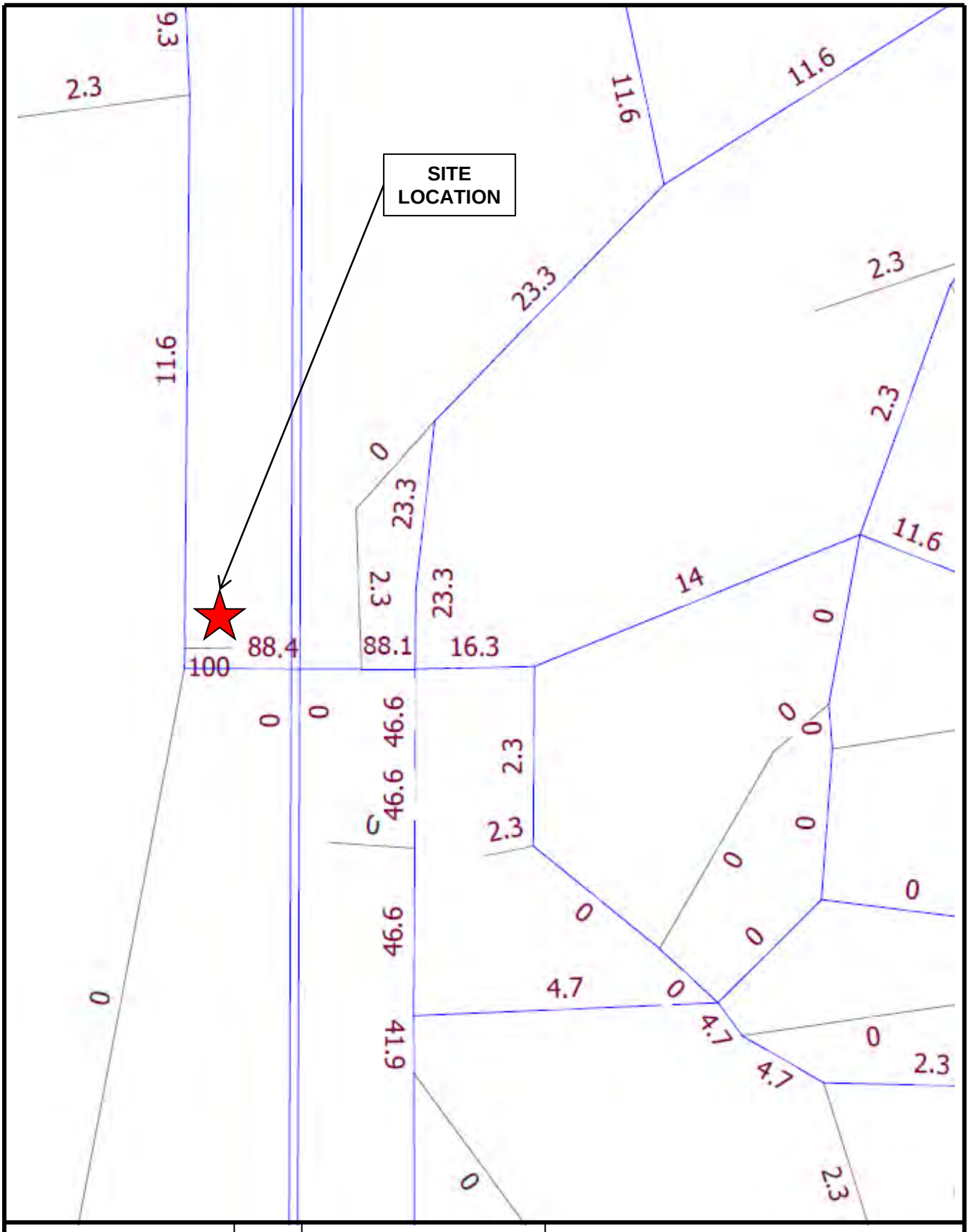
The Central Florida Regional Planning Model version 6.1 will be used to obtain trip distribution and will be manually modified where appropriate. Figure 2 shows the proposed distribution of traffic along the surrounding road network.

Trip Assignment

Traffic will be assigned to the study area roadways using the peak-hour trip generation and the project trip distribution identified by the model.



South Carpenter Estates	N NTS	**Site Location Map**		LTG Engineering & Planning
		Project No.: 4511.01	Figure: 1	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



South Carpenter Estates	N NTS	**Trip Distribution**		LTG Engineering & Planning
		Project No.: 4511.01	Figure: 2	1970 Dairy Road – W. Melbourne, Florida 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Study Area

The City of Titusville Traffic Impact Analysis Policy was used to determine the project study area. Based on the trip generation criteria the study area for the project was determined to be a 1-mile radius.

The study area selected consists of the following intersections and road segments:

Intersections:

- Carpenter Road at Fox Lake Road
- Carpenter Road at Project Driveway
- Fox Lake Road at South Street
- South Street at Park Avenue

Roadway Segments:

- Carpenter Road from Fox Lake Road to Garden Street
- Fox Lake Road from Carpenter Road to South Street
- Harrison Street from South Street to 0.57 mile east of South Street
- SR 405/South Street from SR 50 to Fox Lake Road
- SR 405/ South Street from Fox Lake Road to Singleton Avenue

Analysis Period

Roadway segments will be analyzed based on p.m. peak-hour traffic and intersections will be analyzed for the a.m. and p.m. peak-hours. The analysis will be conducted under 2018 existing conditions and 2018 build-out conditions.

Traffic Concurrency Spreadsheet

The analysis will be based on the latest concurrency information as obtained from the Florida Department of Transportation (FDOT), the Space Coast Transportation Planning Organization (SCTPO), and Brevard County Planning Department.

Traffic Count Procedures

Manual turning movement counts will be conducted on a Tuesday, Wednesday or Thursday during a.m. and p.m. peak hours at each study intersection. Turning movement counts will not be older than one year.

Build-Out Traffic

The build-out traffic will be developed by the sum of the background traffic derived from growth rates plus the estimated project traffic. Growth rates for each study area roadway segment will be determined by historic growth trends calculated based upon five years of historic count data. A Minimum annual growth rate of two percent shall be used unless otherwise documented. In no case shall a negative growth rate be used. All improvements funded for construction within the first three years of the five-year work program will be considered in the analysis.

Segment Analysis – Existing and Build-Out Conditions

If the future projected volume is expected to exceed the maximum service volume of a roadway segment, an additional transportation analysis may be conducted (requires client authorization) to determine the service volume specific to that segment. The procedures documented in the latest version of the FDOT *Quality/Level of Service Handbook* will be used to determine specific capacity, if default capacities are exceeded and if detailed, site-specific capacity analysis has the potential to yield a higher capacity calculation.

Intersection Analysis – A.M. and P.M. Peak-Hour (Existing and Build-Out Conditions)

The operating conditions for both the existing and future conditions at the unsignalized intersections will be analyzed using the Highway *Capacity Software* (HCS). HCS utilizes the procedures outlined in Chapter 20 of the HCM 6th Edition, titled "Two-Way Stop Control Intersections".

The operating conditions for both the existing and future conditions at the signalized intersections will be evaluated using the *Highway Capacity Software (*HCS). This software utilizes the methodology outlined in Chapter 19 of the HCM 6th Edition, titled "Signalized Intersections".

Improvements

If warranted, appropriate roadway and intersection improvements will be identified. Conditions for each analysis phase will be analyzed for improvements that are required for mitigation. Site access needs will be addressed. The need for auxiliary lanes will be assessed using the methodology provided by NCHRP Report 457, HCS, and the latest version of the FDOT Design Standards.

Please review and advise if the City of Titusville is in agreement with this proposed methodology or provide comments relating to preferred revisions. If you have any questions, please contact me at 321.499.4679.

Sincerely,

LTG, INC.

Shanghong Ding, E.I.
Senior Engineer Intern

c: Gil A. Ramirez, PE

APPENDIX C

Turning Movement Counts

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	26	0	0	26	0	2	11	13	0	0	0	0	1	4	0	5	44
07:15 AM	34	0	1	35	0	4	12	16	0	0	0	0	0	2	0	2	53
07:30 AM	33	0	1	34	0	3	12	15	0	0	0	0	1	4	0	5	54
07:45 AM	56	0	0	56	0	3	19	22	0	0	0	0	0	7	0	7	85
Total	149	0	2	151	0	12	54	66	0	0	0	0	2	17	0	19	236
08:00 AM	53	0	0	53	0	2	18	20	0	0	0	0	1	3	0	4	77
08:15 AM	43	0	0	43	0	4	29	33	0	0	0	0	2	7	0	9	85
08:30 AM	35	0	1	36	0	2	16	18	0	0	0	0	1	2	0	3	57
08:45 AM	33	0	1	34	0	1	17	18	0	0	0	0	0	3	0	3	55
Total	164	0	2	166	0	9	80	89	0	0	0	0	4	15	0	19	274
04:00 PM	33	0	2	35	0	8	43	51	0	0	0	0	1	4	0	5	91
04:15 PM	25	0	2	27	0	10	49	59	0	0	0	0	1	3	0	4	90
04:30 PM	22	0	3	25	0	15	51	66	0	0	0	0	2	4	0	6	97
04:45 PM	25	0	1	26	0	7	44	51	0	0	0	0	6	10	0	16	93
Total	105	0	8	113	0	40	187	227	0	0	0	0	10	21	0	31	371
05:00 PM	26	0	2	28	0	5	51	56	0	0	0	0	5	8	0	13	97
05:15 PM	36	0	1	37	0	7	65	72	0	0	0	0	0	9	0	9	118
05:30 PM	40	0	1	41	0	8	45	53	0	0	0	0	2	6	0	8	102
05:45 PM	23	0	2	25	0	8	35	43	0	0	0	0	3	6	0	9	77
Total	125	0	6	131	0	28	196	224	0	0	0	0	10	29	0	39	394
Grand Total	543	0	18	561	0	89	517	606	0	0	0	0	26	82	0	108	1275
Apprch %	96.8	0	3.2		0	14.7	85.3		0	0	0		24.1	75.9	0		
Total %	42.6	0	1.4	44	0	7	40.5	47.5	0	0	0	0	2	6.4	0	8.5	

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	542	0	18	560	0	88	515	603	0	0	0	0	26	81	0	107	1270
% Automobiles	99.8	0	100	99.8	0	98.9	99.6	99.5	0	0	0	0	100	98.8	0	99.1	99.6
Commercial	1	0	0	1	0	1	2	3	0	0	0	0	0	1	0	1	5
% Commercial	0.2	0	0	0.2	0	1.1	0.4	0.5	0	0	0	0	0	1.2	0	0.9	0.4

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

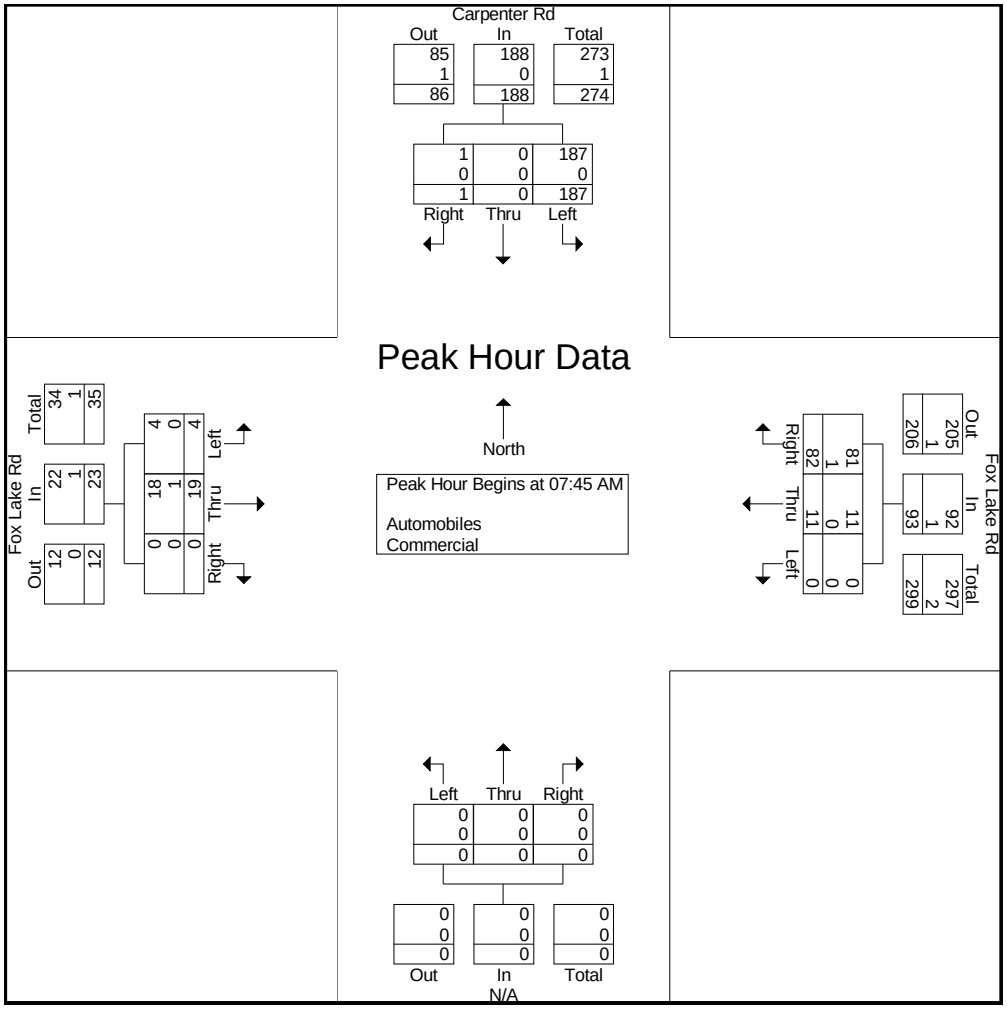
File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 3

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	56	0	0	56	0	3	19	22	0	0	0	0	0	7	0	7	85
08:00 AM	53	0	0	53	0	2	18	20	0	0	0	0	1	3	0	4	77
08:15 AM	43	0	0	43	0	4	29	33	0	0	0	0	2	7	0	9	85
08:30 AM	35	0	1	36	0	2	16	18	0	0	0	0	1	2	0	3	57
Total Volume	187	0	1	188	0	11	82	93	0	0	0	0	4	19	0	23	304
% App. Total	99.5	0	0.5		0	11.8	88.2		0	0	0		17.4	82.6	0		
PHF	.835	.000	.250	.839	.000	.688	.707	.705	.000	.000	.000	.000	.500	.679	.000	.639	.894
Automobiles	187	0	1	188	0	11	81	92	0	0	0	0	4	18	0	22	302
% Automobiles	100	0	100	100	0	100	98.8	98.9	0	0	0	0	100	94.7	0	95.7	99.3
Commercial	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
% Commercial	0	0	0	0	0	0	1.2	1.1	0	0	0	0	0	5.3	0	4.3	0.7

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 5

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	25	0	1	26	0	7	44	51	0	0	0	0	6	10	0	16	93
05:00 PM	26	0	2	28	0	5	51	56	0	0	0	0	5	8	0	13	97
05:15 PM	36	0	1	37	0	7	65	72	0	0	0	0	0	9	0	9	118
05:30 PM	40	0	1	41	0	8	45	53	0	0	0	0	2	6	0	8	102
Total Volume	127	0	5	132	0	27	205	232	0	0	0	0	13	33	0	46	410
% App. Total	96.2	0	3.8		0	11.6	88.4		0	0	0		28.3	71.7	0		
PHF	.794	.000	.625	.805	.000	.844	.788	.806	.000	.000	.000	.000	.542	.825	.000	.719	.869
Automobiles	127	0	5	132	0	27	204	231	0	0	0	0	13	33	0	46	409
% Automobiles	100	0	100	100	0	100	99.5	99.6	0	0	0	0	100	100	0	100	99.8
Commercial	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% Commercial	0	0	0	0	0	0	0.5	0.4	0	0	0	0	0	0	0	0	0.2

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
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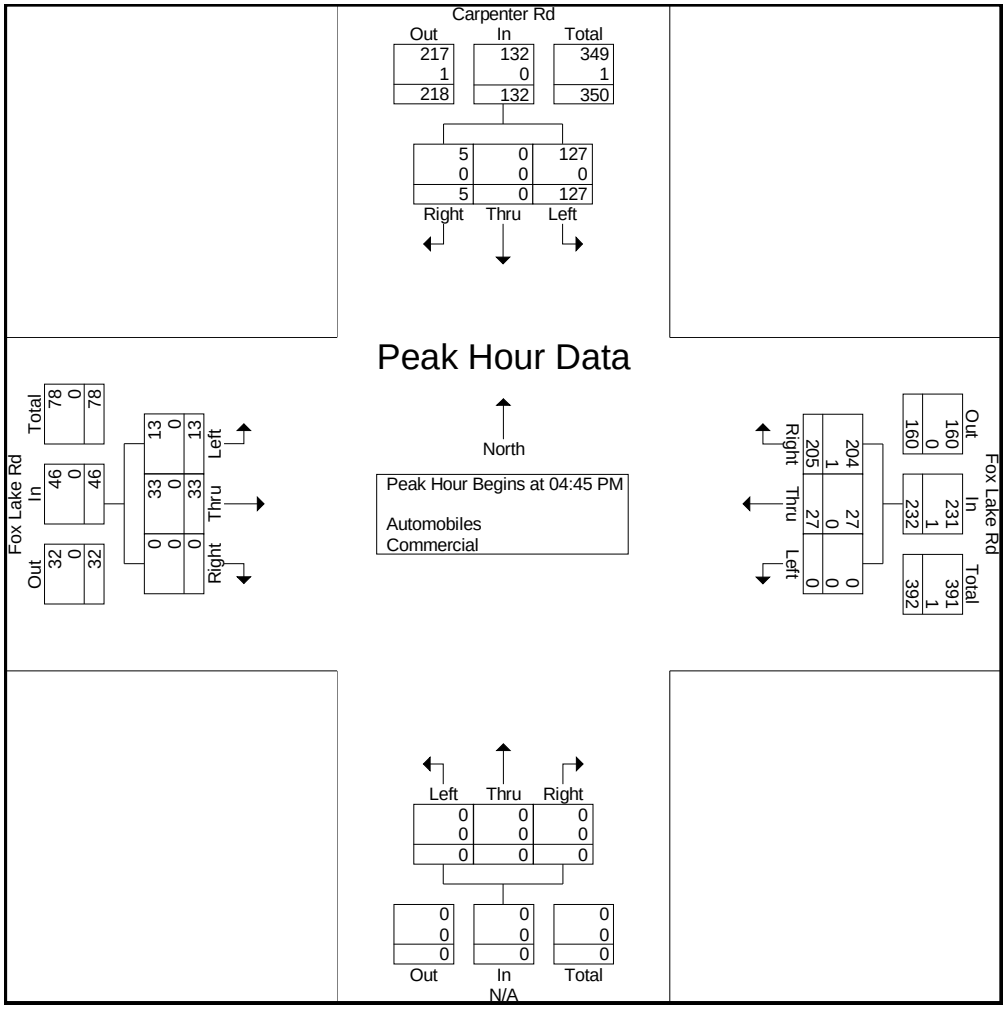

DE TRAFFIC

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Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	14	71	1	86	14	4	14	32	7	85	12	104	3	13	20	36	258
07:15 AM	11	74	2	87	13	5	12	30	4	86	25	115	3	12	22	37	269
07:30 AM	19	86	1	106	17	6	14	37	7	72	31	110	3	15	25	43	296
07:45 AM	26	110	0	136	25	14	18	57	10	116	43	169	2	29	25	56	418
Total	70	341	4	415	69	29	58	156	28	359	111	498	11	69	92	172	1241
08:00 AM	38	94	4	136	19	8	26	53	7	93	8	108	3	32	34	69	366
08:15 AM	16	75	3	94	13	17	23	53	14	94	8	116	5	15	30	50	313
08:30 AM	19	85	4	108	14	7	9	30	11	89	4	104	6	16	20	42	284
08:45 AM	20	79	1	100	15	13	16	44	8	73	10	91	2	14	29	45	280
Total	93	333	12	438	61	45	74	180	40	349	30	419	16	77	113	206	1243
04:00 PM	24	133	5	162	14	19	25	58	24	101	18	143	3	16	21	40	403
04:15 PM	21	106	8	135	15	26	18	59	30	111	15	156	2	13	19	34	384
04:30 PM	27	138	4	169	11	27	22	60	46	109	15	170	0	9	12	21	420
04:45 PM	20	101	1	122	16	25	16	57	27	109	25	161	1	17	17	35	375
Total	92	478	18	588	56	97	81	234	127	430	73	630	6	55	69	130	1582
05:00 PM	19	134	3	156	12	12	15	39	43	135	17	195	1	13	23	37	427
05:15 PM	16	133	4	153	11	32	26	69	44	106	21	171	6	11	31	48	441
05:30 PM	28	109	2	139	14	19	21	54	38	126	12	176	4	18	22	44	413
05:45 PM	29	95	2	126	18	22	23	63	27	99	23	149	2	23	13	38	376
Total	92	471	11	574	55	85	85	225	152	466	73	691	13	65	89	167	1657
Grand Total	347	1623	45	2015	241	256	298	795	347	1604	287	2238	46	266	363	675	5723
Apprch %	17.2	80.5	2.2		30.3	32.2	37.5		15.5	71.7	12.8		6.8	39.4	53.8		
Total %	6.1	28.4	0.8	35.2	4.2	4.5	5.2	13.9	6.1	28	5	39.1	0.8	4.6	6.3	11.8	

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	335	1537	43	1915	224	248	282	754	337	1517	277	2131	44	258	350	652	5452
% Automobiles	96.5	94.7	95.6	95	92.9	96.9	94.6	94.8	97.1	94.6	96.5	95.2	95.7	97	96.4	96.6	95.3
Commercial	12	86	2	100	17	8	16	41	10	87	10	107	2	8	13	23	271
% Commercial	3.5	5.3	4.4	5	7.1	3.1	5.4	5.2	2.9	5.4	3.5	4.8	4.3	3	3.6	3.4	4.7

DE TRAFFIC

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South St at Fox Lake Rd
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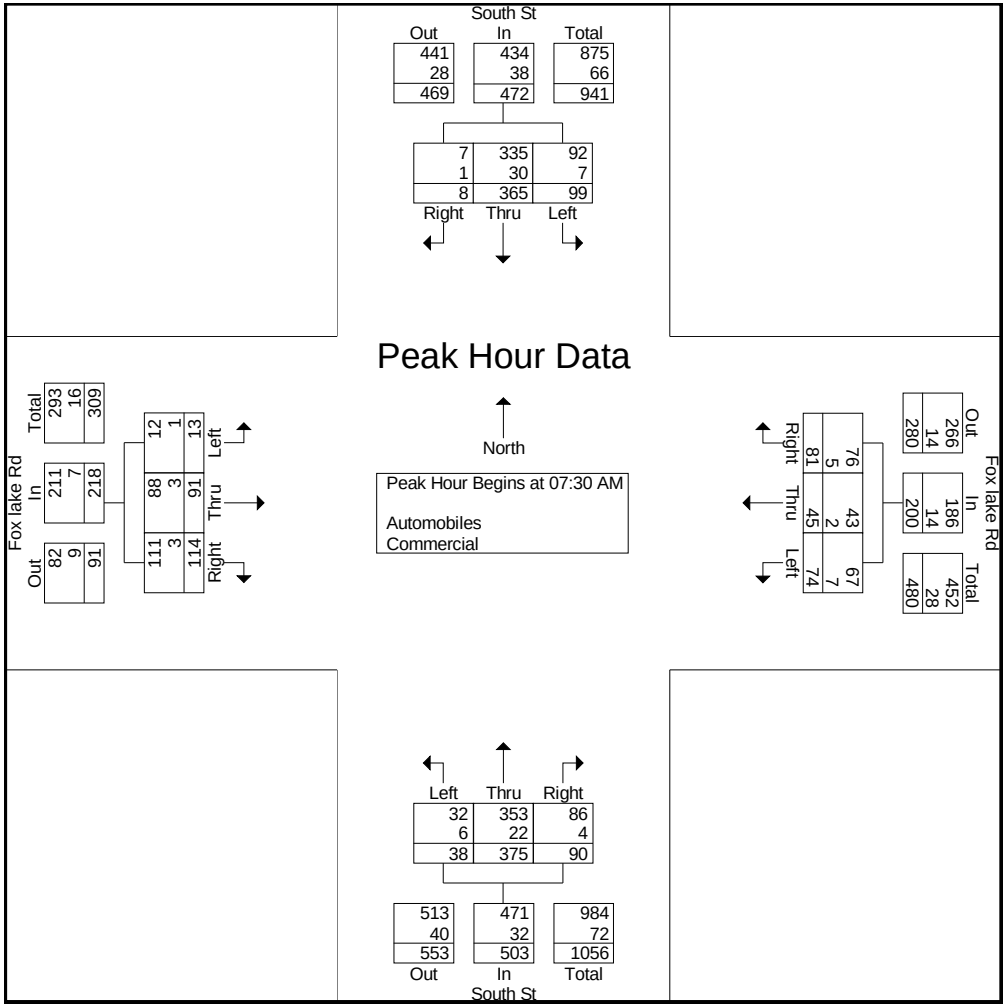
	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	86	1	106	17	6	14	37	7	72	31	110	3	15	25	43	296
07:45 AM	26	110	0	136	25	14	18	57	10	116	43	169	2	29	25	56	418
08:00 AM	38	94	4	136	19	8	26	53	7	93	8	108	3	32	34	69	366
08:15 AM	16	75	3	94	13	17	23	53	14	94	8	116	5	15	30	50	313
Total Volume	99	365	8	472	74	45	81	200	38	375	90	503	13	91	114	218	1393
% App. Total	21	77.3	1.7		37	22.5	40.5		7.6	74.6	17.9		6	41.7	52.3		
PHF	.651	.830	.500	.868	.740	.662	.779	.877	.679	.808	.523	.744	.650	.711	.838	.790	.833
Automobiles	92	335	7	434	67	43	76	186	32	353	86	471	12	88	111	211	1302
% Automobiles	92.9	91.8	87.5	91.9	90.5	95.6	93.8	93.0	84.2	94.1	95.6	93.6	92.3	96.7	97.4	96.8	93.5
Commercial	7	30	1	38	7	2	5	14	6	22	4	32	1	3	3	7	91
% Commercial	7.1	8.2	12.5	8.1	9.5	4.4	6.2	7.0	15.8	5.9	4.4	6.4	7.7	3.3	2.6	3.2	6.5

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

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South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 5

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	27	138	4	169	11	27	22	60	46	109	15	170	0	9	12	21	420
04:45 PM	20	101	1	122	16	25	16	57	27	109	25	161	1	17	17	35	375
05:00 PM	19	134	3	156	12	12	15	39	43	135	17	195	1	13	23	37	427
05:15 PM	16	133	4	153	11	32	26	69	44	106	21	171	6	11	31	48	441
Total Volume	82	506	12	600	50	96	79	225	160	459	78	697	8	50	83	141	1663
% App. Total	13.7	84.3	2		22.2	42.7	35.1		23	65.9	11.2		5.7	35.5	58.9		
PHF	.759	.917	.750	.888	.781	.750	.760	.815	.870	.850	.780	.894	.333	.735	.669	.734	.943
Automobiles	81	487	12	580	48	93	77	218	157	432	77	666	8	50	82	140	1604
% Automobiles	98.8	96.2	100	96.7	96.0	96.9	97.5	96.9	98.1	94.1	98.7	95.6	100	100	98.8	99.3	96.5
Commercial	1	19	0	20	2	3	2	7	3	27	1	31	0	0	1	1	59
% Commercial	1.2	3.8	0	3.3	4.0	3.1	2.5	3.1	1.9	5.9	1.3	4.4	0	0	1.2	0.7	3.5

DE TRAFFIC

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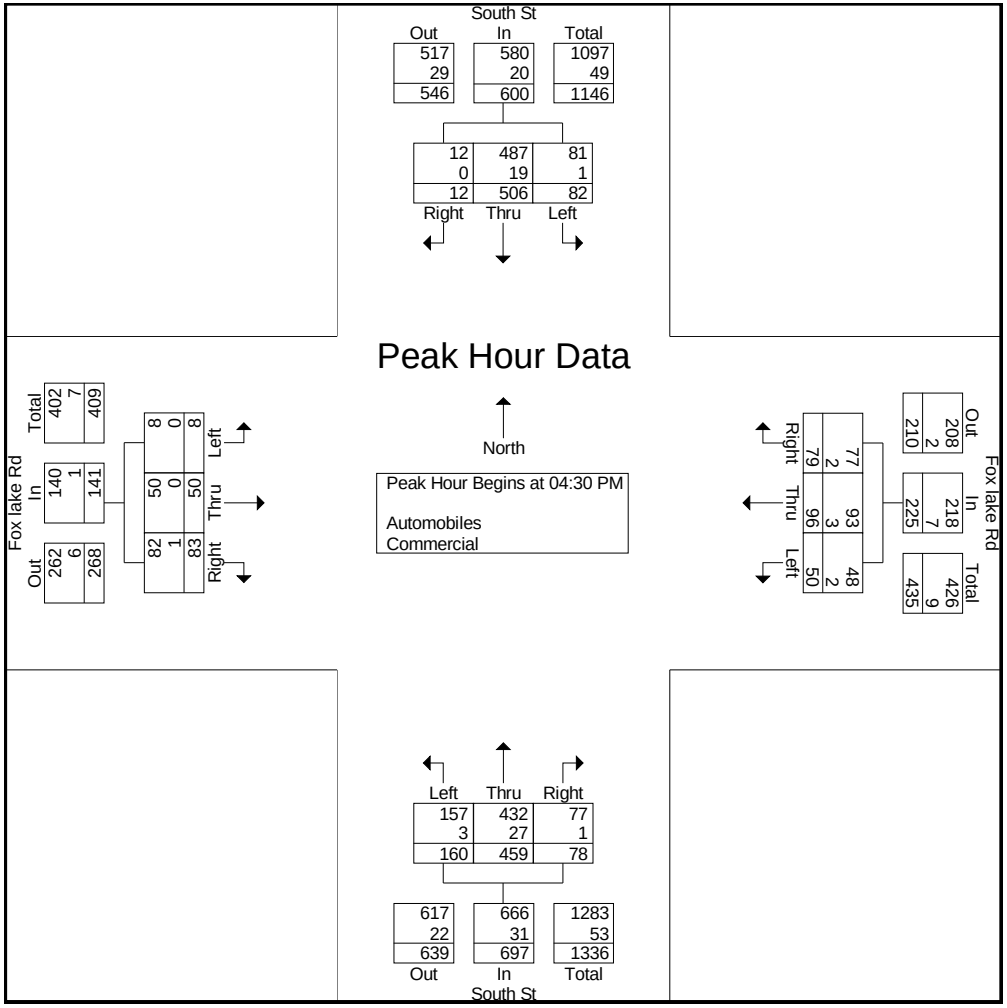
Start Date : 1/23/2018
Page No : 6



DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	South St Southbound					Fox lake Rd Westbound					South St Northbound					Fox lake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
08:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
04:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
04:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	4
05:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	4
Total	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	3	3	8
Grand Total	0	0	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	11	11	23
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	52.2	52.2	0	0	0	0	0	0	0	0	47.8	47.8	

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	10	102	2	114	26	1	11	38	3	88	13	104	1	0	1	2	258
07:15 AM	6	99	2	107	31	0	13	44	2	94	11	107	0	0	0	0	258
07:30 AM	8	105	0	113	41	1	13	55	4	93	12	109	0	0	0	0	277
07:45 AM	15	143	2	160	56	1	25	82	3	142	19	164	2	1	1	4	410
Total	39	449	6	494	154	3	62	219	12	417	55	484	3	1	2	6	1203
08:00 AM	13	147	0	160	47	0	7	54	6	106	23	135	0	0	5	5	354
08:15 AM	9	110	1	120	64	2	14	80	2	110	19	131	2	0	4	6	337
08:30 AM	12	108	1	121	27	0	11	38	2	94	24	120	1	0	5	6	285
08:45 AM	9	106	2	117	57	0	10	67	2	87	23	112	0	1	5	6	302
Total	43	471	4	518	195	2	42	239	12	397	89	498	3	1	19	23	1278
04:00 PM	13	166	2	181	42	1	6	49	1	147	44	192	0	2	1	3	425
04:15 PM	15	124	2	141	44	2	11	57	6	146	45	197	3	0	5	8	403
04:30 PM	13	140	1	154	44	2	12	58	3	163	42	208	4	0	5	9	429
04:45 PM	10	128	0	138	38	0	11	49	2	161	45	208	4	1	1	6	401
Total	51	558	5	614	168	5	40	213	12	617	176	805	11	3	12	26	1658
05:00 PM	12	175	1	188	32	2	17	51	3	173	56	232	1	0	3	4	475
05:15 PM	11	154	1	166	46	0	14	60	2	172	63	237	6	0	2	8	471
05:30 PM	12	135	0	147	40	0	10	50	0	150	53	203	0	0	0	0	400
05:45 PM	12	111	0	123	27	1	15	43	1	133	67	201	0	0	0	0	367
Total	47	575	2	624	145	3	56	204	6	628	239	873	7	0	5	12	1713
Grand Total	180	2053	17	2250	662	13	200	875	42	2059	559	2660	24	5	38	67	5852
Apprch %	8	91.2	0.8		75.7	1.5	22.9		1.6	77.4	21		35.8	7.5	56.7		
Total %	3.1	35.1	0.3	38.4	11.3	0.2	3.4	15	0.7	35.2	9.6	45.5	0.4	0.1	0.6	1.1	

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	176	2018	17	2211	654	13	199	866	32	2029	556	2617	22	5	31	58	5752
% Automobiles	97.8	98.3	100	98.3	98.8	100	99.5	99	76.2	98.5	99.5	98.4	91.7	100	81.6	86.6	98.3
Commercial	4	35	0	39	8	0	1	9	10	30	3	43	2	0	7	9	100
% Commercial	2.2	1.7	0	1.7	1.2	0	0.5	1	23.8	1.5	0.5	1.6	8.3	0	18.4	13.4	1.7

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

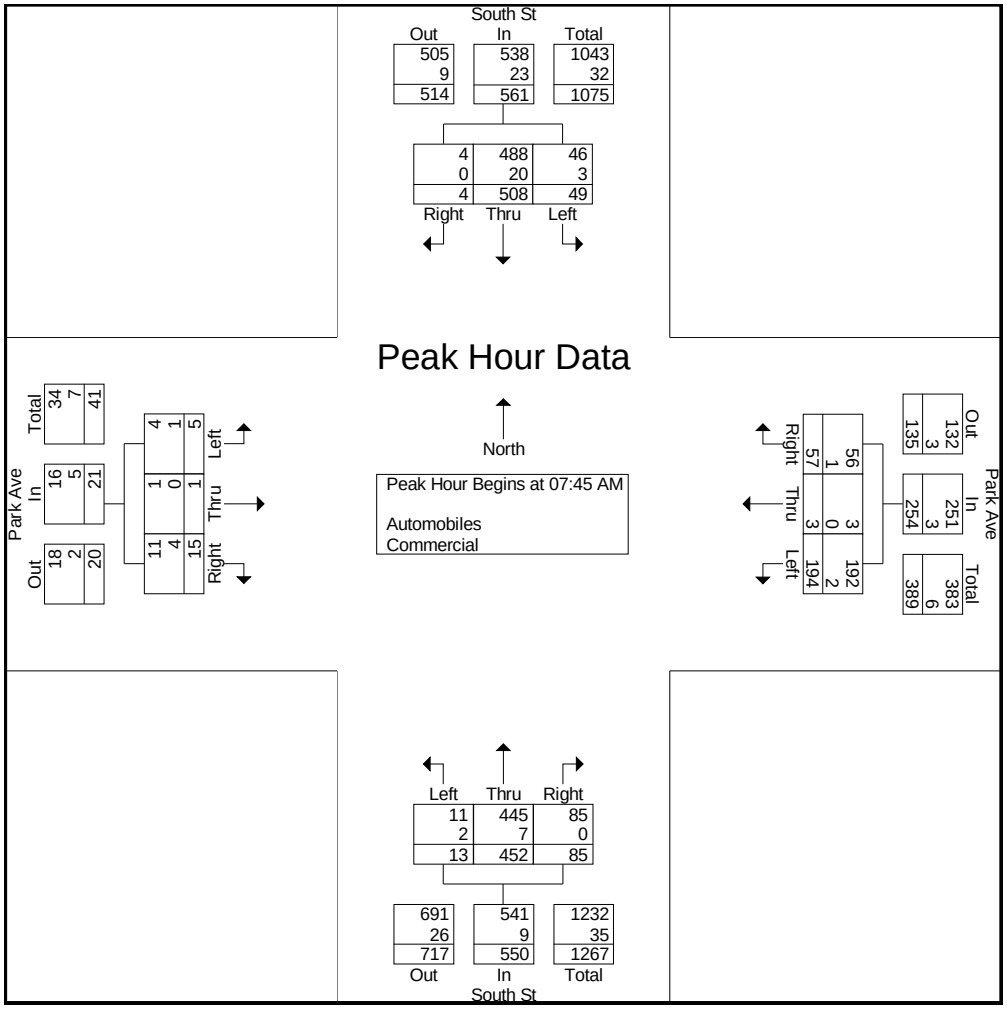
File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 3

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	143	2	160	56	1	25	82	3	142	19	164	2	1	1	4	410
08:00 AM	13	147	0	160	47	0	7	54	6	106	23	135	0	0	5	5	354
08:15 AM	9	110	1	120	64	2	14	80	2	110	19	131	2	0	4	6	337
08:30 AM	12	108	1	121	27	0	11	38	2	94	24	120	1	0	5	6	285
Total Volume	49	508	4	561	194	3	57	254	13	452	85	550	5	1	15	21	1386
% App. Total	8.7	90.6	0.7		76.4	1.2	22.4		2.4	82.2	15.5		23.8	4.8	71.4		
PHF	.817	.864	.500	.877	.758	.375	.570	.774	.542	.796	.885	.838	.625	.250	.750	.875	.845
Automobiles	46	488	4	538	192	3	56	251	11	445	85	541	4	1	11	16	1346
% Automobiles	93.9	96.1	100	95.9	99.0	100	98.2	98.8	84.6	98.5	100	98.4	80.0	100	73.3	76.2	97.1
Commercial	3	20	0	23	2	0	1	3	2	7	0	9	1	0	4	5	40
% Commercial	6.1	3.9	0	4.1	1.0	0	1.8	1.2	15.4	1.5	0	1.6	20.0	0	26.7	23.8	2.9

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

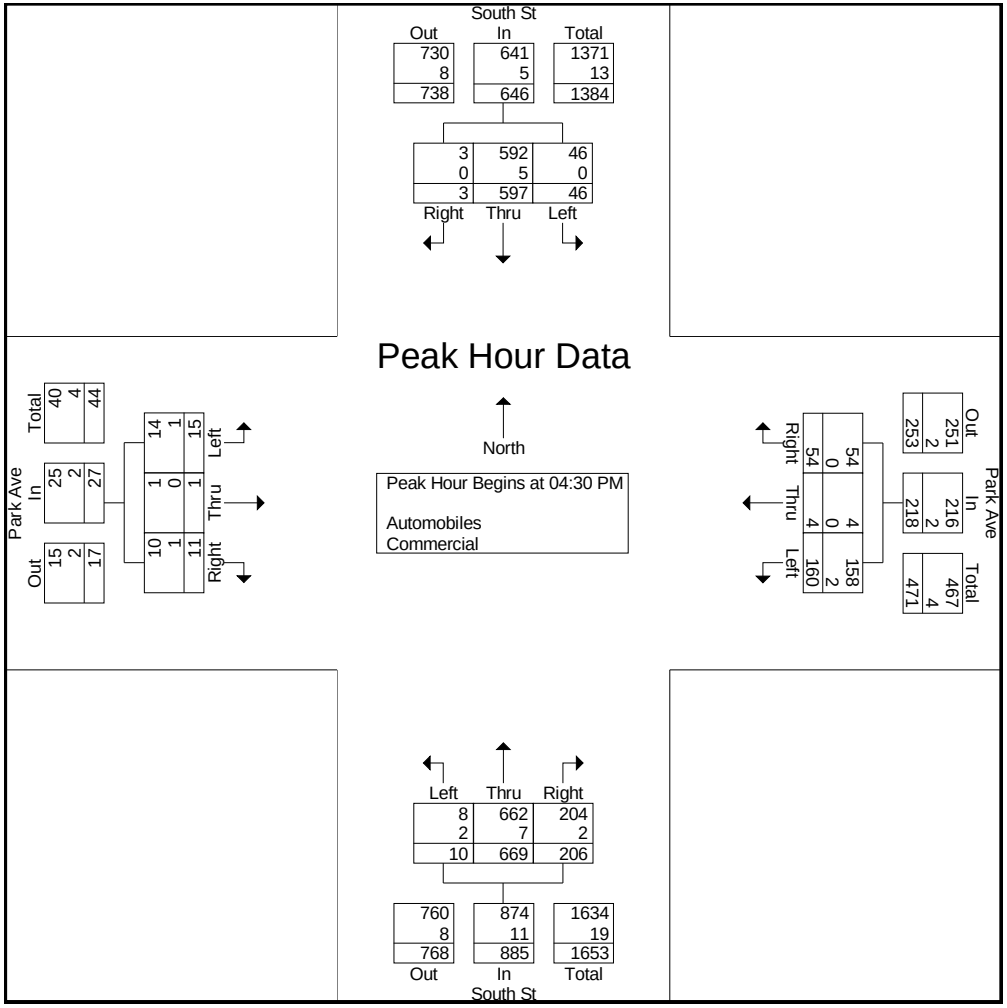
File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 5

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	13	140	1	154	44	2	12	58	3	163	42	208	4	0	5	9	429
04:45 PM	10	128	0	138	38	0	11	49	2	161	45	208	4	1	1	6	401
05:00 PM	12	175	1	188	32	2	17	51	3	173	56	232	1	0	3	4	475
05:15 PM	11	154	1	166	46	0	14	60	2	172	63	237	6	0	2	8	471
Total Volume	46	597	3	646	160	4	54	218	10	669	206	885	15	1	11	27	1776
% App. Total	7.1	92.4	0.5		73.4	1.8	24.8		1.1	75.6	23.3		55.6	3.7	40.7		
PHF	.885	.853	.750	.859	.870	.500	.794	.908	.833	.967	.817	.934	.625	.250	.550	.750	.935
Automobiles	46	592	3	641	158	4	54	216	8	662	204	874	14	1	10	25	1756
% Automobiles	100	99.2	100	99.2	98.8	100	100	99.1	80.0	99.0	99.0	98.8	93.3	100	90.9	92.6	98.9
Commercial	0	5	0	5	2	0	0	2	2	7	2	11	1	0	1	2	20
% Commercial	0	0.8	0	0.8	1.3	0	0	0.9	20.0	1.0	1.0	1.2	6.7	0	9.1	7.4	1.1

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 6



DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	South St Southbound					Park Ave Westbound					South St Northbound					Park Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	4
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
08:00 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
Grand Total	0	0	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	6	6	18
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	66.7	66.7	0	0	0	0	0	0	0	0	33.3	33.3	



SB Approach



EB Approach



WB Approach

de traffic	Carpenter Rd at Fox Lake Rd	Brevard County
	www.de-traffic.com 299 McGregor Rd. DeLand Fl. 32720	Project Number: L18-004 / Sheet Number: 1



NB Approach



SB Approach



EB Approach



WB Approach

de traffic	South St at Fox Lake Rd/Harrison St	Brevard County
	www.de-traffic.com 299 McGregor Rd. DeLand Fl. 32720	Project Number: L18-004 / Sheet Number: 2



NB Approach



SB Approach



EB Approach



WB Approach

de traffic	South St at Park Ave	Brevard County
	www.de-traffic.com	Project Number: L18-004 / Sheet Number: 3
	299 McGregor Rd. DeLand Fl. 32720	

APPENDIX D

Unsignalized Intersection HCS Worksheets – Existing Conditions

HCS7 Two-Way Stop-Control Report

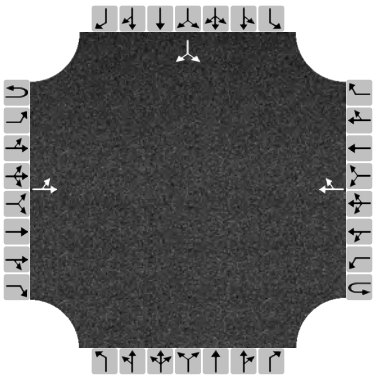
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Exising A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	82						187		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													211	
Capacity, c (veh/h)		1486													912	
v/c Ratio		0.00													0.23	
95% Queue Length, Q_{95} (veh)		0.0													0.9	
Control Delay (s/veh)		7.4													10.1	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.1		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

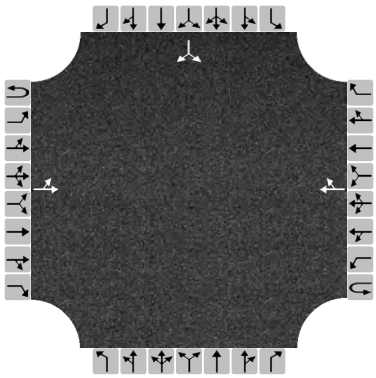
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Exising P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	33				27	205						127		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													152	
Capacity, c (veh/h)		1296													767	
v/c Ratio		0.01													0.20	
95% Queue Length, Q_{95} (veh)		0.0													0.7	
Control Delay (s/veh)		7.8													10.9	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.3												10.9		
Approach LOS														B		

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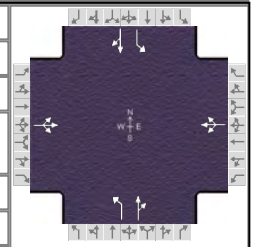
APPENDIX E

Signalized Intersection HCS Worksheets – Existing Conditions

HCS 2010 Signalized Intersection Results Summary

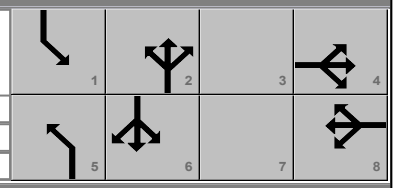
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Existing A…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	91	114	74	45	81	38	375	90	99	365	8

Signal Information			
Cycle, s	47.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.3	1.7	17.7	10.1	0.0	0.0						
Yellow	4.3	0.0	4.3	4.0	0.0	0.0						
Red	1.0	0.0	1.0	1.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.1		15.1	7.6	23.0	9.3	24.7
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		8.8		8.9	2.8	15.7	3.8	11.3
Green Extension Time (g_e), s		1.1		1.1	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.45	1.00	0.79	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		263			241		46	560		119	449	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1688			1488		1560	1732		1691	1752	
Queue Service Time (g_s), s		0.0			0.2		0.8	13.7		1.8	9.3	
Cycle Queue Clearance Time (g_c), s		6.8			6.9		0.8	13.7		1.8	9.3	
Green Ratio (*g/C*)		0.23			0.23		0.47	0.39		0.50	0.43	
Capacity (*c*), veh/h		440			421		402	648		415	718	
Volume-to-Capacity Ratio (*X*)		0.597			0.572		0.114	0.865		0.287	0.626	
Back of Queue (*Q*), ft/ln (95 th percentile)		104.3			96.1		7.7	179.7		18.3	112.1	
Back of Queue (*Q*), veh/ln (95 th percentile)		4.1			3.8		0.3	7.1		0.7	4.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.04	0.00		0.10	0.00	
Uniform Delay (d_1), s/veh		17.2			17.2		8.2	12.9		8.7	10.3	
Incremental Delay (d_2), s/veh		0.5			0.5		0.0	1.4		0.1	0.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		17.7			17.7		8.3	14.3		8.8	10.7	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	17.7	B		17.7	B		13.9	B		10.3	B	
Intersection Delay, s/veh / LOS	13.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.9	A	0.9	A	1.5	A	1.4	A

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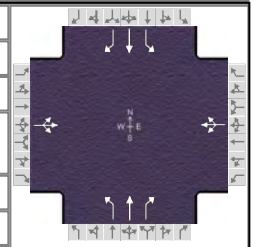
HCS 2010 Signalized Intersection Results Summary

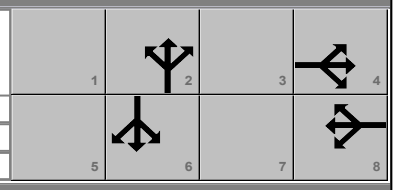
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Existing AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	194	3	57	13	452	85	49	508	4

Signal Information			
Cycle, s	39.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.0	13.6	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.6		18.6		21.0		21.0
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.2		13.6		13.4
Green Extension Time (g_e), s		0.6		0.6		2.5		2.5
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.00		0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			299		15	532	100	58	598	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1609			1450		725	1863	1579	836	1827	1579
Queue Service Time (g_s), s		0.0			6.6		0.8	8.8	1.7	2.6	10.7	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.2		11.6	8.8	1.7	11.4	10.7	0.1
Green Ratio (*g/C*)		0.38			0.38		0.44	0.44	0.44	0.44	0.44	0.44
Capacity (*c*), veh/h		584			585		241	824	559	290	808	559
Volume-to-Capacity Ratio (*X*)		0.042			0.511		0.063	0.645	0.179	0.199	0.740	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.4			81.5		4.5	76.3	15.5	16.1	91.7	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.2		0.2	3.0	0.6	0.6	3.6	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.04	0.00	0.00
Uniform Delay (d_1), s/veh		10.0			12.4		17.1	9.9	8.8	16.1	10.5	8.3
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.0			12.6		17.1	10.2	8.9	16.2	11.1	8.3
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.0	B		12.6	B		10.2	B		11.5	B	
Intersection Delay, s/veh / LOS	11.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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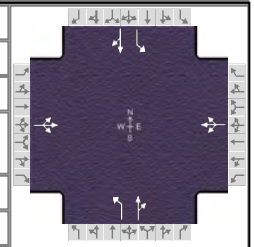
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Existing P…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	50	83	50	96	79	160	459	78	82	506	12

Signal Information			
Cycle, s	46.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	3.4	1.1	17.1	9.1	0.0	0.0						
Yellow	4.3	0.0	4.3	4.0	0.0	0.0						
Red	1.0	0.0	1.0	1.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		14.1		14.1	9.8	23.5	8.7	22.4
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		5.7		8.4	4.8	15.2	3.3	15.0
Green Extension Time (g_e), s		0.8		0.8	0.2	2.1	0.1	2.1
Phase Call Probability		0.99		0.99	0.89	1.00	0.68	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		150			239		170	571		87	551	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1666			1612		1560	1747		1691	1752	
Queue Service Time (g_s), s		0.0			2.8		2.8	13.2		1.3	13.0	
Cycle Queue Clearance Time (g_c), s		3.7			6.4		2.8	13.2		1.3	13.0	
Green Ratio (*g/C*)		0.22			0.22		0.51	0.41		0.49	0.39	
Capacity (*c*), veh/h		411			413		424	688		369	649	
Volume-to-Capacity Ratio (*X*)		0.365			0.580		0.401	0.831		0.237	0.849	
Back of Queue (*Q*), ft/ln (95 th percentile)		55			93.6		25	164.3		13.2	167.7	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.2			3.7		1.0	6.5		0.5	6.6	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.12	0.00		0.07	0.00	
Uniform Delay (d_1), s/veh		16.3			17.2		8.6	11.9		9.2	12.5	
Incremental Delay (d_2), s/veh		0.2			0.5		0.2	1.0		0.1	1.2	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		16.5			17.7		8.8	12.9		9.3	13.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	16.5	B		17.7	B		12.0	B		13.1	B	
Intersection Delay, s/veh / LOS	13.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.7	A	0.9	A	1.7	A	1.5	A

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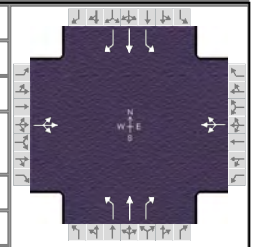
HCS 2010 Signalized Intersection Results Summary

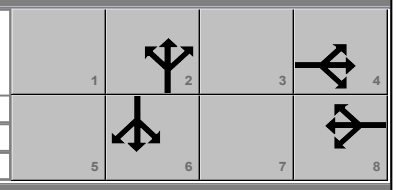
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Existing PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	160	4	54	10	669	206	46	597	3

Signal Information			
Cycle, s	49.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	25.6	13.7	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.7		18.7		30.6		30.6
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		9.9		18.3		22.1
Green Extension Time (g_e), s		0.5		0.5		3.7		3.5
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.08		0.15

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			256		12	787	242	54	702	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1522			1463		658	1863	1579	659	1827	1579
Queue Service Time (g_s), s		0.0			7.2		0.7	16.3	4.7	3.8	13.9	0.1
Cycle Queue Clearance Time (g_c), s		0.7			7.9		14.7	16.3	4.7	20.1	13.9	0.1
Green Ratio (*g/C*)		0.31			0.31		0.55	0.55	0.55	0.55	0.55	0.55
Capacity (*c*), veh/h		476			475		274	1023	755	242	1003	755
Volume-to-Capacity Ratio (*X*)		0.067			0.540		0.043	0.770	0.321	0.223	0.700	0.005
Back of Queue (*Q*), ft/ln (95 th percentile)		10.9			105.6		3.9	148.7	41.8	21.1	118.1	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.4			4.2		0.2	5.9	1.6	0.8	4.6	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.12	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		14.5			17.2		16.3	9.9	7.9	19.6	9.3	6.7
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.1	0.1	0.2	0.4	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		14.5			17.6		16.3	11.0	8.0	19.8	9.6	6.7
Level of Service (LOS)		B			B		B	B	A	B	A	A
Approach Delay, s/veh / LOS	14.5	B		17.6	B		10.3	B		10.3	B	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.2	B	1.7	A

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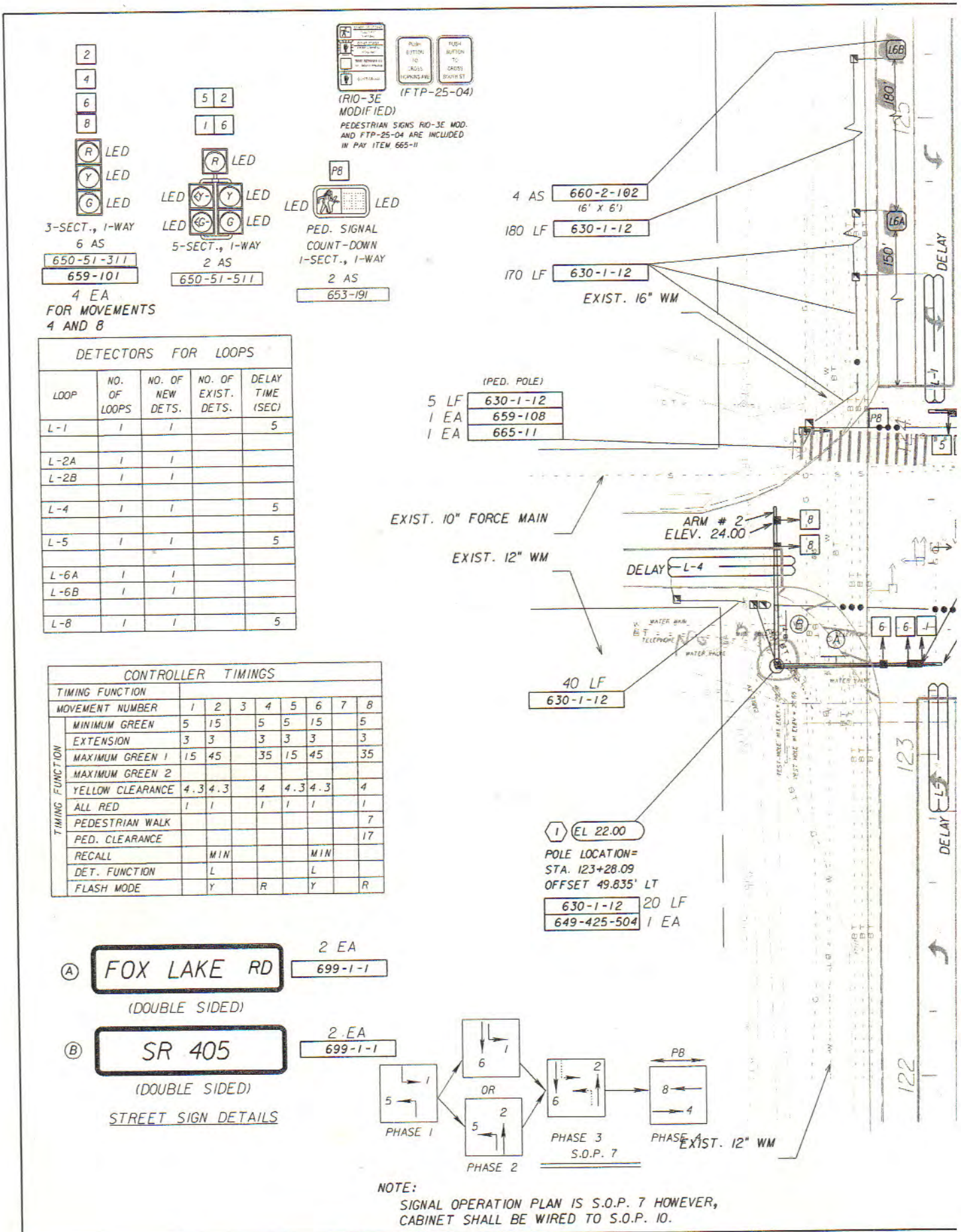
APPENDIX F
Signal Timing

#29



DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	NO. OF EXIST. DETS.	DELAY TIME (SEC)
L-1	1	1		5
L-2A	1	1		
L-2B	1	1		
L-4	1	1		5
L-5	1	1		5
L-6A	1	1		
L-6B	1	1		
L-8	1	1		5

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION: MINIMUM GREEN	5	15		5	5	15		5
EXTENSION	3	3		3	3	3		3
MAXIMUM GREEN 1	15	45		35	15	45		35
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.3	4.3		4	4.3	4.3		4
ALL RED	1	1		1	1	1		1
PEDESTRIAN WALK								7
PED. CLEARANCE								17
RECALL		MIN				MIN		
DET. FUNCTION		L				L		
FLASH MODE		Y		R		Y		R

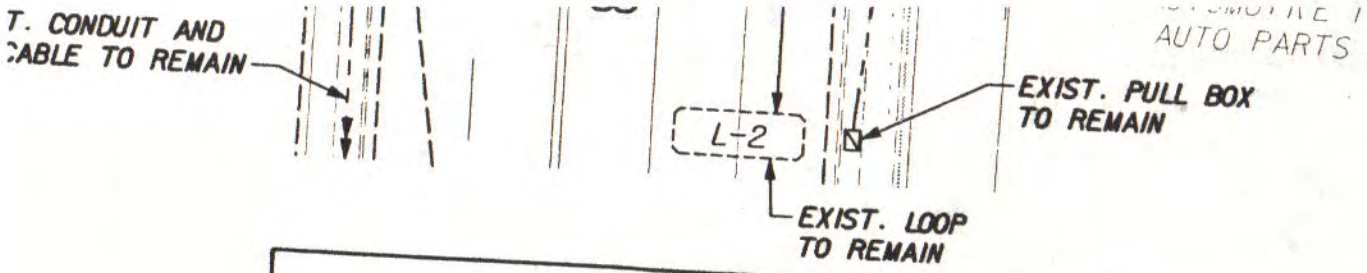
NOTE:
SIGNAL OPERATION PLAN IS S.O.P. 7 HOWEVER, CABINET SHALL BE WIRED TO S.O.P. 10.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

MICHAEL L. M
P.E. LICENSE
Ghyabi & Assoc
214 East New Y
Deland, FL 32
Phone: 386 469
Fax. 386/469
C.A. # 7311

#30

PARK Ave. SR405 (South St)



SUGGESTED INITIAL CONTROLLER TIMING

MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN		14		8		14		8
EXTENSION		3.5		3.5		3.5		3.5
MAXIMUM GREEN 1		29		36		29		36
MAXIMUM GREEN 2		0		0		0		0
YELLOW CLEARANCE		4		4		4		4
ALL RED		1		1		1		1
PEDESTRIAN WALK		8		8		8		8
PED. CLEARANCE		14		24		14		24
RECALL		MIN		OFF		MIN		OFF
DETECTOR FUNCTION		LOCK		NON-LOCK		LOCK		NON-LOCK
FLASHING MODE		YELLOW		RED		YELLOW		RED

SIGNAL TIMING IS INITIAL AND MAY BE ADJUSTED BY THE MAINTAINING AGENCY.

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SIGNALIZATION PLAN

SHEET NO.

-

APPENDIX G

Unsignalized Intersection HCS Worksheets – Background Conditions

HCS7 Two-Way Stop-Control Report

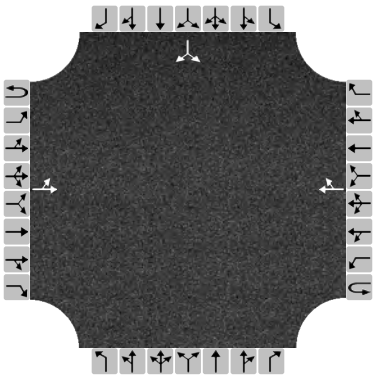
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Background A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	84						191		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													216	
Capacity, c (veh/h)		1484													910	
v/c Ratio		0.00													0.24	
95% Queue Length, Q_{95} (veh)		0.0													0.9	
Control Delay (s/veh)		7.4													10.2	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.2		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

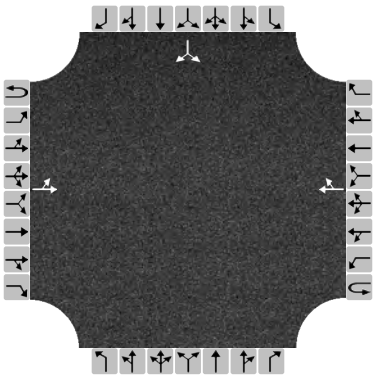
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Background P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	34				28	209						130		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													155	
Capacity, c (veh/h)		1290													762	
v/c Ratio		0.01													0.20	
95% Queue Length, Q_{95} (veh)		0.0													0.8	
Control Delay (s/veh)		7.8													10.9	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.2												10.9		
Approach LOS														B		

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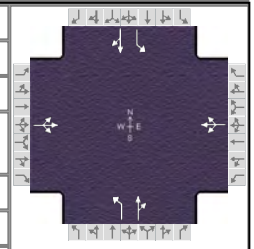
APPENDIX H

Signalized Intersection HCS Worksheets – Background Conditions

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Backgrou…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	93	116	75	46	83	39	383	92	101	372	8

Signal Information			
Cycle, s	48.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.4	1.7	18.4	10.4	0.0	0.0	1	2	3	4		
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	5	6	7	8		
Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.4		15.4	7.7	23.7	9.3	25.3
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		9.0		9.3	2.8	16.4	3.9	11.7
Green Extension Time (g_e), s		1.1		1.1	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.47	1.00	0.81	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		267			246		47	572		122	458	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1689			1487		1560	1732		1691	1753	
Queue Service Time (g_s), s		0.0			0.3		0.8	14.4		1.9	9.7	
Cycle Queue Clearance Time (g_c), s		7.0			7.3		0.8	14.4		1.9	9.7	
Green Ratio (*g/C*)		0.24			0.24		0.47	0.40		0.51	0.43	
Capacity (*c*), veh/h		442			422		399	658		408	726	
Volume-to-Capacity Ratio (*X*)		0.605			0.583		0.118	0.870		0.298	0.630	
Back of Queue (*Q*), ft/ln (95 th percentile)		110			101.2		8.1	189.8		19.2	118.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		4.3			4.0		0.3	7.5		0.8	4.7	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.04	0.00		0.10	0.00	
Uniform Delay (d_1), s/veh		17.5			17.6		8.3	13.1		8.9	10.5	
Incremental Delay (d_2), s/veh		0.5			0.5		0.0	1.4		0.2	0.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.0			18.1		8.4	14.6		9.1	10.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.0	B		18.1	B		14.1	B		10.5	B	
Intersection Delay, s/veh / LOS	14.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.9	A	0.9	A	1.5	A	1.4	A

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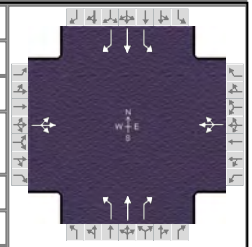
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Background AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	198	3	58	13	461	87	50	518	4

Signal Information			
Cycle, s	40.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	16.5	13.6	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	1.0	1.0	0.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.6		18.6		21.5		21.5
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.5		13.9		13.8
Green Extension Time (g_e), s		0.6		0.6		2.5		2.5
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.00		0.00		0.01		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			305		15	542	102	59	609	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1613			1450		717	1863	1579	828	1827	1579
Queue Service Time (g_s), s		0.0			6.9		0.8	9.1	1.8	2.7	11.1	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.5		11.9	9.1	1.8	11.8	11.1	0.1
Green Ratio (*g/C*)		0.38			0.38		0.45	0.45	0.45	0.45	0.45	0.45
Capacity (*c*), veh/h		580			579		239	834	569	289	818	569
Volume-to-Capacity Ratio (*X*)		0.043			0.526		0.064	0.650	0.180	0.203	0.745	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.5			85.9		4.6	79.1	16	16.8	95.8	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.4		0.2	3.1	0.6	0.7	3.8	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.04	0.00	0.00
Uniform Delay (d_1), s/veh		10.2			12.7		17.2	9.9	8.8	16.2	10.6	8.2
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.2			13.0		17.3	10.2	8.8	16.4	11.1	8.2
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.2	B		13.0	B		10.1	B		11.5	B	
Intersection Delay, s/veh / LOS	11.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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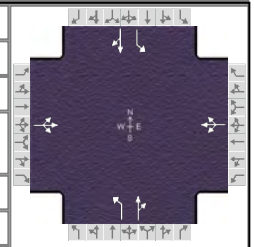
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Backgrou…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	51	85	51	98	81	163	468	80	84	516	12

Signal Information			
Cycle, s	47.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.5	1.1	17.8	9.5	0.0	0.0	1	2	3	4		
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	5	6	7	8		
Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		14.5		14.5	9.9	24.2	8.8	23.1
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		5.8		8.7	4.9	15.9	3.4	15.6
Green Extension Time (g_e), s		0.8		0.8	0.2	2.2	0.1	2.2
Phase Call Probability		0.99		0.99	0.90	1.00	0.69	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		153			245		173	583		89	562	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1666			1611		1560	1747		1691	1752	
Queue Service Time (g_s), s		0.0			2.9		2.9	13.9		1.4	13.6	
Cycle Queue Clearance Time (g_c), s		3.8			6.7		2.9	13.9		1.4	13.6	
Green Ratio (*g/C*)		0.22			0.22		0.52	0.42		0.49	0.40	
Capacity (*c*), veh/h		413			414		419	697		364	658	
Volume-to-Capacity Ratio (*X*)		0.371			0.590		0.414	0.836		0.246	0.854	
Back of Queue (*Q*), ft/ln (95 th percentile)		57.9			99.1		26.4	176		14.2	178.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.3			3.9		1.0	6.9		0.6	7.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.13	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh		16.6			17.6		8.8	12.1		9.4	12.8	
Incremental Delay (d_2), s/veh		0.2			0.5		0.2	1.0		0.1	1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		16.8			18.1		9.1	13.1		9.6	14.0	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	16.8	B		18.1	B		12.2	B		13.4	B	
Intersection Delay, s/veh / LOS	13.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.7	A	0.9	A	1.7	A	1.6	A

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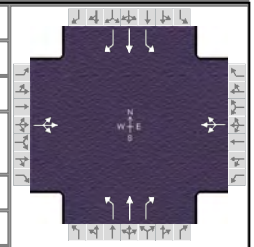
HCS 2010 Signalized Intersection Results Summary

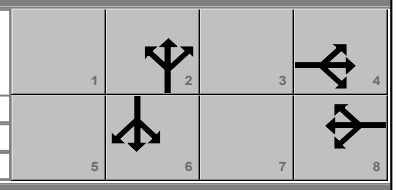
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Background PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	163	4	55	10	682	210	47	609	3

Signal Information			
Cycle, s	50.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	26.4	13.8	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.8		18.8		31.4		31.4
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		10.3		18.8		22.9
Green Extension Time (g_e), s		0.5		0.5		3.8		3.6
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.10		0.19

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			261		12	802	247	55	716	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1524			1463		649	1863	1579	650	1827	1579
Queue Service Time (g_s), s		0.0			7.5		0.7	16.8	4.8	4.0	14.4	0.1
Cycle Queue Clearance Time (g_c), s		0.7			8.3		15.2	16.8	4.8	20.9	14.4	0.1
Green Ratio (*g/C*)		0.30			0.30		0.56	0.56	0.56	0.56	0.56	0.56
Capacity (*c*), veh/h		469			468		272	1036	767	240	1016	767
Volume-to-Capacity Ratio (*X*)		0.068			0.558		0.043	0.775	0.322	0.231	0.705	0.005
Back of Queue (*Q*), ft/ln (95 th percentile)		11.3			111.3		4	156.7	42.9	22.2	123.3	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.4			4.4		0.2	6.2	1.7	0.9	4.9	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.13	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		14.9			17.7		16.4	9.9	7.8	19.9	9.2	6.6
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.3	0.1	0.2	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		14.9			18.1		16.5	11.2	7.9	20.1	9.8	6.6
Level of Service (LOS)		B			B		B	B	A	C	A	A
Approach Delay, s/veh / LOS	14.9	B		18.1	B		10.5	B		10.5	B	
Intersection Delay, s/veh / LOS	11.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.2	B	1.8	A

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APPENDIX I

Unsignalized Intersections HCS Worksheets – Build-Out Conditions

HCS7 Two-Way Stop-Control Report

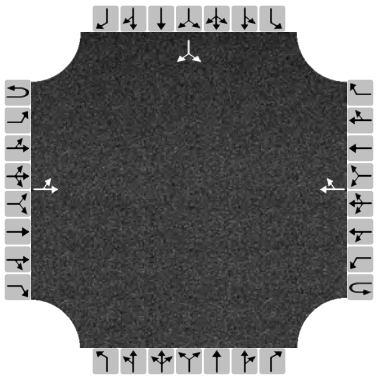
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Build-Out A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	97						230		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													259	
Capacity, c (veh/h)		1465													901	
v/c Ratio		0.00													0.29	
95% Queue Length, Q_{95} (veh)		0.0													1.2	
Control Delay (s/veh)		7.5													10.6	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.6		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

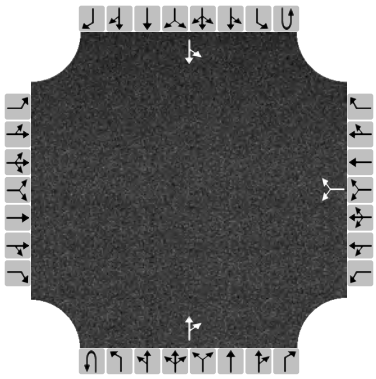
General Information

Analyst	SD
Agency/Co.	LTG
Date Performed	1/29/2018
Analysis Year	2018
Time Analyzed	Build-Out A.M. Peak Hour
Intersection Orientation	North-South
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Carpenter at Project Driv
Jurisdiction	City of Titusville
East/West Street	Project Driveway
North/South Street	Carpenter Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						39		5			88	13		2	192	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							47							2		
Capacity, c (veh/h)							695							1472		
v/c Ratio							0.07							0.00		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							10.6							7.4		
Level of Service, LOS							B							A		
Approach Delay (s/veh)						10.6								0.1		
Approach LOS						B										

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HCS7 Two-Way Stop-Control Report

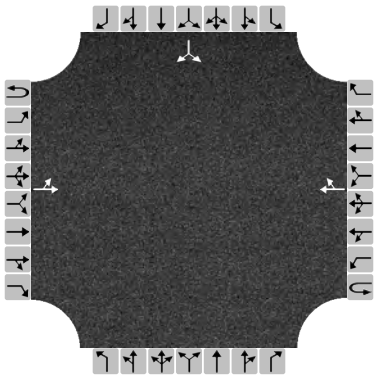
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Build-Out P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	34				28	251						155		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													184	
Capacity, c (veh/h)		1238													737	
v/c Ratio		0.01													0.25	
95% Queue Length, Q_{95} (veh)		0.0													1.0	
Control Delay (s/veh)		7.9													11.5	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.3												11.5		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

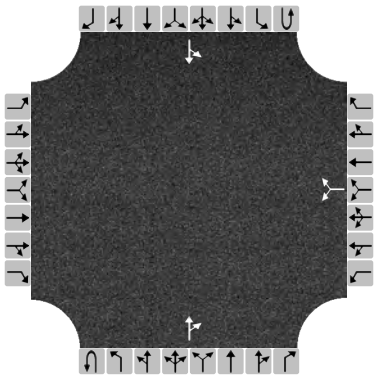
General Information

Analyst	SD
Agency/Co.	LTG
Date Performed	1/29/2018
Analysis Year	2018
Time Analyzed	Build-Out P.M. Peak Hour
Intersection Orientation	North-South
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Carpenter at Project Driv
Jurisdiction	City of Titusville
East/West Street	Project Driveway
North/South Street	Carpenter Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						25		3			222	42		6	135	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							30							7		
Capacity, c (veh/h)							595							1268		
v/c Ratio							0.05							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							11.4							7.9		
Level of Service, LOS							B							A		
Approach Delay (s/veh)						11.4								0.4		
Approach LOS						B										

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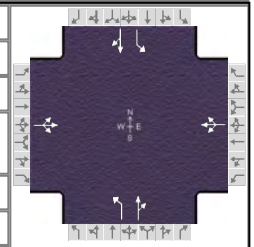
APPENDIX J

Signalized Intersections HCS Worksheets – Build-Out Conditions

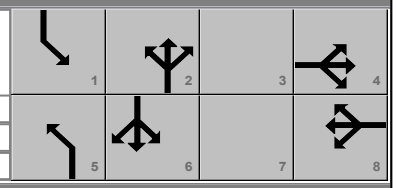
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Build-Out…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	23	100	137	75	48	83	46	383	92	101	372	11

Signal Information					EB			WB			NB			SB		
Cycle, s	51.2	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	2.7	1.4		19.3	12.2	0.0	0.0					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.3	0.0		4.3	4.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.0	1.0	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		17.2		17.2	8.0	24.6	9.4	26.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		10.9		9.5	3.0	17.3	4.0	12.6
Green Extension Time (g_e), s		1.2		1.2	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.55	1.00	0.82	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		313			248		55	572		122	461	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1671			1479		1560	1732		1691	1750	
Queue Service Time (g_s), s		1.4			0.0		1.0	15.3		2.0	10.6	
Cycle Queue Clearance Time (g_c), s		8.9			7.5		1.0	15.3		2.0	10.6	
Green Ratio (*g/C*)		0.26			0.26		0.47	0.40		0.50	0.42	
Capacity (*c*), veh/h		474			448		385	654		389	708	
Volume-to-Capacity Ratio (*X*)		0.661			0.555		0.144	0.875		0.313	0.652	
Back of Queue (*Q*), ft/ln (95 th percentile)		137.9			105.7		10.7	207.1		22.3	137.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		5.4			4.2		0.4	8.2		0.9	5.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.05	0.00		0.12	0.00	
Uniform Delay (d_1), s/veh		18.1			17.5		9.0	14.0		9.7	11.6	
Incremental Delay (d_2), s/veh		0.6			0.4		0.1	1.5		0.2	0.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.7			17.9		9.1	15.5		9.8	12.0	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.7	B		17.9	B		15.0	B		11.5	B	
Intersection Delay, s/veh / LOS	14.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.0	A	0.9	A	1.5	A	1.4	A

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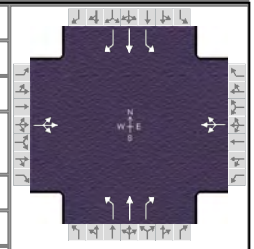
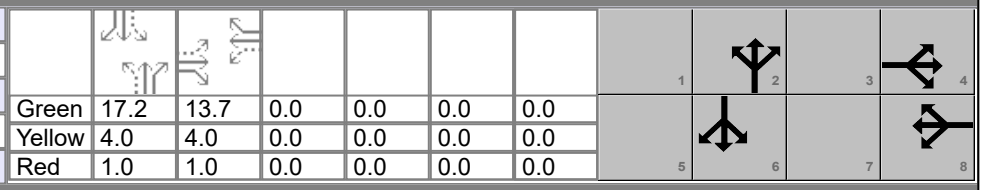
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Build-Out AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	198	3	59	13	467	87	52	536	4

Signal Information			
Cycle, s	40.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	17.2	13.7	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	1.0	1.0	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.7		18.7		22.2		22.2
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.7		14.6		14.1
Green Extension Time (g_e), s		0.6		0.6		2.6		2.6
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.01		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			306		15	549	102	61	631	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1616			1451		703	1863	1579	822	1827	1579
Queue Service Time (g_s), s		0.0			7.1		0.8	9.3	1.8	2.8	11.7	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.7		12.6	9.3	1.8	12.1	11.7	0.1
Green Ratio (*g/C*)		0.37			0.37		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (*c*), veh/h		571			570		235	851	586	294	835	586
Volume-to-Capacity Ratio (*X*)		0.043			0.537		0.065	0.645	0.175	0.208	0.755	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.8			89.8		4.7	79.4	15.9	17.7	100.1	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.5		0.2	3.1	0.6	0.7	3.9	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.05	0.00	0.00
Uniform Delay (d_1), s/veh		10.5			13.1		17.5	9.8	8.6	16.2	10.6	8.1
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.5			13.4		17.6	10.1	8.7	16.3	11.1	8.1
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.5	B		13.4	B		10.0	B		11.5	B	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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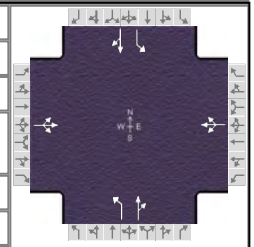
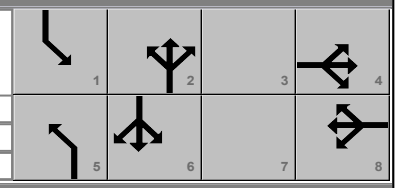
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Build-Out…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	56	98	51	106	81	185	468	80	84	516	23

Signal Information													
Cycle, s	50.1	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.6	1.7	19.0	10.2	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.3	0.0	4.3	4.0	0.0	0.0			
				Red	1.0	0.0	1.0	1.0	0.0	0.0			



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.2		15.2	10.6	26.1	8.9	24.3
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		6.8		9.3	5.4	16.3	3.4	16.8
Green Extension Time (g_e), s		0.9		0.9	0.2	2.2	0.1	2.2
Phase Call Probability		1.00		1.00	0.94	1.00	0.71	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		180			253		197	583		89	573	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1665			1618		1560	1747		1691	1746	
Queue Service Time (g_s), s		0.0			2.5		3.4	14.3		1.4	14.8	
Cycle Queue Clearance Time (g_c), s		4.8			7.3		3.4	14.3		1.4	14.8	
Green Ratio (*g/C*)		0.22			0.22		0.53	0.43		0.49	0.40	
Capacity (*c*), veh/h		416			416		419	725		371	664	
Volume-to-Capacity Ratio (*X*)		0.432			0.609		0.470	0.804		0.241	0.864	
Back of Queue (*Q*), ft/ln (95 th percentile)		74.5			110.6		32.6	182.9		15.7	198.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.9			4.4		1.3	7.2		0.6	7.8	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.16	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh		17.7			18.6		9.4	12.1		9.5	13.5	
Incremental Delay (d_2), s/veh		0.3			0.5		0.3	0.8		0.1	1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.0			19.1		9.7	12.9		9.7	14.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.0	B		19.1	B		12.1	B		14.1	B	
Intersection Delay, s/veh / LOS	14.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.8	A	0.9	A	1.8	A	1.6	A

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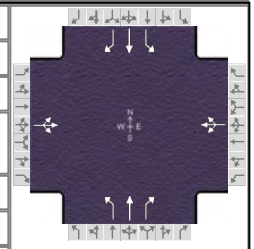
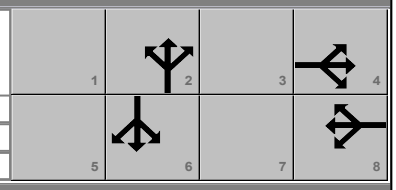
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Build-Out PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	163	4	57	10	702	210	48	621	3

Signal Information												
Cycle, s	51.4	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	27.6	13.8	0.0	0.0	0.0	0.0		
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	0.0	0.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.8		18.8		32.6		32.6
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		10.6		19.8		24.1
Green Extension Time (g_e), s		0.6		0.5		3.9		3.6
Phase Call Probability		0.99		0.99		1.00		1.00
Max Out Probability		0.00		0.00		0.12		0.24

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			264		12	826	247	56	731	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1524			1464		641	1863	1579	636	1827	1579
Queue Service Time (g_s), s		0.0			7.9		0.8	17.8	4.8	4.3	14.9	0.1
Cycle Queue Clearance Time (g_c), s		0.7			8.6		15.7	17.8	4.8	22.1	14.9	0.1
Green Ratio (*g/C*)		0.30			0.30		0.57	0.57	0.57	0.57	0.57	0.57
Capacity (*c*), veh/h		459			458		273	1054	785	236	1034	785
Volume-to-Capacity Ratio (*X*)		0.069			0.576		0.043	0.784	0.315	0.240	0.707	0.004
Back of Queue (*Q*), ft/ln (95 th percentile)		11.8			117.4		4.1	169.4	42.9	23.5	129.8	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.5			4.6		0.2	6.7	1.7	0.9	5.1	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.13	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		15.5			18.4		16.5	9.9	7.7	20.4	9.2	6.5
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.7	0.1	0.2	0.7	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		15.5			18.9		16.5	11.6	7.8	20.5	9.8	6.5
Level of Service (LOS)		B			B		B	B	A	C	A	A
Approach Delay, s/veh / LOS	15.5	B		18.9	B		10.8	B		10.6	B	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.3	B	1.8	A

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APPENDIX K

ARTPLAN Result - SR 405 / South Street from Fox Lake Road to SR 50

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SD	**Arterial Name**	SR 405/South St	**Study Period**	**Standard K**
Date Prepared	2/13/2018 1:21:07 PM	**From**	Fox Lake Rd	**Modal Analysis**	Auto Only
Agency	LTG	**To**	SR 50	**Program**	ARTPLAN 2012
Area Type	Transitioning/Urban	**Peak Direction**	Southbound	**Version Date**	12/12/2012
Arterial Class	1				
File Name	X:\jobs\4500\4511.02\data\Artplan\SR 405 from SR 50 to Fox Lake.xap				
User Notes					

Arterial Data

K	0.09	**PHF**	0.845	**Control Type**	CoordinatedActuated
D	0.53	**% Heavy Vehicles**	3	**Base Sat. Flow Rate**	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Park Ave	120	0.48	3	1	14	2	Yes	ProtPerm	1	410	0.15	Yes
SR 50	120	0.44	5	2	25	15	Yes	Protected	1	450	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Park Ave)	4100	18573	886	1	55	60	Restrictive	No	N/A
2 (to SR 50)	7300	18573	886	1	55	60	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Park Ave)	881	1818	0.976	37.86	D	0.27	31.92	B
2 (to SR 50)	629	3101	0.358	9.97	A	0.74	50.62	A

Arterial Length	2.1727	Weighted g/C	0.46	FFS Delay	57.60	Threshold Delay	0.00	Auto Speed	41.79	Auto LOS	A

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	880	990	1040	***	***
2	1810	2000	2120	***	***
3	2740	3030	3200	***	***
4	3670	4060	4280	***	***
*	890	1000	1040	***	***
Lanes	**Hourly Volume In Both Directions**				
2	1670	1870	1970	***	***
4	3420	3780	4000	***	***
6	5170	5720	6030	***	***
8	6930	7670	8060	***	***
*	1680	1890	1970	***	***
Lanes	**Annual Average Daily Traffic**				
2	18500	20800	21900	***	***
4	38000	42000	44500	***	***
6	57500	63600	67000	***	***
8	77000	85200	89600	***	***
*	18700	21000	21900	***	***

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

APPENDIX L
NCHRP 457 Reports

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

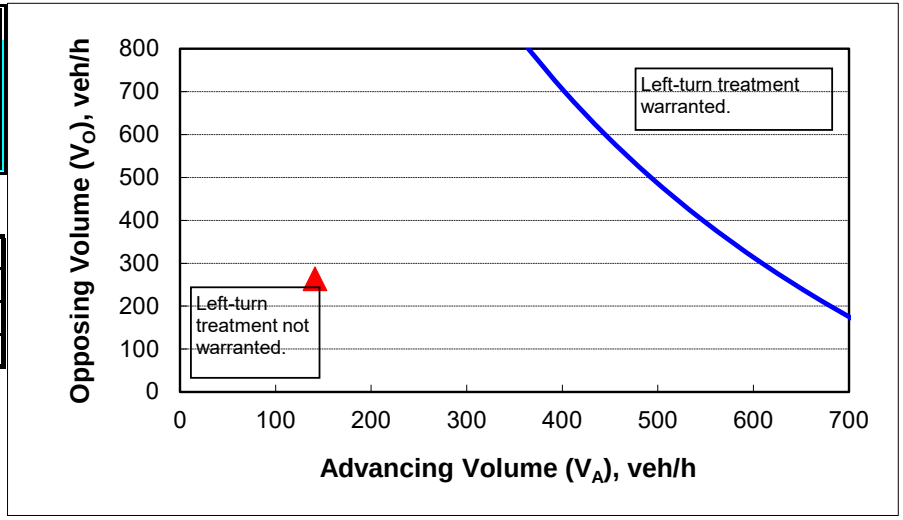
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	141
Opposing volume (V_O), veh/h:	264

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	634
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

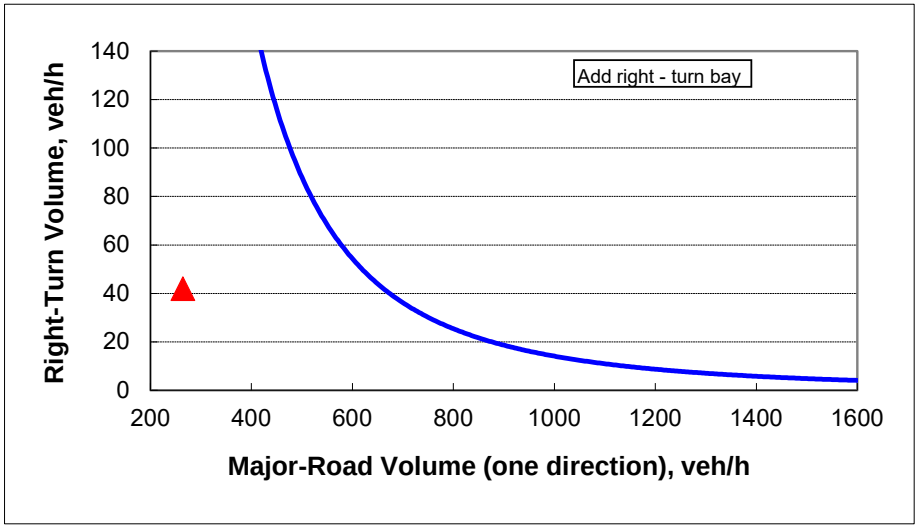
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	264
Right-turn volume, veh/h:	42

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	475
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



TRAFFIC IMPACT STUDY

STEP BY STEP LEARNING CENTER
TITUSVILLE, FLORIDA

Prepared for:

Space Coast Step by Step Early Learning Center
801 South Park Avenue
Titusville, Florida 32796

Prepared by:

Traffic Planning and Design, Inc.
535 Versailles Drive
Maitland, Florida 32751
407-628-9955

November 2018

TPD № 5157

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic Planning & Design, Inc., a corporation authorized to operate as an engineering business, EB-3702, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Step by Step Learning Center

LOCATION: Titusville, Florida

CLIENT: Space Coast Step by Step Early Learning Center

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

NAME: Turgut Dervish, P.E.

P.E. №: 20400

DATE: November 21, 2018

SIGNATURE:



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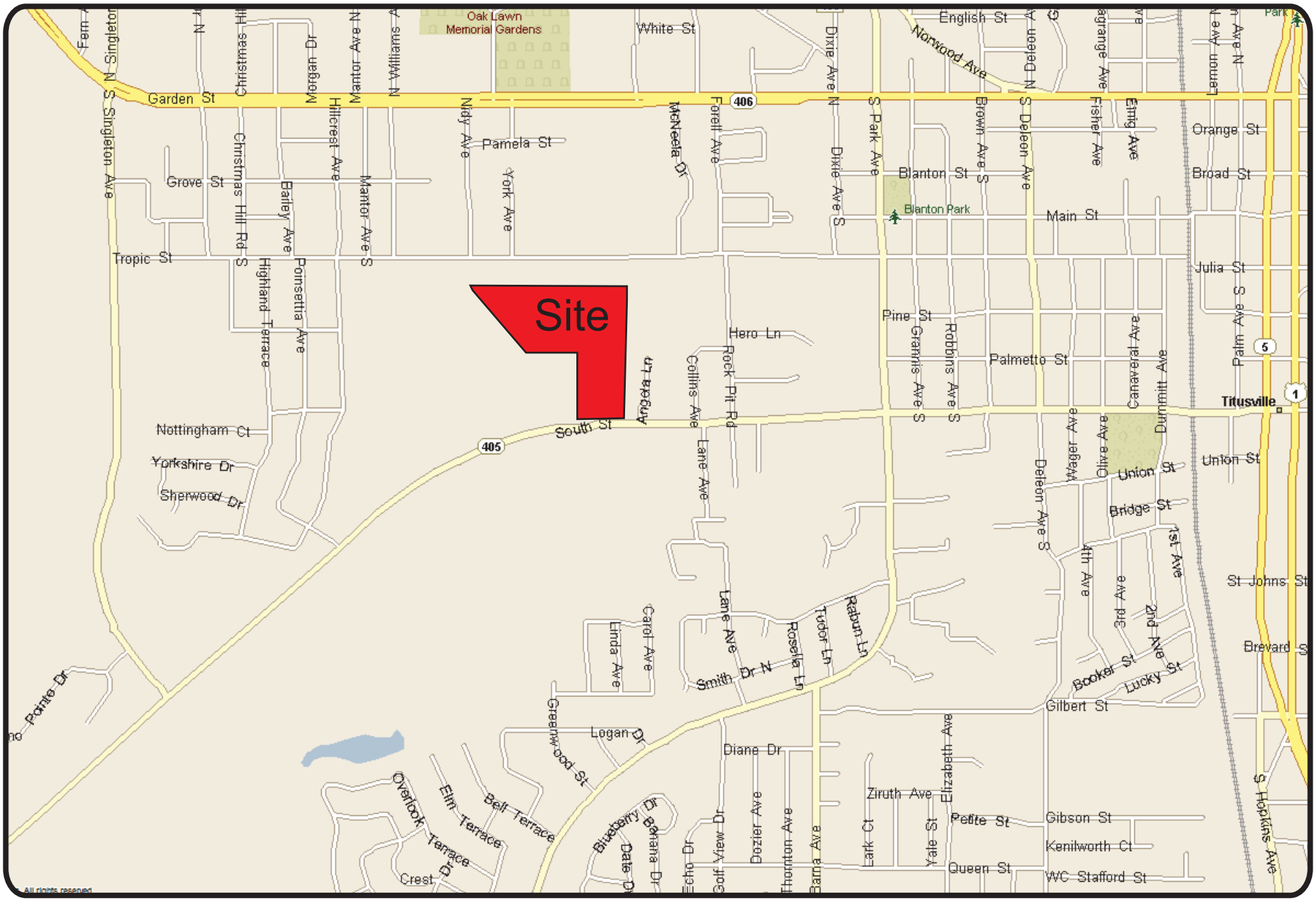
INTRODUCTION

This traffic study was performed to assess the impact of a proposed day care center in Titusville, Florida. The proposed center will consist of an 18,000 square foot building located on SR 405 just west of Angela Lane. Access to the site will be provided via an existing driveway which currently serves the Space Coast Unity Church. **Figure 1** depicts the site location and the area roadways.

The roadway segment of SR 405 from South Singleton Avenue to South Park Avenue and the following intersections were included in the analysis:

- SR 405 and South Park Avenue
- SR 405 and Site Entrance

The traffic study was conducted in accordance with the study methodology submitted to and reviewed by the City. The methodology document and related correspondence are included in **Appendix A.** Data used in the analysis consisted of the site plan/development information provided by Project Engineers, traffic volume data obtained from the Florida DOT and Space Coast TPO, and field data acquired by Traffic Planning and Design, Inc. (TPD).



Childcare Facility @ SR 405
Project № 5157
Figure 1

Site Location

EXISTING TRAFFIC CONDITIONS

A capacity analysis was performed for the study roadway segment and intersections in order to establish their current Level of Service (LOS) for existing conditions. The roadway segment was analyzed for daily traffic conditions and the intersections were analyzed for P.M. peak hour conditions.

Roadway Capacity Analysis

Table 1 presents a summary of the existing conditions for the roadway segment using existing daily traffic volumes. The Roadway segment was analyzed by comparing the existing traffic volume of the segment with its corresponding capacity. The existing traffic volumes and adopted LOS and capacities were obtained from the Space Coast TPO Traffic Counts Spreadsheets. The pertinent page from the Traffic Count database is included in **Appendix B**.

Table 1
Existing Conditions- Roadway Analysis

ID	Roadway Segment	Function/ Class	# of Lns	Adopted LOS	Daily Capacity*	Daily Volume*	LOS
SR 405/South Street							
215	Singleton Ave to Angela Ln	U/Minor	2	D	17,700	6,630	C
	Angela Ln to Park Ave	U/Minor	4	D	37,810	6,630	C

* Obtained from the Space Coast TPO counts: 2007-2016 spreadsheets

The results of the analysis indicate that the study segment of SR 405 currently operates at satisfactory Levels of Service.

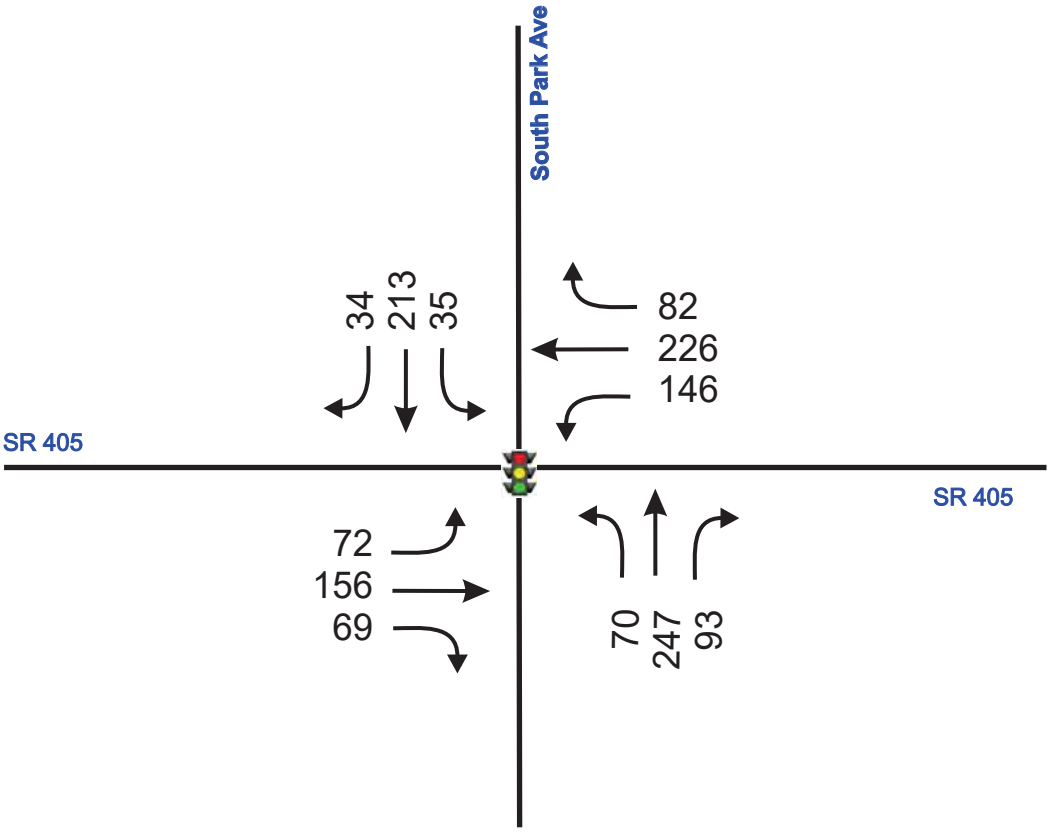
Intersection Capacity Analysis

The capacity analysis for the SR 405/South Park Avenue intersection was conducted using the existing P.M. peak hour volumes, the existing intersection geometry and traffic controls. The existing P.M. peak hour traffic volumes are summarized in **Figure 2**. These counts determined from 4-6 P.M. turning movement counts included in **Appendix C** were adjusted as per FDOT's Peak Season Factor Category Report for Brevard County. The Peak Season Category report along with the signal timing data are included in **Appendix D.**

The analysis was based on the ***Highway Capacity Software (HCS)*** in accordance with the procedures of the ***2010 Highway Capacity Manual*** for intersections. The results of the capacity analysis are summarized in **Table 2,** which shows that the study intersection currently operates at satisfactory Levels of Service. A detailed capacity analysis worksheet is included in **Appendix E**.

Table 2
Existing Intersection Level of Service

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 405 & Park Ave	Signal	13.7	B	20.6	C	19.1	B	21.0	C	18.8	B



Childcare Facility @ SR 405
Project № 5157
Figure 2

Existing PM Peak Hour Traffic Volumes

TRIP GENERATION AND PROPOSED DEVELOPMENT

The proposed development will consist of an 18,000 square foot day care center. **Figure 3** depicts the site plan of the development and its access configuration. To determine the impact of this development, an analysis of its trip generation characteristics was performed. This included a determination of the number of trips generated and their distribution and assignment onto the surrounding transportation network.

Trip Generation

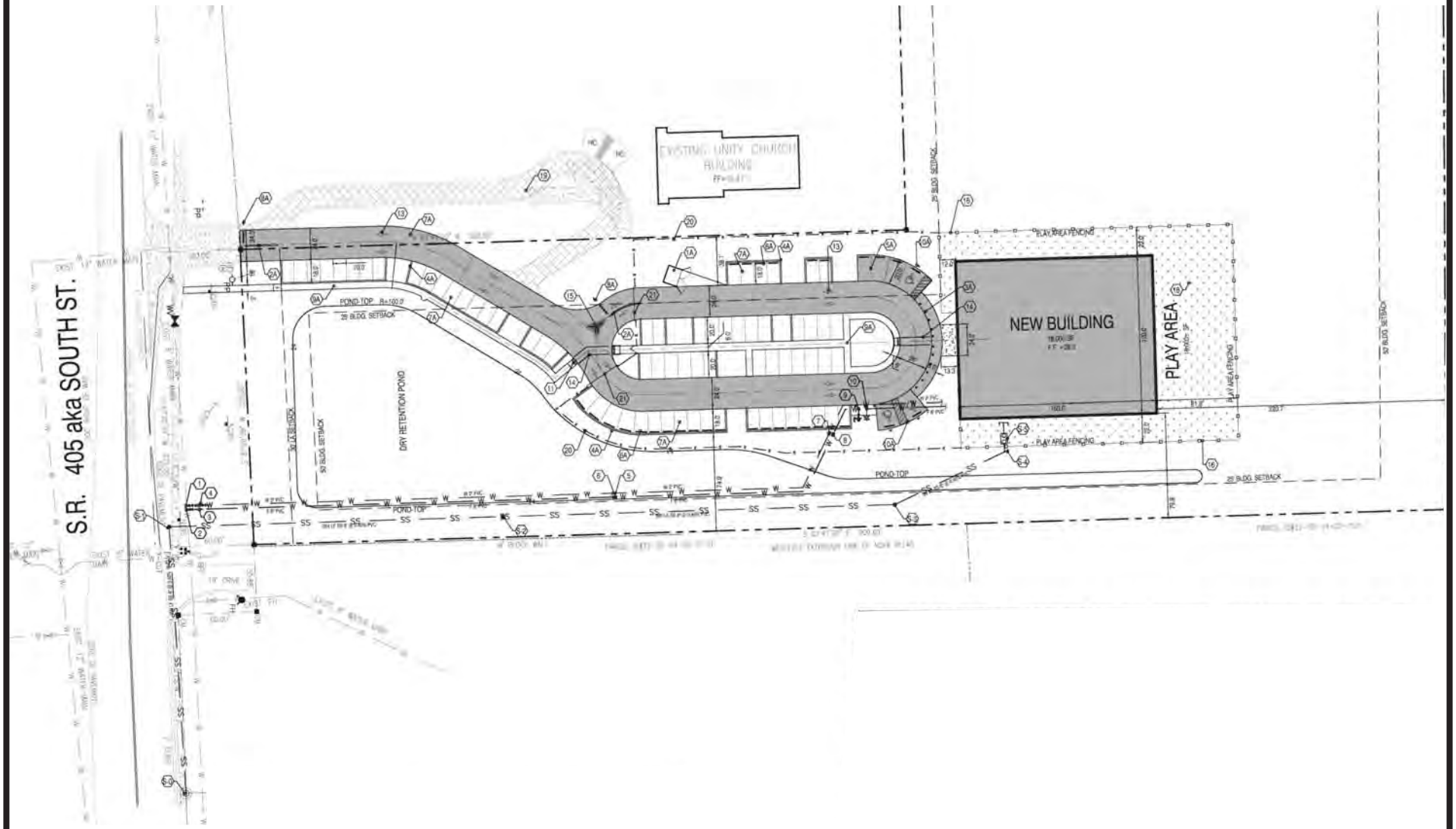
The trip generation of the proposed development was calculated using data from the 10th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual.* The proposed project is expected to generate 857 daily trips and 200 P.M. peak hour trips, 94 entering and 106 exiting. **Table 3** provides a summary of the trip generation calculation. The ITE trip generation sheets are included in **Appendix F.**

Table 3
Trip Generation Summary

ITE Code	Land Use	Size	Daily Generation		P.M. Peak Hour Generation			
			Rate	Trips	Rate	Enter	Exit	Total
565	Day Care Center	18,000 Sq Ft	47.62	857	11.12	94	106	200

Trip Distribution and Assignment

The trip distribution for the proposed development was based upon information provided by the Developer/Owner and review of existing P.M. peak hour counts at the SR 405/S. Park Avenue intersection. The distribution thus determined on the area roadways is shown in **Figure 4**. The figure also shows the project trips assigned to the roadways.



Childcare Facility @ SR 405
Project № 5157
Figure 3

Site Plan

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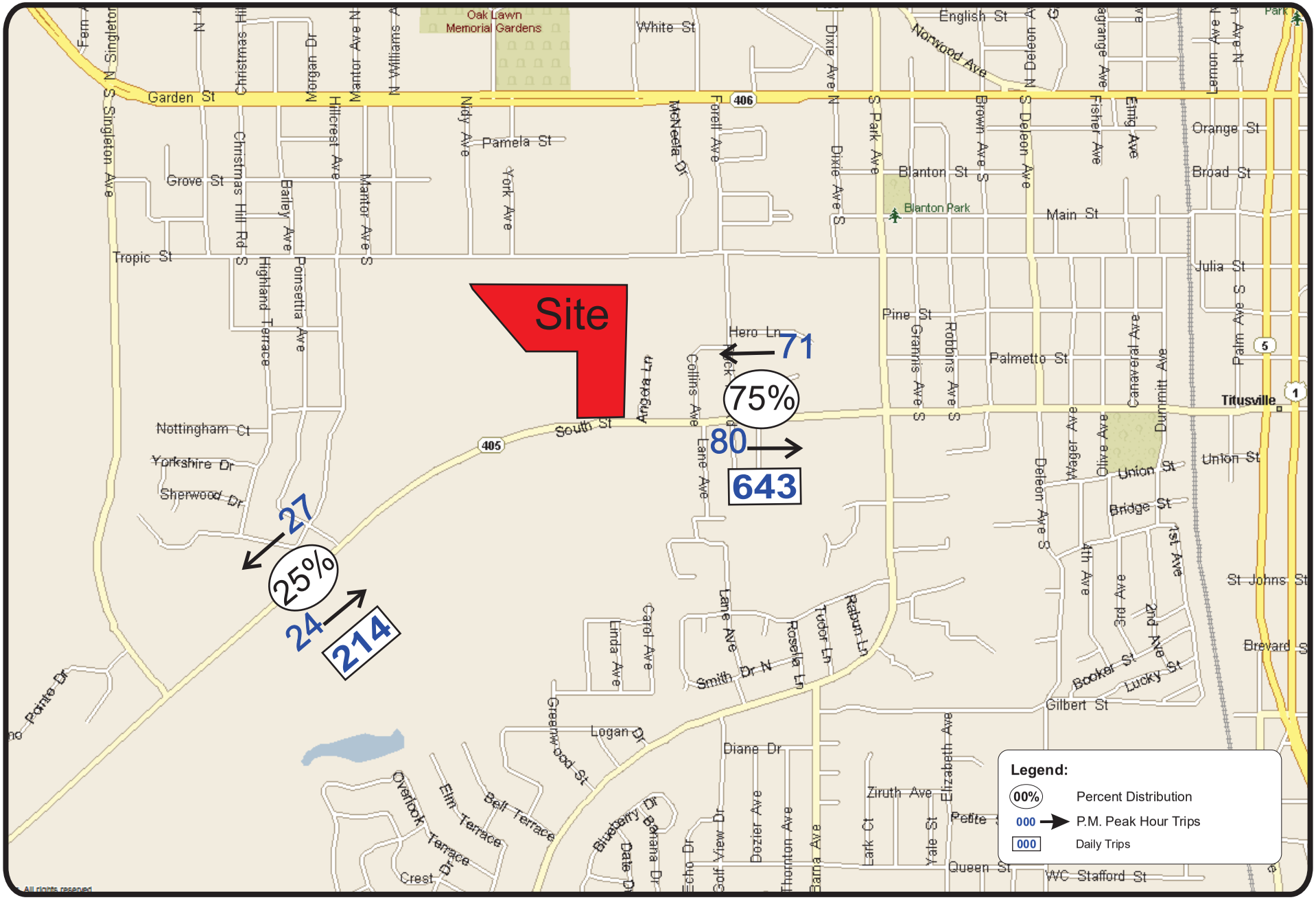
NTS



Childcare Facility @ SR 405
Project № 5157
Figure 4

Trip Distribution/Assignment

NTS

PROJECTED TRAFFIC CONDITIONS

Projected traffic conditions were analyzed similar to existing conditions utilizing daily traffic volumes for the roadways and P.M. peak hour traffic volumes for the study intersections. The roadway analysis consisted of a generalized capacity analysis with the projected traffic consisting of background traffic, vested trips and project trips. Background traffic was estimated with the use of an annual growth of 2%. Vested trips were determined from the respective traffic studies for South Carpenter Estates and Titusville Pointe provided by the City.

Roadway Capacity Analysis

A roadway segment analysis was performed for the study roadway segment by comparing the total daily traffic volumes with the corresponding capacity of the segment. The roadway segment analysis is shown in **Table 4**.

Table 4
Projected Daily Conditions Roadway Analysis

ID	Roadway Segment	Function/ Class	# of Lns	Adopted LOS	Daily Cap.	B'grnd Volume*	Vested Trips	Project Trips	Total Trips	LOS
215	Singleton Ave to Angela Ln	U/Minor	2	D	17,700	6,895	300	214	7,409	C
	Angela Ln to Park Ave	U/Minor	4	D	37,810	6,895	300	643	7,838	C

* Existing x 1.04

The results of the analysis indicate that the study roadway segment is projected to operate at satisfactory Levels of Service.

Intersection Capacity Analysis

Projected P.M. peak hour traffic conditions at the study intersections were estimated by combining project trips with background traffic plus vested trips as shown in **Figure 5**. An analysis of projected peak hour traffic conditions was performed using the ***Highway Capacity Software (HCS7)*** and procedures of the ***2010 Highway Capacity Manual*** for intersections. The results of the capacity analysis are included in **Appendix G** and summarized in **Table 5**.

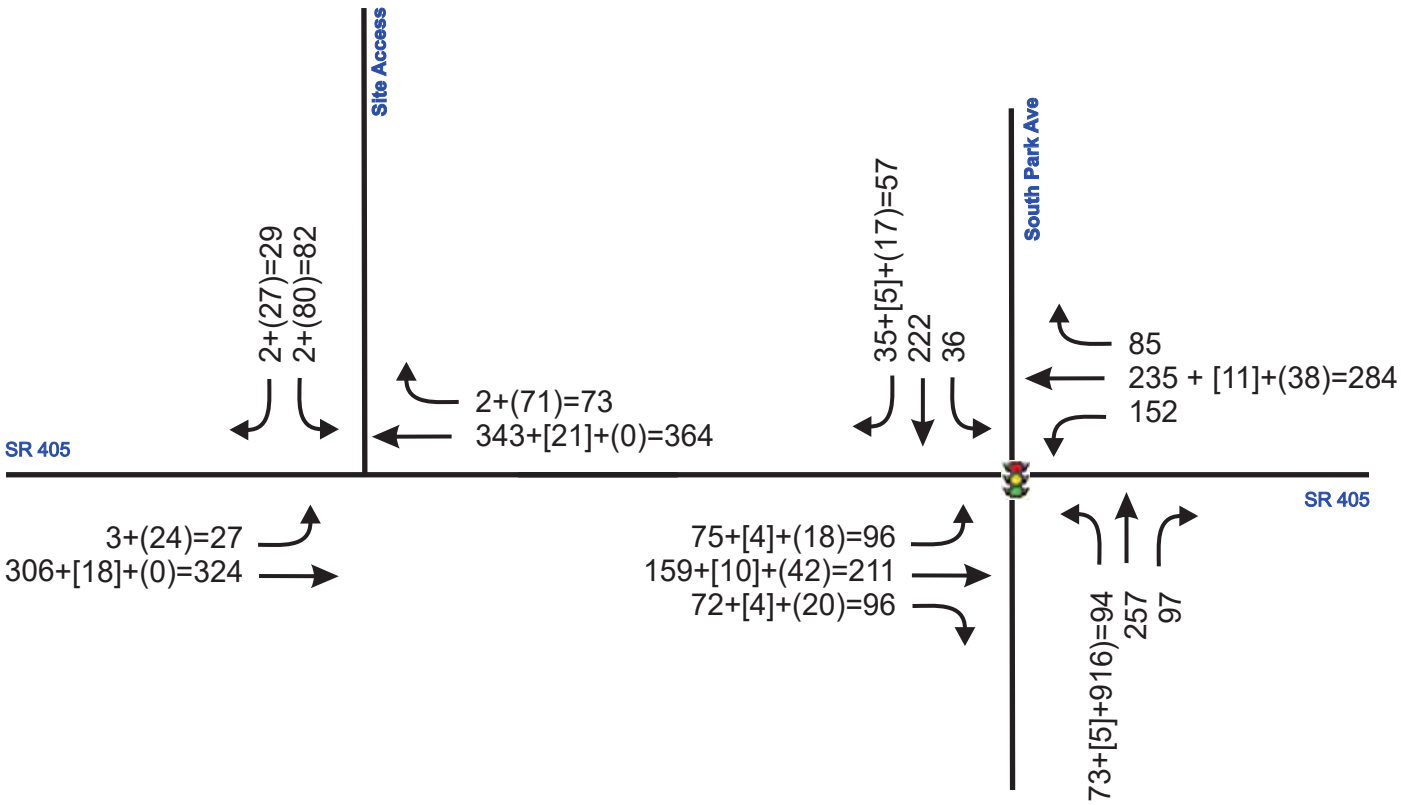
Table 5
Projected Intersection Level of Service

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 405 & Park Ave	Signal	20.0	C	52.2	D	21.1	C	23.6	C	30.9	C
Site Entrance	Stop	8.4	A	---	---	---	---	19.4	C	---	---

This analysis shows that with the addition of projected trips, the intersections will operate at satisfactory Levels of Service.

Turn Lane Analysis

The proposed development will be served by the existing driveway which currently serves the Space Coast Unity Church. This driveway has a 100-foot taper for right turning vehicles. As per the FDOT Driveway Information Guide a right turn lane would not be warranted. However, a separate left turn lane for vehicles approaching from the west is recommended due to the relatively high travel speeds. The minimum length of this turn lane should be 185 feet.



Legend:
000 + [000]+ (000) = 000

- Total Traffic
- Project Trips
- S. Carpenter Estates +Titusville Pointe
- Background Traffic

Childcare Facility @ SR 405
Project № 5157
Figure 5

Projected PM Peak Hour Traffic Volumes

N
NTS

CONCLUSIONS

This study was undertaken in order to assess the traffic impact of a proposed day care center in Titusville, Florida. The site is located on SR 405 just west of Angela Lane. The proposed development will consist of an 18,000 square foot building. Access to the site will be provided via one full access on SR 405. The results of the study documented in this report are presented below:

- The proposed project will generate 857 daily trips and 200 P.M. peak hour trips.

- The study roadway segment currently operates within its adopted Level of Service and will continue to do so with the completion of the project.

- The study intersection currently operates within its adopted Level of Service under existing traffic conditions. Under the projected traffic conditions, the study intersection will continue to operate within its LOS standard.

- The development is proposed to be served by a full access driveway on SR 405. A separate left turn lane should be provided to serve project trips from the west. As per FDOT's Driveway Information Guide, a right turn lane will not be required. A 100-foot taper is already existing.

APPENDICES

APPENDIX A

Study Methodology and Related Correspondence

Rita Merhi

From: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent: Tuesday, October 23, 2018 12:28 PM
To: Turgut Dervish
Cc: Z. Sid Chehayeb, PE [CCEI]; Traphagen, Trevor
Subject: RE: Titusville Childcare @ SR 405
Attachments: Titusville Point Revised Traffic Impact Analysis.pdf; TIS South Carpenter Estates.pdf

Turgut,

The methodology is OK. Please consider the following projects for vested trips.

South Carpenter Estates (residential subdivision)
Titusville Pointe (multi use, commercial)
Brookshire (residential subdivision) – currently in progress

Thanks.
KB

From: Turgut Dervish [mailto:turgut@tpdtraffic.com]
Sent: Friday, October 19, 2018 10:51 AM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Z. Sid Chehayeb, PE [CCEI] <sid@cceifl.com>
Subject: RE: Titusville Childcare @ SR 405

Kwabena,
Attached is our traffic study methodology for a proposed childcare center on SR 405 in Titusville. Please review and provide us with any comments you may have.
Thanks,
Turgut

Turgut Dervish, P.E., President
TRAFFIC PLANNING AND DESIGN, INC.
535 Versailles Drive
Maitland, Florida 32751
407-628-9955
407-628-8850 FAX
turgut@tpdtraffic.com

TO: Kwabena Ofosu , P.E.
City Engineer

FROM: Turgut Dervish, P.E.

DATE: October 19, 2018

RE: Childcare Facility at SR 405
Traffic Study Methodology
Titusville, Florida
TPD № 5157

The following is an outline of the traffic study methodology to be followed in the conduct of a traffic study for a Childcare Facility in Titusville, Florida. Located on SR 405 just west of Angela Lane, the proposed childcare will consist of and 18,000 square foot building. See **Figure 1** for site location. **Figure 2** depicts the conceptual site plan.

Trip Generation

To be calculated with the use of the trip generation rates from the 10th *Edition of the ITE Trip Generation Manual as follows:*

- ITE Code, 565- Daycare Center.
- Daily Generation, 47.62 trips per 10,000 square feet.
- P.M. Peak hour Generation, 11.12 trips per 1,000 square feet (47% Entering/53% Exiting).
- See attached ITE trip generation sheets.

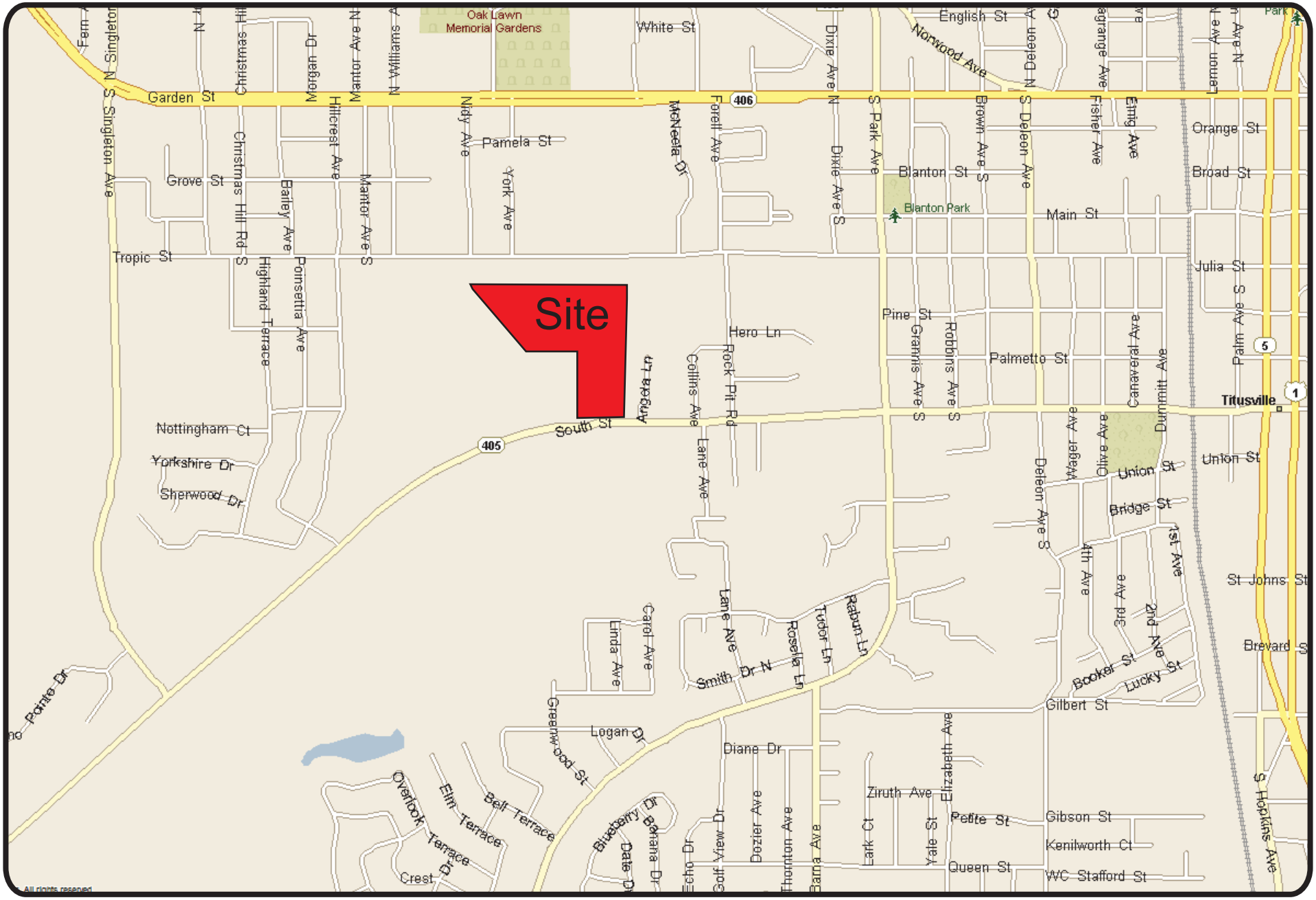
Based upon these rates, the proposed childcare will generate 857 daily trips and 200 P.M. Peak hour trips, 94 entering and 106 exiting.

Trip Distribution

Based upon review of existing turning counts at SR 405 and information provided by the Developer/Owner, the following distribution pattern was determined:

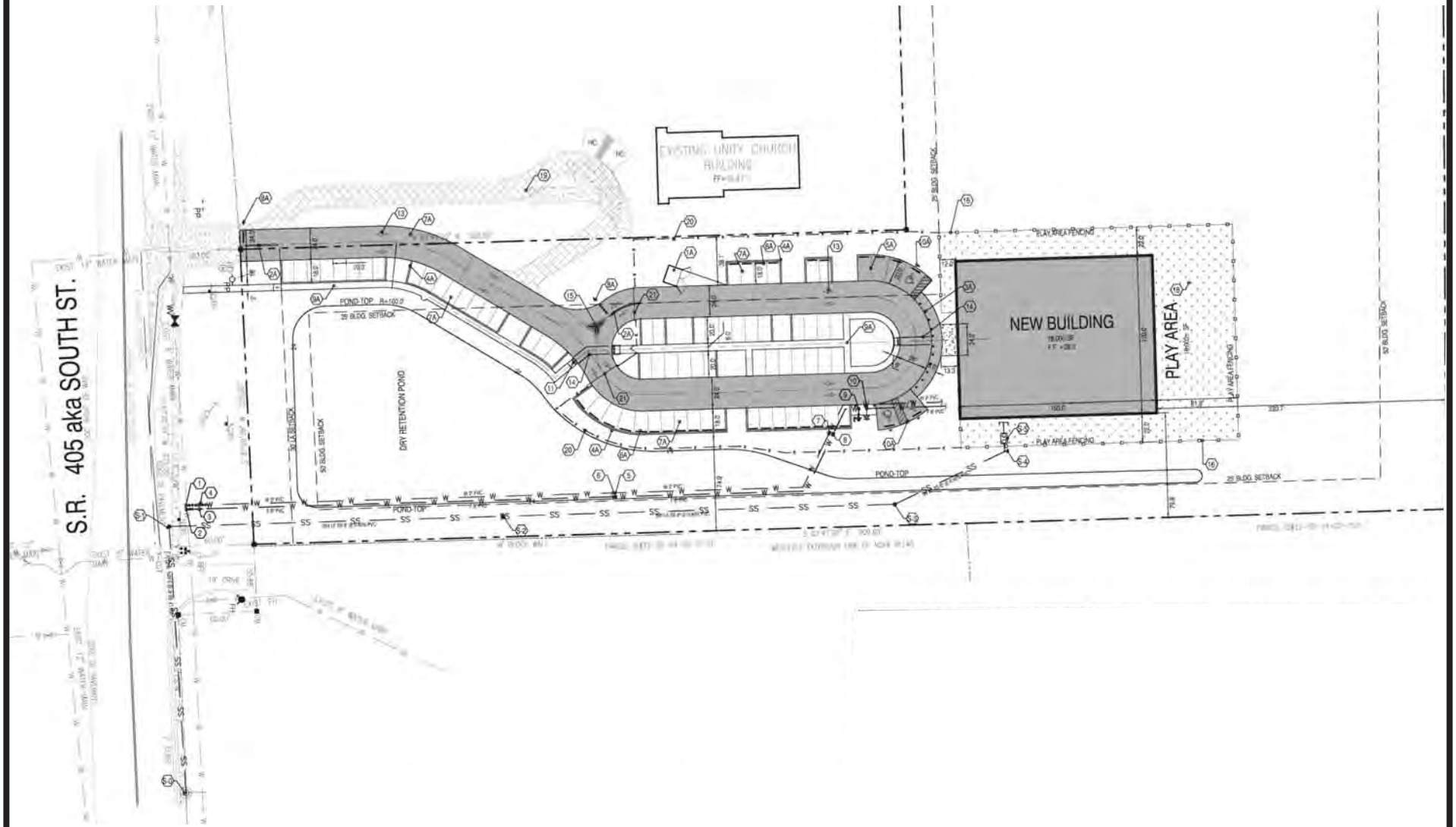
- To/From East of SR 405 75%
- To/From West of SR 405 25%

The distribution of the generated trips at the SR 405/South Park Avenue intersection will be based upon P.M. peak hour timing movement counts to be made.



Childcare Facility @ SR 405
Project № 5157
Figure 1

Site Location



Childcare Facility @ SR 405
Project № 5157
Figure 2

Site Plan

Study Area and Trip Assignment

A study area along SR 405 from south Singleton to south Park Avenue is proposed including the following intersections:

- SR 405 and south Park Avenue
- SR 405 and Site Entrance

The daily and P.M. peak hour trips to be generated will be assigned to SR 405 and the SR 405/south Park Avenue intersection based upon the distribution pattern as described herein.

Traffic Analysis

The analysis will be conducted for the project's buildout year 2020. Existing traffic will be expanded to this year using historical growth rates plus vested trips available with the City to obtain background traffic volumes. Based upon a trend analysis of historical traffic data on SR 405, an annual growth rate of 1.59% was determined but a minimum of 2.00% will be used. The trend chart is attached. Project trips will be combined with background traffic to obtain total traffic to be used in the analysis. In the analysis the FDOT/City LOS standards for roadways and HCS software for intersections will be utilized.

Traffic Report

A traffic report will be prepared summarizing the analysis and results.

* * * * * * * * * * * *

Please review and provide any comments you may have.

ATTACHMENT

ITE Trip Generation Sheets

Day Care Center
(565)

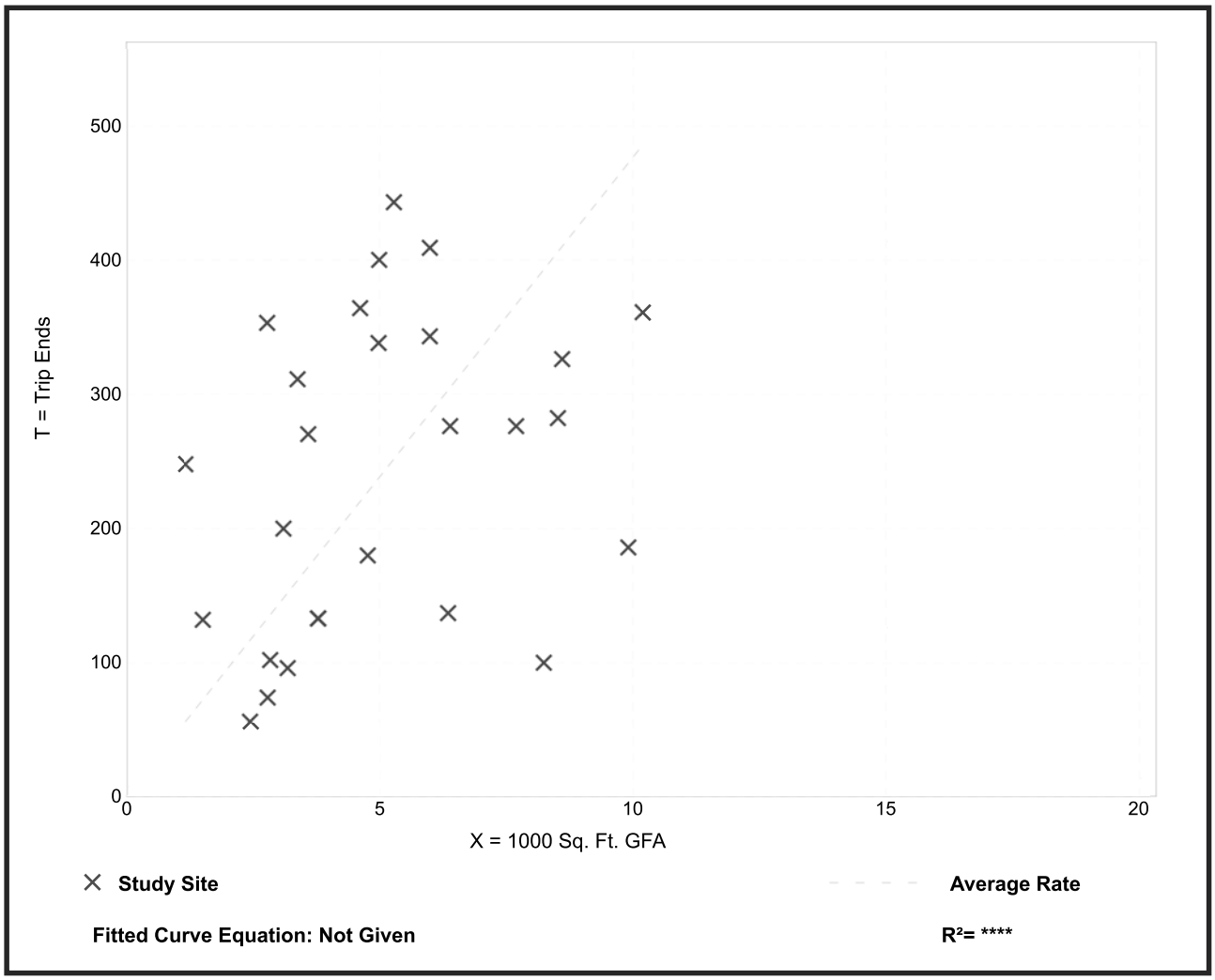
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

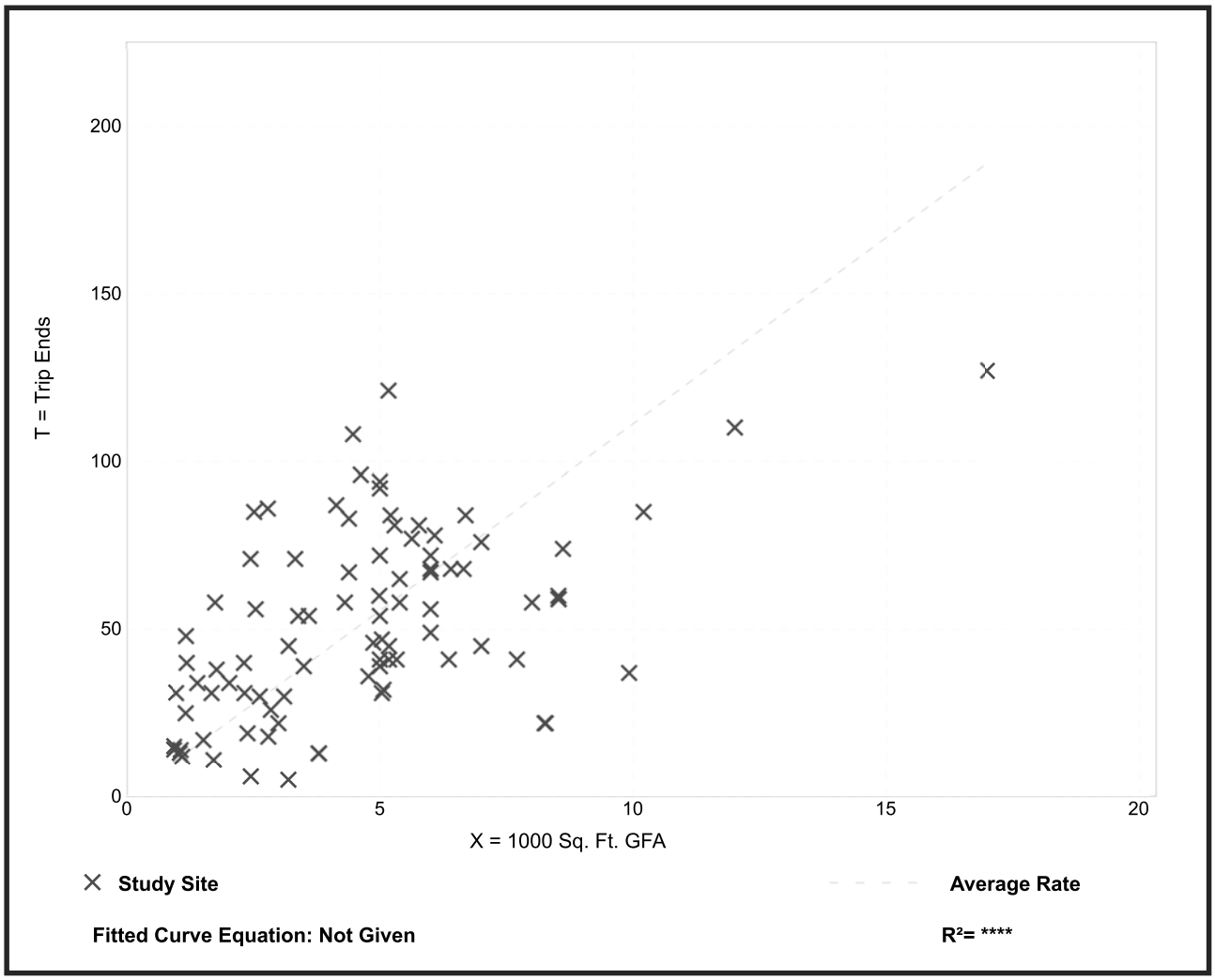
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 90
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

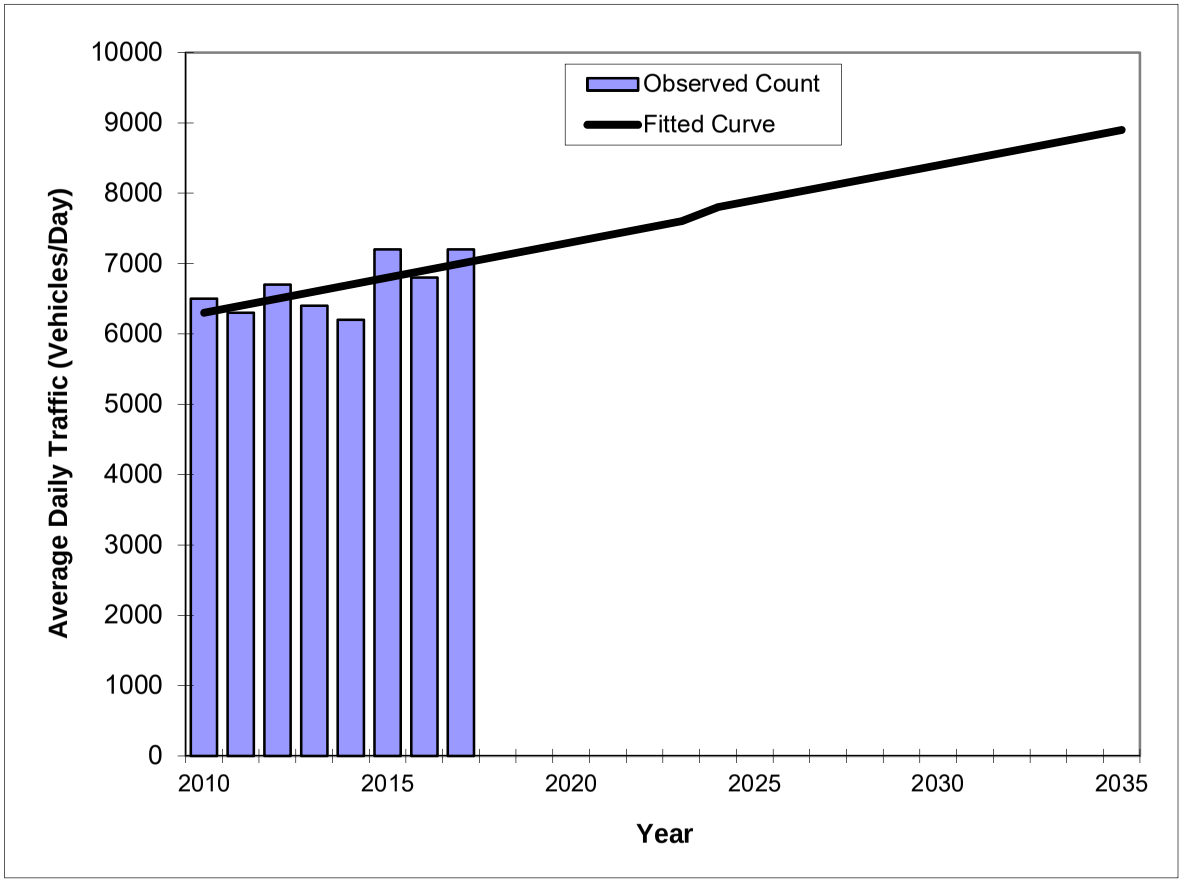
Trend Analysis Chart

Traffic Trends - V3.0

SR 405 -- W of S. Park Avenue

FIN#	0
Location	1

County:	Brevard (70)
Station #:	5139
Highway:	SR 405



Year	Traffic (ADT/AADT) Count*	Trend**
2010	6500	6300
2011	6300	6400
2012	6700	6500
2013	6400	6600
2014	6200	6700
2015	7200	6800
2016	6800	6900
2017	7200	7000
2020 Opening Year Trend		
2020	N/A	7300
2023 Mid-Year Trend		
2023	N/A	7600
2025 Design Year Trend		
2025	N/A	7900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	104
Trend R-squared:	43.37%
Trend Annual Historic Growth Rate:	1.59%
Trend Growth Rate (2017 to Design Year):	1.61%
Printed:	18-Oct-18

Straight Line Growth Option

APPENDIX B

Traffic Count Database

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2008 - 2017

ID	ROAD	SEGMENT (Sections)	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2,017 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH															
239	OLD DIXIE	GARDEN-DAIRY	1,380	NC	1,200	NC	1,320	NC	1,190	NC	NC	NC	15,600	12/9/2014	Urban Major Collector
240	OLD DIXIE	DAIRY-PARKER	NC	930	NC	960	NC	910	NC	860	NC	940	15,600	11/8/2017	Urban Major Collector
	PARRISH	HOLDER-US 1	700	1,290	600	1,320	690	1,340	780	1,240	850	1,210			
242	PARRISH	HOLDER-SINGLETON	700	NC	600	NC	690	NC	780	NC	840	NC	15,600	11/9/2016	Urban Major Collector
241	PARRISH	SINGLETON-US 1	NC	1,290	NC	1,320	NC	1,340	NC	1,240	NC	1,210	15,600	12/13/2017	Urban Major Collector
211	PT ST JOHN PKWY	I-95-GRISSOM	7,910	8,440	8,410	8,570	8,210	8,890	9,960	10,550	10,370	10,990	39,800	11/8/2017	Urban Minor Arterial
	SINGLETON	SR 405 (SOUTH ST)-SR 46	4,965	8,430	4,705	7,830	4,270	7,730	1,680			8,180			
578	SINGLETON	SR 405 (SOUTH ST)-GARDEN					6,970	NC	NC	NC	NC	7,570	17,700	11/8/2017	Urban Major Collector
238	SINGLETON	GARDEN-DAIRY	8,260	8,430	7,970	7,830	NC	7,730	NC	NC	NC	8,790	15,600	11/8/2017	Urban Major Collector
547	SINGLETON	DAIRY-SR 46	1,670	NC	1,440	NC	1,570	NC	1,680	NC	NC	NC	15,600	12/16/2014	Urban Major Collector
	SISSON	SR 405-SR 50	6,125	6,770	6,200	6,365	6,025	6,150	6,770	6,825	7,500	7,905			
234	SISSON	SR 405-SAN MATEO BLVD	5,590	6,170	5,520	5,650	5,340	5,300	5,870	5,980	6,450	6,980	15,600	12/12/2017	Urban Major Collector
550	SISSON	SAN MATEO BLVD-SR 50	6,660	7,370	6,880	7,080	6,710	7,000	7,670	7,670	8,550	8,830	15,600	11/29/2017	Urban Major Collector
201	SR 46	VOLUSIA CO-FAWN LAKE	5,420	5,500	5,520	5,760	5,640	5,750	5,970	5,680	7,230	7,070	8,400	12/13/2017	Rural Principal Arterial Other
	SR 46	FAWN LAKE-US 1	9,380	9,280	9,230	9,420	9,140	9,325	9,605	11,000	10,755	11,040			
200	SR 46	FAWN LAKE-I-95	8,820	8,730	8,590	8,960	8,580	8,970	9,080	NC	9,930	10,360	14,160	11/29/2017	Urban Principal Arterial-Other
199	SR 46	I-95-US 1	9,940	9,830	9,870	9,880	9,700	9,680	10,130	11,000	11,580	11,720	14,160	11/7/2017	Urban Principal Arterial-Other
231	SR 50	ORANGE CO-I-95	11,070	11,540	10,760	10,290	UC	9,160	10,190	10,270	10,470	11,500	40,300	11/28/2017	Rural Principal Arterial Other
	SR 50	I 95-US 1	20,628	21,476	20,018	20,004	UC	18,923	18,487	21,715	20,268	21,568			
232	SR 50	I-95-SR 405	26,010	26,710	26,290	25,080	UC	24,260	UC	27,980	23,810	30,320	41,790	11/8/2017	Urban Principal Arterial-Other
164	SR 50	SR 405-BARNA	20,690	21,560	20,260	20,580	UC	19,220	NC	24,080	NC	23,350	41,790	12/13/2017	Urban Minor Arterial
163	SR 50	BARNA-SISSON	20,370	21,880	20,230	20,280	UC	NC	20,800	NC	21,360	NC	41,790	11/8/2016	Urban Minor Arterial
162	SR 50	SISSON-HOPKINS	20,710	21,400	18,940	19,680	UC	18,620	20,460	20,240	20,900	16,660	34,020	11/29/2017	Urban Minor Arterial
161	SR 50	HOPKINS-US 1	15,360	15,830	14,370	14,400	UC	13,590	14,200	14,560	15,000	15,940	34,020	12/12/2017	Urban Minor Arterial
	SR 405 (COLUMBIA)	SR 50-US 1	19,416	19,668	17,762	17,338	16,786	16,330	16,710	17,004	17,604	18,292			
218	SR 405 (COLUMBIA)	SR 50-BARNA	20,780	20,010	18,580	18,920	18,510	17,090	19,070	19,500	19,110	20,210	41,790	11/28/2017	Urban Principal Arterial-Other
219	SR 405 (COLUMBIA)	BARNA-SR 407	20,200	20,970	19,030	18,820	18,350	17,220	16,850	17,740	17,950	18,510	41,790	11/28/2017	Urban Principal Arterial-Other
220	SR 405 (COLUMBIA)	SR 407-GRISSOM	22,350	23,210	20,900	20,110	19,550	19,660	19,730	20,020	21,110	21,370	41,790	11/28/2017	Urban Principal Arterial-Other
221	SR 405 (COLUMBIA)	GRISSOM-SISSON	18,050	18,320	16,280	15,880	15,060	15,200	16,080	15,730	17,140	17,060	41,790	11/28/2017	Urban Principal Arterial-Other
222	SR 405 (COLUMBIA)	SISSON-US 1	15,700	15,830	14,020	12,960	12,460	12,480	11,820	12,030	12,710	14,310	41,790	12/12/2017	Urban Principal Arterial-Other
	SR 405 (SOUTH)	SR 50-SINGLETON(END 2L)	15,520	15,780	15,180	15,750	15,040	14,605	15,095	14,265	15,690	16,130			
217	SR 405 (SOUTH)	SR 50-FOX LAKE	18,180	18,210	17,510	18,440	17,550	16,940	17,720	16,910	18,210	18,840	18,590	11/8/2017	Urban Minor Arterial
216	SR 405 (SOUTH)	FOX LAKE-SINGLETON	12,860	13,350	12,850	13,060	12,530	12,270	12,470	11,620	13,170	13,420	17,700	11/8/2017	Urban Minor Arterial
	SR 405 (SOUTH)	SINGLETON(END 2L)-US 1	7,005	6,565	6,185	6,245	5,830	6,480	6,070	6,930	6,480	6,630			
215	SR 405 (SOUTH)	SINGLETON-PARK	7,480	7,160	6,870	6,910	6,440	6,480	6,660	6,930	6,960	6,630	37,810	12/13/2017	Urban Minor Arterial
214	SR 405 (SOUTH)	PARK-US 1	6,530	5,970	5,500	5,580	5,220	NC	5,290	NC	5,520	NC	34,020	11/9/2016	Urban Minor Arterial
595	SR 406 (GARDEN)	CARPENTER-I-95							6,260	NC	6,960	NC	15,600	11/9/2016	Urban Major Collector
	SR 406 (GARDEN)	I-95-WASHINGTON	13,125	13,030	12,038	11,920	11,698	11,345	11,890	12,833	13,613	13,243			
202	SR 406 (GARDEN)	I-95-SINGLETON	13,440	13,810	13,940	12,960	12,530	11,670	12,800	13,850	14,510	14,730	41,790	12/13/2017	Urban Principal Arterial-Other
203	SR 406 (GARDEN)	SINGLETON-PARK	16,850	16,250	15,470	15,700	15,410	14,980	15,690	18,060	16,180	16,930	39,800	11/29/2017	Urban Principal Arterial-Other
204	SR 406 (GARDEN)	PARK-HOPKINS	12,400	11,740	10,000	10,510	10,480	10,080	10,960	10,940	13,780	10,930	39,800	12/13/2017	Urban Principal Arterial-Other
205	SR 406 (GARDEN)	HOPKINS-WASHINGTON	9,810	10,320	8,740	8,510	8,370	8,650	8,110	8,480	9,980	10,380	32,400	11/29/2017	Urban Principal Arterial-Other
233	SR 406 (GARDEN)	WASHINGTON-BLACK POINT RD.	5,350	5,210	5,560	4,370	4,800	4,510	4,030	4,900	5,960	5,290	14,800	12/13/2017	Urban Principal Arterial-Other
	SR 407	SR 528-SR 405	6,463	6,487	6,413	6,380	6,070	5,867	6,833	7,210	8,550	8,693			
225	SR 407	SR 528-I-95	6,930	6,360	6,660	6,990	6,340	6,140	6,830	7,220	8,750	9,150	8,820	12/13/2017	Rural Principal Arterial - Freeways & Expressways
548	SR 407	I-95-SHEPARD DR	6,710	7,060	6,630	6,500	6,320	6,290	7,460	7,660	9,190	8,980	24,200	12/12/2017	Urban Principal Arterial - Freeways & Expressways
224	SR 407	SHEPARD DR-SR 405	5,750	6,040	5,950	5,650	5,550	5,170	6,210	6,750	7,710	7,950	24,200	11/28/2017	Urban Principal Arterial - Freeways & Expressways

**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

APPENDIX C

Turning Movement Counts

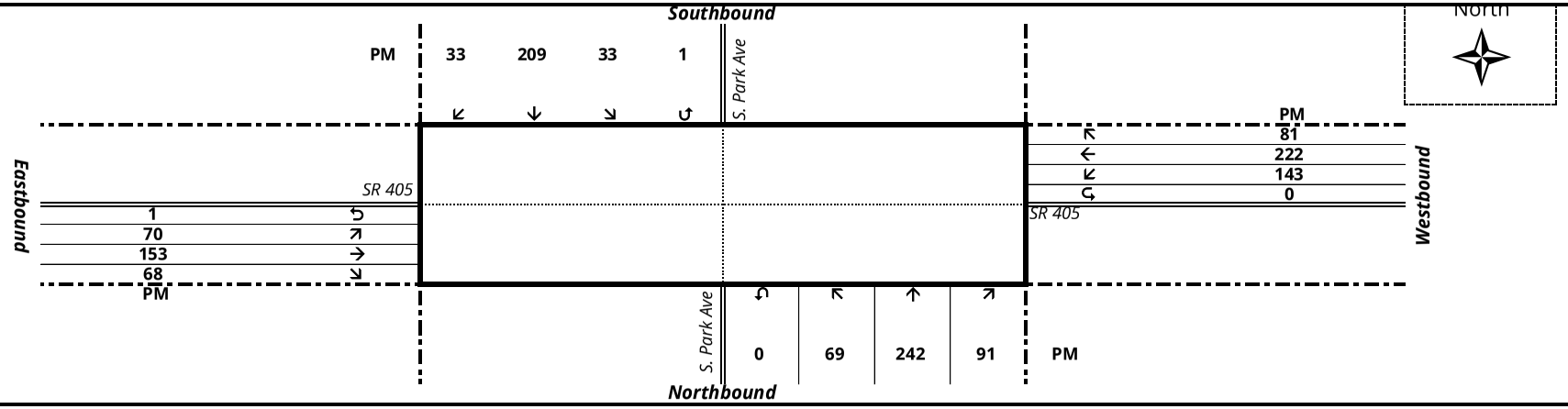
15 MINUTE TURNING MOVEMENT COUNTS

(Cars and Trucks)

DATE: November 15, 2018 (Thursday) **CITY:** Titusville **LATITUDE:** 0

LOCATION: S. Park Ave & SR 405 **COUNTY:** Brevard County **LONGITUDE:** 0

	S. Park Ave					S. Park Ave						SR 405						SR 405						
TIME	NORTHBOUND					SOUTHBOUND					N/S	EASTBOUND					WESTBOUND					E/W	GRAND
BEGIN	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	TOTAL
04:00 PM	10	58	15	0	**83**	8	46	12	0	**66**	**149**	21	36	14	0	**71**	47	55	21	1	**124**	**195**	**344**
04:15 PM	7	42	9	0	**58**	12	44	7	0	**63**	**121**	8	39	11	0	**58**	17	43	15	0	**75**	**133**	**254**
04:30 PM	12	52	22	0	**86**	4	54	9	0	**67**	**153**	14	40	21	1	**76**	40	64	25	0	**129**	**205**	**358**
04:45 PM	13	45	13	0	**71**	8	46	7	1	**62**	**133**	16	49	13	0	**78**	16	41	26	0	**83**	**161**	**294**
TOTAL	42	197	59	0	**298**	32	190	35	1	**258**	**556**	59	164	59	1	**283**	120	203	87	1	**411**	**694**	**1,250**
05:00 PM	24	75	29	0	**128**	14	66	10	0	**90**	**218**	26	36	20	0	**82**	47	74	18	0	**139**	**221**	**439**
05:15 PM	20	70	27	0	**117**	7	43	7	0	**57**	**174**	14	28	14	0	**56**	40	43	12	0	**95**	**151**	**325**
05:30 PM	12	36	18	0	**66**	4	43	7	0	**54**	**120**	19	28	11	0	**58**	21	29	14	0	**64**	**122**	**242**
05:45 PM	5	23	13	0	**41**	10	26	9	0	**45**	**86**	17	37	10	0	**64**	22	34	20	2	**78**	**142**	**228**
TOTAL	61	204	87	0	**352**	35	178	33	0	**246**	**598**	76	129	55	0	**260**	130	180	64	2	**376**	**636**	**1,234**
PM Peak																						**Peak Hour Factor:**	**0.806**
04:30 PM to 05:30 PM	**69**	**242**	**91**	**0**	**402**	**33**	**209**	**33**	**1**	**276**	**678**	**70**	**153**	**68**	**1**	**292**	**143**	**222**	**81**	**0**	**446**	**738**	**1,416**



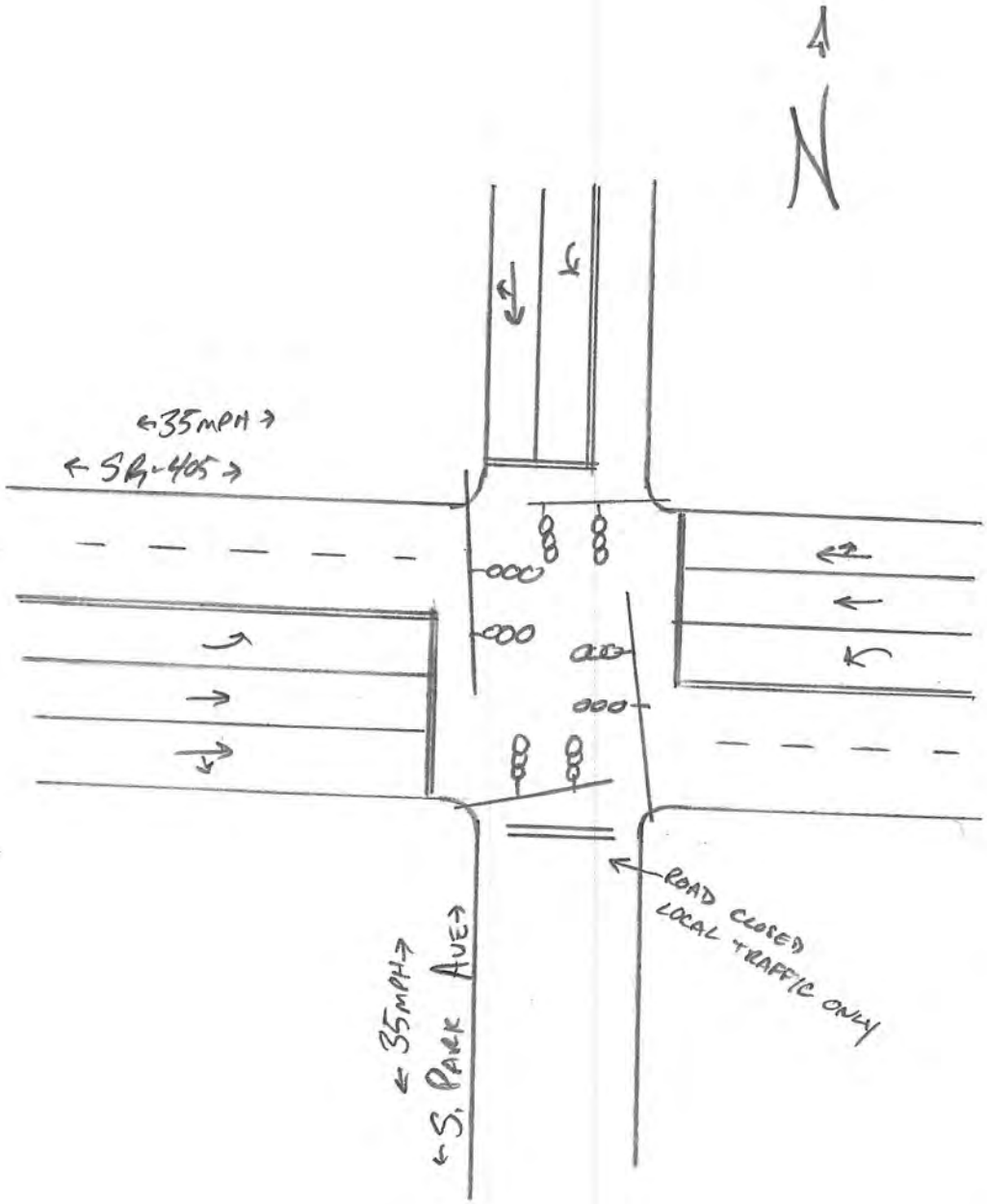
15 MINUTE TURNING MOVEMENT COUNTS

(Trucks Only)

DATE: November 15, 2018 (Thursday) **CITY:** Titusville **LATITUDE:** 0

LOCATION: S. Park Ave & SR 405 **COUNTY:** Brevard County **LONGITUDE:** 0

	S. Park Ave					S. Park Ave						SR 405					SR 405						
TIME	NORTHBOUND					SOUTHBOUND					N/S	EASTBOUND					WESTBOUND					E/W	GRAND
BEGIN	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	TOTAL
04:00 PM	1	0	0	0	**1**	0	1	0	0	**1**	**2**	1	0	1	0	**2**	0	1	0	0	**1**	**3**	**5**
04:15 PM	0	0	0	0	**0**	0	1	0	0	**1**	**1**	1	1	0	0	**2**	0	0	0	0	**0**	**2**	**3**
04:30 PM	0	1	0	0	**1**	0	1	0	0	**1**	**2**	0	0	2	0	**2**	0	1	0	0	**1**	**3**	**5**
04:45 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	1	0	0	**1**	0	1	0	0	**1**	**2**	**2**
TOTAL	1	1	0	0	**2**	0	3	0	0	**3**	**5**	2	2	3	0	**7**	0	3	0	0	**3**	**10**	**15**
05:00 PM	0	2	0	0	**2**	0	0	0	0	**0**	**2**	0	0	0	0	**0**	0	0	0	0	**0**	**0**	**2**
05:15 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	0	0	0	**0**	1	0	0	0	**1**	**1**	**1**
05:30 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	**1**	**1**
05:45 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	0	0	0	**0**	0	0	1	0	**1**	**1**	**1**
TOTAL	0	2	0	0	**2**	0	0	0	0	**0**	**2**	0	1	0	0	**1**	1	0	1	0	**2**	**3**	**5**
PM Peak																							
04:30 PM to 05:30 PM	**0**	**3**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**1**	**4**	**0**	**1**	**2**	**0**	**3**	**1**	**2**	**0**	**0**	**3**	**6**	**10**


N
←35MPH→
← SR-405 →
ROAD CLOSED
LOCAL TRAFFIC ONLY
←35MPH→
← S. PARK AVE →

APPENDIX D

Peak Season Category Report/Signal Timings

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.92

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	1.00	1.09
2	01/08/2017 - 01/14/2017	0.99	1.08
3	01/15/2017 - 01/21/2017	0.98	1.07
4	01/22/2017 - 01/28/2017	0.96	1.04
* 5	01/29/2017 - 02/04/2017	0.95	1.03
* 6	02/05/2017 - 02/11/2017	0.93	1.01
* 7	02/12/2017 - 02/18/2017	0.92	1.00
* 8	02/19/2017 - 02/25/2017	0.91	0.99
* 9	02/26/2017 - 03/04/2017	0.90	0.98
*10	03/05/2017 - 03/11/2017	0.89	0.97
*11	03/12/2017 - 03/18/2017	0.88	0.96
*12	03/19/2017 - 03/25/2017	0.89	0.97
*13	03/26/2017 - 04/01/2017	0.91	0.99
*14	04/02/2017 - 04/08/2017	0.92	1.00
*15	04/09/2017 - 04/15/2017	0.94	1.02
*16	04/16/2017 - 04/22/2017	0.95	1.03
*17	04/23/2017 - 04/29/2017	0.96	1.04
18	04/30/2017 - 05/06/2017	0.97	1.05
19	05/07/2017 - 05/13/2017	0.98	1.07
20	05/14/2017 - 05/20/2017	0.99	1.08
21	05/21/2017 - 05/27/2017	1.00	1.09
22	05/28/2017 - 06/03/2017	1.02	1.11
23	06/04/2017 - 06/10/2017	1.03	1.12
24	06/11/2017 - 06/17/2017	1.04	1.13
25	06/18/2017 - 06/24/2017	1.04	1.13
26	06/25/2017 - 07/01/2017	1.03	1.12
27	07/02/2017 - 07/08/2017	1.03	1.12
28	07/09/2017 - 07/15/2017	1.02	1.11
29	07/16/2017 - 07/22/2017	1.03	1.12
30	07/23/2017 - 07/29/2017	1.03	1.12
31	07/30/2017 - 08/05/2017	1.04	1.13
32	08/06/2017 - 08/12/2017	1.04	1.13
33	08/13/2017 - 08/19/2017	1.05	1.14
34	08/20/2017 - 08/26/2017	1.08	1.17
35	08/27/2017 - 09/02/2017	1.12	1.22
36	09/03/2017 - 09/09/2017	1.15	1.25
37	09/10/2017 - 09/16/2017	1.19	1.29
38	09/17/2017 - 09/23/2017	1.16	1.26
39	09/24/2017 - 09/30/2017	1.13	1.23
40	10/01/2017 - 10/07/2017	1.10	1.20
41	10/08/2017 - 10/14/2017	1.08	1.17
42	10/15/2017 - 10/21/2017	1.05	1.14
43	10/22/2017 - 10/28/2017	1.04	1.13
44	10/29/2017 - 11/04/2017	1.03	1.12
45	11/05/2017 - 11/11/2017	1.02	1.11
46	11/12/2017 - 11/18/2017	1.02	1.11
47	11/19/2017 - 11/25/2017	1.01	1.10
48	11/26/2017 - 12/02/2017	1.01	1.10
49	12/03/2017 - 12/09/2017	1.01	1.10
50	12/10/2017 - 12/16/2017	1.00	1.09
51	12/17/2017 - 12/23/2017	0.99	1.08
52	12/24/2017 - 12/30/2017	0.98	1.07
53	12/31/2017 - 12/31/2017	0.98	1.07

* PEAK SEASON

02-MAR-2018 15:35:06 830UPD 5_7000_PKSEASON.TXT

#38

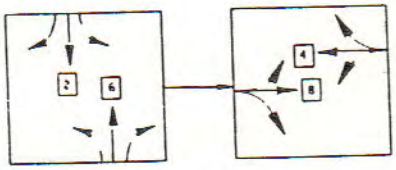
DETAIL OF SIGNAL HEADS



RED
YELLOW
GREEN

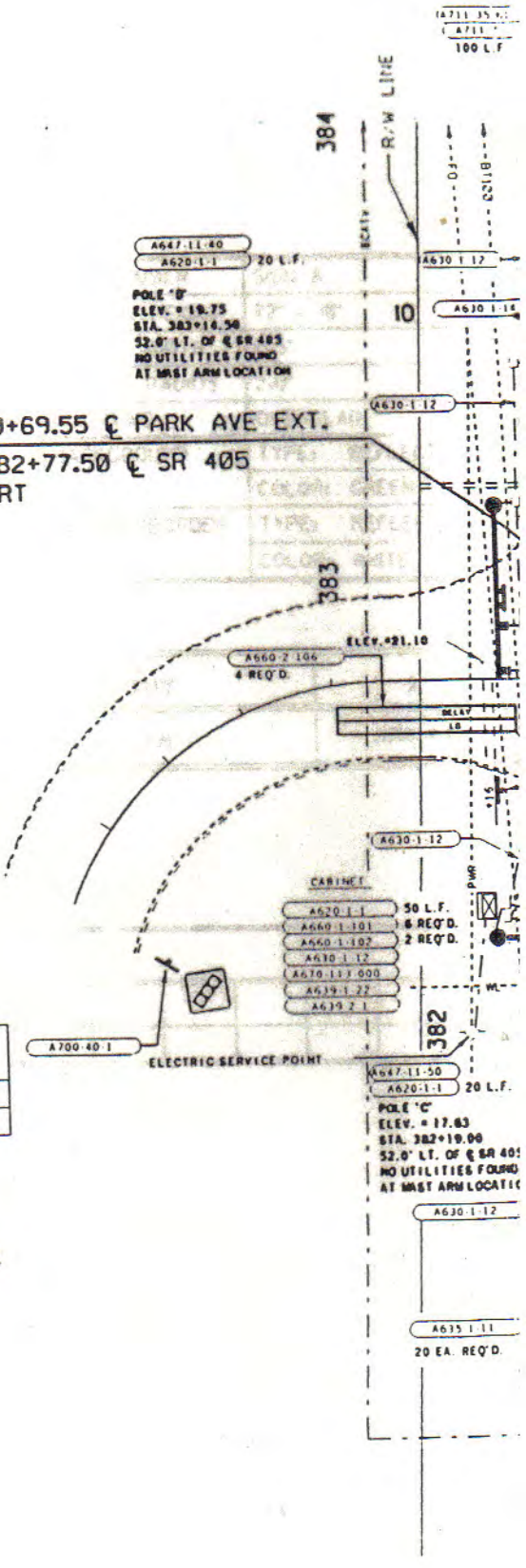
NO. REQ'D 8 AS.
ITEM NO. 650-1-131

MOVEMENT DIAGRAM



CONTROLLER TIMINGS

MOVEMENT	MIN	EXT	MAX	CL	ALL RED	WALK	FDW	RECALL	DETECTOR FUNCTION	FLASH
2+6	17	3	50	4	1	-	-	MIN.	LOCK	YELLOW
4+8	6	3	15	4	1	-	-	OFF	NL	RED



SR 405 + PARK South of Fox lAKe

UTILITY CONTACTS:

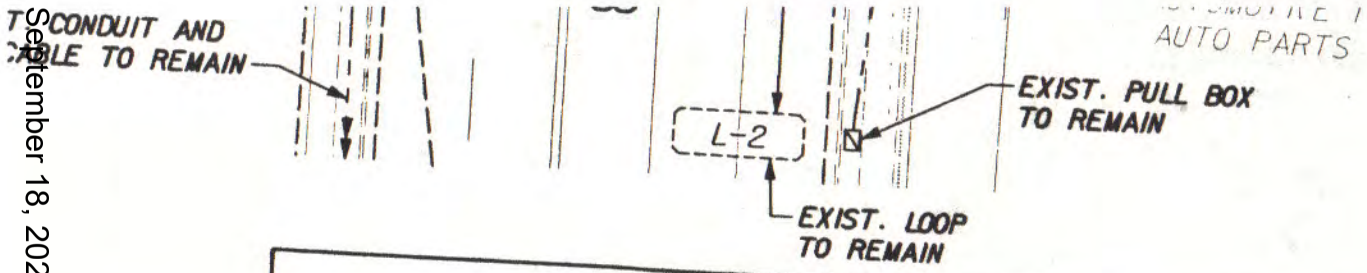
BELLSOUTH TELECOMUNICATIONS, INC.	407-455-7133.
CONTACT FLORIDA POWER AND LIGHT COMPANY	407-726-4820.
TIME WARNER CABLE	407-631-3770.
CITY GAS COMPANY OF FLORIDA	407-632-1735.
CITY OF TITUSVILLE COMPANY	407-268-6050.
BREVARD COUNTY	407-633-2041.

REVISIONS

BY	DESCRIPTION	DATE	BY	DESCRIPTION

#30

PARK Ave. SR405 (South St)



SUGGESTED INITIAL CONTROLLER TIMING

MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN		14		8		14		8
EXTENSION		3.5		3.5		3.5		3.5
MAXIMUM GREEN 1		29		36		29		36
MAXIMUM GREEN 2		0		0		0		0
YELLOW CLEARANCE		4		4		4		4
ALL RED		1		1		1		1
PEDESTRIAN WALK		8		8		8		8
PED. CLEARANCE		14		24		14		24
RECALL		MIN		OFF		MIN		OFF
DETECTOR FUNCTION		LOCK		NON-LOCK		LOCK		NON-LOCK
FLASHING MODE		YELLOW		RED		YELLOW		RED

SIGNAL TIMING IS INITIAL AND MAY BE ADJUSTED BY THE MAINTAINING AGENCY.

le Florida

SIGNALIZATION PLAN

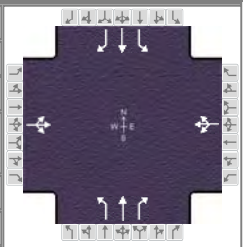
SHEET NO.

APPENDIX E

Existing Capacity Analysis Worksheet

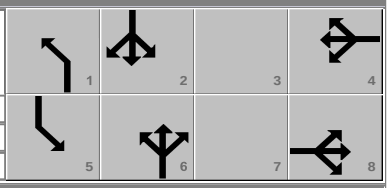
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TPD, Inc.			Duration, h	0.25
Analyst	TPD, Inc.	Analysis Date	11/19/2018	Area Type	Other
Jurisdiction	Titusville	Time Period	P.M. Peak Hour (Existing)	PHF	0.81
Urban Street	SR 405	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	SR 405 & S Park Ave	File Name	SR 405 & S Park Ave.xus		
Project Description	Step by Step learning center TPD (5157)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	72	156	69	146	226	82	70	247	93	35	213	34

Signal Information					EB			WB			NB		
Cycle, s	60.2	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	4.1	2.0		14.0	25.1	0.0	0.0		
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	0.0		4.0	4.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.0	1.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		8.0		8.0	1.1	3.0	1.1	3.0
Phase Duration, s		30.1		30.1	11.1	21.0	9.1	19.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		4.8		4.8	4.6	4.6	4.6	4.6
Queue Clearance Time (g_s), s		12.1		22.1	4.0	10.5	3.0	9.5
Green Extension Time (g_e), s		4.9		2.9	0.3	3.7	0.1	3.7
Phase Call Probability		1.00		1.00	0.76	1.00	0.51	1.00
Max Out Probability		0.17		0.74	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		367			560		86	305	115	43	263	42
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1521			1531		1795	1885	1598	1795	1885	1598
Queue Service Time (g_s), s		0.0			10.2		2.0	8.5	3.4	1.0	7.5	1.2
Cycle Queue Clearance Time (g_c), s		10.1			20.1		2.0	8.5	3.4	1.0	7.5	1.2
Green Ratio (*g/C*)		0.42			0.42		0.33	0.27	0.27	0.30	0.23	0.23
Capacity (*c*), veh/h		708			717		423	501	424	340	438	371
Volume-to-Capacity Ratio (*X*)		0.518			0.782		0.204	0.609	0.271	0.127	0.600	0.113
Back of Queue (*Q*), ft/ln (95 th percentile)		144.9			277.4		34.4	160.5	53.7	18	143.7	19.8
Back of Queue (*Q*), veh/ln (95 th percentile)		5.8			11.0		1.4	6.4	2.1	0.7	5.7	0.8
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		13.0			15.9		14.5	19.4	17.5	15.7	20.6	18.2
Incremental Delay (d_2), s/veh		0.7			4.6		0.3	1.4	0.4	0.2	1.6	0.2
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		13.7			20.6		14.8	20.8	17.9	15.9	22.2	18.4
Level of Service (LOS)		B			C		B	C	B	B	C	B
Approach Delay, s/veh / LOS	13.7	B		20.6	C		19.1	B		21.0	C	
Intersection Delay, s/veh / LOS	18.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.08	B	1.68	B	1.69	B
Bicycle LOS Score / LOS	1.09	A	1.41	A	1.32	A	1.06	A

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APPENDIX F

ITE Trip Generation Sheets

Day Care Center
(565)

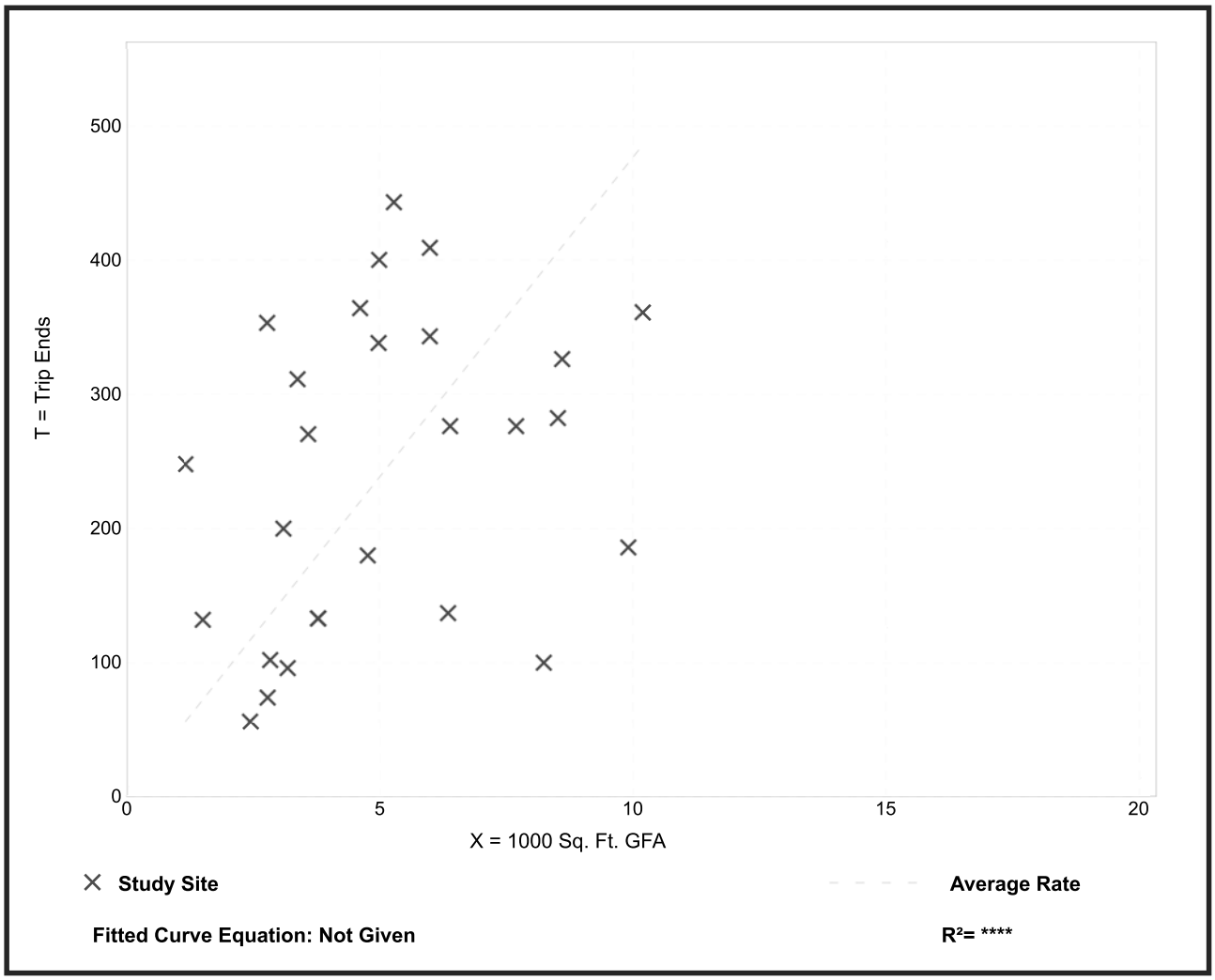
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

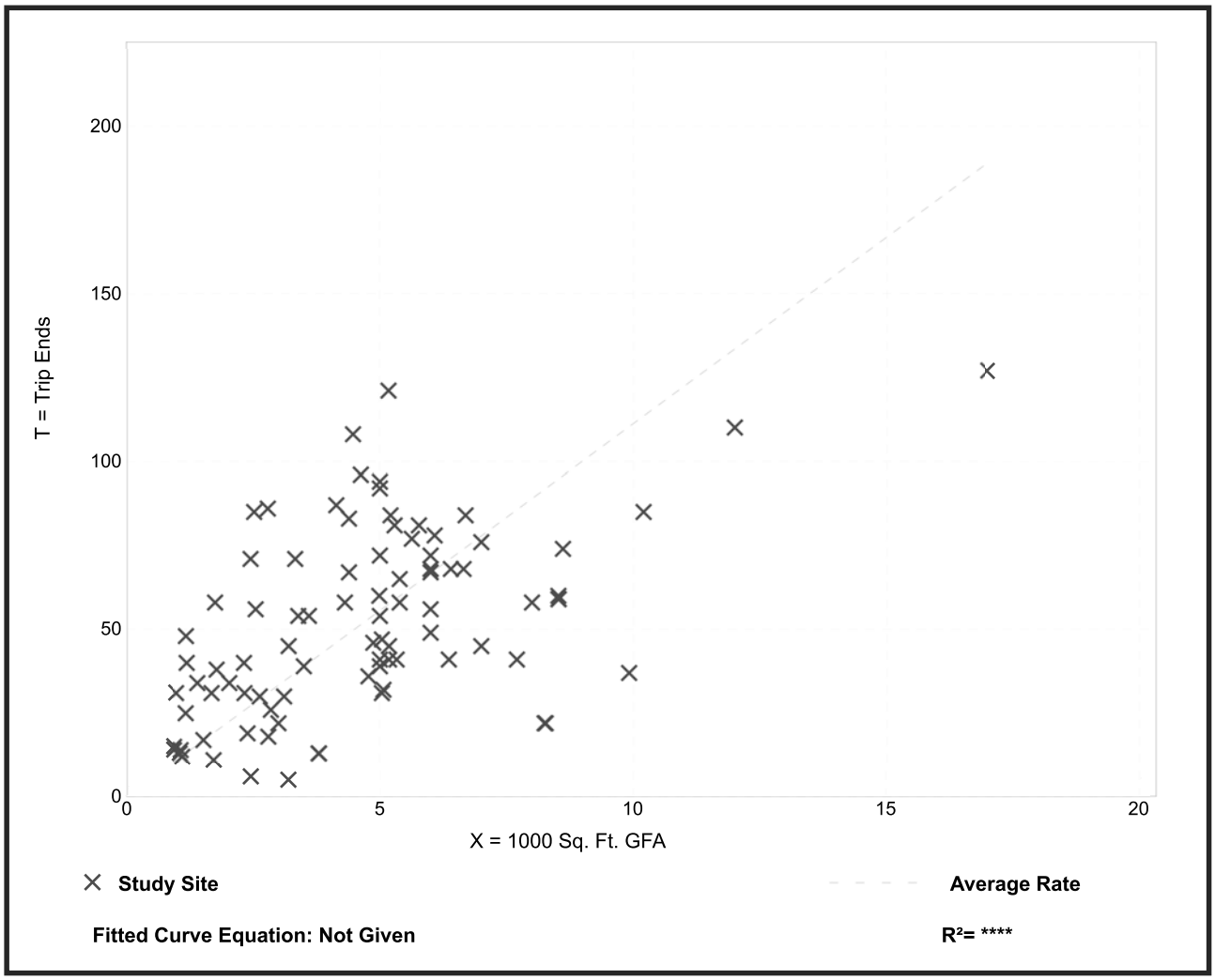
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 90
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



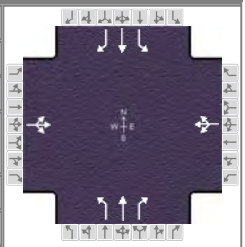
Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

APPENDIX G

Projected Capacity Analysis Worksheets

HCS7 Signalized Intersection Results Summary

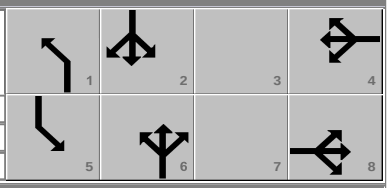
General Information				Intersection Information	
Agency	TPD, Inc.			Duration, h	0.25
Analyst	TPD, Inc.	Analysis Date	11/19/2018	Area Type	Other
Jurisdiction	Titusville	Time Period	P.M. Peak Hour (Projected)	PHF	0.81
Urban Street	SR 405	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	SR 405 & S Park Ave	File Name	SR 405 & S Park Ave.xus		
Project Description	Step by Step learning center TPD (5157)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	96	211	96	152	284	85	94	257	97	36	222	57

Signal Information			
Cycle, s	65.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.5	2.6	14.7	29.0	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	1.0	0.0	1.0	1.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		8.0		8.0	1.1	3.0	1.1	3.0
Phase Duration, s		34.0		34.0	12.0	22.3	9.5	19.7
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		4.9		4.9	4.6	4.6	4.6	4.6
Queue Clearance Time (g_s), s		22.3		31.0	5.0	11.8	3.2	10.7
Green Extension Time (g_e), s		3.6		0.0	0.5	4.0	0.1	4.0
Phase Call Probability		1.00		1.00	0.88	1.00	0.56	1.00
Max Out Probability		0.83		1.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		498			643		116	317	120	44	274	70
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1358			1315		1795	1885	1598	1795	1885	1598
Queue Service Time (g_s), s		0.0			8.7		3.0	9.8	3.9	1.2	8.7	2.4
Cycle Queue Clearance Time (g_c), s		20.3			29.0		3.0	9.8	3.9	1.2	8.7	2.4
Green Ratio (*g/C*)		0.44			0.44		0.33	0.26	0.26	0.29	0.22	0.22
Capacity (*c*), veh/h		667			651		404	496	420	321	422	357
Volume-to-Capacity Ratio (*X*)		0.746			0.988		0.287	0.640	0.285	0.138	0.650	0.197
Back of Queue (*Q*), ft/ln (95 th percentile)		259.2			535.7		53.4	189.5	63.2	21.1	171.8	38.4
Back of Queue (*Q*), veh/ln (95 th percentile)		10.3			21.3		2.1	7.5	2.5	0.8	6.8	1.5
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		15.3			19.9		16.4	21.5	19.3	17.6	23.2	20.7
Incremental Delay (d_2), s/veh		4.8			32.2		0.5	1.7	0.4	0.2	2.0	0.3
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		20.0			52.2		16.8	23.1	19.7	17.8	25.2	21.0
Level of Service (LOS)		C			D		B	C	B	B	C	C
Approach Delay, s/veh / LOS	20.0	C		52.2	D		21.1	C		23.6	C	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.08	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.31	A	1.55	B	1.40	A	1.13	A

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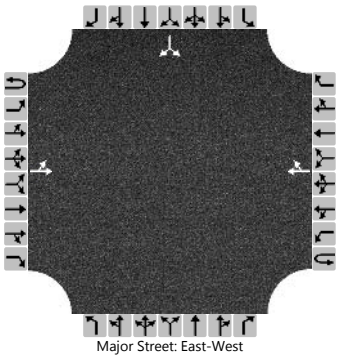
HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	TPD, Inc.	Intersection	SR 405 & Site Access
Agency/Co.	TPD, Inc.	Jurisdiction	Titusville
Date Performed	11/19/2018	East/West Street	SR 405
Analysis Year	2018	North/South Street	Site Access
Time Analyzed	P.M. Peak Hour Projected	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Step by Step Learning Center		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		27	324				364	73						82		29
Percent Heavy Vehicles (%)		1												1		1
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												6.41		6.21
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.51		3.31

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		29													121	
Capacity, c (veh/h)		1092													369	
v/c Ratio		0.03													0.33	
95% Queue Length, Q_{95} (veh)		0.1													1.4	
Control Delay (s/veh)		8.4													19.4	
Level of Service (LOS)		A													C	
Approach Delay (s/veh)		0.9												19.4		
Approach LOS														C		

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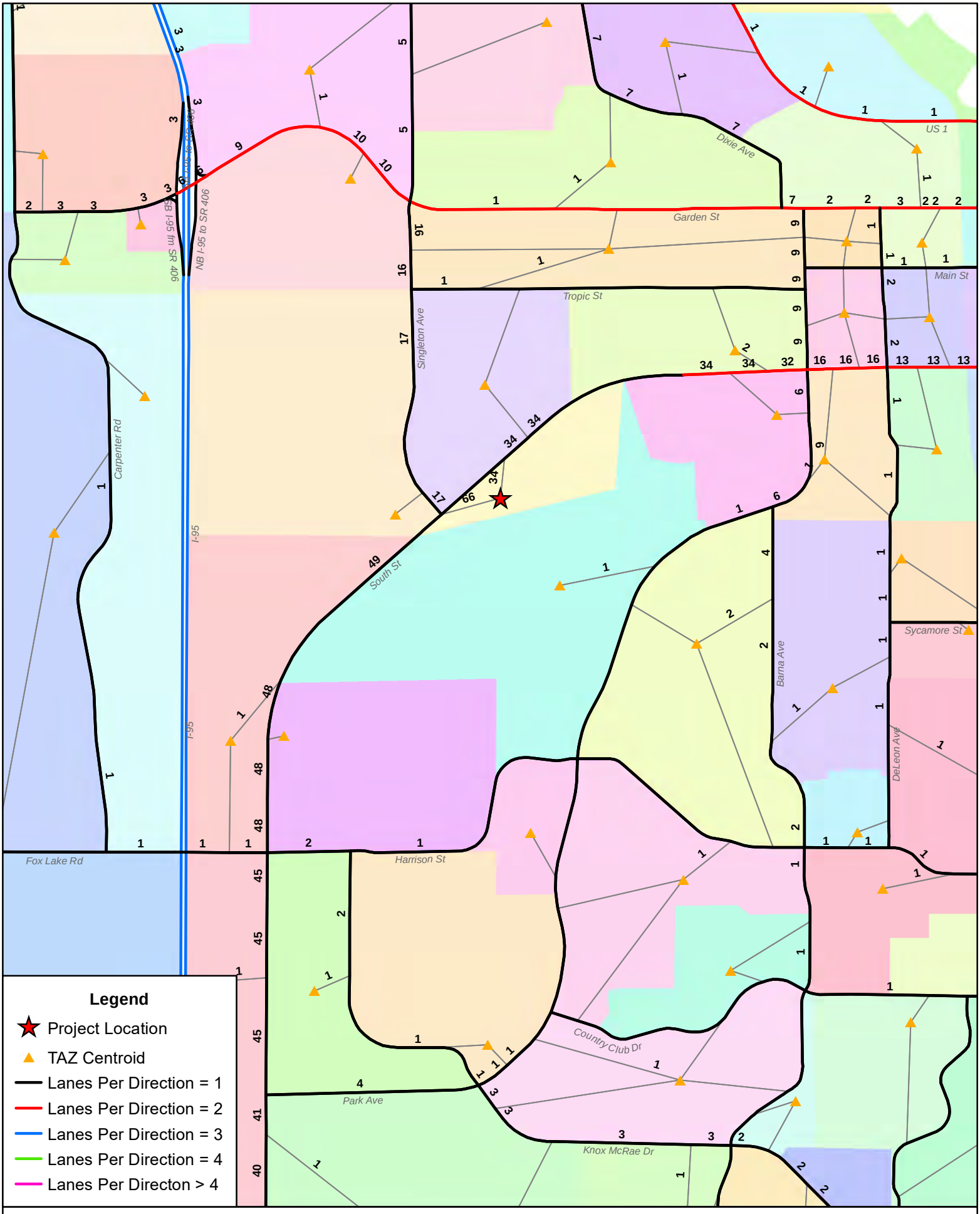
APPENDIX K

CFRPM Model



Trip Distribution - Titusville South in Brevard County

CFRPMv7 - 2025 - May 2022

APPENDIX L

NCHRP Outputs

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

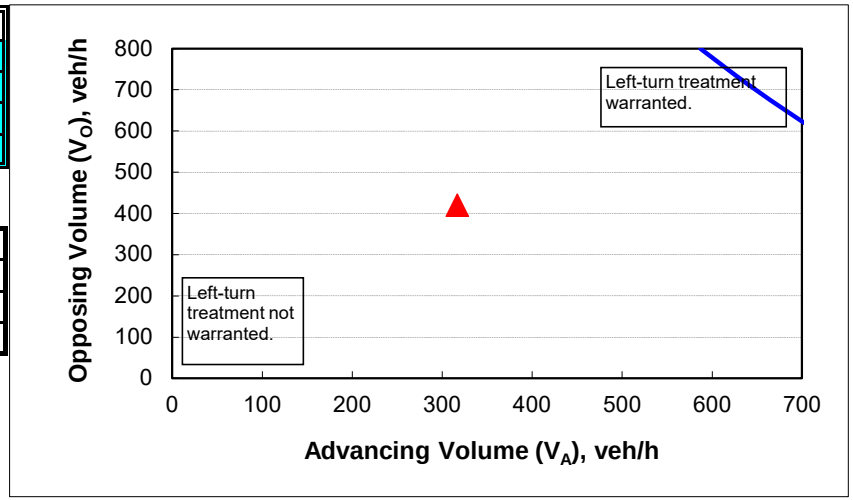
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	317
Opposing volume (V_O), veh/h:	420

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	863
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	420
Right-turn volume, veh/h:	18

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1278
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

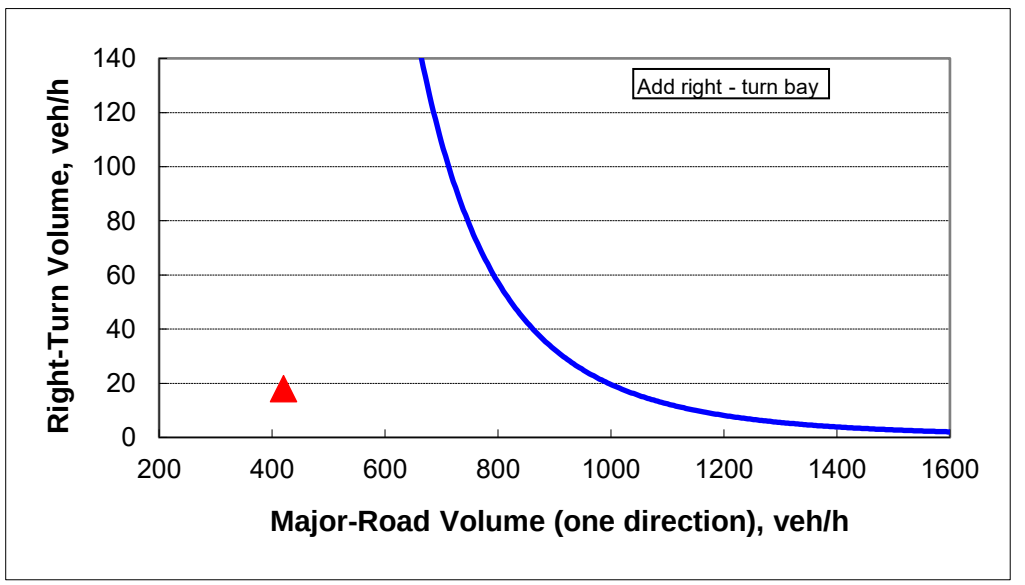


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

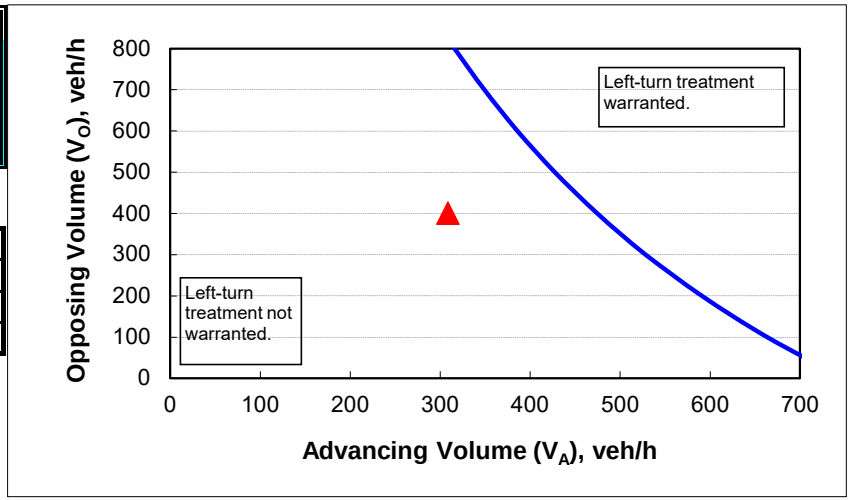
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	309
Opposing volume (V_O), veh/h:	400

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	475
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	309
Right-turn volume, veh/h:	14

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	23
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

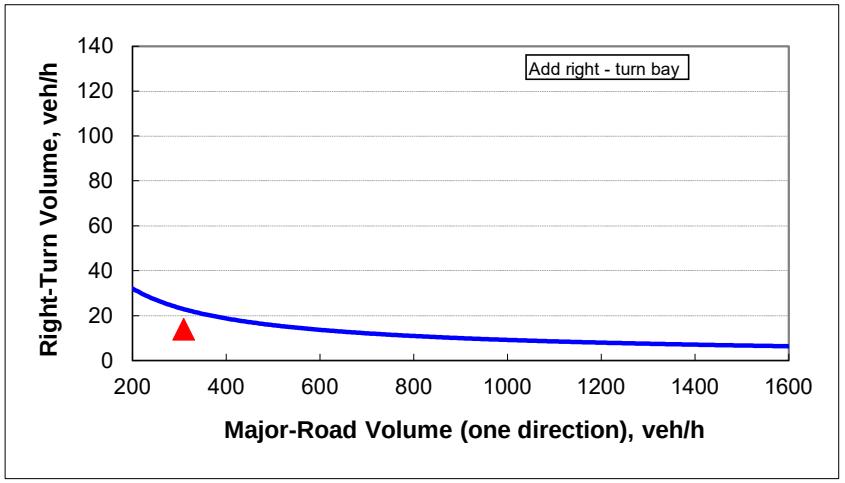


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

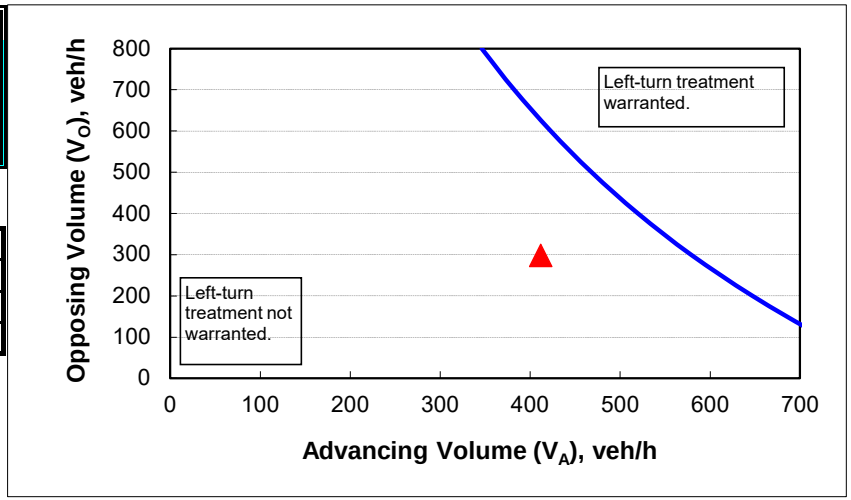
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	412
Opposing volume (V_O), veh/h:	298

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	580
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

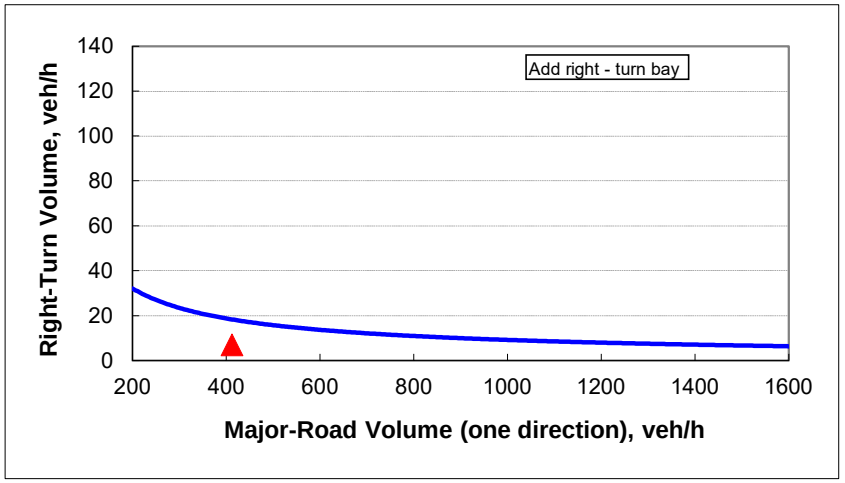
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	412
Right-turn volume, veh/h:	7

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	18
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



School Board of Brevard County
2700 Judge Fran Jamieson Way • Viera, FL 32940-6699
Dr. Mark J. Rendell, Ed.D., Superintendent

Brevard Public Schools

February 26, 2024

Mr. Eddy Galindo, AICP
Senior Planner
City of Titusville
555 S. Washington Ave.
Titusville, Florida 32781

RE: Proposed SR405 and Singleton PD-North Development
School Impact Analysis – Capacity Determination CD-2024--03

Dear Mr. Galindo,

We received a completed *School Facility Planning & Concurrency Application* for the referenced development. The subject property is Tax Account 3028882 (Parcel ID: 22-35-05-00-750), and a portion of Tax Account 2202226 (Parcel ID: 22-35-05-00-752) containing approximately 38.65 acres north of SR405 in The City of Titusville, Brevard County, Florida. The proposed development includes sixty-seven (67) single-family townhomes. The School Impact Analysis of this proposed development has been undertaken and the following information is provided for your use.

The calculations used to analyze the prospective student impact are consistent with the methodology outlined in Section 13.2 and Amended Appendix "A"-School District Student Generation Multiplier (approved April 11, 2022) of the *Interlocal Agreement for Public School Facility Planning & School Concurrency (ILA-2014)*. The following capacity analysis is performed using capacities/projected students as shown in years 2024-25 to 2028-29 of the *Brevard County Public Schools Financially Feasible Plan for School Years 2023-24 to 2028-29 which* is attached for reference.

Single-Family Homes	67		
Students Generated	**Student Generation Rates**	**Calculated Students Generated**	**Rounded Number of Students Generated**
Elementary	0.24	16.08	16
Middle	0.07	4.69	5
High	0.12	8.04	8
Total	0.43		**29**

Planning & Project Management
Facilities Services
Phone: (321) 633-1000 x11418 • FAX: (321) 633-4646

An Equal Opportunity Employer

FISH Capacity (including relocatable classrooms) from the Financially Feasible Plan (FFP) Data and Analysis for School Years 2024-25 to 2028-29

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	968	968	968	968	968
Madison	781	781	781	781	781
Astronaut	1,451	1,451	1,451	1,451	1,451

Projected Student Membership

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	441	449	453	428	403
Madison	431	374	336	426	469
Astronaut	1,046	1,008	1,024	985	975

Students Generated by Newly Issued SCADL Reservations Since FFP

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	-	-	-	-	-
Madison	-	7	14	22	31
Astronaut	-	12	24	38	53

Cumulative Students Generated by Proposed Development

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	-	16	16	16	16
Madison	-	5	5	5	5
Astronaut	-	8	8	8	8

Total Projected Student Membership (includes Cumulative Impact of Proposed Development)

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	441	465	469	444	419
Madison	431	386	355	453	505
Astronaut	1,046	1,028	1,056	1,031	1,036

Projected Available Capacity = FISH Capacity - Total Projected Student Membership

School	2024-25	2025-26	2026-27	2027-28	2028-29
Oak Park	527	503	499	524	549
Madison	350	395	426	328	276
Astronaut	405	423	395	420	415

At this time, Oak Park Elementary, Madison Middle School and Astronaut High School are projected to have enough capacity for the total of projected and potential students from the SR405 and Singleton PD-North development.

This is a **non-binding** review; a *Concurrency Determination* must be performed by the School District prior to a Final Development Order and the issuance of a Concurrency Evaluation Finding of Nondeficiency by the Local Government.

We appreciate the opportunity to review this proposed project. Please let us know if you require additional information.

Sincerely,

Karen M. Black, AICP
Manager – Facilities Planning & Intergovernmental Coordination
Planning & Project Management, Facilities Services

Enclosure: *Brevard County Public Schools Financially Feasible Plan for School Years 2023-2024 to 2028-29*

Copy: Susan Hann, AICP, Assistant Superintendent of Facility Services
File CD-2024-03

David G. Lindemann, AICP, Director of Planning & Project Management, Facilities Services
File CD-2024-03

SR 405 and Singleton PD-North Development Location Map

Brevard Public Schools

N

SR 405 and Singleton PD-North
CD-2024-03
67 Single-Family Townhome Units

Oak Park Elementary School

Madison Middle School

Astronaut Senior High School

City of Titusville

Indian River

South Lake

Fox Lake

Schools Affected by Development:
Oak Park Elementary School
James Madison Middle School
Astronaut High School

Drawn By:
Planning & Project Management
Karen M. Black
February 26, 2024

FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

0 0.5 1 2 Miles

Brevard County Public Schools
Financially Feasible Plan To Maintain Utilization Rates Lower than the 100% Level of Service
Data and Analysis for School Years 2023-24 to 2028-29

Summary	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Highest Utilization Elementary Schools:	101%	101%	98%	97%	100%	100%
Highest Utilization Middle Schools:	86%	87%	87%	92%	98%	100%
Highest Utilization Jr / Sr High Schools:	80%	80%	79%	81%	82%	82%
Highest Utilization High Schools:	97%	97%	99%	99%	99%	100%

				School Year 2023-24			School Year 2024-25			School Year 2025-26			School Year 2026-27			School Year 2027-28			School Year 2028-29		
School	Type	Grades	Utilization Factor	FISH Capacity	10/13/23 Member-ship	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization
Elementary School Concurrency Service Areas																					
Allen	Elementary	PK-6	100%	751	583	78%	751	559	74%	751	602	80%	751	634	84%	751	653	87%	773	649	84%
Andersen	Elementary	K-6	100%	884	525	59%	884	493	56%	884	476	54%	884	478	54%	884	446	50%	884	433	49%
Apollo	Elementary	K-6	100%	902	643	71%	902	616	68%	902	633	70%	902	642	71%	902	637	71%	902	641	71%
Atlantis	Elementary	PK-6	100%	739	635	86%	739	660	89%	739	661	89%	739	667	90%	739	682	92%	739	688	93%
Audubon	Elementary	PK-6	100%	761	420	55%	761	408	54%	761	415	55%	761	438	58%	761	442	58%	761	447	59%
Cambridge	Elementary	PK-6	100%	787	504	64%	787	505	64%	787	519	66%	787	532	68%	787	546	69%	787	564	72%
Cape View	Elementary	PK-6	100%	570	295	52%	570	291	51%	570	284	50%	570	282	49%	570	286	50%	570	285	50%
Carroll	Elementary	K-6	100%	751	628	84%	751	645	86%	751	626	83%	751	622	83%	751	606	81%	751	594	79%
Challenger 7	Elementary	PK-6	100%	573	481	84%	573	470	82%	573	469	82%	573	457	80%	573	431	75%	573	416	73%
Columbia	Elementary	PK-6	100%	751	558	74%	751	573	76%	751	560	75%	751	570	76%	751	566	75%	751	561	75%
Coquina	Elementary	K-6	100%	711	488	69%	711	472	66%	711	481	68%	711	477	67%	711	476	67%	711	470	66%
Creel	Elementary	PK-6	100%	1,114	589	53%	1,114	575	52%	1,114	576	52%	1,114	584	52%	1,114	564	51%	1,114	543	49%
Croton	Elementary	PK-6	100%	795	484	61%	795	491	62%	795	518	65%	795	551	69%	795	565	71%	795	589	74%
Discovery	Elementary	PK-6	100%	980	682	70%	980	724	74%	980	738	75%	980	750	77%	980	753	77%	980	764	78%
Endeavour	Elementary	PK-6	100%	968	720	74%	968	740	76%	968	750	77%	968	749	77%	968	739	76%	968	708	73%
Enterprise	Elementary	K-6	100%	729	610	84%	729	621	85%	729	625	86%	729	622	85%	729	634	87%	729	644	88%
Fairglen	Elementary	PK-6	100%	789	517	66%	789	492	62%	789	511	65%	789	540	68%	789	531	67%	789	534	68%
Gemini	Elementary	K-6	100%	711	445	63%	711	437	61%	711	442	62%	711	426	60%	711	428	60%	711	433	61%
Golfview	Elementary	PK-6	100%	777	459	59%	777	477	61%	777	500	64%	777	503	65%	777	505	65%	777	506	65%
Harbor City	Elementary	PK-6	100%	629	397	63%	629	412	66%	629	425	68%	629	448	71%	629	463	74%	629	477	76%
Holland	Elementary	PK-6	100%	605	435	72%	605	436	72%	605	433	72%	605	435	72%	605	420	69%	605	425	70%
Imperial Estates	Elementary	K-6	100%	729	671	92%	729	674	92%	729	656	90%	729	650	89%	729	640	88%	729	628	86%
Indialantic	Elementary	K-6	100%	798	680	85%	798	682	85%	798	671	84%	798	672	84%	798	646	81%	798	662	83%
Jupiter	Elementary	PK-6	100%	930	851	92%	930	892	96%	974	941	97%	1,018	992	97%	1,062	1,061	100%	1,084	1,072	99%
Lockmar	Elementary	PK-6	100%	892	601	67%	892	582	65%	892	570	64%	892	577	65%	892	564	63%	892	567	64%
Longleaf	Elementary	PK-6	100%	790	607	77%	790	596	75%	790	581	74%	790	570	72%	790	548	69%	790	554	70%
Manatee	Elementary	K-6	100%	998	876	88%	998	869	87%	998	823	82%	998	800	80%	998	773	77%	998	757	76%
McAuliffe	Elementary	PK-6	100%	838	648	77%	838	644	77%	838	642	77%	838	627	75%	838	611	73%	838	601	72%
Meadowlane Intermediate	Elementary	3-6	100%	1,114	655	59%	1,114	793	71%	1,114	779	70%	1,114	773	69%	1,114	805	72%	1,114	843	76%
Meadowlane Primary	Elementary	K-6	100%	824	797	97%	824	621	75%	824	660	80%	824	630	76%	824	618	75%	824	613	74%
Mila	Elementary	PK-6	100%	707	431	61%	707	439	62%	707	430	61%	707	441	62%	707	429	61%	707	416	59%
Mims	Elementary	PK-6	100%	725	416	57%	725	414	57%	725	490	68%	725	497	69%	725	466	64%	725	441	61%
Oak Park	Elementary	PK-6	100%	968	472	49%	968	441	46%	968	449	46%	968	453	47%	968	428	44%	968	403	42%
Ocean Breeze	Elementary	PK-6	100%	654	529	81%	654	513	78%	654	494	76%	654	477	73%	654	459	70%	654	437	67%
Palm Bay Elem	Elementary	PK-6	100%	983	623	63%	983	636	65%	983	660	67%	983	683	69%	983	685	70%	983	684	70%
Pinewood	Elementary	PK-6	100%	613	529	86%	613	532	87%	613	558	91%	613	586	96%	613	582	95%	613	570	93%
Port Malabar	Elementary	PK-6	100%	852	605	71%	852	613	72%	852	654	77%	852	657	77%	852	677	79%	852	713	84%
Quest	Elementary	PK-6	100%	932	712	76%	932	719	77%	932	715	77%	932	704	76%	932	701	75%	932	689	74%
Riviera	Elementary	PK-6	100%	777	647	83%	777	627	81%	777	664	85%	777	688	89%	777	735	95%	777	741	95%
Roosevelt	Elementary	K-6	100%	599	268	45%	599	280	47%	599	288	48%	599	285	48%	599	285	48%	599	292	49%
Sabal	Elementary	PK-6	100%	785	514	65%	785	517	66%	785	523	67%	785	537	68%	785	532	68%	785	542	69%
Saturn	Elementary	PK-6	100%	998	589	59%	998	614	62%	998	634	64%	998	638	64%	998	632	63%	998	644	65%
Sea Park	Elementary	PK-6	100%	461	327	71%	461	347	75%	461	351	76%	461	362	79%	461	365	79%	461	375	81%
Sherwood	Elementary	PK-6	100%	609	468	77%	609	477	78%	609	492	81%	609	495	81%	609	493	81%	609	502	82%
Sunrise	Elementary	PK-6	100%	913	867	95%	957	942	98%	957	917	96%	957	927	97%	957	907	95%	957	909	95%
Suntree	Elementary	K-6	100%	755	601	80%	755	604	80%	755	604	80%	755	595	79%	755	584	77%	755	583	77%
Surfside	Elementary	K-6	100%	541	419	77%	541	410	76%	541	397	73%	541	388	72%	541	364	67%	541	353	65%
Tropical	Elementary	K-6	100%	910	619	68%	910	611	67%	910	580	64%	910	565	62%	910	547	60%	910	516	57%
Turner	Elementary	PK-6	100%	874	578	66%	874	623	71%	874	672	77%	874	739	85%	874	807	92%	874	854	98%
University Park	Elementary	PK-6	100%	811	495	61%	811	505	62%	811	533	66%	811	565	70%	811	577	71%	811	590	73%
Viera Elem	Elementary	K-6	100%	1,030	784	76%	1,030	854	83%	1,096	997	91%	1,184	1,115	94%	1,272	1,262	99%	1,360	1,359	100%
Westside	Elementary	K-6	100%	857	867	101%	945	950	101%	1,033	1,016	98%	1,121	1,075	96%	1,209	1,170	97%	1,209	1,155	96%
Williams	Elementary	PK-6	100%	715	443	62%	715	427	60%	715	390	55%	715	380	53%	715	371	52%	715	359	50%
Elementary Totals				42,259	30,287		42,391	30,545		42,589	31,075		42,809	31,550		43,029	31,697		43,161	31,795	

School	Type	Grades	Utilization Factor	School Year 2023-24 FISH Capacity	10/13/23 Membership	Total Capacity Utilization	School Year 2024-25 Future FISH Capacity	Student Projection	Total Capacity Utilization	School Year 2025-26 Future FISH Capacity	Student Projection	Total Capacity Utilization	School Year 2026-27 Future FISH Capacity	Student Projection	Total Capacity Utilization	School Year 2027-28 Future FISH Capacity	Student Projection	Total Capacity Utilization	School Year 2028-29 Future FISH Capacity	Student Projection	Total Capacity Utilization
Middle School Concurrency Service Areas																					
Central	Middle	7-8	90%	1,514	1,061	70%	1,514	1,110	73%	1,514	1,184	78%	1,514	1,213	80%	1,514	1,272	84%	1,514	1,348	89%
DeLaura	Middle	7-8	90%	960	823	86%	960	517	54%	960	432	45%	960	411	43%	960	439	46%	960	429	45%
Hoover	Middle	7-8	90%	680	442	65%	680	475	70%	680	498	73%	680	470	69%	680	479	70%	680	463	68%
Jackson	Middle	7-8	90%	660	561	85%	660	575	87%	660	501	76%	660	482	73%	660	505	77%	660	517	78%
Jefferson	Middle	7-8	90%	873	541	62%	873	521	60%	873	523	60%	873	480	55%	873	479	55%	873	540	62%
Johnson	Middle	7-8	90%	1,064	555	52%	1,064	588	55%	1,064	575	54%	1,064	548	52%	1,064	620	58%	1,064	640	60%
Kennedy	Middle	7-8	90%	869	667	77%	869	436	50%	869	391	45%	869	373	43%	869	412	47%	869	433	50%
Madison	Middle	7-8	90%	781	429	55%	781	431	55%	781	374	48%	781	336	43%	781	426	55%	781	469	60%
McNair	Middle	7-8	90%	616	355	58%	616	290	47%	616	284	46%	616	281	46%	616	299	49%	616	330	54%
Southwest	Middle	7-8	90%	1,281	900	70%	1,281	980	77%	1,281	1,118	87%	1,281	1,176	92%	1,321	1,290	98%	1,380	1,376	100%
Stone	Middle	7-8	90%	1,076	584	54%	1,076	571	53%	1,076	640	59%	1,076	710	66%	1,076	783	73%	1,076	822	76%
Viera Middle	Middle	7-8	90%	-	-	0%	900	656	73%	900	755	84%	900	805	89%	900	830	92%	900	869	97%
Middle Totals				**10,374**	**6,918**		**11,274**	**7,150**		**11,274**	**7,275**		**11,274**	**7,285**		**11,314**	**7,834**		**11,373**	**8,236**	
Junior / Senior High School Concurrency Service Areas																					
Cocoa	Jr / Sr High	PK, 7-12	90%	2,085	1,474	71%	2,085	1,480	71%	2,085	1,441	69%	2,085	1,421	68%	2,085	1,444	69%	2,085	1,437	69%
Cocoa Beach	Jr / Sr High	7-12	90%	1,445	1,028	71%	1,445	1,025	71%	1,445	967	67%	1,445	938	65%	1,445	873	60%	1,445	831	58%
Space Coast	Jr / Sr High	7-12	90%	1,852	1,488	80%	1,852	1,483	80%	1,852	1,469	79%	1,852	1,503	81%	1,852	1,510	82%	1,852	1,513	82%
Jr / Sr High Totals				**5,382**	**3,990**		**5,382**	**3,988**		**5,382**	**3,877**		**5,382**	**3,862**		**5,382**	**3,827**		**5,382**	**3,781**	
Senior High School Concurrency Service Areas																					
Astronaut	High	9-12	95%	1,451	1,056	73%	1,451	1,046	72%	1,451	1,008	69%	1,451	1,024	71%	1,451	985	68%	1,451	975	67%
Bayside	High	9-12	95%	2,263	2,039	90%	2,263	2,166	96%	2,263	2,241	99%	2,334	2,316	99%	2,406	2,391	99%	2,477	2,466	100%
Eau Gallie	High	PK, 9-12	95%	2,211	1,489	67%	2,211	1,470	66%	2,211	1,490	67%	2,211	1,440	65%	2,211	1,395	63%	2,211	1,440	65%
Heritage	High	9-12	95%	2,314	2,037	88%	2,314	2,053	89%	2,314	2,023	87%	2,314	2,118	92%	2,314	2,160	93%	2,314	2,246	97%
Melbourne	High	9-12	95%	2,370	2,178	92%	2,370	2,148	91%	2,370	2,145	91%	2,370	2,188	92%	2,370	2,265	96%	2,417	2,395	99%
Merritt Island	High	PK, 9-12	95%	1,966	1,481	75%	1,966	1,443	73%	1,966	1,376	70%	1,966	1,352	69%	1,966	1,360	69%	1,966	1,306	66%
Palm Bay	High	PK, 9-12	95%	2,657	1,410	53%	2,657	1,413	53%	2,657	1,442	54%	2,657	1,482	56%	2,657	1,507	57%	2,657	1,605	60%
Rockledge	High	9-12	95%	1,836	1,544	84%	1,836	1,601	87%	1,836	1,675	91%	1,836	1,671	91%	1,836	1,660	90%	1,836	1,623	88%
Satellite	High	PK, 9-12	95%	1,551	1,506	97%	1,551	1,497	97%	1,551	1,483	96%	1,551	1,393	90%	1,551	1,287	83%	1,551	1,269	82%
Titusville	High	9-12	95%	1,801	1,309	73%	1,801	1,293	72%	1,801	1,322	73%	1,801	1,330	74%	1,801	1,317	73%	1,801	1,317	73%
Viera	High	PK, 9-12	95%	2,461	2,312	94%	2,461	2,349	95%	2,461	2,364	96%	2,461	2,388	97%	2,461	2,420	98%	2,461	2,441	99%
High Totals				**22,881**	**18,361**		**22,881**	**18,479**		**22,881**	**18,569**		**22,952**	**18,702**		**23,024**	**18,747**		**23,142**	**19,083**	
Schools of Choice (Not Concurrency Service Areas)																					
Freedom 7	Elementary	K-6	100%	475	407	86%	475	407	86%	475	407	86%	475	407	86%	475	407	86%	475	407	86%
Stevenson	Elementary	K-6	100%	569	505	89%	569	499	88%	569	499	88%	569	499	88%	569	499	88%	569	499	88%
South Lake	Elementary	K-6	100%	639	446	70%	639	489	77%	639	489	77%	639	489	77%	639	489	77%	639	489	77%
West Melbourne	Elementary	K-6	100%	618	550	89%	618	606	98%	794	692	87%	794	692	87%	794	692	87%	794	692	87%
Edgewood	Jr / Sr High	7-12	90%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%
West Shore	Jr / Sr High	7-12	90%	1,264	931	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%
Schools of Choice				**4,642**	**3,774**		**4,642**	**3,876**		**4,818**	**3,962**		**4,818**	**3,962**		**4,818**	**3,962**		**4,818**	**3,962**	
Brevard Totals				**85,538**	**63,330**		**86,570**	**64,038**		**86,944**	**64,758**		**87,235**	**65,361**		**87,567**	**66,067**		**87,876**	**66,857**	

Notes

1. FISH Capacity is the sum of the factored permanent capacity and the factored relocatable capacity. Permanent and relocatable capacities for 2023-24 are reported from the FISH database as of October 11, 2023.
2. Student Membership is reported from the Fall Final Membership Count (10/13/2023).
3. Davis Demographics SchoolSite Enrollment Forecasting Extension for ArcGIS estimates future student populations by analyzing the following data:
   - Development Projections from Brevard County Local Government Jurisdictions
   - Brevard County School Concurrency Student Generation Multipliers (SGM)
   - Fall Membership student addresses and corresponding concurrency service areas
   - Student Mobility Rates / Cohort Survival Rates
   - Brevard County Birth rates by zip code
4. Davis Demographics estimates are then adjusted using the following factors:
   - PK (Pre-Kindengarten) and AH (daycare for students with infants) enrollment number are assumed to be constant
   - Current From/To attendance patterns are assumed to remain constant.
   - Nongeocoded student addresses are assumed to continue in their attendance schools.
   - Charter School Growth.
5. In order to maintain utilization rates lower than the 100% Level of Service, Permanent Capacity and Relocatable Classrooms are assumed to add future student stations as necessary.
6. If student projections are accurate, the school board could add additional classroom capacity, implement attendance boundary changes, or add relocatable classrooms. A south area elementary school is planned for the future growth, but the exact timing hasn't been established. If only relocatable classrooms are used for the next 5 years, the following changes would be needed to accommodate projected growth. These schools are being analyzed for the best options to accommodate additional students.
   - Primary relocatable classrooms (Grades K-3) = 18 student stations, Intermediate (Grades 4-8) relocatable classrooms = 22 student stations, and High School (Grades 9-12) relocatable classrooms = 25 student stations
   For school year 2024-25, a total of 6 intermediate classrooms are projected for Westside (4) and Sunrise (2) Elementary Schools.
   For school year 2025-26, a total of 9 intermediate classrooms are projected for Westside (4), Viera (2), and Jupiter (2) Elementary Schools.
   For school year 2026-27, a total of 10 intermediate classrooms are projected for Westside (4), Viera (4), and Jupiter (2) Elementary Schools and 3 High School relocatable classrooms are proposed for Bayside High School.
   For school year 2027-28, a total of 12 intermediate classrooms are projected for Westside (4), Viera (4), and Jupiter (2) Elementary Schools, Southwest Middle School (2) and 3 High School relocatable classrooms are proposed for Bayside High School.
   For school year 2028-29, a total of 9 intermediate classrooms are projected for Viera (4), and Jupiter (3) Elementary Schools, Southwest Middle School (3) and 5 High School relocatable classrooms are proposed for Bayside (3) and Melbourne (2) High Schools.
9. A classroom addition is planned for construction at West Melbourne School of Science for 2024-25. The factored capacity is adjusted for the proposed 176 student stations.

Anderson, Christie

From: Black.Karen@Plng, Design and Constr <Black.Karen@Brevardschools.org>
Sent: Tuesday, June 25, 2024 9:32 AM
To: Anderson, Christie
Cc: Colby, Alyssa
Subject: RE: SR405 and Singleton PD-North

Good morning,

Thank you. I will place the package in the mail to be returned to Kimley-horn…Alyssa-please let me know if you would rather pick up the package here at ESF.

Sincerely,

Karen M. Black, AICP
Manager-Facilities Planning & Intergovernmental Coordination

Brevard Public Schools
Facilities Services, Planning & Project Management
2700 Judge Fran Jamieson Way
Viera, FL 32940
321-633-1000, ext. 11418

From: Anderson, Christie <Christie.Anderson@Titusville.com>
Sent: Tuesday, June 25, 2024 9:29 AM
To: Black.Karen@Plng, Design and Constr <Black.Karen@Brevardschools.org>
Cc: Colby, Alyssa <Alyssa.Colby@kimley-horn.com>
Subject: RE: SR405 and Singleton PD-North

Caution: This email originated from outside of Brevard Public Schools. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Morning Karen,

Based on the information you have provided the attached preliminary school capacity determination would be sufficient to proceed with the rezoning and small scale amendment process. I would recommend that the final capacity determination be applied for at a later date. If you have any other questions feel free to reach out. I hope you have a great day!

Christie Anderson, AICP
Senior Planner | City of Titusville
555 S. Washington Avenue
Titusville, FL 32781-2806
Phone: (321) 567-3777

Titusville
Gateway to Nature & Space

Community Development

Planning

Please note: Florida has a very broad public records law. Most written communications to or from City employees regarding City business are public records available to the public and media upon request. Your email communications may therefore be subject to public disclosure.

From: Black.Karen@Plng, Design and Constr <Black.Karen@Brevardschools.org>
Sent: Tuesday, June 25, 2024 8:28 AM
To: Anderson, Christie <Christie.Anderson@Titusville.com>
Cc: Colby, Alyssa <Alyssa.Colby@kimley-horn.com>
Subject: SR405 and Singleton PD-North

Good Morning,

I received an application for a school capacity determination (Preliminary) to accompany a rezoning and Comp Plan Amendment application, along with a check for $200.00. Both North and South areas of the SR405/Singleton PD development were reviewed under CD-2024-03 in February. I have attached the letter for reference. Preliminary determinations do not expire. Since the change in the number of units is less than 50 units, no amendment is necessary at this time.

If the development is proceeding to final approval, a final capacity determination could be processed; however, the reservations will expire in two years. If final approval is not projected within that time frame, it may be better to wait on making any reservations. Since the preliminary review was completed this reporting period (under the same Financially Feasible Plan), the application to final would be considered a conversion at the fee of $200.00. I have all the information I need to process as a final.

Please let me know how you would like to proceed. Should the attached determination be enough until the plan returns for final approval at a later date, the application and fee will be returned.

I will be out of the office from Thursday, June 27 until July 8th and would love to have this back to you prior to leaving.

Sincerely,

Karen M. Black, AICP
Manager-Facilities Planning & Intergovernmental Coordination

Brevard Public Schools
Facilities Services, Planning & Project Management
2700 Judge Fran Jamieson Way
Viera, FL 32940
321-633-1000, ext. 11418

Due to Florida's broad public records law, most written communications to or from government employees regarding public education are public records. Therefore, this e-mail communication may be subject to public disclosure.
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Category: 9.
Item: B.

City of Titusville

"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Planning and Zoning Commission Members

From: Brad Parrish, Community Development Director

Subject: Small Scale Amendment (SSA) No.2-2024 - SR405 & Singleton Avenue PD SOUTH

Department/Office: Planning

Recommended Action:

Conduct the public hearing and make recommendation on Small Scale Comprehensive Plan Amendment (SSA 2-2024).

Recommend approval of SSA 2-2024 to amend the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 11.25+/- acres of property and from Conservation to Low Density Residential on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759; and 22-35-05-00-760. This ordinance is a legislative item.

Recommend approval of the rezoning from the General Use (GU) zoning district to the Planned Development (PD) zoning district on 27.99+/- acres of property; and the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760 with master plan and conditions of approval as described in the rezoning ordinance:
1. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].
2. Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers shall be preserved with the submittal of the sketch plat [1.11(a)].
3. The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(c)].
4. Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].
5. Direct Impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].
This ordinance is quasi-judicial.

The City Council will hear this agenda item on October 8, 2024.

Summary Explanation & Background:

The applicant is requesting to change the property to the City's Low Density Residential and Conservation future land use designations and rezone to the Planned Development (PD) zoning district with master plan. The Applicant is requesting a Small-Scale Comprehensive Plan Amendment (SSA) with rezoning on 66.49+/- acres for purposes of constructing a townhome community with residential amenities consisting of 62 individually platted townhome units.
The subject property is made up of five (5) parcels and is located along the south side of S.R.405 (South Street) near the southern terminus of South Singleton Avenue. The parcels are vacant woodlands and currently have future land use (FLU) designations of Low Density Residential, and Conservation; and have General Use (GU), and Open Space and Recreational (OR) zoning designations.
The 66.49+/- acre property includes 50.69+/- acres of wetlands and has approximately 15.70+/- acres of developable land in which 5.55+/- acres of parks and open space are proposed. The proposed PD ordinance limits uses on the property to 62 townhome units with a minimum unit living area of 800 square feet with supporting infrastructure and site improvements, including vehicular access, sidewalks, landscaping, utilities, onsite stormwater management facilities and common recreational amenities including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise equipment, and a mail kiosk. Permitted accessory uses will be limited to recreational amenities.

Alternatives:

1. Recommend approval of the amendment and rezoning ordinances and master plan.
2. Do not recommend approval the amendment and rezoning ordinances and master plan.
3. Other action.

Item Budgeted:

NA

Source/use of funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Staff Report	9/12/2024	Backup Material
🗋	Application FLU	9/12/2024	Backup Material
🗋	Application REZ	9/12/2024	Backup Material

Ordinance FLU	9/12/2024	Backup Material
Ordinance REZ	9/12/2024	Backup Material
Master Plan - Exhibit B	9/12/2024	Backup Material
Survey	9/12/2024	Backup Material
Survey 2	9/13/2024	Backup Material
Sketches and Descriptions	9/12/2024	Backup Material
Maps	9/12/2024	Backup Material
Concurrency	9/12/2024	Backup Material
Environmental Assessment - Redacted	9/12/2024	Backup Material
Traffic Study	9/12/2024	Backup Material
School Report	9/12/2024	Backup Material

City of Titusville

Planning Department Staff Report

Small Scale Comprehensive Plan Map Amendment (SSA) and Planned Development (PD) Rezoning with Master Plan

SSA#2-2024 SR 405 & SINGLETON AVENUE PD SOUTH

Meeting Dates:

Commission/Council	Meeting dates
Planning and Zoning Commission	September 18, 2024
City Council First Ordinance Reading	September 24, 2024
City Council Public Hearing	October 8, 2024

Prepared By: Christie Anderson, AICP, Senior Planner

Applicant(s): Alyssa Colby, P.E. with Kimley-Horn & Associates, Inc. on behalf of Singleton Avenue 44 Acre Trust, LLC

Applicant's Request: **SSA:** Amend the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 11.25+/- acres of property and from Conservation to Low Density Residential on 0.44+/- acres of property.

REZ: Amend the zoning map by changing the General Use (GU) zoning district to the Planned Development (PD) zoning district on 27.99+/- acres of property; and the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.44+/- acres of property.

Staff Recommendation: SSA: Approve the comprehensive plan land use amendment from the Low Density Residential and Conservation land uses to the Conservation and Low Density Residential land uses.

REZ: Approve the Planned Development (PD) rezoning with master plan.

BACKGROUND INFORMATION

The intent of the request is to change the property to the City's Low Density Residential and Conservation future land use designations and rezone to the Planned Development

(PD) zoning district with master plan. The Applicant is requesting a Small-Scale Comprehensive Plan Amendment (SSA) with rezoning on 66.49+/- acres for purposes of constructing a townhome community with residential amenities consisting of 62 individually platted townhome units.

The subject property is made up of five (5) parcels and is located along the south side of S.R.405 (South Street) near the southern terminus of South Singleton Avenue. The parcels are vacant woodlands and currently have future land use (FLU) designations of Low Density Residential, and Conservation; and have General Use (GU), and Open Space and Recreational (OR) zoning designations.

The 66.49+/- acre property includes 50.69+/- acres of wetlands and has approximately 15.70+/- acres of developable land in which 5.55+/- acres of parks and open space are proposed. The proposed PD ordinance limits uses on the property to 62 townhome units with a minimum unit living area of 800 square feet with supporting infrastructure and site improvements, including vehicular access, sidewalks, landscaping, utilities, onsite stormwater management facilities and common recreational amenities including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise equipment, and a mail kiosk. Permitted accessory uses will be limited to recreational amenities.

PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Existing Use	Future Land Use	Zoning
Vacant Woodland	-Low Density Residential -Conservation	-General Use (GU) -Open Space and Recreational (OR)

Proposed Use, Future Land Use, and Zoning

Proposed Use	Future Land Use	Zoning
Townhomes Proposed 62 units	-Conservation -Low Density Residential (Max 5 du/acre)	-Planned Development (PD)

SURROUNDING PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Location	Use	Future Land Use	Zoning
North	-S.R. 405 (South St.) -Vacant land -Single-family homes	-Low Density Residential -Commercial High Intensity -Conservation	-General Use (GU) -Neighborhood Commercial (NC) -Open Space and Recreational (OR) -Single Family Medium Density (R-1B) -Rural Residential (RR)
South	-Vacant land -Single-family homes	-Low Density Residential -Conservation	-Open Space and Recreational (OR) -Single Family Medium Density (R-1B)
East	-Vacant land -Single-family homes	-Low Density Residential -Conservation	-Open Space and Recreational (OR) -Single Family Medium Density (R-1B)
West	-South Singlton Ave. -S.R. 405 (South St.) -Vacant land -Single-family homes	-Conservation -Commercial High Intensity -Residential Two -Low Density Residential	-General Use (GU) -Rural Residential (RR) -Neighborhood Commercial (NC)
*Internal	-Church -Single-family home	-Low Density Residential	-General Use (GU)

STAFF ANALYSIS

The applicant's stated purpose for the land use amendment and rezoning is to construct an individually platted townhome community with residential amenities as a Planned Development (PD). The proposed PD development conditions have been provided as Exhibit A, contained within the attached draft ordinance. The table below sets forth the proposed PD development standards as compared with the development standards of the current General Use (GU) and Open Space and Recreational (OR) zoning districts.

The property is **NOT** located within the City's Area of Critical Concern (ACC).

Area, Height, Bulk and Open Space Requirements	Proposed SR405 and Singleton PD – South	General Use (GU)	Open Space and Recreational (OR)
Floor area per dwelling unit, minimum (sq. ft.)	800 [Sec.33-6(a)(3)d]	900	None
Height, maximum (ft.)	50	35	35
Building coverage, maximum (% of full site)	50%	20	None
Maximum Impervious Coverage (% of full site)	NA	NA	NA
Front yard setback, minimum (ft.)	20	50	50
Interior side yard setback, minimum (ft.)	10	25	50
Side corner yard setback, minimum (ft.)	10	50	50
Rear yard setback, minimum (ft.)	10	50	50
Open Space, minimum (% of total gross acreage of the PD)	35% [Sec. 33-5(c)]	None	None
Accessory Use Development Standards	Tot Lot, Mail Kiosk and Recreational Amenities	See Chapter 28 Article VII	See Chapter 28 Article VII
***If this PD Ordinance does not address a specific standard, the standards of the Multi Family Medium Density (R-2) zoning district shall apply.*			

In 1993, the existing General Use (GU) and Open Space and Recreational (OR) zoning were placed on the property during the 1993 citywide rezoning (Ordinance No. 5-1993). The subject property has remained undeveloped woodlands. There are single family residential subdivisions within the surrounding area which include Country Club Heights, Forest Hills Estates, and Sereno Pointe. Country Club Heights is located to the southeast and was platted in 1957. Forest Hills Estates to the north, was platted in 1958, and to the west Sereno Pointe, was platted in 2007. The South Street Small Area Plan was adopted in 2016 and recommended a Residential/Conservation development pattern for the area.

In the existing General Use (GU) zoning district, single-family dwellings may be permitted at a density of one (1) dwelling for each three (3) acres. In the Open Space and Recreation (OR) zoning district, single-family dwellings outside of wetlands may be permitted at a density of one (1) dwelling unit per five (5) acres The proposed development increases the potential buildout of the property from a maximum of 16 residential units to a maximum of 62 units.

Zoning District	Proposed SR405 and Singleton PD – South	General Use (GU)	Open Space and Recreational (OR)
Max Density	62 proposed units LDR 15.70+/- ac = **78 units** (5 du/ac)	27.98+/- ac **9 units**	38.2+/- ac **7 units**

A master plan is required with the submittal of a PD rezoning. The applicant is proposing the minimum 20-foot perimeter landscape yard (buffer), and building setbacks on each lot, 20-foot front setback, 10-foot side setbacks and a 10-foot rear setback measured from lot boundary. The plan proposes two driveway access points along S.R.405 (South

Street). The PD zoning requires a minimum of 35% open space. According to Section 30-163(f)(3) of the Code,

> "*Common open space includes both passive recreation (e.g. picnic areas or walking trails) and active recreation (e.g. playgrounds or basketball courts) areas. Private waterbodies and stormwater retention or detention areas that are designed to be used for passive recreation (i.e. improved with fountains, benches, and walkways) may be counted towards the common open space minimum requirement."*

The applicant's proposed open space illustrated on the master plan identifies stormwater treatment areas and recreational areas including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise equipment, and a mail kiosk. Permitted accessory uses will be limited to recreational amenities. A final recreational plan shall be submitted with the sketch plat illustrating the proposed recreational amenities within the open space areas and conforms with the minimum required open space.

COMPREHENSIVE PLAN AMENDMENT REVIEW

Future Land Use Map Amendment Sprawl Criteria

The following list is the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to urban sprawl [Section 34-23 of the LDR].

Summary of Staff's findings

1. The extent to which the proposed amendment is contiguous to an existing development area which has developed in a manner providing a compact, contiguous development pattern with the proposed amendment.

   Staff Comment: The subject property lies south of S.R.405 (South Street) adjacent to vacant woodlands. The following single family subdivisions are located within proximity to the subject property. Country Club Heights is located to the southeast and was platted in 1957. Forest Hills Estates to the north, was platted in 1958, and to the west Sereno Pointe, was platted in 2007. The homes were generally constructed in the late 1950's and early 1960's with the exception of Sereno Pointe which was constructed in the mid-2010's.

   The PD master plan proposes two driveway access points along S.R.405 (South Street). A single family residence and the Forest Hills Baptist Church are located between the proposed access points. The proposed development is contiguous with the surrounding low density developments in the area. Most of the existing development near this area along S.R.405 (South Street) is not contiguous, which can be attributed to the significant acreage of wetlands in the area.

2. The extent to which population growth and development trends warrant an amendment, including an analysis of vested and approved but unbuilt development.

   Staff Comment: The city has experienced a population growth rate of approximately 1% to 1.2% per year. The land use amendment could result

in a population increase of 138+/- residents. Fox Lake Hammock, a single family subdivision, was platted in 2021 and is an indicator of the trend toward residential development in the general area. A townhome development may be considered as a needed and more affordable alternative to detached single family housing.

3. The extent to which adequate infrastructure to accommodate the proposed amendment exists or is programmed and funded through an adopted capital improvement schedule or will be privately financed through a binding executed agreement or will otherwise be provided at the time of development impacts as required by law.

Staff Comment: The site is adjacent to sanitary sewer and water mains along S.R.405 (South Street) with adequate water and sewer service to serve a build out scenario of 62 multifamily units. The adjacent arterial road S.R.405 (South Street) can accommodate the additional volume according to the City's concurrency assessment. In addition, South Street is listed on the Space Coast Transportation Planning Organization's Long Range Transportation Plan for a capacity improvement.

A traffic study dated June 2022 was provided by the applicant which indicates that the buildout of the proposed development will operate within the adopted maximum service volumes. In addition, Space Coast Area Transit Route 2, Stop 8 is located at the intersection of South Singleton Avenue and Sereno Pointe Drive, which is located within one-quarter mile of the subject property.

The City's required recreation and open space will not be exceeded with the additional population. The Public Works Department stated that capacity is available to serve the new townhome subdivision with solid waste services. The School District evaluated the land use application for school concurrency and there is enough capacity at nearby schools to accommodate the new residential development.

4. The extent to which the amendment will result in an efficient use of public funds needed for the provision of new infrastructure and services related to it.

Staff Comment: Public infrastructure is available to serve the property, and no additional public funds will be necessary for the provision of new infrastructure.

5. The extent to which the amendment will not result in a sprawl development pattern as determined by Chapter 163, Florida Statutes, and will not discourage infilling of more appropriate areas available for development within existing Development Area Boundaries; and

Staff Comment: The proposed land use change appears consistent with existing residential land uses on this segment of S.R.405 (South Street). The site is located near the intersection of collector and arterial roadways and water and sanitary sewer utilities are available.

6. The extent to which the amendment will result in a sustainable development pattern through a balance of land uses that is internally interrelated, demonstrates an

efficient use of land, ensures compatible development adjacent to agriculture lands, protects environmental qualities and characteristics, provides interconnectivity of roadways, supports the use of non-automobile modes of transportation, and appropriately addresses the infrastructure needs of the community.

Staff Comment: In 2016, the South Street Small Area Plan was adopted, which recommended a development pattern for the area primarily west of the subject property; however, the southwest portion of the subject property is included within the study area. The study's recommended development pattern for the area is Residential/Conservation. The requested Open Space and Recreational and PD zoning which proposes less than 5 units per acre is appropriate within the Residential/Conservation area according to the Land Use/Zoning Matrix of the South Street plan (p.8). The proposed low density residential and conservation land uses will provide a sustainable development pattern within the surrounding area of low density residential and conservation. The proposed townhome development will also be located at the southeast corner of an arterial and collector roadway intersection. With regards to non-automobile modes of transportation, the Space Coast Area Transit Route 2, Stop 8 is located at the intersection of South Singleton Avenue and Sereno Pointe Drive, which is located within one-quarter mile of the subject property. All new construction requires that sidewalks be constructed along any lot or parcel of ground abutting any public or private street unless a waiver is granted pursuant to LDR Sec. 30-238(a).

The Florida Department of Transportation (FDOT) will conduct a corridor study to determine the need for, and potential impacts of, widening the road from two to four lanes for South Street (S.R. 405)/Columbia Boulevard from west of S.R. 50 to east of U.S. 1 (5.4+/- miles). This segment of South Street (State Road 405) was also identified within the City's 2019 Multimodal Master Plan as an area recommended for significant multimodal facility upgrades.

FDOT is also milling and resurfacing South Street (State Road 405) from south of Bobbi Lane to north of Swan Lake Drive (south of the subject property) to extend the life of the roadway. Pedestrian safety improvements include replacing the existing 6-foot-wide sidewalk with an 8-foot-wide path along the west side of South Street, which will extend the existing 8-foot-wide path from Fox Lake Road to North of Swan Lake Drive. A new 6-foot-wide sidewalk will also be constructed along the east side of South Street from Fox Lake Road to North of Joe Murell Drive. Other FDOT improvements include upgrades to intersection lighting, improved crosswalks with median refuge areas, upgraded transit stops, and minor widening at turn lanes to provide bicycle through lanes.

7. The extent to which the amendment results in positive market, economic and fiscal benefits of the area as demonstrated through a market demand analysis, economic impact analysis and fiscal impact analysis.

Staff Comment: Established residential developments within proximity to the subject property include Country Club Heights located to the southeast, Forest Hills Estates, to the north and Sereno Pointe to the west. South of the proposed development along South Street includes the Woodbridge Townhomes, Swan Lake Estates Manufactured Housing Park, Fox Hollow, Fox Lake Manor, and Fox Lake Hammock. Fox Lake Hammock, a single family subdivision, was platted in 2021 and is an indicator of the trend toward residential development in the general area. A townhome development may be considered as a needed and more affordable alternative to detached single family housing. A market demand analysis was not provided by the applicant.

Consistency with the Comprehensive Plan

The following is an analysis of the consistency of the request with the City's Comprehensive Plan. The request for a Comprehensive Plan Amendment and rezoning is consistent with the Comprehensive Plan and more specifically with the following objectives and policies of the Comprehensive Plan.

Future Land Use Element (FLUE) Policy 1.14.1: Sites for residential development shall be located throughout the City in a variety of residential zoning classifications, which provide for a variety of lot sizes, floor areas, setbacks, and residential densities.

Staff Comment: Within a one mile radius of the subject property, there are existing multifamily, single family, and manufactured housing communities, which provide a variety of lot sizes, floor areas, setbacks, residential densities and housing types.

FLUE Policy 1.14.4: Low density residential uses (maximum 5 units per acre) shall consider existing and proposed land uses to ensure compatibility.

Staff Comment: The existing low density residential and conservation land uses are consistent and compatible with the surrounding area which consists primarily of low density residential and conservation.

FLUE Policy 1.14.8: Negative impacts of residential land uses on environmentally sensitive areas shall be minimized. The Conservation Element objectives and policies shall be utilized in determining the appropriateness of residential land uses designation and the specific intensity of use authorized by land development regulations.

Staff Comment: Approximately 76% of the subject property is designated as wetlands (50+/- acres). The development does not propose any direct wetland impacts and has provided an average 25-foot wetland buffer as shown on the proposed master plan. ***Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers noted on the proposed master plan shall be preserved with the submittal of the sketch plat***

The applicant provided an environmental impact report prepared by Bio-Tech Consulting Inc. dated November 15, 2023. According to the report an assessment for "listed" floral and faunal species was conducted at the

subject property during October 2022, January, August, and September 2023.The environmental assessment indicates that there is the likely presence of listed species. Any impacts to these species will require permitting by Florida Fish and Wildlife Conservation Commission (FWC).

FLUE Policy 1.14.9: Residential development sites shall be accessible to and/or provide essential public services at levels of service adopted by the Comprehensive Plan including transportation, potable water, sewage treatment, solid waste, drainage, recreation and open space, law enforcement and fire protection.

Staff Comment: The site is adjacent to a sanitary sewer and a water main along S.R.405 (South Street) with adequate water and sewer service to serve a build out scenario of 62 townhome units. No concurrency related issues were identified through the review process. Sufficient public infrastructure appears to be available to serve the residential development. The Fire Department did not state any concerns with the land use amendment.

The proposed development increases the potential buildout of the property by 46 additional units over the existing zoning. The proposed development will not reduce the levels of service for potable water, sanitary sewer, recreation and open space, law enforcement, and fire protection. Solid waste needs will be assessed by the Public Works Department at the time of site plan submittal. The drainage level of service will be reviewed and required as part of the engineering review of the project.

FLUE Policy 1.17.1: The following items shall be addressed in the analysis of the land use changes: Surrounding uses; Surrounding zoning; Acreage; Description of site; Soils and topography; Flood zone; Recharge potential; Traffic counts on adjacent streets; and Impact on adopted levels of service; Water supply availability.

Staff Comment: The amendment will permit a residential buildout potential of 62 townhome units on 15.70+/- acres of developable land. The proposed master plan illustrates a maximum impervious surface coverage of 5.15+/- acres (33%). The subject property is not located within the Area of Critical Concern. All developable acreage is located within Flood Zone X (area of minimal flood hazard) except for the proposed wetland buffers in which no grading or development is proposed; the remainder of the subject property is located within Flood Zone AE (Special Flood Hazard Area). Approximately 76% of the subject property is designated as wetlands (50+/- acres). A soils map is included in the agenda item for this request.

The site is adjacent to a sanitary sewer and water main along South Street (S.R. 405) with adequate water and sewer service to serve a build out scenario of 62 multifamily units. The arterial road (South Street (S.R. 405)) can accommodate the additional volume according to the City's concurrency assessment.

Conservation Element (CE) GOAL 1: To preserve and enhance the quality of the natural environment through preservation, conservation, and appropriate management of the vital natural resources, including air, water (both potable and surface), biotic and factors that affect energy conservation.

Staff Comment: New residential developments must address potential impacts to wildlife habitats and protected species and obtain permits through the appropriate state agencies [CE Objective 1.1]. The City's Code describes the requirements for stormwater systems as part of new development, which will be evaluated at the time of site plan submittal [CE Objective 1.12].

The 15.70+/- acre development is located on upland property with ***no direct wetland impacts****. The proposed residential development has provided an average 25-foot wetland buffer (2.75+/- ac) as shown on the proposed master plan to mitigate against secondary impacts.* ***Direct impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan.*** *Wetland impacts will require permitting by the appropriate agencies.* ***Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers noted on the proposed master plan shall be preserved with the submittal of the sketch plat.***

CE Strategy 1.6.1.2: The development of land under all land uses categories shall take into consideration natural constraints such as flood hazards, wetlands, soil suitability and aquifer recharge potential.

Staff Comment: All developable acreage is located within Flood Zone X (area of minimal flood hazard) except for the proposed wetland buffers in which no grading or development is proposed; the remainder of the subject property is located within Flood Zone AE (Special Flood Hazard Area). A soils map is included in the agenda item for this request.

CE Strategy 1.6.3.2: At a minimum, wetlands 5 acres or more in size shall be designated as a conservation land use and wetlands less than 5 acres will be subject to review to determine what protection, if any, they should receive from development. Said review shall be based on the functional value criteria specified in Strategy 1.6.4. If based on this determination, protection is warranted, development may be permitted, based upon criteria set forth in the environmental performance standards of the land development regulations.

Staff Comment: The subject property contains a 50+/- acres of wetlands. The developable area (15.70+/- acres) of the site is proposed as Low Density Residential land use and is located on upland property. The master plan layout has been designed around the existing wetlands and proposes no direct wetland impacts. Wetlands #1, Wetlands #2, and Wetlands #3 as shown on the master plan with be placed with the Conservation future land use and will be preserved by a conservation easement as part of a Planned Development (PD), and any other upland areas to be permitted for preservation for state and/or federal listed wildlife species [CE Policy 1.16.2]. ***Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers***

noted on the proposed master plan shall also be preserved with the submittal of the sketch plat.

REZONING REVIEW

Zoning Review Criteria

Section 34-40 of the LDR lists the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to **zoning**.

The following are staff's findings.

1. ***Comprehensive Plan Consistency Statement.*** The proposed rezoning to the PD zoning district is consistent with the proposed Low Density Residential and Conservation land use designations.

   1.1. Public facilities are available and concurrent with the land use change per the Comprehensive Plan and Concurrency provisions of the LDRs.

   Staff Comment: The property is within the City's urban service area. Public facilities are available to serve the site, and no concurrency related issues were identified. Potable water and sewer services are available to serve the property. Reclaimed water service is not available in the area.

   Transportation impact.

   Staff Comment: The subject property has a frontage along S.R.405 (South Street) and is located adjacent to the intersection of S.R.405 (South Street) and South Singleton Avenue. S.R.405 (South Street) is classified as an arterial roadway and South Singleton Avenue is classified as a collector roadway Sec. 9.3 of the Transportation Technical Manual. Using procedures published in the 11th Edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual the proposed low density residential use will generate 498 daily trips. According to a traffic study dated June of 2022 provided by the applicant, "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes". A final concurrency determination will be made at the time of site plan submittal.

   Solid Waste.

   Staff Comment: Solid waste services are available to the subject property and can serve a townhome development.

   Schools.

   Staff Comment: Brevard County Public Schools staff have completed a non-binding School Impact Analysis for the proposed development based upon on the Student Generation Multiplier (adopted April 11, 2022). "Apollo Elementary, Jackson Middle School and Titusville High School are projected to have enough capacity for the total of projected and potential students from the S.R. 405 and Singleton PD-South development." It should be noted that a Concurrency Determination is required to be performed by the School District prior to issuance of a final development order.

1.2. Public streets are adequate to access the property.

Staff Comment: The subject property has frontage along S.R.405 (South Street) an arterial roadway.

1.3. The land will support the proposed development.

Staff Comment: The property appears able to support the proposed development. Much of the developable acreage is located within Flood Zone X (area of minimal flood hazard); however, the remainder of the subject property is located within Flood Zone AE (Special Flood Hazard Area). The developable acreage of the site is calculated at 15.70+/- acres. Approximately 76% of the subject property is designated as wetlands (50+/- acres). A soils map is included in the agenda item for this request.

*The developable area of the site is located on upland property. The master plan proposes **no direct wetland impacts**. The proposed residential development has provided an average 25-foot wetland buffer (2.75+/- ac) as shown on the proposed master plan to mitigate against secondary impacts. **Direct Impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan** and will also require permitting by the appropriate agencies.*

1.4. Environmental impact.

*Staff Comment: The subject property is currently undeveloped land with dense tree coverage. A large majority (76%) of the full parcel acreage is designed as wetlands (50+/- acres), and the developable area is calculated to be 15.70+/- acres. The developable acreage is primarily uplands with **no direct wetland impacts** and provides an average 25-foot wetland buffer (2.75+/- ac) as shown on the proposed master plan. Wetland and/or other surface water impacts (both direct and secondary) will require permitting by the appropriate agencies. The environmental assessment also noted that the presence of threatened species has been identified, and that the required review and permitting by Florida Fish and Wildlife Conservation Commission (FWC) will be required.*

2. The existing zoning, if deemed consistent with the Comprehensive Plan, shall be presumed correct unless substantial change in the area has occurred since the original zoning.

Staff Comment: In 1993, the existing General Use (GU) and Open Space and Recreational (OR) zoning was placed on the property during the citywide rezoning (Ordinance No. 5-1993). The subject property has remained undeveloped woodlands. Since then, the city has experienced a substantial increase in demand for housing, including demand for additional housing types beyond detached single family residences. The South Street Small Area Plan has also recommended a Residential/Conservation development pattern for the area. The subject property has remained undeveloped woodlands. The city has experienced a substantial increase in demand for housing, including demand for additional housing types beyond detached single family residences.

3. The density or intensity of the proposed rezoning and use shall be consistent with:

3.1. The development in the area.

Staff Comment: The existing development is predominantly medium to low density single family residential. Most of the existing development near this area along S.R.405 (South Street) is not contiguous, which can be attributed to the significant acreage of wetlands in the area. A low density residential townhome development with approximately 76% (50+/- acres) of the property designated as preserved wetlands is consistent with the existing development in the area.

3.2. Not likely to cause a depreciation of property values in the area.

Staff Comment: The rezoning is unlikely to cause a depreciation of property values in the area. Although much of the property within this area along S.R.405 (South Street) is undeveloped (potentially due to the presence of wetlands) multifamily, single-family, and residential manufactured housing are established uses.

4. The application is consistent with zoning in the area.

Staff Comment: The zoning in the area is predominantly Open Space and Recreational (OR) as there is a significant acreage of wetlands within the surrounding area. Single Family Medium Density Residential (R-1B), Rural Residential (RR), Neighborhood Commercial (NC), and General Use (GU) are proximate to the proposed development area. The GU and NC zoning within this area has primarily remained undeveloped. In general, the proposed residential townhome development associated with the PD zoning is consistent with the Residential/Conservation development pattern within the area as described in the South Street Small Area Plan.

5. The application will protect the public health, safety, morals or welfare of the general public.

Staff Comment: The development of townhomes at this location is not expected to generate any detriment to the public safety and welfare of the general area. A minimum 20-foot landscape yard (buffer) between the development and adjacent single-family subdivisions is required in order to protect the adjacent residents from potential noise, glare or visual nuisances.

6. Whether the applicant has sufficiently protected adjacent land uses and zoning districts by adequate buffering and screening.

Staff Comment: The townhome building setbacks will be 20 feet (Front), 10 feet (Rear), 10 feet (Side). The proposed PD development standards have been provided as Exhibit A, contained within the attached draft ordinance. The townhome buildings illustrated on the proposed master plan that are nearest to S.R.405 (South Street) will be approximately 30 feet from the right of way. The roadway, sidewalks, and recreational amenities are proposed between the townhome buildings and the existing church and

single family home properties located internal to the site. The proposed development will be buffered from all other adjacent properties by vacant woodlands and wetland preservation areas. The PD proposes a maximum building height of 50 feet. Section 1.13 (d) of the proposed PD development standards note that "Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage".

The perimeter of the development is required to provide a minimum 20-foot wide landscape yard (buffer) and a minimum landscape buffer along S.R.405 (South Street) of 30 feet wide. The proposed master plan illustrates the required minimum landscape yard (buffer) requirements for a multifamily development.

7. Substantial reasons why the property cannot be used in the existing zoning district.

Staff Comment: There are two zoning districts on the subject property General Use (GU) and Open Space Recreational (OR). The requested action is to change the areas zoned GU and OR to Planned Development (PD) to allow a 15.70+/- acre multifamily townhome development with the conservation of 50+/- acres of wetlands. The current zoning limits the allowable density to a maximum of 16 single family residential units. There are no other substantial reasons why the property cannot be used in the existing zoning districts of General Use (GU), and Open Space Recreational (OR). The subject property has been zoned General Use (GU) and Open Space Recreational (OR) since the 1993 citywide rezoning and has remained undeveloped.

COMMUNITY ENGAGEMENT MEETING

LDR Section 34-14

Staff Comment: A community engagement meeting was held by the applicant on November 2, 2023.

PLANNED DEVELOPMENT (PD) REVIEW CRITERIA

The purpose of a PD district is to provide flexibility in the planning and construction of development projects by allowing a combination of uses developed in accordance with an approved plan that protects adjacent properties; provide an environment within the layout of a site that contributes to a sense of community and coherent living style; encourage the preservation and enhancement of natural amenities and cultural resources, and to provide for a minimum amount of open space; provide for a more efficient arrangement of land uses, buildings, circulation systems, and infrastructure; and, encourage infill projects and the development of sites made difficult for conventionally designed development because of shape, size, abutting development, or natural features [Sec. 34-53]. Sections 33-4, 33-5, 33-6, and 33-8 of the Land Development Regulations list the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to Planned Development (PD) applications.

The following are staff's findings.

1. **The minimum land area shall be five (5) acres.** (Sec. 33-4)

   Staff Comment: The planned development is greater than 5 acres at 66+/- acres.

2. **The applicant is responsible for demonstrating the project protects the health, safety and welfare of the general public to a greater extent than would have been possible pursuant to the standard zoning regulations.** [Sec. 33-5(a)(1)]

   Staff Comment: A 20-foot interior perimeter landscape yard (buffer) is proposed consistent with the City's Code. The land development regulations (LDR) also require a minimum landscape buffer along S.R.405 (South Street) of 30 feet, which has also been provided on the proposed master plan. The proposed master plan illustrates the required landscape yard (buffers) for a multifamily development.

   The PD proposes a maximum building height of 50 feet. The proposed development will be buffered from all other adjacent properties by vacant woodlands and wetland preservation areas. Section 1.13 (d) of the proposed PD development standards note that "Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage". The plan proposes two driveway access connection points along S.R. 405 (South St.)

   The PD ordinance and master plan appear to go above and beyond the following standards. The plan proposes buffers around each of the wetlands on site where the City's Code does not require it. Approximately 76% of the subject property is designated as wetlands (50+/- acres). Efforts to minimize wetland impacts have been taken in the proposed design. The developable area of the site is located on upland property and the master plan proposes ***no direct wetland impacts****. The proposed residential development has provided an average 25-foot wetland buffer (2.75+/- ac) as shown on the proposed master plan to mitigate against secondary impacts.* ***Direct Impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan*** *and will also require permitting by the appropriate agencies.* ***Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers noted on the proposed master plan shall also be preserved with the submittal of the sketch plat.***

   35% of the developable acreage will also be dedicated to common open space, and will include stormwater treatment areas, and recreational areas including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise equipment, and a mail kiosk.

3. **Provide access without creating traffic along local streets in residential areas or clusters outside the PD.** [Sec. 33-5(a)(2)]

   Staff Comment: The PD master plan illustrates two driveway access connection points along S.R. 405 (South St.). S.R. 405 (South St.) is an arterial roadway per Sec. 9.4.3 of the City's Transportation Infrastructure Technical Manual. The property has 3,500+/- linear feet of frontage along

S.R. 405 (South St.) and a maximum of two driveways are permitted on the roadway per Section 9.11 of the Transportation Technical Manual.

4. **Infrastructure connectivity and reducing the need for increased public cost or earlier public costs.** [Sec. 33-5(a)(3)]

   Staff Comment: According to the City's Water Resources Department, water and sewer lines are available to serve the property. A 16-inch water main is available for use along South Street and an 8-inch water main is available on Singleton Ave. There is also a 6-inch force main approximately 670 feet south of Singleton Ave on South Street available for sewer. Reclaimed water is not available to serve the site. ***There may be a significant demand on city resources if potable water is used for irrigation. Sustainable landscape or alternative irrigation methods could be utilized to reduce potential impacts on the City's potable supply.***

5. **The developer shall place all utility lines underground.** [Sec. 33-5(a)(4)]

   Staff Comment: This will be required with the submittal of a site plan.

6. **Access.** [Sec. 33-5(b)]

   Staff Comment: The subject property has a frontage along S.R.405 (South Street) and is located adjacent to the intersection of S.R.405 (South Street) and South Singleton Avenue. S.R.405 (South Street) is classified as an arterial roadway and South Singleton Avenue is classified as a collector roadway Sec. 9.3 of the Transportation Technical Manual. The property has 3,500+/- linear feet of frontage along S.R. 405 (South St.) and a maximum of two driveways are permitted on the roadway per Section 9.11 of the Transportation Technical Manual.

7. **Parks and Open Space.** [Sec. 33-5(c)]

   Staff Comment: The minimum percentage of parks and open space required for a PD is 35% of the total gross acreage of the PD. According to Section 30-163(f)(3) of the Code:

   > *"Common open space includes both passive recreation (e.g. picnic areas or walking trails) and active recreation (e.g. playgrounds or basketball courts) areas. Private waterbodies and stormwater retention or detention areas that are designed to be used for passive recreation (i.e. improved with fountains, benches, and walkways) may be counted towards the common open space minimum requirement."*

   The minimum percentage of parks and open space required for the PD is 5.50 acers (35%). The master plan is proposing 5.55 acers dedicated to common open space and will include stormwater treatment areas and recreational areas including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise equipment, and a mail kiosk. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities

including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage.

8. Minimum lot size. [Sec. 33-6(a)(1)]

Staff Comment: The PD proposes individually platted townhomes on 20 feet by 100 foot (2,000 sq. ft.) and 30 feet by 100 foot (3,000 sq. ft.) lots. The total amount of maximum impervious surface for each lot must be noted individually on the final plat per Sec. 13.2.13 of the City's Development Review Procedures Technical Manual.

9. Frontage. [Sec. 33-6(a)(2)]

Staff Comment: The PD master plan proposes 4 and 6 unit townhome building groups with a maximum frontage of 120 linear feet and a minimum distance of 20 feet between structures.

10. Minimum living areas. [Sec. 33-6(a)(3)]

b. Town homes: Eight hundred (800) square feet.

Staff Comment: The minimum unit living area for a townhome within the PD zoning district is 800 square feet. The PD ordinance proposes a minimum living area of 800 square feet.

11. Maximum building height. [Sec. 33-6(a)(4)]

Staff Comment: The maximum building height within the PD zoning district is 50-feet. The PD ordinance proposes a maximum building height of 50-feet.

12. Time schedule and appropriate surety. [Sec. 33-6(a)(5)]

Staff Comment: The applicant did not propose a specific phasing schedule; however, the time frame shall be consistent with Section 33-9.

13. Maximum residential density. [Sec. 33-6(a)(6)]

Staff Comment: The maximum residential density is 78 units under the Low Density Residential Land Use category. The PD ordinance and master plan proposes 62 residential townhome units.

14. Consistency with the Comprehensive Plan and any other small area plan. [Sec. 33-8(a)(1)]

Staff Comment: The PD and master plan are consistent with the proposed Low Density Residential and Conservation land use designations as well as the South Street Small Area Plan's recommended development pattern of Residential/Conservation [LDR Sections 33-3 and 33-8].

15. Internal Compatibility and Design. [Sec. 33-8(a)(2)]

a. The streetscape pattern shall provide for pedestrian and bicycle pathways, as well as an interesting vista that includes street trees, sidewalk treatments, and lighting.

Staff Comment: The master plan proposes 62 townhome units with supporting infrastructure and site improvements, including vehicular access, sidewalks, residential amenities, landscaping, utilities, and onsite stormwater management facilities. The preservation of tree clusters could be utilized to create interesting vistas which include canopy trees, landscaping, and pedestrian lighting along sidewalks and trails as part of the overall open space and recreation areas. All new construction requires that sidewalks be constructed along any lot or parcel of ground abutting any public or private street unless a waiver is granted pursuant to LDR Sec. 30-238(a).

b. The overall development shall make use of existing natural features and interesting topography.

Staff Comment: The development proposes the preservation of existing large canopy trees and clusters of canopy trees where feasible. This includes areas of upland scrub pine and oaks which will be incorporated into common areas to provide shade within common areas and along multiuse paths. ***Staff recommends the condition that the developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible and heritage trees should to the extent possible be preserved with the submittal of the sketch plat****. The development has been designed to preserve the existing wetland areas and proposes* ***no wetland impacts****. Most of the units are designed to have views of wetlands from their back or front yards, and the proposed recreational amenities have been designed to highlight the property's natural features and topography.*

c. In commercial and residential PDs, a variety of residential designs and commercial spaces shall be included, and the mix of land uses should be designed to be compatible and complimentary.

Staff Comment: The project is a single use low density residential townhome development with ancillary recreational amenities. The master plan proposes townhouse buildings with a maximum building height of 50 feet.

d. Building designs shall provide for architectural styles that are compatible with surrounding development or design standards that apply to the area.

Staff Comment: There are no specific design standards for this area per the City's Code. Building elevations/architectural plans were not submitted for review by the applicant.

e. Open space shall provide for quality recreational amenities including fountains and passive recreational amenities, such as benches and lighting.

Staff Comment: The open space illustrated on the master plan identifies stormwater treatment areas, and recreational areas including walking trails, benches, informational placards on native vegetation and wildlife, tot lot, exercise pads for outdoor exercise

equipment, and a mail kiosk. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage.

f. Projects in existing urban contexts shall provide urban amenities, such as structured automobile parking, amenities for bicycle users, and public meeting areas.

Staff Comment: Sidewalks and multi-use pathways are proposed throughout the development. There is an existing sidewalk network located along South Singleton Avenue and along the north side of S.R.405 (South Street); There are no sidewalks located along the south side of S.R. 405 (South St.) All new construction requires that sidewalks be constructed along any lot or parcel of ground abutting any public or private street unless a waiver is granted pursuant to LDR Sec. 30-238(a). Dedicated bicycle lanes are located along S.R. 405 (South St.).

16. External Compatibility. [Sec. 33-8(a)(3)]

a. The proposed development shall not negatively impact the quality of life for any adjacent residential uses. Negative impacts can include a decrease in property values and any substantial increase in noise or traffic. Any traffic impacts shall be demonstrated with a traffic analysis and the developer, in accordance with the Comprehensive Plan, shall mitigate the impacts.

Staff Comment: The PD master plan illustrates two points of access along S.R. 405 (South St.). S.R. 405 (South St.). is classified as an arterial roadway per Sec. 9.3 of the Transportation Technical Manual. Using procedures published in the 11th Edition of the Institute of Traffic Engineers (ITE) Trip Generation Manual the proposed low density residential FLU will generate 498 average daily vehicle trips (ADT). According to a traffic study dated June of 2022 provided by the applicant, "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes".

b. The proposed development shall not negatively impact any adjacent conservation lands.

Staff Comment: Approximately 76% of the subject property is designated as preserved wetlands (50+/- acres). The developable acreage is primarily uplands with no direct wetland impacts. The proposed master plan provides an average 25-foot wetland buffer (2.75+/- ac).

c. The proposed development shall provide bikeways and trails to be consistent and compatible with the Brevard

Metropolitan Planning Organization's overall Greenways and Trails program.

Staff Comment: Sidewalks and multi-use pathways are proposed throughout the development. Dedicated bicycle lanes are located along S.R. 405 (South Street). The proposed development is within cycling distance (2.5 miles) of the Florida East Central Regional Rail Trail. The subdivision will not be a gated community. The internal roadway will meet the City's Street standards and will be dedicated to the city.

d. Access and street patterns of the development shall compliment and be compatible with the existing street system of the surrounding development.

Staff Comment: The development is located adjacent to the intersection of S.R.405 (South Street) and South Singleton Avenue. S.R.405 (South Street) is classified as an arterial roadway and South Singleton Avenue is classified as a collector roadway Sec. 9.3 of the Transportation Technical Manual. The property has 3,500+/- linear feet of frontage along S.R. 405 (South St.) and a maximum of two driveways are permitted on the roadway per Section 9.11 of the Transportation Technical Manual. The PD master plan proposes two driveway access points along S.R.405 (South Street).

e. Commercial and industrial uses within the development shall be adequately buffered from any adjacent residential uses.

Staff Comment: No commercial or industrial uses are proposed in the development.

MASTER PLAN REVIEW CRITERIA

a. Master Plan required. A Master Plan is a land-use plan focused on one or more sites within an area that identifies site access and general improvements and is intended to guide growth and development over a number of years or in several phases. A Master Plan is required with a PD rezoning. [Sections 34-51 and 34-52(b)].

Staff Comment: The site plan will be in general conformance with the layout illustrated in the master plan. Substantial modifications require a recommendation from the Planning and Zoning Commission and approval from the City Council [Sec. 6.3.2].

b. Sketch Plat. A Master Plan may take the place of a Sketch Plat approval. Approval of the Sketch Plat by the City Council authorizes the applicant to proceed with the Preliminary Plat, which is processed as a Site Plan. [Sections 34-60 and 34-151]

Staff Comment: The project includes the subdivision of 62 individually platted townhome units. A sketch plat will be required pursuant to Section 34-151.

c. Unified control. All land included in a Master Plan shall be under the legal control of the applicant, whether the applicant is an individual, partnership, corporation or group of individuals. [Sec 34-54]

Staff Comment: The property is under single ownership by Singleton Avenue 44 Acre Trust, LLC.

d. Concurrency. Concurrency for potable water, sewer, stormwater and solid waste are required by the State. Concurrency for transportation, parks and schools are required by the City's comprehensive plan. [Sec 34-55]

Staff Comment: A preliminary concurrency review indicated that the residential use will not exceed the level of service standards of the comprehensive plan for concurrency related facilities; specifically, water, sewer, parks and open space. The project is anticipated to generate a population of 147 new residents. A traffic study provided by the applicant dated June of 2022 indicates that "all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes". The City's required recreation and open space will not be exceeded with the additional population. The Public Works Department stated that capacity is available to serve the new townhome subdivision with solid waste services. The School District evaluated the land use application for school concurrency and there is enough capacity at nearby schools to accommodate the new residential development. ***The project will be reviewed for formal City concurrency, including stormwater management and transportation, with the submittal of a site plan.***

FINDINGS:

Comprehensive Plan Amendment

The comprehensive plan future land use small scale map amendment is consistent with the City's comprehensive plan and the South Street Small Area Plan.

Rezoning

The rezoning and conditions of approval are consistent with the proposed land use amendment, Comprehensive Plan, and the Land Development Regulations, including PD and rezoning criteria described in Section 33-8 and 34-40 of the Code.

Master Plan

The master plan is consistent with the City's Comprehensive Plan, Land Development Regulations and master plan requirements described in Chapter 34, Article II, Division 3 of the Code.

RECOMMENDATION:

Comprehensive Plan Amendment

Approve the amendment to the Comprehensive Plan Future Land Use Map by changing the future land use designation from Low Density Residential to Conservation on 11.25+/- acres of property and from Conservation to Low Density

Residential on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759; and 22-35-05-00-760.

Rezoning

Approve the rezoning from the General Use (GU) zoning district to the Planned Development (PD) zoning district on 27.99+/- acres of property; and the Open Space Recreational (OR) zoning district to the Planned Development (PD) zoning district on 0.44+/- acres of property having Parcel ID Nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760 with master plan and conditions of approval as described in the rezoning ordinance:

1. **A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities including interconnected stabilized sidewalks and walking trails within the open space areas and confirms the minimum required open space acreage [1.6(a)].**
2. **Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers shall be preserved with the submittal of the sketch plat [1.11(a)].**
3. **The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat [1.11(c)].**
4. **Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of the ordinance and as illustrated on the master plan in Exhibit B [1.13(d)].**
5. **Direct Impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan [1.13(e)].**

Gateway to Nature & Space

APPLICATION FOR COMPREHENSIVE PLAN AMENDMENT

Please submit electronically a completed application including required submittals to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Annexation	Does the request include an annexation?	☐ Yes ☐ No
2. Regular or Small Scale Amendment	Regular Amendment (CPA) Property **50 acres or greater** ☐	Small Scale Amendment (SSA) Property **less than 50 acres** ☐
3. Project Information	Project Name	Property Address/Location Description
4. Applicant / Owner	Name of Applicant/Contact	Name of Owner
	Street Address	Street Address
	City State Zip	City State Zip
	Telephone # Fax #	Telephone # Fax #
	E-Mail Address	E-Mail Address
5. Applicant Status	☐ Owner ☐ Tenant ☐ Agent ☐ Other	
6. Parcel ID		**Tax Acct.**
7. Site Size (Attach Legal Description)	Acres:	Square Feet:
8. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.: **SUBJECT SITE:** _____ **NORTH:** _____ **SOUTH:** _____ **EAST:** _____ **WEST:** _____	

9. Current Designation	Future Land Use:		Zoning:	
10. Proposed Designations	Future Land Use:		Zoning:	
11. Subject Property	Current Use:		Proposed Use:	
12. Note any previous amendments on the site				
13. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☐	Rezoning ☐
	Vacation of Right of Way ☐	Site Plan ☐	Subdivision/ Plat ☐	Other:
14. Narrative	Please provide a brief description of the request and the proposed project: (Attach separate narrative page if necessary)			

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
- Tentative hearing dates are scheduled approximately 4 months from the time a completed application is submitted.
- Incomplete applications will not be accepted and will not be considered to be officially submitted until the appropriate information and fees are submitted. Meeting dates for incomplete applications will not be set until all required information and fees are submitted.
- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the schedule noted above.
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
4. I understand that I must attend all applicable meetings and have been informed of the meeting date(s) and time(s). I understand that if I fail to appear at an applicable meeting, the appropriate Board or Commission may either table or deny the request.
5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781

/s/ Alyssa J Colby _____ _____
(Signature*) (Date)

* *By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

Date Received:_____

Accepted by:_____

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 4)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	☐
2.	Warranty Deed	☐
3.	Notarized Owner Authorization Form (If applicable)	☐
4.	Legal Description (from a certified survey in Microsoft Word format)	☐
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format.	☐
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	☐
7.	Additional site-specific data as necessary to describe any impacts to conservation / wetland areas, and other environmentally sensitive resources, including any mitigation efforts to be proposed or required by these regulations.	☐
8.	Traffic counts and Level of Service (LOS) on streets providing access to subject property may be required by the City. A determination of the needed information will be provided by the City prior to submittal of the request.	☐
9.	Pre-Application Meeting Held – YES Date: 6/28/2023 Staff in Attendance: Eddy Galindo, KB Ofosu, Christie Anderson	☐
10.	Preliminary School Concurrency Determination Submitted. Contact Brevard County Public Schools, David Lindemann to receive this application for completion. Lindemann.David@BrevardSchools.org	☐
11.	Community Meeting per Ordinance 26-2019 – Tentative meeting date 11/2/2023	☐

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 4)

In order to illustrate the proposed use of the property to be rezoned, the applicant is encouraged to submit a conceptual site plan in support of the proposal. If a conceptual site plan or developer's agreement is not provided with the application, the City shall review the application based on the most intensive land use and the maximum intensity and/or density within the zoning district requested within the application. If a conceptual site plan is submitted, the following information shall be provided:

1.	A vicinity map indicating the general location of the abutting streets and utilities.	☐
2.	General information regarding the existing site conditions and physical characteristics, adjacent community facilities and public utilities, and surrounding property conditions.	☐
3.	General description of the proposed development including the total acreage, the proposed number of buildings, or the number of units.	☐
4.	The location of existing buildings and structures including the dimensions.	☐
5.	The means of ingress and egress to the project.	☐
6.	General location and dimension of all existing and proposed parking and/or loading areas.	☐
7.	Information showing approximate location of all structures and major features, setbacks, distance between structures and property lines, floor areas, width of driveways, parking spaces, property or lot lines, percent of property or lot lines, percent of property coverage.	☐

Gateway to Nature & Space

APPLICATION FOR REZONING (REZ) / PLANNED DEVELOPMENT (PD) / MASTER PLAN (MP)

Please submit electronically a completed application including to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Project Information	Project Name	Property Address/Location Description
2. Type of Request	Rezoning (REZ) ☐ Planned Development (PD) ☐ Master Plan (MP) ☐	
2. Applicant/ Owner	Name of Applicant/Contact	Name of Owner
	Street Address	Street Address
	City State Zip	City State Zip
	Telephone # Fax #	Telephone # Fax #
	E-Mail Address	E-Mail Address
3. Applicant Status	☐ Owner ☐ Tenant ☐ Agent ☐ Other	
4. Parcel ID		**Tax Acct.**
5. Site Size	Acres:	Square Feet:
6. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.: **SUBJECT SITE:** _____ **NORTH:** _____ **SOUTH:** _____ **EAST:** _____ **WEST:** _____	

7. Current Future Land Use Designation	Future Land Use:			
8. Existing Zoning District				
9. Proposed Zoning District				
10. Building Status	Existing Building(s) on the site?		New Buildings Proposed?	
11. Note any previous rezonings on the site				
12. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☐	Rezoning ☐
	Vacation of Right of Way ☐	Site Plan ☐	Subdivision/ Plat ☐	Other:
13. Narrative	Please provide a brief description of your request and the proposed project: (Attach separate narrative page if necessary)			

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
- Tentative hearing dates are scheduled approximately 4 months from the time a completed application is submitted.
- Incomplete applications will not be accepted and will not be considered to be officially submitted until the appropriate information and fees are submitted. Meeting dates for incomplete applications will not be set until all required information and fees are submitted.
- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the originally scheduled date(s).
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
4. I understand that I must attend all applicable meetings and have been informed of the meeting date(s) and time(s). I understand that if I fail to appear at an applicable meeting, the appropriate Board or Commission may either table or deny the request.
5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781

/s/ Alyssa J Colby _____ _____

(Signature*) (Date)

* *By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

Date received: _____

Accepted by:_____

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 5 and 6)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	☐
2.	Warranty Deed	☐
3.	Notarized Owner Authorization Form (If applicable)	☐
4.	Legal Description (from a certified survey)	☐
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format	☐
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	☐
7.	For **Planned Development and Master Plan** applications, a conceptual site plan (minimum 24" x 36") in electronic PDF format. See table below for requirements.	☐
8.	For **Master Plan** applications, a Unified Control Agreement pursuant to Sec. 34-54 of the Land Development Regulations. N/A	☐
9.	Pre-Application Meeting Date: 6/28/2023, Eddy Galindo, KB Ofosu, Christe Anderson Staff in Attendance:	☐
10.	Community Meeting per Ordinance 26-2019 – Tentative meeting date 11/2/2023	☐

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 5 and 6)

THE CONCEPTUAL SITE PLAN SHALL INCLUDE THE FOLLOWING:

1.	All information required for a sketch plat. (if applicable)	☐
2.	Development plan identifying the location and acreage of each component and district of the project, including the location and placement of proposed land uses by type and density, density, layout of lots, open space designation, location of landscape buffer areas required by these regulations, recreational facilities, commercial uses, other permitted uses, off-street parking and loading locations and refuse collection locations.	☐
3.	Development plans showing access and buffer areas (both external and internal) to the development and how pedestrian and other non-motoring travel will be safely integrated.	☐
4.	Tabulations of acreage devoted to each use and total gross acreage of the project. These tabulations shall include acreage totals for each use, open space designations, recreation facilities, streets, parks, schools and other uses. Within these tabulations, information relative to the total number and type of residential units, the residential density for each type of unit, and the overall residential density of the project shall be provided.	☐
5.	An environmental component, including maps and analyses, which determine the effect of the proposed development upon the conservation/preservation of native habitat, wildlife, floodplains, recreation advantages wetlands and other natural resources.	☐
6.	Documentation as to the impact of the proposed development on the levels of service for roads, potable water, sanitary sewer, solid waste drainage, parks and any other public facilities and services. (Preliminary Concurrency Analysis)	☐
7.	A stormwater management plan with sufficient detail included to demonstrate that the proposed development can comply with the requirements of the Land Development Regulations.	☐
8.	The location of existing buildings and structures including the dimensions.	☐

ORDINANCE NO. __-2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY AMENDING THE FUTURE LAND USE DESIGNATION ON LAND LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF SOUTH SINGLETON AVENUE AND S.R. 405/SOUTH STREET FROM LOW DENSITY RESIDENTIAL TO CONSERVATION ON 11.25+/- ACRES OF PROPERTY; AND FROM CONSERVATION TO LOW DENSITY RESIDENTIAL ON 0.44+/- ACRES OF PROPERTY HAVING PARCEL ID NOS. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760; PROVIDING FOR SEVERABILITY; REPEAL OF CONFLICTING ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: **RECITALS**. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Small Scale Comprehensive Plan Amendment No. 2-2024 and amends its Future Land Use Map, by changing the land use designation of on land located at the southeast corner of the intersection of South Singleton Avenue and S.R. 405/South Street from Low Density Residential to Conservation on 11.25+/- acres of property; and Conservation to Low Density Residential on .44+/- acres of property having parcel ID nos. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760; as described in Exhibit A.

SECTION 3. SEVERABILITY. If any provisions of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 5. EFFECTIVE DATE. This ordinance shall take effect 31 days after adoption pursuant to Section 163.3187(5)(c) Florida Statutes.

PASSED AND ADOPTED, this _____ day of _____, 2024.

Daniel E. Diesel, Mayor

ATTEST:

WANDA F. WELLS, CITY CLERK

Exhibit A

LOW DENSITY RESIDENTIAL TO CONSERVATION

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 531.56 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 38.21 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 54°47'19" WEST, A DISTANCE OF 39.63 FEET; THENCE SOUTH 76°01'09" WEST, A DISTANCE OF 96.65 FEET; THENCE SOUTH 79°00'01" WEST, A DISTANCE OF 109.34 FEET; THENCE SOUTH 72°15'35" WEST, A DISTANCE OF 110.33 FEET; THENCE SOUTH 77°43'07" WEST, A DISTANCE OF 79.24 FEET; THENCE SOUTH 82°30'18" WEST, A DISTANCE OF 17.52 FEET; THENCE NORTH 68°04'35" EAST, A DISTANCE OF 159.68 FEET; THENCE NORTH 73°38'50" EAST, A DISTANCE OF 78.05 FEET; THENCE NORTH 58°25'51" WEST, A DISTANCE OF 48.51 FEET; THENCE NORTH 32°06'17" WEST, A DISTANCE OF 59.96 FEET; THENCE NORTH 28°14'18" WEST, A DISTANCE OF 70.27 FEET; THENCE NORTH 47°00'12" WEST, A DISTANCE OF 63.20 FEET; THENCE NORTH 67°35'35" WEST, A DISTANCE OF 62.03 FEET; THENCE NORTH 40°52'38" WEST, A DISTANCE OF 66.62 FEET; THENCE NORTH 76'00'08" WEST, A DISTANCE OF 49.47 FEET; THENCE NORTH 62°26'17" WEST, A DISTANCE OF 49.96 FEET; THENCE NORTH 36°20'31" WEST, A DISTANCE OF 141.79 FEET; THENCE NORTH 70°53'52" WEST, A DISTANCE OF 39.65 FEET; THENCE NORTH 00°22'21" WEST, A DISTANCE OF 34.62 FEET; THENCE NORTH 39°56'07" WEST, A DISTANCE OF 39.17 FEET; THENCE NORTH 29'17'47" WEST, A DISTANCE OF 57.86 FEET; THENCE NORTH 28°20'49" WEST, A DISTANCE OF 50.56 FEET; THENCE NORTH 23°40'17" WEST, A DISTANCE OF 63.65 FEET; THENCE NORTH 40°15'23" WEST, A DISTANCE OF 72.76 FEET; THENCE NORTH 14°23'39" WEST, A DISTANCE OF 28.25 FEET; THENCE NORTH 33°44'54" WEST, A DISTANCE OF 99.27 FEET; THENCE NORTH 67°10'37" WEST, A DISTANCE OF 52.53 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°29'31" EAST ALONG SAID SOUTHERLY RIGHT A WAY, A DISTANCE OF 155.51 FEET; THENCE SOUTH 01°32'33" EAST, A DISTANCE OF 49.39 FEET; THENCE SOUTH 30°29'30" EAST, A DISTANCE OF 24.11 FEET; THENCE SOUTH 30°02'47" EAST, A DISTANCE OF 44.82 FEET; THENCE SOUTH 28°16'46" EAST, A DISTANCE OF 31.30 FEET; THENCE SOUTH 25°16'49" EAST, A DISTANCE OF 139.25 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 645.41 FEET AND A CHORD WHICH BEARS SOUTH 34°53'24" EAST AND A DISTANCE OF 149.07 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 149.40 FEET; THENCE SOUTH 40°33'10" EAST, A DISTANCE OF 85.64 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 197.67 FEET AND A CHORD WHICH BEARS SOUTH 60°20'57" EAST, A DISTANCE 133.89 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 136.60 FEET; THENCE SOUTH 77°48'24" EAST, A DISTANCE OF 121.52 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 416.53 FEET AND A

CHORD WHICH BEARS SOUTH 70°56'43" EAST AND A DISTANCE OF 140.31 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 140.99 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 943.10 FEET AND A CHORD WHICH BEARS SOUTH 70°09'47" EAST AND A DISTANCE OF 86.42 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 86.45 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 106.21 FEET AND A CHORD WHICH BEARS SOUTH 55°53'26" EAST, AND A DISTANCE OF 61.75 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 62.65 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 337.29 FEET AND A CHORD WHICH BEARS SOUTH 25°56'58" EAST A DISTANCE OF 152.24 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 153.56 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 144.10 FEET AND A CHORD WHICH BEARS SOUTH 04°43'51" EAST A DISTANCE OF 40.99 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 41.13 FEET; THENCE SOUTH 07°31'10" EAST, A DISTANCE OF 24.07 FEET; THENCE SOUTH 04°13'12" WEST, A DISTANCE OF 33.09 FEET TO THE POINT OF BEGINNING.

CONTAINING 195,888.48 SQUARE FEET OR 4.50 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 700.64 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 75°06'58" WEST, ALONG SAID LINE, A DISTANCE OF 1492.93 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT (B); THENCE NORTH 14°08'52" EAST, A DISTANCE OF 34.85 FEET; THENCE NORTH 23°09'04" WEST, A DISTANCE OF 142.28 FEET; THENCE NORTH 67°52'10" WEST, A DISTANCE OF 118.31 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID SOUTHERLY RIGHT OF WAY, A DISTANCE OF 599.31 FEET; THENCE SOUTH 04°46'39" EAST, A DISTANCE OF 36.37 FEET; THENCE SOUTH 21°26'05" WEST, A DISTANCE OF 85.92 FEET; THENCE SOUTH 20°42'59" EAST, A DISTANCE OF 45.79 FEET; THENCE SOUTH 07°10'23" EAST, A DISTANCE OF 97.01 FEET; THENCE SOUTH 78°24'30" EAST, A DISTANCE OF 55.67 FEET; THENCE SOUTH 69°19'37" EAST, A DISTANCE OF 55.60 FEET; THENCE SOUTH 72°03'56" EAST, A DISTANCE OF 112.07 FEET; THENCE NORTH 88°59'32" EAST, A DISTANCE OF 81.58 FEET; THENCE NORTH 83°39'01" EAST, A DISTANCE OF 159.32 FEET; THENCE SOUTH 85°20'29" EAST, A DISTANCE OF 59.48 FEET; THENCE NORTH 70°57'56" EAST, A DISTANCE OF 42.37 FEET; THENCE NORTH 75°18'21" EAST, A DISTANCE OF 131.68 FEET; THENCE NORTH 43°25'45" EAST, A DISTANCE OF 48.25 FEET; THENCE SOUTH 88°14'50" EAST, A DISTANCE OF 75.10 FEET; THENCE NORTH 79°30'10" EAST, A DISTANCE OF 64.28 FEET; THENCE SOUTH 78°18'15" EAST, A DISTANCE OF 58.26 FEET; THENCE NORTH 66°33'07" EAST, A DISTANCE OF 25.42 FEET; THENCE NORTH 63°01'51" EAST, A DISTANCE OF 68.03 FEET; THENCE SOUTH 77°32'14" EAST, A DISTANCE OF 51.75 FEET; THENCE NORTH 72°49'19" EAST, A DISTANCE OF 71.37 FEET; THENCE SOUTH 34°36'19" EAST, A DISTANCE OF 35.78 FEET; THENCE NORTH 77°48'50" EAST, A DISTANCE OF 12.95 FEET; THENCE SOUTH 18°29'37" EAST, A DISTANCE OF 21.04 FEET TO THE POINT OF BEGINNING.

CONTAINING 274,792.6508 SQUARE FEET OR 6.31 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 3

COMMENCE AT REFERENCE POINT "B"; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 186.92 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 75°06'58" WEST, ALONG SAID LINE, A DISTANCE OF 396.33 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID SOUTHERLY RIGHT OF WAY, A DISTANCE OF 233.78 FEET; THENCE SOUTH 67°22'42" EAST, A DISTANCE OF 36.69 FEET; THENCE SOUTH 77°33'51" EAST, A DISTANCE OF 103.56 FEET; THENCE SOUTH 80°15'06" EAST, A DISTANCE OF 67.39 FEET; THENCE SOUTH 51°20'37" EAST, A DISTANCE OF 8.15 FEET TO THE POINT OF BEGINNING.

CONTAINING 20,295.52 SQUARE FEET OR 0.47 ACRES, MORE OR LESS.

CONSERVATION TO LOW DENSITY RESIDENTIAL

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 981.17 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 33.73 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 68°04'35" WEST, A DISTANCE OF 22.75 FEET; THENCE SOUTH 74°13'54" WEST, A DISTANCE OF 121.16 FEET; THENCE SOUTH 63°56'35" WEST, A DISTANCE OF 54.96 FEET; THENCE SOUTH 77°48'50" WEST, A DISTANCE OF 54.77 FEET; THENCE NORTH 18°27'34" WEST, A DISTANCE OF 29.12 FEET; THENCE NORTH 43°54'16" EAST, A DISTANCE OF 31.20 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°57'46" EAST, A DISTANCE OF 116.79 FEET; THENCE NORTH 82°30'22" EAST, A DISTANCE OF 113.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 5,964.53 SQUARE FEET OR 0.14 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 39°59'21" WEST, A DISTANCE OF 267.56 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH

09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.308 ACRES, MORE OR LESS.

ORDINANCE NO. __-2024

AN ORDINANCE AMENDING ORDINANCE NO. 5-1993 OF THE CITY OF TITUSVILLE, FLORIDA, BY AMENDING THE ZONING MAP MADE A PART OF SAID ORDINANCE BY REFERENCE BY CHANGING THE ZONING CLASSIFICATION ON LAND LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF SOUTH SINGLETON AVENUE AND S.R. 405/SOUTH STREET FROM THE GENERAL USE (GU) ZONING DISTRICT TO THE PLANNED DEVELOPMENT (PD) ZONING DISTRICT ON 27.99+/- ACRES OF PROPERTY; AND FROM THE OPEN SPACE RECREATIONAL (OR) ZONING DISTRICT TO THE PLANNED DEVELOPMENT (PD) ZONING DISTRICT ON 0.44+/- ACRES OF PROPERTY HAVING PARCEL ID NOS. 22-35-08-00-1; 22-35-05-00-752; 22-35-05-00-758; 22-35-05-00-759 and 22-35-05-00-760; PROVIDING FOR SEVERABILITY; REPEAL OF CONFLICTING ORDINANCES; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Titusville received an application for a rezoning from certain property owners; and

WHEREAS, a first and second public hearing has been held on the rezoning before the Local Planning Agency and the local governing body and considered findings and advice of staff, citizens, and all interested parties submitting written and oral comments and supporting data and analysis, and after complete deliberation, hereby finds the requested change consistent with the Comprehensive Plan and that sufficient, competent, and substantial evidence supports the zoning change set forth hereunder; and

WHEREAS, the City of Titusville finds that said rezoning has been processed in accordance with the applicable law and desires to amend its Zoning Map to change the zoning designation on said properties; and

WHEREAS, the City of Titusville finds that said rezoning has been processed in accordance with the applicable law and desires to amend its Zoning Map to change the zoning designation on said properties; and

WHEREAS, the City Council of the City of Titusville desires to amend its Zoning Map.

BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF TITUSVILLE, FLORIDA as follows:

SECTION 1. RECITALS. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. Ordinance No. 5-1993 is hereby amended by amending the Zoning Map of the City of Titusville, made a part of said Ordinance by reference, by designating the following property described in Exhibit A with conditions and associated Master Plan in Exhibit B presently zoned General Use (GU) and Open Space and Recreational (OR) to Planned Development (PD).

SECTION 3. This ordinance shall take effect simultaneously with the effective date of Small-Scale Amendment (SSA) No. 2-2024 contained in Ordinance __-2024.

SECTION 4. SEVERABILITY. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. REPEAL OF CONFLICTING ORDINANCES. All ordinances or parts of ordinances, and all resolutions and parts of resolutions, in conflict herewith are hereby repealed to the extent of such conflict.

SECTION 6. INCORPORATION INTO CODE. This ordinance shall be incorporated into the City of Titusville Code of Ordinances and any section or paragraph, number or letter, and any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical, and like errors may be corrected and additions, alterations, and omissions, not affecting the construction or meaning of this ordinance and the Code may be made.

PASSED AND ADOPTED this _____day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

Exhibit A – Planned Development Ordinance

SR405 and Singleton PD – South

1.1 DESCRIPTION:

The **SR405 and Singleton PD - South** Planned Development zoned area of approximately 66.49 +/- acres (full site) and 15.70 +/- acres of developable area is comprised of townhome units and common open space and recreation areas.

1.2 LEGAL DESCRIPTION

A PART OF GOVERNMENT LOTS 1, 2 & 3, LYING IN SECTIONS 5 & 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA; THAT PORTION OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY. TOGETHER WITH: THAT PORTION OF U.S GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY. TOGETHER WITH: THAT PORTION OF U.S. GOVERNMENT LOT NO. 3, SECTION 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY, BEING IN BREVARD COUNTY, FLORIDA, LESS AND EXCEPT LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 923, PAGE 1018.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHEAST CORNER OF SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST FOR A POINT OF BEGINNING; THENCE SOUTH 75°06'58" WEST ALONG THE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 3,308.38 FEET TO A POINT ON THE SOUTH RIGHT OF WAY FOR STATE ROAD #405; THENCE NORTH 48°33'44" EAST ALONG THE SAID RIGHT OF WAY, A DISTANCE OF 1,413.77 FEET TO THE NORTHEASTERLY BOUNDARY CORNER OF AFORESAID OFFICIAL RECORD BOOK 938, PAGE 1018; THENCE LEAVING SAID RIGHT OF WAY SOUTH 41°29'44" EAST ALONG SAID BOUNDARY, A DISTANCE OF 521.76 FEET; THENCE NORTH 48°24'08" EAST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 417.82 FEET; THENCE NORTH 41°32'24" WEST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 520.98 FEET TO THE SOUTH RIGHT OF WAY FOR SAID STATE ROAD #405; THENCE NORTH 48°29'31" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 2,015.54 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,796.93 FEET AND A CHORD WHICH BEARS NORTH 52°11'31" EAST AND A DISTANCE OF 346.73 FEET; THENCE ALONG SAID SOUTH RIGHT OF WAY AND SAID CURVE TO THE RIGHT A DISTANCE OF 346.95 FEET TO A POINT ON THE EAST BOUNDARY OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG SAID SECTION 5, A DISTANCE OF 1,911.13 FEET; TO THE POINT OF BEGINNING. CONTAINING 2,896,295.82 SQUARE FEET OR 66.49 ACRES, MORE OR LESS.

GENERAL USE TO PLANNED DEVELOPMENT

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 531.56 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 38.21 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 54°47'19" WEST, A DISTANCE OF 39.63 FEET; THENCE SOUTH 76°01'09" WEST, A DISTANCE OF 96.65 FEET; THENCE SOUTH 79°00'01" WEST, A DISTANCE OF 109.34 FEET; THENCE SOUTH 72°15'35" WEST, A DISTANCE OF 110.33 FEET; THENCE SOUTH 77°43'07" WEST, A DISTANCE OF 79.24 FEET; THENCE SOUTH 82°30'22" WEST, A DISTANCE OF 130.54 FEET; THENCE SOUTH 83°57'46" WEST, A DISTANCE OF 116.79 FEET; THENCE SOUTH 43°54'16" WEST, A DISTANCE OF 31.20 FEET; THENCE SOUTH 18°28'26" EAST, A DISTANCE OF 50.16 FEET TO THE SAID SOUTH LINE OF GOVERNMENT LOT 3; THENCE SOUTH 75°06'58" WEST ALONG SAID SOUTHERLY LINE, A DISTANCE OF 897.40 FEET; THENCE NORTH 77°26'24" WEST, A DISTANCE OF 29.27 FEET; THENCE SOUTH 85°46'29" WEST, A DISTANCE OF 81.31 FEET; THENCE SOUTH 77°48'33" WEST, A DISTANCE OF 118.98 FEET; THENCE SOUTH 66°58'41" WEST, A DISTANCE OF 241.04 FEET TO THE SAID SOUTH LINE OF GOVERNMENT LOT 3; THENCE SOUTH 75°06'58" WEST ALONG SAID SOUTHERLY LINE, A DISTANCE OF 715.43 FEET TO THE SOUTHERLY RIGHT OF WAY FOR STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID RIGHT OF WAY, A DISTANCE OF 1,413.77 FEET; THENCE SOUTH 41°29'44" EAST, A DISTANCE OF 521.76 FEET; THENCE NORTH 48°24'08" EAST, A DISTANCE OF 417.82 FEET TO A POINT KNOWN AS REFERENCE POINT "A"; THENCE NORTH 41°32'24" WEST, A DISTANCE OF 520.98 FEET TO THE SOUTHERLY RIGHT OFF WAY FOR STATE ROAD 405; THENCE NORTH 48°29'31" EAST ALONG SAID RIGHT OF WAY, A DISTANCE OF 639.84 FEET; THENCE SOUTH 01°32'33" EAST, A DISTANCE OF 49.39 FEET; THENCE SOUTH 30°29'30" EAST, A DISTANCE OF 24.11 FEET; THENCE SOUTH 30°02'47" EAST, A DISTANCE OF 44.82 FEET; THENCE SOUTH 28°16'46" EAST, A DISTANCE OF 31.30 FEET; THENCE SOUTH 25°16'49" EAST, A DISTANCE OF 139.25 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 645.41 FEET AND A CHORD WHICH BEARS SOUTH 34°53'24" EAST AND A DISTANCE OF 149.07 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 149.40 FEET; THENCE SOUTH 40°33'10" EAST, A DISTANCE OF 85.64 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 197.67 FEET AND A CHORD WHICH BEARS SOUTH 60°20'57" EAST, A DISTANCE 133.89 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 136.60 FEET; THENCE SOUTH 77°48'24" EAST, A DISTANCE OF 121.52 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 416.53 FEET AND A CHORD WHICH BEARS SOUTH 70°56'43" EAST AND A DISTANCE OF 140.31 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 140.99 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 943.10 FEET AND A CHORD WHICH BEARS SOUTH 70°09'47" EAST AND A DISTANCE OF 86.42 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 86.45 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 106.21 FEET AND A CHORD WHICH BEARS SOUTH 55°53'26" EAST, AND A DISTANCE OF 61.75 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 62.65 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 337.29 FEET AND A CHORD WHICH BEARS SOUTH 25°56'58" EAST A DISTANCE OF 152.24 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 153.56 FEET; TO A POINT OF COMPOUND CURVATURE,

HAVING A RADIUS OF 144.10 FEET AND A CHORD WHICH BEARS SOUTH 04°43'51" EAST A DISTANCE OF 40.99 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 41.13 FEET; THENCE SOUTH 07°31'10" EAST, A DISTANCE OF 24.07 FEET; THENCE SOUTH 04°13'12" WEST, A DISTANCE OF 33.09 FEET; TO THE POINT OF BEGINNING.

CONTAINING 1,262,539.37 SQUARE FEET OR 28.98 ACRES, MORE OR LESS.

LESS & EXCEPT:

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 30°22'34" EAST, A DISTANCE OF 4.87 FEET; TO THE POINT OF BEGINNING; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH 09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.31 ACRES, MORE OR LESS.

OPEN SPACE AND RECREATIONAL TO PLANNED DEVELOPMENT

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 981.17 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 33.73 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 68°04'35" WEST, A DISTANCE OF 22.75 FEET; THENCE SOUTH 74°13'54" WEST, A DISTANCE OF 121.16 FEET; THENCE SOUTH 63°56'35" WEST, A DISTANCE OF 54.96 FEET; THENCE SOUTH 77°48'50" WEST, A DISTANCE OF 54.77 FEET; THENCE NORTH 18°27'34" WEST, A DISTANCE OF 29.12 FEET; THENCE NORTH 43°54'16" EAST, A DISTANCE OF 31.20 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°57'46" EAST, A DISTANCE OF 116.79 FEET; THENCE NORTH 82°30'22" EAST, A DISTANCE OF 113.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 5,964.53 SQUARE FEET OR 0.14 ACRES, MORE OR LESS. TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 39°59'21" WEST, A DISTANCE OF 267.56 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH 09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.308 ACRES, MORE OR LESS.

1.3 REFERENCE TO GENERAL DEVELOPMENT PLAN

The **SR405 and Singleton PD - South** Planned Development shall be implemented in accordance with the approved Master Plan attached as Exhibit B.

1.4 PERMITTED USES

(a) Townhome units
(b) Common recreational areas

1.4.1 PERMITTED ACCESSORY USES

(a) Tot Lot, Mail Kiosk and recreational amenities including exercise stations, walking trails, benches, and informational placards.

1.5 DENSITY/INTENSITY MINIMUMS AND MAXIMUMS

Maximum of **sixty-two (62) residential dwelling units**.

1.6 CRITICAL DESIGN FEATURES

(a) The critical design features for this project include the preservation of wetlands, preservation of uplands, maintaining required landscape yards (buffers), providing stormwater treatment and proposed passive recreational open space. Recreational amenities include tot lot, mail kiosk, exercise stations, interconnected and stabilized walking trails, benches, and informational placards. A final recreational plan shall be submitted with the sketch plat that illustrates the proposed recreational amenities in the open space areas and confirms the minimum required open space acreage by code is met.

(b) Preservation of existing large canopy trees, upland scrub pine, and oaks in common areas where feasible.

1.7 LAND USE ALLOCATION TABLE

(a)	TOTAL PROJECT ACREAGE:	66.49 Acres
	TOTAL DEVELOPABLE ACREAGE:	15.70 Acres

(also referenced as the Developable Site Area, see Exhibit B)

Minimum Required Open Space:
(Includes Stormwater Ponds) 5.50 Acres

1.8 AREA, HEIGHT, BULK & OPEN SPACE REQUIREMENTS

(a) The Development and all amenities will be in general conformance with the master plan.
(b) Minimum Unit Living Area: 800 square feet per Section 33-6(a)(3)b of the Code.
(c) Maximum Building Height: 50 feet
(d) Maximum Building Coverage (% of full site): 50%
(e) Maximum Impervious Coverage (% of full site): NA
(f) Building Setbacks (per lot): 20 feet (Front)
10 feet (Rear)
10 feet (Side)
10 feet (Side corner)
(g) If this PD Ordinance does not address a specific standard, the standards of the Multi-Family Medium Density (R-2) zoning district shall apply.

1.9 ROADWAY DESIGN/TRAFFIC CIRCULATION

(a) A maximum of two vehicular access driveways may be granted onto State Road 405 unless a waiver is approved consistent with the Code.

(b) The internal sidewalk network shall be stabilized with a minimum of 5-feet in width and provide direct access to the adjacent public sidewalk network.

1.10 UTILITIES

(a) The potable water and sanitary sewer service will be provided by the City of Titusville. Electricity will be supplied by the local power company/companies. Gas will be provided by the local gas company/companies. All utilities will be placed underground consistent with Chapter 33 - Development Options, Article I. - Planned Development (PD), Section. 33-5(a)(4) of the City's Land Development Regulations.

(b) The lift station will be fenced and gated with locking mechanism and generally screened from view with landscape materials, such as bushes, hedges, and small trees, or opaque fence except where the operational requirements limit such screening. An emergency generator shall be installed with the lift station.

1.11 NATURAL RESOURCES

(a) Conservation Areas designated as Wetland #1, Wetland #2, Wetland #3, and the designated Wetland Buffers are to be owned and maintained by the Homeowner Association in accordance with the requirements of the St. Johns River Water Management District consistent with Chapter 30 - Development Standards, Article I - General Provisions, Division 3 - Operations and Maintenance of the City's Land Development Regulations. Additionally, wetlands protection shall adhere to the regulations set forth in Chapter 29 - Special Districts and Overlays, Article IV - Wetland and Conservation Area (WCA), of the City's Land Development Regulations. Wetland #1, Wetland #2, Wetland #3, and Wetland Buffers shall be preserved with the submittal of the sketch plat.

(b) Open Space Areas, including buffers and recreation areas, designated as Tree Canopy Preservation, Landscape/Yard Buffers, Open Green Space are to be owned and maintained by the Homeowner Association in accordance with the requirements of the City of Titusville consistent with Chapter 30 - Development Standards, Article I - General Provisions, Division 3 - Operations and Maintenance of the City's Land Development Regulations; and Chapter 33 Development Options, Article VIII Conservation Subdivision Design, Section 33-104(a)(6).

(c) The developer shall work with the City to adjust the layout of the master plan to achieve the preservation of upland scrub, pine and oaks where feasible. Heritage trees should to the extent possible be preserved with the submittal of the sketch plat. The removal of protected trees shall be consistent with the criteria and requirements of Chapter 30, Article II, Division 2 Trees and Vegetation (Preservation and Mitigation) of the Land Development Regulations.

1.12 BUFFERING/SCREENING

(a) The required landscape yard (buffers) consistent with Chapter 30, Article III, Division 10, Subdivision 3 of the Code, will be provided. A minimum twenty (20) foot landscape yard (buffer) shall be installed along the perimeter of the property boundary and a minimum thirty (30) foot landscape yard (buffer) shall be installed along the perimeter of the property boundary adjacent to SR405 (South Street) to meet the buffer requirements for an arterial/collector roadway as shown in Section 9.3, Roadway Classification Map of the City of Titusville. The required landscape yard (buffers) will be comprised of existing vegetation and additional trees and shrubs. The existing vegetation within this area will be maintained to the greatest extent possible. Invasive trees shall be removed.

1.13 AMENDMENT PROCEDURES AND APPROVAL TIMEFRAME

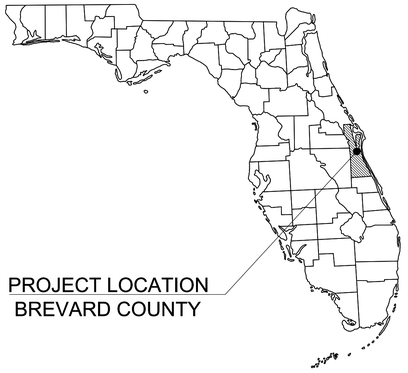
(a) Amendment procedures shall be in accordance with City of Titusville Land Development Regulations Chapter 33 - Development Options, Article I - Planned Development (PD).

(b) The timeframe for the approval of this Planned Development (PD) shall be consistent with the regulations established in Chapter 33 - Development Options, Article I - Planned Development, Sec. 33-9 - Procedure for securing approval of a Planned Development.

(c) Modifications to this Planned Development (PD) ordinance or master plan shall be reviewed consistent with Table 6.3.3 of the Development Review Procedures Manual.

(d) Buildings may be relocated or rearranged outside of required landscape buffers within the area identified as the developable acreage as stated in condition 1.7 of this ordinance and as illustrated on the master plan in Exhibit B.

(e) Direct impacts to wetlands will require an amendment to the Planned Development (PD) ordinance and master plan.



SR 405 AND SINGLETON PD - SOUTH

FOR

THE SINGLETON AVE 44 ACRE LAND TRUST, LLC

LOCATED IN

TITUSVILLE, FLORIDA

SECTION 5, TOWNSHIP 22, RANGE 35E

PROJECT TEAM

OWNER/DEVELOPER
SINGLETON AVENUE 44 ACRE TRUST, LLC
1919 BLANDING BLVD.
JACKSONVILLE, FL 32210
PHONE: (407) 969-0434

CIVIL ENGINEER
ALYSSA COLBY, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.
7341 OFFICE PARK, SUITE 102
MELBOURNE, FLORIDA 32940
(321) 430-1138

SURVEYOR
GREGORY S LOCKLIN, P.S.M.
HAMILTON ENGINEERING & SURVEYING, INC.
775 WARNER LANE
ORLANDO, FL 32803
PHONE: (407) 362-5929

ENVIRONMENTAL CONSULTANT
BIO-TECH CONSULTING, INC.
3025 EAST SOUTH STREET
PHONE: (407) 894-5969
FAX: (407) 894-5970

TRAFFIC ENGINEER
JAMES M. TAYLOR, P.E.
KIMLEY-HORN AND ASSOCIATES, INC.
189 SOUTH ORANGE AVENUE, SUITE 1000
ORLANDO, FL 32801
PHONE: (407) 898-1511

GEOTECHNICAL CONSULTANT
UNIVERSAL ENGINEERING SCIENCES, LLC
820 BREVARD AVENUE
ROCKLEDGE, FL 32955
PHONE: (321) 638-0808

LANDSCAPE ARCHITECT
SUSAN HALL LANDSCAPE ARCHITECTURE
244 MCLEOD STREET
MERRITT ISLAND, FL 32953
PHONE: (321) 449-0790

LIST OF CONTACTS

STORMWATER
ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT
525 COMMUNITY COLLEGE PKWY SE
PALM BAY, FL 32909
PHONE: (321) - 987-7940
CONTACT:

ENGINEERING
CITY OF TITUSVILLE
PUBIC WORKS DEPT.
2910 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 567-3846

WATER
CITY OF TITUSVILLE
WATER RESOURCES DEPT.
2836 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 383-5791

BUILDING DIVISION
CITY OF TITUSVILLE
BUILDING DEPT.
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3760
CONTACT: STEVE ADAMS, CBO

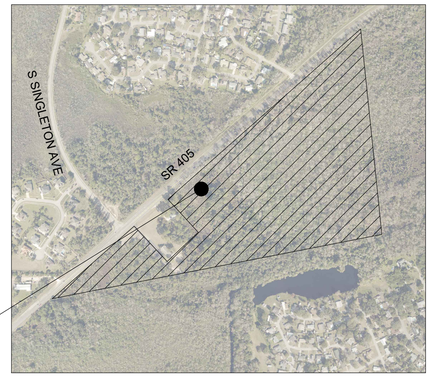
SANITARY SEWER
CITY OF TITUSVILLE
WATER RESOURCES DEPT.
2836 GARDEN STREET
TITUSVILLE, FL 32796
PHONE: (321) 383-5791

COMMUNITY DEVELOPMENT
DEVELOPMENT SERVICES DEPT.
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3757
CONTACT:MANDY LAMOTHE

FIRE PREVENTION
CITY OF TITUSVILLE
FIRE DEPARTMENT
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3800

FDOT
DISTRICT 5
719 S WOODLAND BLVD
DELAND, FL 32720
PHONE: (386) 943-5185

PLANNING AND ZONING
555 S WASHINGTON AVENUE
TITUSVILLE, FL 32796
PHONE: (321) 567-3757
CONTACT: EDDY GALINDO



PROJECT LOCATION

VICINITY
N.T.S.

PREPARED BY:
Kimley»Horn

LEGAL DESCRIPTION:

A PART OF GOVERNMENT LOTS 1, 2 & 3, LYING IN SECTIONS 5 & 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA; THAT PORTION OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY. TOGETHER WITH: THAT PORTION OF U.S GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY. TOGETHER WITH: THAT PORTION OF U.S. GOVERNMENT LOT NO. 3, SECTION 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY, BEING IN BREVARD COUNTY, FLORIDA, LESS AND EXCEPT LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 923, PAGE 1018.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST FOR A POINT OF BEGINNING; THENCE SOUTH 75°06'58" WEST ALONG THE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 3,308.38 FEET TO A POINT ON THE SOUTH RIGHT OF WAY FOR STATE ROAD #405; THENCE NORTH 48°33'44" EAST ALONG THE SAID RIGHT OF WAY, A DISTANCE OF 1,413.77 FEET TO THE NORTHEASTERLY BOUNDARY CORNER OF AFORESAID OFFICIAL RECORD BOOK 938, PAGE 1018; THENCE LEAVING SAID RIGHT OF WAY SOUTH 41°29'44" EAST ALONG SAID BOUNDARY, A DISTANCE OF 521.76 FEET; THENCE NORTH 48°24'08" EAST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 417.82 FEET; THENCE NORTH 41°32'24" WEST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 520.98 FEET TO THE SOUTH RIGHT OF WAY FOR SAID STATE ROAD #405; THENCE NORTH 48°29'31" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 2,015.54 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,796.93 FEET AND A CHORD WHICH BEARS NORTH 52°11'31" EAST AND A DISTANCE OF 346.73 FEET; THENCE ALONG SAID SOUTH RIGHT OF WAY AND SAID CURVE TO THE RIGHT A DISTANCE OF 346.95 FEET TO A POINT ON THE EAST BOUNDARY OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG SAID SECTION 5, A DISTANCE OF 1,911.13 FEET; TO THE POINT OF BEGINNING. CONTAINING 2,896,295.82 SQUARE FEET OR 66.49 ACRES, MORE OR LESS.

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.

Sunshine811
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

No.	REVISIONS	DATE	BY

Kimley»Horn
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7341 OFFICE PARK PLACE, SUITE 102, MELBOURNE, FL 32940
PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
DRAWN BY ----
CHECKED BY ----

COVER SHEET

SR 405 AND SINGLETON PD - SOUTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FL

SHEET NUMBER
E-000

Plotted By:Anderson, Zach Sheet Set:SR 405 AND SINGLETON PD - SOUTH Layout:COVER SHEET September 09, 2024 06:58:00pm K:\VRB_LDEV\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\South\E-000 COVER SHEET (S).dwg
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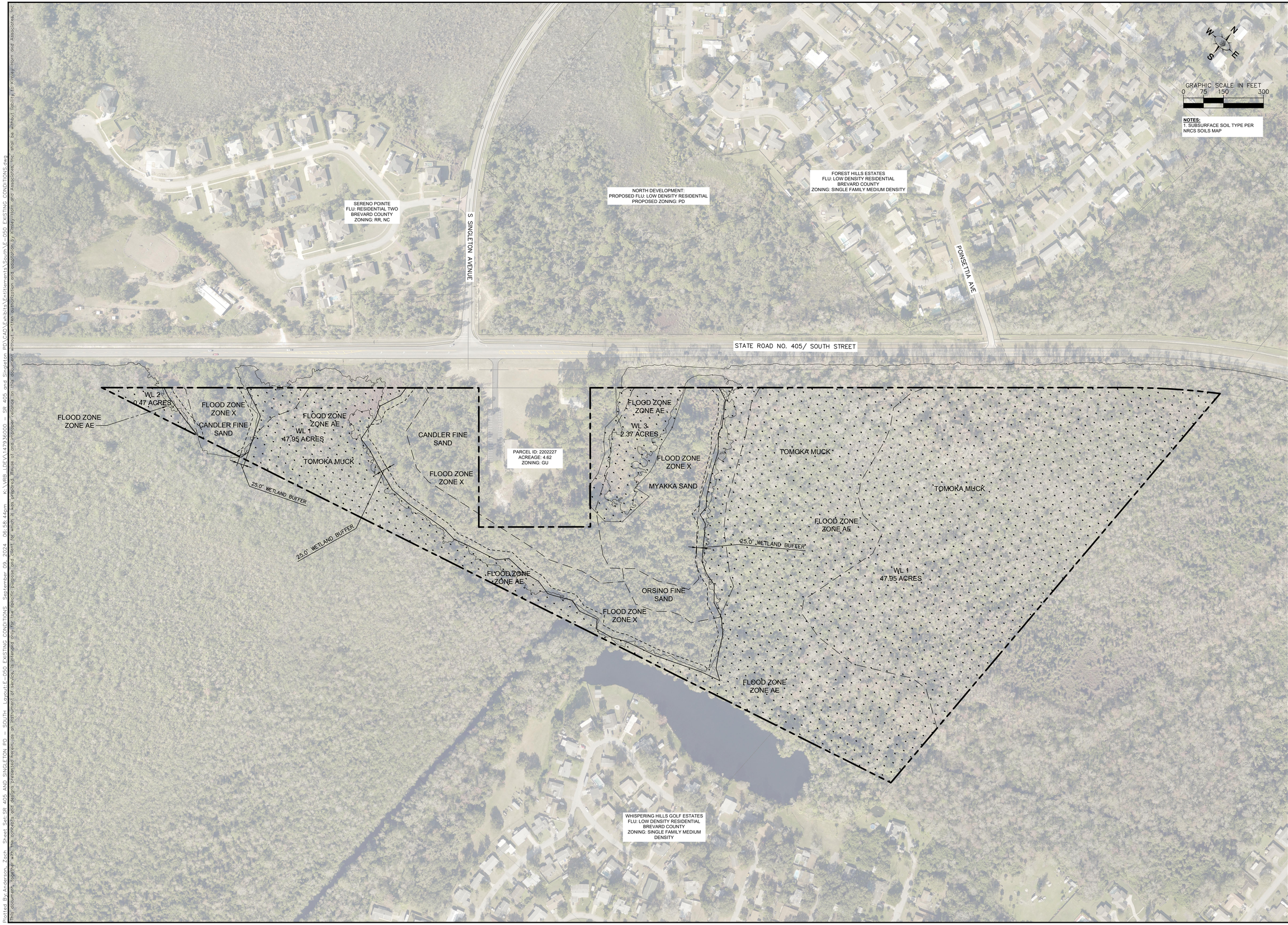

No.	REVISIONS	DATE	BY

Kimley»Horn

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PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT
147936000
DATE
11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
DRAWN BY ----
CHECKED BY ----

EXISTING CONDITIONS

SR 405 AND SINGLETON PD - SOUTH

PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC

TITUSVILLE FL

SHEET NUMBER
E-050

Printed By:Anderson, Zach Sheet Set:SR 405 AND SINGLETON PD - SOUTH Layout:E-050 EXISTING CONDITIONS September 09, 2024 06:58:44pm K:\VRB_LOE\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\South\E-050 EXISTING CONDITIONS.dwg
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GENERAL STATEMENT:

THE SUBJECT PROPERTY IS A 66.49 AC UNDEVELOPED PARCEL WITHIN THE CITY OF TITUSVILLE, LOCATED ON THE SOUTH SIDE OF SR 405/SOUTH STREET, JUST SOUTH OF THE INTERSECTION WITH SINGLETON AVENUE. THE PROPOSED PROJECT INCLUDES THE CONSTRUCTION OF 62 TOWNHOME UNITS (20' IN WIDTH), WHICH ARE TO BE INDIVIDUALLY PLATTED AND OWNED, AND ASSOCIATED ROADWAYS, INFRASTRUCTURE, SITE IMPROVEMENTS, LANDSCAPING, UTILITIES AND STORMWATER MANAGEMENT SYSTEMS TO SERVICE THE DEVELOPMENT. THE PARCEL CURRENTLY HAS MULTIPLE EXISTING ZONING DISTRICTS AND LAND USES WITHIN ITS LEGAL LIMITS; EXISTING ZONING DISTRICTS INCLUDE OPEN SPACE/RECREATION (OR) AND GENERAL USE (GU), AND THE EXISTING LAND USES ARE CONSERVATION, AND LOW DENSITY RESIDENTIAL. WITH THIS PROJECT, THE PROPOSED ZONING DISTRICT WILL BE PLANNED DEVELOPMENT (PD) AND THE PROPOSED LAND USES WILL BE LOW-DENSITY RESIDENTIAL AND CONSERVATION. PLEASE REFER TO THE REZONING AND LAND USE EXHIBITS FOR ADDITIONAL INFORMATION AND SPECIFICS.

THE MAXIMUM DENSITY ALLOWED FOR THIS PROJECT IS GOVERNED BY THE PROPOSED LOW DENSITY RESIDENTIAL LAND USE, WHICH IS 5 DU/AC, AND THE PROJECT CURRENTLY PROPOSES 1 DU/AC.

A LARGE MAJORITY OF THE FULL PARCEL ACREAGE IS DESIGNED AS WETLANDS, AND THE DEVELOPABLE ACREAGE IS CALCULATED TO BE 15.70 AC. THE PROJECT WAS DESIGNED IN EFFORTS TO MINIMIZE WETLAND IMPACTS; CURRENTLY THE PROPOSED DOES NOT PROPOSE ANY DIRECT WETLAND IMPACTS AND HAS PROVIDED AN AVERAGE 25' BUFFER (MINIMUM 15' BUFFER) AS SHOWN ON THIS CONCEPTUAL SITE PLAN WHICH MITIGATE AGAINST SECONDARY IMPACTS FOR DEVELOPING NEAR WETLANDS (PER THE ST. JOHNS WATER MANAGEMENT DISTRICT REQUIREMENTS).

STORMWATER AND UTILITIES STATEMENT:

THE PROPOSED PROJECT WILL BE SERVICED BY CITY OF TITUSVILLE WATER RESOURCES DEPARTMENT AND WILL CONNECT TO EXISTING WATER AND SEWER INFRASTRUCTURE LOCATED WITHIN THE ADJACENT RIGHT-OF-WAYS. THE ONSITE POTABLE WATER SYSTEM PROPOSES 2 CONNECTIONS TO THE EXISTING 16" DIP WATER MAIN ALONG THE NORTH SIDE OF SR405/SOUTH STREET TO ENSURE A LOOPED SYSTEM WITH ADEQUATE FLOWS.

ONSITE SANITARY SEWER WILL BE COLLECTED THROUGH A GRAVITY SEWER SYSTEM FEEDING TO A LIFT STATION, AND WILL EXIT THROUGH A FORCE MAIN, ULTIMATELY CONNECTING TO THE EXISTING 6" FM ALONG SR 405/ SOUTH STREET. A PROPOSED FM EXTENSION WITHIN SR 405 RIGHT-OF-WAY FROM THE CURRENT STUB WEST OF THIS PROJECT WILL BE REQUIRED TO PROVIDE SANITARY SERVICE TO THE DEVELOPMENT, AND WILL BE DESIGNED AND PERMITTED CONCURRENTLY. NO RECLAIM INFRASTRUCTURE IS AVAILABLE IN THE AREA,

STORMWATER TREATMENT AND ATTENUATION WILL BE PROVIDED THROUGH DRY RETENTION PONDS, AND ONCE TREATMENT IS ACHIEVED STORMWATER ULTIMATELY DISCHARGES TO AN ONSITE WETLAND. PROPOSED DRY POND LOCATIONS, DELINEATED WETLAND LOCATIONS AND APPROXIMATE ACREAGES ARE SHOWN ON THE MASTER CONCEPTUAL SITE PLAN. BASED ON EXISTING GRADES ON THE PROVIDED SURVEY, WATER CURRENTLY DISCHARGES TO THE ONSITE WETLANDS, WHICH ESTABLISHES A LEGAL POSITIVE OUTFALL FOR THE PROJECT.

SITE DATA:

PARCEL ID: 22-35-08-00-1; 22-35-05-00-758; 22-35-05-00-759; 22-35-05-00-760; 22-35-05-00-752
TAX ID: 2203599; 3028883; 3028884; 3028885; 2202226
SECTION 5, TOWNSHIP 22, RANGE 35E

TOTAL SITE AREA:	66.49 AC
DEVELOPABLE SITE AREA:	15.70 AC
DEVELOPMENT TYPE:	MULTI-FAMILY RESIDENTIAL (TOWNHOMES)
EXISTING ZONING(S):	OPEN SPACE/RECREATION (OR), AND GENERAL USE (GU)
EXISTING LAND USE(S):	CONSERVATION, LOW DENSITY RESIDENTIAL
PROPOSED ZONING(S):	PLANNED DEVELOPMENT (PD)
PROPOSED LAND USE(S):	LOW DENSITY RESIDENTIAL, CONSERVATION
ALLOWABLE DENSITY:	5 DU/AC
PROPOSED PROJECT DENSITY:	1 DU/AC*
PROPOSED FLU DENSITY (LOW DENSITY RES):	5 DU/AC**
MAX. ALLOWABLE BUILDING HEIGHT:	50'
EXISTING IMPERVIOUS AREA:	0.00 AC (0%)
PROPOSED IMPERVIOUS AREA:	5.15 AC (33%)
PROPOSED LOTS:	62 UNITS
MINIMUM LOT SIZE:	N/A WITHIN PD
PROPOSED LOT SIZE:	20'X100', 30'X100'
PROPOSED WETLAND IMPACTS:	0.00 AC

*PROJECT DENSITY BASED ON TOTAL GROSS PROJECT ACREAGE (+/- 66.49 AC) PER CITY OF TITUSVILLE CODE.
**FLU DENSITY BASED ON TOTAL ACREAGE PROPOSED AS LOW DENSITY RESIDENTIAL WITHIN PD (+/- 15.70 AC)

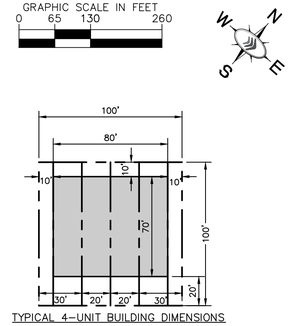
PARCEL BREAKDOWN

TOTAL PARCEL	66.49 AC
WETLAND	50.69 AC
TOTAL DEVELOPABLE AREA:	15.70 AC
TOTAL IMPERVIOUS AREA:	5.15 AC
TOTAL PERVIOUS AREA:	10.55 AC
RIGHT-OF-WAY	2.32 AC
LOTS	3.47 AC
WETLAND BUFFER	2.75 AC

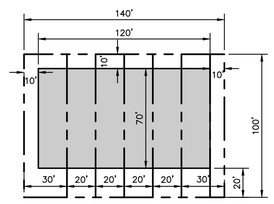
USEABLE OPENSPACE

REQUIRED (35% OF DEVELOPABLE SITE AREA)	5.50 AC
PROVIDED	5.55 AC

GRAPHIC SCALE IN FEET
0 65 130 260



TYPICAL 4–UNIT BUILDING DIMENSIONS



TYPICAL 6–UNIT BUILDING DIMENSIONS

No.	REVISIONS	DATE	BY

Kimley»Horn
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7341 OFFICE PARK PLACE, SUITE 102, MELBOURNE, FL 32940
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KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
DRAWN BY ----
CHECKED BY ----

SITE PLAN EXHIBIT

SR 405 AND SINGLETON PD - SOUTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FL

SHEET NUMBER
E-100

Plotted By:Anderson, Zach Sheet Set:SR 405 AND SINGLETON PD - SOUTH Layout:E-100 SITE PLAN September 09, 2024 06:39:30pm K:\VRB_LDEV\147936000 — SR 405 and Singleton PD\CAD\Exhibits\Entitlements\South\E-100 SITE PLAN EXHIBIT (S).dwg
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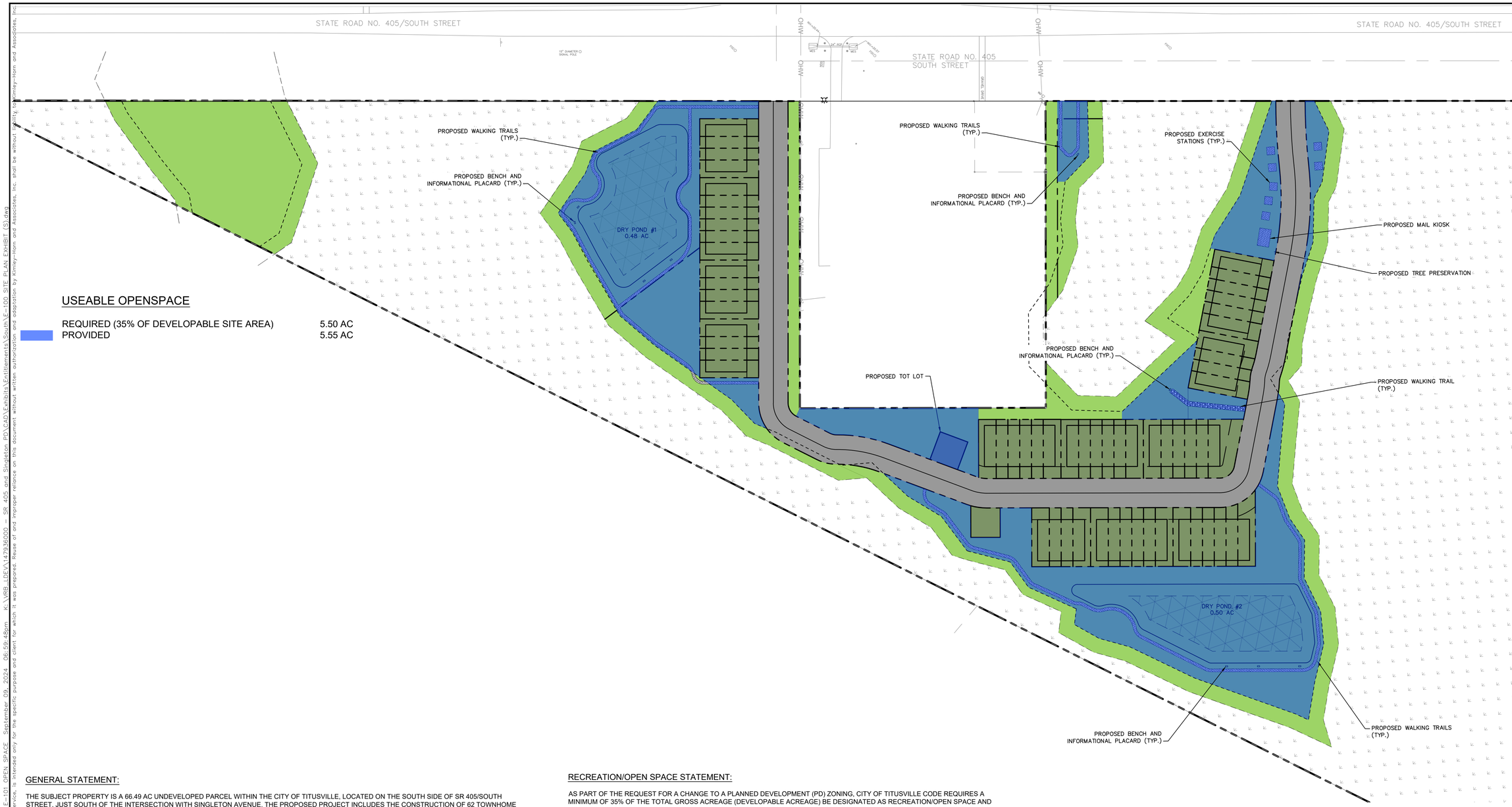

USEABLE OPENSPACE

REQUIRED (35% OF DEVELOPABLE SITE AREA)	5.50 AC
PROVIDED	5.55 AC

GENERAL STATEMENT:

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STORMWATER AND UTILITIES STATEMENT:

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RECREATION/OPEN SPACE STATEMENT:

AS PART OF THE REQUEST FOR A CHANGE TO A PLANNED DEVELOPMENT (PD) ZONING, CITY OF TITUSVILLE CODE REQUIRES A MINIMUM OF 35% OF THE TOTAL GROSS ACREAGE (DEVELOPABLE ACREAGE) BE DESIGNATED AS RECREATION/OPEN SPACE AND MEET OPEN SPACE REQUIREMENTS OF CHAPTER 30 - DEVELOPMENT STANDARDS. COMMON OPEN SPACE IN A PD CAN BE BOTH ACTIVE AND PASSIVE RECREATION, AND PRIVATE WATERBODIES AND/OR STORMWATER RETENTION/DETENTION AREAS CAN BE DESIGNED FOR PASSIVE RECREATION USE IF IMPROVED WITH AMENTIIES SUCH AS, BUT NOT LIMITED TO, FOUNTAINS, BENCHES AND WALKWAYS.

THE PROPOSED PROJECT INCLUDES THE FOLLOWING AMENITIES: WALKING TRAILS SURROUNDING PROPOSED STORMWATER DRY RETENTION PONDS WITH BENCHES AND INFORMATIONAL PLACARDS ON NATIVE VEGETATION AND WILDLIFE, TOT LOT, EXERCISE PADS FOR OUTDOOR EXERCISE EQUIPMENT AND A PAD FOR UNCOVERED MAIL KIOSK. THE PROJECT IS SURROUNDED BY WETLAND AREAS, AND NO WETLAND IMPACTS ARE PROPOSED. MAJORITY OF THE UNITS WILL HAVE VIEWS OF WETLANDS FROM THEIR BACK OR FRONT YARDS, AND THE PROPOSED RECREATIONAL AMENITIES WERE CHOSEN INTENTIONALLY TO HIGHLIGHT THE NATURAL VEGETATION AND LANDSCAPE SURROUNDING THE PROJECT. THERE WILL BE SIDEWALKS ALONG THE PROPOSED 50' LOCAL ROAD/RIGHT-OF-WAY INTERNAL TO THE SITE, ALONG WITH INTENTIONAL WALKING TRAILS/SIDEWALKS PROPOSED ADJACENT TO WETLANDS AND STORMWATER DRY RETENTION PONDS. BENCHES ARE PROPOSED ALONG THESE TRAILS ALONG WITH INFORMATIONAL PLACARDS REGARDING THE NATIVE VEGETATION AND WILDLIFE OFTEN FOUND WITHIN FLORIDAS WETLAND ECOSYSTEM. A TOT LOT AND EXERCISE STATIONS HAVE ALSO BEEN PROPOSED TO ADD AN ACTIVE RECREATION FEATURE TO THE PROJECT, WITH THE TOT LOT TUCKED INTERNAL TO THE SITE AWAY FROM SR405 AND EXERCISE STATIONS ALONG THE ENTRANCE NEAR AREAS OF LANDSCAPING AND EXISTING TREES. THE AMENITIES PROPOSED ON THIS PROJECT WILL SERVICE A 62 UNIT TOWNHOME COMMUNITY AND PROVIDE DIFFERENT OPPORTUNITIES FOR RECREATION BASED ON VARYING INTERESTS AND ACTIVITY LEVELS.

No.	REVISIONS	DATE	BY

Kimley»Horn
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7341 OFFICE PARK PLACE, SUITE 102, MELBOURNE, FL 32940
PHONE: 321-430-1138
WWW.KIMLEY-HORN.COM REGISTRY NO. 696

KHA PROJECT 147936000
DATE 11/16/2023
SCALE AS SHOWN
DESIGNED BY ----
DRAWN BY ----
CHECKED BY ----

OPEN SPACE EXHIBIT

SR 405 AND SINGLETON PD - SOUTH
PREPARED FOR
THE SINGLETON AVE 44 ACRE LAND TRUST, LLC
TITUSVILLE FL

SHEET NUMBER
E-101

Plotted By:Anderson, Zach Sheet Set:SR 405 AND SINGLETON PD - SOUTH Layout:E-101 OPEN SPACE September 09, 2024 06:59:48pm K:\VRB_LDEV\147936000 - SR 405 and Singleton PD\CAD\Exhibits\Entitlements\South\E-100 SITE PLAN EXHIBIT (S).dwg
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Legend (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405	FT.	FEET
○	SET CAPPED IRON ROD LB#8405	GA	GUY ANCHOR
◎	SET PARKER-KALON NAIL & DISK LB#8405	HW/F	HOG WIRE FENCE
■	FOUND 4"X4" CONCRETE MONUMENT	ICV	IRRIGATION CONTROL VALVE
●	FOUND AS NOTED	ID	IDENTIFICATION
◉	FOUND PARKER-KALON NAIL & DISK	ILLEG	ILLEGIBLE
FOC○	FIBER OPTIC CABLE MARKER	LB	LICENSED BUSINESS
FOC○ RSR	FIBER OPTIC CABLE RISER	IE	INVERT ELEVATION
GM○	GAS MARKER	LP	LIGHT POLE
WM□	WATER METER	M/F	METAL FENCE
BW/F	BARBED-WIRE FENCE	NAVD	NORTH AMERICAN VERTICAL DATUM
BDRY	BOUNDARY	NCF	NO CORNER FOUND
CATV	CABLE TELEVISION VAULT	NGVD	NATIONAL GEODETIC VERTICAL DATUM
C.C.R.	CERTIFIED CORNER RECORD	O/A	OVERALL
CI	CURB INLET	OHL	OVERHEAD UTILITY LINE
CL/F	CHAIN LINK FENCE	O.R.B.	OFFICIAL RECORDS BOOK
CMP	CORRUGATED METAL PIPE	PB	PLAT BOOK
CONC	CONCRETE	PG	PAGE
CPP	CORRUGATED PLASTIC PIPE	PRM	PERMANENT REFERENCE MONUMENT
EBX	ELECTRIC BOX	PSM	PROFESSIONAL SURVEYOR AND MAPPER
EL	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EPC	ENVIRONMENTAL PROTECTION COMMISSION	RLS	REGISTERED LAND SURVEYOR
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	RNG	RANGE
FCIP	FOUND CAPPED IRON PIPE	R/W	RIGHT OF WAY
FCIR	FOUND CAPPED IRON ROD	SCIR	SET CAPPED IRON ROD 1/2" LB #8405
FCM	FOUND CONCRETE MONUMENT	SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
FDC	FIRE DEPARTMENT CONNECTION	SEC.	SECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	S.N&D	SET MAG NAIL & DISK LB #8405
FFE	FINISH FLOOR ELEVATION	SV	SEWER VALVE
FIP	FOUND IRON PIPE	S/W	SIDEWALK
FIR	FOUND IRON ROD	SQ.	SQUARE
FPIP	FOUND PINCHED IRON PIPE	TBM	TEMPORARY BENCH MARK
F.N&D	FOUND NAIL & DISK	TBOX	TELEPHONE PEDESTAL
FRRS	FOUND RAILROAD SPIKE	TOB	TOP OF BANK
SRD	STATE ROAD DEPARTMENT	TOS	TOE OF SLOPE
		TWP	TOWNSHIP
		UP	UTILITY POLE
		W/F	WOOD FENCE
		△	WETLAND FLAG
		×45.0 / 45.0	SPOT ELEVATION
			CONTOUR LINE WITH ELEVATION
		15	SCHEDULE B-II ITEMS

(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

Notes Regarding Optional ALTA Table A:

1. MONUMENTS ARE SHOWN.

2. PER THE BREVARD COUNTY PROPERTY APPRAISER WEB SITE, THERE IS NO ASSIGNED ADDRESS FOR THIS SITE.

3. THE FLOOD ZONE IS ZONES "AE" & "X".

4. THE AREA OF THE PROPERTY, CONTAINING 2,896,295.82± SQUARE FEET OR 66.49± ACRES, MORE OR LESS.

8. SUBSTANTIAL FEATURES ARE SHOWN.

13. THE ADJACENT OWNERS ARE SHOWN ACCORDING TO THE BREVARD COUNTY PROPERTY APPRAISER'S WEB SITE.

16. THERE IS NO OBSERVABLE EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS.

17. THERE IS NO OBSERVABLE EVIDENCE OF CHANGE TO STREET RIGHTS-OF-WAY OR STREET AND SIDEWALK CONSTRUCTION.

18. NO PLOTTABLE OFFSITE EASEMENTS PROVIDED.

19. HAMILTON ENGINEERING AND SURVEYING INC. CARRIES $1,000,000.00 OR MORE OF PROFESSIONAL LIABILITY INSURANCE.

Legal Description:

A PART OF GOVERNMENT LOTS 1, 2 & 3, LYING IN SECTIONS 5 & 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING IN BREVARD COUNTY, FLORIDA;

THAT PORTION OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY.

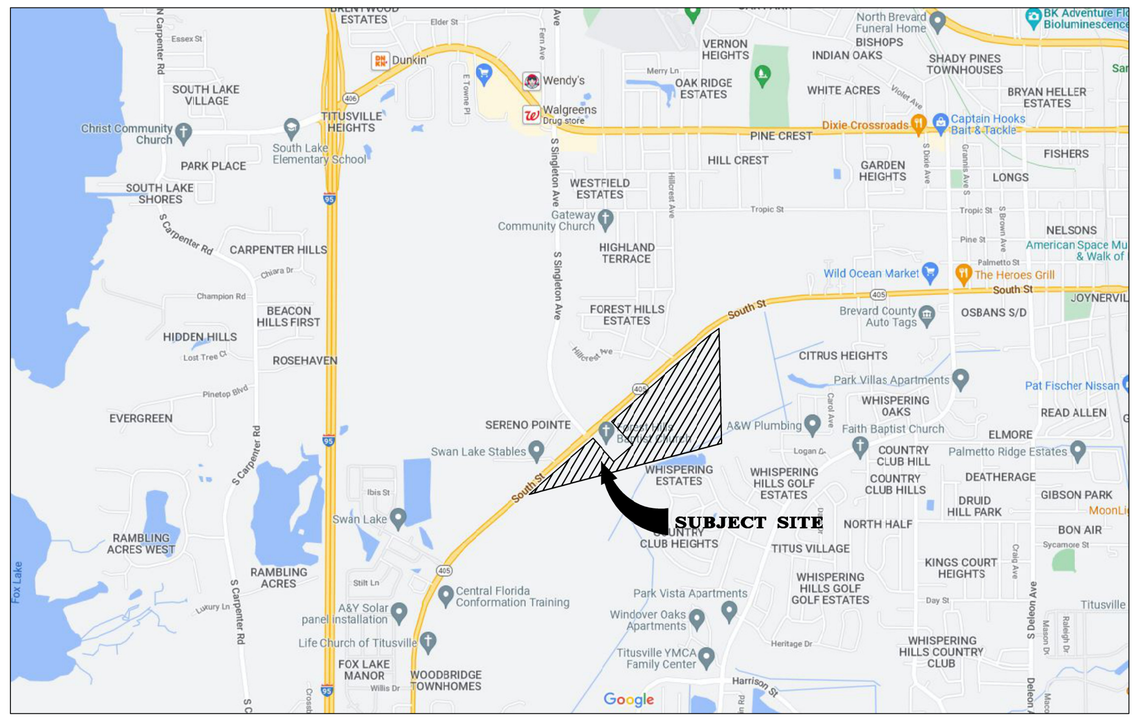
TOGETHER WITH:
THAT PORTION OF U.S GOVERNMENT LOT NO. 2 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY.

TOGETHER WITH:
THAT PORTION OF U.S. GOVERNMENT LOT NO. 3, SECTION 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LYING SOUTH OF STATE ROAD #405 RIGHT OF WAY, BEING IN BREVARD COUNTY, FLORIDA, LESS AND EXCEPT LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 923, PAGE 1018.

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST FOR A POINT OF BEGINNING; THENCE SOUTH 75°06'58" WEST ALONG THE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 3,308.38 FEET TO A POINT ON THE SOUTH RIGHT OF WAY FOR STATE ROAD #405; THENCE NORTH 48°33'44" EAST ALONG THE SAID RIGHT OF WAY, A DISTANCE OF 1,413.77 FEET TO THE NORTHEASTERLY BOUNDARY CORNER OF AFORESAID OFFICIAL RECORD BOOK 938, PAGE 1018; THENCE LEAVING SAID RIGHT OF WAY SOUTH 41°29'44" EAST ALONG SAID BOUNDARY, A DISTANCE OF 521.76 FEET; THENCE NORTH 48°24'08" EAST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 417.82 FEET; THENCE NORTH 41°32'24" WEST CONTINUING ALONG SAID BOUNDARY, A DISTANCE OF 520.98 FEET TO THE SOUTH RIGHT OF WAY FOR SAID STATE ROAD #405; THENCE NORTH 48°29'31" EAST ALONG SAID SOUTH RIGHT OF WAY, A DISTANCE OF 2,015.54 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 2,796.93 FEET AND A CHORD WHICH BEARS NORTH 52°11'31" EAST AND A DISTANCE OF 346.73 FEET; THENCE ALONG SAID SOUTH RIGHT OF WAY AND SAID CURVE TO THE RIGHT A DISTANCE OF 346.95 FEET TO A POINT ON THE EAST BOUNDARY OF SAID SECTION 5; THENCE SOUTH 01°14'43" EAST ALONG SAID SECTION 5, A DISTANCE OF 1,911.13 FEET; TO THE POINT OF BEGINNING.

CONTAINING 2,896,295.82 SQUARE FEET OR 66.49 ACRES, MORE OR LESS.



VICINITY MAP - NOT TO SCALE

Notes Regarding Schedule BII Exceptions:

(AS PER TITLE COMMITMENT AGENT FILE NUMBER 21-1479, ISSUED BY CHICAGO TITLE INSURANCE COMPANY BEARING AN EFFECTIVE DATE OF 01/18/2022 AT 05:00 P.M.)

1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS FORM. NOT A SURVEY MATTER
2. TAXES AND ASSESSMENTS FOR THE YEAR 2022 AND SUBSEQUENT YEARS, WHICH ARE NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
3. STANDARD EXCEPTIONS:
   a. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NOTHING TO PLOT
   b. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
   c. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIALS HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
   d. TAXES OR ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS IN THE PUBLIC RECORDS.
4. ANY CLAIM THAT ANY PORTION OF THE INSURED LAND IS SOVEREIGN LANDS OF THE STATE OF FLORIDA, INCLUDING SUBMERGED, FILLED OR ARTIFICIALLY EXPOSED LANDS ACCRETED TO SUCH LAND. NOT A SURVEY MATTER
5. ANY LIEN PROVIDED BY COUNTY ORDINANCE OR BY CHAPTER 159, FLORIDA STATUTES, IN FAVOR OF ANY CITY, TOWN, VILLAGE OR PORT AUTHORITY FOR UNPAID SERVICE CHARGES FOR SERVICE BY ANY WATER, SEWER OR GAS SYSTEM SUPPLYING THE INSURED LAND. NOT A SURVEY MATTER
6. RIGHT OF WAY DEED RECORDED IN OFFICIAL RECORDS BOOK 1995, PAGE 427, RE-RECORDED IN OFFICIAL RECORDS BOOK 5101, PAGE 46. DOES NOT AFFECT
7. THE NATURE, EXTENT OR EXISTENCE OF RIPARIAN RIGHTS OR LITTORAL RIGHTS IS NOT INSURED. NOT A SURVEY MATTER
8. RIGHTS OF OTHERS TO USE THE WATERS OF ANY WATER BODY EXTENDING FROM THE INSURED LAND ONTO OTHER LANDS. NOT A SURVEY MATTER

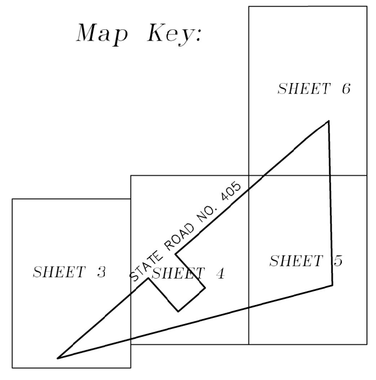
Sheet Key :

SHEET 1 = COVER/INFORMATION SHEET

SHEET 2 = OVERALL BOUNDARY SHEET

SHEETS 3-6 = BOUNDARY, TOPO, TREE, AND WETLAND SHEETS

Map Key:



Basis of Bearings Note:

SHOWN SURVEY FIELD BEARINGS (STATE PLANE-GRID NORTH)
(FDOT) RIGHT OF WAY MAPS (TRUE NORTH)

RIGHT OF WAY INFORMATION:

STATE ROAD #405 DERIVED FROM: FLORIDA DEPARTMENT OF TRANSPORTATION MAP 70160-2503, DATED 06/11/1963.

SINGLETON AVENUE DERIVED FROM: OFFICIAL RECORD BOOK 5101, PAGE 46.

WETLANDS INFORMATION:

WETLANDS LINE AS FLAGGED BY BIO-TECH CONSULTING INC

BOUNDARY, TOPOGRAPHIC, TREE LOCATION & WETLANDS INFORMATION:

ALL FIELD INFORMATION DERIVED FROM PREVIOUS SURVEY BY: HAMILTON ENGINEERING & SURVEYING, PROJECT #04016.C003, DATED 02/22/2022 SIGNED BY: GREGORY S. LOCKLIN, PSM (BOUNDARY WAS UPDATED ON 12/14/2022)

Surveyor's Notes: (AS APPLICABLE)

ACCORDING TO CURRENT FLOOD INSURANCE MAPS ISSUED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THE PROPERTY SHOWN APPEARS TO LIE WITHIN ZONES "AE" & "X" PANEL NO. 12009C0205H DATED 01/29/2021, THERE IS ALSO IN LETTER OF MAP REVISION (LOMR) 16/04/5333P DATED 12/15/2016. THE APPROXIMATE FLOOD ZONE TRANSITION, IF APPLICABLE, HAS BEEN OBTAINED AND PLOTTED FROM LARGE SCALE MAPS AND IS DEPICTED AS ACCURATELY AS POSSIBLE. THIS SURVEY BY NO MEANS REPRESENTS A DETERMINATION ON WHETHER PROPERTIES WILL OR WILL NOT FLOOD. LAND WITHIN THE BOUNDARIES OF THIS SURVEY MAY OR MAY NOT BE SUBJECT TO FLOODING; THE BUILDING DEPARTMENT OR OTHER CUSTODIAL AGENCY FOR FLOOD DETERMINATION WITHIN THIS MUNICIPALITY MAY HAVE ADDITIONAL INFORMATION REGARDING FLOODING AND RESTRICTIONS ON DEVELOPMENT.

1) BEARINGS SHOWN HEREON ARE BASED ON EAST BOUNDARY OF GOVERNMENT LOT 1, IN SECTION 05, TOWNSHIP 22 SOUTH, RANGE 32 EAST, HAVING A GRID BEARING OF SOUTH 01°14'43" EAST (2011 ADJUSTED)
2) ELEVATIONS SHOWN HEREON ARE BASED ON BREVARD COUNTY BENCHMARK C5A17-2004 HAVING A PUBLISHED ELEVATION OF 23.17 FEET NAVD88.(SHOWN ON SURVEY)
3) THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS AFFECTING THIS PROPERTY THAT MAY NOT BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.
54 NO INFORMATION ON ADJACENT PROPERTY OWNERS OR ADJOINING PROPERTY RECORDING INFORMATION WAS PROVIDED TO THIS SURVEYOR.
5) THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
6) THE BOUNDARY CORNERS AND LINES DEPICTED BY THIS SURVEY WERE ESTABLISHED PER INFORMATION AS FURNISHED.
7) UNLESS OTHERWISE SHOWN HEREON, NO JURISDICTIONAL WETLAND AREAS OR OTHER PHYSICAL TOPOGRAPHIC FEATURES HAVE BEEN LOCATED.
8) UNDERGROUND ENCROACHMENTS, SUCH AS UTILITIES, STRUCTURES, INSTALLATIONS, IMPROVEMENTS AND FOUNDATIONS THAT MAY EXIST, HAVE NOT BEEN FIELD LOCATED EXCEPT AS SHOWN.
9) THIS MAP DOES NOT DETERMINE OR REFLECT OWNERSHIP OF PROPERTY, BOUNDARY LINES AFFECTED BY ADVERSE USE, LINES OF CONFLICTING DEEDS, OR OTHER LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW.
10) UNDERGROUND UTILITY LOCATIONS AND IDENTIFICATIONS SHOWN HEREON ARE BASED UPON VISIBLE ABOVE GROUND APPURTENANCES AND DO NOT NECESSARILY SHOW ALL UTILITY LOCATIONS. NO SUBTERRANEAN EXCAVATION HAS BEEN MADE TO DETERMINE UNDERGROUND UTILITY LOCATIONS.
11) THE MEASURED MATHEMATICAL CLOSURE OF THE SURVEYED BOUNDARY EXCEEDS THE ACCURACY STANDARDS FOR AN URBAN CLASS SURVEY AS DEFINED BY THE AMERICAN LAND TITLE ASSOCIATION AND AND THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
12) TIES FROM BUILDING CORNERS, FENCE CORNERS, SHED CORNERS, ETC., ARE NOT TO BE USED TO REESTABLISH PROPERTY BOUNDARIES.
13) ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS MADE BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
14) THIS SURVEY HAS BEEN PREPARED EXPRESSLY FOR THE NAMED ENTITIES AND IS NOT TRANSFERABLE. NO OTHER PERSON OR ENTITY IS ENTITLED TO RELY UPON AND/OR REUSE THIS SURVEY FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN CONSENT OF HAMILTON ENGINEERING & SURVEYING AND THE CERTIFYING PROFESSIONAL SURVEYOR AND MAPPER.
15) NOTHING HEREIN SHALL BE CONSTRUED TO GIVE ANY RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO ON THIS SURVEY.
16) FENCE OWNERSHIP NOT DETERMINED.
17) PRINTED DIMENSIONS SHOWN ON THE MAP OF SURVEY SUPERSEDE SCALED DIMENSIONS. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.
18) REPRODUCTION OF THIS SURVEY IS EXPRESSLY FORBIDDEN WITHOUT THE WRITTEN PERMISSION FROM THE SIGNING SURVEYOR.
19) THE WORD "CERTIFIED" IS UNDERSTOOD TO BE AN EXPRESSION OF THE PROFESSIONAL SURVEYOR'S OPINION BASED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF, AND THAT IT THUS CONSTITUTES NEITHER A GUARANTEE NOR A WARRANTY, EITHER EXPRESSED OR IMPLIED.
20) THIS SURVEY IS A REPRESENTATION OF EXISTING FIELD CONDITIONS AT THE TIME OF THE FIELD SURVEY DATE AND IS BASED ON FOUND EXISTING MONUMENTATION IN THE FIELD.
21) THE TREES SHOWN HEREON WERE LOCATED UTILIZING METHODS ADEQUATE FOR THEIR ACCURATE LOCATION AND IDENTIFICATION. HOWEVER, THIS COMPANY AND THE SIGNING SURVEYOR RESERVES THE RIGHT TO VERIFY THE LOCATION OF ALL TREES CRITICAL TO THE DESIGN OF BUILDINGS, PARKING AND OTHER PERMANENT FEATURES. IT IS THE RESPONSIBILITY OF THE DESIGN PROFESSIONAL TO INFORM THIS COMPANY AND/OR SIGNING SURVEYOR OF ANY TREES CRITICAL TO THEIR DESIGN SO THAT THOSE TREES CAN BE VERIFIED PRIOR TO THE COMPLETION OF THE DESIGN.
22) ALL GROUND ELEVATIONS ARE TO BE INTERPRETED TO THE NEAREST ONE TENTH OF A FOOT.
23) THE DATE OF SIGNATURE DOES NOT UPDATE OR SUPERSEDE THE DATE OF SURVEY.

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PURPOSE OF SURVEY:

THE PURPOSE OF THIS SURVEY IS TO SPLIT THE NORTH & SOUTH PARCELS.
NO FIELD WORK WAS PREFORMED AT TIME OF DRAWING.

CERTIFIED TO:

THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 10, 13, 16, 17, 18, AND 19, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON: 02/22/2022 AND THE BOUNDARY UPDATED 12/14/2022.

DATE OF PLAT OR MAP: 10/06/2023

Harry B. Rogers III, PSM — Signature Date
Florida License No. PSM#6418
Certificate of Authorization LB #8405
Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.
HARRYR@HAMILTONENGINEERING.US

HAMILTON
ENGINEERING & SURVEYING, LLC
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www.HamiltonEngineering.US
LB #8405 CA #8474

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE SOUTH STATE ROAD 405 & SINGLETON AVE. TITUSVILLE, FLORIDA 32796 BREVARD COUNTY, FLORIDA

SHEET TITLE:

BY	REVISIONS	DATE
HBR		XX/XX/XXXX

PREPARED FOR:
THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE:	DIGITAL
QUALITY CONTROL FIELD:	GL
QUALITY CONTROL OFFICE:	HBR
DRAWN BY: HBR	PARTY CHIEF: LM
JOB #:	4225.0001
SEC TWP RNG:	05-22S-35E & 08-22S-35E
SURVEY DATE:	12/14/2022
NOT VALID WITHOUT ALL SHEETS:	1 OF 6

L:\44\04225 Singleton Ave 44 Acre\0001 Titusville Lot Split\SURV\1-DWG\4225.0001 Titusville South.dwg (ALTA) harryr Oct 09, 2023 - 12:10pm

OVERALL BOUNDARY

Legend (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405	FT.	FEET
○	SET CAPPED IRON ROD LB#8405	GA	GUY ANCHOR
◎	SET PARKER-KALON NAIL & DISK LB#8405	HW/F	HOG WIRE FENCE
■	FOUND 4"X4" CONCRETE MONUMENT	ICV	IRRIGATION CONTROL VALVE
●	FOUND AS NOTED	ID	IDENTIFICATION
◉	FOUND PARKER-KALON NAIL & DISK	ILLEG	ILLEGIBLE
FOC○	FIBER OPTIC CABLE MARKER	LB	LICENSED BUSINESS
FOC○ RSR	FIBER OPTIC CABLE RISER	IE	INVERT ELEVATION
GM○	GAS MARKER	LP	LIGHT POLE
WM□	WATER METER	M/F	METAL FENCE
BW/F	BARBED-WIRE FENCE	NAVD	NORTH AMERICAN VERTICAL DATUM
BDRY	BOUNDARY	NCF	NO CORNER FOUND
CATV	CABLE TELEVISION VAULT	NGVD	NATIONAL GEODETIC VERTICAL DATUM
C.C.R.	CERTIFIED CORNER RECORD	O/A	OVERALL
CI	CURB INLET	OHL	OVERHEAD UTILITY LINE
CL/F	CHAIN LINK FENCE	O.R.B.	OFFICIAL RECORDS BOOK
CMP	CORRUGATED METAL PIPE	PB	PLAT BOOK
CONC	CONCRETE	PG	PAGE
CPP	CORRUGATED PLASTIC PIPE	PRM	PERMANENT REFERENCE MONUMENT
EBX	ELECTRIC BOX	PSM	PROFESSIONAL SURVEYOR AND MAPPER
EL	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EPC	ENVIRONMENTAL PROTECTION COMMISSION	RLS	REGISTERED LAND SURVEYOR
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	RNG	RANGE
FCIP	FOUND CAPPED IRON PIPE	R/W	RIGHT OF WAY
FCIR	FOUND CAPPED IRON ROD	SCIR	SET CAPPED IRON ROD 1/2" LB #8405
FCM	FOUND CONCRETE MONUMENT	SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
FDC	FIRE DEPARTMENT CONNECTION	SEC.	SECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	S.N&D	SET MAG NAIL & DISK LB #8405
FFE	FINISH FLOOR ELEVATION	SV	SEWER VALVE
FIP	FOUND IRON PIPE	S/W	SIDEWALK
FIR	FOUND IRON ROD	SQ.	SQUARE
FPIP	FOUND PINCHED IRON PIPE	TBM	TEMPORARY BENCH MARK
F.N&D	FOUND NAIL & DISK	TBOX	TELEPHONE PEDESTAL
FRRS	FOUND RAILROAD SPIKE	TOB	TOP OF BANK
		TOS	TOE OF SLOPE
		TWP	TOWNSHIP
		UP	UTILITY POLE
		W/F	WOOD FENCE

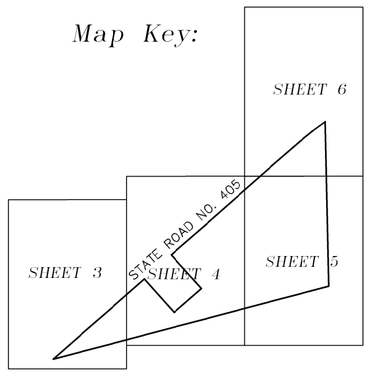
(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

WETLAND FLAG

× 65.0 / 65 — SPOT ELEVATION / CONTOUR LINE WITH ELEVATION

(15) SCHEDULE B-II ITEMS

Map Key:



CURVE TABLE					
CURVE #	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1(FDOT)	2796.53'	NONE			
C1(F)	2796.53'	N 52°11'31" E	346.73'	346.95'	7°06'27"

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LB #8405 CA #8474

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE SOUTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

SHEET TITLE:

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

PREPARED FOR:
THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE:	DIGITAL
QUALITY CONTROL FIELD:	GL
QUALITY CONTROL OFFICE:	HBR
DRAWN BY: HBR	PARTY CHIEF: LM
JOB #:	4225.0001
SEC TWP RNG:	05-22S-35E & 08-22S-35E
SURVEY DATE:	12/14/2022

NOT VALID WITHOUT ALL SHEETS

2 OF 6

Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405
○	SET CAPPED IRON ROD LB#8405
◎	SET PARKER-KALON NAIL & DISK LB#8405
■	FOUND 4"X4" CONCRETE MONUMENT
●	FOUND AS NOTED
◉	FOUND PARKER-KALON NAIL & DISK
FOC ○	FIBER OPTIC CABLE MARKER
FOC RSR ○	FIBER OPTIC CABLE RISER
GM ○	GAS MARKER
WM □	WATER METER
BW/F	BARBED-WIRE FENCE
BDRY	BOUNDARY
CATV	CABLE TELEVISION VAULT
C.C.R.	CERTIFIED CORNER RECORD
CI	CURB INLET
CL/F	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
EBX	ELECTRIC BOX
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F.N&D	FOUND NAIL & DISK
FRRS	FOUND RAILROAD SPIKE

FT.	FEET
GA	GUY ANCHOR
HW/F	HOG WIRE FENCE
ICV	IRRIGATION CONTROL VALVE
ID	IDENTIFICATION
ILLEG	ILLEGIBLE
LB	LICENSED BUSINESS
IE	INVERT ELEVATION
LP	LIGHT POLE
M/F	METAL FENCE
NAVD	NORTH AMERICAN VERTICAL DATUM
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PG.	PAGE
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(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

WETLAND FLAG

+65.0' / 65' SPOT ELEVATION / CONTOUR LINE WITH ELEVATION

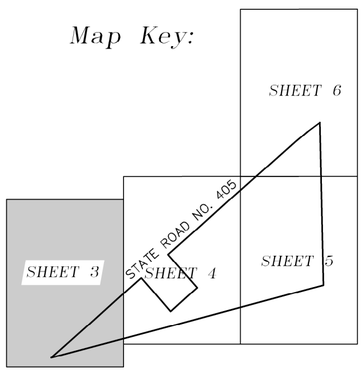
(15) SCHEDULE B-II ITEMS

Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

Map Key:





MATCH LINE A
SHEET 4 OF 6

FCIR 1/2" LB7013

FCIP 1/2" NO ID

FOC

EDGE OF PAVEMENT

15" DIAMETER O SIGNAL POLE

FCM 4X4 PLS 4014
NORTHWEST CORNER OF SECTION 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST, TBM EL=25.56'

STATE ROAD NO. 405/SOUTH STREET

32' ASPHALT PAVEMENT

FLOOD ZONE "AE"

FLOOD ZONE "X"

SOUTH RIGHT OF WAY FOR STATE ROAD #405

APPROXIMATE FLOOD PLAIN

Parcel ID: 22-35-08-00-1

A PART OF GOVERNMENT LOT 3 VACANT LAND

WETLAND AREA:
2,088,709.37± SQ. FT.
OR 47.950± ACRES

UPLAND AREA:
59,936.34± SQ. FT.
OR 1.38± ACRES

WETLAND AREA:
20,295.52± SQ. FT.
OR 0.47± ACRES

NOT PLATTED

FCIR 5/8" LB 6762

405 MAR INC
PARCEL ID
22-35-08-00-2

ELEVATIONS SHOWN HEREON ARE NAVD 1988

PREPARED FOR: THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

FIELD BOOK/PAGE: DIGITAL

QUALITY CONTROL FIELD: GL

QUALITY CONTROL OFFICE: HBR

DRAWN BY: HBR | PARTY CHIEF: LM

JOB #: 4225.0001

SEC TWP RNG: 05-22S-35E & 08-22S-35E

SURVEY DATE: 12/14/2022

NOT VALID WITHOUT ALL SHEETS

3 OF 6

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

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www.HamiltonEngineering.US LB #8405 CA #8474

Legend: (AS APPLICABLE)

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EBX	ELECTRIC BOX
EL	ELEVATION
EPC	ENVIRONMENTAL PROTECTION COMMISSION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
FCIP	FOUND CAPPED IRON PIPE
FCIR	FOUND CAPPED IRON ROD
FCM	FOUND CONCRETE MONUMENT
FDC	FIRE DEPARTMENT CONNECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FFE	FINISH FLOOR ELEVATION
FIP	FOUND IRON PIPE
FIR	FOUND IRON ROD
FPIP	FOUND PINCHED IRON PIPE
F.N&D	FOUND NAIL & DISK
FRRS	FOUND RAILROAD SPIKE
SRD	STATE ROAD DEPARTMENT

FT.	FEET
GA	GUY ANCHOR
HW/F	HOG WIRE FENCE
ICV	IRRIGATION CONTROL VALVE
ID	IDENTIFICATION
ILLEG	ILLEGIBLE
LB	LICENSED BUSINESS
IE	INVERT ELEVATION
LP	LIGHT POLE
M/F	METAL FENCE
NAVD	NORTH AMERICAN VERTICAL DATUM
NCF	NO CORNER FOUND
NGVD	NATIONAL GEODETIC VERTICAL DATUM
O/A	OVERALL
OHL	OVERHEAD UTILITY LINE
O.R.B.	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG.	PAGE
PRM	PERMANENT REFERENCE MONUMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
RCP	REINFORCED CONCRETE PIPE
RLS	REGISTERED LAND SURVEYOR
RNG	RANGE
R/W	RIGHT OF WAY
SCIR	SET CAPPED IRON ROD 1/2" LB #8405
SCM	SET CONCRETE MONUMENT (4"X4") LB #8405
SEC.	SECTION
S.N&D	SET MAG NAIL & DISK LB #8405
SV	SEWER VALVE
S/W	SIDEWALK
SQ.	SQUARE
TBM	TEMPORARY BENCH MARK
TBOX	TELEPHONE PEDESTAL
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TWP	TOWNSHIP
UP	UTILITY POLE
W/F	WOOD FENCE

(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

△ WETLAND FLAG

+ 65.0' / 65' SPOT ELEVATION / CONTOUR LINE WITH ELEVATION

(15) SCHEDULE B-II ITEMS

Tree Legend

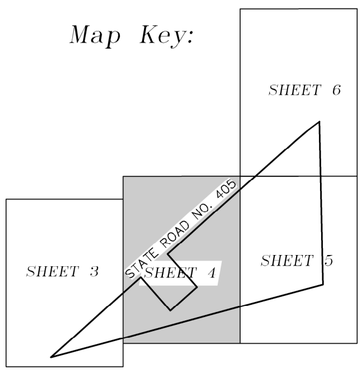
SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

N
W E
S

60 30 15 0 60
1"= 60'
GRID NORTH

Map Key:



A PART OF
GOVERNMENT LOT 2

STATE ROAD NO. 405/SOUTH STREET
EDGE OF PAVEMENT
32' ASPHALT PAVEMENT
CENTERLINE OF FDOT SURVEY
S48°29'42"W 2431.83'(C)
SOUTH RIGHT OF WAY
FOR STATE ROAD #405
APPROXIMATE EAST LINE OF GOVERNMENT LOT 2
APPROXIMATE WEST LINE OF GOVERNMENT LOT 1
APPROXIMATE FLOOD PLAIN
FLOOD ZONE "AE"
FLOOD ZONE "X"
A PART OF
GOVERNMENT LOT 2
VACANT LAND
Parcel ID: 22-35-05-00-759
WETLAND AREA:
103,169.09± SQ. FT.
OR 2.44± ACRES
UPLAND AREA:
22,542.48± SQ. FT.
OR 0.518± ACRES
UPLAND AREA:
601,551.97± SQ. FT.
OR 13.81± ACRES
UPLAND AREA: 604,723 SF
OR 13.883 ACRES±
N48°29'31"E 2658.18'
N48°29'31"E 2015.54'(F)
N48°29'12"E (FDOT)
FCIR 5/8" LB6762
N41°31'26"W 120.41'(F)
N41°30'48"W 120.50'(D)
OWNER: ROBERT & SUSAN DARGIE
PARCEL ID: 22-35-05-00-756
ORB 2530, PG 2067
FCIR 5/8" LB6762
0.02' EAST OF LINE
FCIR 1/2" LB7013
BREVARD COUNTY BENCHMARK
DESIGNATION: CSA17 (NAVD 88)
ELEVATION: 23.17
TBM EL=28.90'
FCIR 1/2"
LB7013
N48°30'32"E 417.41'(F)
N48°29'12"E 417.46'(D)
S41°31'01"E 120.57'(F)
S41°30'48"E 120.50'(D)
FCM "SRD R/W"
BROKEN/LEANING
S48°29'11"W 120.51'(F)
S48°29'12"W 120.50'(D)
FCIR 5/8" LB6762
S48°32'06"W
SOUTH RIGHT OF WAY
FOR STATE ROAD #405
S41°27'49"E 200.00'(F)
200' (FDOT)
FIR 5/8"
NO I.D.
NE CORNER OF
OR. 938, PG 1018
TBM EL=27.26'
FCIR 1/2"
LB7013
APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 1
APPROXIMATE NORTH LINE OF GOVERNMENT LOT 3
OWNER: TITUSVILLE BAPTIST TEMPLE, INC.
PARCEL ID: 22-35-05-00-754
LESS & EXCEPT
ORB 923, PG 1018
PARCEL #3
Parcel ID:
22-35-05-00-758
S41°29'44"E 417.82'(F)
S41°30'48"E 417.46'(D)
N48°24'08"E 417.82'(F)
N48°29'12"E 417.46'(D)
APPROXIMATE NORTH LINE OF SECTION 08-22S-35E
FCIR 5/8" LB 6762
FCIR 5/8" NO ID
S75°06'58"W 3308.38'(F)
APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3
405 MAR INC
PARCEL ID
22-35-08-00-2
POND
EDGE OF WATER
AS OF 2/15/22
APPROXIMATE
FLOOD PLAIN
SHEET 3 OF 6
MATCH LINE A
MATCH LINE B
SHEET 5 OF 6

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

PREPARED FOR: THE SINGLETON AVE. 44 ACRE LAND TRUST DATED APRIL 4, 2022
FIELD BOOK/PAGE: DIGITAL
QUALITY CONTROL FIELD: GL
QUALITY CONTROL OFFICE: HBR
DRAWN BY: HBR
PARTY CHIEF: LM
JOB #: 4225.0001
SEC TWP RNG: 05-22S-35E & 08-22S-35E
SURVEY DATE: 12/14/2022
NOT VALID WITHOUT ALL SHEETS
4 OF 6

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE SOUTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

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8340 CONSUMER CIRCLE
SARASOTA, FL 32807
TEL: 941.377.9178
www.HamiltonEngineering.US LB #8405 CA #8474

SHEET 6 OF 6
MATCH LINE C

OF WAY
D #405

LOMR
16-04-5333P
12/15/2016

FLOOD ZONE
"AE"

PARCEL ID: 22-35-05-00-752

A PART OF
GOVERNMENT LOT 1
VACANT LAND

WETLAND AREA:
2,088,709.37± SQ. FT.
OR 47.950± ACRES

EAST BOUNDARY OF SECTION 05-22S-35E
ALSO BEING THE EAST BOUNDARY OF
GOVERNMENT LOT 1

JOHNSTON, ROBERT STANLEY;
JOHNSTON, GUINDOLA
PARCEL ID
22-35-04-00-513

S01°14'43"E 1911.13(F)
2552.85'(F&FDOT)
S01°14'43"E 2630.73'(F)OVERALL
(BASIS OF BEARINGS)

A:
. FT.
RES

APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 1

APPROXIMATE NORTH LINE OF GOVERNMENT LOT 3

FCIR 1/2" NO ID
APPROXIMATE LOCATION
SE CORNER OF GOVERNMENT
LOT 1

77.88'(FDOT)

SECTION 4-22-35

POB

FCM 4X4 ILLEGIBLE
SOUTHEST CORNER
OF SECTION 5, 22S, 35E
TBM EL=15.01'

SECTION 5-22-35

SECTION 8-22-35

SECTION 9-22-35

S75°06'58"W 3308.38'(F)

FLOOD
ZONE
"AE"

A PART OF
GOVERNMENT LOT 3
VACANT LAND

BLOCK E
COUNTRY CLUB HEIGHTS
PLAT BOOK 12, PAGE 23

ION 08-22S-35E

EDGE OF WATER
AS OF 2/15/22

POND

SHEET 4 OF 6
MATCH LINE B

N

W E

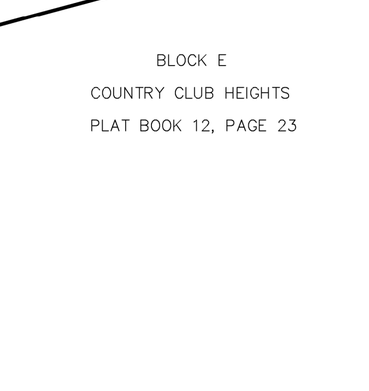
S

60 30 15 0 60

1"= 60'

GRID NORTH

Map Key:



Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405
○	SET CAPPED IRON ROD LB#8405
◎	SET PARKER-KALON NAIL & DISK LB#8405
■	FOUND 4"X4" CONCRETE MONUMENT
●	FOUND AS NOTED
◉	FOUND PARKER-KALON NAIL & DISK
FOC ○	FIBER OPTIC CABLE MARKER
FOC RSR ○	FIBER OPTIC CABLE RISER
GM ○	GAS MARKER
WM □	WATER METER
BW/F	BARBED-WIRE FENCE
BDRY	BOUNDARY
CATV	CABLE TELEVISION VAULT
C.C.R.	CERTIFIED CORNER RECORD
CI	CURB INLET
CL/F	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
EBX	ELECTRIC BOX
EL	ELEVATION
EPC	ENVIRONMENTAL PROTECTION COMMISSION
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
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S/W	SIDEWALK
SQ.	SQUARE
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TBOX	TELEPHONE PEDESTAL
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UP	UTILITY POLE
W/F	WOOD FENCE
(C)	CALCULATED
(D)	PER DEED
(F)	PER FIELD
(P)	PER PLAT
△	WETLAND FLAG
x 65.0' / -65	SPOT ELEVATION / CONTOUR LINE WITH ELEVATION
15	SCHEDULE B-II ITEMS

ELEVATIONS SHOWN HEREON ARE NAVD 1988

5 OF 6

NOT VALID WITHOUT ALL SHEETS

SURVEY DATE: 12/14/2022

SEC TWP RNG: 05-22S-35E & 08-22S-35E

JOB # 4225.0001

DRAWN BY: HBR | PARTY CHIEF: LM

QUALITY CONTROL OFFICE: HBR

QUALITY CONTROL FIELD: GL

FIELD BOOK/PAGE: DIGITAL

PREPARED FOR: THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE SOUTH
STATE ROAD 405 & SINGLETON AVE.
TITUSVILLE, FLORIDA 32796
BREVARD COUNTY, FLORIDA

HAMILTON
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www.HamiltonEngineering.US LB #8405 CA #8474

Legend: (AS APPLICABLE)

□	SET 4"X4" CONCRETE MONUMENT LB#8405
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FT.	FEET
GA	GUY ANCHOR
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ILLEG	ILLEGIBLE
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TOS	TOE OF SLOPE
TWP	TOWNSHIP
UP	UTILITY POLE
W/F	WOOD FENCE

(C) CALCULATED
(D) PER DEED
(F) PER FIELD
(P) PER PLAT

△ WETLAND FLAG

+ 65.0' / 65' SPOT ELEVATION / CONTOUR LINE WITH ELEVATION

(15) SCHEDULE B-II ITEMS

Tree Legend

SYMBOL	NAME	SYMBOL	NAME
	OAK		PINE
	MAGNOLIA		CEDAR
	PALM		

NOTE: TREE SIZES IN INCHES

N

W E

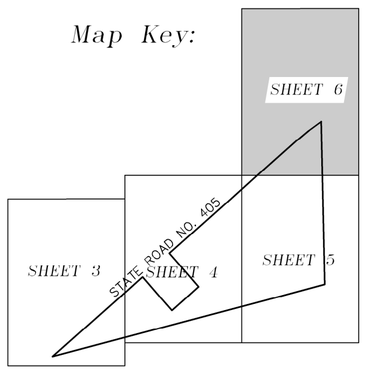
S

60 30 15 0 60

1"= 60'

GRID NORTH

Map Key:



APPROXIMATE NORTH LINE OF GOVERNMENT LOT 1

FCIR 1/2" LB7013
EAST 1/4 CORNER OF SECTION 5-22-35
NE CORNER OF GOVERNMENT LOT 1
CORNER IN LOW LYING AREA
CALCULATED PER FDOT R/W MAP

EAST BOUNDARY OF SECTION 05-22S-35E
ALSO BEING THE EAST BOUNDARY OF THE NORTH 1/2 OF GOVERNMENT LOT 1

S01°14'43"E 719.60'(F)

A PART OF GOVERNMENT LOT 1
(NOT INCLUDED)

STATE ROAD NO. 405/SOUTH STREET

APPROXIMATE FLOOD PLAIN

ASPHALT PAVEMENT

EDGE OF PAVEMENT

CENTERLINE RIGHT OF WAY (FDOT)

CENTERLINE SURVEY(FDOT)

FDCO

LESS & EXCEPT(D)

132'(FDOT)

118.3'

68'(FDOT)

112.6'

100'(FDOT)

FCIR 1/2" LB7013

FIP 1" NO I.D.

C1

SOUTH RIGHT OF WAY FOR STATE ROAD #405

N48°29'45"E 438.59'(C)
N48°29'12"E 438.59'(FDOT)

N48°29'31"E 2015.54'(F)
N48°29'12"E (FDOT)

S01°14'43"E 1911.13'(C)
2552.85'(F&FDOT)
S01°14'43"E 2630.73'(F)OVERALL
(BASIS OF BEARINGS)

JOHNSTON, ROBERT STANLEY;
JOHNSTON, GUINDOLA
PARCEL ID
22-35-04-00-513

PARCEL ID: 22-35-05-00-752

A PART OF
GOVERNMENT LOT 1
VACANT LAND
WETLAND AREA:
2,088,709.37± SQ. FT.
OR 47.950± ACRES

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1(FDOT)	2796.93'	NONE			
C1(F)	2796.93'	N 52°11'31" E	346.73'	346.95'	7°06'27"

32' ASPHALT PAVEMENT
EDGE OF PAVEMENT

MATCH LINE C
SHEET 5 OF 6

ELEVATIONS SHOWN HEREON ARE NAVD 1988

9 OF 9

NOT VALID WITHOUT ALL SHEETS
SURVEY DATE: 12/14/2022
SEC TWP RNG: 05-22S-35E & 08-22S-35E
JOB #: 4225.0001
DRAWN BY: HBR
PARTY CHIEF: LM
QUALITY CONTROL OFFICE: HBR
QUALITY CONTROL FIELD: GL
FIELD BOOK/PAGE: DIGITAL
PREPARED FOR: THE SINGLETON AVE 44 ACRE LAND TRUST DATED APRIL 4, 2022

SIGNATURE & SEAL CAN BE FOUND ON SHEET 1

SHEET TITLE:

MAP OF ALTA/NSPS LAND TITLE BOUNDARY SURVEY WITH TOPOGRAPHIC, TREE LOCATION & WETLANDS

TITUSVILLE SOUTH
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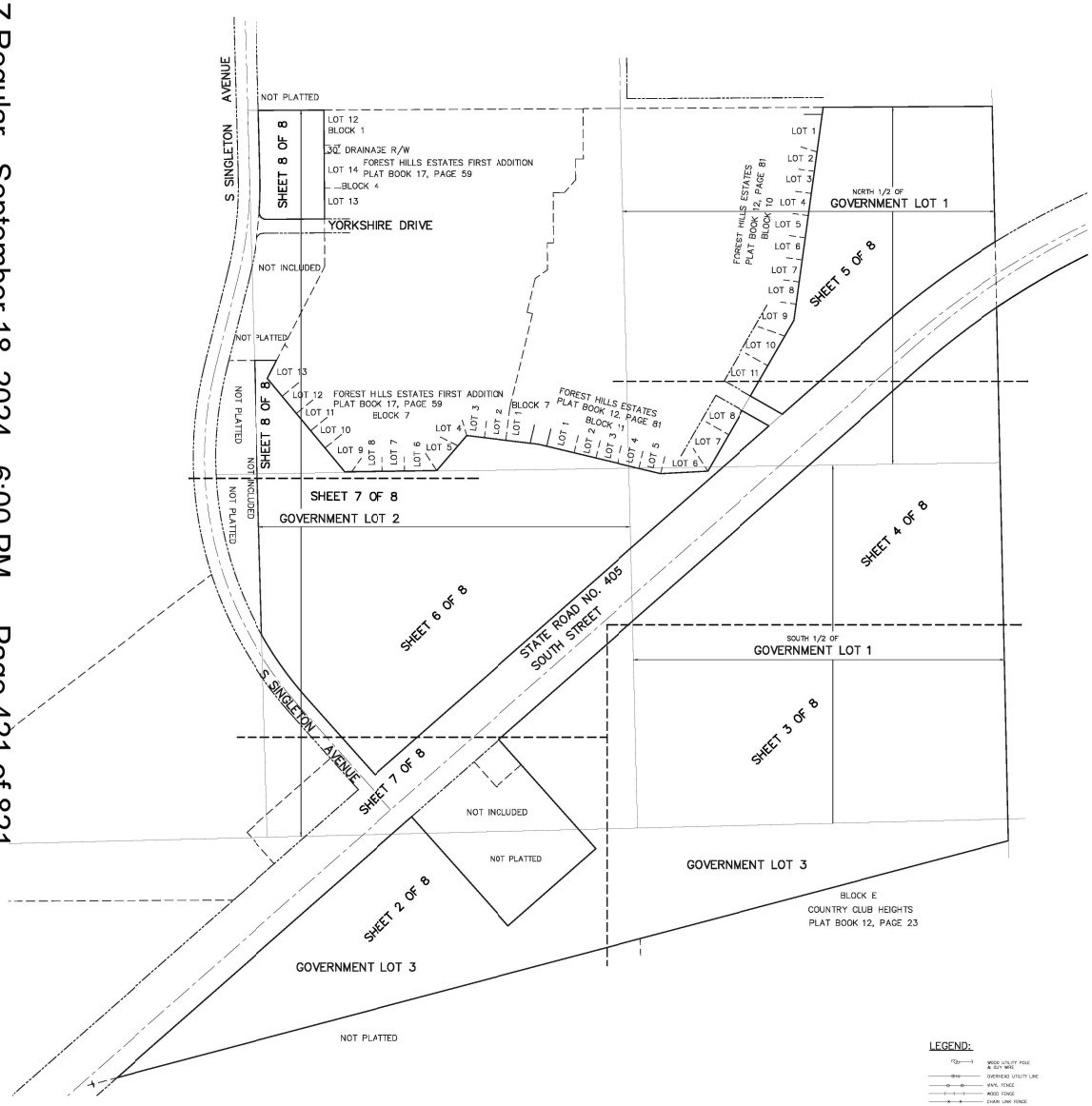




LEGAL DESCRIPTION (CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NUMBER 9854559, DATED 1/18/2022 AT 5:00 PM.

SOUTH 1/2 OF GOVERNMENT LOT 1 SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, EXCEPT ANY PART LYING IN ROAD RIGHT OF WAY.

LEGAL DESCRIPTION (CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NUMBER 9854531, DATED 1/18/2022 AT 5:00 PM.

N 1/2 OF U.S. GOVERNMENT LOT NO. 1, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST, LESS AND EXCEPT FOREST HILLS ESTATES, RECORDED IN PLAT BOOK 12, PAGE 81; LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 828, PAGE 918; AND ANY PORTION LYING WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 405 RIGHT OF WAY, ALL OF BREVARD COUNTY, FLORIDA.

PARCEL 2

U.S. GOVERNMENT LOT NO. 2, SECTION 5, TOWNSHIP 22 SOUTH, RANGE 35 EAST EXCEPT FOREST HILLS ESTATES RECORDED IN PLAT BOOK 12, PAGE 81 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, FOREST HILLS ESTATES FIRST ADDITION, RECORDED IN PLAT BOOK 17, PAGE 59, LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 923, PAGE 1018, OF SAID PUBLIC RECORDS, AND STATE ROAD NO. 405 RIGHT OF WAY.

PARCEL 3

THAT PORTION OF U.S. GOVERNMENT LOT NO. 3, SECTION 8, TOWNSHIP 22 SOUTH, RANGE 35 EAST LESS AND EXCEPT LANDS DESCRIBED IN OFFICIAL RECORES BOOK 828, PAGE 918; AND ANY PORTION LYING WITHIN THE RIGHT OF WAY OF STATE ROAD NO. 405 RIGHT OF WAY, ALL OF BREVARD COUNTY, FLORIDA.

SURVEYOR'S NOTES :

1) HORIZONTAL POSITIONS FOR ALL FEATURES SHOWN ON THE MAP ARE RELATIVE TO NORTH AMERICAN DATUM OF 1983 (NAD83), 2011 ADJUSTMENT, STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, AND BEARINGS SHOWN HEREON ARE BASED ON THE NORTH RIGHT WAY OF LINE OF STATE ROAD 405/SOUTH STREET, HAVING A BEARING OF S48°29'45"W, AS MEASURED.

2) LANDS SHOWN HEREON WERE NOT ABSTRACTED FOR RIGHTS-OF-WAY, EASEMENTS, OWNERSHIP OR OTHER INSTRUMENTS OF RECORD BY THIS FIRM.

3) TITLE OPINION OR ABSTRACT OF MATTERS AFFECTING TITLE OR BOUNDARY TO ADJOINING LAND OWNERS HAVE BEEN PROVIDED. IT IS POSSIBLE THERE ARE DEEDS OF RECORD, UNRECORDED DEEDS OR OTHER INSTRUMENTS WHICH COULD AFFECT THE BOUNDARIES OR USE OF THE SUBJECT PROPERTY.

4) THE BOUNDARY CORNERS AND BOUNDARY LINES DEPICTED BY THIS SURVEY WERE ESTABLISHED PER THE DESCRIPTION (SEE ABOVE) AS FURNISHED BY THE CLIENT.

5) MONUMENT OFFSET DIRECTIONS AND DISTANCES ARE COMPUTED IN CARDINAL DIRECTIONS FROM BOUNDARY CORNERS RELATIVE TO THE BEARING BASIS (I.E., N 0.5' = NORTH 0.5').

6) UNLESS OTHERWISE SHOWN HEREON, NO JURISDICTIONAL WETLAND AREAS OR OTHER PHYSICAL TOPOGRAPHIC FEATURES HAVE BEEN LOCATED.

7) UNDERGROUND ENCROACHMENTS, SUCH AS UTILITIES, STRUCTURES, INSTALLATIONS, IMPROVEMENTS AND FOUNDATIONS THAT MAY EXIST, HAVE NOT BEEN FIELD LOCATED EXCEPT AS SHOWN.

8) THIS MAP DOES NOT DETERMINE OR REFLECT OWNERSHIP OF PROPERTY, BOUNDARY LINES AFFECTED BY ADVERSE USE, LINES OF CONFLICTING DEEDS, OR OTHER LINES THAT MAY OTHERWISE BE DETERMINED BY A COURT OF LAW.

9) UNDERGROUND UTILITY LOCATIONS AND IDENTIFICATIONS SHOWN HEREON ARE BASED UPON VISIBLE ABOVE GROUND APPURTENANCES AND DO NOT NECESSARILY SHOW ALL UTILITY LOCATIONS. NO SUBTERRANEAN EXCAVATION HAS BEEN MADE TO DETERMINE UNDERGROUND UTILITY LOCATIONS.

10) TIES FROM BUILDING CORNERS, FENCE CORNERS, SHED CORNERS, ETC., ARE NOT TO BE USED TO REESTABLISH PROPERTY BOUNDARIES.

12) ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS MADE BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

13) THIS SURVEY HAS BEEN PREPARED EXPRESSLY FOR THE NAMED ENTITIES AND IS NOT TRANSFERABLE. NO OTHER PERSON OR ENTITY IS ENTITLED TO RELY UPON AND/OR REUSE THIS SURVEY FOR ANY OTHER PURPOSE WHATSOEVER WITHOUT THE EXPRESS WRITTEN CONSENT OF HAMILTON ENGINEERING & SURVEYING AND THE CERTIFYING PROFESSIONAL SURVEYOR AND MAPPER.

14) NOTHING HEREIN SHALL BE CONSTRUED TO GIVE ANY RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO ON THIS SURVEY. (SEE CERTIFICATION BELOW.)

15) FENCE OWNERSHIP NOT DETERMINED.

16) PRINTED DIMENSIONS SHOWN ON THE MAP OF SURVEY SUPERSEDE SCALED DIMENSIONS. THERE MAY BE ITEMS DRAWN OUT OF SCALE TO GRAPHICALLY SHOW THEIR LOCATION.

17) REPRODUCTION OF THIS SURVEY IS EXPRESSLY FORBIDDEN WITHOUT THE WRITTEN PERMISSION FROM THE SIGNING SURVEYOR.

18) THE WORDS "CERTIFY", "CERTIFIED" OR "CERTIFICATION", AS SHOWN AND USED HEREON, MEAN AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR INPLIED.

19) THIS SURVEY IS A REPRESENTATION OF EXISTING FIELD CONDITIONS AT THE TIME OF THE FIELD SURVEY DATE.

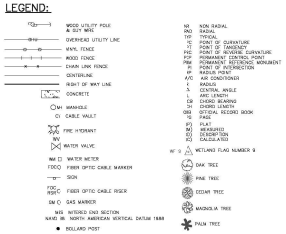
20) THIS SURVEY DOES NOT SHOW OR ADDRESS HANDICAP RAMPS AND SLOPES, SIDEWALK CROSS-SLOPES, EXACT DIMENSIONS OF STRIPING OF HANDICAP PARKING SPACES OR ANY OTHER ITEMS RELATING TO FEDERAL, STATE OR LOCAL HANDICAP COMPLIANCE MATTERS.

21) THE DATE OF SIGNATURE DOES NOT UPDATE OR SUPERSEDE THE DATE OF SURVEY.

22) VERTICAL INFORMATION IS BASED ON BREVARD COUNTY BENCHMARK
DESIGNATION: CSA17
ELEVATION: 23.170 NORTH AMERICAN VERTICAL DATUM 1988
DESCRIPTION: STATION IS LOCATED 18 FT SOUTHEAST OF THE EDGE OF PAVEMENT OF SR 405, 130 FT NORTHEAST OF THE EXTENDED CL OF SINGLETON AVE & NORTH OF DRIVE # 2825

COPYRIGHT 2022 – HAMILTON ENGINEERING & SURVEYING, INC.

LEGEND:



Digitally signed by Gregory S Locklin
DN: cn=Gregory S Locklin, o, ou, email=greglocklin@gmail.com, c=US
Date: 2022.03.01 12:04:30 -05'00'

PRELIMINARY

Certified to:

Standard Investments & Holdings, LLC

I hereby certify that this survey, subject to the surveyor's notes contained hereon, meets the applicable "Standards of Practice" set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 5J-17.05, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.
Date of field work: February 2, 2022

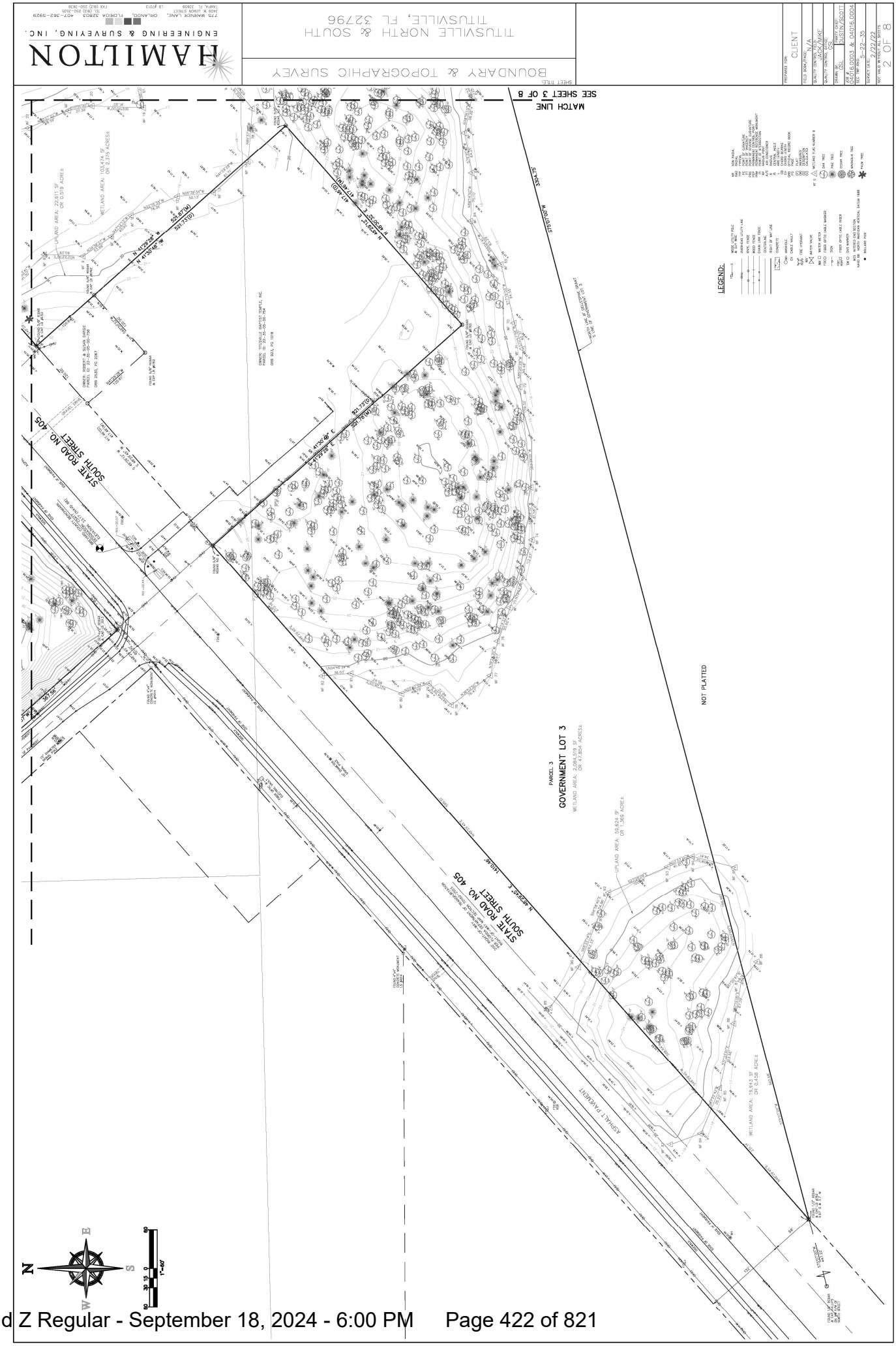
GREGORY S. LOCKLIN, PSM — Signature Date
FLORIDA REGISTRATION NO. 5619
CERTIFICATE OF AUTHORIZATION NO. LB 7013
Not valid without the signature and the original raised seal of a Florida Licensed Surveyor and Mapper

HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARNER LANE, SUITE 101
CASSELBERRY, FLORIDA 32707
407-363-5939
FAX (407) 260-1363
LB #7013

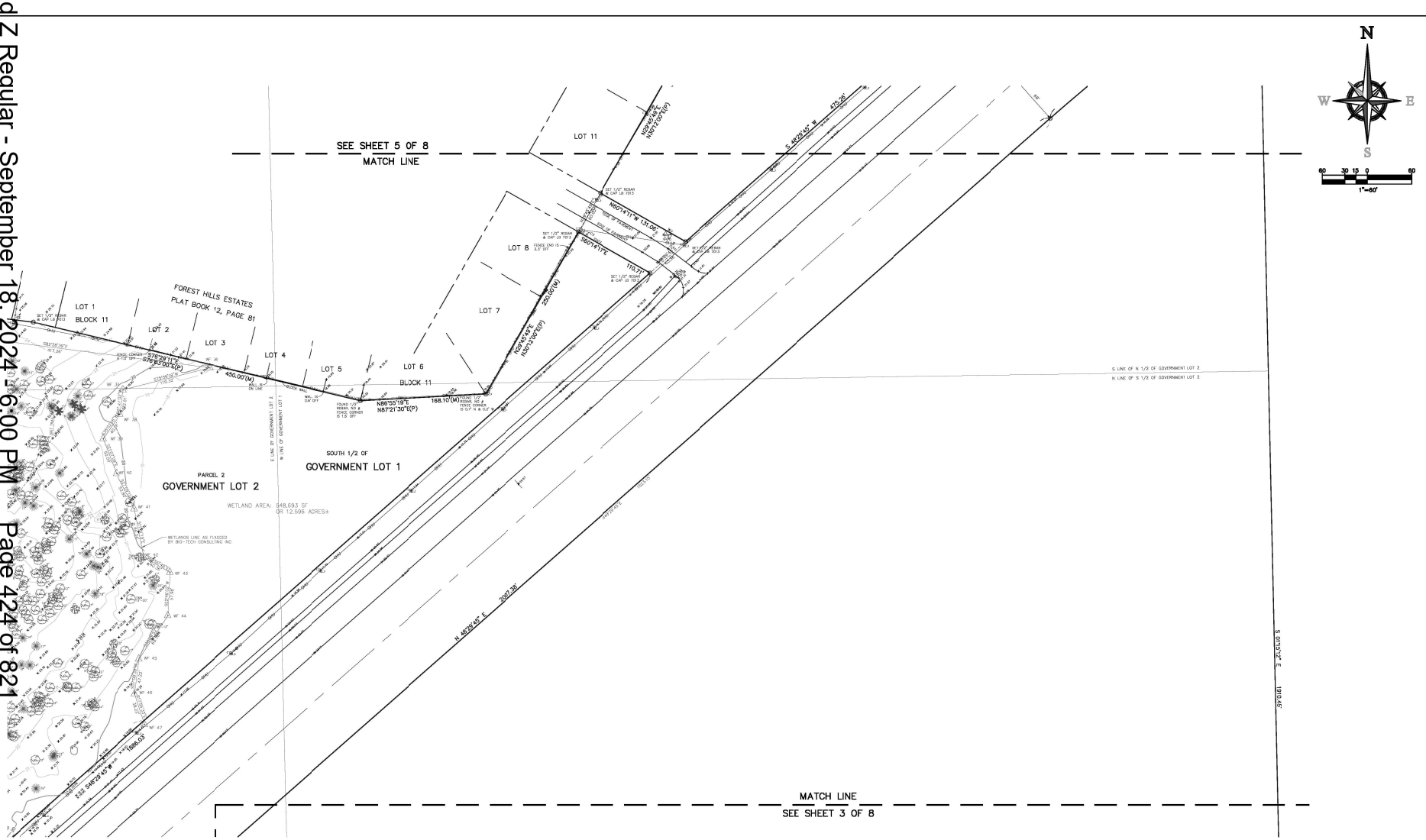
SHEET TITLE: BOUNDARY & TOPOGRAPHIC SURVEY

TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796

PREPARED FOR:	CLIENT
FIELD BOOK/PAGE:	N/A
QUALITY CONTROL FIELD:	JACK/MIKE
QUALITY CONTROL OFFICE:	GSL
DRAWN BY:	GSL
DRAFT CHK'D:	DUSTIN/SCOTT
JOB #	04016.0003 & 04016.0004
SEC TWP RNG:	5-22-35
SURVEY (DATE):	2/22/22
NOT VALID WITHOUT ALL SHEETS	1 OF 8


BOUNDARY & TOPOGRAPHIC SURVEY
TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796
HAMILTON
ENGINEERING & SURVEYING, INC.
CLIENT
N/A
JACK/MIKE
GSI
JUSTIN/SCOTT
04016.0003 & 04016.0004
5-22-35
7/22/22
2 OF 8
MATCH LINE
SEE SHEET 3 OF 8
SHEET 5
SHEET 6
LEGEND:
NOT PLATTED
PARCEL 3
GOVERNMENT LOT 3
WETLAND AREA: 21,084,519 SF
OR 47.824 ACRES
UPLAND AREA: 59,624 SF
OR 1.369 ACRES
WETLAND AREA: 19,943 SF
OR 0.458 ACRES
STATE ROAD NO. 405
SOUTH STREET
ASPHALT PAVEMENT
N 45°30'00" E
S 45°30'00" W
N 44°30'00" W
S 44°30'00" E
N 45°30'00" E 1,147.40(M)
S 45°30'00" W 1,147.40(D)
N 44°30'00" W 521.77(M)
521.77(D)
S 44°30'00" E 521.77(M)
521.77(D)
N 45°30'00" E 1,147.40(M)
S 45°30'00" W 1,147.40

HAMILTON
ENGINEERING & SURVEYING, INC.
BOUNDARY & TOPOGRAPHIC SURVEY
TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796
CLIENT
N/A
JACK/MARC
GSL
JUSTIN/SCOTT
04/16.0003 & 04016.0004
7-22-35
7/22/22
3 OF 8
LEGEND:
SECTION 4-22-35
SECTION 9-22-35
SECTION 5-22-35
SECTION 8-22-35
PARCEL 3
GOVERNMENT LOT 3
BLOCK E
COUNTRY CLUB HEIGHTS
PLAT BOOK 12, PAGE 23
SOUTH 1/2 OF
GOVERNMENT LOT 1
WETLAND AREA: 2,084,519 SF
OR 47.854 ACRES±
UPLAND AREA: 621,725 SF
OR 14.245 ± ACRES
POND
SEE SHEET 4 OF 6
MATCH LINE
SEE SHEET 2 OF 8
MATCH LINE

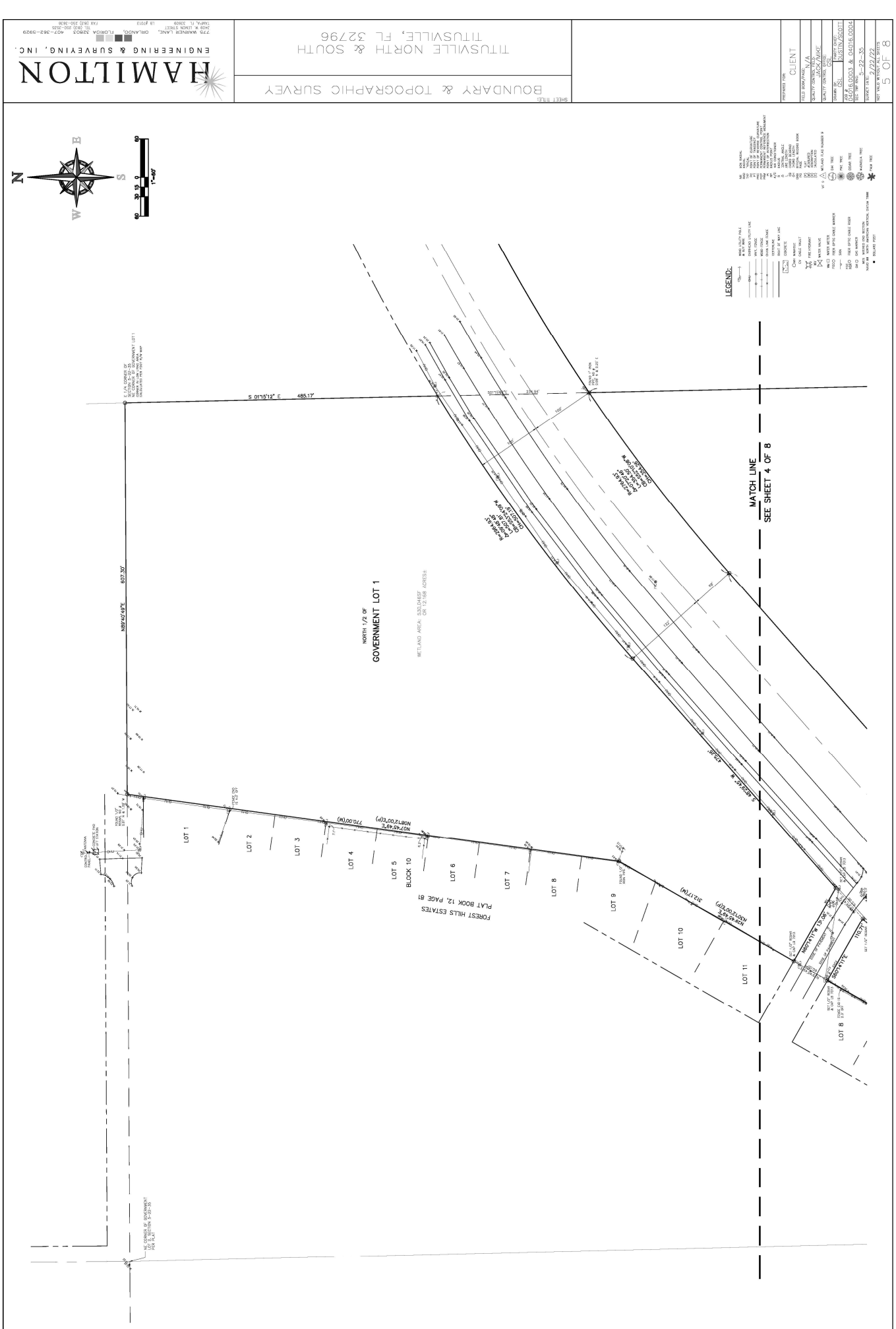


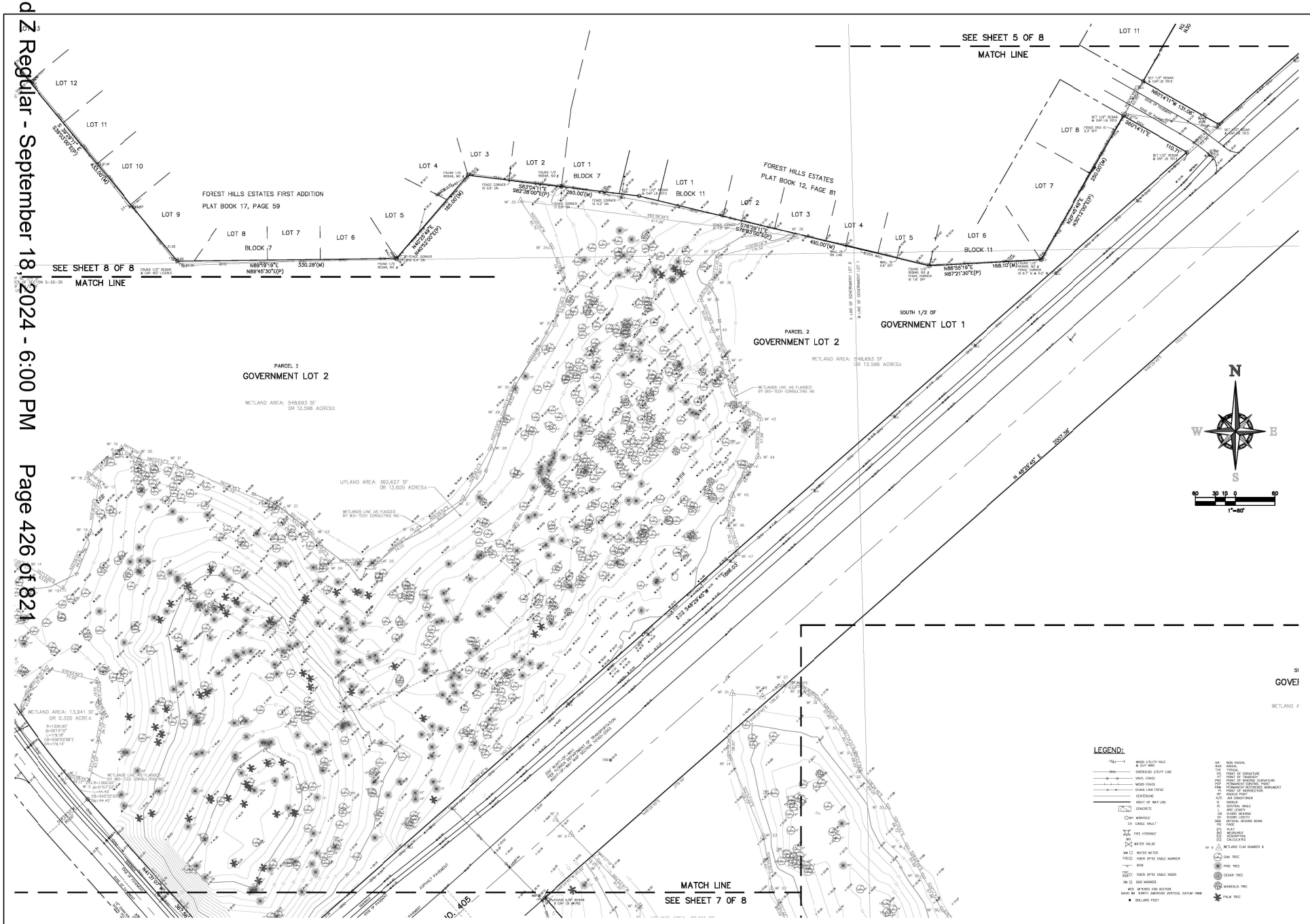
LEGEND:

HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARRINGTON LANE, ORLANDO, FLORIDA 32803 407-362-5939
LAKE N. FL 32609 352-365-3636
LB #7013

SHEET TITLE: BOUNDARY & TOPOGRAPHIC SURVEY

PREPARED FOR: CLIENT
FIELD BOOK/PAGE: N/A
QUALITY CONTROL FIELD: JACK/MIKE
QUALITY CONTROL OFFICE: GSL
DRAWN BY: GSL
CHIEF CHIEF: DUSTIN/SCOTT
JOB #: 04016.0003 & 04016.0004
SEC TWP RNG: 5-22-35
SURVEY DATE: 2/22/22
NOT VALID WITHOUT ALL SHEETS
4 OF 8


HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARNER LANE, ORLANDO, FLORIDA 32803 407-362-9929
7439 W. LINEBAUGH AVENUE, TAMPA, FL 33625 TEL (813) 265-3535 FAX (813) 265-3636
LB #7013
BOUNDARY & TOPOGRAPHIC SURVEY
TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796
SHEET TITLE:
PREPARED FOR:
CLIENT
FIELD BOOK/PAGE: N/A
QUALITY CONTROL: JACK/MIKE
QUALITY CONTROL: GSL
DRAWN BY: GSL
PROJECT CAD: DISTN/SCOTT
04016.0003 & 04016.0004
SEC TWP RNG: 5-22-35
SURVEY DATE: 7/22/22
NOT VALID W/OUT ALL SHEETS
5 OF 8
N
S
E
W
1"=60'
LEGEND:
MATCH LINE
SEE SHEET 4 OF 8
NORTH 1/2 OF
GOVERNMENT LOT 1
WETLAND AREA: 530,046SF
OR 12.168 ACRES±
S 01°15'12" E 485.17'
N89°40'49"E 607.30'
S 89°59'49" W 1320.00'
FOREST HILLS ESTATES
PLAT BOOK 12, PAGE 81
BLOCK 10
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
N07°43'49"E 770.00'(M)
N08°17'00"E(P)
312.17'(M)
N07°43'49"E 770.00'
N08°17'00"E(P)
N89°41'11"W 131.08'
110.27'
S89°41'11"E
SET 1/2" REBAR
W/ CAP "HAMILTON LB 7013"
SET 5/8" REBAR
W/ CAP "HAMILTON LB 7013"
FOUND 1/2" IRON BAR
NO CORNER OR IRON FOUND
PER PLAT
NO CORNER OR IRON FOUND
PER PLAT

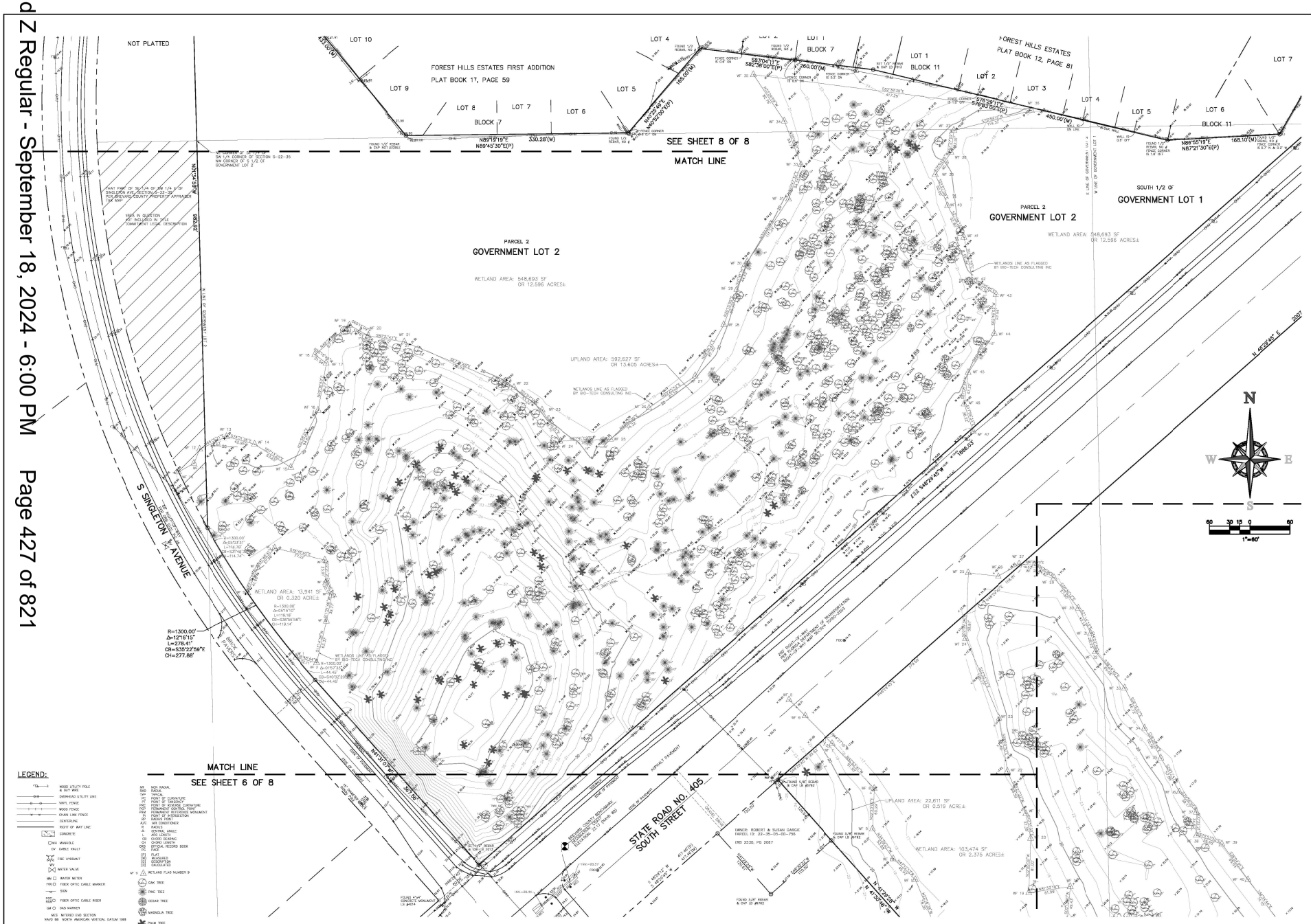


HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARNER LANE, ORLANDO, FLORIDA 32803 407-363-5939
SUITE A, FL 33619 CA #7513 LB #7513

SHEET TITLE:
BOUNDARY & TOPOGRAPHIC SURVEY

TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796

PREPARED FOR:	CLIENT
FIELD BOOK/PAGE:	N/A
QUALITY CONTROL FIELD:	JACK/MIKE
QUALITY CONTROL OFFICE:	GSL
DRAWN BY: GSL	CHKD BY: DUSTIN/SCOTT
JOB #:	04016.0003 & 04016.0004
SEC TWP RNG:	5-22-35
SURVEY DATE:	2/22/22
NOT VALID WITHOUT ALL SHEETS	6 OF 8



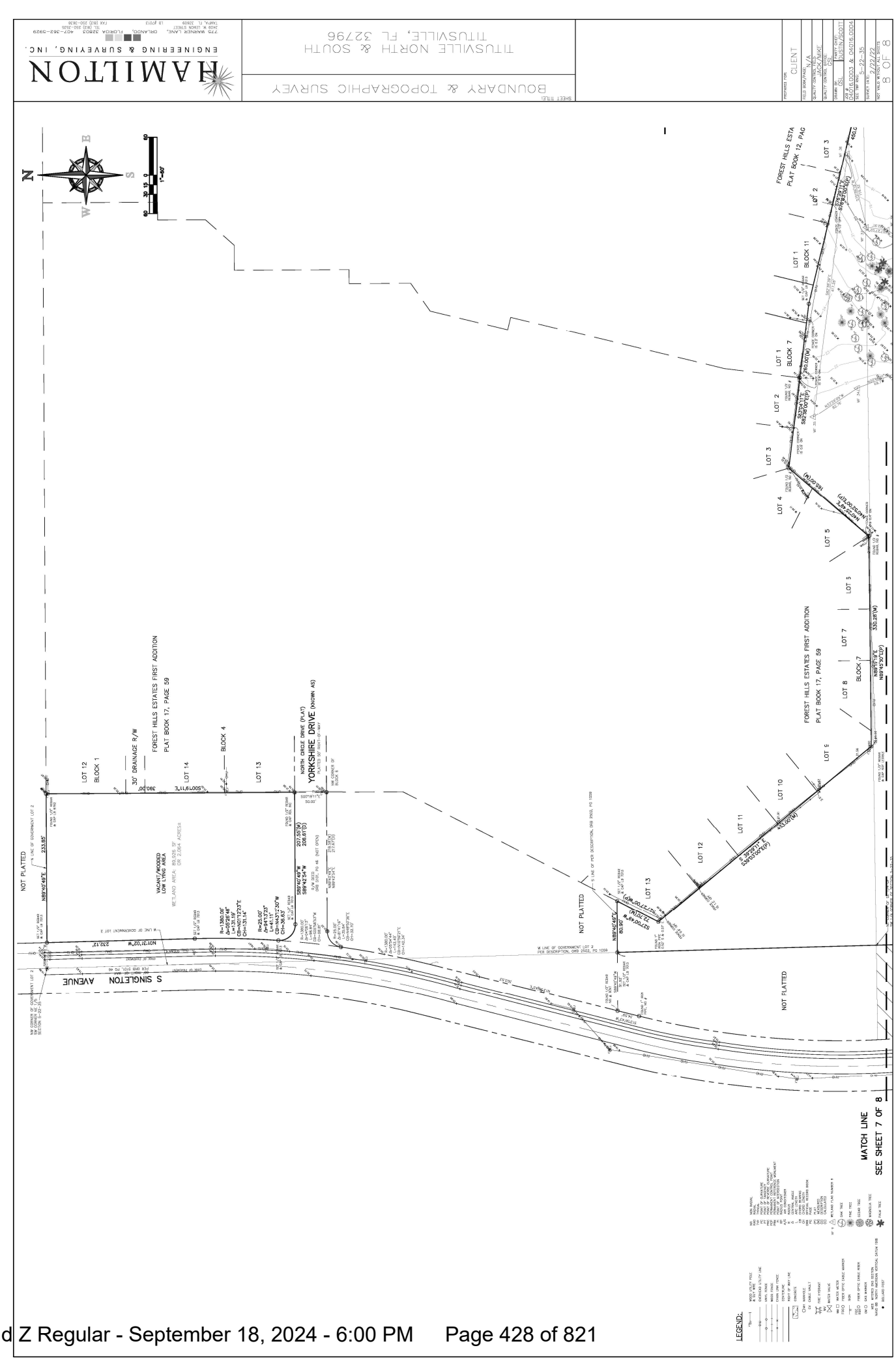
HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARRINGTON LANE, ORLANDO, FLORIDA 32803 (407) 363-5939
LAND SURVEYING BUSINESS #LB 3313

SHEET TITLE:
BOUNDARY & TOPOGRAPHIC SURVEY

TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796

PREPARED FOR:
CLIENT

FIELD BOOK/PAGE: N/A
QUALITY CONTROL FIELD: JACK/MIKE
QUALITY CONTROL OFFICE: GSL
DRAWN BY: GSL
PARTY CHIEF: DUSTIN/SCOTT
JOB #: 04016.0003 & 04016.0004
SEC TWP RNG: 5-22-35
SURVEY DATE: 2/22/22
NOT VALID WITHOUT ALL SHEETS
7 OF 8


HAMILTON
ENGINEERING & SURVEYING, INC.
775 WARNER LANE, ORLANDO, FLORIDA 32803
TAMPA, FL 33609 (813) 250-3636 FAX (813) 250-3635
LB #7013
SHEET TITLE:
BOUNDARY & TOPOGRAPHIC SURVEY
TITUSVILLE NORTH & SOUTH
TITUSVILLE, FL 32796
PREPARED FOR:
CLIENT
FIELD BOOK/PAGE: N/A
QUALITY CONTROL: MCD
QUALITY CONTROL: JACK/MARC
DRAWN BY: GSL
PROJECT CAD: DUSTIN/SCOTT
PROJECT #: 04016.0003 & 04016.0004
SEC TWP RNG: 5-22-35
SURVEY DATE: 7/22/22
NOT VALID W/O ALL SHEETS
8 OF 8
N
S
E
W
1"=60'
60
30
15
0
FOREST HILLS ESTA
PLAT BOOK 12, PAG
LOT 3
LOT 2
LOT 1
BLOCK 11
LOT 1
BLOCK 7
LOT 2
LOT 3
LOT 4
LOT 5
LOT 5
LOT 8
LOT 7
BLOCK 7
LOT 6
LOT 10
LOT 11
LOT 12
LOT 13
FOREST HILLS ESTATES FIRST ADDITION
PLAT BOOK 17, PAGE 59
30' DRAINAGE R/W
FOREST HILLS ESTATES FIRST ADDITION
PLAT BOOK 17, PAGE 59
LOT 12
BLOCK 1
LOT 14
BLOCK 4
LOT 13
NORTH CIRCLE DRIVE (PLAT)
YORKSHIRE DRIVE (KNOWN AS)
PLATTED 50' RIGHT-OF-WAY
NOT PLATTED
N89°40'49"E
233.85'
N LINE OF GOVERNMENT LOT 2
VACANT/WOODED
LOW LYING AREA
WETLAND AREA: 89,026 SF
OR 2.044 ACRES±
NOT PLATTED
NOT PLATTED
NOT PLATTED
S LINE OF PER DESCRIPTION, ORB 2502, PG 1059
N LINE OF GOVERNMENT LOT 2
PER DESCRIPTION, ORB 2502, PG 1059
S SINGLETON AVENUE
NW CORNER OF GOVERNMENT LOT 2
SW CORNER OF GOVERNMENT LOT 2
N01°31'02"W
212.12'
MATCH LINE
SEE SHEET 7 OF 8
LEGEND:

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 531.56 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 38.21 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 54°47'19" WEST, A DISTANCE OF 39.63 FEET; THENCE SOUTH 76°01'09" WEST, A DISTANCE OF 96.65 FEET; THENCE SOUTH 79°00'01" WEST, A DISTANCE OF 109.34 FEET; THENCE SOUTH 72°15'35" WEST, A DISTANCE OF 110.33 FEET; THENCE SOUTH 77°43'07" WEST, A DISTANCE OF 79.24 FEET; THENCE SOUTH 82°30'18" WEST, A DISTANCE OF 17.52 FEET; THENCE NORTH 68°04'35" EAST, A DISTANCE OF 159.68 FEET; THENCE NORTH 73°38'50" EAST, A DISTANCE OF 78.05 FEET; THENCE NORTH 58°25'51" WEST, A DISTANCE OF 48.51 FEET; THENCE NORTH 32°06'17" WEST, A DISTANCE OF 59.96 FEET; THENCE NORTH 28°14'18" WEST, A DISTANCE OF 70.27 FEET; THENCE NORTH 47°00'12" WEST, A DISTANCE OF 63.20 FEET; THENCE NORTH 67°35'35" WEST, A DISTANCE OF 62.03 FEET; THENCE NORTH 40°52'38" WEST, A DISTANCE OF 66.62 FEET; THENCE NORTH 76°00'08" WEST, A DISTANCE OF 49.47 FEET; THENCE NORTH 62°26'17" WEST, A DISTANCE OF 49.96 FEET; THENCE NORTH 36°20'31" WEST, A DISTANCE OF 141.79 FEET; THENCE NORTH 70°53'52" WEST, A DISTANCE OF 39.65 FEET; THENCE NORTH 00°22'21" WEST, A DISTANCE OF 34.62 FEET; THENCE NORTH 39°56'07" WEST, A DISTANCE OF 39.17 FEET; THENCE NORTH 29°17'47" WEST, A DISTANCE OF 57.86 FEET; THENCE NORTH 28°20'49" WEST, A DISTANCE OF 50.56 FEET; THENCE NORTH 23°40'17" WEST, A DISTANCE OF 63.65 FEET; THENCE NORTH 40°15'23" WEST, A DISTANCE OF 72.76 FEET; THENCE NORTH 14°23'39" WEST, A DISTANCE OF 28.25 FEET; THENCE NORTH 33°44'54" WEST, A DISTANCE OF 99.27 FEET; THENCE NORTH 67°10'37" WEST, A DISTANCE OF 52.53 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°29'31" EAST ALONG SAID SOUTHERLY RIGHT A WAY, A DISTANCE OF 155.51 FEET; THENCE SOUTH 01°32'33" EAST, A DISTANCE OF 49.39 FEET; THENCE SOUTH 30°29'30" EAST, A DISTANCE OF 24.11 FEET; THENCE SOUTH 30°02'47" EAST, A DISTANCE OF 44.82 FEET; THENCE SOUTH 28°16'46" EAST, A DISTANCE OF 31.30 FEET; THENCE SOUTH 25°16'49" EAST, A DISTANCE OF 139.25 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY,

CONTINUED ON SHEET 2

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
14:08:18 2024.07.29
'00'04-

HARRY B. ROGERS III License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE PROXIMATE SOUTH LINE OF GORMENT LOT 3, HAVING A GRID BEARING OF S 75°06'58" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 34243

FUTURE LAND USE
LOW DENSITY TO CONSERVATION
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	1/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch) harryr Jul 26, 2024 - 1:23pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

CONTINUED FROM SHEET 1

HAVING A RADIUS OF 645.41 FEET AND A CHORD WHICH BEARS SOUTH 34°53'24" EAST AND A DISTANCE OF 149.07 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 149.40 FEET; THENCE SOUTH 40°33'10" EAST, A DISTANCE OF 85.64 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 197.67 FEET AND A CHORD WHICH BEARS SOUTH 60°20'57" EAST, A DISTANCE 133.89 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 136.60 FEET; THENCE SOUTH 77°48'24" EAST, A DISTANCE OF 121.52 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 416.53 FEET AND A CHORD WHICH BEARS SOUTH 70°56'43" EAST AND A DISTANCE OF 140.31 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 140.99 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 943.10 FEET AND A CHORD WHICH BEARS SOUTH 70°09'47" EAST AND A DISTANCE OF 86.42 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 86.45 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A RADIUS OF 106.21 FEET AND A CHORD WHICH BEARS SOUTH 55°53'26" EAST, AND A DISTANCE OF 61.75 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 62.65 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 337.29 FEET AND A CHORD WHICH BEARS SOUTH 25°56'58" EAST A DISTANCE OF 152.24 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 153.56 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 144.10 FEET AND A CHORD WHICH BEARS SOUTH 04°43'51" EAST A DISTANCE OF 40.99 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 41.13 FEET; THENCE SOUTH 07°31'10" EAST, A DISTANCE OF 24.07 FEET; THENCE SOUTH 04°13'12" WEST, A DISTANCE OF 33.09 FEET TO THE POINT OF BEGINNING.

CONTAINING 195,888.48 SQUARE FEET OR 4.50 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 700.64 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 75°06'58" WEST, ALONG SAID LINE, A DISTANCE OF 1492.93 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT (B); THENCE NORTH 14°08'52" EAST, A DISTANCE OF 34.85 FEET; THENCE NORTH 23°09'04" WEST, A DISTANCE OF 142.28 FEET; THENCE NORTH 67°52'10" WEST, A DISTANCE OF 118.31 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID SOUTHERLY RIGHT OF WAY, A DISTANCE OF 599.31 FEET; THENCE SOUTH 04°46'39" EAST, A DISTANCE OF 36.37 FEET; THENCE SOUTH 21°26'05" WEST, A DISTANCE OF 85.92 FEET; THENCE SOUTH 20°42'59" EAST, A DISTANCE OF 45.79 FEET; THENCE SOUTH 07°10'23" EAST, A DISTANCE OF 97.01 FEET; THENCE SOUTH 78°24'30" EAST, A DISTANCE OF 55.67 FEET; THENCE SOUTH 69°19'37" EAST, A DISTANCE OF 55.60 FEET; THENCE SOUTH 72°03'56" EAST, A DISTANCE OF 112.07 FEET; THENCE NORTH 88°59'32" EAST, A DISTANCE OF 81.58 FEET; THENCE NORTH 83°39'01" EAST, A DISTANCE OF 159.32 FEET; THENCE SOUTH 85°20'29" EAST, A DISTANCE OF 59.48 FEET; THENCE NORTH 70°57'56" EAST, A DISTANCE OF 42.37 FEET; THENCE NORTH 75°18'21" EAST, A DISTANCE OF 131.68 FEET; THENCE NORTH 43°25'45" EAST, A DISTANCE OF 48.25 FEET; THENCE SOUTH 88°14'50" EAST, A DISTANCE OF 75.10 FEET; THENCE NORTH 79°30'10" EAST, A DISTANCE OF 64.28 FEET; THENCE SOUTH 78°18'15" EAST, A DISTANCE OF 58.26 FEET; THENCE NORTH 66°33'07" EAST, A DISTANCE OF 25.42 FEET; THENCE NORTH 63°01'51" EAST, A DISTANCE OF 68.03 FEET; THENCE SOUTH 77°32'14" EAST, A DISTANCE OF 51.75 FEET; THENCE NORTH 72°49'19" EAST, A DISTANCE OF 71.37 FEET; THENCE SOUTH 34°36'19" EAST, A DISTANCE OF 35.78 FEET; THENCE NORTH 77°48'50" EAST, A DISTANCE OF 12.95 FEET; THENCE SOUTH 18°29'37" EAST, A DISTANCE OF 21.04 FEET TO THE POINT OF BEGINNING.

CONTAINING 274,792.6508 SQUARE FEET OR 6.31 ACRES, MORE OR LESS.

CONTINUED ON SHEET 3

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 34240

FUTURE LAND USE
LOW DENSITY TO CONSERVATION
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	2042250001	GCT	07/26/2024	2/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (2)) herryr Jul 26, 2024 - 1:25pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

CONTINUED FROM SHEET 2

TOGETHER WITH

PARCEL 3

COMMENCE AT REFERENCE POINT "B"; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 186.92 FEET; TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 75°06'58" WEST, ALONG SAID LINE, A DISTANCE OF 396.33 FEET TO THE SOUTHERLY RIGHT OF WAY OF STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID SOUTHERLY RIGHT OF WAY, A DISTANCE OF 233.78 FEET; THENCE SOUTH 67°22'42" EAST, A DISTANCE OF 36.69 FEET; THENCE SOUTH 77°33'51" EAST, A DISTANCE OF 103.56 FEET; THENCE SOUTH 80°15'06" EAST, A DISTANCE OF 67.39 FEET; THENCE SOUTH 51°20'37" EAST, A DISTANCE OF 8.15 FEET TO THE POINT OF BEGINNING.

CONTAINING 20,295.52 SQUARE FEET OR 0.47 ACRES, MORE OR LESS.

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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8340 CONSUMER CIRCLE SARASOTA, FL 32807

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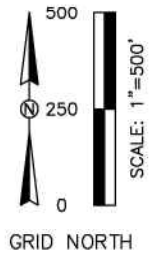
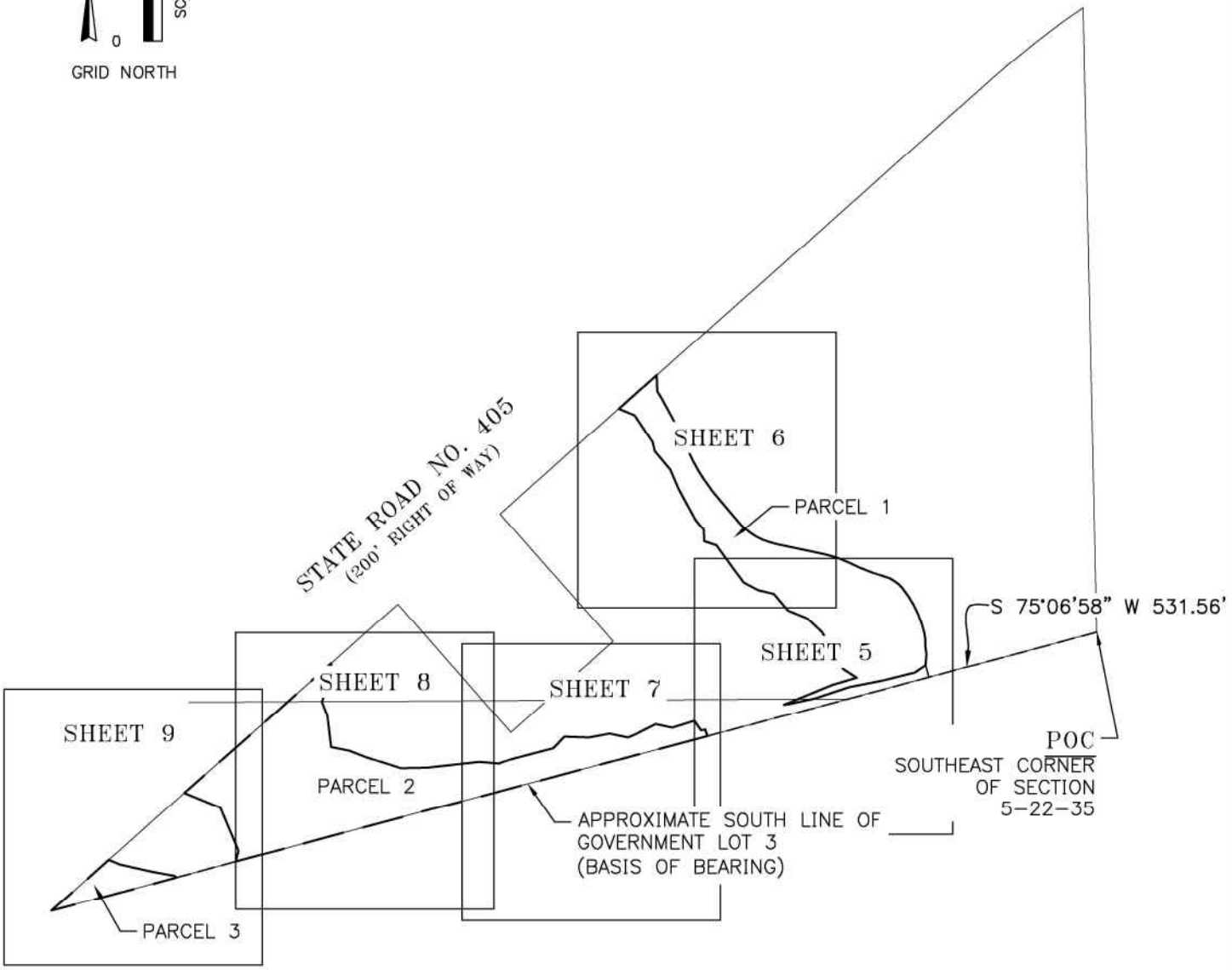
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	3/11

P and Z Regular - September 18, 2024 - 6:00 PM Page 431 of 821

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"





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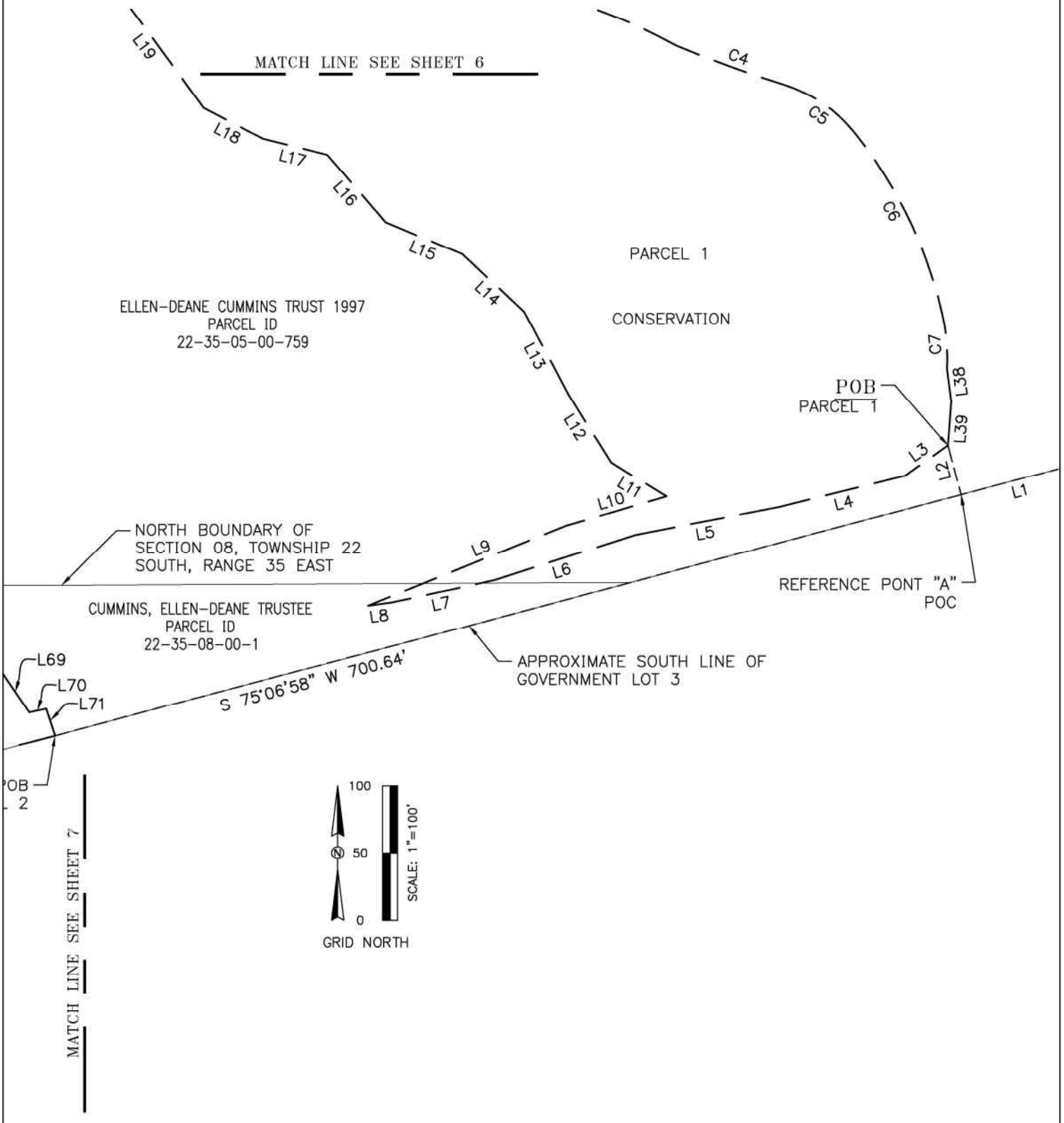
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	24225.0001	GCT	07/26/2024	4/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (4)) harryr Jul 26, 2024 - 1:26pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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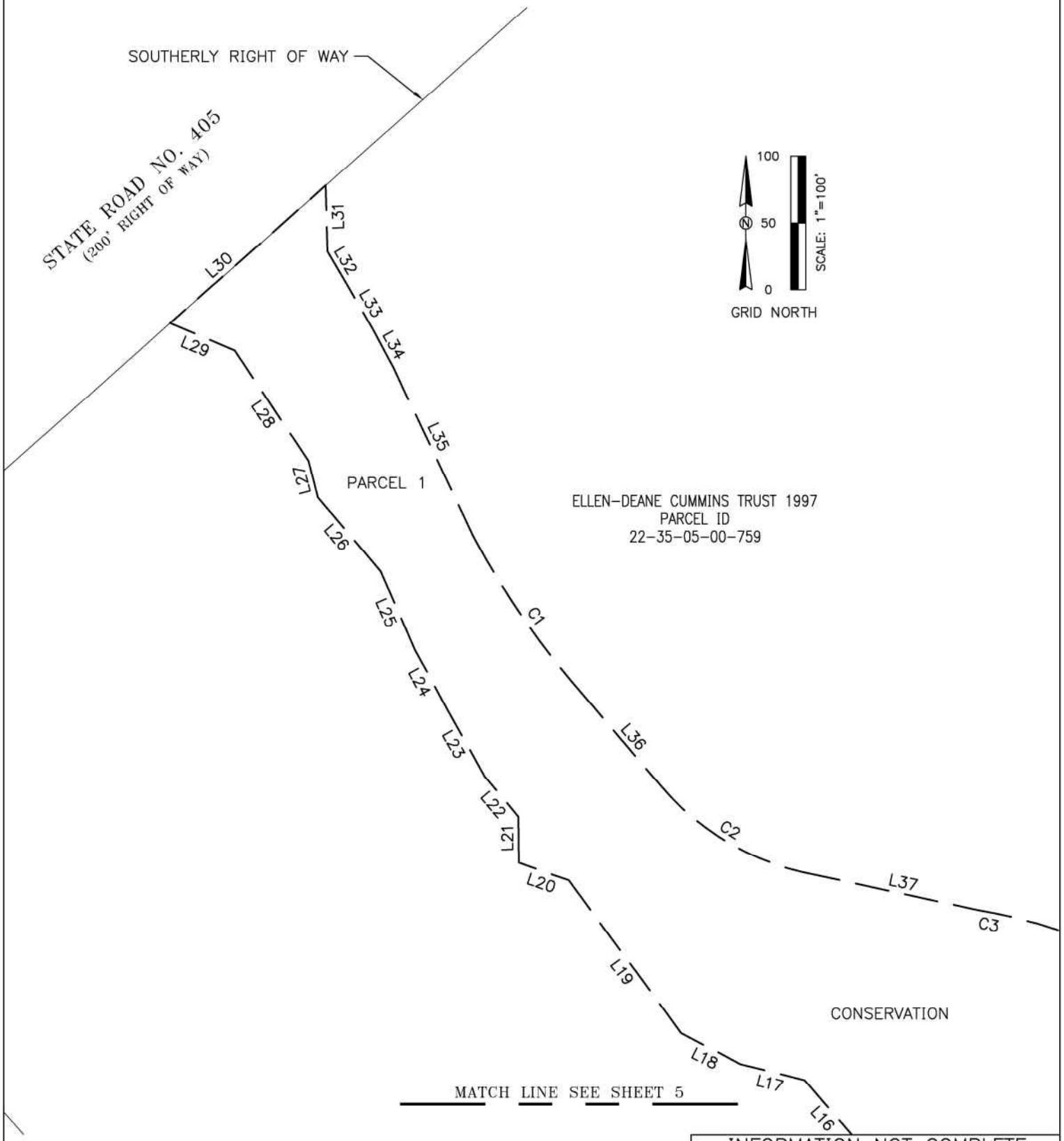
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	5/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (5)) harryr Jul 26, 2024 - 1:26pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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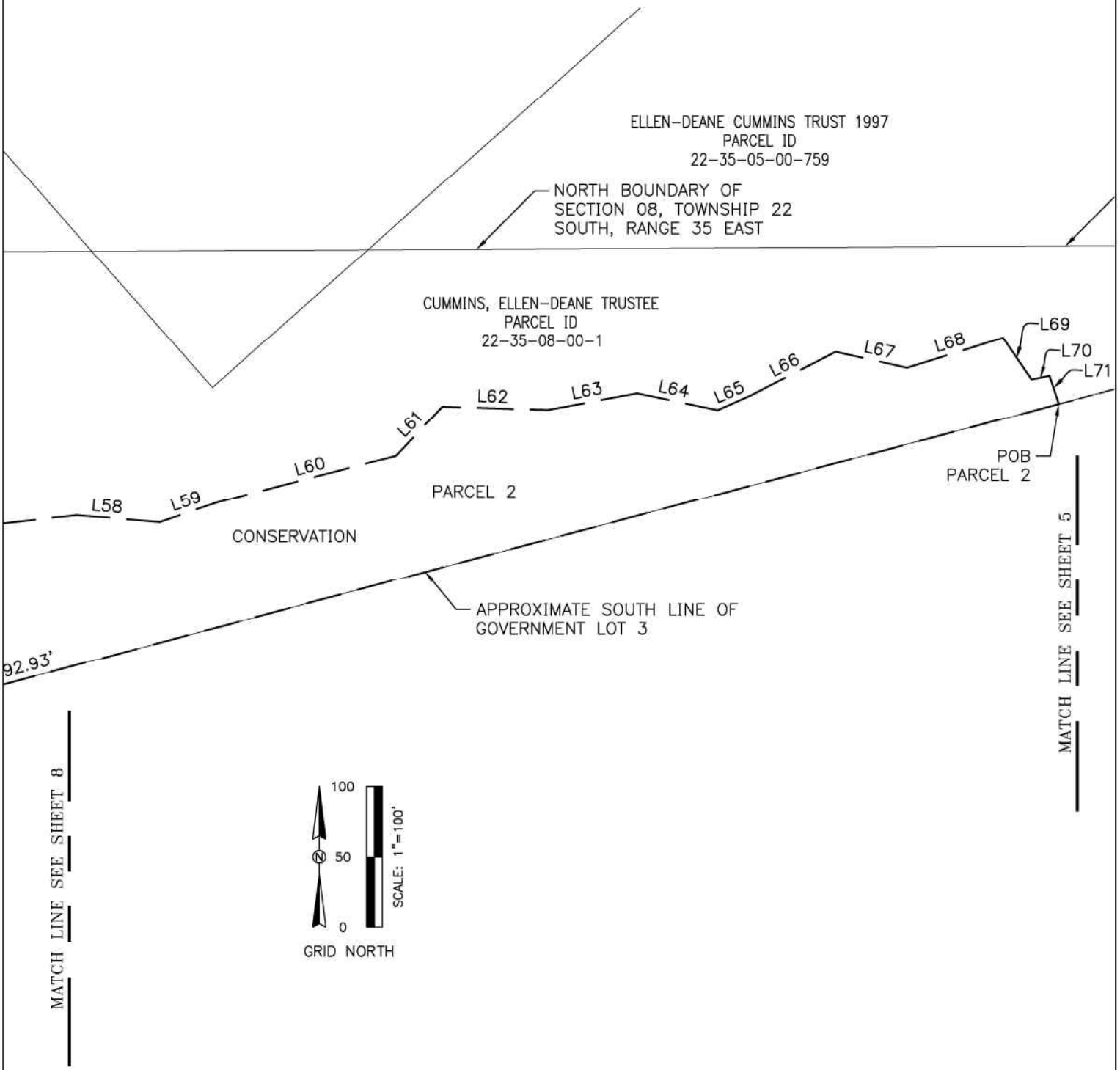
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	6/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (6)) herryr Jul 26, 2024 - 1:27pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	7/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (7)) herryr Jul 26, 2024 - 1:27pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

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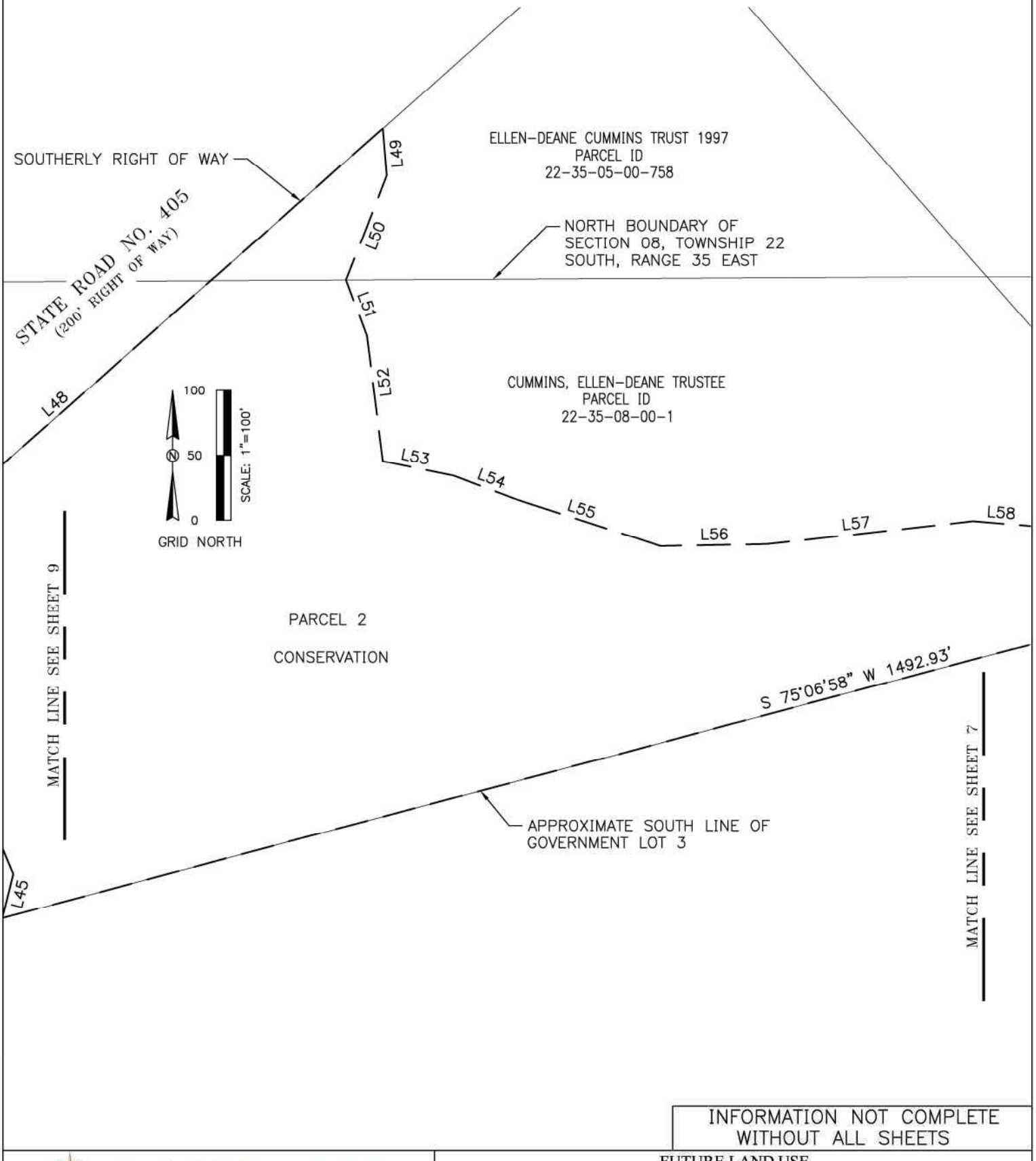

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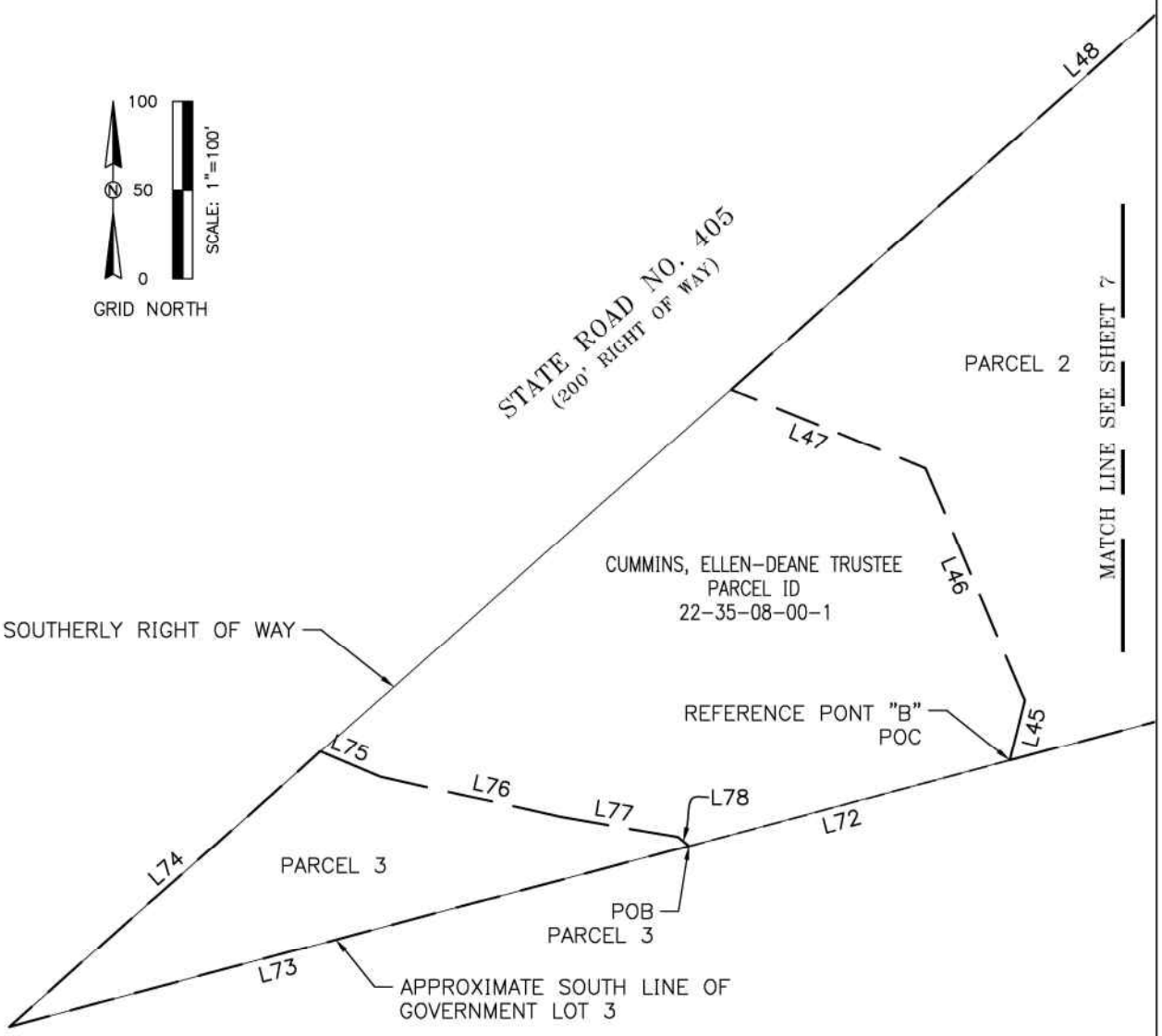
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	8/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (8)) harryr Jul 26, 2024 - 1:27pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	9/11

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SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 75°06'58" W	531.56'
L2	N 14°53'02" W	38.21'
L3	S 54°47'19" W	39.63'
L4	S 76°01'09" W	96.65'
L5	S 79°00'01" W	109.34'
L6	S 72°15'35" W	110.33'
L7	S 77°43'07" W	79.24'
L8	S 82°30'18" W	17.52'
L9	N 68°04'35" E	159.68'
L10	N 73°38'50" E	78.05'
L11	N 58°25'51" W	48.51'
L12	N 32°06'17" W	59.96'
L13	N 28°14'18" W	70.27'
L14	N 47°00'12" W	63.20'
L15	N 67°35'35" W	62.03'
L16	N 40°52'38" W	66.62'
L17	N 76°00'08" W	49.47'
L18	N 62°26'17" W	49.96'
L19	N 36°20'31" W	141.79'
L20	N 70°53'52" W	39.65'
L21	N 00°22'21" W	34.62'
L22	N 39°56'07" W	39.17'
L23	N 29°17'47" W	57.86'
L24	N 28°20'49" W	50.56'
L25	N 23°40'17" W	63.65'
L26	N 40°15'23" W	72.76'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L27	N 14°23'39" W	28.25'
L28	N 33°44'54" W	99.27'
L29	N 67°10'37" W	52.53'
L30	N 48°29'31" E	155.51'
L31	S 01°32'33" E	49.39'
L32	S 30°29'30" E	24.11'
L33	S 30°02'47" E	44.82'
L34	S 28°16'46" E	31.30'
L35	S 25°16'49" E	139.25'
L36	S 40°33'10" E	85.64'
L37	S 77°48'24" E	121.52'
L38	S 07°31'10" E	24.07'
L39	S 04°13'12" W	33.09'
L45	N 14°08'52" E	34.85'
L46	N 23°09'04" W	142.28'
L47	N 67°52'10" W	118.31'
L48	N 48°33'44" E	599.31'
L49	S 04°46'39" E	36.37'
L50	S 21°26'05" W	85.92'
L51	S 20°42'59" E	45.79'
L52	S 07°10'23" E	97.01'
L53	S 78°24'30" E	55.67'
L54	S 69°19'37" E	55.60'
L55	S 72°03'56" E	112.07'
L56	N 88°59'32" E	81.58'
L57	N 83°39'01" E	159.32'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L58	S 85°20'29" E	59.48'
L59	N 70°57'56" E	42.37'
L60	N 75°18'21" E	131.68'
L61	N 43°25'45" E	48.25'
L62	S 88°14'50" E	75.10'
L63	N 79°30'10" E	64.28'
L64	S 78°18'15" E	58.26'
L65	N 66°33'07" E	25.42'
L66	N 63°01'51" E	68.03'
L67	S 77°32'14" E	51.75'
L68	N 72°49'19" E	71.37'
L69	S 34°36'19" E	35.78'
L70	N 77°48'50" E	12.95'
L71	S 18°29'37" E	21.04'
L72	S 75°06'58" W	186.92'
L73	S 75°06'58" W	396.33'
L74	N 48°33'44" E	233.78'
L75	S 67°22'42" E	36.69'
L76	S 77°33'51" E	103.56'
L77	S 80°15'06" E	67.39'
L78	S 51°20'37" E	8.15'

L40 THRU L44 NOT USED

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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	10/11

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\Future Land Use Sketches\South\South- Low Density to Conservation revised.dwg (Sketch (10)) harryr Jul 26, 2024 - 1:30pm

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	645.41'	S 34°53'24" E	149.07'	149.40'	13°15'46"
C2	197.67'	S 60°20'57" E	133.89'	136.60'	39°35'35"
C3	416.53'	S 70°56'43" E	140.31'	140.99'	19°23'36"
C4	943.10'	S 70°09'47" E	86.42'	86.45'	5°15'08"
C5	106.21'	S 55°53'26" E	61.75'	62.65'	33°47'50"
C6	337.29'	S 25°56'58" E	152.24'	153.56'	26°05'07"
C7	144.10'	S 04°43'51" E	40.99'	41.13'	16°21'08"

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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	11/11

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SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1
COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 981.17 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 33.73 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 68°04'35" WEST, A DISTANCE OF 22.75 FEET; THENCE SOUTH 74°13'54" WEST, A DISTANCE OF 121.16 FEET; THENCE SOUTH 63°56'35" WEST, A DISTANCE OF 54.96 FEET; THENCE SOUTH 77°48'50" WEST, A DISTANCE OF 54.77 FEET; THENCE NORTH 18°27'34" WEST, A DISTANCE OF 29.12 FEET; THENCE NORTH 43°54'16" EAST, A DISTANCE OF 31.20 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°57'46" EAST, A DISTANCE OF 116.79 FEET; THENCE NORTH 82°30'22" EAST, A DISTANCE OF 113.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 5,964.53 SQUARE FEET OR 0.14 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2
COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 39°59'21" WEST, A DISTANCE OF 267.56 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH 09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.308 ACRES, MORE OR LESS.

Legend:

INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
'00'04- 14:07:46 2024.07.29

HARRY B. ROGERS License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE PROXIMATE SOUTH LINE OF GORMENT LOT 3, HAVING A GRID BEARING OF S 75°06'58" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

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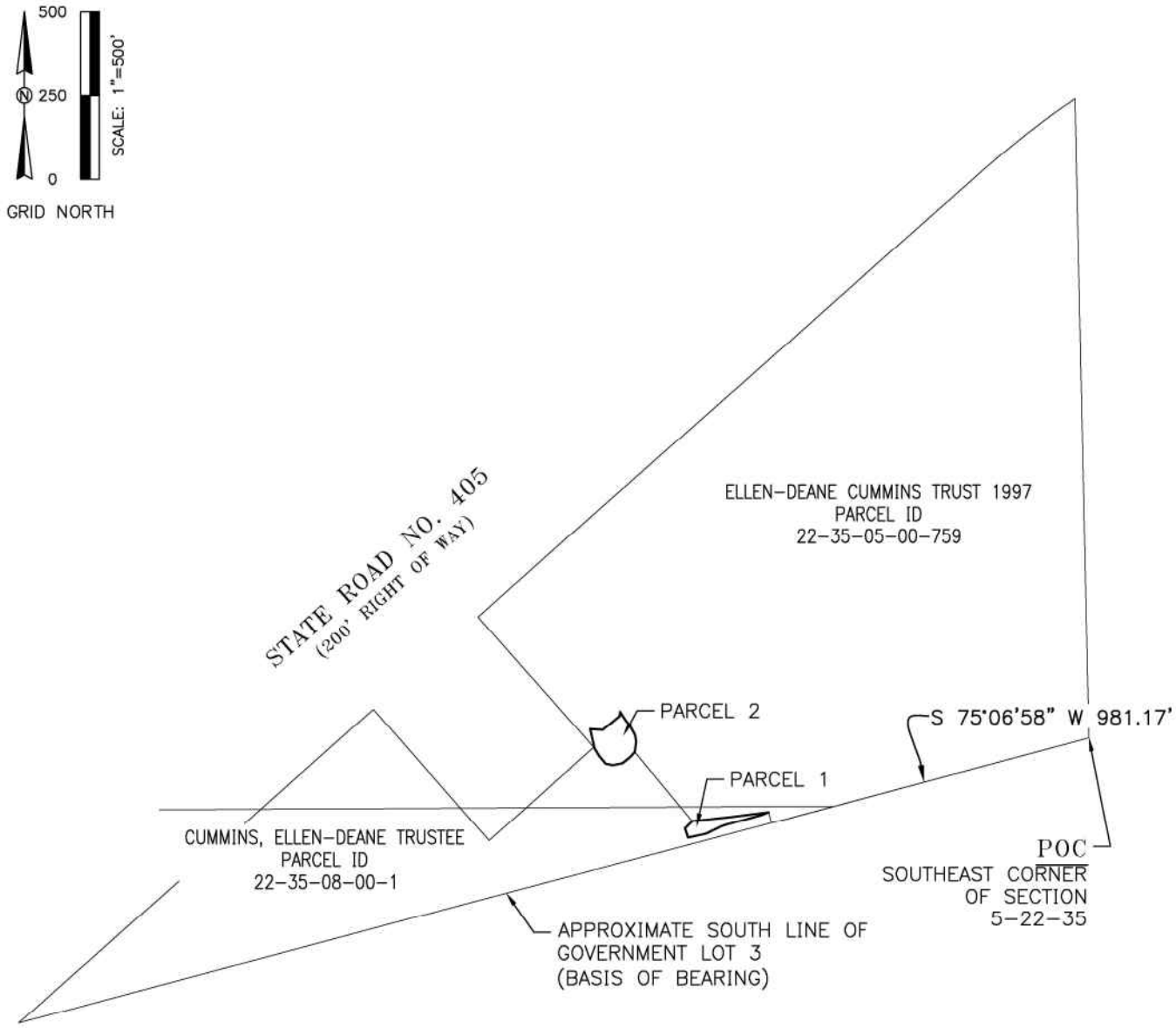
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E 08-22S-35E	04225.0001	GCT	07/26/2024	1/4

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Future Land Use Sketches\South\South- Conservation to Low Density revised.dwg (Sketch) harryr Jul 29, 2024 - 7:46am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



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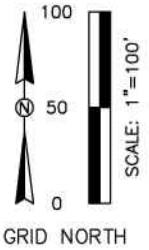
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	2/4

L:\4k\04225 Singleton Ave 44 Acres\0002 Zoning & Future Land Use\1-Future Land Use Sketches\South\South- Conservation to Low Density revised.dwg (Sketch (2)) harryr Jul 29, 2024 - 7:47am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



ELLEN–DEANE CUMMINS TRUST 1997
PARCEL ID
22–35–05–00–759

PARCEL 2
LOW DENSITY

POB
PARCEL 2

NORTH BOUNDARY LINE
OF SECTION 08–22S–35E

REFERENCE POINT "A"
POC

POB
PARCEL 1

PARCEL 1
LOW DENSITY

CUMMINS, ELLEN–DEANE TRUSTEE
PARCEL ID
22–35–08–00–1

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L:\4k\04225 Singleton Ave 44 Acres\0002 Zoning & Future Land Use\1-Future Land Use Sketches\South\South- Conservation to Low Density revised.dwg (Sketch (3)) harryr Jul 29, 2024 - 7:47am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

PARCEL LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S 75°06'58" W	981.17
L2	N 14°53'02" W	33.73
L3	S 68°04'35" W	22.75
L4	S 74°13'54" W	121.16
L5	S 63°56'35" W	54.96
L6	S 77°48'50" W	54.77
L7	N 18°27'34" W	29.12
L8	N 43°54'16" E	31.20
L9	N 83°57'46" E	116.79
L10	N 82°30'22" E	113.02
L11	N 39°59'21" W	267.56
L12	S 40°20'41" W	19.87
L13	S 52°09'19" W	30.02
L14	S 79°17'01" W	28.62
L15	N 78°57'47" W	22.10
L16	N 41°55'22" W	29.16
L17	N 31°39'43" W	26.61
L18	N 12°30'33" W	60.11

PARCEL LINE TABLE		
LINE #	DIRECTION	LENGTH
L19	S 85°37'27" E	37.59
L20	N 50°02'16" E	65.68
L21	N 05°05'01" E	12.96
L22	S 32°20'04" E	27.74
L23	S 36°02'32" E	29.36
L24	S 28°27'11" E	27.00
L25	S 09°37'21" E	19.79
L26	S 08°19'21" W	30.48

INFORMATION NOT COMPLETE
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8340 CONSUMER CIRCLE | SARASOTA, FL 34243

FUTURE LAND USE
CONSERVATION TO LOW DENSITY
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-22S-35E	04225.0001	GCT	07/26/2024	4/4

L:\4k\04225 Singleton Ave 44 Acres\0002 Zoning & Future Land Use\1-Future Land Use Sketches\South\South- Conservation to Low Density revised.dwg (Sketch (4)) harryr Jul 29, 2024 - 7:47am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 531.56 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 38.21 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 54°47'19" WEST, A DISTANCE OF 39.63 FEET; THENCE SOUTH 76°01'09" WEST, A DISTANCE OF 96.65 FEET; THENCE SOUTH 79°00'01" WEST, A DISTANCE OF 109.34 FEET; THENCE SOUTH 72°15'35" WEST, A DISTANCE OF 110.33 FEET; THENCE SOUTH 77°43'07" WEST, A DISTANCE OF 79.24 FEET; THENCE SOUTH 82°30'22" WEST, A DISTANCE OF 130.54 FEET; THENCE SOUTH 83°57'46" WEST, A DISTANCE OF 116.79 FEET; THENCE SOUTH 43°54'16" WEST, A DISTANCE OF 31.20 FEET; THENCE SOUTH 18°28'26" EAST, A DISTANCE OF 50.16 FEET TO THE SAID SOUTH LINE OF GOVERNMENT LOT 3; THENCE SOUTH 75°06'58" WEST ALONG SAID SOUTHERLY LINE, A DISTANCE OF 897.40 FEET; THENCE NORTH 77°26'24" WEST, A DISTANCE OF 29.27 FEET; THENCE SOUTH 85°46'29" WEST, A DISTANCE OF 81.31 FEET; THENCE SOUTH 77°48'33" WEST, A DISTANCE OF 118.98 FEET; THENCE SOUTH 66°58'41" WEST, A DISTANCE OF 241.04 FEET TO THE SAID SOUTH LINE OF GOVERNMENT LOT 3; THENCE SOUTH 75°06'58" WEST ALONG SAID SOUTHERLY LINE, A DISTANCE OF 715.43 FEET TO THE SOUTHERLY RIGHT OF WAY FOR STATE ROAD 405; THENCE NORTH 48°33'44" EAST ALONG SAID RIGHT OF WAY, A DISTANCE OF 1,413.77 FEET; THENCE SOUTH 41°29'44" EAST, A DISTANCE OF 521.76 FEET; THENCE NORTH 48°24'08" EAST, A DISTANCE OF 417.82 FEET TO A POINT KNOWN AS REFERENCE POINT "A"; THENCE NORTH 41°32'24" WEST, A DISTANCE OF 520.98 FEET TO THE SOUTHERLY RIGHT OFF WAY FOR STATE ROAD 405; THENCE NORTH 48°29'31" EAST ALONG SAID RIGHT OF WAY, A DISTANCE OF 639.84 FEET; THENCE SOUTH 01°32'33" EAST, A DISTANCE OF 49.39 FEET; THENCE SOUTH 30°29'30" EAST, A DISTANCE OF 24.11 FEET; THENCE SOUTH 30°02'47" EAST, A DISTANCE OF 44.82 FEET; THENCE SOUTH 28°16'46" EAST, A DISTANCE OF 31.30 FEET; THENCE SOUTH 25°16'49" EAST, A DISTANCE OF 139.25 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 645.41 FEET AND A CHORD WHICH BEARS SOUTH 34°53'24" EAST AND A DISTANCE OF 149.07 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 149.40 FEET; THENCE SOUTH 40°33'10" EAST, A DISTANCE OF 85.64 FEET; TO A POINT OF CURVATURE OF A CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 197.67 FEET AND A CHORD WHICH BEARS SOUTH 60°20'57" EAST, A DISTANCE 133.89 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT, A DISTANCE OF 136.60 FEET; THENCE SOUTH 77°48'24" EAST, A DISTANCE OF 121.52 FEET;TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 416.53 FEET AND A CHORD WHICH BEARS SOUTH 70°56'43" EAST AND A DISTANCE OF 140.31 FEET; THENCE ALONG SAID CURVE TO THE RIGHT A DISTANCE OF 140.99 FEET; TO A POINT OF CURVATURE OF A NON TANGENT CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 943.10 FEET AND A CHORD WHICH BEARS SOUTH 70°09'47" EAST AND A DISTANCE OF 86.42 FEET; THENCE ALONG SAID CURVE TO THE LEFT A DISTANCE OF 86.45 FEET; TO A POINT OF REVERSE CURVATURE OF A CURVE HAVING A

CONTINUED ON SHEET 2

Legend:

CDD	COMMUNITY DEVELOPMENT DISTRICT
INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
11:03:00 2024.08.08
'00'04-

HARRY B. ROGERS III License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE PROXIMATE SOUTH LINE OF GORMENT LOT 3, HAVING A GRID BEARING OF S 75°06'58" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

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ZONING CHANGE
GENERAL USE to PLANED DEVELOPMENT
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
08-22S-35E	04225.0001	HBR	07/26/2024	1/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch) harryr Aug 06, 2024 - 10:49am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY
EXHIBIT "A"

CONTINUED FROM SHEET 1

RADIUS OF 106.21 FEET AND A CHORD WHICH BEARS SOUTH 55°53'26" EAST, AND A DISTANCE OF 61.75 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT, A DISTANCE OF 62.65 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 337.29 FEET AND A CHORD WHICH BEARS SOUTH 25°56'58" EAST A DISTANCE OF 152.24 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 153.56 FEET; TO A POINT OF COMPOUND CURVATURE, HAVING A RADIUS OF 144.10 FEET AND A CHORD WHICH BEARS SOUTH 04°43'51" EAST A DISTANCE OF 40.99 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 41.13 FEET; THENCE SOUTH 07°31'10" EAST, A DISTANCE OF 24.07 FEET; THENCE SOUTH 04°13'12" WEST, A DISTANCE OF 33.09 FEET; TO THE POINT OF BEGINNING.

CONTAINING 1,262,539.37 SQUARE FEET OR 28.98 ACRES, MORE OR LESS.

LESS & EXCEPT:

COMMENCE AT REFERENCE POINT "A"; THENCE SOUTH 30°22'34" EAST, A DISTANCE OF 4.87 FEET; TO THE POINT OF BEGINNING; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH 09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.31 ACRES, MORE OR LESS.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

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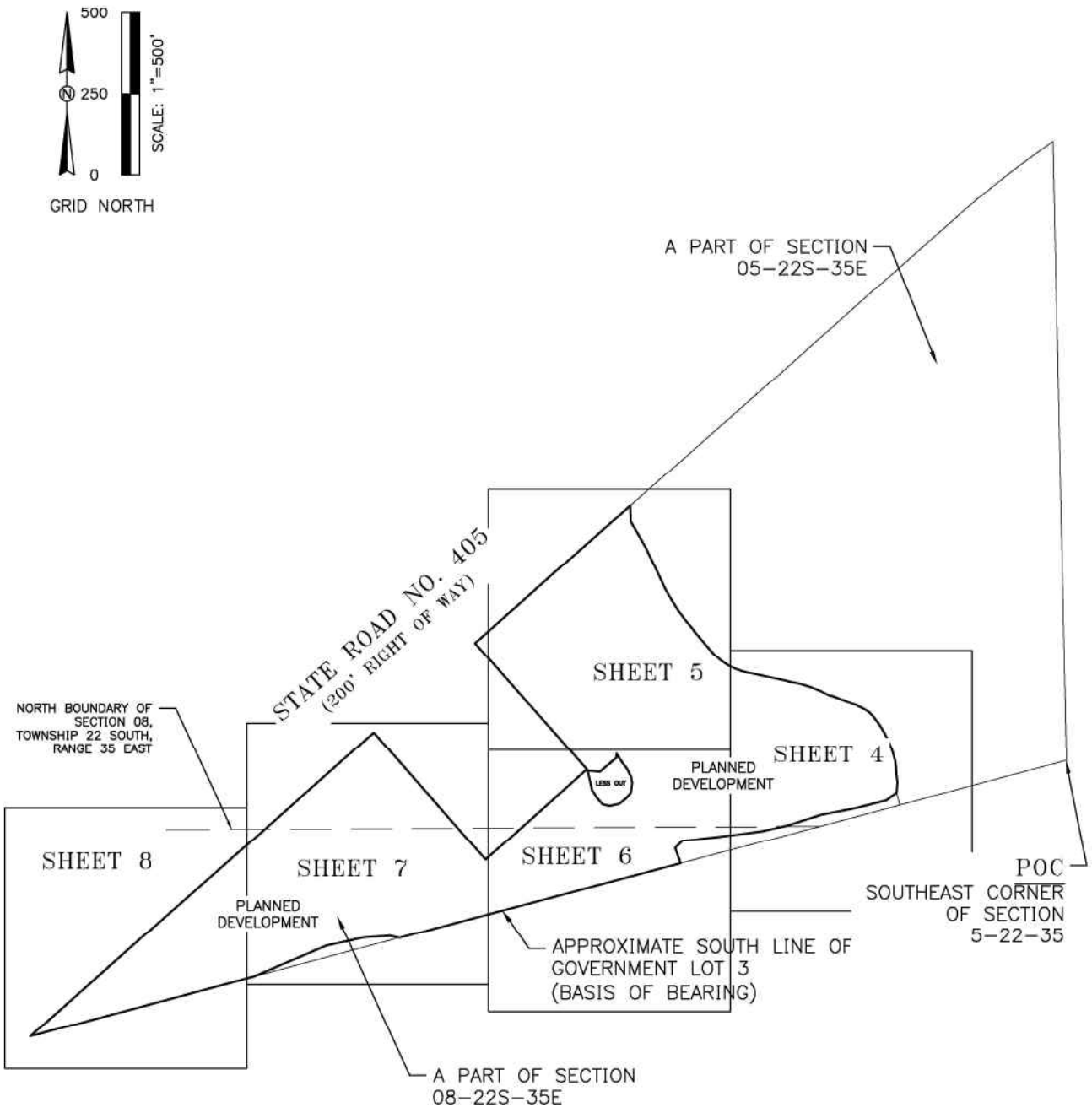
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
28/28-22S-35E	04225.0001	HBR	07/26/2024	2/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (2)) harryr Aug 06, 2024 - 10:50am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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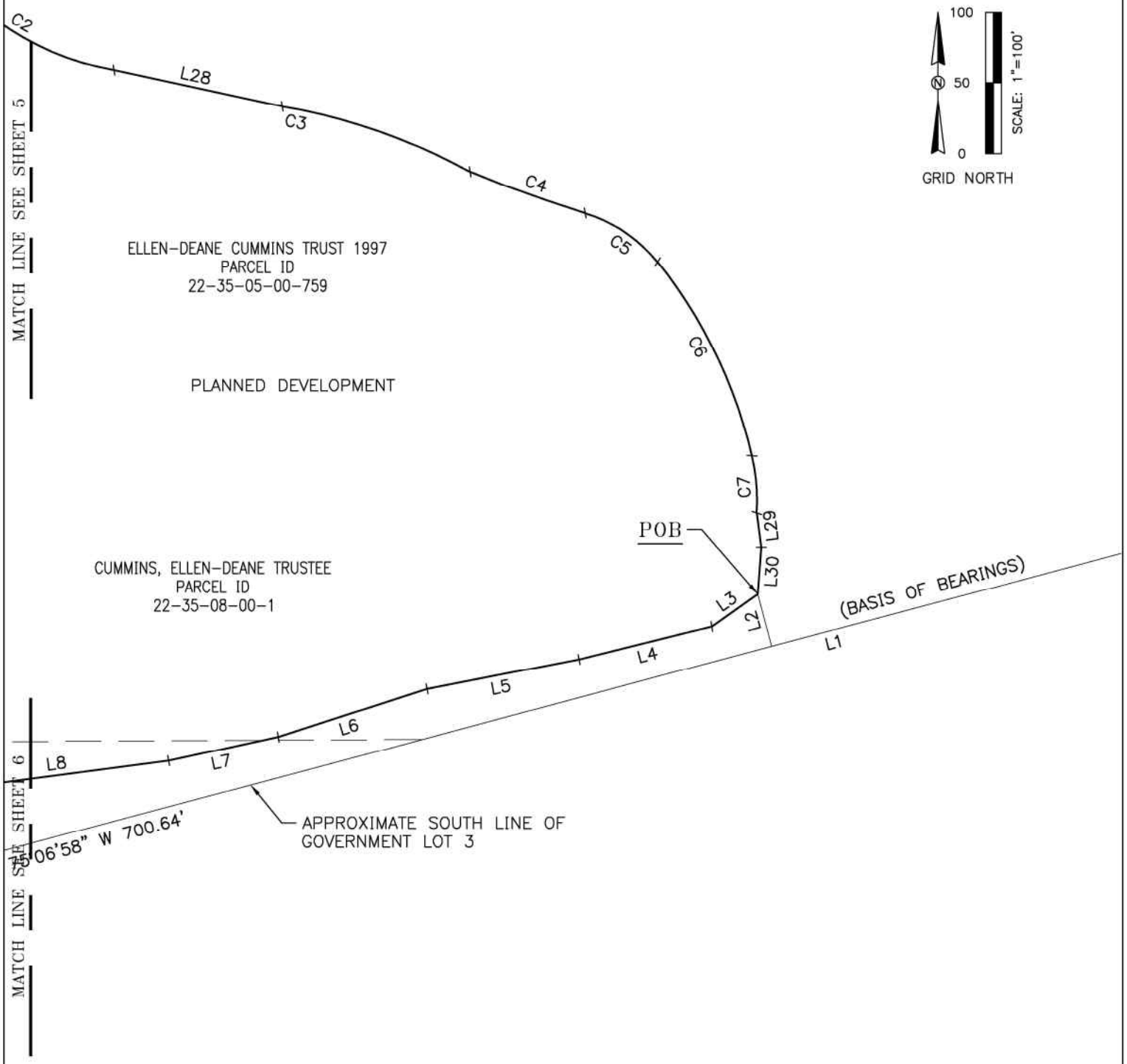
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
08-22S-35E	04225.0001	HBR	07/26/2024	3/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (3)) harryr Aug 06, 2024 - 10:50am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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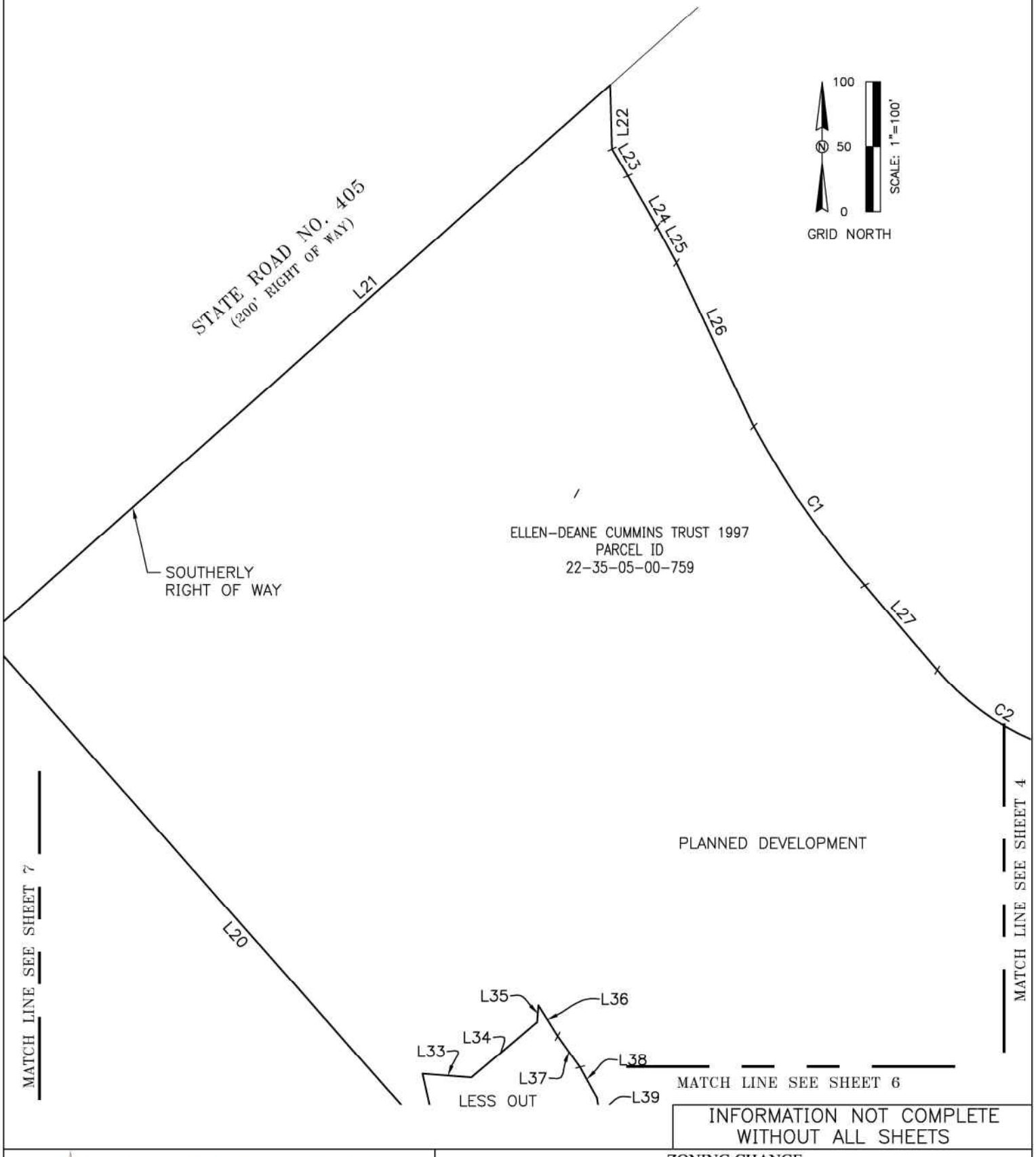
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
22/35/08-22S-35E	04225.0001	HBR	07/26/2024	4/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (4)) harryr Aug 06, 2024 - 10:50am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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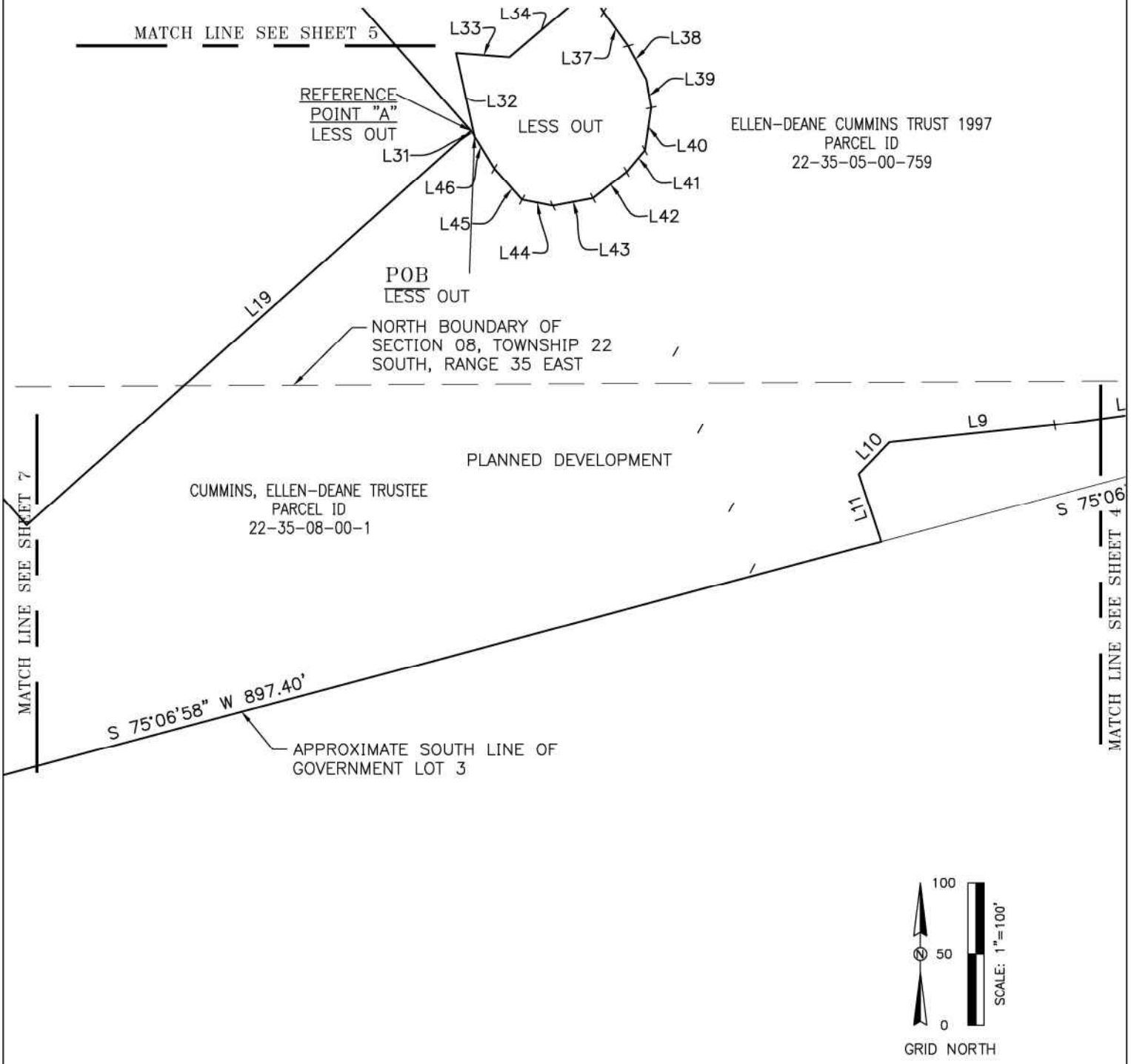
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
22-35-05	04225.0001	HBR	07/26/2024	5/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (5)) harryr Aug 06, 2024 - 10:51am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

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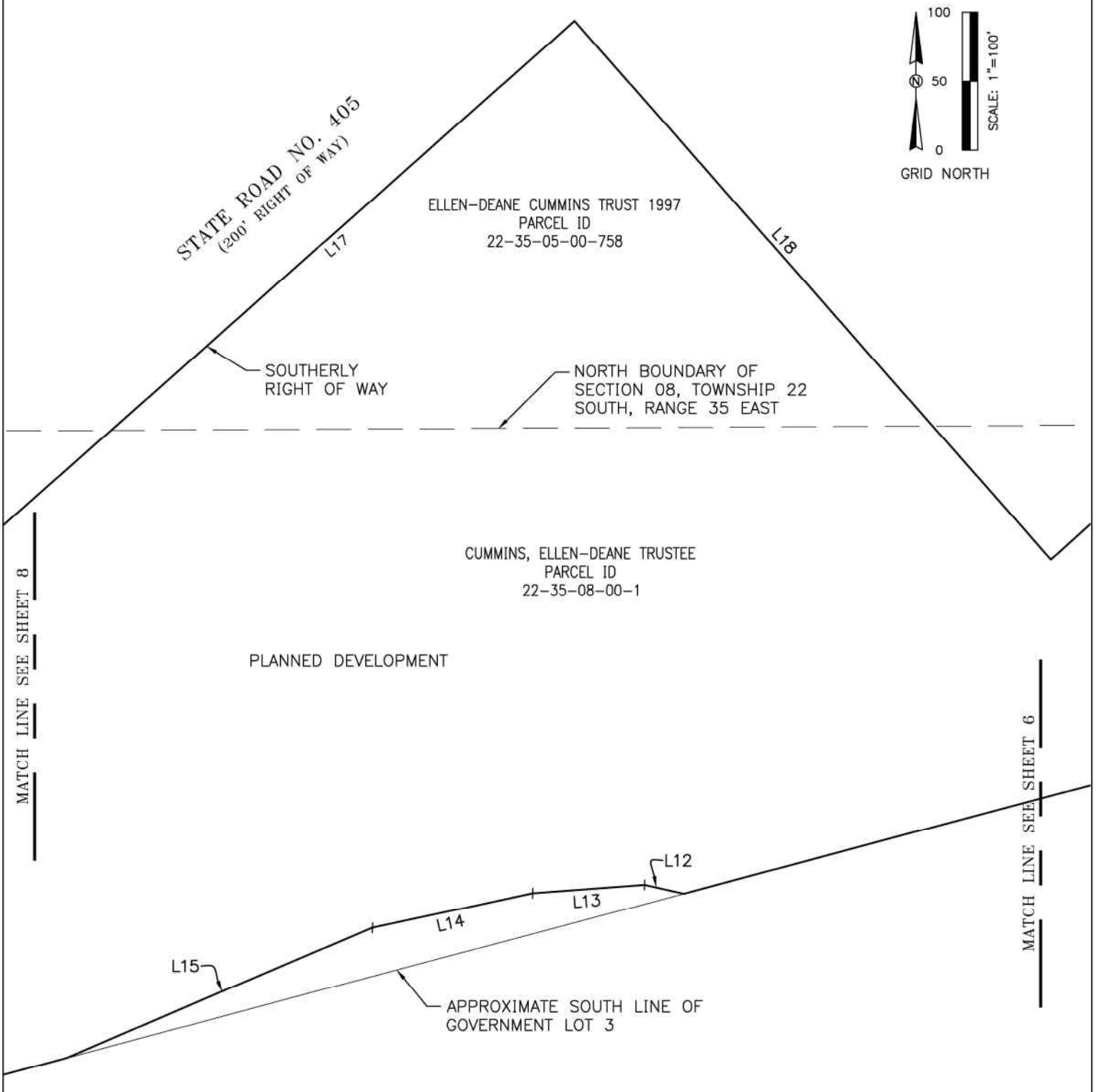
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
08-22S-35E	04225.0001	HBR	07/26/2024	6/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (6)) harryr Aug 06, 2024 - 10:51am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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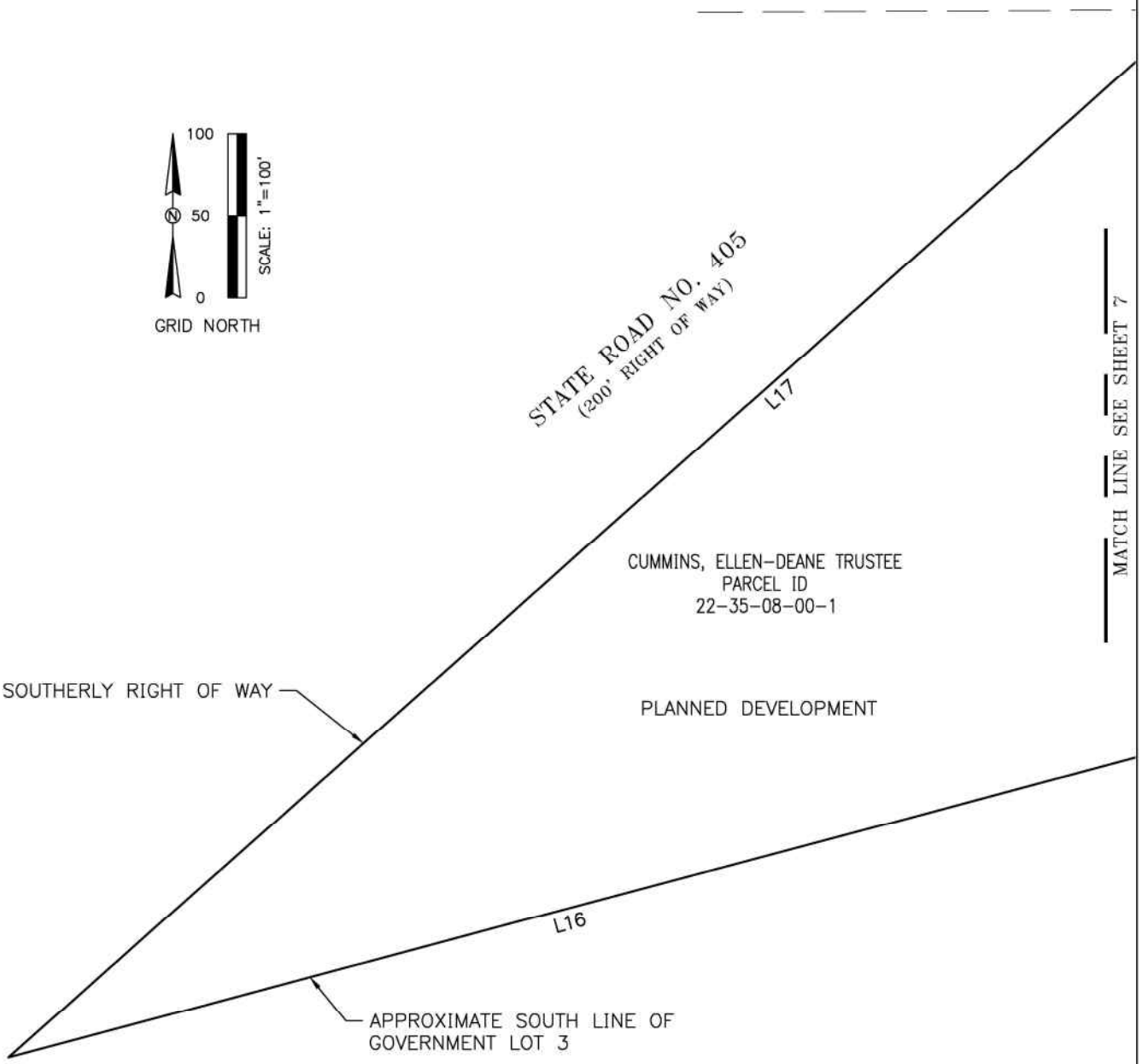
SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
08-22S-35E	04225.0001	HBR	07/26/2024	7/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (7)) harryr Aug 06, 2024 - 10:51am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
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ZONING CHANGE
GENERAL USE to PLANED DEVELOPMENT
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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
22-35-08	04225.0001	HBR	07/26/2024	8/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (8)) harryr Aug 06, 2024 - 10:52am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LINE TABLE		
LINE#	DIRECTION	LENGTH
L1	S 75°06'58" W	531.56'
L2	N 14°53'02" W	38.21'
L3	S 54°47'19" W	39.63'
L4	S 76°01'09" W	96.65'
L5	S 79°00'01" W	109.34'
L6	S 72°15'35" W	110.33'
L7	S 77°43'07" W	79.24'
L8	S 82°30'22" W	130.54'
L9	S 83°57'46" W	116.79'
L10	S 43°54'16" W	31.20'
L11	S 18°28'26" E	50.16'
L12	N 77°26'24" W	29.27'
L13	S 85°46'29" W	81.31'
L14	S 77°48'33" W	118.98'
L15	S 66°58'41" W	241.04'
L16	S 75°06'58" W	715.43'
L17	N 48°33'44" E	1413.77'
L18	S 41°29'44" E	521.76'
L19	N 48°24'08" E	417.82'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L20	N 41°32'24" W	520.98'
L21	N 48°29'31" E	639.84'
L22	S 01°32'33" E	49.39'
L23	S 30°29'30" E	24.11'
L24	S 30°02'47" E	44.82'
L25	S 28°16'46" E	31.30'
L26	S 25°16'49" E	139.25'
L27	S 40°33'10" E	85.64'
L28	S 77°48'24" E	121.52'
L29	S 07°31'10" E	24.07'
L30	S 04°13'12" W	33.09'
L31	S 30°22'34" E	4.87'
L32	N 12°30'33" W	60.11'
L33	S 85°37'27" E	37.59'
L34	N 50°02'16" E	65.68'
L35	N 05°05'01" E	12.96'
L36	S 32°20'04" E	27.74'
L37	S 36°02'32" E	29.36'
L38	S 28°27'11" E	27.00'

LINE TABLE		
LINE#	DIRECTION	LENGTH
L39	S 09°37'21" E	19.79'
L40	S 08°19'21" W	30.48'
L41	S 40°20'41" W	19.87'
L42	S 52°09'19" W	30.02'
L43	S 79°17'01" W	28.62'
L44	N 78°57'47" W	22.10'
L45	N 41°55'22" W	29.16'
L46	N 31°39'43" W	26.61'

CURVE TABLE					
CURVE#	RADIUS	CHORD BEARING	CHORD LENGTH	ARC LENGTH	DELTA
C1	645.41'	S 34°53'24" E	149.07'	149.40'	13°15'46"
C2	197.67'	S 60°20'57" E	133.89'	136.60'	39°35'35"
C3	416.53'	S 70°56'43" E	140.31'	140.99'	19°23'36"
C4	943.10'	S 70°09'47" E	86.42'	86.45'	5°15'08"
C5	106.21'	S 55°53'26" E	61.75'	62.65'	33°47'50"
C6	337.29'	S 25°56'58" E	152.24'	153.56'	26°05'07"
C7	144.10'	S 04°43'51" E	40.99'	41.13'	16°21'08"

INFORMATION NOT COMPLETE
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ZONING CHANGE
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SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
28/28-22S-35E	04225.0001	HBR	07/26/2024	9/9

L:\4k\04225 Singleton Ave 44 Acre\2024 Zoning Revisions\SOUTH\South- GU to PD revised.dwg (Sketch (9)) harryr Aug 06, 2024 - 10:52am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

LEGAL DESCRIPTION:

A TRACT OF LAND BEING IN SECTION 05 AND 08, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS;

PARCEL 1
COMMENCE AT THE SOUTHEAST CORNER OF SECTION 05, TOWNSHIP 22 SOUTH, RANGE 35 EAST OF BREVARD COUNTY; THENCE SOUTH 75°06'58" WEST ALONG THE APPROXIMATE SOUTH LINE OF GOVERNMENT LOT 3, A DISTANCE OF 981.17 FEET; THENCE NORTH 14°53'02" WEST, A DISTANCE OF 33.73 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 68°04'35" WEST, A DISTANCE OF 22.75 FEET; THENCE SOUTH 74°13'54" WEST, A DISTANCE OF 121.16 FEET; THENCE SOUTH 63°56'35" WEST, A DISTANCE OF 54.96 FEET; THENCE SOUTH 77°48'50" WEST, A DISTANCE OF 54.77 FEET; THENCE NORTH 18°27'34" WEST, A DISTANCE OF 29.12 FEET; THENCE NORTH 43°54'16" EAST, A DISTANCE OF 31.20 FEET TO A POINT TO BE KNOWN AS REFERENCE POINT "A"; THENCE NORTH 83°57'46" EAST, A DISTANCE OF 116.79 FEET; THENCE NORTH 82°30'22" EAST, A DISTANCE OF 113.02 FEET TO THE POINT OF BEGINNING.

CONTAINING 5,964.53 SQUARE FEET OR 0.14 ACRES, MORE OR LESS.

TOGETHER WITH

PARCEL 2
COMMENCE AT REFERENCE POINT "A"; THENCE NORTH 39°59'21" WEST, A DISTANCE OF 267.56 FEET; TO THE POINT OF BEGINNING; THENCE SOUTH 40°20'41" WEST, A DISTANCE OF 19.87 FEET; THENCE SOUTH 52°09'19" WEST, A DISTANCE OF 30.02 FEET; THENCE SOUTH 79°17'01" WEST, A DISTANCE OF 28.62 FEET; THENCE NORTH 78°57'47" WEST, A DISTANCE OF 22.10 FEET; THENCE NORTH 41°55'22" WEST, A DISTANCE OF 29.16 FEET; THENCE NORTH 31°39'43" WEST, A DISTANCE OF 26.61 FEET; THENCE NORTH 12°30'33" WEST, A DISTANCE OF 60.11 FEET; THENCE SOUTH 85°37'27" EAST, A DISTANCE OF 37.59 FEET; THENCE NORTH 50°02'16" EAST, A DISTANCE OF 65.68 FEET; THENCE NORTH 05°05'01" EAST, A DISTANCE OF 12.96 FEET; THENCE SOUTH 32°20'04" EAST, A DISTANCE OF 27.74 FEET; THENCE SOUTH 36°02'32" EAST, A DISTANCE OF 29.36 FEET; THENCE SOUTH 28°27'11" EAST, A DISTANCE OF 27.00 FEET; THENCE SOUTH 09°37'21" EAST, A DISTANCE OF 19.79 FEET; THENCE SOUTH 08°19'21" WEST, A DISTANCE OF 30.48 FEET TO THE POINT OF BEGINNING.

CONTAINING 13,414.70 SQUARE FEET OR 0.308 ACRES, MORE OR LESS.

Legend:

INC.	INCORPORATED
LB	LICENSED BUSINESS
LLC	LIMITED LIABILITY COMPANY
NAD	NORTH AMERICAN DATUM
No.	NUMBER
ORB	OFFICIAL RECORD BOOK
PB	PLAT BOOK
PG	PAGE
POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
PSM	PROFESSIONAL SURVEYOR AND MAPPER
R/W	RIGHT OF WAY

Harry B Rogers III
14:09:56 2024.07.29
'00'04-

HARRY B. ROGERS III License Number 6418 STATE OF FLORIDA Professional Surveyor and Mapper

Harry B. Rogers III, PSM — Date
Florida Professional Surveyor & Mapper No. 6418
for Hamilton Engineering and Surveying, LLC.
Certificate of Authorization No. LB8405

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE GRID BASED ON THE FLORIDA EAST TRANSVERSE MERCATOR STATE PLANE COORDINATE SYSTEM NAD83 DATUM (2011 ADJUSTMENT). THE PROXIMATE SOUTH LINE OF GORMENT LOT 3, HAVING A GRID BEARING OF S 75°06'58" W.

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

Not valid without the signature and the original raised seal or the unique signature and the digital seal of a Florida Licensed Surveyor and Mapper.

HAMILTON
ENGINEERING & SURVEYING, LLC
www.HamiltonEngineering.US LB #8405 CA #8474
3409 W LEMON ST TAMPA, FL 33609 | 2400 N. FORSYTH 106 ORLANDO, FL 32807 | 8340 CONSUMER CIRCLE SARASOTA, FL 32807

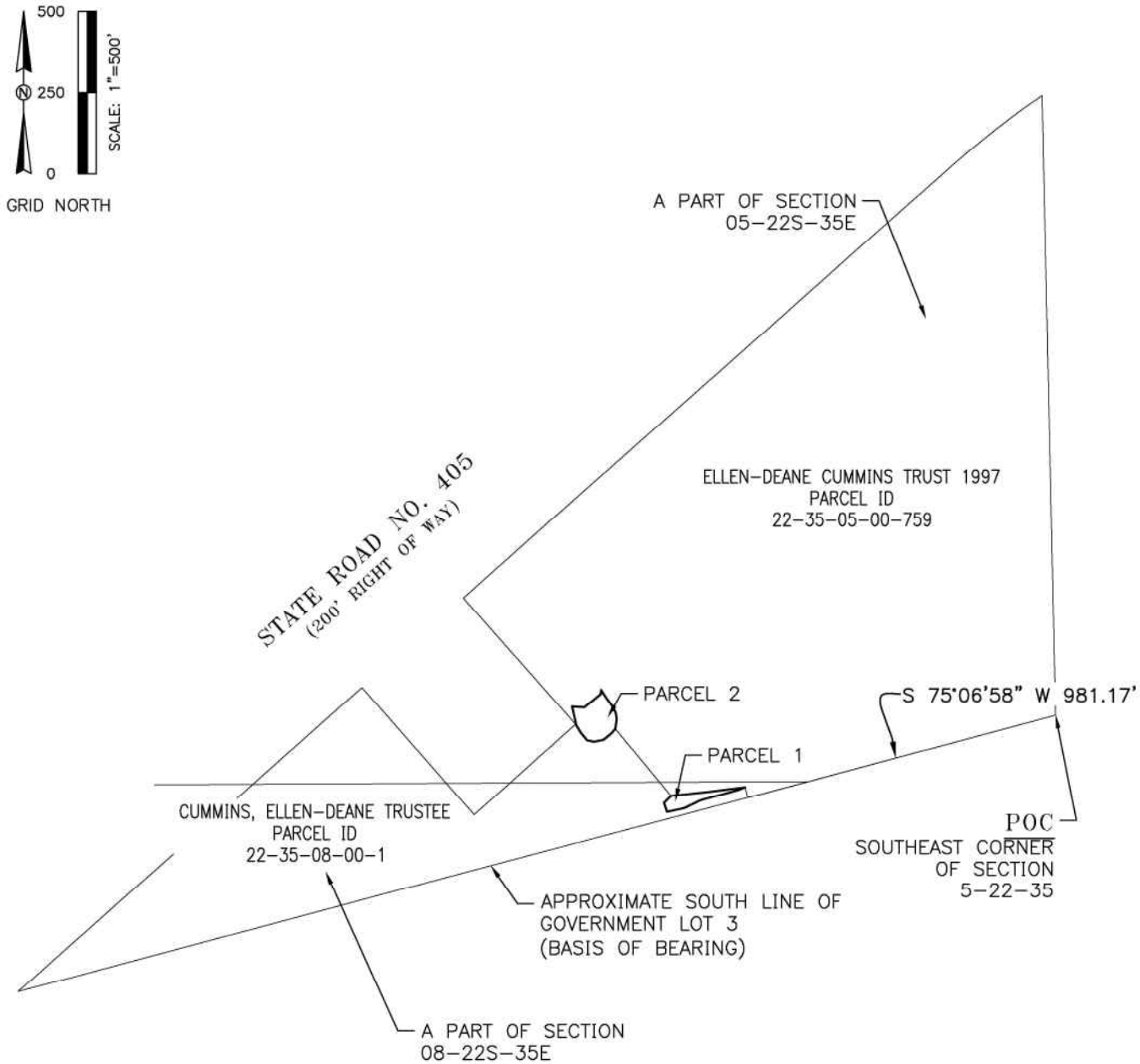
ZONING CHANGE
OPEN SPACE & RECREATION to PLANNED UNIT DEVELOPMENT
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
05-08-22S-35E	4225.0001	GCT	07/26/2024	1/4

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Zoning Sketches\South\South- OR to PUD revised.dwg (Sketch) harryr Jul 29, 2024 - 7:52am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"



INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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ZONING CHANGE
OPEN SPACE & RECREATION to PLANNED UNIT DEVELOPMENT
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
PT 08-22S-35E	04225.0001	GCT	07/26/2024	2/4

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SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

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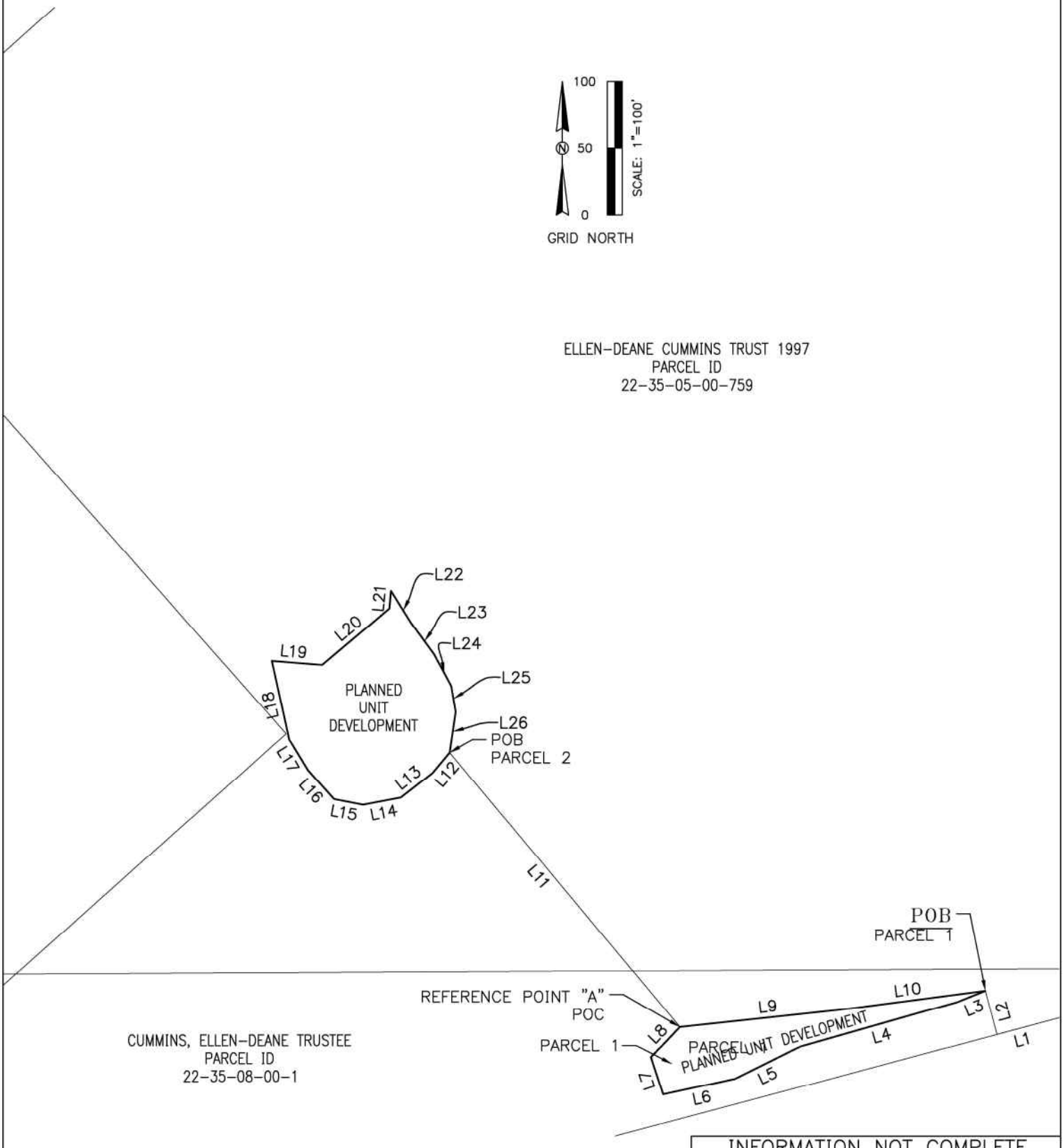

INFORMATION NOT COMPLETE
WITHOUT ALL SHEETS

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LB #8405 CA #8474

3409 W LEMON ST
TAMPA, FL 33609

2400 N. FORSYTH 106
ORLANDO, FL 32807

8340 CONSUMER CIRCLE
SARASOTA, FL 32807

ZONING CHANGE
OPEN SPACE & RECREATION to PLANNED UNIT DEVELOPMENT
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
	04225.0002	GCT	07/26/2024	3/4

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Zoning Sketches\South\South- OR to PUD revised.dwg (Sketch (3)) harryr Jul 29, 2024 - 7:52am

SKETCH & DESCRIPTION – NOT A BOUNDARY SURVEY

EXHIBIT "A"

PARCEL LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	S 75°06'58" W	981.17
L2	N 14°53'02" W	33.73
L3	S 68°04'35" W	22.75
L4	S 74°13'54" W	121.16
L5	S 63°56'35" W	54.96
L6	S 77°48'50" W	54.77
L7	N 18°27'34" W	29.12
L8	N 43°54'16" E	31.20
L9	N 83°57'46" E	116.79
L10	N 82°30'22" E	113.02
L11	N 39°59'21" W	267.56
L12	S 40°20'41" W	19.87
L13	S 52°09'19" W	30.02
L14	S 79°17'01" W	28.62
L15	N 78°57'47" W	22.10
L16	N 41°55'22" W	29.16
L17	N 31°39'43" W	26.61
L18	N 12°30'33" W	60.11

PARCEL LINE TABLE		
LINE #	DIRECTION	LENGTH
L19	S 85°37'27" E	37.59
L20	N 50°02'16" E	65.68
L21	N 05°05'01" E	12.96
L22	S 32°20'04" E	27.74
L23	S 36°02'32" E	29.36
L24	S 28°27'11" E	27.00
L25	S 09°37'21" E	19.79
L26	S 08°19'21" W	30.48

INFORMATION NOT COMPLETE WITHOUT ALL SHEETS

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ZONING CHANGE
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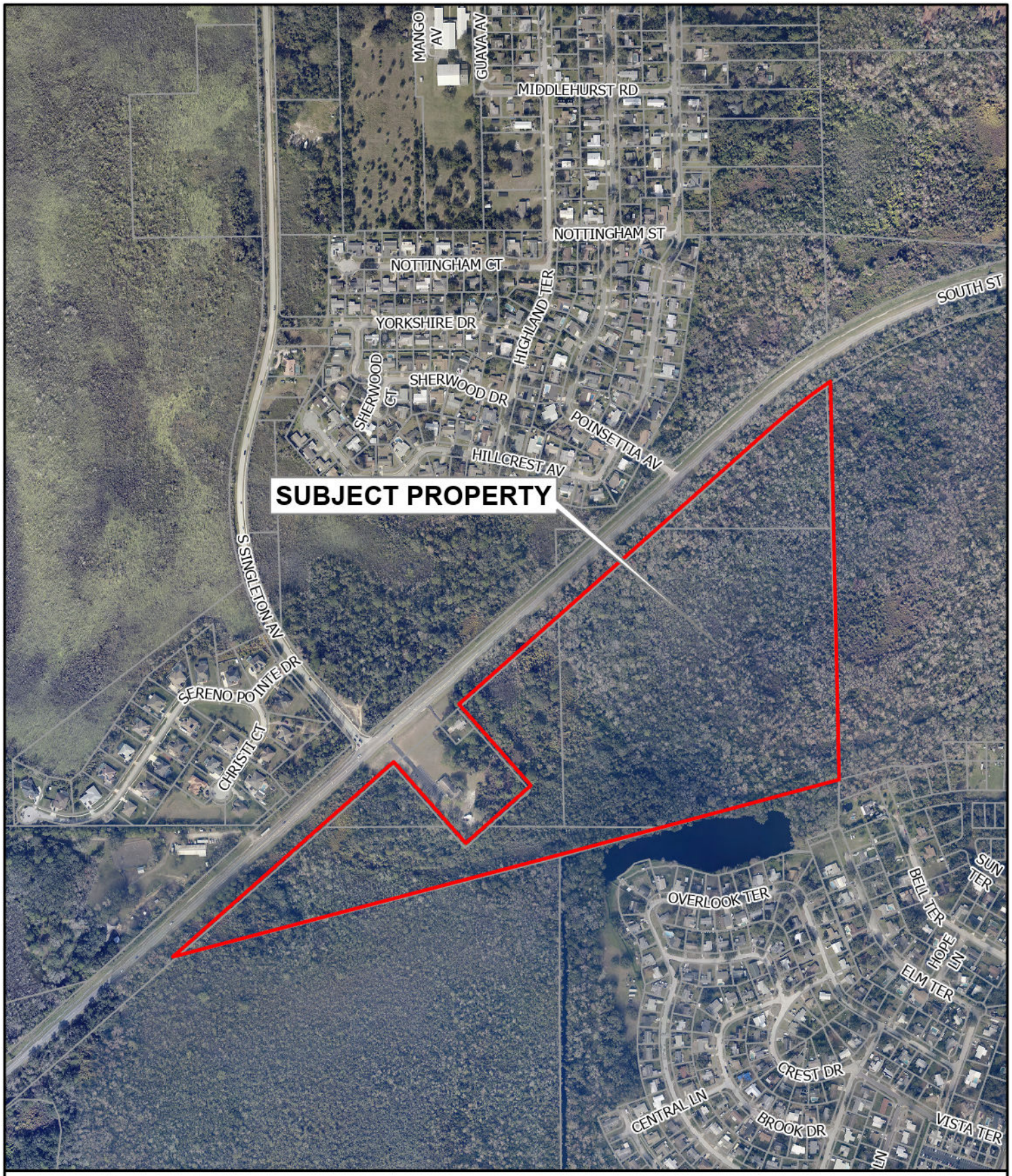
SR 405 AND SINGLETON - SOUTH
TITUSVILLE, FLORIDA 32796

SECTION TOWNSHIP RANGE	JOB NUMBER	DRAWN BY:	DATE	
	DRAWING NO. 08-22S-35E-04225-0001	GCT	07/26/2024	4/4

L:\4k\04225 Singleton Ave 44 Acre\0002 Zoning & Future Land Use\1-Zoning Sketches\South\South- OR to PUD revised.dwg (Sketch (4)) harryr Jul 29, 2024 - 7:53am



Aerial 2024

SSA_2-2024

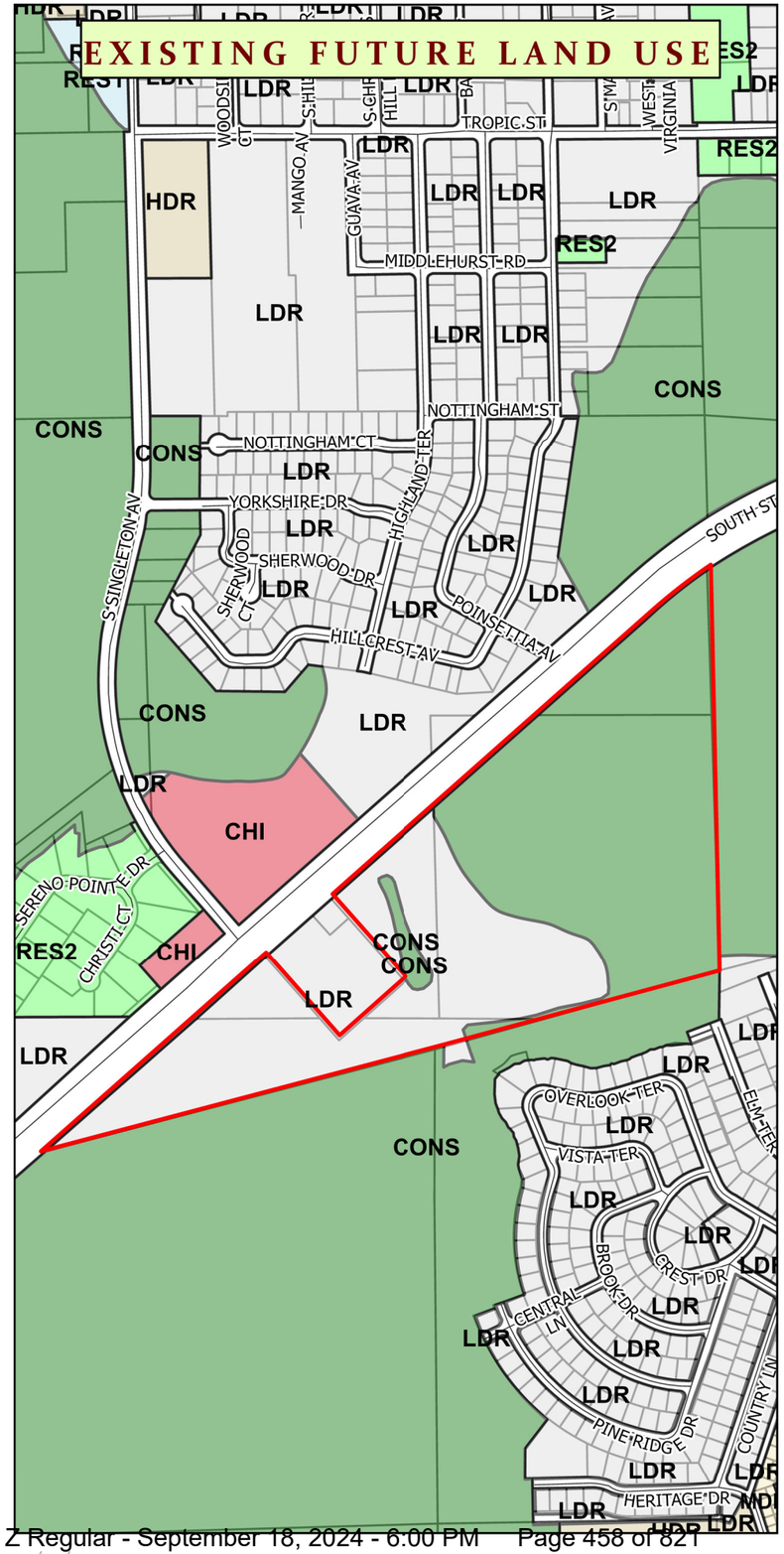
0 350 700 1,400 Feet

Community Development Department

Aerial photography provided by the Brevard County Property Appraiser's Office

8/27/2024

EXISTING FUTURE LAND USE



SSA 2-2024

N

W E

S

EXISTING FLU ACREAGE

CONS: 38.36 AC
LDR: 29.14 AC

PROPOSED FLU ACREAGE

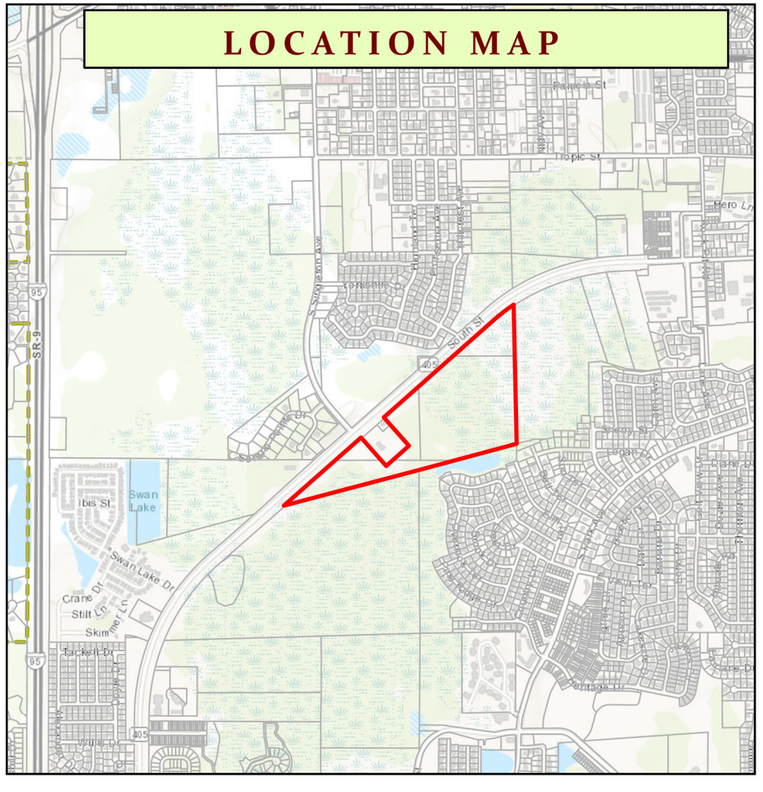
CONS: 49.06 AC
LDR: 17.44 AC

FUTURE LAND USE

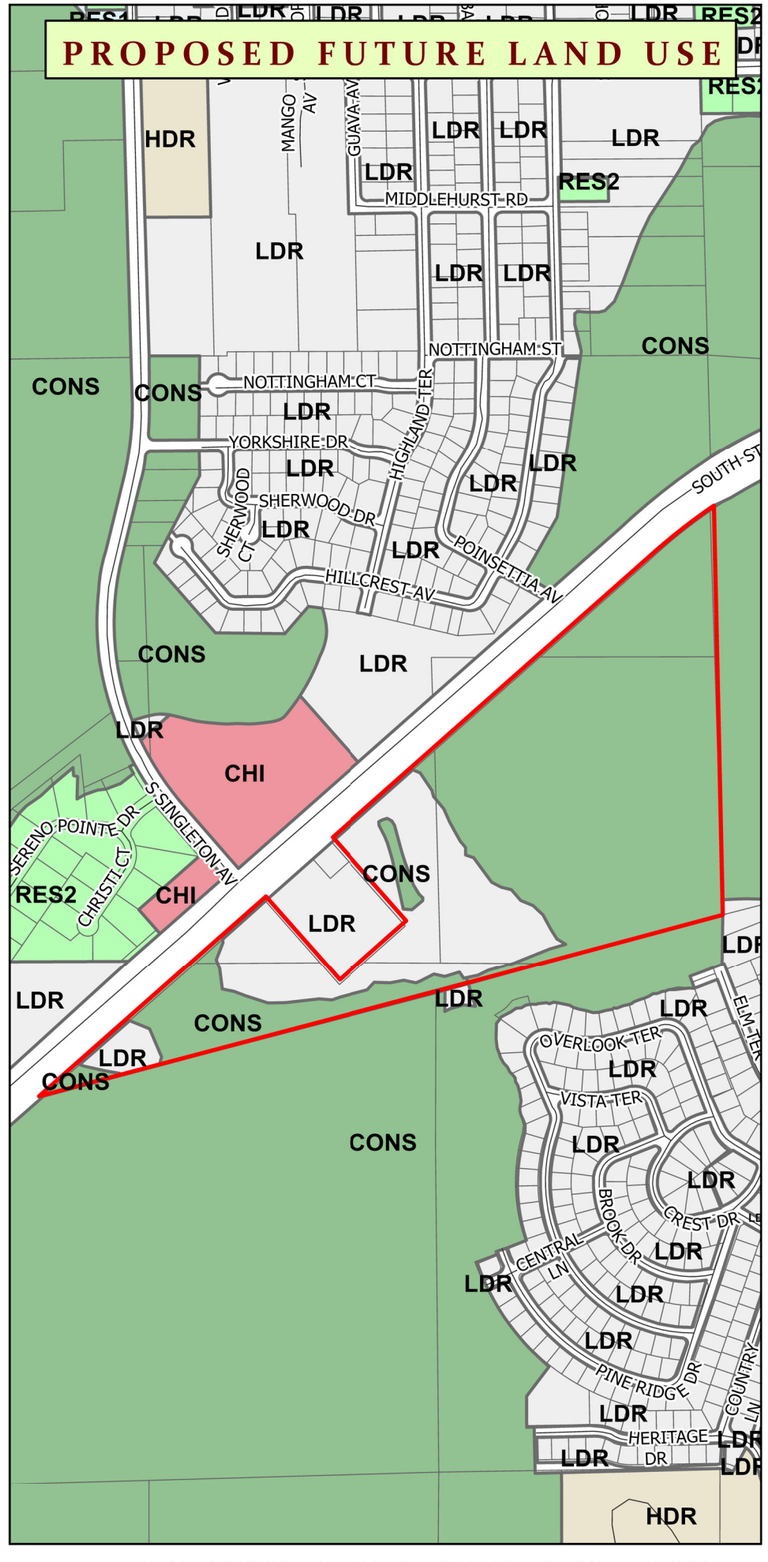
- COMMERCIAL HIGH INTENSITY
- CONSERVATION
- HIGH-DENSITY RESIDENTIAL
- LOW-DENSITY RESIDENTIAL
- MEDIUM-DENSITY RESIDENTIAL
- Residential One
- Residential Two

0 450 900 1,800 Feet

LOCATION MAP

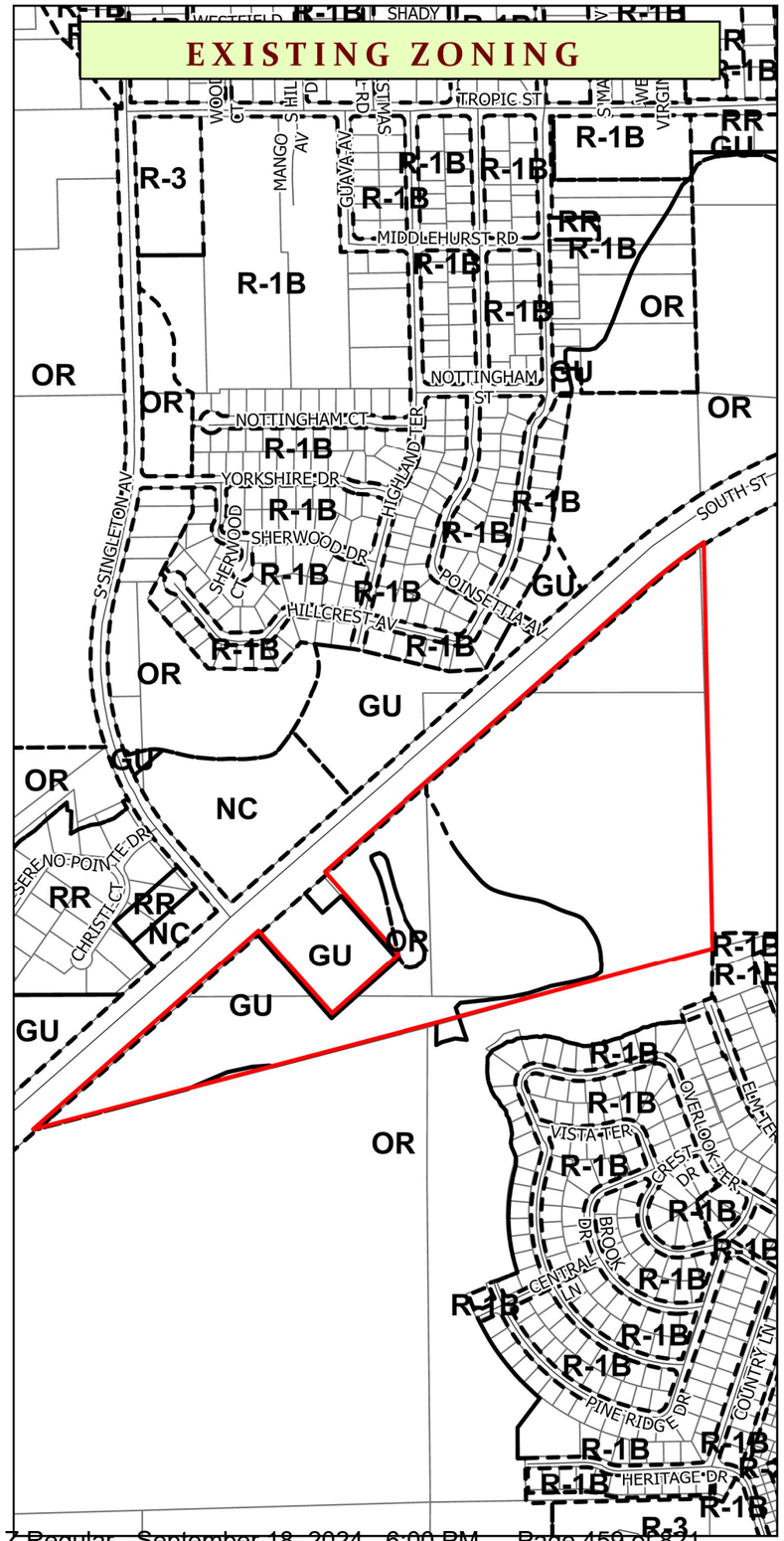


PROPOSED FUTURE LAND USE



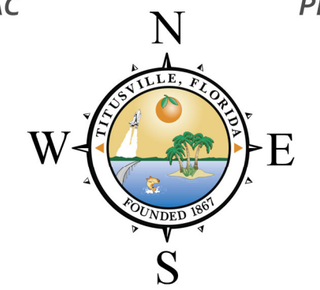
Q:\GIS\COMMUNITY DEVELOPMENT\PLANNING\PLANNING

EXISTING ZONING



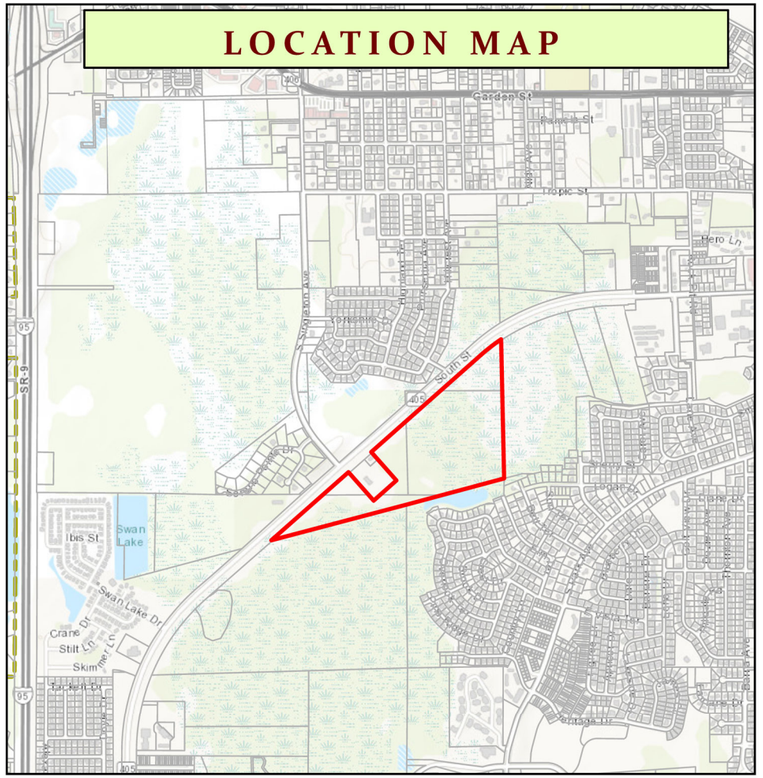
SSA 2-2024

EXISTING ZONING ACREAGE		PROPOSED ZONING ACREAGE	
OR:	30.79 AC	OR:	37.37 AC
GU:	27.71 AC	PD:	29.13 AC

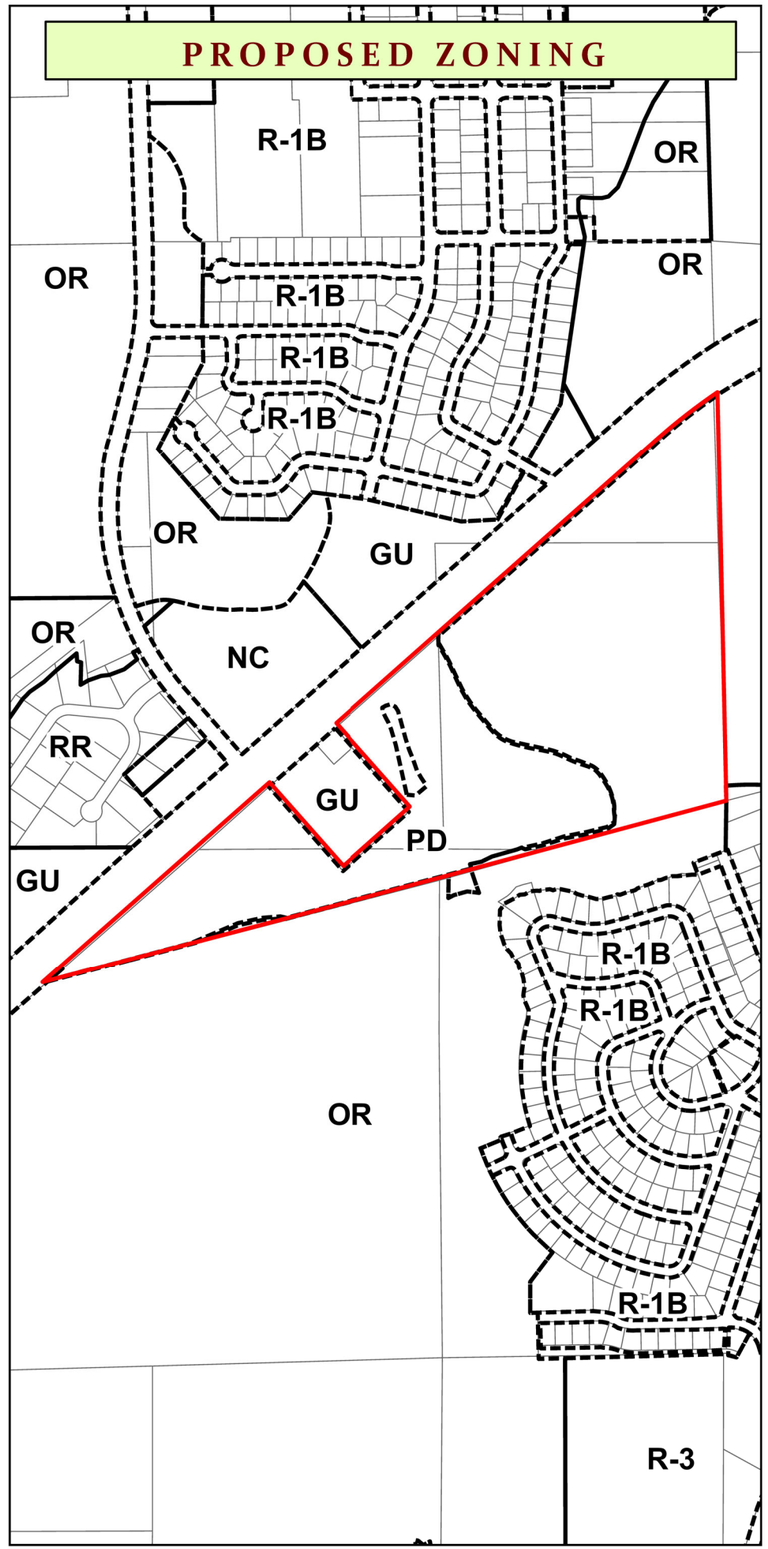


0 500 1,000 2,000 Feet

LOCATION MAP



PROPOSED ZONING



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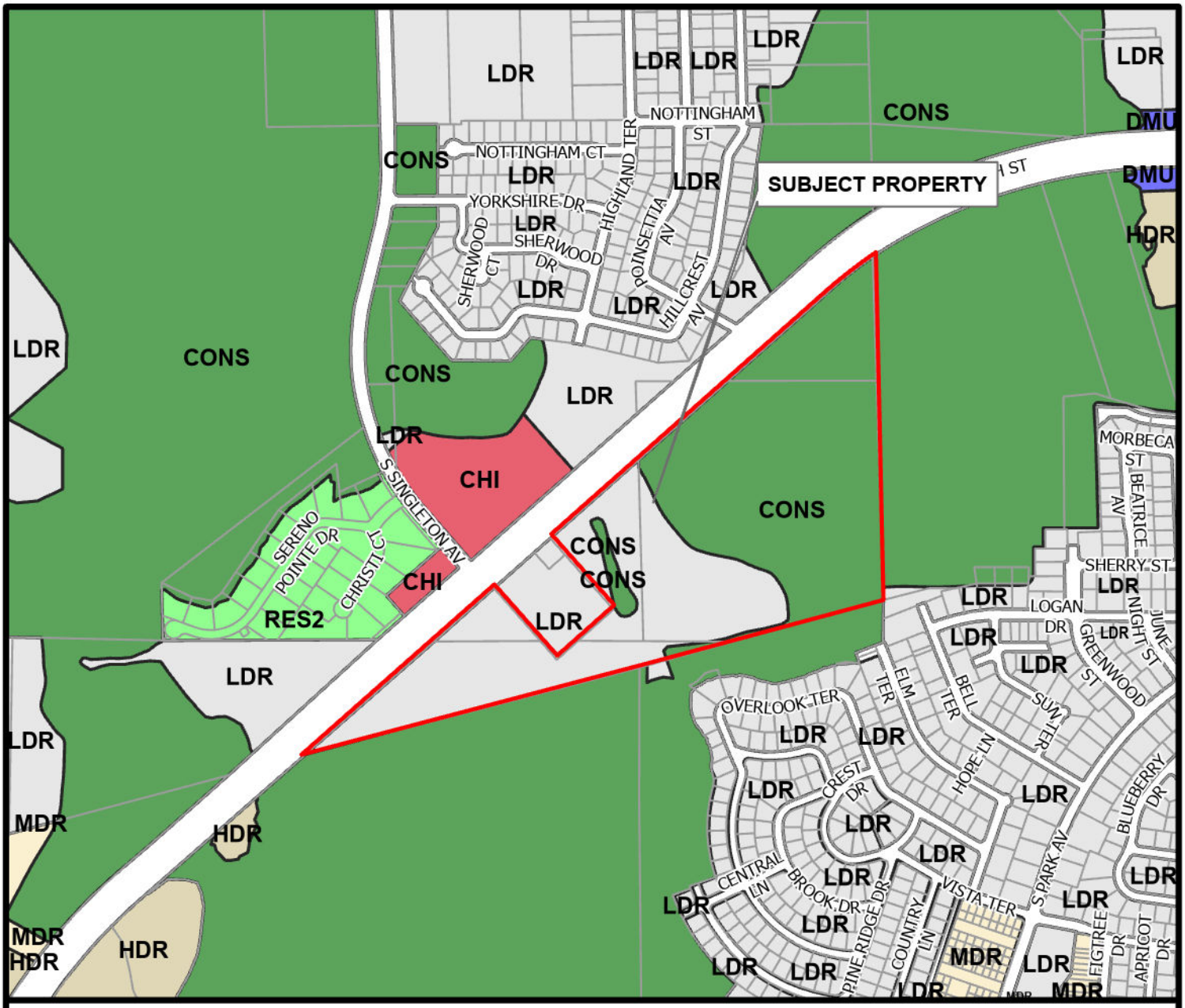


LOCATION OF PROPERTY AND FUTURE LAND USE MAP

CHI	COMMERCIAL HIGH INTENSITY	ED	EDUCATIONAL	PIP	PLANNED INDUSTRIAL PARK	RES-2	RESIDENTIAL-2
CLI	COMMERCIAL LOW INTENSITY	IND	INDUSTRIAL	PSP	PUBLIC/ SEMI-PUBLIC	RMU	REGIONAL MIXED USE
CONS	CONSERVATION	HDR	HIGH-DENSITY RESIDENTIAL	PUD	PLANNED UNIT DEVELOPMENT	SMU	SHORELINE MIXED-USE
DMU	DOWNTOWN MIXED-USE	MDR	MEDIUM-DENSITY RESIDENTIAL	REC	RECREATIONAL	UMU	URBAN MIXED-USE
		LDR	LOW-DENSITY RESIDENTIAL	RES-1	RESIDENTIAL-1	US1	US-1 CORRIDOR

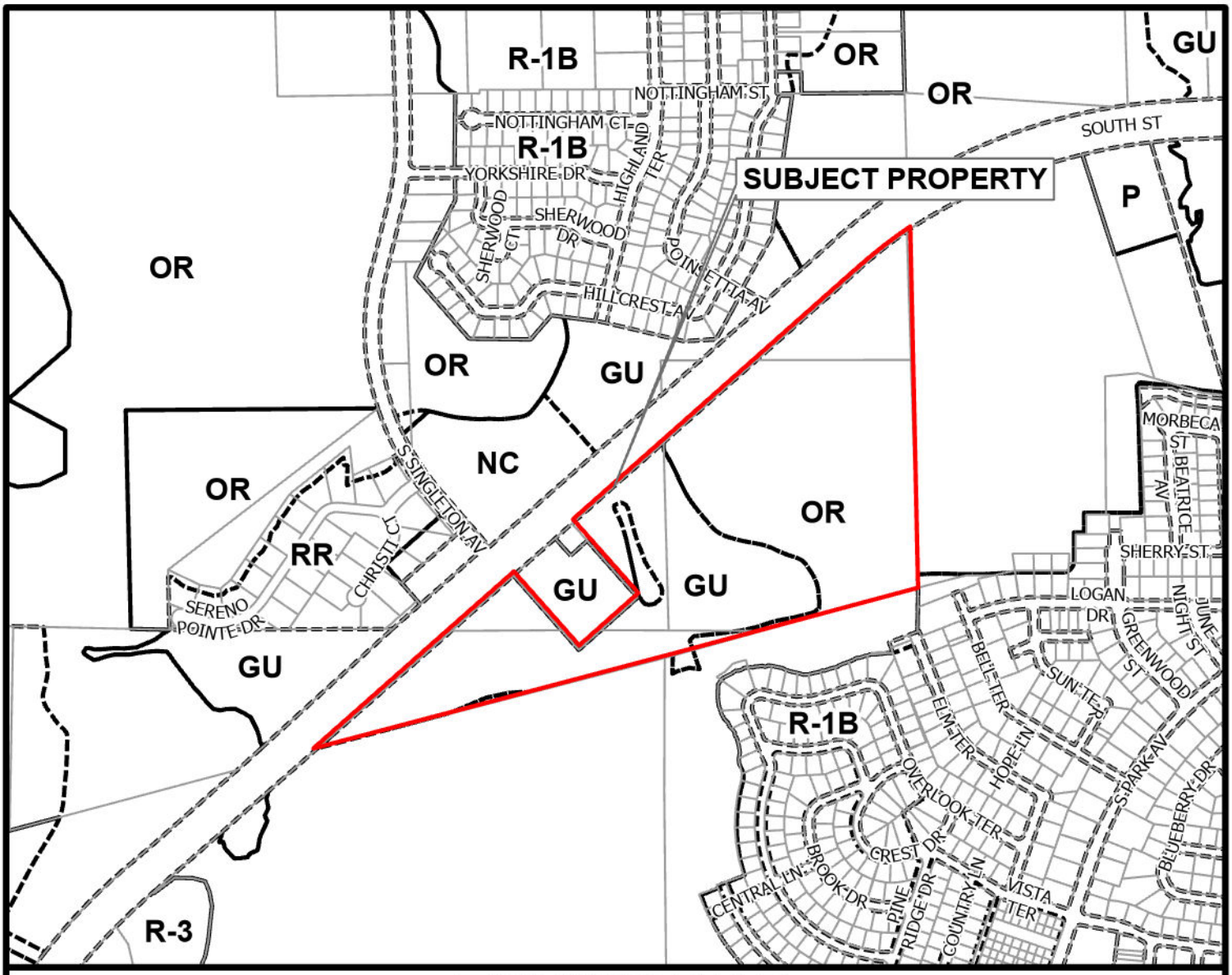
Subject

N W E S

0 500 1,000 2,000 Feet

Community Development Department

8/27/2024



ZONING MAP

RESIDENTIAL DISTRICTS

RE	RESIDENTIAL ESTATES
RR	RURAL RESIDENTIAL
R-1A	SINGLE FAMILY, LOW DENSITY
R-1B	SINGLE FAMILY, MEDIUM DENSITY
R-1C	SINGLE FAMILY, HIGH DENSITY
R-2	MULTIFAMILY, MEDIUM DENSITY
R-3	MULTIFAMILY, HIGH DENSITY
RMH-1	RESIDENTIAL MANUFACTURED HOUSING SUBDIVISION
RMH-2	RESIDENTIAL MANUFACTURED HOUSING PARK

COMMERCIAL DISTRICTS

HM	HOSPITAL MEDICAL
T	TOURIST
NC	NEIGHBORHOOD COMMERCIAL
CC	COMMUNITY COMMERCIAL
RC	REGIONAL COMMERCIAL
OP	OFFICE PROFESSIONAL

INDUSTRIAL DISTRICTS

M-1	LIGHT INDUSTRIAL SERVICES AND WAREHOUSING
M-2	HEAVY INDUSTRIAL
M-3	HIGHWAY INDUSTRIAL INFILL
PID	PLANNED INDUSTRIAL DEVELOPMENT

OVERLAY DISTRICTS

TSA	TITUSVILLE SHORELINE AREA
AIA	AIRPORT IMPACT AREA
WCA	WETLAND AND CONSERVATIONA AREA
ACC	AREA OF CRITICAL CONCERN
HPA	HISTORIC PRESERVATION AREA

SPECIAL DISTRICTS

GU	GENERAL USE
OR	OPEN SPACE AND RECREATION
UMU	URBAN MIXED USE
SMU	SHORELINE MIXED USE
RHP	RESIDENTIAL HISTORIC PRESERVATION
RMU	REGIONAL MIXED USE
PD	PLANNED DEVELOPMENT
P	PUBLIC
UV	URBAN VILLAGE
DMU	DOWNTOWN MIXED USE
IRCN-R	INDIAN RIVER CITY NEIGHBORHOOD RESIDENTIAL
IRCN-C	INDIAN RIVER CITY NEIGHBORHOOD COMMERCIAL

N W E S

TITUSVILLE, FLORIDA FOUNDED 1867

Base Map

City Limits

Zoning

Subject

SSA_2-2024

0 400 800 1,600 Feet

Community Development Department

8/27/2024

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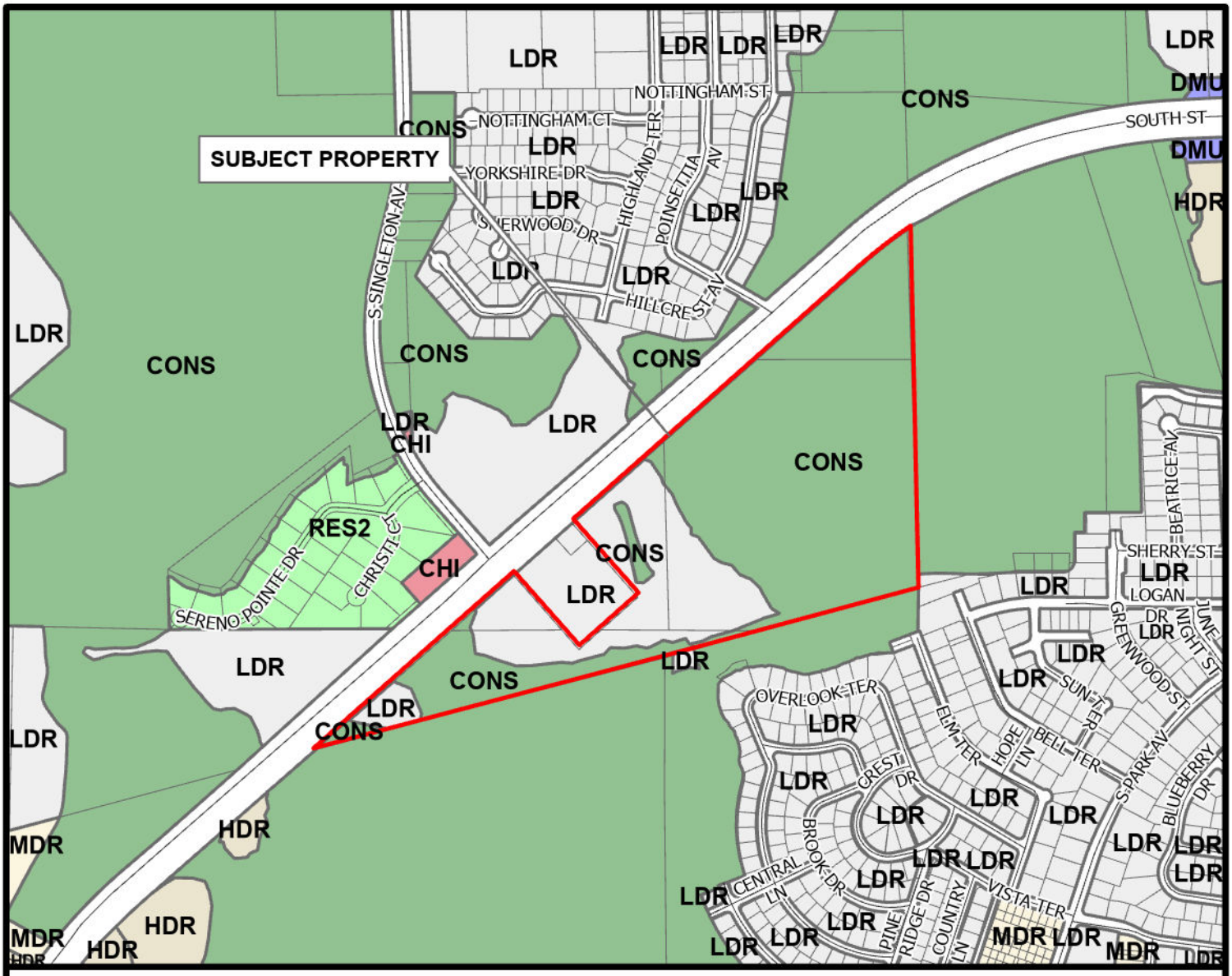


PROPOSED FUTURE LAND USE MAP

CHI	COMMERCIAL HIGH INTENSITY	ED	EDUCATIONAL	PIP	PLANNED INDUSTRIAL PARK	RES-2	RESIDENTIAL-2
CLI	COMMERCIAL LOW INTENSITY	IND	INDUSTRIAL	PSP	PUBLIC/ SEMI-PUBLIC	RMU	REGIONAL MIXED USE
CONS	CONSERVATION	HDR	HIGH-DENSITY RESIDENTIAL	PUD	PLANNED UNIT DEVELOPMENT	SMU	SHORELINE MIXED-USE
DMU	DOWNTOWN MIXED-USE	MDR	MEDIUM-DENSITY RESIDENTIAL	REC	RECREATIONAL	UMU	URBAN MIXED-USE
		LDR	LOW-DENSITY RESIDENTIAL	RES-1	RESIDENTIAL-1	US1	US-1 CORRIDOR

Subject

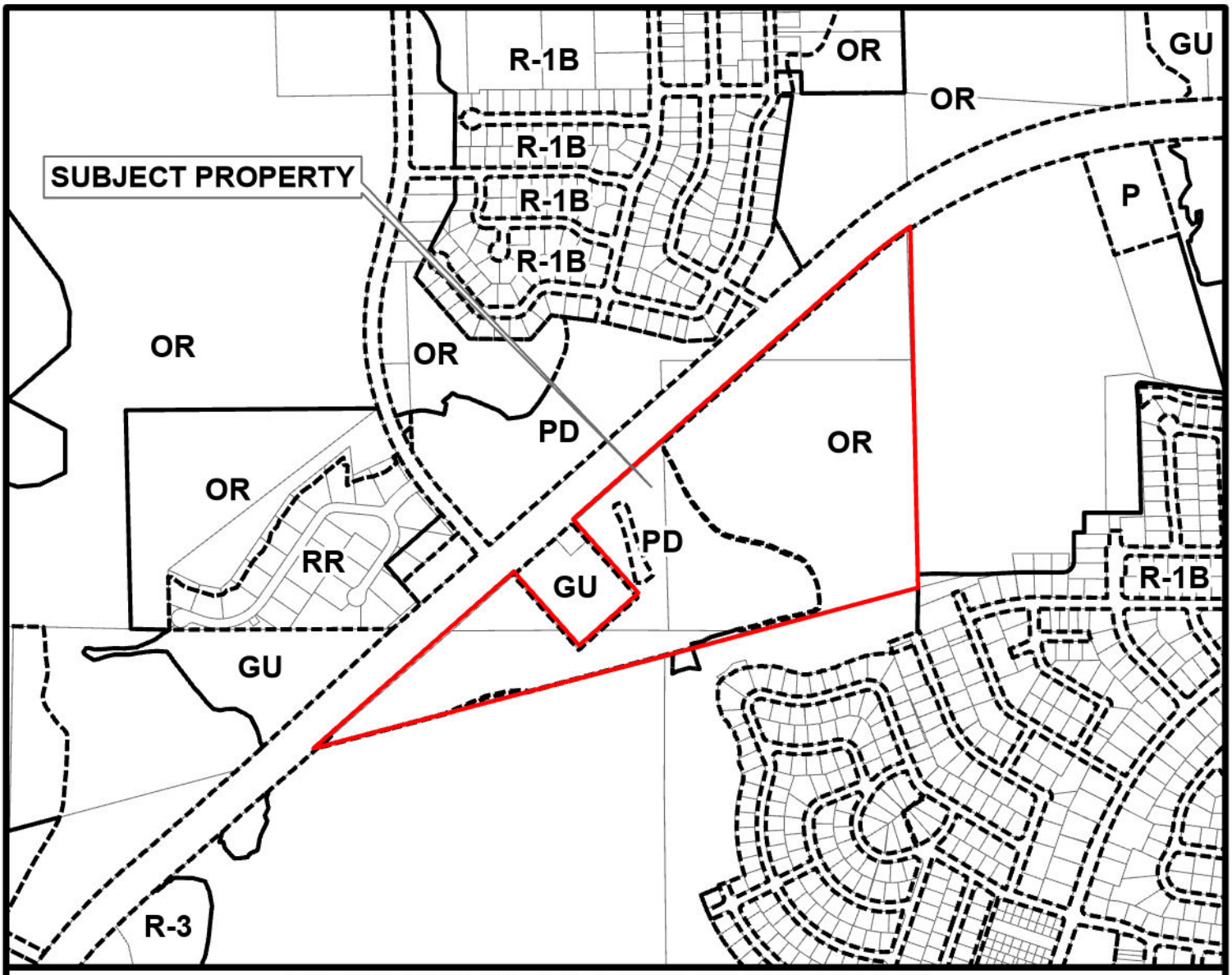
Local Roads

N W E S

0 410 820 1,640 Feet

Community Development Department

8/27/2024



PROPOSED ZONING MAP

RESIDENTIAL DISTRICTS

RE	RESIDENTIAL ESTATES
RR	RURAL RESIDENTIAL
R-1A	SINGLE FAMILY, LOW DENSITY
R-1B	SINGLE FAMILY, MEDIUM DENSITY
R-1C	SINGLE FAMILY, HIGH DENSITY
R-2	MULTIFAMILY, MEDIUM DENSITY
R-3	MULTIFAMILY, HIGH DENSITY
RMH-1	RESIDENTIAL MANUFACTURED HOUSING SUBDIVISION
RMH-2	RESIDENTIAL MANUFACTURED HOUSING PARK

COMMERCIAL DISTRICTS

HM	HOSPITAL MEDICAL
T	TOURIST
NC	NEIGHBORHOOD COMMERCIAL
CC	COMMUNITY COMMERCIAL
RC	REGIONAL COMMERCIAL
OP	OFFICE PROFESSIONAL

INDUSTRIAL DISTRICTS

M-1	LIGHT INDUSTRIAL SERVICES AND WAREHOUSING
M-2	HEAVY INDUSTRIAL
M-3	HIGHWAY INDUSTRIAL INFILL
PID	PLANNED INDUSTRIAL DEVELOPMENT

OVERLAY DISTRICTS

TSA	TITUSVILLE SHORELINE AREA
AIA	AIRPORT IMPACT AREA
WCA	WETLAND AND CONSERVATIONA AREA
ACC	AREA OF CRITICAL CONCERN
HPA	HISTORIC PRESERVATION AREA

SPECIAL DISTRICTS

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RMU	REGIONAL MIXED USE
PD	PLANNED DEVELOPMENT
P	PUBLIC
UV	URBAN VILLAGE
DMU	DOWNTOWN MIXED USE
IRCN-R	INDIAN RIVER CITY NEIGHBORHOOD RESIDENTIAL
IRCN-C	INDIAN RIVER CITY NEIGHBORHOOD COMMERCIAL

Proposed Zoning

Parcels

Subject

N W E S

TITUSVILLE, FLORIDA FOUNDED 1867

0 412.5 825 1,650 Feet

Community Development Department

8/27/2024

EXISTING LAND USE	PROPOSED LAND USE
CONSERVATION	LOW DENSITY RESIDENTIAL
LOW DENSITY RESIDENTIAL	CONSERVATION



4N

SR 405 AND SINGLETON

TITUSVILLE

FUTURE LAND USE EXHIBIT - SOUTH

11/16/23 - CONTACT: (321) 335-6692

GRAPHIC SCALE IN FEET
0 60 120 240

W N S E

Kimley»Horn

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EXISTING ZONING	PROPOSED ZONING
OPEN SPACE AND RECREATION (OR)	PLANNED DEVELOPMENT (PD)
GENERAL USE (GU)	PLANNED DEVELOPMENT (PD)



4N

SR 405 AND SINGLETON

TITUSVILLE

ZONING EXHIBIT - SOUTH

06/07/24 - CONTACT: (321) 335-6692

GRAPHIC SCALE IN FEET
0 60 120 240

W N S E

Kimley»Horn

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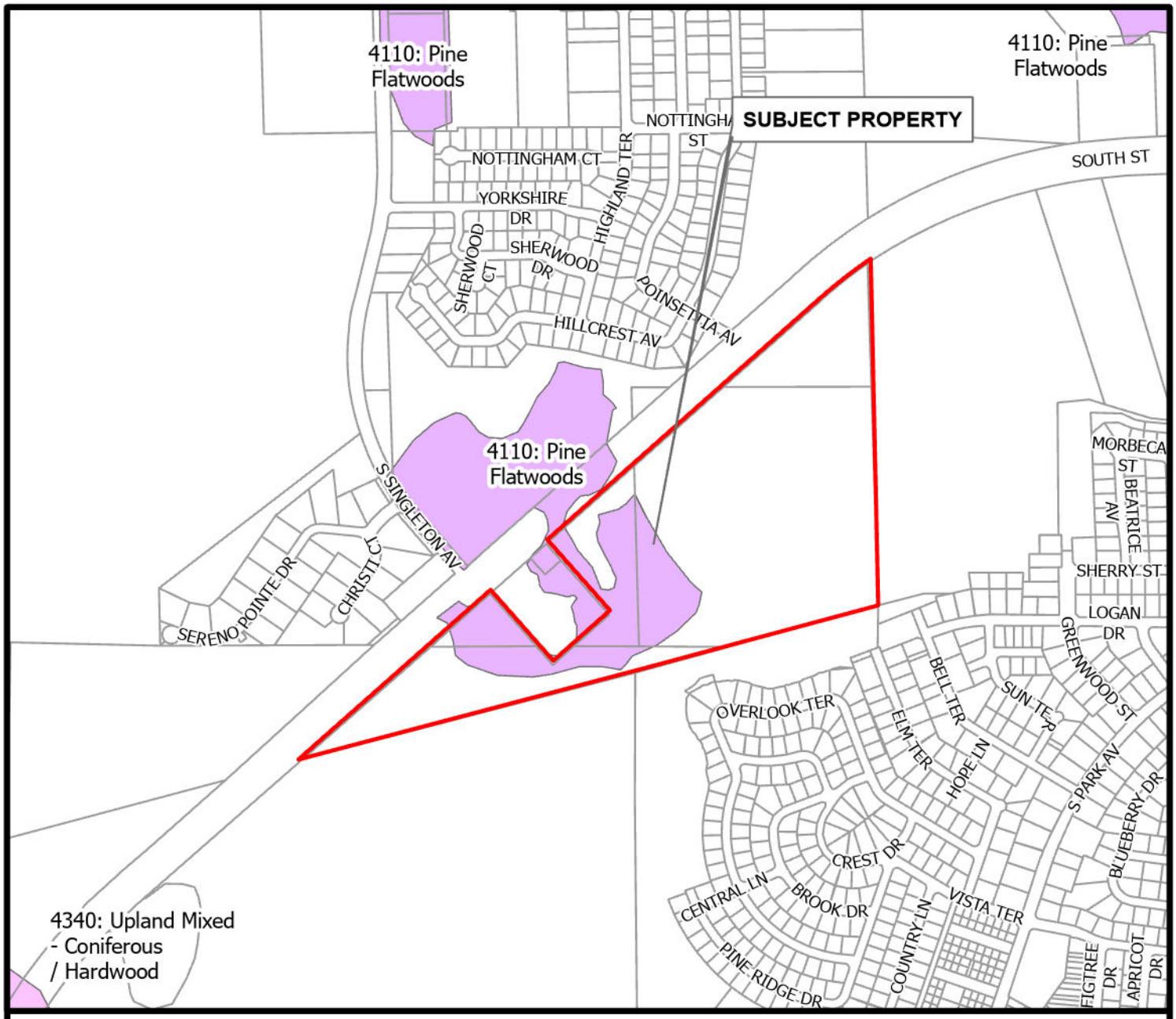


SJRWMD Florida Land Use Cover Classification System
Upland Forests - 4000 Series
SSA_2-2024

LANDCOVER DESCRIPTION

- 4110: Pine Flatwoods
- 4340: Upland Mixed - Coniferous / Hardwood

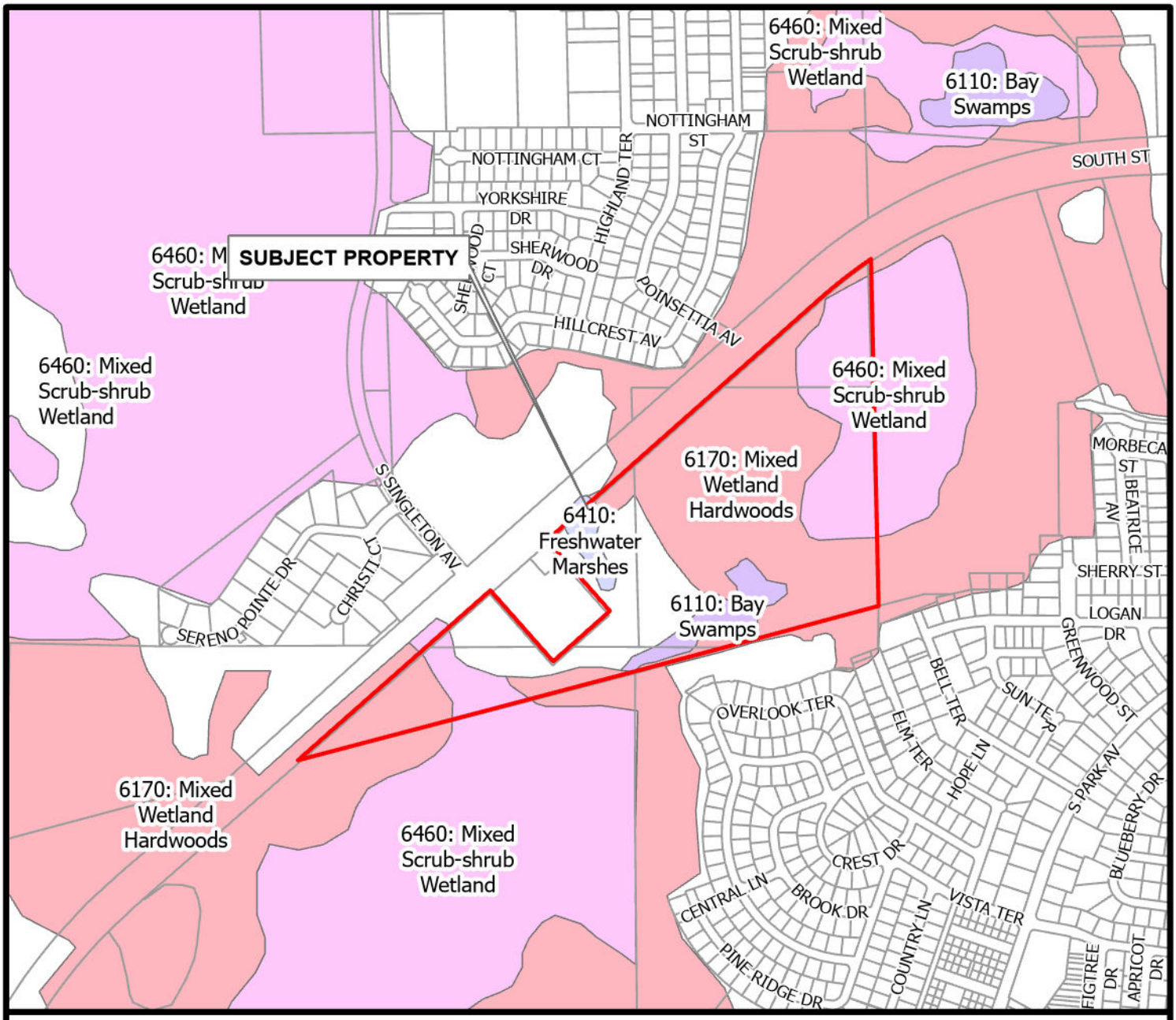
N W E S

Community Development Department

0 410 820 1,640 Feet

8/27/2024

This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District



SJRWMD Florida Land Use Cover Classification System
Wetlands - 6000 Series

SSA_2-2024

SJRWMD Land Cover 6000 Series

6460: Mixed Scrub-shrub Wetland

LANDCOVER DESCRIPTION

- 6110: Bay Swamps
- 6170: Mixed Wetland Hardwoods
- 6410: Freshwater Marshes

Base Map

- Parcels
- Subject

N W E S

Community Development Department

0 410 820 1,640 Feet

This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District

8/27/2024

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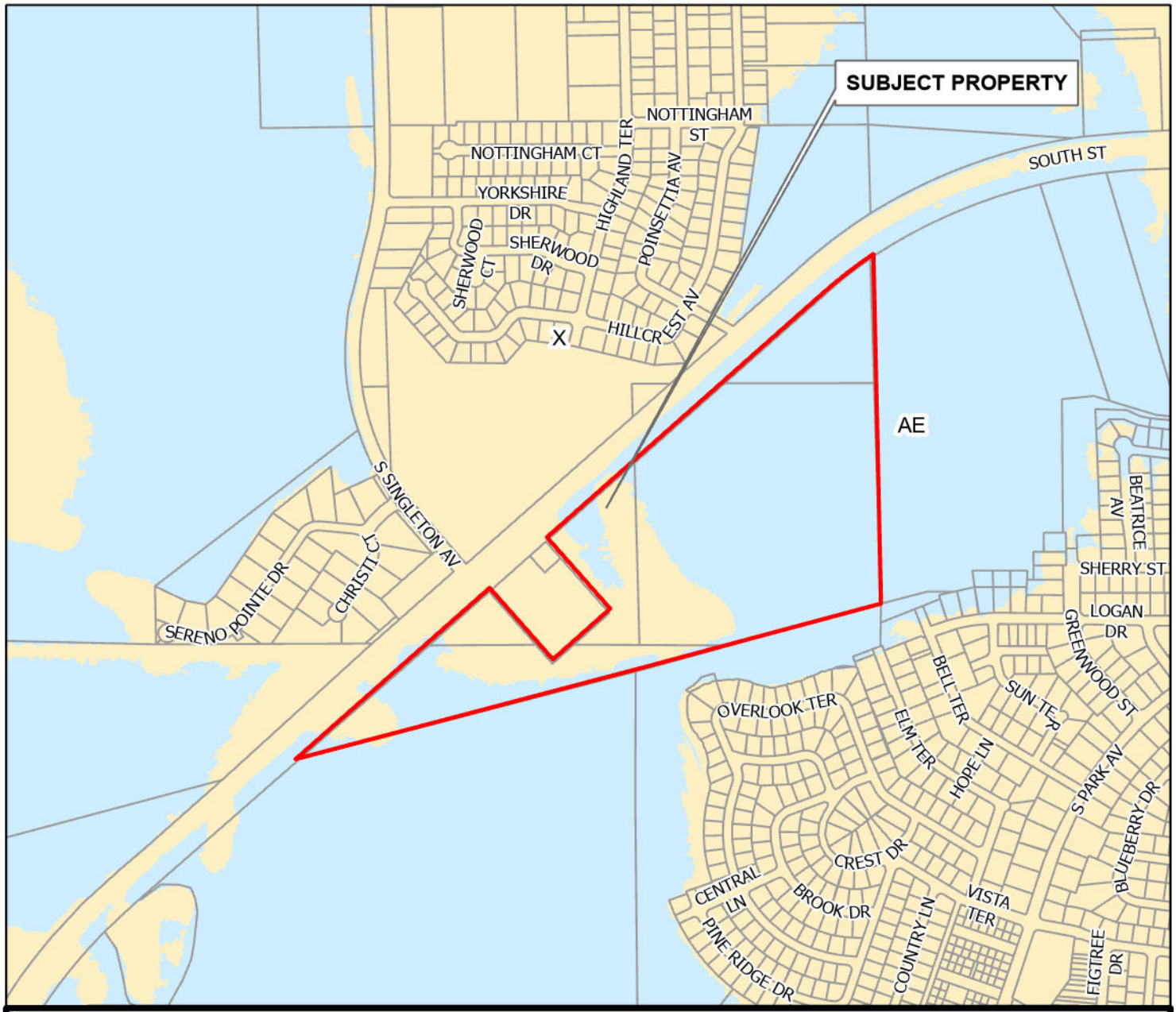

FEMA FLOOD HAZARD AREAS

SSA_2-2024

Special Flood Hazard Area Zones

- A
- A0
- AE
- AO
- VE

Moderate Flood Hazard Area Zone

- X5

Minimal Flood Hazard Zones

- C
- X
- X .2 PCT

Other Flood Zone Areas

- D
- FW

N W E S

0 405 810 1,620 Feet

Community Development Department | Source: FEMA FHA Update, 01/29/2021 | 8/27/2024

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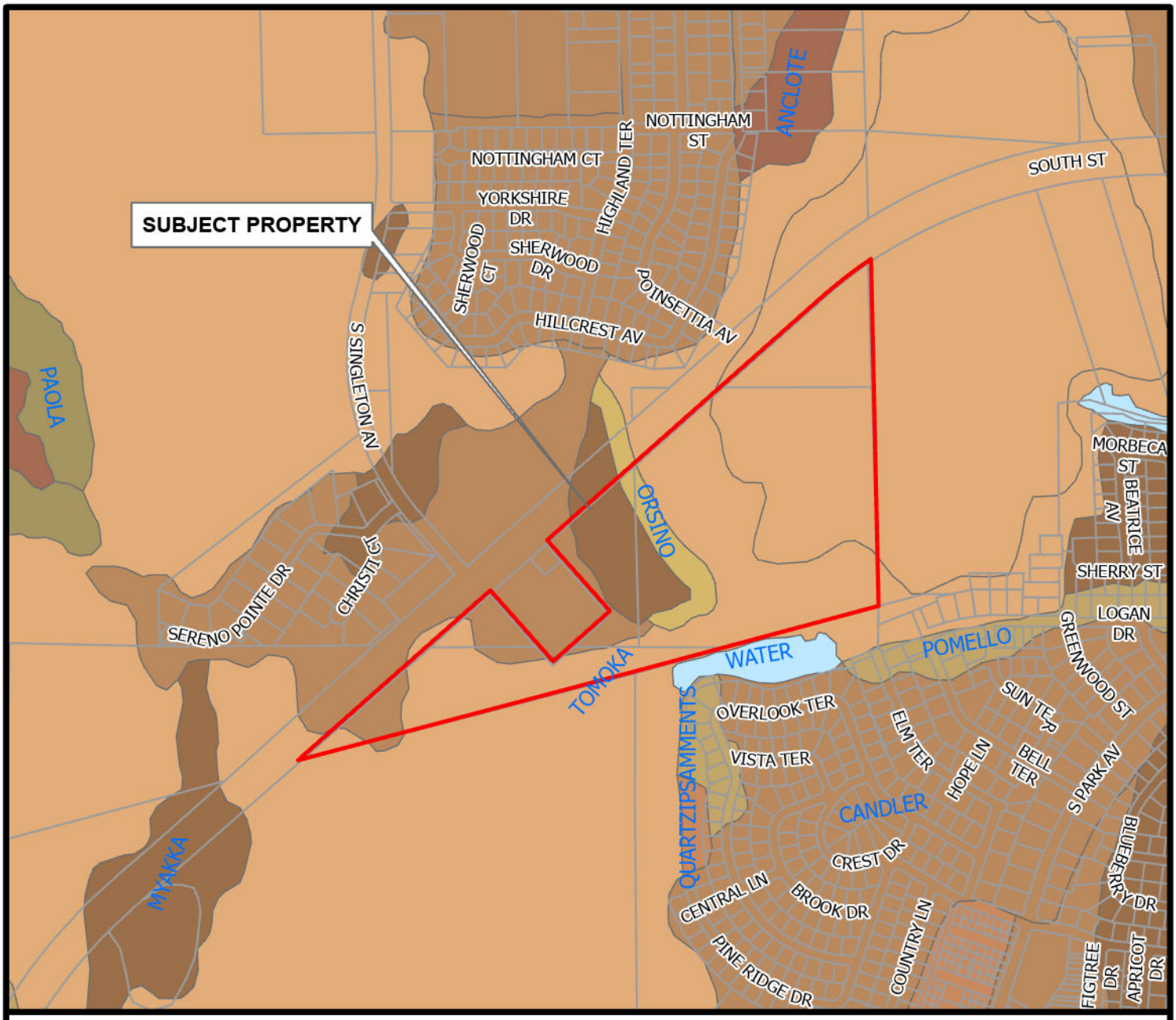


SOILS IN THE VICINITY OF SUBJECT PROPERTY
SSA_2-2024

SoilName

- ANCLOTE
- CANDLER
- MYAKKA
- ORSINO
- PAOLA
- POMELLO
- QUARTZIPSAMMENTS
- TOMOKA
- WATER

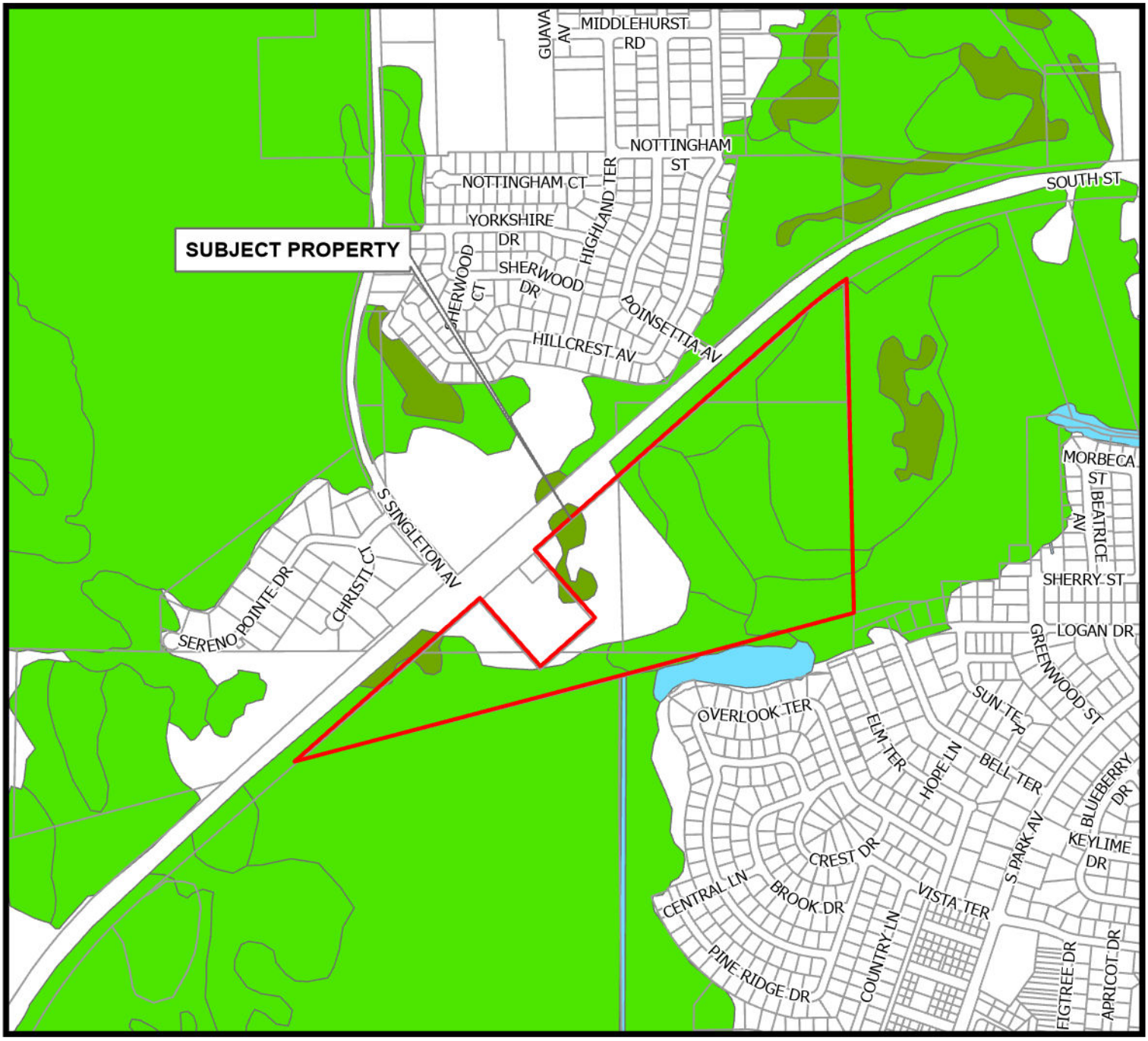
N W E S

Community Development Department

0 410 820 1,640 Feet

Soils data source: The U.S. Department of Agriculture, Natural Resources Conservation Service. (2019)

8/27/2024



WETLANDS IN VICINITY OF PROPERTY

SSA_2-2024

N

W E

S

WETLAND_TY

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

8/27/2024

Scale:1:10,000

Community Development Department
Source: USFWS NWI (2023)

This data set represents the approximate location and type of wetlands and deepwater habitats. The primary intended use is for regional and watershed data display and analysis, rather than specific project data analysis.

Q:\GIS\Community Development\PLANNING\Planning Templates\ArcPro\PlanningMaps\PlanningMaps.aprx

City of Titusville Preliminary Concurrency Assessment

Project Name: SR 405 and Singleton - PD - South **Date:** November 30, 2023

Project Description: Townhomes: 66 units

Residential Density (dwelling units): 66 **Non-Residential Intensity (1,000 s.f.):**

Total Water Capacity*			5.429 MGD
Less Current Demand**			4.439 MGD
Less Future Commitments (FDEP/Water Supply Allocation permits)			0.177 MGD
Remaining Capacity***			0.813 MGD
Estimated Unit Based Water Demand******	91	ERU	0.0228 MGD

*Total Water Capacity permitted flow is 6.01 MGD minus 10% reservation
**12 Month Rolling Average
***Remaining capacity subject to change without notice - This is neither a commitment nor a reservation of this capacity.
****Based on 100 gallons/capita/day or 250 gallons/unit/day in accordance with Section 10 of the City's Concurrency Technical Manual
Water is reserved for this project only upon issuance of a Water Supply Capacity Allocation Permit in accordance with City Code Section 21-50.

Wastewater

Total Wastewater Capacity*			6.750 MGD
Less Current Demand**			3.784 MGD
Less Future Commitments (FDEP Permits)			0.466 MGD
Remaining Capacity***			2.480 MGD
Estimated Unit Based Wastewater Demand******	91	ERU	0.0205 MGD

*Total Wastewater Capacity based on Design capacity of Blue Heron and Osprey Treatment Facilities
**12 Month Rolling Average
***Remaining capacity subject to change without notice - This is neither a commitment nor a reservation of this capacity.
****Based on 75 gallons/capita/day or 225 gallons/unit/day in accordance with Section 10 of the City's Concurrency Technical Manual

Traffic Circulation

Primary Access

Street Name: South St (SR 405) **Adopted LOS:** E **Max Capacity:** 37,810 ADT

Current Conditions

Roadway Segment: Singleton Ave - Park Ave **2022 E+C Count:** 6,590 ADT
Volume/Count Ratio: 0.17

Future Conditions

Roadway Segment: **Existing + New Count:** 7,088 ADT
Volume/Count Ratio: 0.19

Secondary Access

Street Name: **Adopted LOS:** **Max Capacity:** - ADT

Current Conditions

Roadway Segment: **2022 E+C Count:** - ADT
Volume/Count Ratio:

Future Conditions

Roadway Segment: **Existing + New Count:** ADT
Volume/Count Ratio:

Institute of Transportation Engineers (ITE) Index Number*:	220	Index
Average Vehicle Trips per Unit on a Weekday:	6.74	ADT
Total Average Vehicle Trips for this Development on a Weekday:	498	ADT

* Institute of Transportation Engineers Trip Generation rates or Latest Edition. [Sec. 10.3.1.2 of the Transportation Technical Manual]

Recreation/Open Space

City Population:	49,085	**Required Recreation/Open Space:**	392.68 AC
Adopted LOS (acres/1,000 population):	8	**Current Recreation/Open Space:**	566.60 AC
		Existing Available Recreation/Open Space Capacity:	173.92 AC
Project Population:	147	**Required Recreation/Open Space:**	1.18 AC
		Remaining Recreation/Open Space Capacity:	172.74 AC

Staff Comments

Traffic Study is <u>not</u> required

Evaluated By: KO, JF, CA **Evaluation Expiration Date:** 5/28/2024

Bio-Tech Consulting Inc.
Environmental and Permitting Services

November 15, 2023

John Gilbert
Standard Investments & Holdings, LLC
609 East Pine Street
Orlando, Florida 32809

Proj: Titusville South Street - Titusville, Brevard County, Florida
Sections 4,5,8 & 9, Township 22 South, Range 35 East
(BTC File #303-28)
Re: Environmental Assessment Report

Dear Mr. Gilbert:

During October of 2022, January, August and September of 2023, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 107-acre Titusville South Street site. This site is located on the north and south sides of South Street (405), east of I-95, within Sections 4, 5, 8 & 9, Township 22 South, Range 35 East, Brevard County, Florida (**Figures 1 and 2**). This environmental assessment includes the following elements:

- **general review of site topography;**
- **review of soil types mapped within the site boundaries;**
- **evaluation of land use types/vegetative communities present;**
- **field review for occurrence of protected flora and fauna; and,**
- **an overview of potential development constraints.**

TOPOGRAPHY

Based upon review of the USGS Topographic Map present in **Figure 3** (Titusville, Florida Quadrangle), elevations on the subject property range from +20 feet above the National Geodetic Vertical Datum of 1929 (NGVD) to +45 feet NGVD. Overall, the property drains to the north, west, and south.

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Jacksonville Office
11235 St Johns Industrial Pkwy N
Suite 2
Jacksonville, FL 32246

Tampa Office
6011 Benjamin Road
Suite 101-B
Tampa, FL 33634

Vero Beach Office
4445 North A1A
Suite 221
Vero Beach, FL 32963

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Land & Aquatic Management
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

info@bio-techconsulting.com www.bio-techconsulting.com

SOILS

According to the Soil Survey of Brevard County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), seven (7) soil type exists within the subject property (**Figure 4**). These soil types include the following:

- **Candler fine sand (#4)**
- **Candler – Urban land complex (5)**
- **Myakka sand, 0 to 2 percent slopes (#36)**
- **Orsino fine sand (#41)**
- **Tomoka muck, undrained (#67)**
- **Tomoka muck, drained (#68)**
- **Anclote sand (#91)**

The following presents a brief description of each of the soil types mapped for the subject property:

Candler fine sand (#4) is a nearly level to gently sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of very dark grayish brown fine sand about 5 inches thick. The seasonal high water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler-Urban land complex (#5) is a nearly level to gently sloping, excessively drained soil found on the uplands that has been altered by earthmoving machines. Many areas have been modified by grading and shaping, and may have thin layers of dark topsoil spread over the surface. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Myakka sand, 0 to 2 percent slopes (#36) is a nearly level, poorly drained sandy soil on broad areas on the flatwoods and on areas between sand ridges and sloughs and ponds. The surface layer of this soil type consists of very dark gray and dark gray sand about 8 inches thick. During most years, the water table for this soil type is within a depth of 10 inches of the surface for 1 to 4 months and between 10 and 40 inches of the surface for more than 6 months. The permeability of this soil type is rapid in the sandy layers to a depth of 22 inches, moderate from about 22 to 46 inches, and rapid from about 46 to 63 inches.

Orsino fine sand (#41) is a nearly level, moderately well drained sandy soil on moderately low ridges and between high ridges and poorly drained areas. In most years the water table is at a depth of 40 to 60 inches for 6 months or more. During prolonged dry periods it is below a depth of 60 inches, and during wet periods it is between 20 and 40 inches for 7 days to 1 month.

Tomoka muck, undrained (#67) is a nearly level, very poorly drained muck soil in broad flat marshes, small depressions, and swamps. Sandy and loamy layers are at a depth of 16 to 40 inches. The water table is within a depth of 10 inches for 9 to 12 months in most years, and water is frequently above the surface. In dry periods it is between 10 and 30 inches.

Tomoka muck, drained (#68) is a nearly level, very poorly drained muck soil in broad flat marshes, small depressions, and swamps. The parent material consists of herbaceous organic matter over sandy and loamy marine deposits. Sandy and loamy layers are at a depth of 1 to 3 feet. Being drained, the depth to water table for this soil type has an average rating of 8 cm in comparison to the undrained soil onsite and is just below the soil surface for most of the year (6-9 months). The water table upper limit is within a depth of 0 to 15 cm for most months during the year. In dry periods it is between 15 and 90 cm (March through May). Organic-matter content is very high. This soil type is not frequently flooded, but frequently ponded from June to October, and meets hydric criteria.

Anclote sand (#91) is a nearly level, very poorly drained sandy soil found in marshy depressions in the flatwoods, in broad areas on the flood plains, and in poorly defined drainageways. In most years, the water table is within 10 inches for 6 months of the year. During the dry season, the water depth ranges between 10 inches and 40 inches.

The Florida Association of Environmental Soil Scientists (FAESS) considers the main components and inclusions of Tomoka muck, undrained (#67) and Tomoka muck, drained (#68) to be hydric. This Association also considers inclusions present within Anclote sand (#91) to be hydric. This information can be found in the Hydric Soils of Florida Handbook, Fourth Edition (March, 2007).

LAND USE TYPES/VEGETATIVE COMMUNITIES

The subject site currently supports four (4) land use types/vegetative communities within its boundaries. These areas were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 1999) (**Figure 5**). The upland land use types/vegetative communities on the site are classified as Temperate Hardwoods (425) and Upland Scrub, Pine and Hardwoods (436). The wetland/surface water land use types/vegetative communities on the site are classified as Wetland Forested Mixed (630) and Freshwater Marsh (641). The following provides a brief description of the on-site land use types/vegetative communities

Uplands:

425 – Temperate Hardwoods

A small portion of uplands in the southern portion of the property are consistent with the Temperate Hardwoods (425) FLUCFCS classification. Vegetation observed within this community type includes live oak (*Quercus virginiana*), southern red cedar (*Juniperus virginiana*), cabbage palm (*Sabal palmetto*), saw palmetto (*Serenoa repens*), blackberry (*Rubus* sp.), American beautyberry (*Callicarpa americana*), winged sumac (*Rhus copallinum*), and muscadine (*Vitis rotundifolia*).

436 – Upland Scrub, Pine and Hardwoods

The majority of the upland areas found on the site are consistent with the Upland Scrub, Pine and Hardwoods (436) FLUCFCS classification. Vegetation observed within this community type includes slash pine (*Pinus elliottii*), longleaf pine (*Pinus palustaris*), sand live oak (*Quercus geminata*), live oak (*Quercus virginiana*), myrtle oak (*Quercus myrtifolia*), saw palmetto (*Serenoa repens*), blackberry (*Rubus* sp.), American beautyberry (*Callicarpa americana*), winged sumac (*Rhus copallinum*), wiregrass (*Aristida stricta*), gopher apple (*Licania michauxii*), muscadine (*Vitis rotundifolia*), gallberry (*Ilex glabra*), reindeer lichen (*Cladonia rangiferina*), blueberry (*Vaccinium darrowii*), tuberous sword fern (*Nephrolepis cordifolia*), air potato (*Dioscorea bulbifera*), and bracken fern (*Pteridium aquilinum*).

Wetlands

630 – Wetland Forested Mixed

The majority of wetlands found on the site are consistent with the Wetland Forested Mixed (630) FLUCFCS classification. Vegetation observed within this community type includes red maple (*Acer rubrum*), loblolly bay (*Gordonia lasianthus*), American elm (*Ulmus americana*), dahoon holly (*Ilex cassine*), water oak (*Quercus nigra*), Chinese tallowtree (*Triadica sebifera*), primrose willow (*Ludwigia peruviana*), elderberry (*Sambucus canadensis*), cattail (*Typha* sp.), spikerush (*Eleocharis* sp.), arrowhead (*Sagittaria lancifolia*), wild taro (*Colocasia esculenta*), marsh fern (*Thelypteris palustaris*), cinnamon fern (*Osmundastrum cinnamomea*), royal fern (*Osmunda regalis*), lizard's tail (*Saururus cernuus*), sawgrass (*Cladium jamaicense*), water hyssop (*Bacopa monnieri*), buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Morella cerifera*), soft rush (*Juncus effusus*), dotted smartweed (*Persicaria punctata*), old world climbing fern (*Lygodium microphyllum*), and poison ivy (*Toxicodendron radicans*).

641 – Freshwater Marsh

The herbaceous wetlands associated with the site are consistet with the Freshwater Marsh (641) FLUCFCS classification. Vegetation observed within this community includes spikerush (*Eleocharis* sp.), arrowhead (*Sagittaria lancifolia*), marsh fern (*Thelypteris palustaris*), cinnamon fern (*Osmundastrum cinnamomea*), royal fern (*Osmunda regalis*), sawgrass (*Cladium jamaicense*), water hyssop (*Bacopa monnieri*), buttonbush (*Cephalanthus occidentalis*), wax myrtle (*Morella cerifera*), soft rush (*Juncus effusus*), and dotted smartweed (*Persicaria punctata*).

PROTECTED SPECIES

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001) and Florida Fish and Wildlife Conservation Commission's (FFWCC) Gopher Tortoise Permitting Guidelines (July 2021); an assessment for "listed" floral and faunal species was conducted at the subject property during October 2022, January, August and September 2023. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings and birdcalls that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered and Threatened Species (December 2022) that have the potential to occur in Brevard County.

Reptiles and Amphibians
American toad (*Anaxyrus americanus*)
black racer (*Coluber constrictor*)
brown anole (*Anolis sagrei*)
cricket frog (*Acris crepitans*)
green anole (*Anolis caroliniana*)
gopher tortoise (*Gopherus polyphemus*)
six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*)

Birds
Bald Eagle (*Haliaeetus leucocephalus*)
Black Vulture (*Coragyps atratus*)
Blue Jay (*Cyanocitta cristata*)
Common Nighthawk (*Chordeiles minor*)
Eastern Phoebe (*Sayornis phoebe*)
Mourning Dove (*Zenaida macroura*)
Northern Mockingbird (*Mimus polyglottos*)
Northern Cardinal (*Cardinalis cardinalis*)
Pileated Woodpecker (*Drycocpus pileatus*)
Red-Tailed Hawk (*Buteo jamaicensis*)

Mammals
eastern gray squirrel (*Sciurus carolinensis*)
marsh rabbit (*Sylvilagus palustris*)
nine-banded armadillo (*Dasypus novemcinctus*)
raccoon (*Procyon lotor*)
Virginia opossum (*Didelphis virginiana*)

Two (2) of the above wildlife species are identified in the FFWCC's Official Lists - Florida's Endangered Species and Threatened Species (December 2022).

The following provides a brief description of additional species as they relate to the development of the project site.

Bald Eagle (*Haliaeetus leucocephalus*)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940).

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (Haliaeetus leucocephalus).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under the USFWS's management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C. A USFWS Bald Eagle "Non-Purposeful Take Permit" is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the on-site evaluation for "listed" species, BTC conducted a review for any FFWCC recorded Bald Eagle nests (2016-2017 nesting season) and Audubon Florida EagleWatch (2020-2021 nesting season) recorded Bald Eagle nests on or within the vicinity of the site. This review revealed one (1) Bald Eagle nest within the [redacted]. According to the FFWCC nest locator, nest ID BE071 was last observed active in 2016. This nest was not monitored by the Audubon Eagle Watch Program last season (2021). BTC did not observe a Bald Eagle nest at the recorded location or within the subject property during the October 2021 study or during a subsequent drone survey during January 2023. An updated ground survey was conducted during August 2023. No further action is required in regards to the Bald Eagle, unless a new nest is constructed.

Gopher Tortoise (*Gopherus polyphemus*)
State Listed as "Threatened" by USFWS

Currently the gopher tortoise (*Gopherus polyphemus*) is classified as a "Category 2 Candidate Species" by the USFWS, and as of September 2007 is now classified as "Threatened" by FFWCC, and as "Threatened" by FCREPA. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with the pine flatwoods, pastures and abandoned orange groves. Several other protected species known to occur in Osceola County have a possibility of occurring in this area, as they are gopher tortoise commensal species. These species include the eastern indigo snake (*Drymarchon corais couperi*), Florida mouse (*Podomys floridanus*) and the gopher frog (*Rana capito*). However, none of these species were observed during the survey conducted.

The site was surveyed for the existence of gopher tortoises through the use of pedestrian transects. The survey observed several potentially occupied burrows [redacted]. The on-site tortoise population will be re-located to an approved recipeient site through permitting with the FFWCC.

WETLANDS

The extent of all wetlands and surface waters on the subject site were delineated by in accordance with the Chapter 62-340, F.A.C and have been verified by the Florida Department of Environmental Protection. The on-site wetlands are located within the St. Johns River (Canaveral Marshes to Wekiva).

St. Johns River Water Management District

An Environmental Resource Permit (ERP) will be required through the St. Johns River Water Management District (SJRWMD) for all wetland and/or other surface water impacts (both direct and secondary) in association with the proposed development. Impacts to the project's wetland and/or other surface water communities would be permittable by the SJRWMD as long as the issues of elimination and reduction of wetland impacts have been addressed and as long as the mitigation offered is sufficient to offset the functional losses incurred via the proposed impacts.

Florida Department of Environmental Protection

In December of 2020, the FDEP "assumed" federal permitting authority for all wetland and surface water resources under Section 404 of the Clean Water Act (CWA). For those project's whose wetland and surface water resources are associated with tidal waters or traditional navigable waters, under Section 10 of the Rivers and Harbors Act, the US Army Corps of Engineers (USACE) will "retain" federal permitting authority. These "retained" resources also include wetlands and/or other surface waters that fall within the 300' guide line established from the ordinary high water mark or mean high tide line of the retained waters

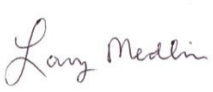
With respect to the subject property, it is anticipated that the on-site wetlands and/or other surface waters would fall under the regulatory authority of the FDEP, as these resources are not Section 10 waters. Currently, FDEP considers all wetland and/or surface water resources to be federally jurisdictional unless the applicant provides documentation proving otherwise.

A State 404 Permit Individual application (DEP Application No: 0434155-001-SFI) is currently under review by the FDEP. Informal consultation with the FWC and USFWS is complete.

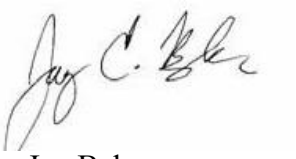
The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

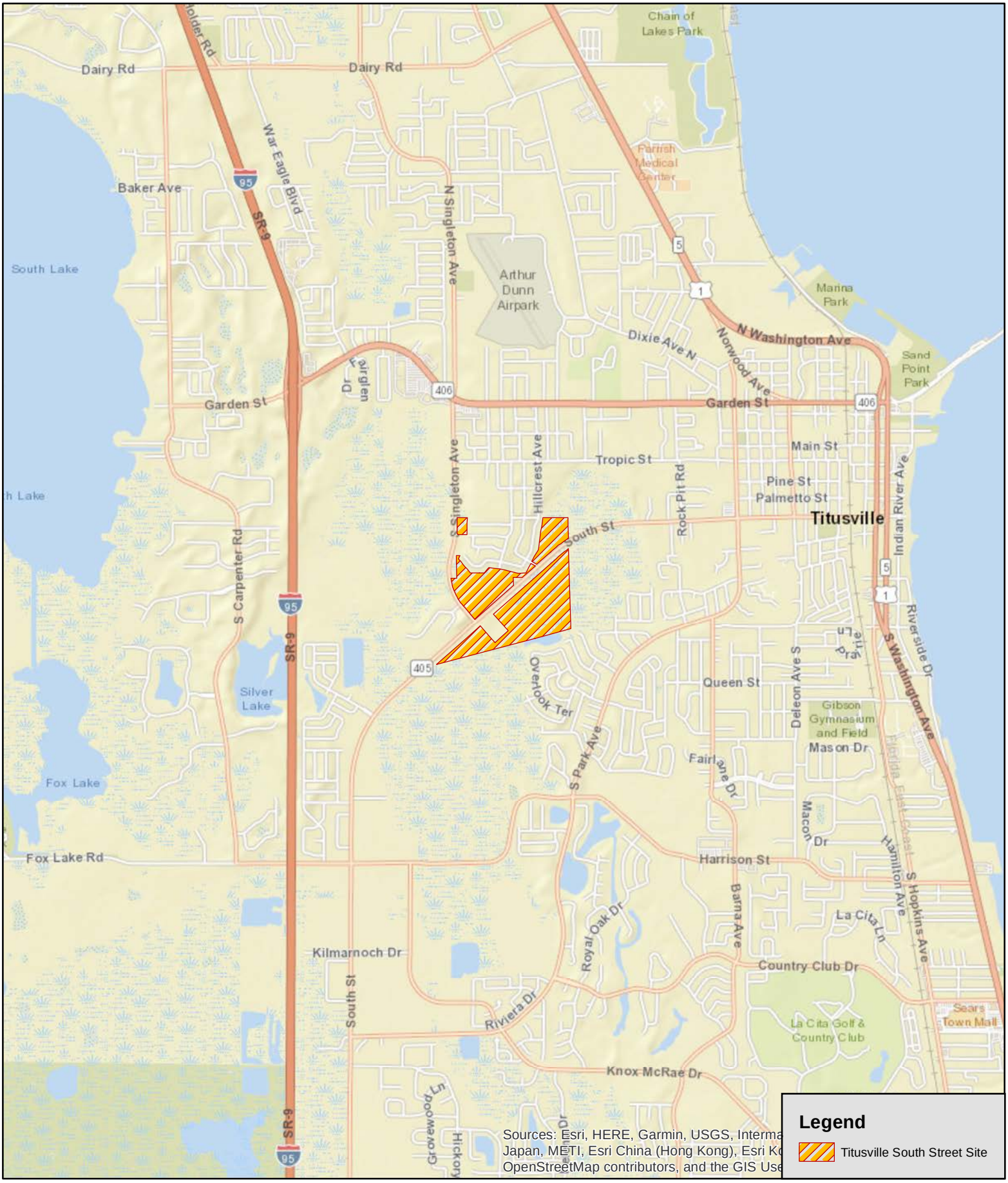


Larry Medlin
Project Manager



Jay Baker
Director

Attachments



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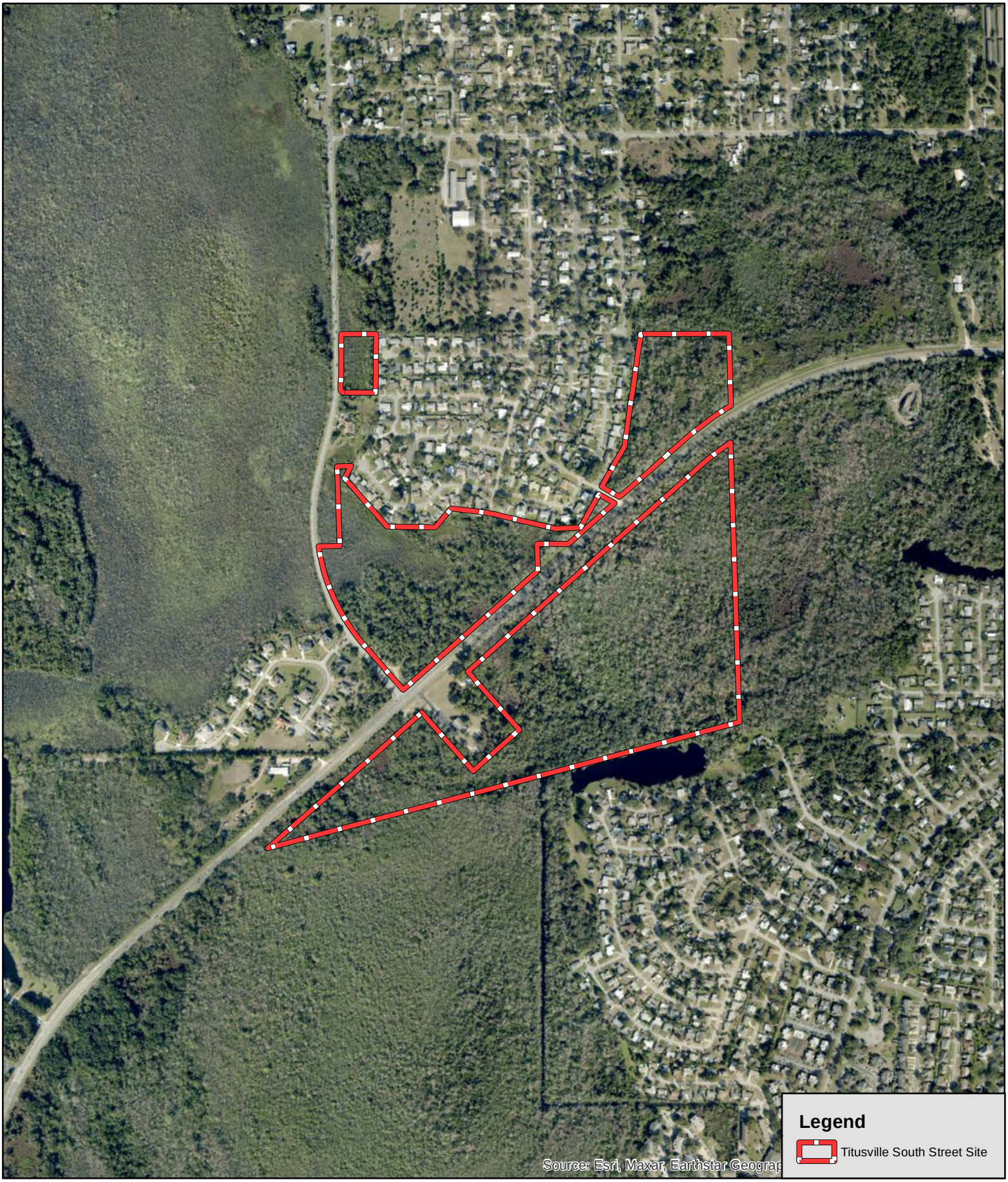
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Titusville South Street
Brevard County, Florida
Figure 1
Location Map

N

0.5
Miles

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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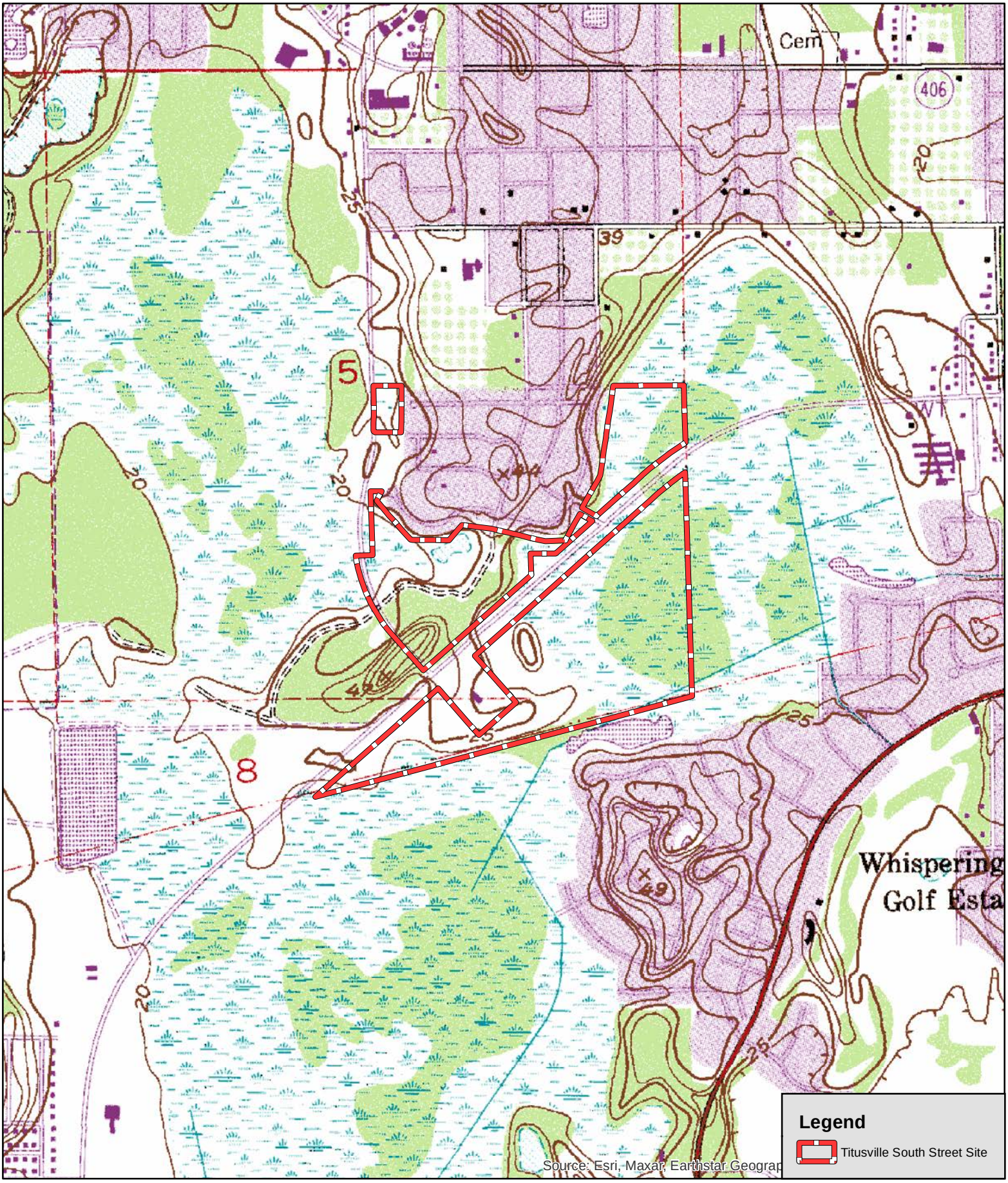
Titusville South Street
Brevard County, Florida
Figure 2
2021 Aerial Photograph

N

1,000 Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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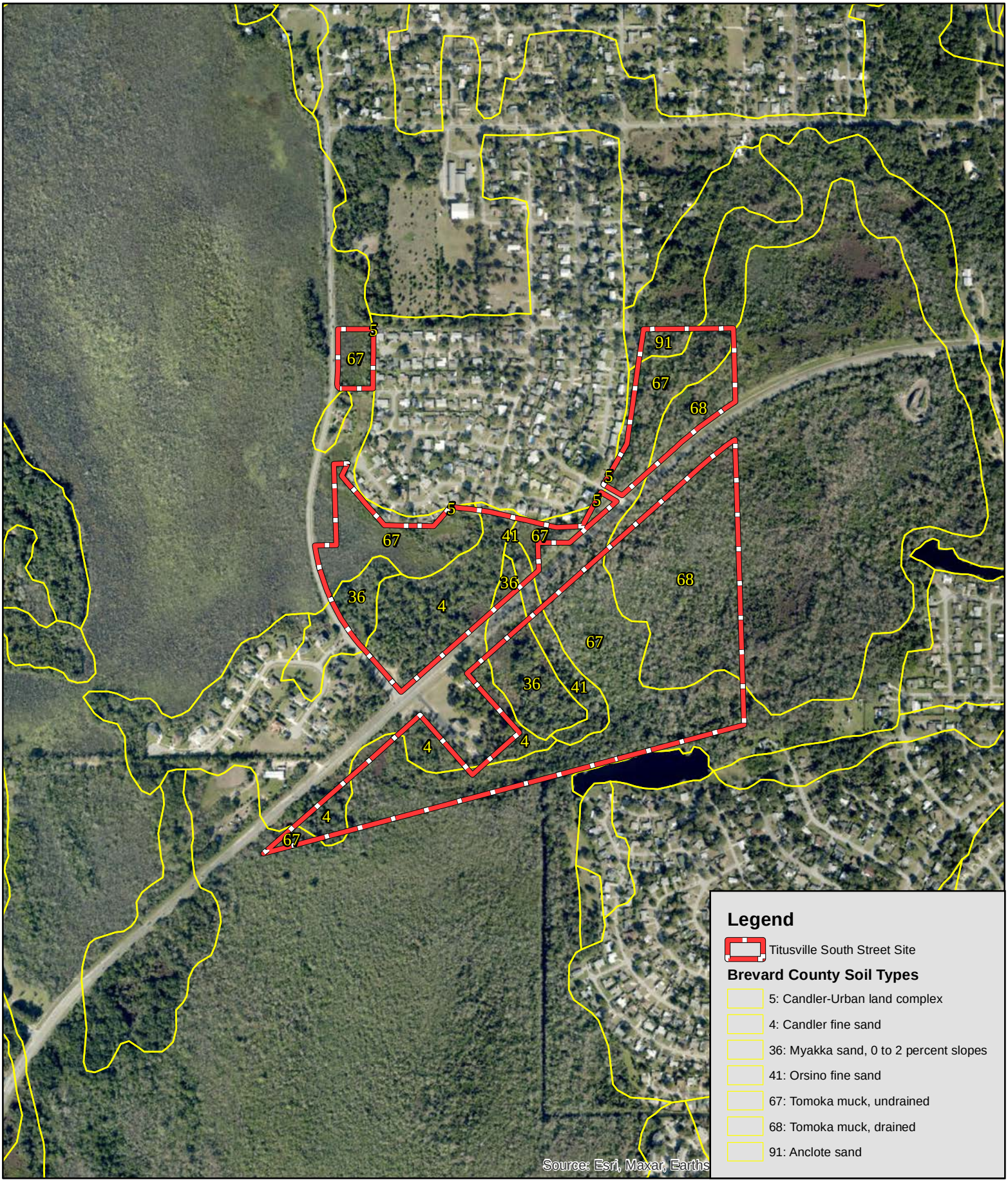
Titusville South Street
Brevard County, Florida
Figure 3
USGS Topographic Map

N

1,000
Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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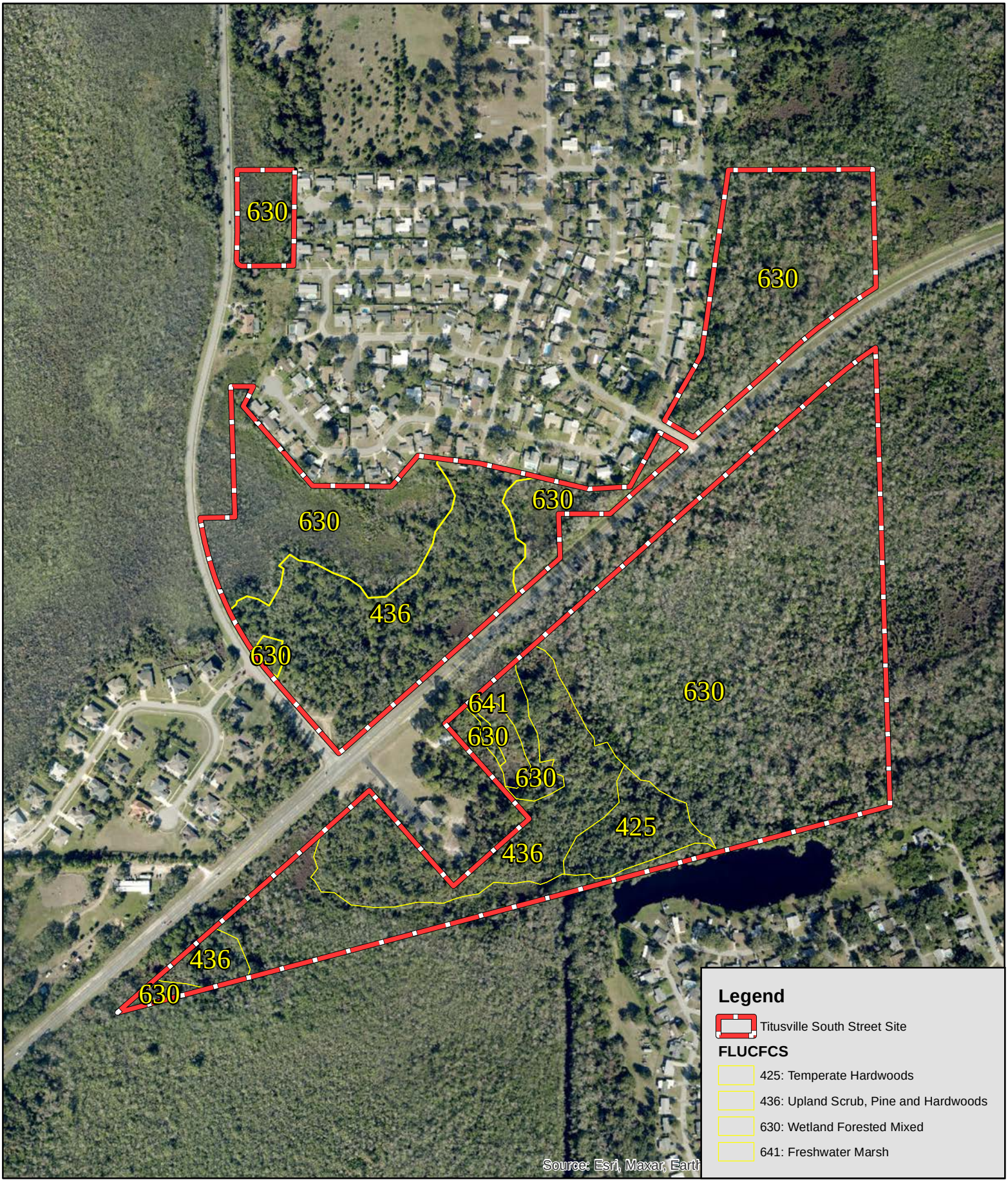
Titusville South Street
Brevard County, Florida
Figure 4
USGS Soils Map

N

800
Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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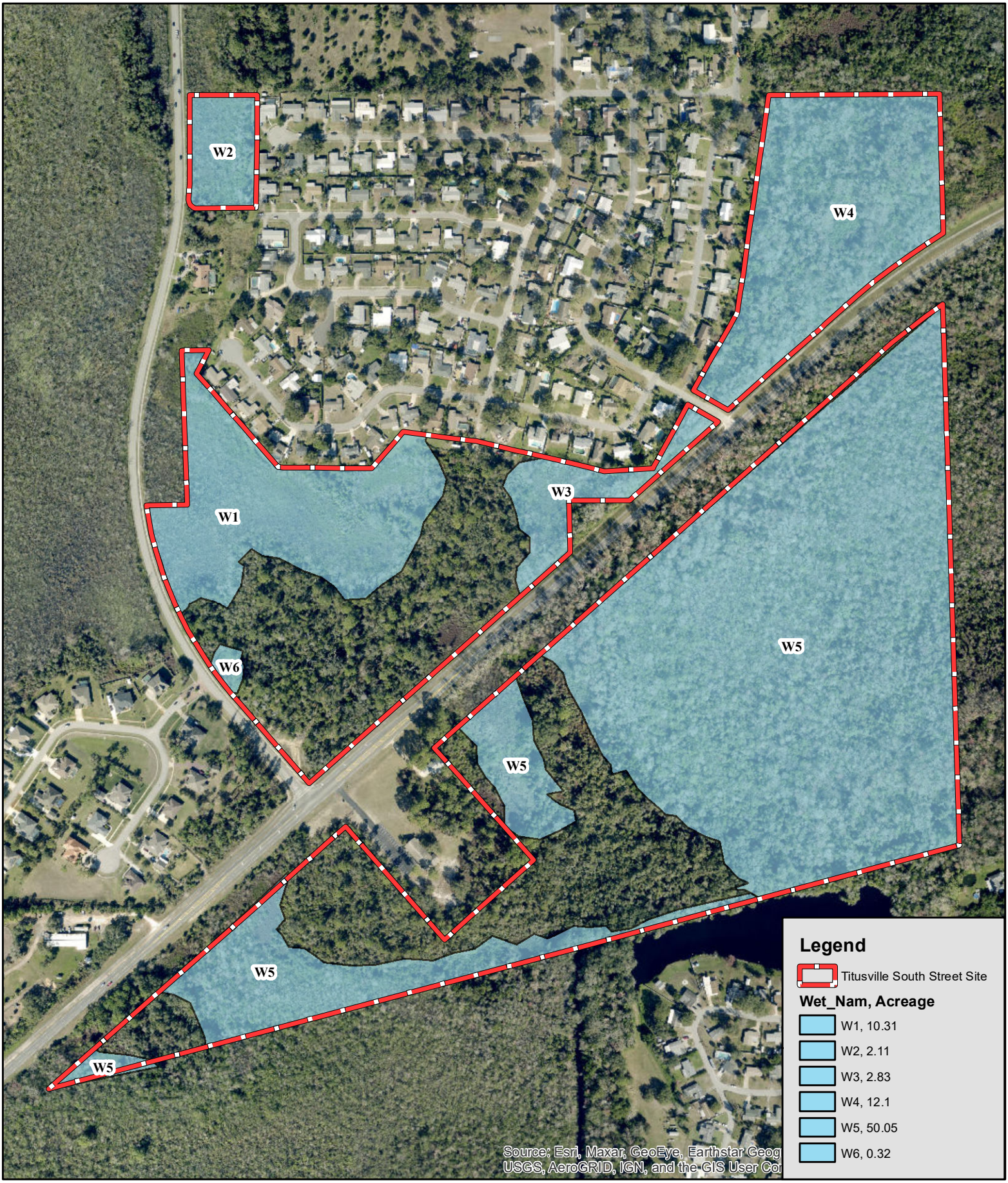
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Titusville South Street
Brevard County, Florida
Figure 5
FLUCFCS Map

N

500 Feet

Project #: 303-28
Produced By: RAB
Date: 3/28/2023



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3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
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Titusville South Street
Brevard County, Florida
Figure 6
Wetland Map

N

420
Feet

Project #: 303-28
Produced By: RAB
Date: 4/18/2023

Titusville South Street

Traffic Impact Study

City of Titusville, FL

June 2022

Kimley»Horn

Titusville South Street

Traffic Impact Study

City of Titusville, FL

Prepared by:

Kimley-Horn and Associates, Inc.

June 2022

©Kimley-Horn and Associates, Inc. 2022

K:\ORL_TPTO\249192000_Titusville South Street\03_Documentation\Titusville South Street_TIA_2022.05.XX.docx

Kimley»Horn

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Appendix D: Space Coast TPO Traffic Counts

Appendix E: Turning Movement Counts

Appendix F: FDOT's Florida Traffic Online (FTO) Data

Appendix G: Turning Movement Volume Worksheets

Appendix H: Signal Timings

Appendix I: Synchro Outputs

Appendix J: Vested Trips Developments

Appendix K: CFRPM Model Plot

Appendix L: NCHRP Outputs

1.0 INTRODUCTION

1.1 INTRODUCTION

Kimley-Horn and Associates, Inc. was retained by Standard Investments + Holdings, LLC. to analyze and document the transportation impacts associated with the proposed Titusville South Street residential development in the City of Titusville, Florida. The following Traffic Impact Study (TIS) generally conforms to the methodology provided in **Appendix A**.

The ±107-acre site is generally located to the north and south of State Road 405/South Street and east of South Singleton Avenue, bound by wetlands to the north of the north parcel and to the east and west of the south parcel. The site will consist of ±76 single-family homes and ±120 townhomes. Access to the north portion of the site will be provided via one (1) full-access connection on Singleton Avenue and one (1) full access connection on South Street east of Singleton Avenue Access to the site will be provided via two (2) full access connections on South Street and one (1) full access connection on Singleton Avenue. The proposed development and its access points are shown on the conceptual site plan included in **Appendix B**.

As part of the permitting process, the Future Land Use (FLU) of the project site will need to be amended to reflect the proposed development type. An analysis of the existing and proposed FLU maximum trip generation potential is included in this TIA.

1.2 STUDY AREA

From discussions with City staff and per guidelines in the City of Titusville Land Development Code, the resulting study area was determined, as shown on **Figure 1**:

Study Area Roadway Segments

- South Street (SR405), from Fox Lake Road to Singleton Avenue
- South Street (SR405), from Singleton Avenue to Park Avenue
- Singleton Avenue, from South Street (SR405) to Garden Street

Study Area Intersections

- South Street/SR405 (N/S) & Fox Lake Road (E/W)
- South Street/SR405 (N/S) & Singleton Avenue (E/W)
- South Street/SR405 (E/W) & Park Avenue (N/S)
- Singleton Avenue (E/W) & Project Driveway (N/S)
- South Street/SR405 (N/S) & Project Driveway (E/W)

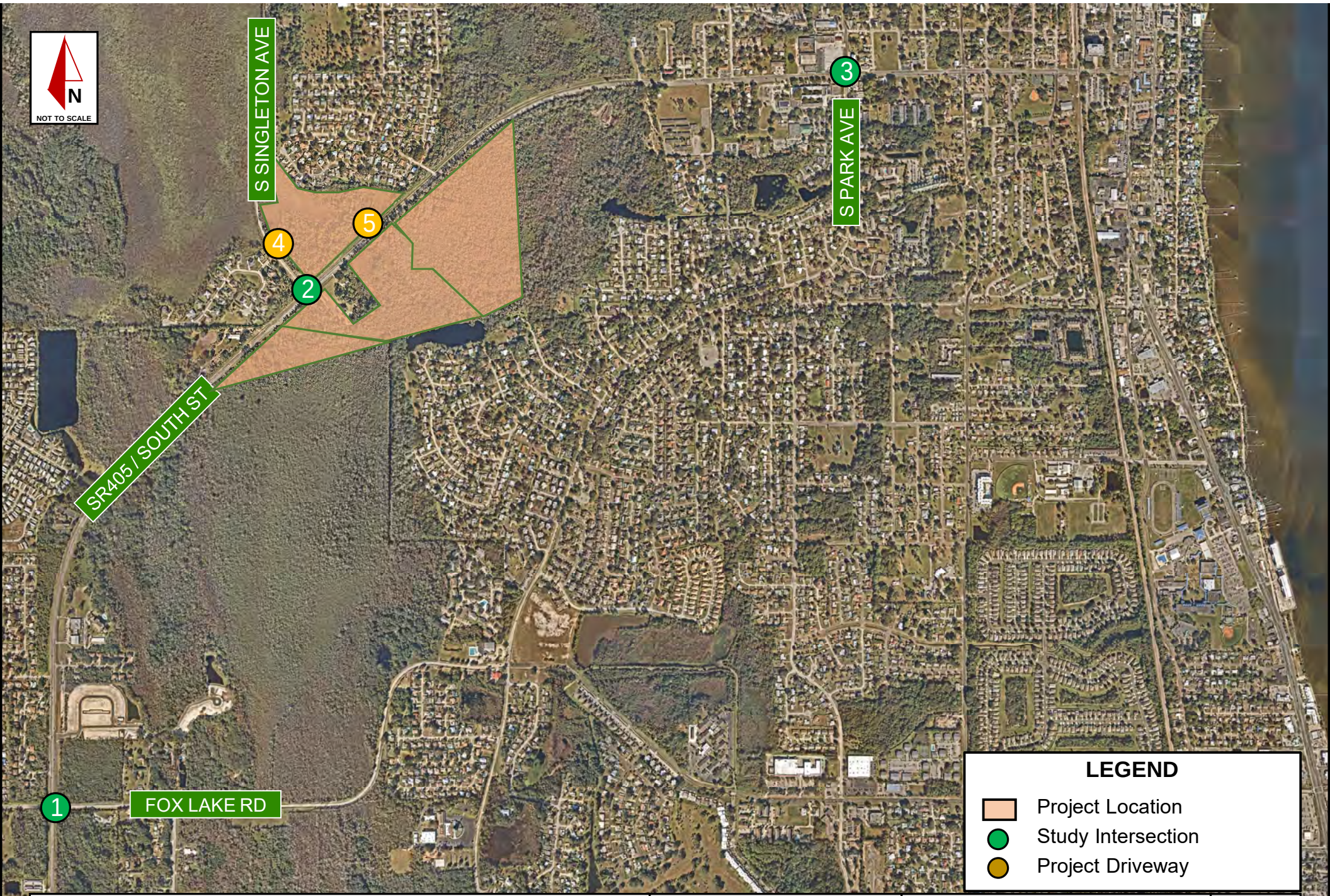

Figure 1: Project Location & Study Area

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2.0 FUTURE LAND USE AMENDMENT

As part of the FLU Amendment Evaluation process, a transportation assessment is needed to determine the potential impact the change in FLU will have on the surrounding roadway network. The maximum trip generation potential was calculated for the existing and proposed FLU at maximum intensity. This assessment was performed per procedures established in the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, the City of Titusville Land Development Regulations Chapter 27 Article III and Chapter 28 Article VI, and the Brevard County Land Development Regulations Article VI.

The project site has the following existing FLU designation: ±9.80-acres of Commercial High Intensity Use (CHI), ±59.60 acres of Conservation (CONS), and ±37.60 acres of Low Density Residential (LDR). The proposed FLU designation is Planned Unit Development (PUD), which allows for the proposed development of single-family attached and detached housing.

Per both the Titusville and Brevard County Land Development Regulations, each FLU category has regulations for maximum density for development. This determines the maximum intensity of development that each FLU designation allows on the project site. The CHI FLU designation has maximum intensity with the Community Commercial (CC) zoning. The City of Titusville permits a maximum building coverage of 30% with CC zoning so the maximum development potential of the +/- 9.80 acres of CHI FLU designation is 128.07 KSF of commercial space. The LDR FLU designation has a maximum intensity of 5.8 dwelling units per acre in the Single-Family Medium Density (R1-B) zoning. Therefore, a maximum of 218 dwelling units could be developed on LDR portion of the project site. Even at maximum intensity, no development is anticipated on the conservation (CONS) portion of the project site as the allowed zoning districts in the CONS FLU designation have little to no development potential.

The proposed PUD FLU designation will have a maximum development potential of 76 single-family homes and 120 townhomes.

From this, the trip generation potential for each FLU designation was determined using procedures published in the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* for the maximum intensity of each FLU designation. ITE Excerpts are provided in **Appendix C**. The following Land Use Codes (LUC) were used:

- LUC 210 – Single-Family Detached Housing
- LUC 215 – Single-Family Attached Housing
- LUC 821 – Shopping Plaza (40 – 150K)

Table 1 provides the maximum trip generation for the existing and proposed FLU. The existing FLU is anticipated to generate 14,168 daily trips and 1,363 (685 In / 678 Out) PM Peak Hour trips. The proposed FLU is anticipated to generate a maximum of 1,648 daily trips and 145 (88 In / 57 Out) PM Peak Hour trips.

The proposed FLU at maximum intensity will generate fewer trips than the existing FLU designation at maximum intensity. Therefore, no additional transportation analysis is needed.

Table 1: Trip Generation Comparison for Existing and Proposed FLU

Existing FLU Allowance												
Daily	Land Use	Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	Daily Trip Generation					
							Total	In[1]		Out[1]		
	Commercial, High Intensity (CHI)	9.80	821	**128.07**	KSF	94.49	12,101	50%	6,051	50%	6,050	
	Low Density Residential (LDR)	37.60	210	**218**	DU	9.48	2,067	50%	1,034	50%	1,033	
	Conservation	59.60	-	**59.60**	AC	0.00	0	50%	0	50%	0	
	Total Generated Trips						**14,168**	**7,085**		**7,083**		
PM Peak	Land Use	Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	PM Peak Hour Trip Generation					
							Total	In[1]		Out[1]		
	Commercial, High Intensity (CHI)	9.80	821	**128.07**	KSF	9.03	1,156	48%	555	52%	601	
	Low Density Residential (LDR)	37.60	210	**218**	DU	0.95	207	63%	130	37%	77	
	Conservation	59.60	-	**59.60**	AC	0.00	0	48%	0	52%	0	
	Total Generated Trips						**1,363**	**685**		**678**		

Proposed FLU Allowance												
Daily	Land Use	Total Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	Daily Trip Generation					
							Total	In[1]		Out[1]		
	Planned Unit Developmet (PUD): Single-Family Detached Housing	-	210	**76**	DU	10.32	784	50%	392	50%	392	
	Planned Unit Developmet (PUD): Single-Family Attached Housing	-	215	**120**	DU	7.20	864	50%	432	50%	432	
	Total Generated Trips						**1,648**	**824**		**824**		
PM Peak	Land Use	Total Acres	ITE LUC	Size	Units	ITE Trip Rate[1]	PM Peak Hour Trip Generation					
							Total	In[1]		Out[1]		
	Planned Unit Developmet (PUD): Single-Family Detached Housing	-	210	**76**	DU	1.01	77	63%	49	37%	28	
	Planned Unit Developmet (PUD): Single-Family Attached Housing	-	215	**120**	DU	0.57	68	57%	39	43%	29	
	Total Generated Trips						**145**	**88**		**57**		

Maximum Additional Trips			
Daily New External Trips (Proposed - Existing)	**-12,520**	**-6,261**	**-6,259**
PM Peak New External Trips (Proposed - Existing)	**-1,218**	**-597**	**-621**

Notes: [1] Vehicle trip rates and directional splits per data and procedures outlined in ITE Trip Generation Manual, 11th Edition

3.0 EXISTING CONDITIONS ANALYSIS

3.1 EXISTING ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour roadway segment capacity analysis was performed for the roadways segments adjacent to the development for existing conditions. Average Annual Daily Traffic (AADT) and the adopted MSV were obtained for each segment from the Space Coast Transportation Planning Organization Traffic Counts document, provided in **Appendix D**. The provided 2020 AADT was converted to a peak hour, peak direction (PHPD) volume using the segment's D-factor and K-factor. The most applicable FDOT Florida Traffic Online count station historical AADT report is provided in **Appendix F** with the seasonal factor data. The provided 2020 AADT and calculated PHPD was grown to the existing year, 2022, by applying a 3% annual growth rate. The existing Daily and PM peak hour segment capacity analyses are shown in **Tables 2 and 3**.

As shown in the following table, all segments in the study area are operating with existing Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 2: Existing (2022) Daily Capacity Analysis

Roadway		Roadway Attributes [1]				Daily - Existing (2022)				
From	To	Functional Classification	Adopted LOS	Number of Lanes	Daily MSV	2020 AADT[1]	Annual Growth Rate	2022 AADT[2]	V/C Ratio	LOS
South Steet (SR405)										
Fox Lake Rd	*Singleton Ave*	Urban Minor Arterial	D	2	17,700	12,471	3%	13,230	0.75	C
Singleton Ave	*Park Ave*	Urban Minor Arterial	D	2/4	37,810	6,303	3%	6,687	0.18	C
Singleton Ave										
South Street (SR405)	*Garden St*	Urban Major Collector	D	2	17,700	7,231	3%	7,671	0.43	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. 2022 ADDT derived by applying a 3% annual growth rate to 2020 AADT volumes.

Table 3: Existing (2022) PM Peak Hour Capacity Analysis

Roadway		Roadway Attributes [1]				Daily - Existing (2022)					
From	To	Functional Classification	Adopted LOS	Number of Lanes	PHPD MSV [2]	2020 AADT[1]	2020 PHPD Volume[3]	Annual Growth Rate	2022 PHPD Volume[4]	V/C Ratio	LOS
South Steet (SR405)											
Fox Lake Rd	*Singleton Ave*	Urban Minor Arterial	D	2	880	12,471	617	3%	655	0.74	C
Singleton Ave	*Park Ave*	Urban Minor Arterial	D	2/4	1,900	6,303	312	3%	331	0.17	C
Singleton Ave											
South Street (SR405)	*Garden St*	Urban Major Collector	D	2	880	7,231	358	3%	380	0.43	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. PHPD Maximum Service Volume obtained from the 2020 FDOT Q/LOS Handbook.
3. PHPD Volume determined by applying the historic K-factor and D-factor from most applicable FDOT traffic monitoring site.
4. 2022 PHPD Volume derived by applying a 3% annual growth rate to 2020 PHPD Volumes.

3.2 EXISTING TRAFFIC COUNTS

Turning movement counts (TMCs) were collected at the study intersections on Wednesday, May 11, 2022, and are provided in **Appendix E**. Data was collected during the PM Peak Period (4:00 PM to 6:00 PM).

The counts were adjusted using the seasonal factor (SF) from FDOT's Florida Traffic Online (FTO) publication. SF data is provided in **Appendix F**. Turning movement volume development worksheets for all study area intersections are provided in **Appendix G.**

3.3 EXISTING INTERSECTION CONDITIONS

An intersection operational analysis was performed for existing (2022) conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. Existing signal timings were provided by the City of Titusville, provided in **Appendix H**, for the following signalized intersections:

- SR405/South Street & Fox Lake Road
- South Park Avenue & SR405/South Street

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour existing conditions are provided in **Table 4**. Synchro outputs are included in **Appendix I**.

As shown in **Table 4**, all study area intersections currently operate with acceptable overall LOS in existing (2022) PM peak hour conditions.

Table 4: Existing (2022) PM Peak Hour Intersection Conditions

Existing Condition - 2022						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	B	EBL/T/R	0.41
			WB	B	WBL/T/R	0.53
			NB	B	NBR	0.81
			SB	B	SBR	0.68
			Overall	**B (13.9 s)**	**NBR**	**0.81**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	C	EBR	0.42
			WB	-	-	-
			NB(L)	A	NBL	0.31
			SB(L)	-	-	-
			Overall	**-**	**EBR**	**0.42**
3	South Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.27
			WB	B	WBT/R	0.40
			NB	A	NBT/R	0.51
			SB	A	SBT/R	0.53
			Overall	**A (9.1 s)**	**SBT/R**	**0.53**

4.0 BACKGROUND CONDITIONS ANALYSIS

Traffic conditions were evaluated for Year 2024 background conditions, without the impact of project trips on the roadway network. Background volumes at study area intersections were derived by applying a 3% annual growth rate and vested trips from two developments – South Carpenter Estates and Step by Step Learning Center – to existing turning movement volumes. Information about these projects is provided in **Appendix J.**

Background growth and vested trips are shown in the intersection turning movement volume development worksheets, provided in **Appendix G**.

4.1 BACKGROUND ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour capacity analysis was performed for the roadway segments adjacent to the development for background conditions. Background segment volumes were determined by applying a 3% annual growth rate and vested trips.

The background Daily and PM peak hour segment capacity analysis are shown in **Tables 5 and 6**.

As shown in the following table, all segments in the study area are operating with background Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 5: Background (2024) Daily Capacity Analysis

Roadway		Daily MSV [1]	Daily - Background (2024)					
From	To		Existing 2022 AADT	Annual Growth Rate [2]	Vested Trips[2]	Background 2024 AADT[3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	13,230	3.0%	200	14,236	0.80	C
Singleton Ave	*Park Ave*	37,810	6,687	3.0%	643	7,737	0.20	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	7,671	3.0%	0	8,139	0.46	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Annual Growth Rate and Vested Trips coordinated and agreed upon with City staff. Vested trips are from South Carpenter Estates and Step by Step Learning Center developments.
3. Background (2024) AADT volumes derived by applying a 3% annual growth rate to 2022 AADT volumes and adding vested trips.

Table 6: Background (2024) PM Peak Hour Capacity Analysis

Roadway		PHPD MSV [1]	Daily - Background (2024)					
From	To		Existing 2022 PHPD Volume	Annual Growth Rate [2]	Vested Trips[2]	Background 2024 PHPD Volume[3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	880	655	3.0%	10	704	0.80	C
Singleton Ave	*Park Ave*	1,900	331	3.0%	32	383	0.20	C
Singleton Ave								
South Street (SR405)	*Garden St*	880	380	3.0%	0	403	0.46	C

Notes:
1. PHPD Maximum Service Volume obtained from the 2020 FDOT Q/LOS Handbook.
2. Annual Growth Rate and Vested Trips coordinated and agreed upon with City staff. Vested trips are from South Carpenter Estates and Step by Step Learning Center developments.
3. Background (2024) PHPD Volumes derived by applying a 3% annual growth rate to 2022 PHPD Volumes and adding vested trips

4.2 BACKGROUND INTERSECTION CONDITIONS

An intersection operational analysis was performed for background conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. The existing (2022) volumes were grown to Year 2024 background volumes by applying a growth rate of three percent (3%) over two (2) years and adding trips from the vested projects.

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour background conditions are provided in **Table 7**. Synchro outputs are provided in **Appendix I**.

As shown in **Table 7**, all study area intersections are expected to operate at an acceptable LOS overall and with v/c ratios less than one (1.0) during background (2024) PM peak hour conditions.

Table 7: Background (2024) PM Peak Hour Intersection Conditions

Background Condition - 2024						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	C	EBL/T/R	0.47
			WB	C	WBL/T/R	0.56
			NB	B	NBR	0.83
			SB	B	SBR	0.71
			Overall	**B (14.8 s)**	**NBR**	**0.83**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	A	EBR	0.47
			WB	-	-	-
			NB	B	NB(L)	0.34
			SB	-	SB(L)	-
			Overall	**A (7.1 s)**	**EBR**	**0.47**
3	South Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.33
			WB	B	WBT/R	0.42
			NB	A	NBT/R	0.56
			SB	A	SBT/R	0.61
			Overall	**A (9.9 s)**	**SBT/R**	**0.61**

5.0 DEVELOPMENT TRAFFIC

The applicant is proposing to develop the site to consist of ±76 single-family homes and ±120 townhomes. Buildout of the project is anticipated in Year 2024. The latest industry standards were referenced to evaluate the amount of new external trips to be generated by the site at buildout. The latest adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

5.1 TRIP GENERATION

Trip generation for the proposed site was calculated using procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*.

Table 8 provides the daily and PM peak hour trip generation summary for the project. As shown in the table, the proposed site is anticipated to generate 1,648 daily trips and 145 PM peak hour trips (88 inbound and 57 outbound).

Table 8: Trip Generation

	Land Use	ITE LUC[1]	Size	Units	ITE Trip Rate[1]	Daily				
						Total	In[1]		Out[1]	
Daily	Single-Family Detached Housing	210	**76**	DU	10.32	784	50%	392	50%	392
	Single-Family Attached Housing	215	**120**	DU	7.20	864	50%	432	50%	432
	Total Generated Trips					**1,648**	**824**		**824**	
	Land Use	**ITE LUC[1]**	**Size**	**Units**	**ITE Trip Rate[1]**	**PM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
PM Peak Hour	Single-Family Detached Housing	210	**76**	DU	1.01	77	63%	49	37%	28
	Single-Family Attached Housing	215	**120**	DU	0.57	68	57%	39	43%	29
	Total Generated Trips					**145**	**88**		**57**	

Notes: [1]Vehicle trip rate and directional splits per ITE Trip Generation, 11th Edition

5.2 TRIP DISTRIBUTION

Projected traffic patterns on study area facilities were developed using the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) set and situated within the existing roadway network to appropriately represent project access. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plot showing the percent of daily project distribution is provided in **Appendix K**.

Daily model project distribution was referenced to manually assign project distribution at the study area in general accordance with daily model output. **Figure 2** shows the project distribution at the study intersection for use in forecasting project trips.

5.3 TRIP ASSIGNMENT

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 3** shows the anticipated peak hour project trip assignments at study area intersections during the PM peak hour.

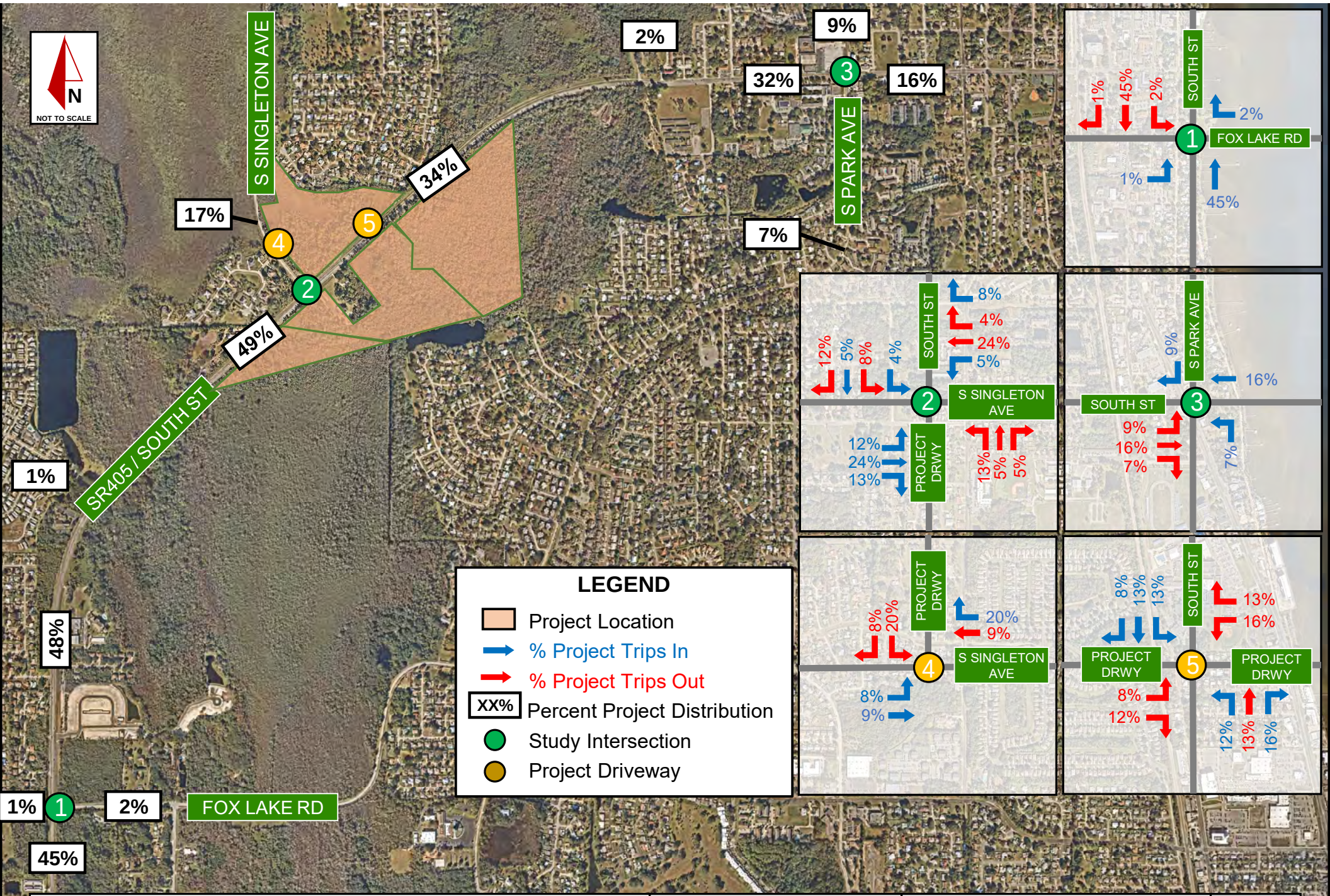

Figure 2: Project Trip Distribution

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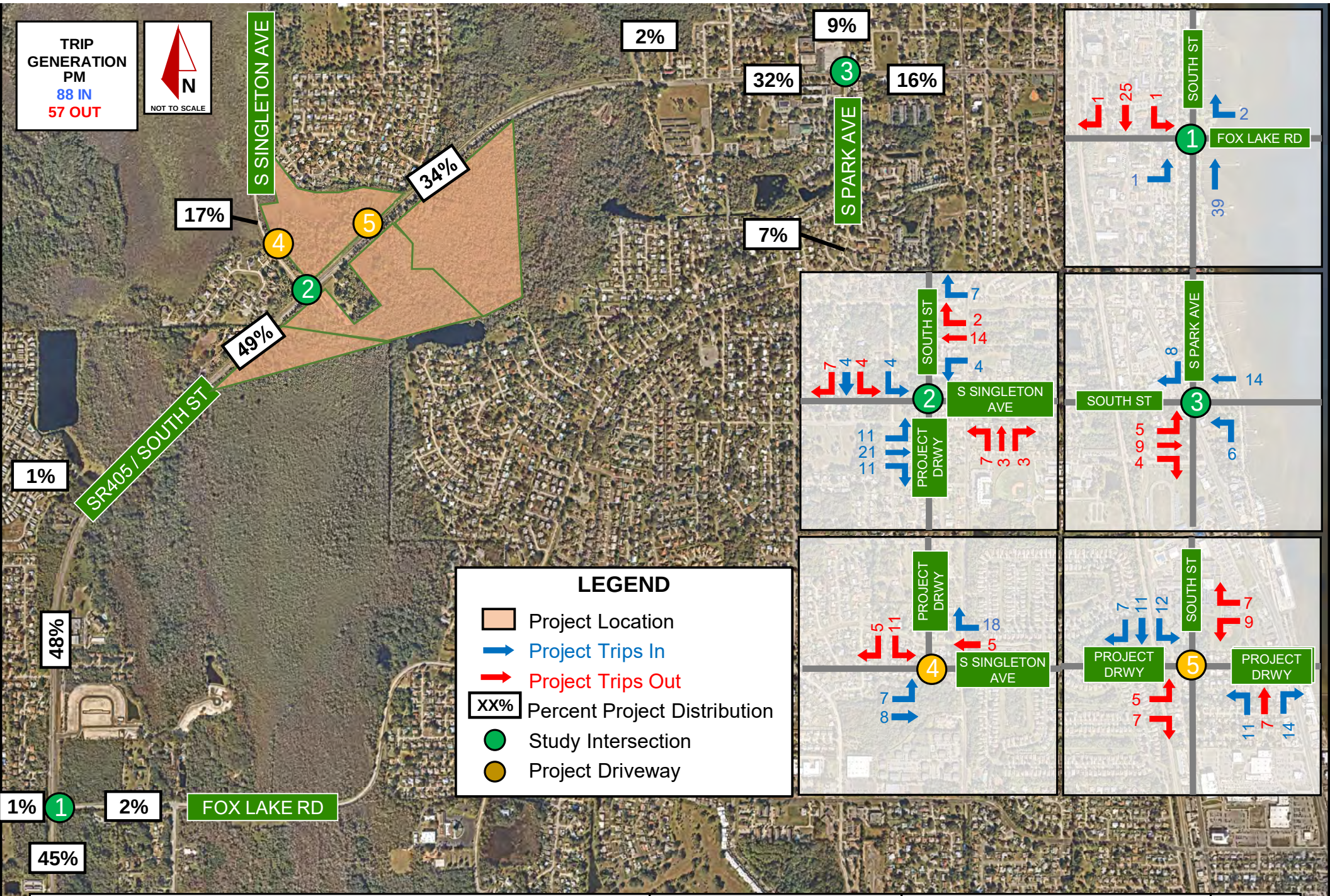

Figure 3: PM Peak Hour Trip Assignment

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6.0 BUILDOUT CONDITIONS ANALYSIS

Buildout volumes were developed by adding anticipated project trips to background volumes. A determination of the impact of project traffic on the roadway network was made, including LOS conditions for the intersections and roadway segments within the study area. Turning movement volume worksheets for all intersections and driveways are provided in **Appendix G.**

6.1 BUILDOUT ROADWAY SEGMENT ANALYSIS

A Daily and PM peak hour capacity analysis was performed for the roadway segments adjacent to the development for buildout conditions. The anticipated project trip volumes on each segment were added to the background volumes. The buildout Daily and PM peak hour capacity analysis are shown in **Tables 9 and 10**.

As shown in the following tables, all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes (MSV).

Table 9: Buildout (2024) Daily Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Buildout (2024) Background 2024 AADT	1,648 Daily Trips % Assign [2]	1,648 Daily Trips Project Trips	Buildout AADT [3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	14,236	49%	808	15,044	0.85	C
Singleton Ave	*Park Ave*	37,810	7,737	34%	560	8,297	0.22	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	8,139	17%	280	8,419	0.48	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Percent project traffic assignment was calculated as the maximum across the segment.
3. Buildout AADT = background AADT + project trips.

Table 10: Buildout (2024) PM Peak Hour Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Buildout (2024) Background 2024 AADT	1,648 Daily Trips % Assign [2]	1,648 Daily Trips Project Trips	Buildout AADT [3]	V/C Ratio	LOS
South Steet (SR405)								
Fox Lake Rd	*Singleton Ave*	17,700	14,236	49%	808	15,044	0.85	C
Singleton Ave	*Park Ave*	37,810	7,737	34%	560	8,297	0.22	C
Singleton Ave								
South Street (SR405)	*Garden St*	17,700	8,139	17%	280	8,419	0.48	C

Notes:
1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.
2. Percent project traffic assignment was calculated as the maximum across the segment.
3. Buildout PHPD = background PHPD volume + project trips.

6.2 BUILDOUT INTERSECTION ANALYSIS

An intersection operational analysis was performed for Year 2024 buildout conditions during the PM peak hours using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. Intersection level of service (LOS), delay, and maximum volume to capacity (v/c) ratios for the PM peak hour buildout conditions are provided in **Table 11.** Synchro outputs are provided in **Appendix I**. **Figure 4** illustrates turning movement buildout volumes at the study area intersections for the PM peak hour

As shown in **Table 11**, the study area intersections are anticipated to operate at an acceptable LOS under buildout (2024) PM peak hour conditions with the exception of the project driveway (westbound approach) at the unsignalized intersection of South Street and Singleton Avenue. This approach operates with LOS F but with a v/c ratio less than one (1.0). It is common for minor street approaches to operate with high delay at unsignalized intersections.

No operational deficiencies were identified as a result of the proposed residential development.

Table 11: Buildout (2024) PM Peak Hour Intersection Conditions

Buildout Condition - 2024						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	SR405/South Street & Fox Lake Road	Signalized	EB	C	EBL/T/R	0.48
			WB	C	WBL/T/R	0.58
			NB	B	NBT/R	0.84
			SB	B	SBT/R	0.72
			Overall	**B (15.3 s)**	**NBT/R**	**0.84**
2	SR405/South Street & South Singleton Avenue	Unsignalized	EB	E	EBL/T	0.80
			WB	F	WBL/T/R	0.43
			NB(L)	A	NBL	0.35
			SB(L)	A	SBL	0.01
			Overall	**-**	**EBL/T**	**0.80**
3	Sout Park Avenue & SR405/South Street	Signalized	EB	B	EBT/R	0.33
			WB	B	WBT/R	0.43
			NB	A	NBT/R	0.57
			SB	A	SBT/R	0.62
			Overall	**B (10.0s)**	**SBT/R**	**0.62**
4	South Singleton Ave & Project Driveway 1	Unsignalized	EB(L)	A	EBL	0.01
			WB(L)	-	-	-
			NB	-	-	-
			SB	B	SBL/R	0.04
			Overall	**-**	**SBL/R**	**0.04**
5	SR405/South Street & Project Driveway 2	Unsignalized	EB	B	EBL/T/R	0.03
			WB	B	WBL/T/R	0.04
			NB(L)	A	NBL	0.01
			SB(L)	A	SBL	0.01
			Overall	**-**	**SBL/R**	**0.04**

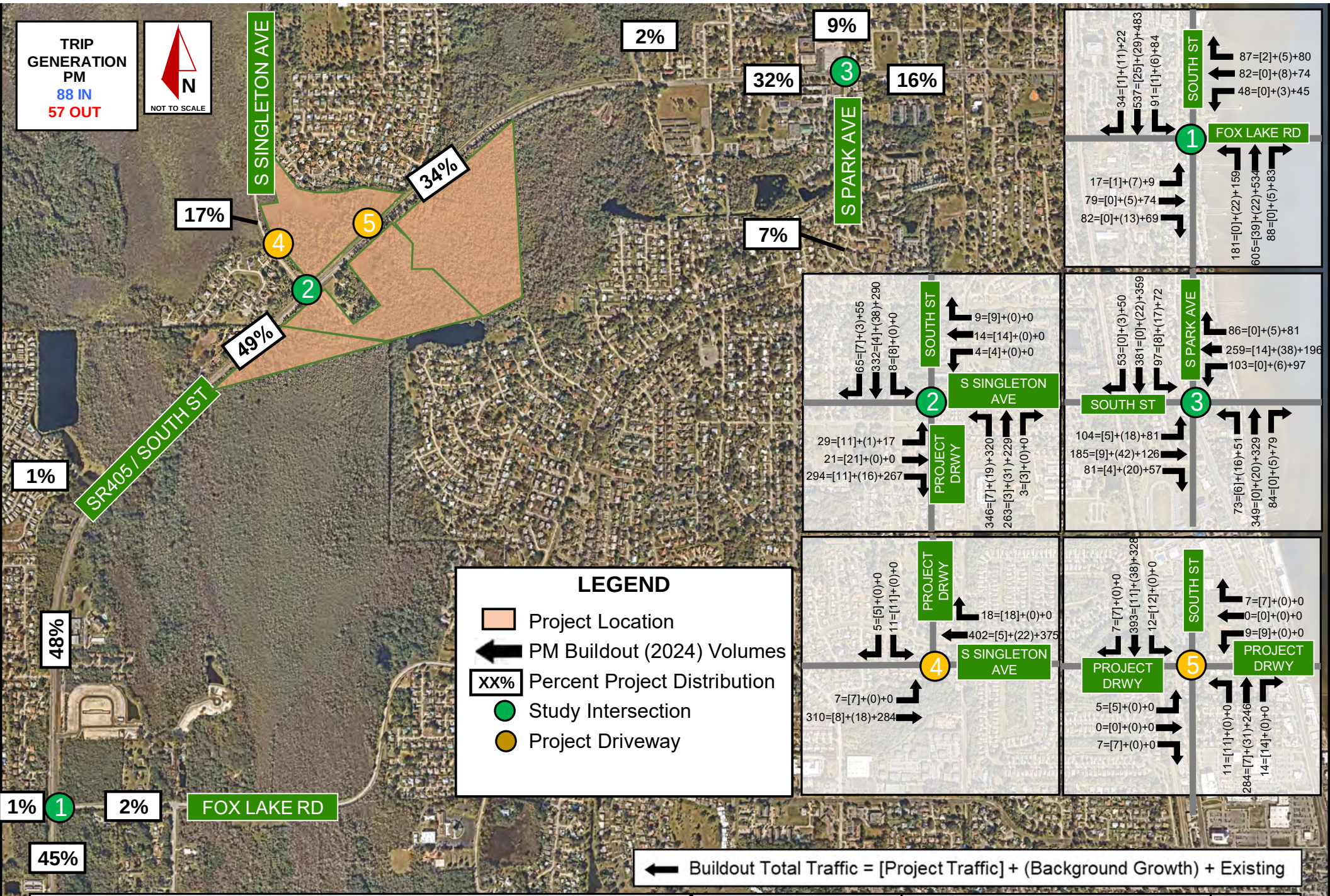

Figure 4: Intersection Volumes (2024) – PM Peak Hour

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Phone: (407)-898-1511

Aerial imagery provided by: nearmap

6.3 BUILDOUT INGRESS TURN LANE ANALYSIS

The need for exclusive ingress right-turn and left-turn lanes at the proposed project driveways on South Singleton Avenue and South Street were evaluated using the National Cooperative of Highway Research Program (NCHRP) Report 457 thresholds.

The need for an exclusive right-turn lane at the project driveways on South Singleton Avenue and South Street was determined by comparing the right turning volumes with the approach volume. Based on the project volumes shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress right-turn lane is not warranted at any of the project driveways.

The need for an exclusive left-turn lane at the project driveways on Singleton Avenue (Intersection #4) and South Street (Intersection #5) were determined by comparing the left turning volumes with the approach and opposing volumes. Based on the project volumes shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress left-turn lane is not warranted at any of the project driveways.

NCHRP outputs are provided in **Appendix L.**

7.0 CONCLUSION

This traffic impact analysis was performed to analyze and document the traffic impacts associated with the development of Titusville South Street residential in the City of Titusville, Florida. The ±107-acre site is generally located to the north and south of State Road 405/South Street and east of South Singleton Avenue. The applicant is proposing to develop the site to consist of ±76 single-family homes and ±120 townhomes. Access to the site will be provided via two (2) full access connections on South Street and one (1) full access connection on Singleton Avenue.

A FLU analysis was performed to determine the potential transportation impacts associated with the proposed FLU amendment. The proposed FLU designation of Planned Unit Development (PUD) at maximum intensity generates fewer trips than the existing FLU designation at maximum intensity. Therefore, no additional traffic impacts are anticipated as a result of the proposed FLU amendment.

The proposed development is anticipated to generate 1,648 daily trips and 145 PM peak hour trips (88 inbound and 57 outbound) based on the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*. Project trips were distributed onto the surrounding network using the latest adopted regional travel demand model and manually assigned at the study area intersections.

A roadway segment capacity analysis was performed for the roadway segments in the study area for existing, background, and buildout conditions. The analysis identifies no roadway segment capacity deficiencies.

An operational analysis was performed for existing, background, and buildout conditions at all driveways and intersections within the study area. The study area intersections are anticipated to operate at an acceptable LOS under buildout (2024) PM peak hour conditions with the exception of the project driveway (westbound approach) at the unsignalized intersection of South Street and Singleton Avenue. This approach operates with LOS F but with a v/c ratio less than one (1.0). It is common for minor street approaches to operate with high delay at unsignalized intersections. Therefore, no operational deficiencies were identified as a result of the proposed development.

The need for exclusive ingress left-turn and right-turn lanes at the proposed project driveways were evaluated based on the NCHRP Report 457 thresholds for the proposed project driveways on South Singleton Avenue and SR405/South Street. Ingress right-turn lane nor left-turn lanes are warranted at the project driveways.

APPENDIX A
Methodology Statement

Viteri, Sabrina

From:	Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent:	Monday, May 2, 2022 11:37 AM
To:	Shellenberger, Erika
Cc:	Taylor, James
Subject:	RE: Titusville South Street Methodology
Categories:	External

You don't often get email from kwabena.ofosu@titusville.com. Learn why this is important

Hello,

Please consider the following:

7. Perform turning movement counts from PM peak hour turning movement counts at the following intersection in the study area:

    a. South Street & Singleton Avenue
    b. South Street and Park Ave
    c. South Street and Fox Lake Road

The Vested trips include:

- South Carpenter Estates subdivision, traffic study by LTG Inc.
- Step by Step Learning Center, traffic study by TPD Inc.
- Brookshire subdivision, Civil Engineer was Honeycutt and Associates
- Fox Lake Hammock subdivision, Civil Engineer was Honeycutt and Associates

I would also like to draw your attention to the South Street Small Area Plan that was adopted by the City.

I have created a link to access the above documents that are currently handy, others may be added in due course or you may reach out to the consultants that were involved.
https://titusville.sharefile.com/d-sa5847c3b5a1d48d69024d6d6968710c0

Thanks.
KB

Kwabena “KB” Ofosu, P.E.
Community Development Engineer
City of Titusville, FL

Please provide feedback on our service. The Community Development customer service survey is available at https://www.titusville.com/FormCenter/Community-Development-7/Customer-Satisfaction-Survey-55.

Titusville
Gateway to Nature & Space

Community Development
Planning

Do you live in a flood zone or concerned about flooding? Go to City of Titusville Flood Information.

From: Shellenberger, Erika <Erika.Shellenberger@kimley-horn.com>
Sent: Thursday, April 28, 2022 12:12 PM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Taylor, James <James.Taylor@kimley-horn.com>
Subject: Titusville South Street Methodology

Kwabena,

See below the traffic impact analysis methodology for the Titusville South Street residential development proposed to be generally located on the north and south side of South St. (SR 405) at its intersection with Singleton Avenue in the City of Titusville, Florida. The residential development will consist of approximately 120 townhome units and 76 single-family homes (concept sketch attached). Access to the single-family homes on the north side of South Street will be provided via one (1) full access connection on Singleton Avenue and one (1) full access connection on South Street east of Singleton Avenue. Access to the south parcel will be provided via two (2) full access connections on South Street – one (1) aligned with Singleton Avenue and one (1) aligned with the proposed north parcel driveway on South Street.

Comprehensive Plan Amendment (CPA) Transportation Evaluation
The goal of this study is to determine the impact of the change in Future Land Use on study area Cost Feasible roadway capacity. As part of the CPA transportation evaluation, the following assumptions and analysis will be conducted:

1. Existing Future Land Use
    a. Commercial, High Intensity (CHI) – maximum development of 30% building coverage (RC)
    b. Conservation (CONS) – No Anticipated Development
    c. Low Density Residential (LDR) – maximum development of 5.8 DU/AC (R-1B)
2. Proposed Future Land Use
    a. PUD – 76 Single Family Homes and 120 Townhomes
3. It is anticipated that the maximum development trip intensity will be reduced by the FLU amendment.

Traffic Impact Analysis
The basis for this study will be to evaluate the traffic operations of the adjacent roadway segments and intersections. As part of the traffic impact analysis for the proposed development, we will perform the following tasks:

1. Calculate Daily & PM peak hour trip generation calculations based on ITE's Trip Generation Manual (11th Edition).
2. Determine project traffic distribution and assignment using transportation modeling software and traffic volumes on the adjacent roadway segments.
3. Obtain available traffic data from the Space Coast Transportation Planning Organization, Brevard County, City of Titusville, and FDOT for roadway segments within the project study area (unless the City provides additional data).
4. Calculate background growth (review of historical count data and any vested trip data to be provided by the City).
5. Perform PM peak hour intersection LOS analysis of the study area intersections and project driveways.
    a. South Street & Singleton Avenue
    b. South Street & Proposed Aligned Full Access Driveways
    c. Singleton Avenue & Full Access Driveway
6. Perform roadway segment analysis for:
    a. Singleton Avenue, from South Street (SR 405) to Garden Street
    b. South Street (SR 405), from Fox Lake Road to Singleton Avenue

    c. South Street (SR 405), from Singleton Avenue to Park Avenue
7. Perform turning movement counts from PM peak hour turning movement counts at the following intersection in the study area:
    a. South Street & Singleton Avenue
8. Prepare a traffic impact analysis report summarizing the analysis to the City of Titusville.

Please let me know if you have any other information to provide. You mentioned the City may have a concurrency management database with vested trips. Otherwise, we will use historical growth rates.

Thank you for your time and let me know if a phone call is preferred.

Erika Shellenberger, E.I.
Kimley-Horn | 189 S. Orange Ave. Suite 1000, Orlando, FL 32801
Direct: 689 206 9002 **|** Mobile: 317 549 5337

APPENDIX B
Site Plan



BENGE DEVELOPMENT CORPORATION
Development Consulting Brokerage

gai consultants

COMMUNITY SOLUTIONS GROUP

TITUSVILLE SOUTH STREET

0' 200' 400' 800' N

DRAWING NO.	00 of 00
DATE OF ISSUE	October 06, 2021
REVISION	#

CONCEPT PLAN A

APPENDIX C
ITE Excerpts

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing – single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

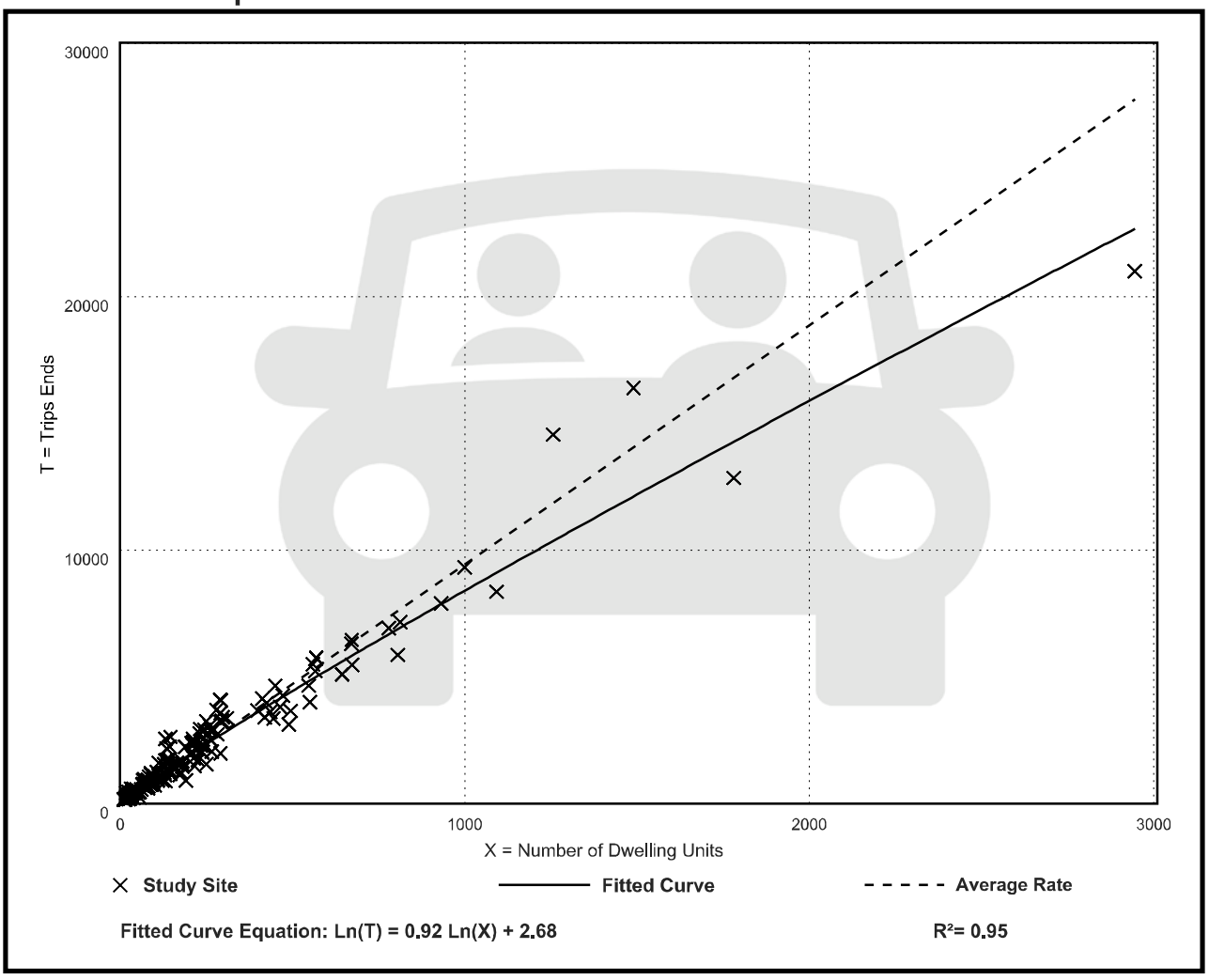
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

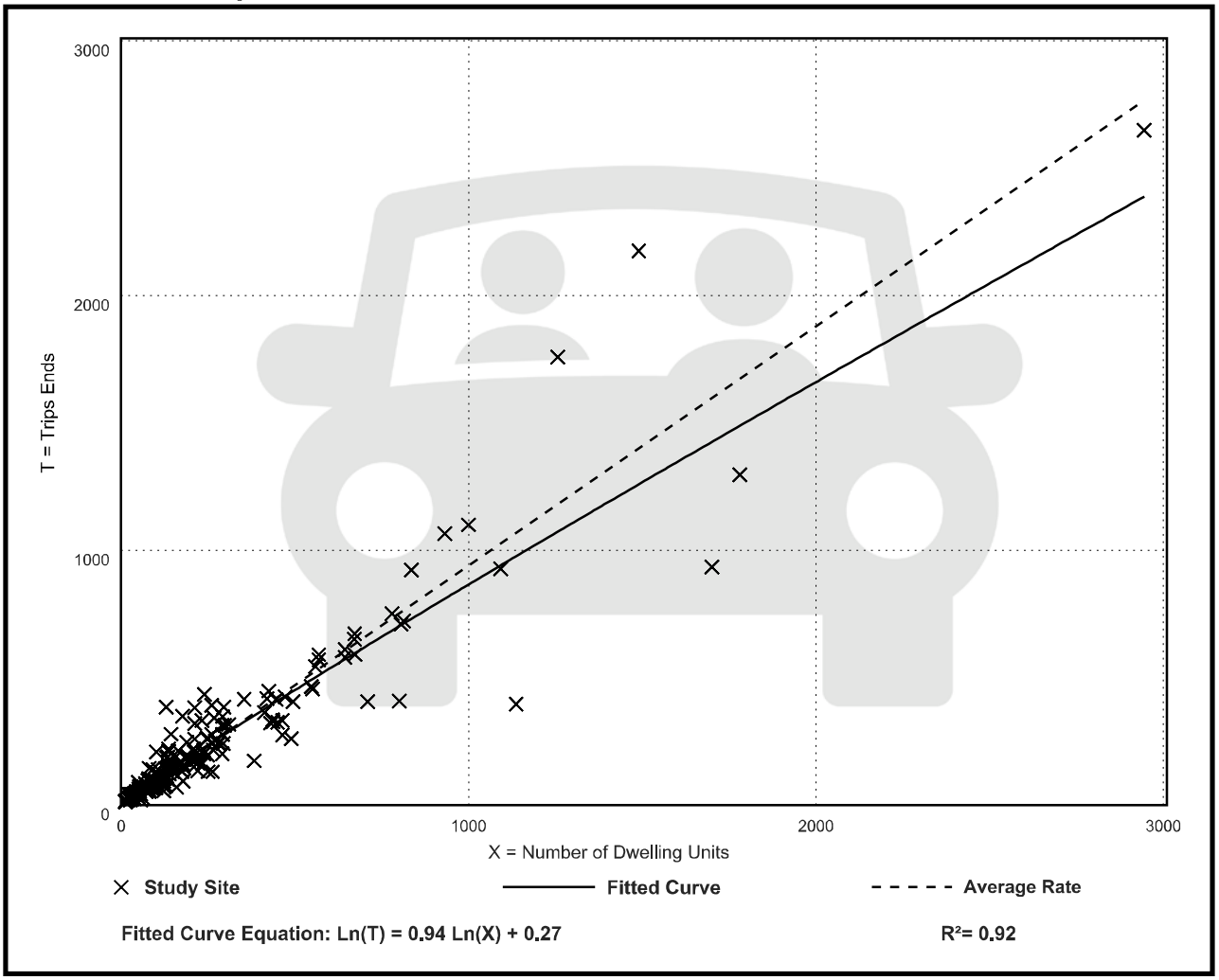
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 215
Single-Family Attached Housing

Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

Single-Family Attached Housing
(215)

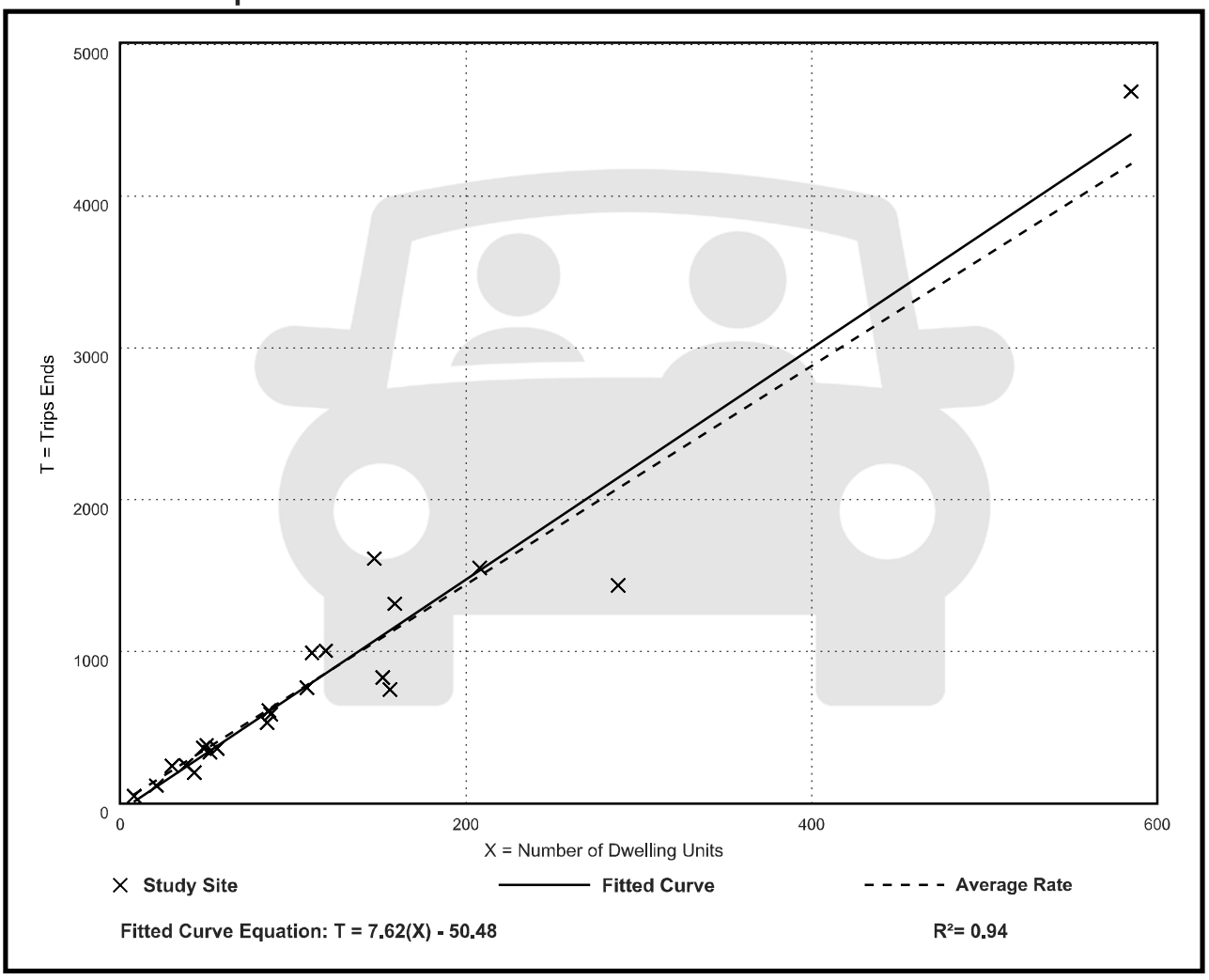
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



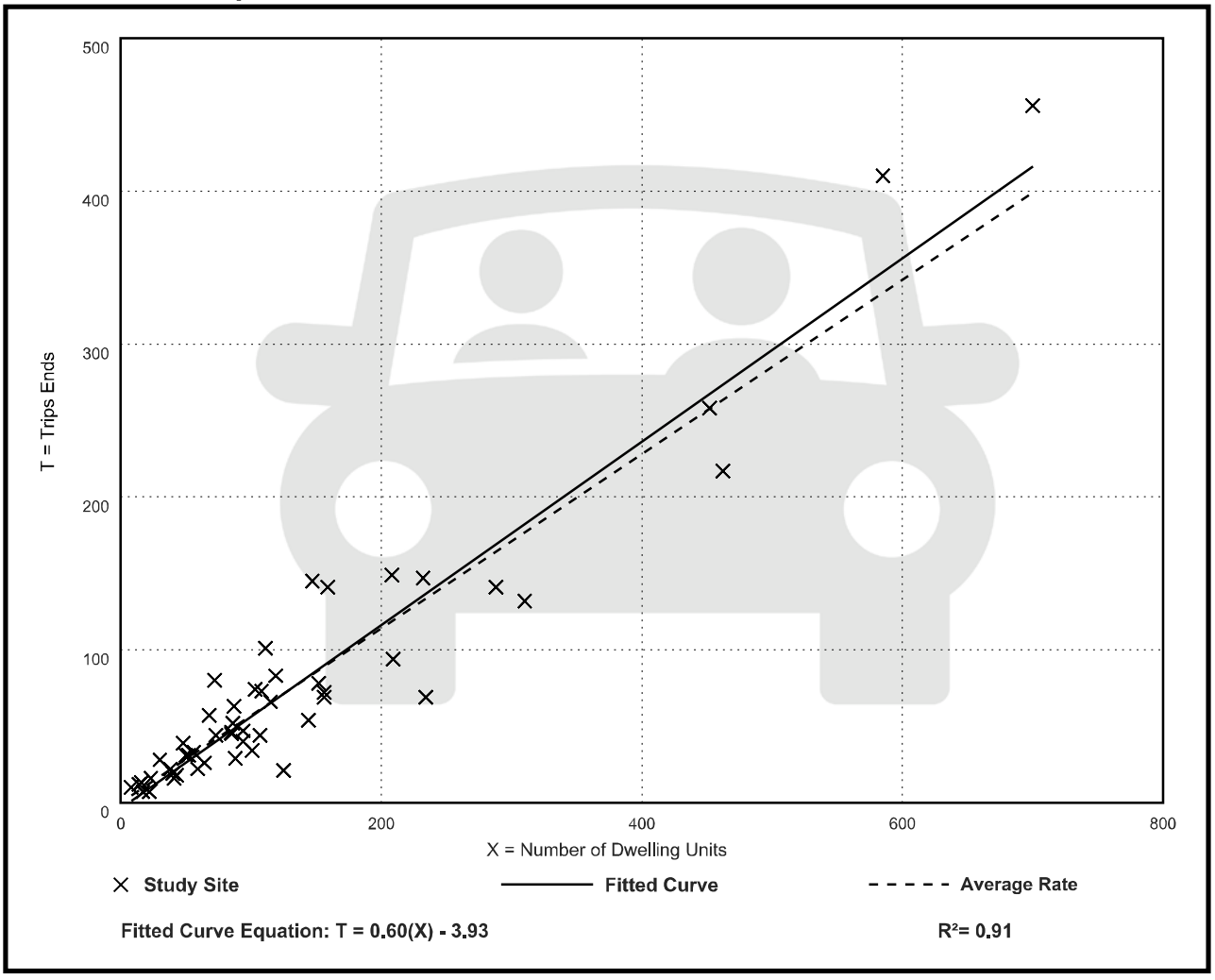
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Land Use: 821
Shopping Plaza (40-150k)

Description

A shopping plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has between 40,000 and 150,000 square feet of gross leasable area (GLA). The term "plaza" in the land use name rather than "center" is simply a means of distinction between the different shopping center size ranges. Various other names are commonly used to categorize a shopping plaza within this size range, depending on its specific size and tenants, such as neighborhood center, community center, and fashion center.

Its major tenant is often a supermarket but many sites are anchored by home improvement, discount, or other stores. A shopping plaza typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants. A shopping plaza is almost always open-air and the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between shopping plaza and shopping center (Land Use 820) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket.

The 40,000 square feet GFA threshold between shopping plaza and strip retail plaza (Land Use 822) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land Use 820), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.

Land Use Subcategory

The presence or absence of a supermarket in a shopping plaza has been determined to have a measurable effect on site trip generation. Therefore, data are presented for two subcategories for this land use: sites with a supermarket anchor and sites without a supermarket.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), British Columbia (CAN), California, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Texas, Vermont, Virginia, Washington, and Wisconsin.

Source Numbers

105, 110, 156, 159, 186, 198, 204, 211, 213, 239, 259, 260, 295, 301, 304, 305, 307, 317, 319, 358, 376, 390, 400, 404, 437, 444, 446, 507, 580, 598, 658, 728, 908, 926, 944, 946, 960, 973, 974, 1004, 1009, 1025, 1069

P and Z Regular - September 18, 2024 - 6:00 PM Page 527 of 821

Shopping Plaza (40-150k) - Supermarket - Yes (821)

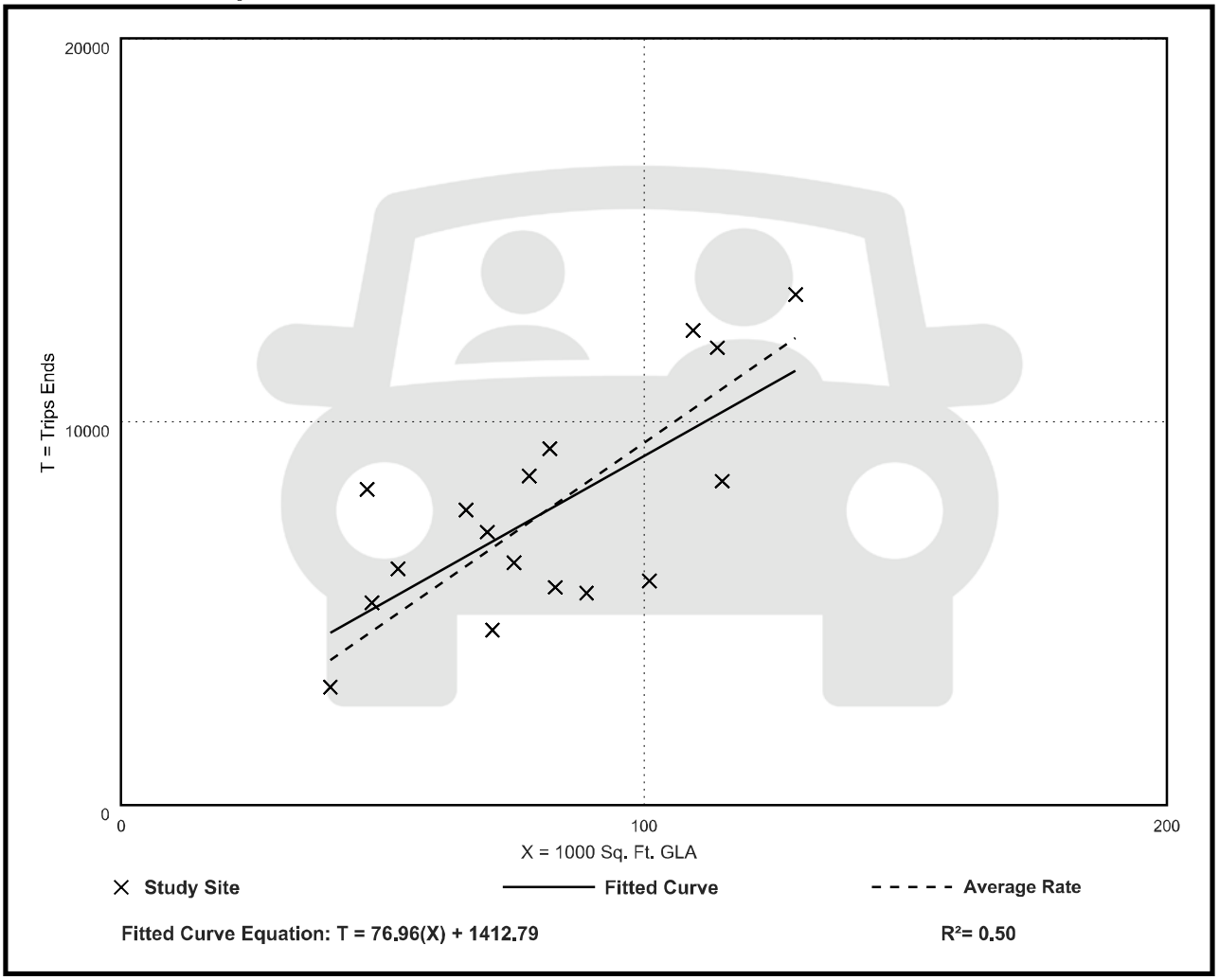
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 17
Avg. 1000 Sq. Ft. GLA: 81
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
94.49	57.86 - 175.32	26.55

Data Plot and Equation



Fitted Curve Equation: T = 76.96(X) + 1412.79

R^2= 0.50

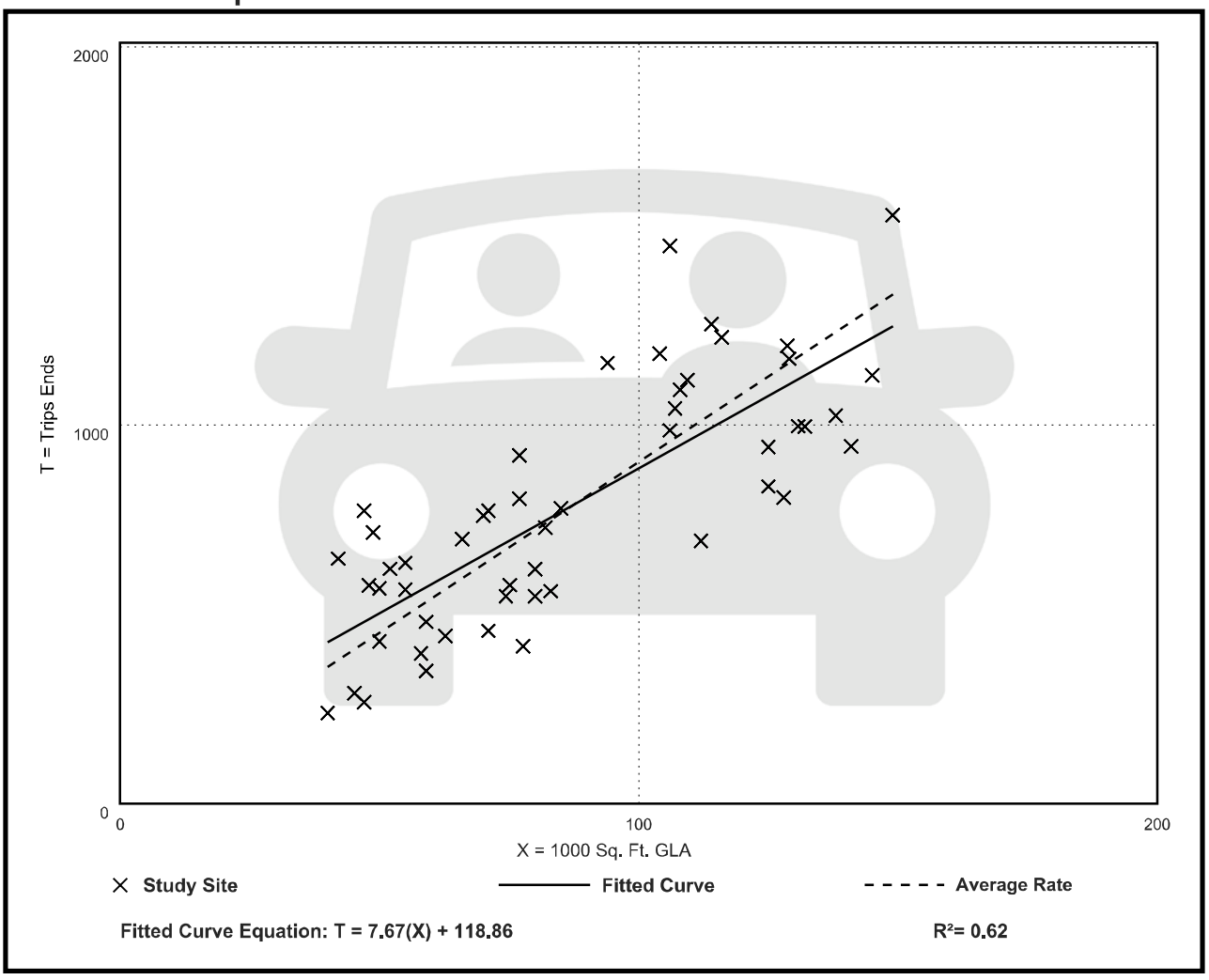
Shopping Plaza (40-150k) - Supermarket - Yes (821)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. 1000 Sq. Ft. GLA: 87
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
9.03	5.35 - 16.45	2.37

Data Plot and Equation



Fitted Curve Equation: T = 7.67(X) + 118.86

R^2= 0.62

APPENDIX D
Space Coast TPO Traffic Counts

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS

Historical Counts from 2011 - 2020

2725 Judge Fran Jamieson Way

Melbourne, FL 32940

P: 321-690-6890

F: 321-690-6827

chelsea.forgenie@brevardfl.gov

June 11, 2021

View Traffic Counts on Interactive Map: https://brevard.ms2soft.com/tcds/tsearch.asp?loc=Brevard&mod=

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2011 - 2020

ID	ROAD	SEGMENT (Sections)	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH															
239	OLD DIXIE	GARDEN-DAIRY	NC	1,320	NC	1,190	NC	NC	NC	1,350	NC	1,060	15,600	12/1/2020	Urban Major Collector
240	OLD DIXIE	DAIRY-PARKER	960	NC	910	NC	860	NC	940	NC	820	NC	15,600	12/4/2019	Urban Major Collector
	PARRISH	HOLDER-US 1	1,320	690	1,340	780	1,240	850	1,210	840	1,110	690			
242	PARRISH	HOLDER-SINGLETON	NC	690	NC	780	NC	840	NC	840	NC	690	15,600	12/1/2020	Urban Major Collector
241	PARRISH	SINGLETON-US 1	1,320	NC	1,340	NC	1,240	NC	1,210	NC	1,110	NC	15,600	12/11/2019	Urban Major Collector
211	PT ST JOHN PKWY	I-95-GRISSOM	8,570	8,210	8,890	9,960	10,550	10,370	10,990	11,030	10,940	10,960	39,800	11/17/2020	Urban Minor Arterial
	SINGLETON	SR 405 (SOUTH ST)-SR 46	7,830	4,270	7,730	1,680			8,180	4,570	9,140	4,360			
578	SINGLETON	SR 405 (SOUTH ST)-GARDEN		6,970	NC	NC	NC	NC	7,570	7,510	NC	7,230	17,700	11/16/2020	Urban Major Collector
238	SINGLETON	GARDEN-DAIRY	7,830	NC	7,730	NC	NC	NC	8,790	NC	9,140	NC	15,600	11/13/2019	Urban Major Collector
547	SINGLETON	DAIRY-SR 46	NC	1,570	NC	1,680	NC	NC	NC	1,630	NC	1,490	15,600	12/1/2020	Urban Major Collector
	SISSON	SR 405-SR 50	6,365	6,025	6,150	6,770	6,825	7,500	7,905	7,070	7,810	7,545			
234	SISSON	SR 405-SAN MATEO BLVD	5,650	5,340	5,300	5,870	5,980	6,450	6,980	7,330	6,810	6,570	15,600	11/18/2020	Urban Major Collector
550	SISSON	SAN MATEO BLVD-SR 50	7,080	6,710	7,000	7,670	7,670	8,550	8,830	6,810	8,810	8,520	15,600	11/18/2020	Urban Major Collector
201	SR 46	VOLUSIA CO-FAWN LAKE	5,760	5,640	5,750	5,970	5,680	7,230	7,070	7,660	8,520	6,130	8,400	12/1/2020	Rural Principal Arterial Other
	SR 46	FAWN LAKE-US 1	9,420	9,140	9,325	9,605	11,000	10,755	11,040	10,440	10,780	10,400			
200	SR 46	FAWN LAKE-I-95	8,960	8,580	8,970	9,080	NC	9,930	10,360	10,440	10,050	9,380	14,160	12/1/2020	Urban Principal Arterial-Other
199	SR 46	I-95-US 1	9,880	9,700	9,680	10,130	11,000	11,580	11,720	NC	11,510	11,420	14,160	12/1/2020	Urban Principal Arterial-Other
231	SR 50	ORANGE CO-I-95	10,290	UC	9,160	10,190	10,270	10,470	11,500	12,370	13,260	11,160	40,300	11/17/2020	Rural Principal Arterial Other
	SR 50	I 95-US 1	20,004	UC	18,923	18,487	21,715	20,268	21,568	24,043	23,148	20,598			
232	SR 50	I-95-SR 405	25,080	UC	24,260	UC	27,980	23,810	30,320	34,830	31,190	29,760	41,790	11/17/2020	Urban Principal Arterial-Other
164	SR 50	SR 405-BARNA	20,580	UC	19,220	NC	24,080	NC	23,350	NC	23,940	NC	41,790	12/4/2019	Urban Minor Arterial
163	SR 50	BARNA-SISSON	20,280	UC	NC	20,800	NC	21,360	NC	23,450	NC	18,740	41,790	11/18/2020	Urban Minor Arterial
162	SR 50	SISSON-HOPKINS	19,680	UC	18,620	20,460	20,240	20,900	16,660	21,580	21,500	20,170	34,020	11/16/2020	Urban Minor Arterial
161	SR 50	HOPKINS-US 1	14,400	UC	13,590	14,200	14,560	15,000	15,940	16,310	15,960	13,720	34,020	11/18/2020	Urban Minor Arterial
	SR 405 (COLUMBIA)	SR 50-US 1	17,338	16,786	16,330	16,710	17,004	17,604	18,292	19,163	19,590	16,258			
218	SR 405 (COLUMBIA)	SR 50-BARNA	18,920	18,510	17,090	19,070	19,500	19,110	20,210	20,330	20,540	18,790	41,790	11/17/2020	Urban Principal Arterial-Other
219	SR 405 (COLUMBIA)	BARNA-SR 407	18,820	18,350	17,220	16,850	17,740	17,950	18,510	19,530	19,870	17,220	41,790	11/17/2020	Urban Principal Arterial-Other
220	SR 405 (COLUMBIA)	SR 407-GRISSOM	20,110	19,550	19,660	19,730	20,020	21,110	21,370	22,430	23,250	19,140	41,790	11/17/2020	Urban Principal Arterial-Other
221	SR 405 (COLUMBIA)	GRISSOM-SISSON	15,880	15,060	15,200	16,080	15,730	17,140	17,060	NC	18,920	14,940	41,790	11/17/2020	Urban Principal Arterial-Other
222	SR 405 (COLUMBIA)	SISSON-US 1	12,960	12,460	12,480	11,820	12,030	12,710	14,310	14,360	15,370	11,200	41,790	12/7/2020	Urban Principal Arterial-Other
	SR 405 (SOUTH)	SR 50-SINGLETON(END 2L)	15,750	15,040	14,605	15,095	14,265	15,690	16,130	16,110	16,075	14,770			
217	SR 405 (SOUTH)	SR 50-FOX LAKE	18,440	17,550	16,940	17,720	16,910	18,210	18,840	18,770	18,950	17,070	18,590	12/7/2020	Urban Minor Arterial
216	SR 405 (SOUTH)	FOX LAKE-SINGLETON	13,060	12,530	12,270	12,470	11,620	13,170	13,420	13,450	13,200	12,470	17,700	11/16/2020	Urban Minor Arterial
	SR 405 (SOUTH)	SINGLETON(END 2L)-US 1	6,245	5,830	6,480	6,070	6,930	6,480	6,630	6,240	6,800	5,610			
215	SR 405 (SOUTH)	SINGLETON-PARK	6,910	6,440	6,480	6,660	6,930	6,960	6,630	7,010	6,800	6,300	37,810	11/16/2020	Urban Minor Arterial
214	SR 405 (SOUTH)	PARK-US 1	5,580	5,220	NC	5,290	NC	5,520	NC	5,470	NC	4,920	34,020	11/18/2020	Urban Minor Arterial
595	SR 406 (GARDEN)	CARPENTER-I-95				6,260	NC	6,960	NC	7,290	NC	7,240	15,600	11/16/2020	Urban Major Collector
	SR 406 (GARDEN)	I-95-WASHINGTON	11,920	11,698	11,345	11,890	12,833	13,613	13,243	13,763	14,050	12,443			
202	SR 406 (GARDEN)	I-95-SINGLETON	12,960	12,530	11,670	12,800	13,850	14,510	14,730	16,310	15,700	14,820	41,790	11/16/2020	Urban Principal Arterial-Other
203	SR 406 (GARDEN)	SINGLETON-PARK	15,700	15,410	14,980	15,690	18,060	16,180	16,930	17,390	17,230	14,980	39,800	12/7/2020	Urban Principal Arterial-Other
204	SR 406 (GARDEN)	PARK-HOPKINS	10,510	10,480	10,080	10,960	10,940	13,780	10,930	11,480	12,910	11,210	39,800	11/18/2020	Urban Principal Arterial-Other
205	SR 406 (GARDEN)	HOPKINS-WASHINGTON	8,510	8,370	8,650	8,110	8,480	9,980	10,380	9,870	10,360	8,760	32,400	11/18/2020	Urban Principal Arterial-Other
233	SR 406 (GARDEN)	WASHINGTON-BLACK POINT RD.	4,370	4,800	4,510	4,030	4,900	5,960	5,290	6,120	6,530	4,980	14,800	12/7/2020	Urban Principal Arterial-Other
	SR 407	SR 528-SR 405	6,380	6,070	5,867	6,833	7,210	8,550	8,693	9,433	12,110	8,023			
225	SR 407	SR 528-I-95	6,990	6,340	6,140	6,830	7,220	8,750	9,150	9,970	12,640	7,520	8,820	11/17/2020	Rural Principal Arterial - Freeways & Expressways
548	SR 407	I-95-SHEPARD DR	6,500	6,320	6,290	7,460	7,660	9,190	8,980	10,090	12,850	9,370	24,200	12/7/2020	Urban Principal Arterial - Freeways & Expressways
224	SR 407	SHEPARD DR-SR 405	5,650	5,550	5,170	6,210	6,750	7,710	7,950	8,240	10,840	7,180	24,200	11/17/2020	Urban Principal Arterial - Freeways & Expressways

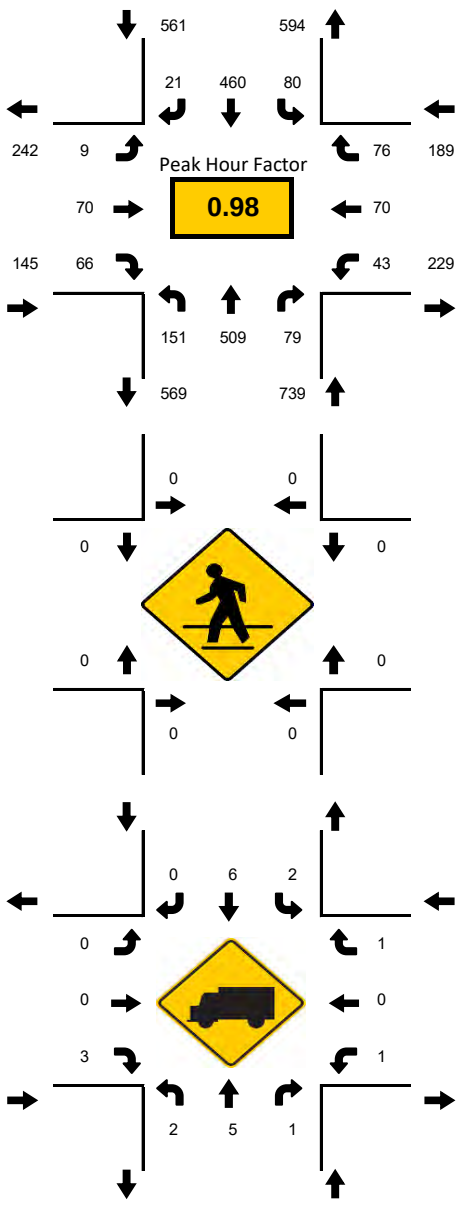
**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

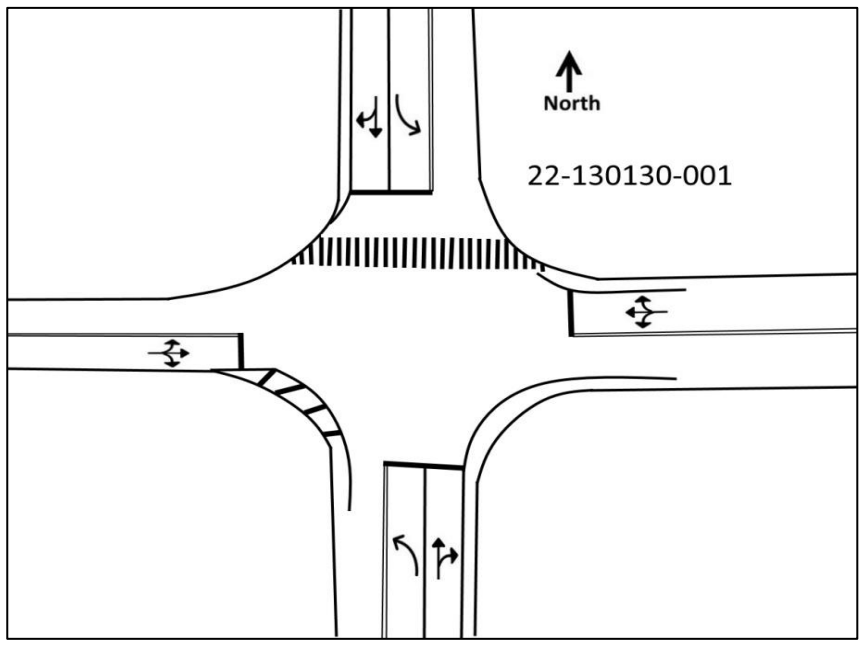
APPENDIX E
Turning Movement Counts

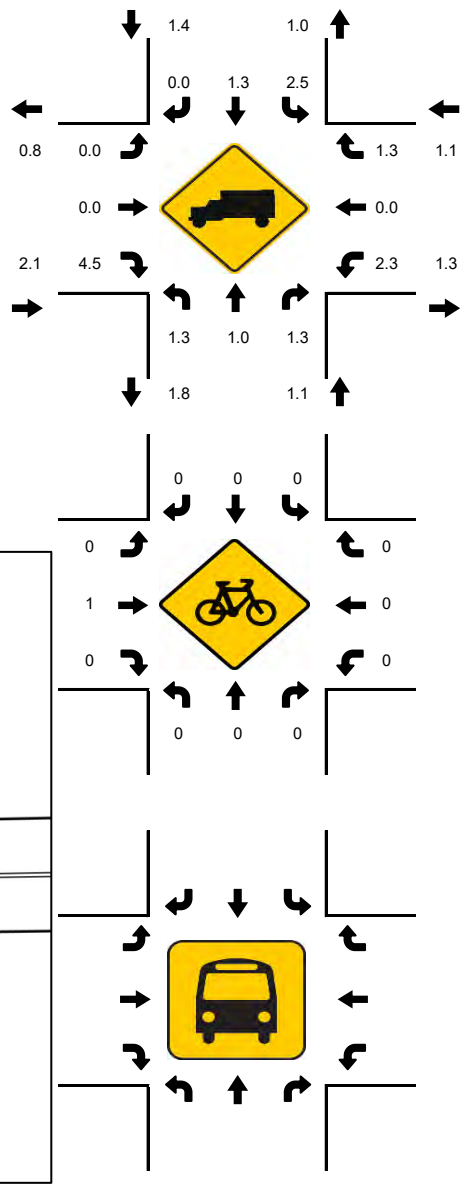
LOCATION: SR 405/South St & Fox Lake Rd
CITY/STATE: Titusville, FL

PROJECT ID: 22-130130-001
DATE: Wed, May 11, 2022

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM





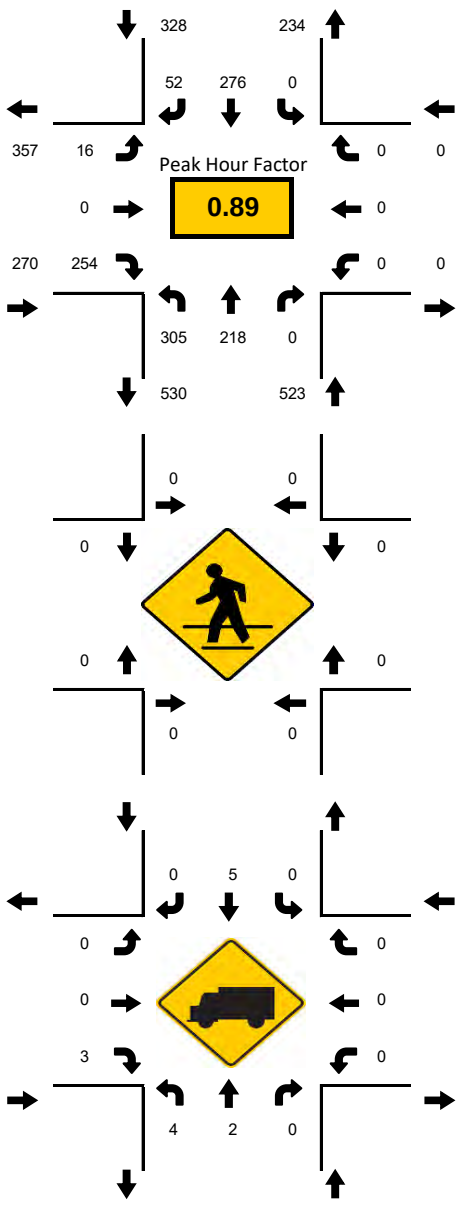


15-Min Count Period Beginning At	SR 405/South St Northbound					SR 405/South St Southbound					Fox Lake Rd Eastbound					Fox Lake Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	20	110	17	0		12	104	4	0		1	10	23	0		16	21	17	0		355	1493
04:15 PM	34	102	19	0		23	81	3	0		3	10	19	0		10	17	12	0		333	1553
04:30 PM	32	123	25	0		25	131	2	0		0	12	15	0		8	21	20	0		414	1634
04:45 PM	36	124	20	0		19	99	5	0		1	18	23	0		13	13	20	0		391	1575
05:00 PM	38	134	13	0		23	119	9	0		4	14	15	0		8	27	11	0		415	1542
05:15 PM	45	128	21	0		13	111	5	0		4	26	13	0		14	9	25	0		414	1127
05:30 PM	39	106	17	0		16	99	1	0		3	17	13	0		12	20	12	0		355	713
05:45 PM	25	113	20	0		22	74	3	0		2	29	20	0		16	11	23	0		358	358
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	180	536	100	0		100	524	36	0		16	104	92	0		56	108	100	0		**1952**	
Heavy Trucks	4	8	4	0		8	8	0	0		0	0	8	0		4	0	4	0		**48**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	0	0	0		0	4	0	0		0	0	0	0		**4**	
Buses																						
Stopped Buses																						

LOCATION: SR 405/South St & S Singleton Ave
CITY/STATE: Titusville, FL

PROJECT ID: 22-130130-002
DATE: Wed, May 11, 2022

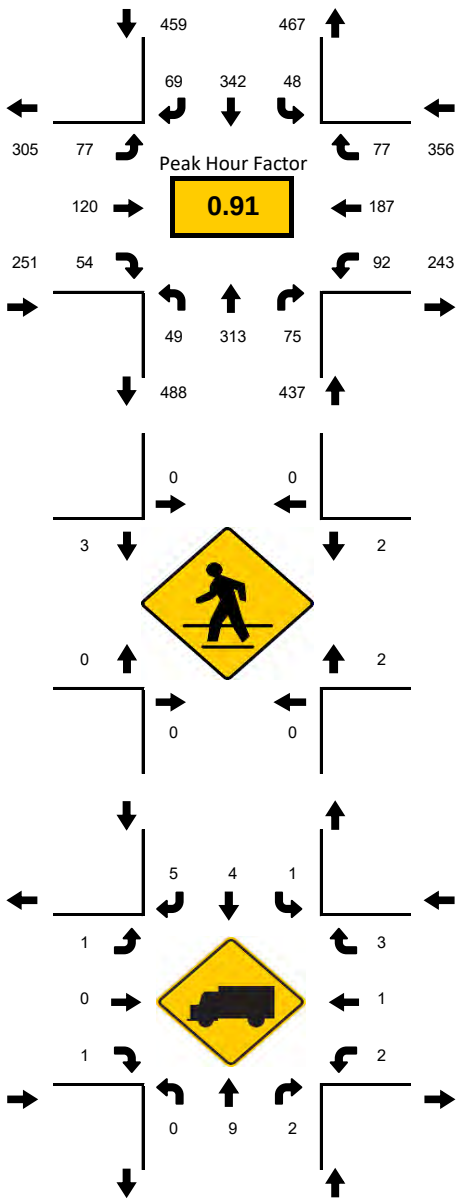
Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM

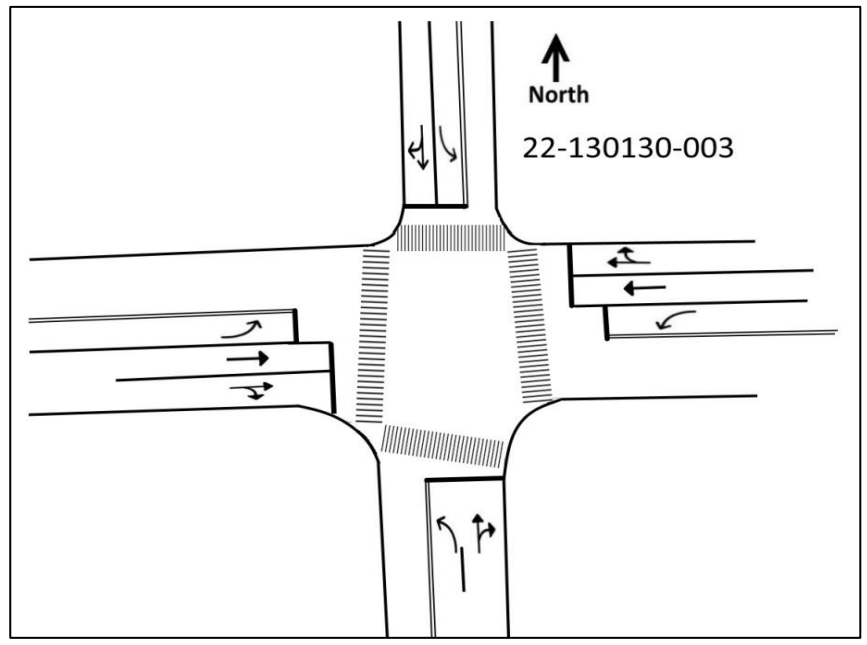

328
234
52
276
0
357
16
Peak Hour Factor
0.89
0
0
270
254
0
0
305
218
0
530
523
0
0
0

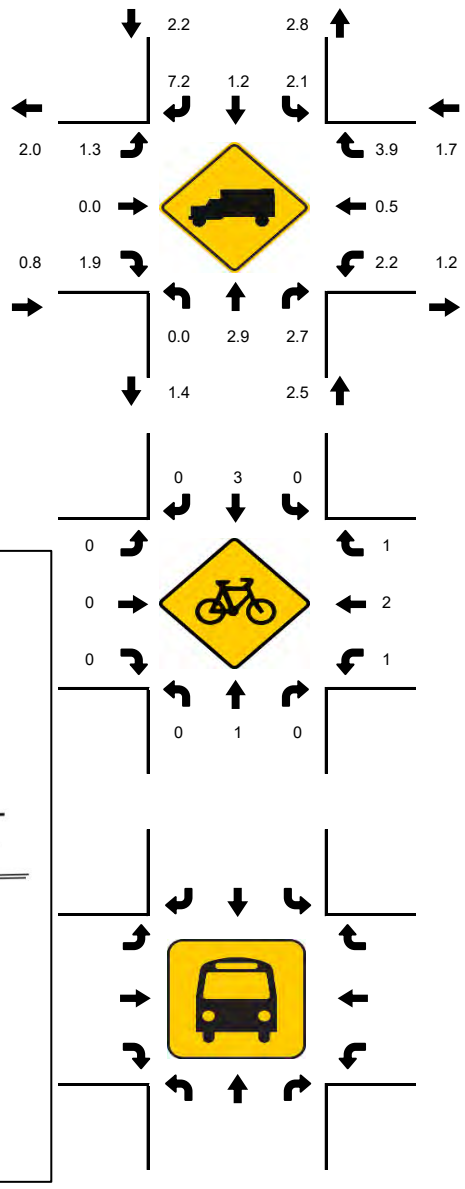
LOCATION: S Park Ave & SR 405/South St
CITY/STATE: Titusville, FL

PROJECT ID: 22-130130-003
DATE: Wed, May 11, 2022

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM







15-Min Count Period Beginning At	S Park Ave Northbound					S Park Ave Southbound					SR 405/South St Eastbound					SR 405/South St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	17	78	18	0		16	80	14	0		19	32	18	0		16	29	17	0		354	1402
04:15 PM	11	68	16	0		14	79	22	0		13	14	14	0		20	42	23	0		336	1461
04:30 PM	13	88	22	0		12	74	17	0		20	16	15	0		23	51	15	0		366	1503
04:45 PM	7	73	15	0		10	98	17	0		13	30	11	0		17	32	23	0		346	1474
05:00 PM	16	73	22	0		10	82	16	0		28	36	14	0		30	65	21	0		413	1447
05:15 PM	13	79	16	0		16	88	19	0		16	38	14	0		22	39	18	0		378	1034
05:30 PM	11	70	15	0		22	78	12	0		15	26	14	0		18	41	15	0		337	656
05:45 PM	9	66	17	0		11	77	13	0		19	34	12	0		15	30	16	0		319	319
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	64	352	88	0		64	392	76	0		112	152	60	0		120	260	92	0		**1832**	
Heavy Trucks	0	16	4	0		4	12	8	0		4	0	4	0		8	4	8	0		**72**	
Pedestrians		0					0					8					8				**16**	
Bicycles	0	4	0	0		0	8	0	0		0	0	0	0		4	8	4	0		**28**	
Buses																						
Stopped Buses																						

APPENDIX F
FDOT's Florida Traffic Online (FTO) Data

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.92

WEEK	DATES	SF	PSCF
* 1	01/01/2020 - 01/04/2020	1.00	1.09
* 2	01/05/2020 - 01/11/2020	0.95	1.03
* 3	01/12/2020 - 01/18/2020	0.90	0.98
* 4	01/19/2020 - 01/25/2020	0.88	0.96
* 5	01/26/2020 - 02/01/2020	0.87	0.95
* 6	02/02/2020 - 02/08/2020	0.85	0.92
* 7	02/09/2020 - 02/15/2020	0.84	0.91
* 8	02/16/2020 - 02/22/2020	0.86	0.93
* 9	02/23/2020 - 02/29/2020	0.89	0.97
*10	03/01/2020 - 03/07/2020	0.91	0.99
*11	03/08/2020 - 03/14/2020	0.94	1.02
*12	03/15/2020 - 03/21/2020	0.96	1.04
*13	03/22/2020 - 03/28/2020	1.05	1.14
14	03/29/2020 - 04/04/2020	1.14	1.24
15	04/05/2020 - 04/11/2020	1.23	1.34
16	04/12/2020 - 04/18/2020	1.33	1.45
17	04/19/2020 - 04/25/2020	1.26	1.37
18	04/26/2020 - 05/02/2020	1.19	1.29
19	05/03/2020 - 05/09/2020	1.12	1.22
20	05/10/2020 - 05/16/2020	1.05	1.14
21	05/17/2020 - 05/23/2020	1.04	1.13
22	05/24/2020 - 05/30/2020	1.03	1.12
23	05/31/2020 - 06/06/2020	1.02	1.11
24	06/07/2020 - 06/13/2020	1.02	1.11
25	06/14/2020 - 06/20/2020	1.01	1.10
26	06/21/2020 - 06/27/2020	1.02	1.11
27	06/28/2020 - 07/04/2020	1.02	1.11
28	07/05/2020 - 07/11/2020	1.03	1.12
29	07/12/2020 - 07/18/2020	1.04	1.13
30	07/19/2020 - 07/25/2020	1.04	1.13
31	07/26/2020 - 08/01/2020	1.04	1.13
32	08/02/2020 - 08/08/2020	1.04	1.13
33	08/09/2020 - 08/15/2020	1.04	1.13
34	08/16/2020 - 08/22/2020	1.03	1.12
35	08/23/2020 - 08/29/2020	1.03	1.12
36	08/30/2020 - 09/05/2020	1.02	1.11
37	09/06/2020 - 09/12/2020	1.02	1.11
38	09/13/2020 - 09/19/2020	1.01	1.10
39	09/20/2020 - 09/26/2020	1.01	1.10
40	09/27/2020 - 10/03/2020	1.00	1.09
41	10/04/2020 - 10/10/2020	1.00	1.09
42	10/11/2020 - 10/17/2020	0.99	1.08
43	10/18/2020 - 10/24/2020	1.00	1.09
44	10/25/2020 - 10/31/2020	1.00	1.09
45	11/01/2020 - 11/07/2020	1.01	1.10
46	11/08/2020 - 11/14/2020	1.01	1.10
47	11/15/2020 - 11/21/2020	1.02	1.11
48	11/22/2020 - 11/28/2020	1.01	1.10
49	11/29/2020 - 12/05/2020	1.01	1.10
50	12/06/2020 - 12/12/2020	1.00	1.09
51	12/13/2020 - 12/19/2020	1.00	1.09
52	12/20/2020 - 12/26/2020	0.95	1.03
53	12/27/2020 - 12/31/2020	0.90	0.98

* PEAK SEASON

27-FEB-2021 10:30:04 830UPD 5_7000_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2020 HISTORICAL AADT REPORT

COUNTY: 70 - BREVARD

SITE: 7109 - ON SOUTH STREET, 0.95 MILES NORTH OF FOX LAKE ROAD (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	10000 C	N 5300	S 4700	9.00	55.00	4.10
2019	16200 S	N 8200	S 8000	9.00	54.70	3.70
2018	16000 F	N 8100	S 7900	9.00	54.10	3.70
2017	15600 C	N 7900	S 7700	9.00	54.30	3.70
2016	13100 S	N 6600	S 6500	9.00	53.40	1.80
2015	12500 F	N 6300	S 6200	9.00	53.80	1.80
2014	12100 C	N 6100	S 6000	9.00	53.80	1.80
2013	12600 F	N 6200	S 6400	9.00	54.20	2.30
2012	12600 C	N 6200	S 6400	9.00	53.60	2.30

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

APPENDIX G
Turning Movement Volume Worksheets

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	N/S	***Buildout Year:***	2024	
Minor Street:	Fox Lake Rd	E/W	***Seasonal Factor:***	1.05	

PHF: 0.98

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								Fox Lake Rd							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	151	509	79	0	80	460	21	0	9	70	66	0	43	70	76
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	1%	1%	1%	0%	3%	1%	0%	0%	0%	0%	5%	0%	2%	0%	1%
Existing (2022)	**0**	**159**	**534**	**83**	**0**	**84**	**483**	**22**	**0**	**9**	**74**	**69**	**0**	**45**	**74**	**80**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]		22						11		7	5	13			8	
Background (2024)	**0**	**181**	**566**	**88**	**0**	**90**	**512**	**33**	**0**	**16**	**79**	**82**	**0**	**48**	**82**	**85**
Project Assignment																
Ingress			45%							1%						2%
Egress						2%	45%	1%								
Project Trips	0	0	39	0	0	1	25	1	0	1	0	0	0	0	0	2
Project Buildout	**0**	**181**	**605**	**88**	**0**	**91**	**537**	**34**	**0**	**17**	**79**	**82**	**0**	**48**	**82**	**87**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	2		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	S Singleton Ave	E/W	***Buildout Year:***	2024	
Minor Street:	SR405/South St	N/S	***Seasonal Factor:***	1.05	
PHF:	0.89				

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								S Singleton Ave							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	305	218	0	0	0	276	52	0	16	0	254	0	0	0	0
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	1%	1%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing (2022)	**0**	**320**	**229**	**0**	**0**	**0**	**290**	**55**	**0**	**17**	**0**	**267**	**0**	**0**	**0**	**0**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]			31				38									
Background (2024)	**0**	**339**	**260**	**0**	**0**	**0**	**328**	**58**	**0**	**18**	**0**	**283**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress						4%	5%			12%	24%	13%		5%		8%
Egress		13%	5%	5%		8%		12%							24%	4%
Project Trips	0	7	3	3	0	8	4	7	0	11	21	11	0	4	14	9
Project Buildout	**0**	**346**	**263**	**3**	**0**	**8**	**332**	**65**	**0**	**29**	**21**	**294**	**0**	**4**	**14**	**9**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	3		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	E/W	***Buildout Year:***	2024	
Minor Street:	S Park Ave	N/S	***Seasonal Factor:***	1.05	

PHF: 0.91

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	S Park Ave								SR405/South St							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	49	313	75	0	48	342	69	0	77	120	54	0	92	187	77
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	0%	3%	3%	0%	2%	1%	7%	0%	1%	1%	2%	0%	2%	1%	4%
Existing (2022)	**0**	**51**	**329**	**79**	**0**	**50**	**359**	**72**	**0**	**81**	**126**	**57**	**0**	**97**	**196**	**81**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]		16						17		18	42	20			38	
Background (2024)	**0**	**67**	**349**	**84**	**0**	**53**	**381**	**89**	**0**	**99**	**176**	**77**	**0**	**103**	**245**	**86**
Project Assignment																
Ingress		7%						9%							16%	
Egress										9%	16%	7%				
Project Trips	0	6	0	0	0	0	0	8	0	5	9	4	0	0	14	0
Project Buildout	**0**	**73**	**349**	**84**	**0**	**53**	**381**	**97**	**0**	**104**	**185**	**81**	**0**	**103**	**259**	**86**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	4		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	Project Drwy	N/S	***Buildout Year:***	2024	
Minor Street:	S Singleton Ave	E/W	***Seasonal Factor:***	1.05	
PHF:	0.92				

PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	Project Drwy								S Singleton Ave							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	0	0	0	0	0	0	0	0	0	270	0	0	0	357	0
Seasonal Factor		1.05				1.05				1.05				1.05		
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%
Existing (2022)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**284**	**0**	**0**	**0**	**375**	**0**
Growth Factor		*1.00*				*1.00*				*1.00*				*1.00*		
Growth Rates		3.00%				3.00%				3.00%				3.00%		
Growth Factor		1.06				1.06				1.06				1.06		
Vested Trips[1]																
Background (2024)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**302**	**0**	**0**	**0**	**397**	**0**
Project Assignment																
Ingress										8%	9%					20%
Egress						20%		8%							9%	
Project Trips	0	0	0	0	0	11	0	5	0	7	8	0	0	0	5	18
Project Buildout	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**5**	**0**	**7**	**310**	**0**	**0**	**0**	**402**	**18**

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	5		***Existing Year:***	2022	***TMC Year:*** 2022
Major Street:	SR405/South St	N/S	***Buildout Year:***	2024	
Minor Street:	Project Drwy	E/W	***Seasonal Factor:***	1.05	
PHF:	0.92				

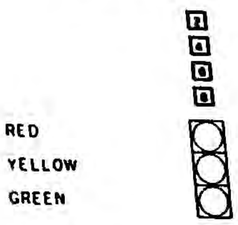
PM Peak Hour Trips: IN = 88 **OUT =** 57

Weekday PM Peak Hour 4:30PM - 5:30PM	SR405/South St								Project Drwy							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2022)	0	0	234	0	0	0	328	0	0	0	0	0	0	0	0	0
Seasonal Factor			1.05				1.05				1.05				1.05	
Heavy Vehicle (%)	0%	0%	1%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Existing (2022)	**0**	**0**	**246**	**0**	**0**	**0**	**344**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Growth Factor			*1.00*				*1.00*				*1.00*				*1.00*	
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips[1]			31				38									
Background (2024)	**0**	**0**	**277**	**0**	**0**	**0**	**382**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress		12%		16%		13%	13%	8%								
Egress			13%							8%		12%		16%		13%
Project Trips	0	11	7	14	0	12	11	7	0	5	0	7	0	9	0	7
Project Buildout	**0**	**11**	**284**	**14**	**0**	**12**	**393**	**7**	**0**	**5**	**0**	**7**	**0**	**9**	**0**	**7**

APPENDIX H
Signal Timings

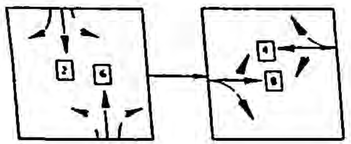
STATE PROJ. NO.	SHEET NO.
70160-3501	T-4

DETAIL OF SIGNAL HEADS



NO. REQ'D 8 AS.
ITEM NO. 650-1-131

MOVEMENT DIAGRAM



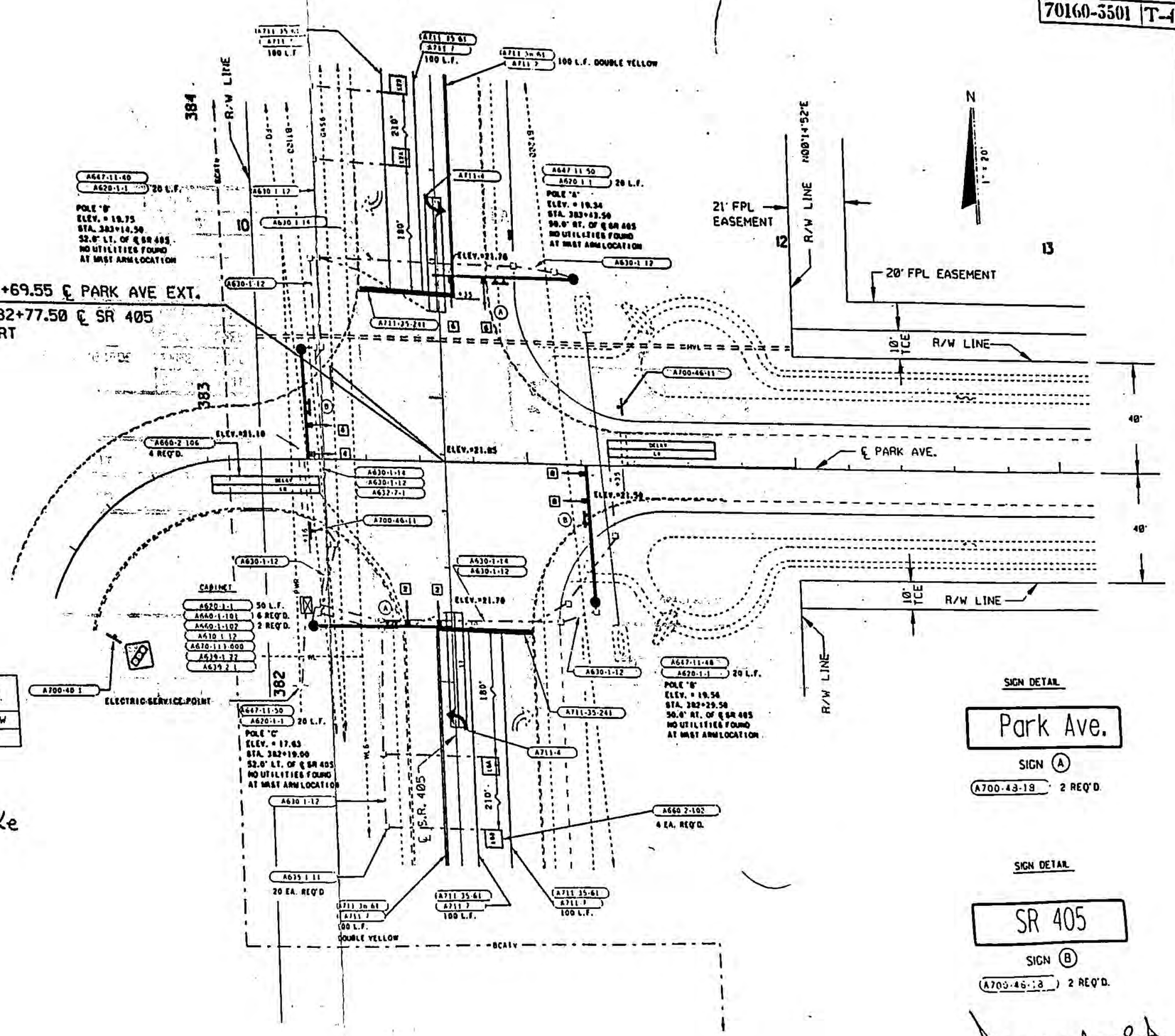
CONTROLLER TIMINGS

MOVEMENT	MIN	EXT	MAX	CL	ALL RED	WALK	FDW	RECALL	DETECTOR FUNCTION	FLASH
2+6	17	3	50	4	1	-	-	MIN.	LOCK	YELLOW
4+8	6	3	15	4	1	-	-	OFF	NL	RED

SR 405 + PARK South of Fox lake

UTILITY CONTACTS:

BELLSOUTH TELECOMUNICATIONS, INC.	407-455-7133.
CONTACT FLORIDA POWER AND LIGHT COMPANY	407-726-4820.
TIME WARNER CABLE	407-631-3770.
CITY GAS COMPANY OF FLORIDA	407-632-1735.
CITY OF TITUSVILLE COMPANY	407-268-6050.
BREVARD COUNTY	407-633-2841.

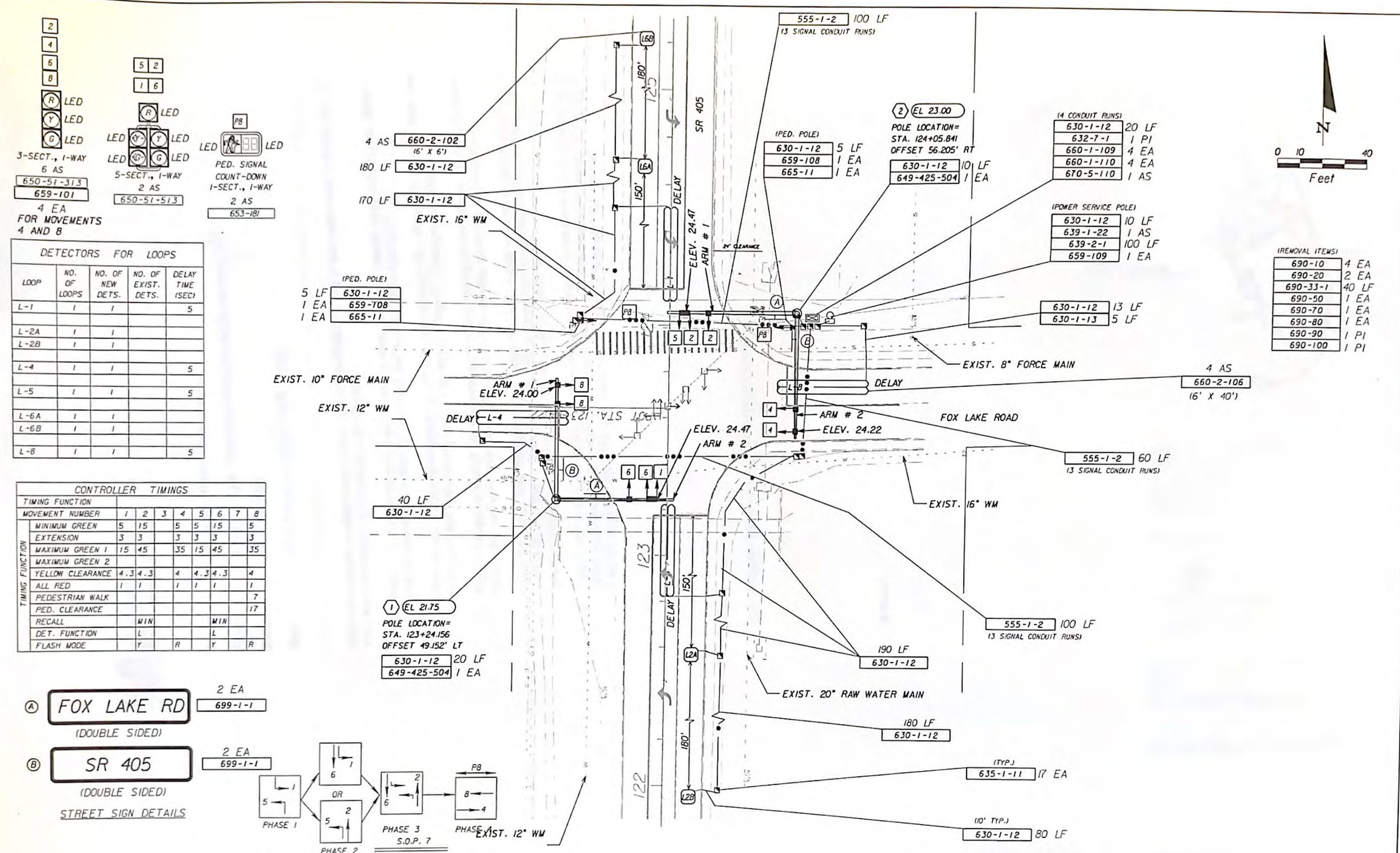


2/21/97

REVISIONS												
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION

INTERSECTION DETAILS



DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	NO. OF EXIST. DETS.	DELAY TIME (SEC)
L-1	1	1		5
L-2A	1	1		
L-2B	1	1		
L-4	1	1		5
L-5	1	1		5
L-6A	1	1		
L-6B	1	1		
L-8	1	1		5

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN	5	15		5	5	15		5
EXTENSION	3	3		3	3	3		3
MAXIMUM GREEN 1	15	45		35	15	45		35
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.3	4.3		4	4.3	4.3		4
ALL RED	1	1		1	1	1		1
PEDESTRIAN WALK								7
PED. CLEARANCE								17
RECALL		MIN				MIN		
DET. FUNCTION		L				L		
FLASH MODE		Y		R		Y		R

TIMING FUNCTION

Ⓐ FOX LAKE RD — 2 EA 699-1-1
(DOUBLE SIDED)

Ⓑ SR 405 — 2 EA 699-1-1
(DOUBLE SIDED)

STREET SIGN DETAILS

NOTE:
SIGNAL OPERATION PLAN IS S.O.P. 7 HOWEVER, CABINET SHALL BE WIRED TO S.O.P. 10.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

SANJIV S. CHOKSHI
P.E. LICENCE NO. 55854
Ghyabi & Associates, Inc.
214 East New York Avenue
DeLand, FL 32724
Phone: 386/469-0006
Fax: 386/469-0017
C.A. # 7311

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 405	BREVARD	413764-1-52-01

SIGNALIZATION PLAN

SHEET NO. T-5

prowatha 11/8/2005 2:58:50 PM n:\2563-04\413764\PDP\Signals\Plans01.dgn

APPENDIX I

Synchro Outputs

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	9	74	45	74	159	534	84	483
Future Volume (vph)	9	74	45	74	159	534	84	483
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 64.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	74	69	45	74	80	159	534	83	84	483	22
Future Volume (veh/h)	9	74	69	45	74	80	159	534	83	84	483	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	9	76	70	46	76	82	162	545	85	86	493	22
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	87	157	136	138	129	117	473	675	105	376	721	32
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.09	0.43	0.43	0.07	0.41	0.41
Sat Flow, veh/h	44	901	778	262	738	672	1781	1580	246	1767	1777	79
Grp Volume(v), veh/h	155	0	0	204	0	0	162	0	630	86	0	515
Grp Sat Flow(s),veh/h/ln	1722	0	0	1673	0	0	1781	0	1826	1767	0	1856
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	2.4	0.0	14.4	1.3	0.0	10.9
Cycle Q Clear(g_c), s	3.9	0.0	0.0	5.3	0.0	0.0	2.4	0.0	14.4	1.3	0.0	10.9
Prop In Lane	0.06		0.45	0.23		0.40	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	381	0	0	385	0	0	473	0	780	376	0	753
V/C Ratio(X)	0.41	0.00	0.00	0.53	0.00	0.00	0.34	0.00	0.81	0.23	0.00	0.68
Avail Cap(c_a), veh/h	1144	0	0	1100	0	0	670	0	1519	609	0	1544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	0.0	18.4	0.0	0.0	8.1	0.0	12.0	9.0	0.0	11.7
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	0.0	0.4	0.0	2.0	0.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.0	1.9	0.0	0.0	0.6	0.0	4.3	0.3	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	19.5	0.0	0.0	8.6	0.0	14.0	9.3	0.0	12.8
LnGrp LOS	B	A	A	B	A	A	A	A	B	A	A	B
Approach Vol, veh/h		155			204			792			601	
Approach Delay, s/veh		18.6			19.5			12.9			12.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	24.7		13.3	8.7	25.7		13.3				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.4	12.9		7.3	3.3	16.4		5.9				
Green Ext Time (p_c), s	0.2	3.1		1.1	0.1	4.0		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	267	320	229	290	55
Future Vol, veh/h	17	267	320	229	290	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	170	410	-	-	400
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	300	360	257	326	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1303	326	388	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	177	715	1170	-	-	-
Stage 1	731	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	122	715	1170	-	-	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	506	-	-	-	-	-
Stage 2	365	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	5.5	0
HCM LOS	C		

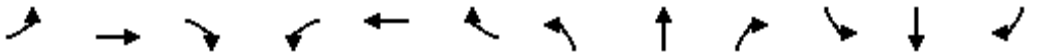
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1170	-	122	715	-	-
HCM Lane V/C Ratio	0.307	-	0.157	0.42	-	-
HCM Control Delay (s)	9.4	-	39.9	13.6	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	1.3	-	0.5	2.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	81	126	97	196	51	329	50	359
Future Volume (vph)	81	126	97	196	51	329	50	359
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 36.2
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	126	57	97	196	81	51	329	79	50	359	72
Future Volume (veh/h)	81	126	57	97	196	81	51	329	79	50	359	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	89	138	63	107	215	89	56	362	87	55	395	79
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	364	535	233	411	550	220	492	708	170	508	741	148
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	1075	2410	1049	1181	2477	992	920	1446	347	941	1513	303
Grp Volume(v), veh/h	89	100	101	107	152	152	56	0	449	55	0	474
Grp Sat Flow(s),veh/h/ln	1075	1777	1682	1181	1777	1692	920	0	1793	941	0	1816
Q Serve(g_s), s	2.7	1.6	1.7	2.9	2.5	2.7	1.6	0.0	5.9	1.5	0.0	6.3
Cycle Q Clear(g_c), s	5.3	1.6	1.7	4.6	2.5	2.7	7.8	0.0	5.9	7.4	0.0	6.3
Prop In Lane	1.00		0.62	1.00		0.59	1.00		0.19	1.00		0.17
Lane Grp Cap(c), veh/h	364	395	373	411	395	376	492	0	878	508	0	889
V/C Ratio(X)	0.24	0.25	0.27	0.26	0.39	0.40	0.11	0.00	0.51	0.11	0.00	0.53
Avail Cap(c_a), veh/h	435	512	484	489	512	487	1234	0	2325	1267	0	2354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	11.1	11.2	13.1	11.5	11.5	8.8	0.0	6.0	8.5	0.0	6.1
Incr Delay (d2), s/veh	0.3	0.3	0.4	0.3	0.6	0.7	0.1	0.0	0.5	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.5	0.6	0.8	0.8	0.2	0.0	1.2	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	11.5	11.6	13.4	12.1	12.2	8.9	0.0	6.5	8.6	0.0	6.6
LnGrp LOS	B	B	B	B	B	B	A	A	A	A	A	A
Approach Vol, veh/h		290			411			505			529	
Approach Delay, s/veh		12.3			12.5			6.8			6.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		12.7		22.0		12.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		9.8		7.3		9.4		6.6				
Green Ext Time (p_c), s		3.4		0.4		3.6		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			9.1									
HCM 6th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	79	48	82	181	566	90	512
Future Volume (vph)	16	79	48	82	181	566	90	512
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 68.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	79	82	48	82	85	181	566	88	90	512	33
Future Volume (veh/h)	16	79	82	48	82	85	181	566	88	90	512	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	16	81	84	49	84	87	185	578	90	92	522	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	90	153	144	134	137	121	453	700	109	360	733	48
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.09	0.44	0.44	0.07	0.42	0.42
Sat Flow, veh/h	77	846	799	264	757	668	1781	1580	246	1767	1737	113
Grp Volume(v), veh/h	181	0	0	220	0	0	185	0	668	92	0	556
Grp Sat Flow(s),veh/h/ln	1722	0	0	1689	0	0	1781	0	1826	1767	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	2.9	0.0	16.4	1.4	0.0	12.7
Cycle Q Clear(g_c), s	4.9	0.0	0.0	6.0	0.0	0.0	2.9	0.0	16.4	1.4	0.0	12.7
Prop In Lane	0.09		0.46	0.22		0.40	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	387	0	0	391	0	0	453	0	809	360	0	781
V/C Ratio(X)	0.47	0.00	0.00	0.56	0.00	0.00	0.41	0.00	0.83	0.26	0.00	0.71
Avail Cap(c_a), veh/h	1060	0	0	1030	0	0	627	0	1419	569	0	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	19.6	0.0	0.0	8.7	0.0	12.5	9.5	0.0	12.2
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.3	0.0	0.0	0.6	0.0	2.2	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	2.3	0.0	0.0	0.8	0.0	5.1	0.4	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	0.0	0.0	20.9	0.0	0.0	9.3	0.0	14.7	9.9	0.0	13.4
LnGrp LOS	C	A	A	C	A	A	A	A	B	A	A	B
Approach Vol, veh/h		181			220			853			648	
Approach Delay, s/veh		20.0			20.9			13.6			12.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.9		14.2	8.9	27.9		14.2				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.9	14.7		8.0	3.4	18.4		6.9				
Green Ext Time (p_c), s	0.2	3.4		1.2	0.1	4.2		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	283	339	260	328	58
Future Vol, veh/h	18	283	339	260	328	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	170	410	-	-	400
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	318	381	292	369	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1423	369	434	0	-	0
Stage 1	369	-	-	-	-	-
Stage 2	1054	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	150	677	1126	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	99	677	1126	-	-	-
Mov Cap-2 Maneuver	99	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	335	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	5.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1126	-	99	677	-	-
HCM Lane V/C Ratio	0.338	-	0.204	0.47	-	-
HCM Control Delay (s)	9.8	-	50.5	14.9	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	1.5	-	0.7	2.5	-	-

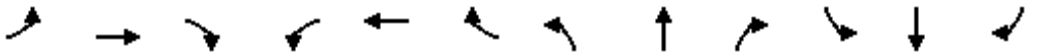
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	176	103	245	67	349	53	381
Future Volume (vph)	99	176	103	245	67	349	53	381
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary

Cycle Length: 65
Actuated Cycle Length: 38.2
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	176	77	103	245	86	67	349	84	53	381	89
Future Volume (veh/h)	99	176	77	103	245	86	67	349	84	53	381	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	109	193	85	113	269	95	74	384	92	58	419	98
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	365	612	260	403	653	225	429	681	163	456	690	161
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1018	2431	1031	1101	2592	894	884	1447	347	918	1466	343
Grp Volume(v), veh/h	109	139	139	113	182	182	74	0	476	58	0	517
Grp Sat Flow(s),veh/h/ln	1018	1777	1685	1101	1777	1709	884	0	1793	918	0	1809
Q Serve(g_s), s	3.6	2.3	2.4	3.4	3.1	3.2	2.4	0.0	6.9	1.8	0.0	7.6
Cycle Q Clear(g_c), s	6.8	2.3	2.4	5.8	3.1	3.2	10.1	0.0	6.9	8.7	0.0	7.6
Prop In Lane	1.00		0.61	1.00		0.52	1.00		0.19	1.00		0.19
Lane Grp Cap(c), veh/h	365	448	424	403	448	431	429	0	845	456	0	852
V/C Ratio(X)	0.30	0.31	0.33	0.28	0.41	0.42	0.17	0.00	0.56	0.13	0.00	0.61
Avail Cap(c_a), veh/h	391	492	467	431	492	474	1115	0	2236	1169	0	2255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	11.0	11.0	13.4	11.3	11.3	10.8	0.0	6.9	10.0	0.0	7.1
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.4	0.6	0.7	0.2	0.0	0.6	0.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.8	0.7	1.0	1.0	0.4	0.0	1.6	0.3	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	11.3	11.5	13.7	11.8	12.0	11.0	0.0	7.5	10.1	0.0	7.8
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		387			477			550			575	
Approach Delay, s/veh		12.3			12.3			7.9			8.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		14.1		22.0		14.1				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		12.1		8.8		10.7		7.8				
Green Ext Time (p_c), s		3.8		0.3		4.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			9.9									
HCM 6th LOS			A									

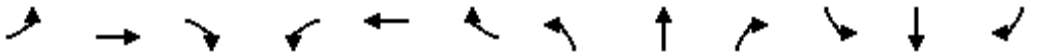
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	79	48	82	181	605	91	537
Future Volume (vph)	17	79	48	82	181	605	91	537
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	23.0	23.0	23.0	23.0	10.3	23.3	10.3	23.3
Total Split (s)	35.0	35.0	35.0	35.0	15.0	45.0	15.0	45.0
Total Split (%)	36.8%	36.8%	36.8%	36.8%	15.8%	47.4%	15.8%	47.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.0		5.0	5.3	5.3	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 70
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: SR405/South St & Fox Lake Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	79	82	48	82	87	181	605	88	91	537	34
Future Volume (veh/h)	17	79	82	48	82	87	181	605	88	91	537	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1826	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	17	81	84	49	84	89	185	617	90	93	548	35
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	5	2	2	2	2	2	2	3	2	2
Cap, veh/h	88	152	143	129	134	122	446	734	107	346	766	49
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.09	0.46	0.46	0.07	0.44	0.44
Sat Flow, veh/h	82	846	796	263	750	678	1781	1596	233	1767	1739	111
Grp Volume(v), veh/h	182	0	0	222	0	0	185	0	707	93	0	583
Grp Sat Flow(s),veh/h/ln	1725	0	0	1691	0	0	1781	0	1828	1767	0	1850
Q Serve(g_s), s	0.0	0.0	0.0	1.2	0.0	0.0	2.9	0.0	18.3	1.5	0.0	13.8
Cycle Q Clear(g_c), s	5.1	0.0	0.0	6.4	0.0	0.0	2.9	0.0	18.3	1.5	0.0	13.8
Prop In Lane	0.09		0.46	0.22		0.40	1.00		0.13	1.00		0.06
Lane Grp Cap(c), veh/h	383	0	0	385	0	0	446	0	841	346	0	815
V/C Ratio(X)	0.48	0.00	0.00	0.58	0.00	0.00	0.41	0.00	0.84	0.27	0.00	0.72
Avail Cap(c_a), veh/h	1009	0	0	982	0	0	609	0	1353	542	0	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	0.0	0.0	20.7	0.0	0.0	8.9	0.0	12.7	9.9	0.0	12.3
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.4	0.0	0.0	0.6	0.0	2.7	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.0	2.5	0.0	0.0	0.8	0.0	5.8	0.4	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	0.0	0.0	22.0	0.0	0.0	9.5	0.0	15.5	10.4	0.0	13.4
LnGrp LOS	C	A	A	C	A	A	A	A	B	B	A	B
Approach Vol, veh/h		182			222			892			676	
Approach Delay, s/veh		21.1			22.0			14.2			13.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	28.9		14.6	9.0	30.0		14.6				
Change Period (Y+Rc), s	5.3	5.3		5.0	5.3	5.3		5.0				
Max Green Setting (Gmax), s	9.7	39.7		30.0	9.7	39.7		30.0				
Max Q Clear Time (g_c+I1), s	4.9	15.8		8.4	3.5	20.3		7.1				
Green Ext Time (p_c), s	0.2	3.6		1.2	0.1	4.4		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	13.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	21	294	4	14	9	346	263	3	8	332	65
Future Vol, veh/h	29	21	294	4	14	9	346	263	3	8	332	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	170	-	-	-	410	-	-	-	-	400
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	24	330	4	16	10	389	296	3	9	373	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1480	1468	373	1681	1540	298	446	0	0	299	0	0
Stage 1	391	391	-	1076	1076	-	-	-	-	-	-	-
Stage 2	1089	1077	-	605	464	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	104	128	673	75	115	741	1114	-	-	1262	-	-
Stage 1	633	607	-	266	296	-	-	-	-	-	-	-
Stage 2	261	295	-	485	564	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	82	673	22	74	741	1114	-	-	1262	-	-
Mov Cap-2 Maneuver	63	82	-	22	74	-	-	-	-	-	-	-
Stage 1	412	601	-	173	193	-	-	-	-	-	-	-
Stage 2	154	192	-	235	558	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.7	91.1	5.6	0.2
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1114	-	-	70	673	70	1262	-	-
HCM Lane V/C Ratio	0.349	-	-	0.803	0.491	0.433	0.007	-	-
HCM Control Delay (s)	10	-	-	155.3	15.4	91.1	7.9	-	-
HCM Lane LOS	A	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	1.6	-	-	3.8	2.7	1.7	0	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	104	185	103	259	73	349	53	381
Future Volume (vph)	104	185	103	259	73	349	53	381
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	17.0	17.0	17.0	17.0
Minimum Split (s)	11.0	11.0	11.0	11.0	22.0	22.0	22.0	22.0
Total Split (s)	15.0	15.0	15.0	15.0	50.0	50.0	50.0	50.0
Total Split (%)	23.1%	23.1%	23.1%	23.1%	76.9%	76.9%	76.9%	76.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min

Intersection Summary
Cycle Length: 65
Actuated Cycle Length: 38.6
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: S Park Ave & SR405/South St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	185	81	103	259	86	73	349	84	53	381	97
Future Volume (veh/h)	104	185	81	103	259	86	73	349	84	53	381	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1856	1856	1870	1870	1796
Adj Flow Rate, veh/h	114	203	89	113	285	95	80	384	92	58	419	107
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	4	2	3	3	2	2	7
Cap, veh/h	365	630	266	403	682	222	414	675	162	449	671	171
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1003	2433	1029	1087	2633	859	877	1447	347	918	1437	367
Grp Volume(v), veh/h	114	146	146	113	190	190	80	0	476	58	0	526
Grp Sat Flow(s),veh/h/ln	1003	1777	1685	1087	1777	1716	877	0	1793	918	0	1804
Q Serve(g_s), s	3.9	2.4	2.6	3.4	3.2	3.4	2.8	0.0	7.0	1.8	0.0	8.0
Cycle Q Clear(g_c), s	7.2	2.4	2.6	6.0	3.2	3.4	10.7	0.0	7.0	8.8	0.0	8.0
Prop In Lane	1.00		0.61	1.00		0.50	1.00		0.19	1.00		0.20
Lane Grp Cap(c), veh/h	365	460	436	403	460	444	414	0	837	449	0	842
V/C Ratio(X)	0.31	0.32	0.33	0.28	0.41	0.43	0.19	0.00	0.57	0.13	0.00	0.62
Avail Cap(c_a), veh/h	381	488	463	420	488	471	1088	0	2215	1155	0	2229
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.3	10.9	11.0	13.4	11.2	11.2	11.4	0.0	7.1	10.3	0.0	7.3
Incr Delay (d2), s/veh	0.5	0.4	0.4	0.4	0.6	0.7	0.2	0.0	0.6	0.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.8	0.8	0.7	1.0	1.0	0.4	0.0	1.6	0.3	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	11.3	11.4	13.8	11.8	11.9	11.6	0.0	7.7	10.4	0.0	8.1
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		406			493			556			584	
Approach Delay, s/veh		12.3			12.3			8.2			8.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.0		14.4		22.0		14.4				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		10.0		45.0		10.0				
Max Q Clear Time (g_c+I1), s		12.7		9.2		10.8		8.0				
Green Ext Time (p_c), s		3.8		0.2		4.1		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	310	402	18	11	5
Future Vol, veh/h	7	310	402	18	11	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	337	437	20	12	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	457	0	-	0	800	447
Stage 1	-	-	-	-	447	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1104	-	-	-	354	612
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1104	-	-	-	351	612
Mov Cap-2 Maneuver	-	-	-	-	351	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1104	-	-	-	405
HCM Lane V/C Ratio	0.007	-	-	-	0.043
HCM Control Delay (s)	8.3	0	-	-	14.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	0	7	9	0	7	11	284	14	12	393	7
Future Vol, veh/h	5	0	7	9	0	7	11	284	14	12	393	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	8	10	0	8	12	309	15	13	427	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	802	805	431	802	802	317	435	0	0	324	0	0
Stage 1	457	457	-	341	341	-	-	-	-	-	-	-
Stage 2	345	348	-	461	461	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	302	316	624	302	317	724	1125	-	-	1236	-	-
Stage 1	583	568	-	674	639	-	-	-	-	-	-	-
Stage 2	671	634	-	581	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	293	307	624	292	308	724	1125	-	-	1236	-	-
Mov Cap-2 Maneuver	293	307	-	292	308	-	-	-	-	-	-	-
Stage 1	575	560	-	665	631	-	-	-	-	-	-	-
Stage 2	655	626	-	566	557	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	14.5	0.3	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	424	395	1236	-	-
HCM Lane V/C Ratio	0.011	-	-	0.031	0.044	0.011	-	-
HCM Control Delay (s)	8.2	0	-	13.8	14.5	7.9	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

APPENDIX J

Vested Trips Developments

South Carpenter Estates
City of Titusville, Florida

Traffic Impact Study

Prepared for South Carpenter Estates LLC.
By LTG, Inc.
February 2018

LTG Engineering & Planning

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with LTG, Inc., a corporation authorized to operate as an engineering business, EB 0009227, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: South Carpenter Estates

LOCATION: City of Titusville, Florida

CLIENT: South Carpenter Estates, LLC.

JOB #: 4511.02

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

Prepared by:
LTG, Inc.
1970 Dairy Road,
W. Melbourne, FL 32904
Certificate of Authorization 9227
321/499-4679

This item has been electronically signed and sealed by: Gil Ramirez, PE on date shown using a digital signature.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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INTRODUCTION

LTG Inc. has been retained by South Carpenter Estates, LLC. to prepare a Traffic Impact Study (TIS) for the proposed South Carpenter Estates Subdivision located in the northeast corner of Carpenter Road and Fox Lake Road in the City of Titusville, Florida. The proposed development consists of 70 single family lots and has an anticipated build-out year of 2018. Figure 1 shows the location of the project relative to the surrounding road network. A preliminary site plan showing the site layout is attached as Appendix A.

Study Area

The study area includes the following intersections as approved in the submitted methodology. The methodology is included as Appendix B.

Intersections:

- Carpenter Road at Fox Lake Road
- Carpenter Road at Project Driveway
- Fox Lake Road at SR 405/South Street
- SR 405/South Street at Park Avenue

Roadway Segments:

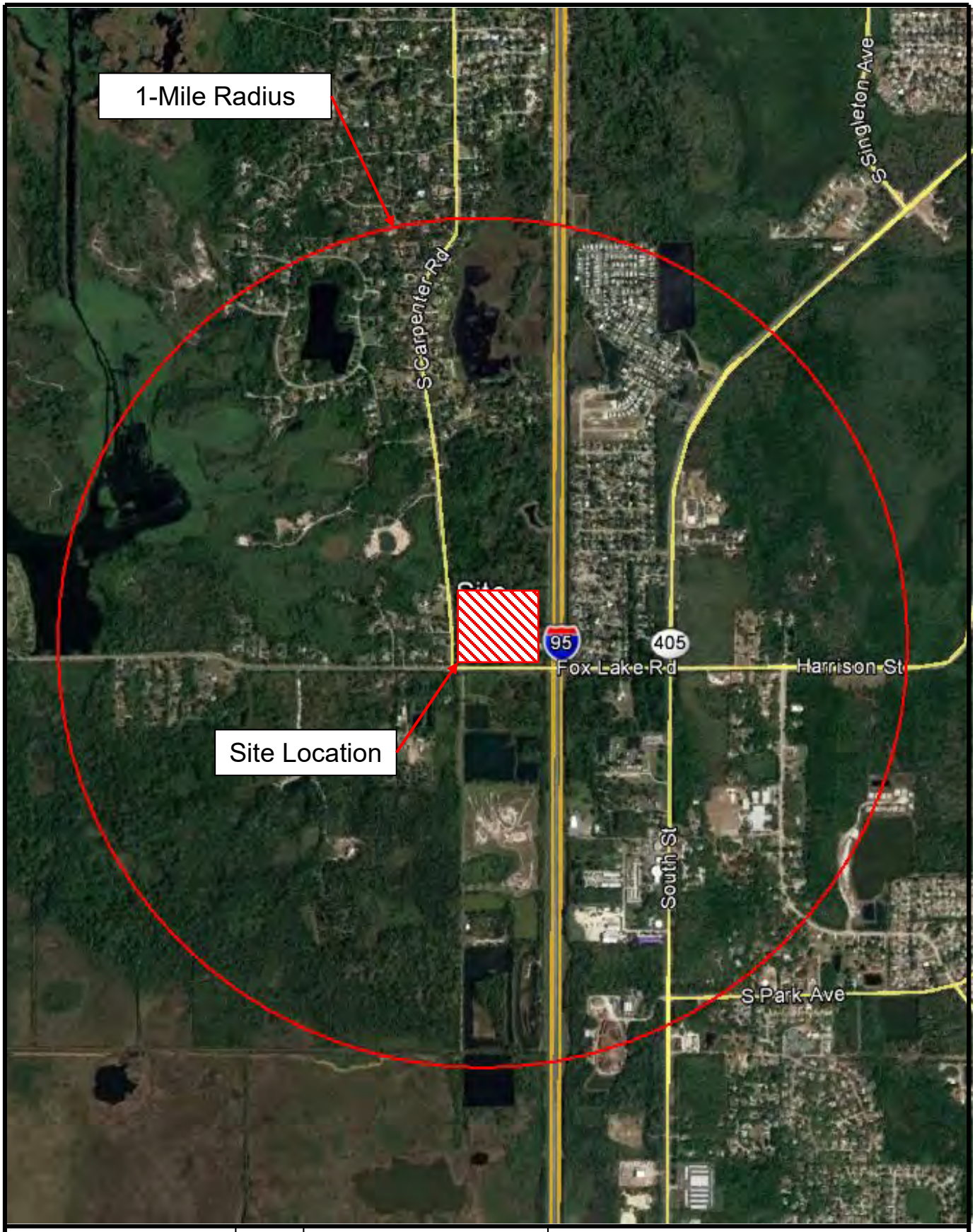
- Carpenter Road from Fox Lake Road to Garden Street
- Fox Lake Road from Carpenter Road to SR405/South Street
- Harrison Street from SR 405/South Street to 0.57 Mile east of South Street
- SR 405/South Street from SR 50 to Fox Lake Road
- SR 405/South Street from Fox Lake Road to Singleton Avenue

Study Procedures

Standard engineering and planning procedures were used to determine the impacts of this project. Reference data was obtained from the Florida Department of Transportation (FDOT), the City of Titusville, the Space Coast Transportation Planning Organization (TPO), and the Brevard County Planning Department.

Planned Roadway Improvements

FDOT's Five Year Work Program, Space Coast TPO Transportation Improvement Program, and the City of Titusville Capital Improvement Program were reviewed to ascertain if there were any programmed or planned roadway improvements within the area of interest. Based on information obtained, there are no completions of planned capacity enhancing improvements scheduled within the area before the end of 2021.



South Carpenter Estates	N NTS	**Site Location Map**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 1	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2

EXISTING ROADWAY ANALYSIS

Peak-period turning movement counts for the a.m. and p.m. peak-hours were conducted at the study area intersections on a typical weekday. Figures 2 and 3 graphically show the existing a.m. and p.m. peak-hour turning movements at the study area intersections. The raw traffic counts are provided in Appendix C.

Unsignalized Intersection Analysis

The Level of Service (LOS) at an unsignalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the unsignalized intersection were evaluated using *Highway Capacity Software 2010 version 7.4 (HCS).* This software utilizes the procedures outlined in Chapter 20 of the *Highway Capacity Manual 6th Edition*, titled "Two-Way Stop-Controlled Intersections". Table 1 shows the existing a.m. and p.m. peak-hour LOS at the unsignalized study area intersection. The HCS summary sheet is located in Appendix D. As indicated in the table, the unsignalized intersection currently operates within the adopted LOS.

Table 1
Existing A.M. and P.M. Peak-Hour LOS - Unsignalized Intersection
South Carpenter Estates

Intersections	Adopted LOS	Existing Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.2	B	SB	10.9	B

Signalized Intersection Analysis

The LOS at a signalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the signalized intersections were evaluated using the agencies' signal timings, optimized signal timings and HCS. This software utilizes the procedures outlined in Chapter 19 of the *Highway Capacity Manual, 6th Edition*. Table 2 shows the existing a.m. and p.m. peak-hour LOS at the signalized intersection. As indicated in the table, the signalized intersection is currently operating out within the adopted LOS with v/c ratio less than 1.0. The HCS worksheets are located in Appendix E. The signal timing is included in Appendix F.

Table 2
Existing A.M. and P.M. Peak-Hour LOS - Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Existing Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	13.7	B	No	13.4	B	No
South St. at Park Ave.	E	11.1	B	No	11.2	B	No

Roadway Segment Analysis

Roadway level of service describes the operating condition determined from the number of vehicles passing over a given section of roadway during a specified time period. It is a qualitative measure of several factors which include: speed, travel time, traffic interruptions, freedom to maneuver, driver comfort, convenience, safety and vehicle operating costs. Six levels of service have been established as standards by which to gauge roadway performance, designated by the letters A through F. The level of service categories are defined as follows**:**

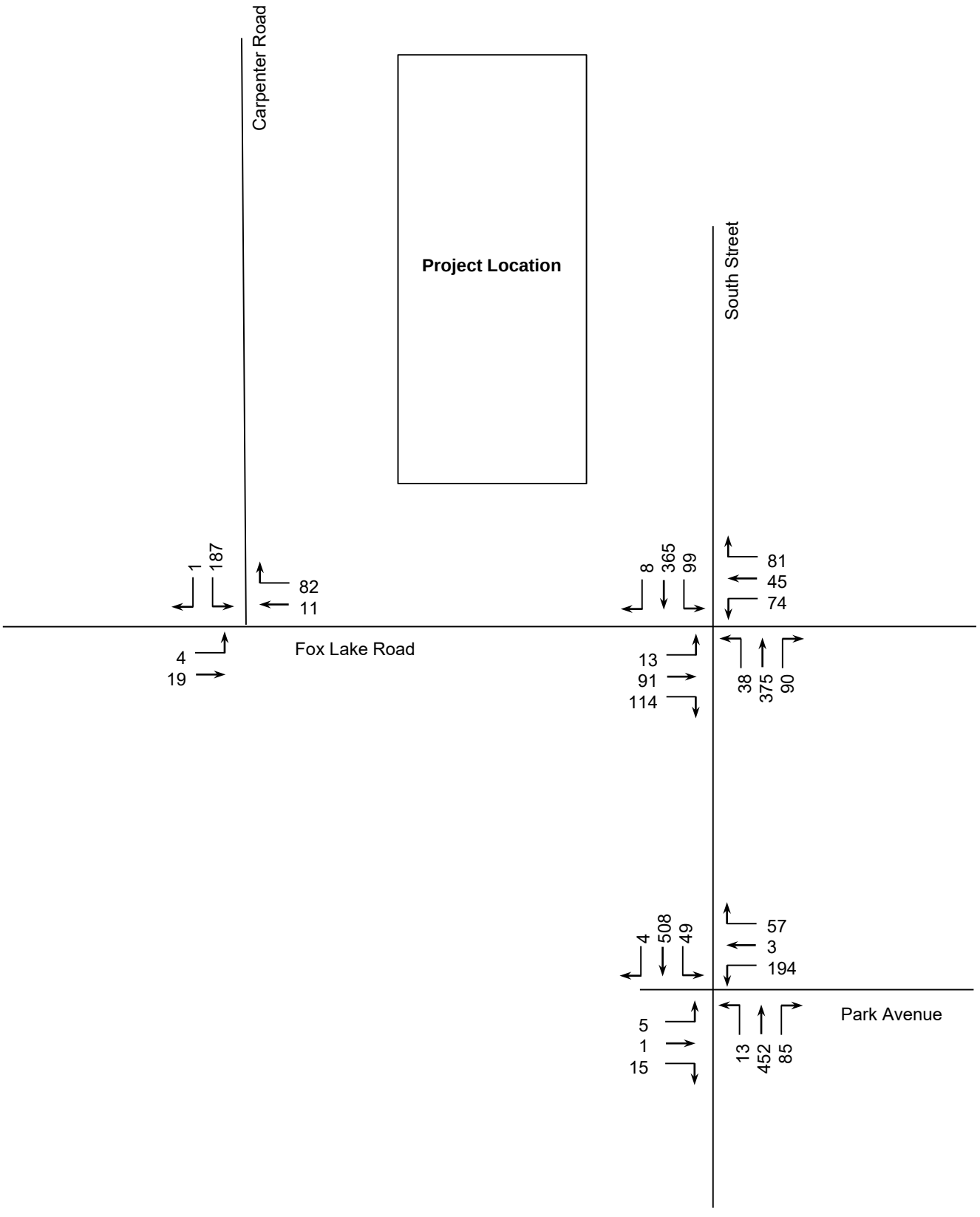
Level of Service A: Free flow, individual users virtually unaffected by the presence of others
Level of Service B: Stable flow with a high degree of freedom to select operating conditions
Level of Service C: Flow remains stable, but with significant interactions with others
Level of Service D: High-density stable flow in which the freedom to maneuver is severely restricted
Level of Service E: This condition represents the capacity level of the road
Level of Service F: Forced flow in which the traffic exceeds the amount that can be served

The AADT for the study roadway segments were obtained from the Space Coast TPO Segment Counts database. The existing p.m. peak-hour two-way LOS for the study area road segments are shown in Table 3. As indicated in the table, the study roadway segments are currently operating within the adopted levels of service D

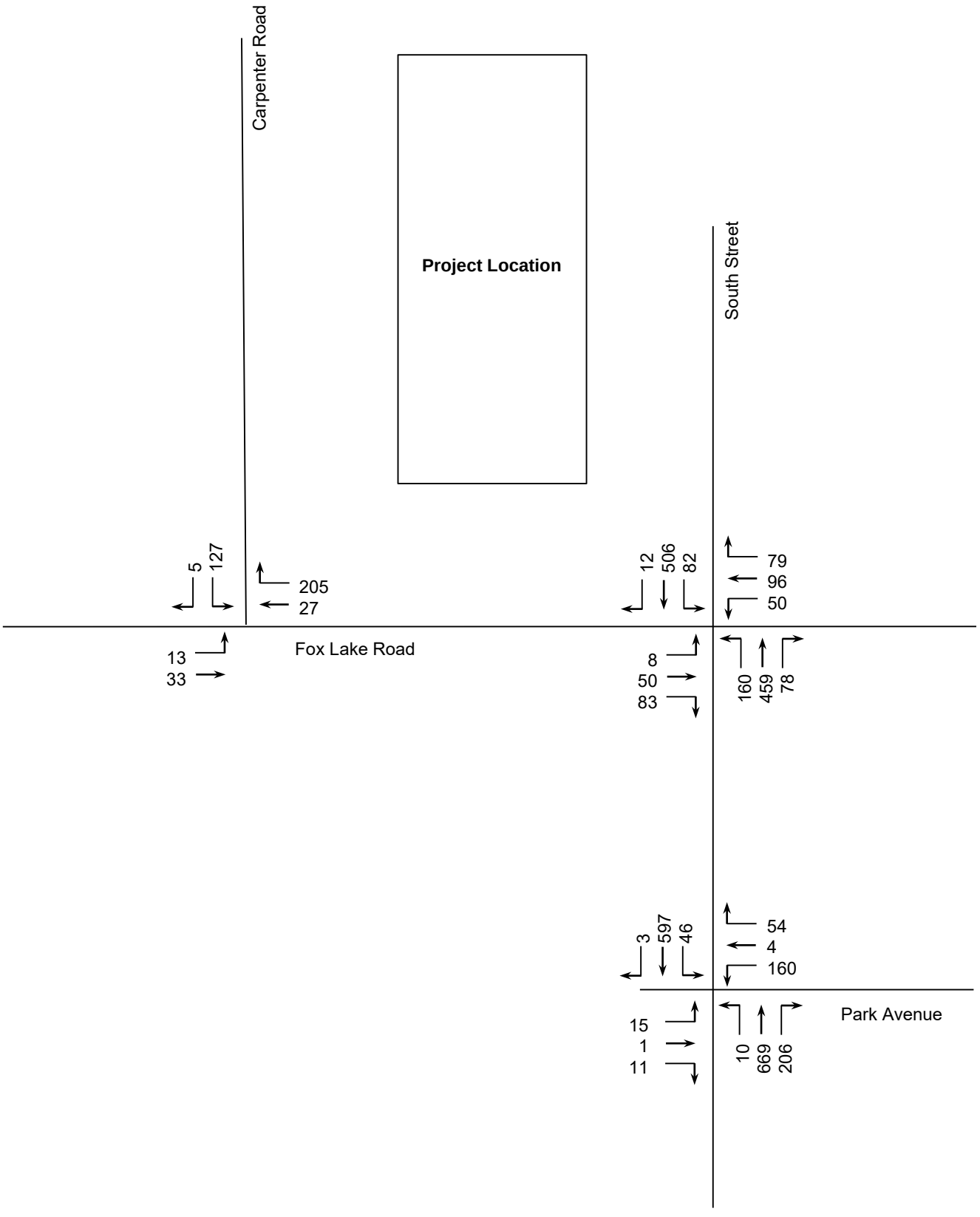
Table 3
Existing P.M. Peak-Hour Two-Way LOS – Roadway Segments
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing AADT	MAV	K Factor	Existing Peak-Hour Two-Way Volume	LOS
	From	To								
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1,152	3,480	15,600	0.09	313	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1,152	3,920	17,700	0.09	353	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1,152	3,900	17,700	0.09	351	C
SR 405/South St.	SR 50	Fox Lake Rd.	2	D	1,680	18,210	18,590	0.09	1,639	D
	Fox Lake Rd.	Singleton Ave	2	D	1,680	13,170	17,700	0.09	1,185	C

**Taken from Space Coast Transportation Planning Organization Traffic Counts: 2007-2016*



South Carpenter Estates	N NTS	**Existing A.M. Peak-Hour Turning Movement Counts**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 2	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



South Carpenter Estates	N NTS	**Existing P.M. Peak-Hour Turning Movement Counts**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 3	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

3

FUTURE TRAFFIC CONDITIONS

The next step in the analysis was to determine the future traffic conditions on the study area roadways at the time of project completion. The critical intersections and roadway segments were analyzed to determine potential impacts based on the background conditions. The following documents the procedures used to determine the future traffic.

Background Traffic Growth Rates

Historical growth rates were used to determine the background traffic. *FDOT Traffic Trends* software was used to calculate historical growth rates using the past five years of data obtained from the Space Coast Transportation Planning Organization (see Appendix G). When existing growth rates fall below 2%, a minimum growth rate of 2% was applied to the existing traffic volumes. The historical and applied growth rates used in the analysis are provided in Table 4.

Table 4
Historical Growth Rates
South Carpenter Estates

Roadway	Segment		Average Growth Rate	Applied Growth Rate	Growth Factor
	From	To			
Carpenter Rd.	Fox Lake Rd.	Garden St.	0.00%	2.00%	1.020
Fox Lake Rd.	Carpenter Rd.	South St.	-1.90%	2.00%	1.020
Harrison St.	South St.	0.75 Mile East of South St.	-5.85%	2.00%	1.020
SR 405/South St.	SR 50	Fox Lake Rd.	0.73%	2.00%	1.020
	Fox Lake Rd.	Singleton Ave	0.61%	2.00%	1.020

Background Unsignalized Intersection Analysis

The unsignalized intersection was analyzed to determine the operational LOS under the background conditions during the a.m. and p.m. peak-hours. Table 5 shows the project background conditions. As indicated in Table 5, the intersection is anticipated to operate within the adopted LOS at the background conditions with only background growth. The HCS summary sheets are located in Appendix H for the unsignalized intersection.

Table 5
Background A.M. and P.M. Peak Hour LOS – Unsignalized Intersection
South Carpenter Estates

Intersections	Adopted LOS	Background Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.2	B	SB	10.9	B

Background Signalized Intersection Analysis

The signalized intersections were analyzed to determine the operational LOS under background conditions during the a.m. and p.m. peak-hours in 2018. As indicated in Table 6, all signalized intersections are expected to operate at an acceptable LOS. The HCS summary sheets are located in Appendix I.

Table 6
Background A.M. and P.M. Peak Hour LOS – Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Background Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	13.9	B	No	13.7	B	No
South St. at Park Ave.	E	11.2	B	No	11.4	B	No

Roadway Segment Analysis

The background p.m. peak-hour two-way LOS for the study area road segments are shown in Table 7. As indicated in Table 7, the study roadway segments are expected to operate within the adopted level of service under 2018 background conditions.

Table 7
Background P.M. Peak Hour Two-Way LOS – Roadway Segments
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	MVA	Growth Factor	Back-ground Traffic	LOS
	From	To								
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1152	313	15600	1.020	319	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1152	353	17700	1.020	353	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1152	351	17700	1.020	351	C
SR 405 / South St.	SR 50	Fox Lake Rd.	2	D	1680	1,639	18590	1.020	1639	D
	Fox Lake Rd.	Singleton Ave	2	D	1680	1,185	17700	1.020	1185	C

4

BUILD-OUT ROADWAY ANALYSIS

The study intersections were analyzed based on the build-out roadway conditions in 2018 to determine potential impacts and to investigate mitigation requirements.

Trip Generation

Trip generation for the build-out of the development was determined using the trip generation rates published by the Institute of Transportation Engineers (ITE) in the document *Trip Generation Manual, 10th Edition*. The total daily, a.m. and p.m. peak-hour trip generation is presented in Table 8 for the proposed development.

Table 8
Trip Generation
South Carpenter Estates

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (x) Dus	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Single-Family	210	Ln(T) = 0.92 Ln(X) + 2.72	70	756	50%	50%	378	378
A.M. Peak-hour	Single-Family	210	T = 0.70 (X) + 9.74	70	59	25%	75%	15	44
P.M. Peak-hour	Single-Family	210	Ln(T) = 0.90 Ln(X) + 0.51	70	76	63%	37%	48	28

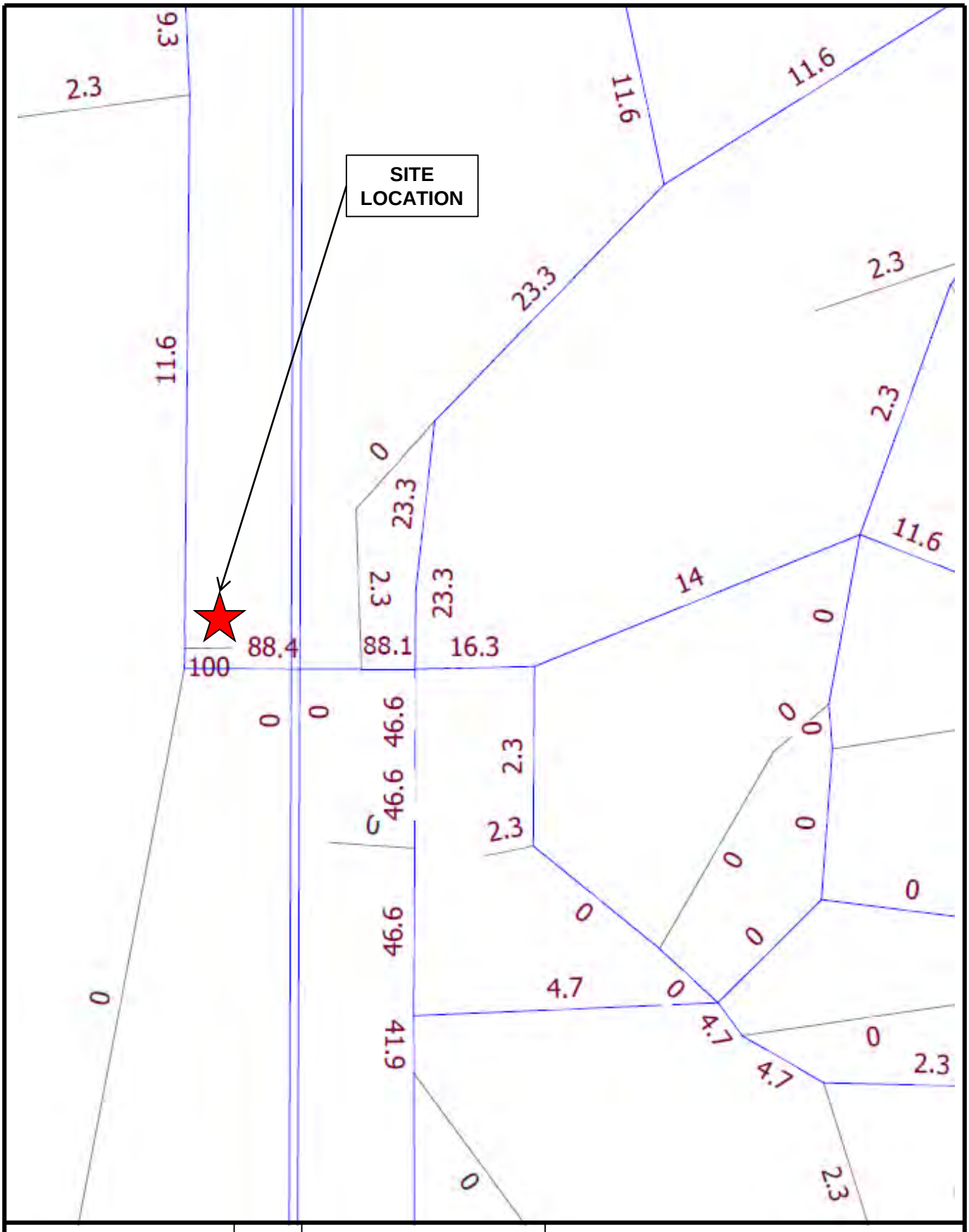
Source: ITE, Trip Generation 10th Edition

Trip Distribution

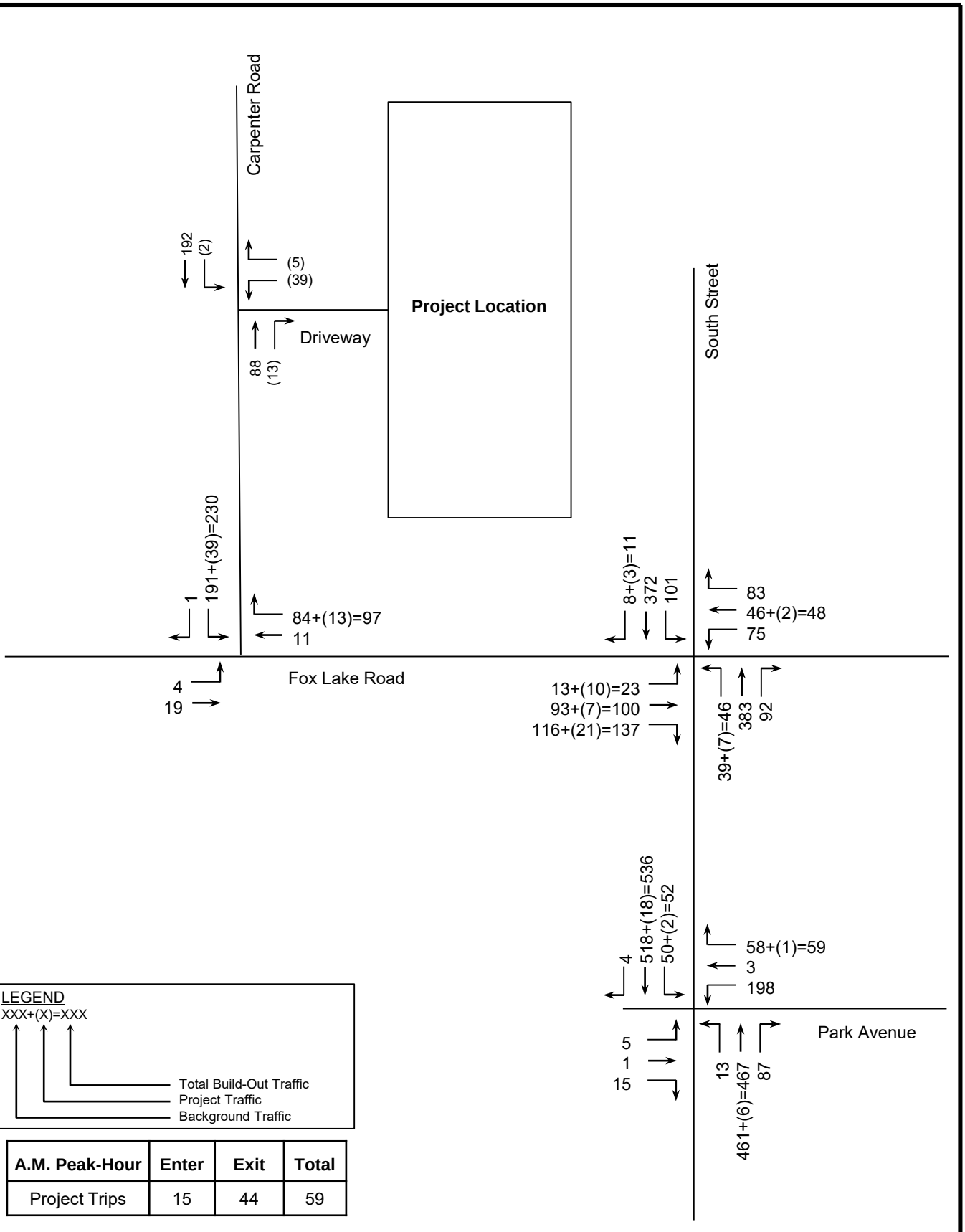
The process of determining the directional flow of traffic associated with a new development is called trip distribution. The Central Florida Regional Planning Model version 6.1 was used to obtain trip distribution and was manually modified where appropriate. The project TAZ is 3682. The anticipated distribution is illustrated in Figure 4.

Trip Assignment

The final step in the analysis was to assign the project traffic to the road network. Figures 5 and 6 graphically depict the a.m. and p.m. peak-hour traffic assignment for the proposed development.



South Carpenter Estates	N NTS	**Trip Distribution**		LTG Engineering & Planning
		Project No.: 4511.02	Figure: 4	1970 Dairy Road – W. Melbourne, Florida 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



A.M. Peak-Hour	Enter	Exit	Total
Project Trips	15	44	59

South Carpenter Estates

N

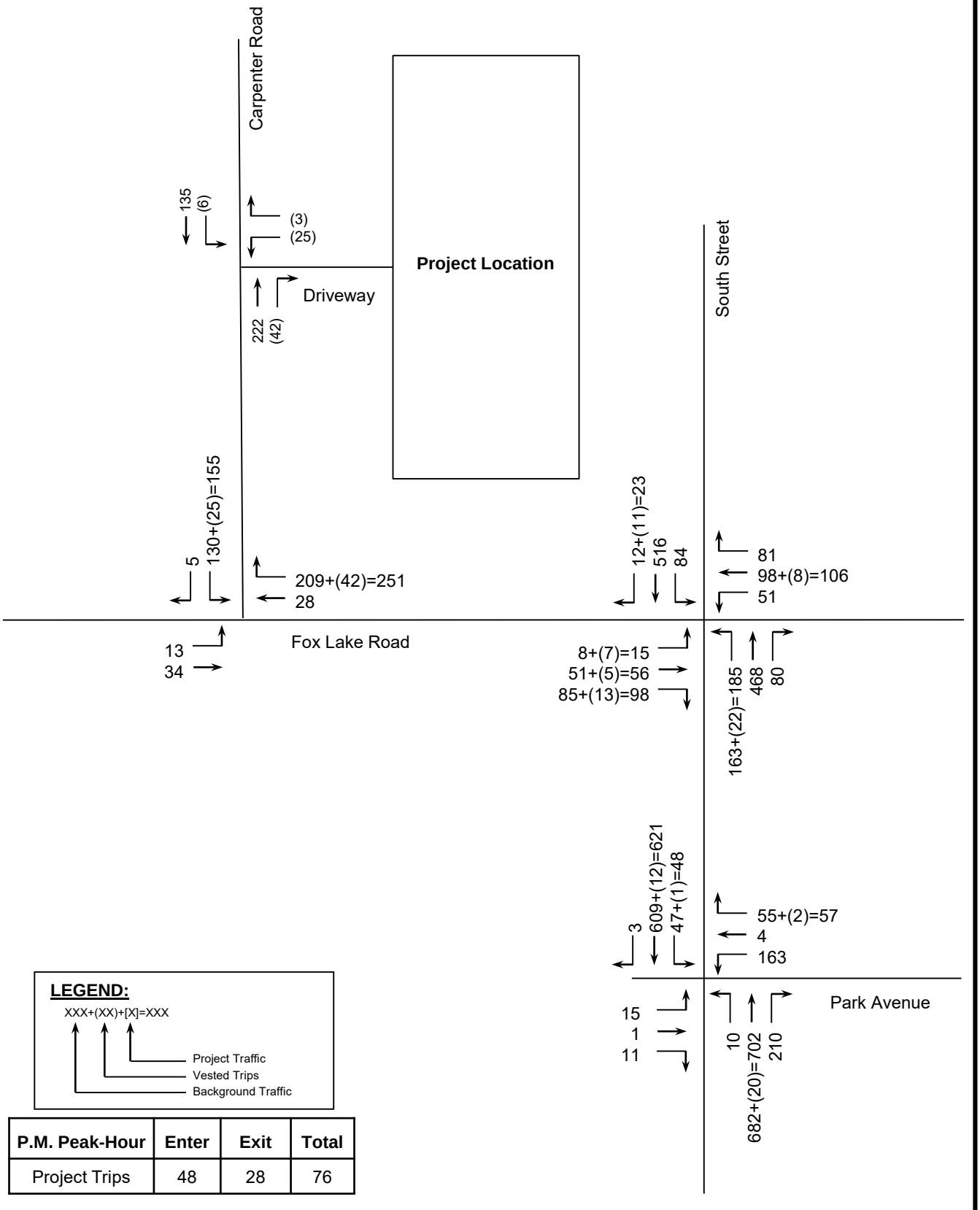
NTS

2018 Build-Out A.M. Peak-Hour Trip Assignment

Project No.: 4511.02 | Figure: 5

LTG Engineering & Planning

1970 Dairy Road, W. Melbourne. FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



P.M. Peak-Hour	Enter	Exit	Total
Project Trips	48	28	76

South Carpenter Estates

N

NTS

2018 Build-Out P.M. Peak-Hour Trip Assignment

Project No.: 4511.02 | Figure: 6

LTG Engineering & Planning
1970 Dairy Road, W. Melbourne. FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Build-Out Unsignalized Intersection Analysis

The unsignalized intersections were analyzed to determine the operational LOS at the time of build-out. Table 9 shows the projected LOS for the study unsignalized intersections at build-out conditions. As indicated in the table, the study unsignalized intersections are anticipated to operate within the adopted LOS in 2018. The HCS worksheets are included in Appendix J

Table 9
Build-Out A.M. and P.M. Peak-Hour LOS - Unsignalized Intersections
South Carpenter Estates

Intersections	Adopted LOS	Build-Out Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Critical Approach	Delay (sec.)	LOS	Critical Approach	Delay (sec.)	LOS
Carpenter Rd. at Fox Lake Rd.	E	SB	10.6	B	SB	11.5	B
Carpenter Rd. at Project Driveway	E	WB	10.5	B	WB	11.3	B

Build-Out Signalized Intersection Analysis

The signalized intersections were analyzed to determine the operational LOS at the time of build-out. Table 10 shows the projected LOS for the study intersections under build-out conditions. The HCS worksheets are contained in Appendix K. As indicated in the table, the study signalized intersections are anticipated to operate within the adopted level of services and with v/c ratio less than 1.0 under 2018 build-out conditions.

Table 10
Build-Out A.M. and P.M. Peak-Hour LOS – Signalized Intersections
South Carpenter Estates

Intersection	Adopted LOS	Build-Out Conditions					
		A.M. Peak-Hour			P.M. Peak-Hour		
		Delay (sec.)	LOS	V/C >1	Delay (sec.)	LOS	V/C >1
South St. at Fox Lake Rd/ Harrison St	E	14.8	B	No	14.2	B	No
South St. at Park Ave.	E	11.2	B	No	11.7	B	No

5

BUILD-OUT ROADWAY SEGMENT ANALYSIS

The traffic analysis for the roadway segments involves the comparison of the future peak-hour two-way volumes to available capacity. The roadway segments were analyzed based on the build-out roadway conditions to determine potential impacts in 2018 and to investigate mitigation requirements.

Generalized Arterial Segment Analysis

A generalized arterial segment analysis was conducted in first accordance with industry standard and procedures recommended by the State of Florida Department of Transportation. The existing AADT for the study roadway segments were obtained from Space Coast TPO Transportation Data Management System. The existing peak-hour two-way volume and capacity at the adopted LOS along the study-area roadway segments were determined using the generalized service volume tables shown in the FDOT 2013 Quality/Level of Service (Q/LOS) Handbook.

Table 11 presents the results of the p.m. peak-hour two-way road segment analyses for the study area roadways under 2018 build-out conditions. As indicated in the table, all the study roadway segments are anticipated to operate within the adopted LOS except the segment of SR 405/ South Street from SR 50 to Fox Lake Road. The FDOT generalized roadway segment capacity of SR 405/ South Street from SR 50 to Fox Lake Road indicates a concurrency failure.

Table 11
Build-Out General Arterial Segment P.M. Peak-Hour Two-Way LOS – Roadway Segment
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	MVA	Growth Factor	Back-ground Traffic	Project Trip Distribution	Build-Out		
	From	To									Project Trips	Traffic	LOS
Carpenter Rd.	Fox Lake Rd.	Garden St.	2	E	1,152	313	15,600	1.020	319	11.6%	9	328	C
Fox Lake Rd.	Carpenter Rd.	South St.	2	E	1,152	353	17,700	1.020	360	88.4%	67	427	C
Harrison St.	South St.	0.57 Mile East of South St.	2	E	1,152	351	17,700	1.020	358	16.3%	12	370	C
SR 405/ South St.	SR 50	Fox Lake Rd.	2	D	1,680	1,639	18,590	1.020	1,672	46.6%	35	1,707	F
	Fox Lake Rd.	Singleton Ave	2	D	1,680	1,185	17,700	1.020	1,209	23.3%	18	1,227	C

Specific Arterial Segment Analysis

Per industry standards and the guidance provided by the FDOT, when the generalized tables appear to show a failure a specific segment analysis should be conducted to provide a detailed analysis of the segments. The FDOT 2012 version of the ArtPlan software was used to determine the corridor automobile capacity and LOS based on the FDOT Q/LOS Handbook and 2010 Highway Capacity Manual (HCM) methodologies. The arterial segments, critical intersections, and peak direction LOS along the study area roadway segments inputs were determined according to the procedures in the FDOT Q/LOS Handbook.

The results of the build-out specific arterial segment analysis are shown in Table 12. As indicated in Table 12 below, the study arterial segments operate within the adopted LOS under build-out conditions. The details of the ArtPlan result are attached as Appendix L.

Table 12
Build-Out Specific Arterial Segment P.M. Peak-Hour Two-Way LOS – Roadway Segment
South Carpenter Estates

Roadway	Segment		Lanes	Adopted LOS	Peak-Hour Two-Way Capacity at Adopted LOS	Existing Peak-Hour Two-Way Volume	Build-Out AADT	Growth Factor	Back-ground Traffic	Project Trip Distribution	Build-Out		
	From	To									Project Trips	Traffic	LOS
SR 405/ South St.	SR 50	Fox Lake Rd.	2	D	1,970	1,639	18,968	1.020	1,672	46.6%	35	1,707	B

Access Review

The project access to the development will be provided via a full access driveway on S Carpenter Road. The need and geometry for turn lanes was evaluated using National Cooperative Highway Research Program (NCHRP) Report 457, FDOT standard index 301 and HCS output. The summary worksheets are included as Appendix M. The results of the turn lane evaluation are provided below:

Project Driveway 1 at S Carpenter Road

The recommended geometry of the ingress and egress at the intersection will consist of:

- Northbound: One through/right shared lane
- Southbound: One through/left/ shared lane
- Westbound: One left/right shared lane

Based on NCHRP Report 457, no turn lanes are warranted under build-out conditions.

6

CONCLUSION AND RECOMMENDATIONS

This study was conducted to evaluate the impact of the proposed South Carpenter Estates development. The results of the study are summarized below:

- The proposed subdivision consists of 70 single-family lots. The proposed development is located in the northeast corner of Fox Lake Road and S Carpenter Road in City of Titusville, Florida
- This development is anticipated to generate 59 total trips in the a.m. peak-hour and 76 total trips in the p.m. peak-hour.

Existing

- Under existing conditions, the unsignalized intersection of Fox Lake Road and S Carpenter Road currently operates within the adopted LOS during the a.m. and p.m. peak-hours.
- Under existing conditions, the signalized intersections of South Street at Fox Lake Road and Park Avenue currently operate within the adopted LOS with v/c ratio less than 1.0 during the a.m. and p.m. peak-hours.
- Under existing conditions, the roadway segments within the study area currently operate within the adopted LOS

Background

- Under background conditions, the unsignalized intersection operates within the adopted LOS during the a.m. and p.m. peak-hours.
- Under background conditions, the signalized intersections operate within the adopted LOS and v/c ratio less than1.0 during the a.m. and p.m. peak-hours.
- Under background conditions, the roadway segments are expected to operate within the adopted LOS

2018 Build-Out

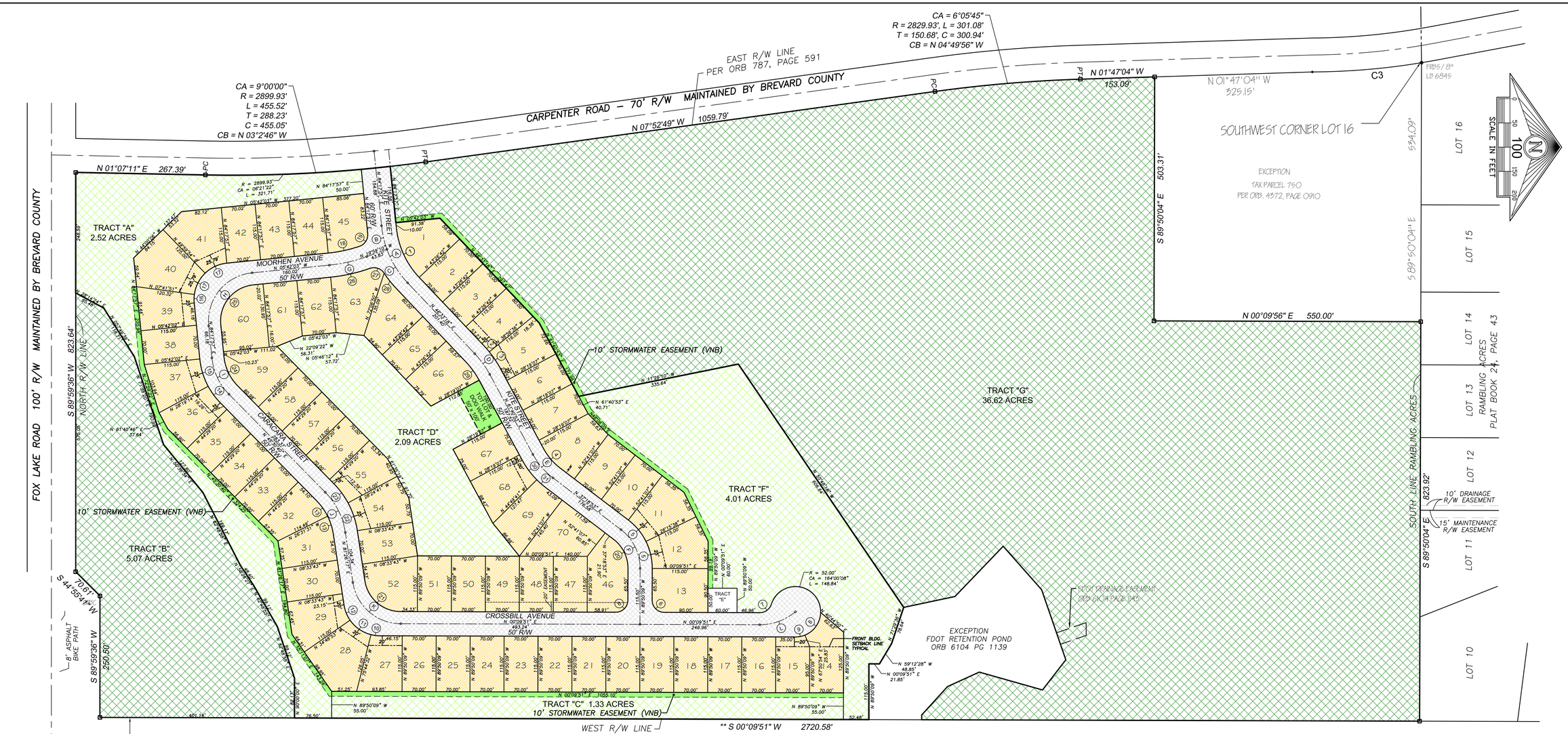
- Under 2018 build-out conditions, the unsignalized intersection is anticipated to operate within the adopted LOS.
- Under 2018 build-out conditions, the signalized intersections are anticipated to operate within the adopted LOS and v/c ratio less than 1.0.
- Under 2018 build-out conditions, the generalized arterial segment analysis of SR 405/South Street from SR 50 to Fox Lake Road will operate outside the adopted LOS.
- Under 2018 build-out conditions, the specific arterial segment analysis of SR 405/South Street from SR 50 to Fox Lake Road is anticipated to operate within the adopted LOS.

- The access review indicates that an exclusive left-turn lane and exclusive right-turn lane are not warranted under build-out conditions.

Appendices

APPENDIX A

Preliminary Site Plan



LEGAL DESCRIPTION: (TAX PARCEL 22-35-07-00-00750.0-0000.00)

All of the land in the South ½ of Section 7, Township 22 South, Range 35 East, North of Fox Lake Road Right of Way, lying between the West Right of Way of Interstate 95 and the East Right of Way of Carpenter Road, Brevard County, Florida.

LESS AND EXCEPT
A part of the South half of Section 7, Township 22 South, Range 35 East, Brevard County, Florida lying South of Rambling Acres, as recorded in Plat Book 24, Page 43, of the Public Records of Brevard County, Florida and East of Carpenter Road(a 70' r/w) per Official Records Book 787, Page 591 of the aforesaid public records, being more particularly described as follows:
Begin at the Southwest Corner of Lot 16 of said RAMBLING ACRES SUBDIVISION, run thence South 89 degrees 47 minutes 20 seconds East along the south line of said Subdivision, a distance of 534.09 feet;
Thence South 00 degrees 12 minutes 40 seconds West perpendicular to said South line, a distance of 550.00 feet;
thence North 89 degrees 47 minutes 20 seconds West parallel with said South line, a distance of 503.31 feet to a point on the Easterly Right-of-Way line of the aforesaid Carpenter Road;
THENCE North 01 degrees 44 minutes 27 seconds West along said Easterly Right-of-Way line, a distance of 325.15 feet to the point of curvature of a circular curve to the left;
THENCE along said Easterly Right-of-Way line and said curve to the left having a radius of 1438.61 feet, a delta of 09 degrees 00 minutes 22 seconds, an arc length 226.13 feet and a chord which bears north 04 degrees 47 minutes 34 seconds West and having a chord distance of 225.90 feet to the Point of Beginning.

AND ALSO LESS AND EXCEPT FDOT I-95 Retention Area as described in Official Records Book 6104, at Page 1139 of the aforesaid Public Records.
Containing 69.96 Acres more or less.
SUBJECT TO: Drainage Easement as described in Official Records Book 6104 at Page 1143.

CURVE TABLE

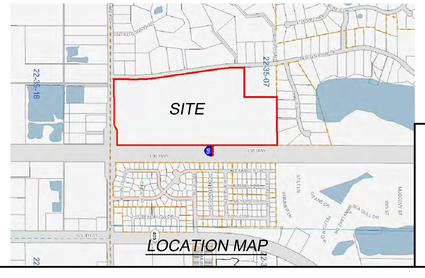
ID	RADIUS	CENTRAL ANGLE Deg	Min	Sec	LENGTH	CHORD	TANGENT
A	200.00	37	44	40	131.75	129.38	68.37
B	200.00	14	17	7	49.86	49.74	25.06
C	200.00	23	27	33	81.89	81.32	41.53
D	200.00	15	7	36	52.80	52.65	26.56
E	150.00	24	22	0	63.79	63.31	32.39
F	100.00	52	50	58	92.24	89.00	49.69
G	319.20	14	17	7	79.59	79.38	40.00
H	100.00	90	0	0	157.08	141.42	100.00
I	125.00	38	47	17	84.62	83.02	44.00
J	150.00	35	55	37	94.06	92.52	48.63
K	100.00	81	16	26	141.85	130.25	85.82
L	113.50	40	20	57	79.93	78.29	41.70
1	175.00	37	44	40	116.28	113.21	59.82
2	225.00	4	30	6	17.68	17.67	8.84
3	225.00	10	37	29	41.72	41.66	20.92
4	125.00	24	22	0	53.16	52.76	26.99
5	125.00	26	26	29	57.65	57.14	29.35
6	25.00	90	0	0	39.27	35.36	25.00
7	25.00	72	37	13	31.69	29.61	18.37
8	52.00	66	18	8	60.17	56.87	33.96
9	52.00	22	18	57	20.25	20.13	10.26
10	75.00	14	5	37	18.45	18.40	9.27
11	75.00	40	55	39	53.57	52.44	27.99
12	75.00	26	15	11	34.37	34.07	17.49
13	125.00	17	57	48	39.19	39.03	19.76
14	150.00	16	10	5	42.33	42.19	21.31
15	150.00	22	37	12	59.22	58.84	30.00
16	75.00	13	23	54	17.54	17.50	8.81
17	75.00	38	18	3	50.14	49.21	26.05
18	294.20	12	53	25	66.19	66.05	33.23
19	25.00	77	6	35	33.65	31.16	19.93
20	75.00	52	50	58	69.18	66.76	37.27
21	75.00	81	16	26	106.39	97.69	64.37
22	175.00	19	50	58	60.63	60.32	30.62
23	175.00	15	4	39	49.11	48.94	24.72
24	100.00	38	47	17	67.70	66.41	35.20
25	75.00	90	0	0	117.81	106.07	75.00
26	344.20	13	51	46	83.28	83.08	41.84
27	25.00	76	16	59	33.28	30.88	19.63
28	225.00	10	9	53	39.92	39.86	20.01
29	175.00	15	7	36	46.20	46.07	23.24
30	175.00	16	30	34	50.43	50.26	25.39
31	175.00	7	51	26	24.00	23.98	12.02

PD ZONING AREAS

Lots:	14.40 Acres
Rights-of-Way:	3.87 Acres
Tract "E":	0.07 Acres
Open Space	
Tract "A":	2.52 Acres
Tract "C":	1.33 Acres
Tract "D":	2.09 Acres
Tract "F":	4.01 Acres
Open Space Total:	9.95 Acres
PD Zoning Total:	28.29 Acres

PROJECT AREAS

PD Zoning:	28.29 Acres
Tract "B":	5.07 Acres
Tract "G":	36.62 Acres
TOTAL SITE:	69.98 Acres



NOTES

1-This project is a Planned Development (PD) per Titusville LDR Chapter 33 Article I.
2-Tracts "A", "C" "D" & "F" are Open Space per COT LDRs.
3-Tract "D" will also be used for Stormwater Treatment.
4-Tract "E" is for a Sanitary Sewer Lift Station which will be dedicated to the Public and maintained by the City of Titusville.
5-Tracts "A", "B", "C", "D", "F" & "G" will be owned and maintained by the Homeowners Association.
6-Tracts "B" & "G" are for Conservation.
7-Tracts "A", "B", "C", "F", & "G" will be subject to a Conservation Easement in favor of the St. Johns River Water Management District.
8- Roadway ownership and maintenance to be determined.
9-Lot width is defined as the distance between side lot lines at the front yard setback as shown on the Record Plat.
10-All lots have 5' side lot line and 10' rear lot line public drainage & utility easements unless otherwise shown.

SITE DATA

Existing Land Use	LDR & Conservation
Existing Zoning	PD & OR
PD Zoning Area	28.29 Acres
Open Space Required	35 % (9.90 Acres)
Open Space Provided	35.2 % (9.95 Acres)
PD Density Allowed	70 Lots
PD Density Proposed	70 Lots
Min. Lot Size Allowed	8000 SF
Min. Lot Size Proposed	8050 SF
Minimum Dwelling Size	2000 SF
Building Setbacks	20' Front, Rear & Side Corner 5' Side

DEVELOPER & OWNER
EKS Development, Inc.
516 Delannoy Avenue
Cocoa, Florida
Attn: Jim Swan
321-631-2022
jim@eksdevelopment.com

SURVEYOR & LAND PLANNER
B.L.Ward
528 Poinsettia Avenue
Titusville, Florida 32796
321-271-0717
loysward@gmail.com

DATE	REVISION

B.L. WARD, PLS
State of Florida License Number LS 2396
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Certified By:
B.L. Ward, PLS
FL. Reg. No. 2396
Date:

PRELIMINARY PLAT
South Carpenter Estates
A Single Family Residential Planned Development
City of Titusville, Brevard County, Florida

Date: 11/20/17
PL
Drawn by: BLW
FN: 22-35-07-00-750

APPENDIX B
Methodology Letter

LTG Engineering & Planning

Via Email: (kwabena.Ofosu @Titusville.com)

Ref: 4511.01

January 11, 2018

Kwabena KB Ofosu
The City of Titysville
P.O. Box 2806, (32781-2806)
555 S. Washington Avenue
Titusville, FL 32796

RE: South Carpenter Estates - Traffic Impact Study Methodology
City of Titusville, Florida

Dear Mr. Ofosu:

LTG, Inc. (LTG) has been retained by South Carpenter Estates, LLC Consultants to prepare a Traffic Impact Study for the proposed South Carpenter Estates. The subdivision will consist of 70 single-family units located on the northeast corner of Carpenter Road and Fox Lake Road with one access driveway on Carpenter Road in the City of Titusville, Florida. The project build-out year is 2018. Figure 1 shows the location and influence area of the project relative to the surrounding road network. A concept site plan showing the layout of the site is attached as Appendix A.

Trip Generation

The daily, a.m. and p.m. peak-hour trip generation for the build-out of the development was determined using the Institute of Transportation Engineers (ITE) 10th edition of the *Trip Generation Manual*. The trip generation for the development is summarized in Table 1.

Table 1
Trip Generation
Palmer Property Residential Development

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (x) Dus	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Single-Family	210	Ln(T) = 0.92 Ln(X) + 2.72	70	756	50%	50%	378	378
A.M. Peak-hour	Single-Family	210	T = 0.70 (X) + 9.74	70	59	25%	75%	15	44
P.M. Peak-hour	Single-Family	210	Ln(T) = 0.90 Ln(X) + 0.51	70	76	63%	37%	48	28

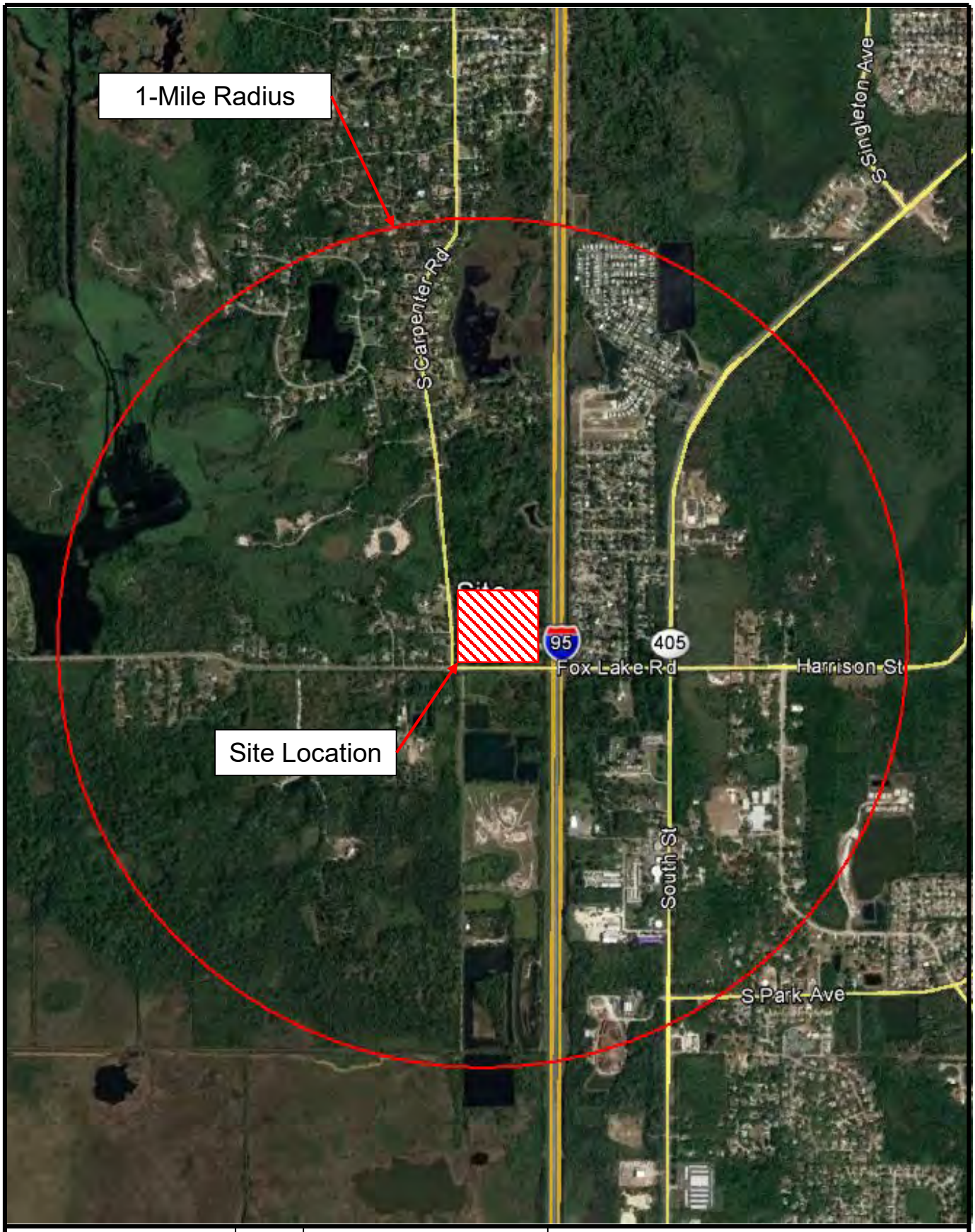
Source: ITE, Trip Generation 10th Edition

Trip Distribution

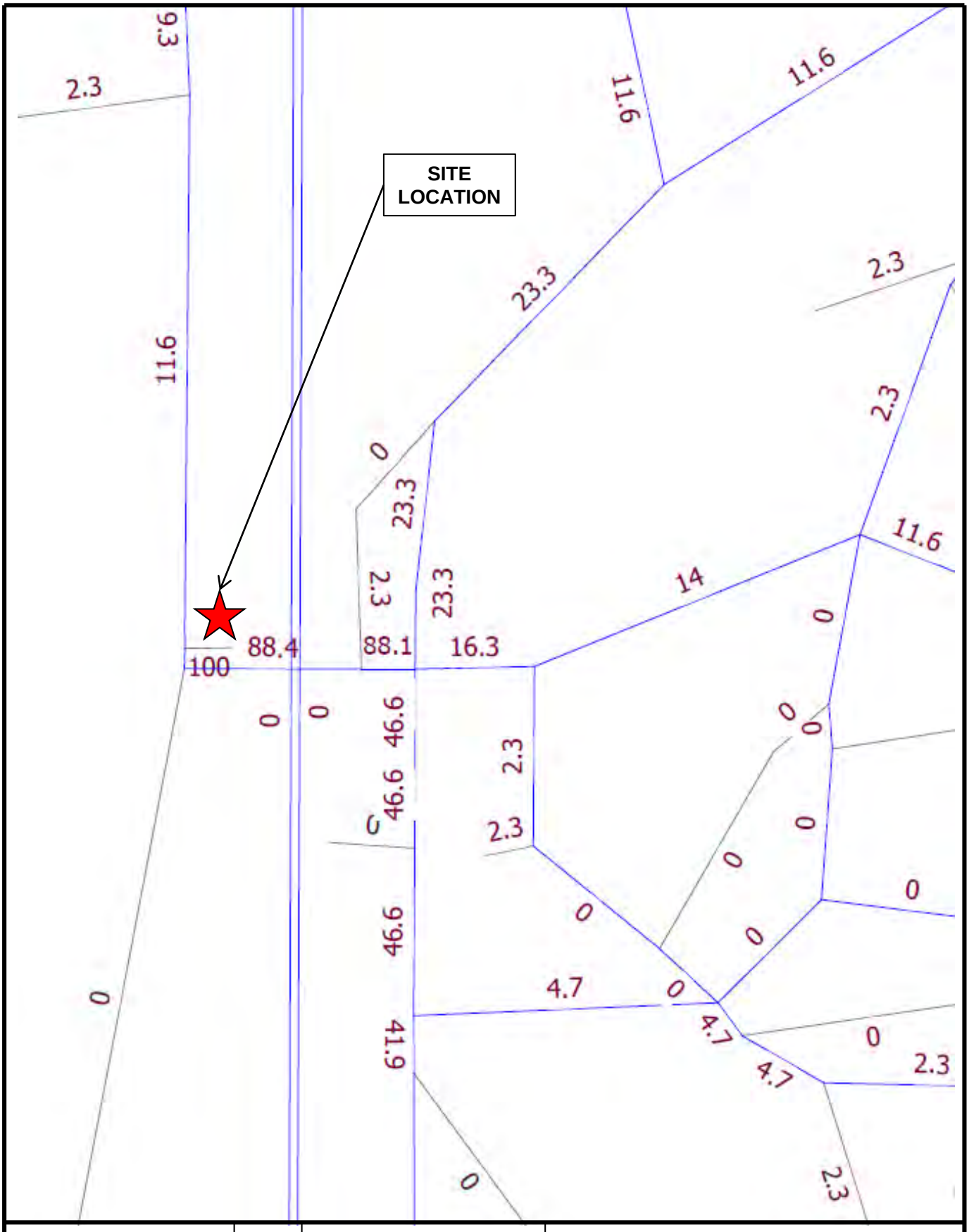
The Central Florida Regional Planning Model version 6.1 will be used to obtain trip distribution and will be manually modified where appropriate. Figure 2 shows the proposed distribution of traffic along the surrounding road network.

Trip Assignment

Traffic will be assigned to the study area roadways using the peak-hour trip generation and the project trip distribution identified by the model.



South Carpenter Estates	N NTS	**Site Location Map**		LTG Engineering & Planning
		Project No.: 4511.01	Figure: 1	1970 Dairy Road, W. Melbourne. FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



South Carpenter Estates	N NTS	**Trip Distribution**		LTG Engineering & Planning
		Project No.: 4511.01	Figure: 2	1970 Dairy Road – W. Melbourne, Florida 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Study Area

The City of Titusville Traffic Impact Analysis Policy was used to determine the project study area. Based on the trip generation criteria the study area for the project was determined to be a 1-mile radius.

The study area selected consists of the following intersections and road segments:

Intersections:

- Carpenter Road at Fox Lake Road
- Carpenter Road at Project Driveway
- Fox Lake Road at South Street
- South Street at Park Avenue

Roadway Segments:

- Carpenter Road from Fox Lake Road to Garden Street
- Fox Lake Road from Carpenter Road to South Street
- Harrison Street from South Street to 0.57 mile east of South Street
- SR 405/South Street from SR 50 to Fox Lake Road
- SR 405/ South Street from Fox Lake Road to Singleton Avenue

Analysis Period

Roadway segments will be analyzed based on p.m. peak-hour traffic and intersections will be analyzed for the a.m. and p.m. peak-hours. The analysis will be conducted under 2018 existing conditions and 2018 build-out conditions.

Traffic Concurrency Spreadsheet

The analysis will be based on the latest concurrency information as obtained from the Florida Department of Transportation (FDOT), the Space Coast Transportation Planning Organization (SCTPO), and Brevard County Planning Department.

Traffic Count Procedures

Manual turning movement counts will be conducted on a Tuesday, Wednesday or Thursday during a.m. and p.m. peak hours at each study intersection. Turning movement counts will not be older than one year.

Build-Out Traffic

The build-out traffic will be developed by the sum of the background traffic derived from growth rates plus the estimated project traffic. Growth rates for each study area roadway segment will be determined by historic growth trends calculated based upon five years of historic count data. A Minimum annual growth rate of two percent shall be used unless otherwise documented. In no case shall a negative growth rate be used. All improvements funded for construction within the first three years of the five-year work program will be considered in the analysis.

Segment Analysis – Existing and Build-Out Conditions

If the future projected volume is expected to exceed the maximum service volume of a roadway segment, an additional transportation analysis may be conducted (requires client authorization) to determine the service volume specific to that segment. The procedures documented in the latest version of the FDOT *Quality/Level of Service Handbook* will be used to determine specific capacity, if default capacities are exceeded and if detailed, site-specific capacity analysis has the potential to yield a higher capacity calculation.

Intersection Analysis – A.M. and P.M. Peak-Hour (Existing and Build-Out Conditions)

The operating conditions for both the existing and future conditions at the unsignalized intersections will be analyzed using the Highway *Capacity Software* (HCS). HCS utilizes the procedures outlined in Chapter 20 of the HCM 6th Edition, titled "Two-Way Stop Control Intersections".

The operating conditions for both the existing and future conditions at the signalized intersections will be evaluated using the *Highway Capacity Software (*HCS). This software utilizes the methodology outlined in Chapter 19 of the HCM 6th Edition, titled "Signalized Intersections".

Improvements

If warranted, appropriate roadway and intersection improvements will be identified. Conditions for each analysis phase will be analyzed for improvements that are required for mitigation. Site access needs will be addressed. The need for auxiliary lanes will be assessed using the methodology provided by NCHRP Report 457, HCS, and the latest version of the FDOT Design Standards.

Please review and advise if the City of Titusville is in agreement with this proposed methodology or provide comments relating to preferred revisions. If you have any questions, please contact me at 321.499.4679.

Sincerely,

LTG, INC.

Shanghong Ding, E.I.
Senior Engineer Intern

c: Gil A. Ramirez, PE

APPENDIX C

Turning Movement Counts

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	26	0	0	26	0	2	11	13	0	0	0	0	1	4	0	5	44
07:15 AM	34	0	1	35	0	4	12	16	0	0	0	0	0	2	0	2	53
07:30 AM	33	0	1	34	0	3	12	15	0	0	0	0	1	4	0	5	54
07:45 AM	56	0	0	56	0	3	19	22	0	0	0	0	0	7	0	7	85
Total	149	0	2	151	0	12	54	66	0	0	0	0	2	17	0	19	236
08:00 AM	53	0	0	53	0	2	18	20	0	0	0	0	1	3	0	4	77
08:15 AM	43	0	0	43	0	4	29	33	0	0	0	0	2	7	0	9	85
08:30 AM	35	0	1	36	0	2	16	18	0	0	0	0	1	2	0	3	57
08:45 AM	33	0	1	34	0	1	17	18	0	0	0	0	0	3	0	3	55
Total	164	0	2	166	0	9	80	89	0	0	0	0	4	15	0	19	274
04:00 PM	33	0	2	35	0	8	43	51	0	0	0	0	1	4	0	5	91
04:15 PM	25	0	2	27	0	10	49	59	0	0	0	0	1	3	0	4	90
04:30 PM	22	0	3	25	0	15	51	66	0	0	0	0	2	4	0	6	97
04:45 PM	25	0	1	26	0	7	44	51	0	0	0	0	6	10	0	16	93
Total	105	0	8	113	0	40	187	227	0	0	0	0	10	21	0	31	371
05:00 PM	26	0	2	28	0	5	51	56	0	0	0	0	5	8	0	13	97
05:15 PM	36	0	1	37	0	7	65	72	0	0	0	0	0	9	0	9	118
05:30 PM	40	0	1	41	0	8	45	53	0	0	0	0	2	6	0	8	102
05:45 PM	23	0	2	25	0	8	35	43	0	0	0	0	3	6	0	9	77
Total	125	0	6	131	0	28	196	224	0	0	0	0	10	29	0	39	394
Grand Total	543	0	18	561	0	89	517	606	0	0	0	0	26	82	0	108	1275
Apprch %	96.8	0	3.2		0	14.7	85.3		0	0	0		24.1	75.9	0		
Total %	42.6	0	1.4	44	0	7	40.5	47.5	0	0	0	0	2	6.4	0	8.5	

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	542	0	18	560	0	88	515	603	0	0	0	0	26	81	0	107	1270
% Automobiles	99.8	0	100	99.8	0	98.9	99.6	99.5	0	0	0	0	100	98.8	0	99.1	99.6
Commercial	1	0	0	1	0	1	2	3	0	0	0	0	0	1	0	1	5
% Commercial	0.2	0	0	0.2	0	1.1	0.4	0.5	0	0	0	0	0	1.2	0	0.9	0.4

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

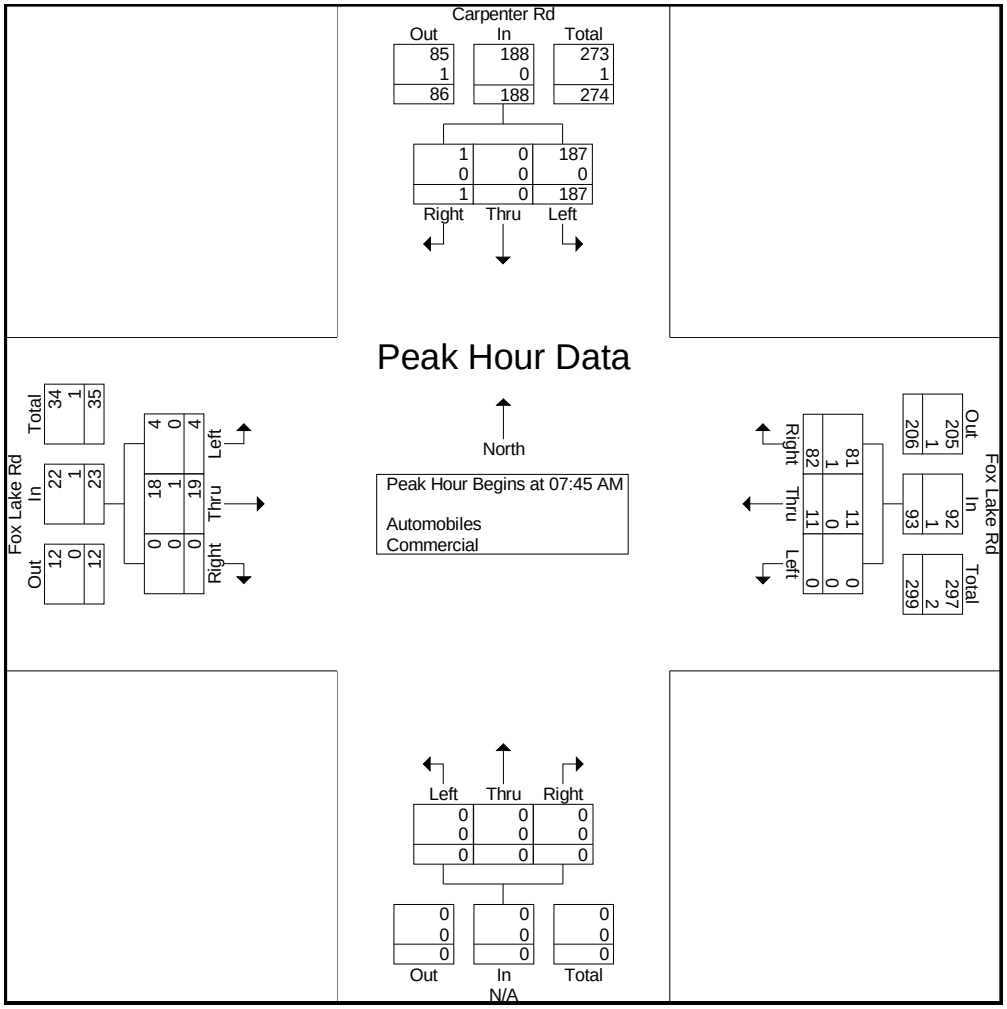
File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 3

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	56	0	0	56	0	3	19	22	0	0	0	0	0	7	0	7	85
08:00 AM	53	0	0	53	0	2	18	20	0	0	0	0	1	3	0	4	77
08:15 AM	43	0	0	43	0	4	29	33	0	0	0	0	2	7	0	9	85
08:30 AM	35	0	1	36	0	2	16	18	0	0	0	0	1	2	0	3	57
Total Volume	187	0	1	188	0	11	82	93	0	0	0	0	4	19	0	23	304
% App. Total	99.5	0	0.5		0	11.8	88.2		0	0	0		17.4	82.6	0		
PHF	.835	.000	.250	.839	.000	.688	.707	.705	.000	.000	.000	.000	.500	.679	.000	.639	.894
Automobiles	187	0	1	188	0	11	81	92	0	0	0	0	4	18	0	22	302
% Automobiles	100	0	100	100	0	100	98.8	98.9	0	0	0	0	100	94.7	0	95.7	99.3
Commercial	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
% Commercial	0	0	0	0	0	0	1.2	1.1	0	0	0	0	0	5.3	0	4.3	0.7

DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

http:de-traffic.com
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 5

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	25	0	1	26	0	7	44	51	0	0	0	0	6	10	0	16	93
05:00 PM	26	0	2	28	0	5	51	56	0	0	0	0	5	8	0	13	97
05:15 PM	36	0	1	37	0	7	65	72	0	0	0	0	0	9	0	9	118
05:30 PM	40	0	1	41	0	8	45	53	0	0	0	0	2	6	0	8	102
Total Volume	127	0	5	132	0	27	205	232	0	0	0	0	13	33	0	46	410
% App. Total	96.2	0	3.8		0	11.6	88.4		0	0	0		28.3	71.7	0		
PHF	.794	.000	.625	.805	.000	.844	.788	.806	.000	.000	.000	.000	.542	.825	.000	.719	.869
Automobiles	127	0	5	132	0	27	204	231	0	0	0	0	13	33	0	46	409
% Automobiles	100	0	100	100	0	100	99.5	99.6	0	0	0	0	100	100	0	100	99.8
Commercial	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% Commercial	0	0	0	0	0	0	0.5	0.4	0	0	0	0	0	0	0	0	0.2

DE TRAFFIC

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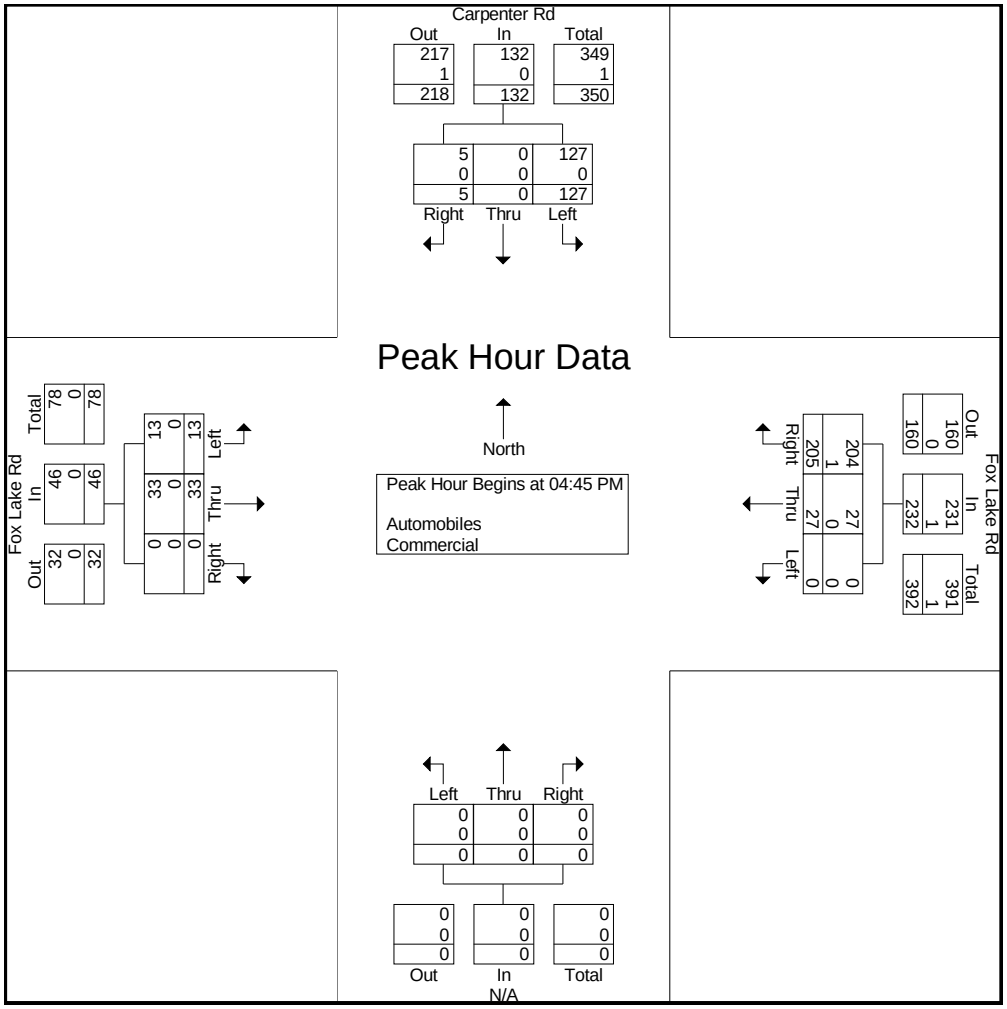
Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 6



DE TRAFFIC

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Carpenter Rd at Fox Lake Rd
Brevard County, FL

File Name : Carpenter at Fox
Site Code : 00000003
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	Carpenter Rd Southbound				Fox Lake Rd Westbound				N/A Northbound				Fox Lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	14	71	1	86	14	4	14	32	7	85	12	104	3	13	20	36	258
07:15 AM	11	74	2	87	13	5	12	30	4	86	25	115	3	12	22	37	269
07:30 AM	19	86	1	106	17	6	14	37	7	72	31	110	3	15	25	43	296
07:45 AM	26	110	0	136	25	14	18	57	10	116	43	169	2	29	25	56	418
Total	70	341	4	415	69	29	58	156	28	359	111	498	11	69	92	172	1241
08:00 AM	38	94	4	136	19	8	26	53	7	93	8	108	3	32	34	69	366
08:15 AM	16	75	3	94	13	17	23	53	14	94	8	116	5	15	30	50	313
08:30 AM	19	85	4	108	14	7	9	30	11	89	4	104	6	16	20	42	284
08:45 AM	20	79	1	100	15	13	16	44	8	73	10	91	2	14	29	45	280
Total	93	333	12	438	61	45	74	180	40	349	30	419	16	77	113	206	1243
04:00 PM	24	133	5	162	14	19	25	58	24	101	18	143	3	16	21	40	403
04:15 PM	21	106	8	135	15	26	18	59	30	111	15	156	2	13	19	34	384
04:30 PM	27	138	4	169	11	27	22	60	46	109	15	170	0	9	12	21	420
04:45 PM	20	101	1	122	16	25	16	57	27	109	25	161	1	17	17	35	375
Total	92	478	18	588	56	97	81	234	127	430	73	630	6	55	69	130	1582
05:00 PM	19	134	3	156	12	12	15	39	43	135	17	195	1	13	23	37	427
05:15 PM	16	133	4	153	11	32	26	69	44	106	21	171	6	11	31	48	441
05:30 PM	28	109	2	139	14	19	21	54	38	126	12	176	4	18	22	44	413
05:45 PM	29	95	2	126	18	22	23	63	27	99	23	149	2	23	13	38	376
Total	92	471	11	574	55	85	85	225	152	466	73	691	13	65	89	167	1657
Grand Total	347	1623	45	2015	241	256	298	795	347	1604	287	2238	46	266	363	675	5723
Apprch %	17.2	80.5	2.2		30.3	32.2	37.5		15.5	71.7	12.8		6.8	39.4	53.8		
Total %	6.1	28.4	0.8	35.2	4.2	4.5	5.2	13.9	6.1	28	5	39.1	0.8	4.6	6.3	11.8	

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	335	1537	43	1915	224	248	282	754	337	1517	277	2131	44	258	350	652	5452
% Automobiles	96.5	94.7	95.6	95	92.9	96.9	94.6	94.8	97.1	94.6	96.5	95.2	95.7	97	96.4	96.6	95.3
Commercial	12	86	2	100	17	8	16	41	10	87	10	107	2	8	13	23	271
% Commercial	3.5	5.3	4.4	5	7.1	3.1	5.4	5.2	2.9	5.4	3.5	4.8	4.3	3	3.6	3.4	4.7

DE TRAFFIC

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South St at Fox Lake Rd
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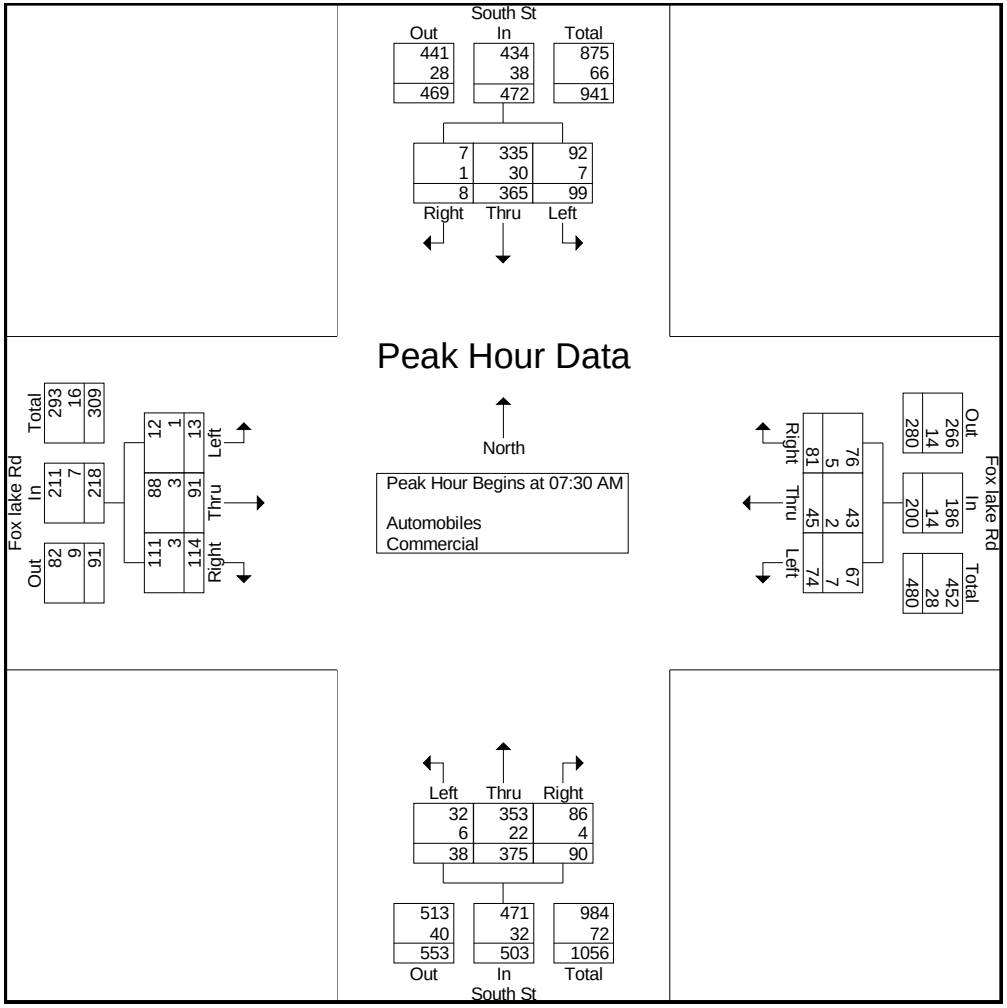
Site Code : 00000002
Start Date : 1/23/2018
Page No : 3

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	86	1	106	17	6	14	37	7	72	31	110	3	15	25	43	296
07:45 AM	26	110	0	136	25	14	18	57	10	116	43	169	2	29	25	56	418
08:00 AM	38	94	4	136	19	8	26	53	7	93	8	108	3	32	34	69	366
08:15 AM	16	75	3	94	13	17	23	53	14	94	8	116	5	15	30	50	313
Total Volume	99	365	8	472	74	45	81	200	38	375	90	503	13	91	114	218	1393
% App. Total	21	77.3	1.7		37	22.5	40.5		7.6	74.6	17.9		6	41.7	52.3		
PHF	.651	.830	.500	.868	.740	.662	.779	.877	.679	.808	.523	.744	.650	.711	.838	.790	.833
Automobiles	92	335	7	434	67	43	76	186	32	353	86	471	12	88	111	211	1302
% Automobiles	92.9	91.8	87.5	91.9	90.5	95.6	93.8	93.0	84.2	94.1	95.6	93.6	92.3	96.7	97.4	96.8	93.5
Commercial	7	30	1	38	7	2	5	14	6	22	4	32	1	3	3	7	91
% Commercial	7.1	8.2	12.5	8.1	9.5	4.4	6.2	7.0	15.8	5.9	4.4	6.4	7.7	3.3	2.6	3.2	6.5

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

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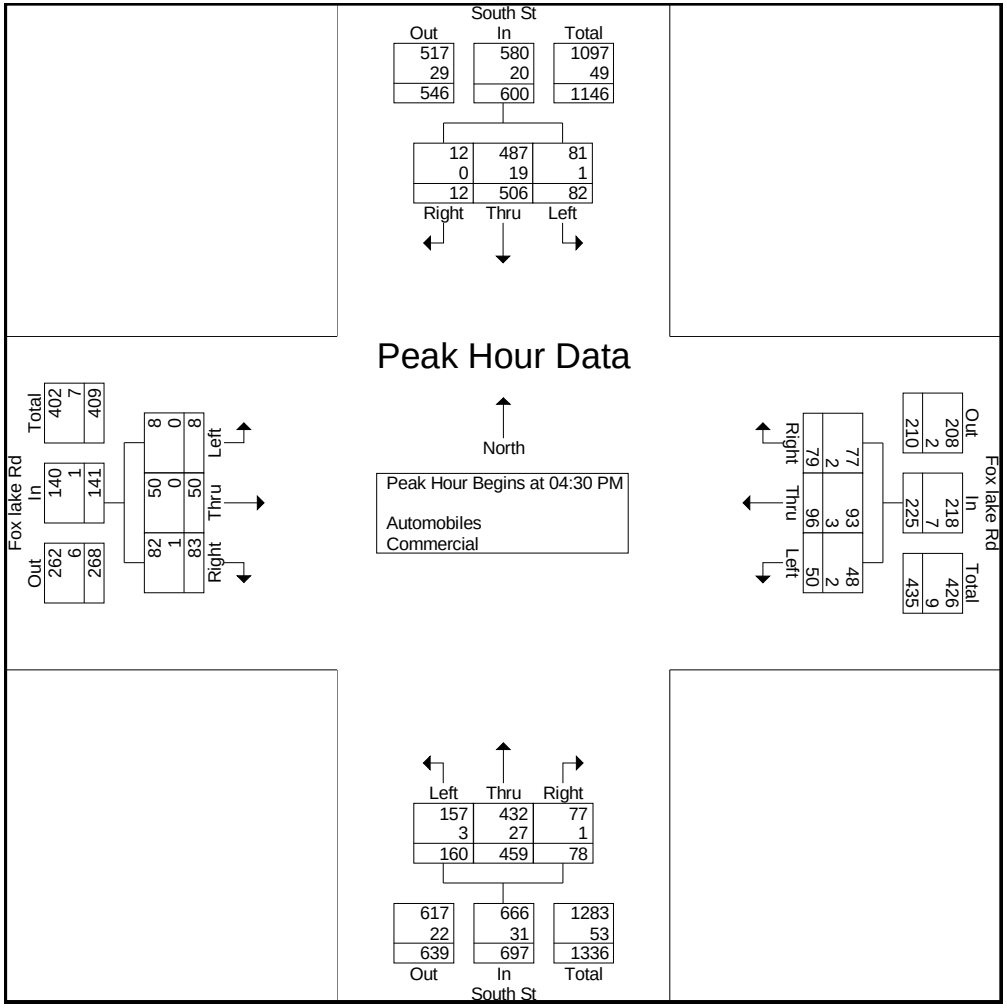
File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 5

	South St Southbound				Fox lake Rd Westbound				South St Northbound				Fox lake Rd Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	27	138	4	169	11	27	22	60	46	109	15	170	0	9	12	21	420
04:45 PM	20	101	1	122	16	25	16	57	27	109	25	161	1	17	17	35	375
05:00 PM	19	134	3	156	12	12	15	39	43	135	17	195	1	13	23	37	427
05:15 PM	16	133	4	153	11	32	26	69	44	106	21	171	6	11	31	48	441
Total Volume	82	506	12	600	50	96	79	225	160	459	78	697	8	50	83	141	1663
% App. Total	13.7	84.3	2		22.2	42.7	35.1		23	65.9	11.2		5.7	35.5	58.9		
PHF	.759	.917	.750	.888	.781	.750	.760	.815	.870	.850	.780	.894	.333	.735	.669	.734	.943
Automobiles	81	487	12	580	48	93	77	218	157	432	77	666	8	50	82	140	1604
% Automobiles	98.8	96.2	100	96.7	96.0	96.9	97.5	96.9	98.1	94.1	98.7	95.6	100	100	98.8	99.3	96.5
Commercial	1	19	0	20	2	3	2	7	3	27	1	31	0	0	1	1	59
% Commercial	1.2	3.8	0	3.3	4.0	3.1	2.5	3.1	1.9	5.9	1.3	4.4	0	0	1.2	0.7	3.5

DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 6



DE TRAFFIC

http:de-traffic.com
South St at Fox Lake Rd
Brevard County, FL

File Name : South at Fox
Site Code : 00000002
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	South St Southbound					Fox lake Rd Westbound					South St Northbound					Fox lake Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
08:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
04:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	3
04:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	4
05:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	4
Total	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	3	3	8
Grand Total	0	0	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	11	11	23
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	52.2	52.2	0	0	0	0	0	0	0	0	47.8	47.8	

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 1

Groups Printed- Automobiles - Commercial

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	10	102	2	114	26	1	11	38	3	88	13	104	1	0	1	2	258
07:15 AM	6	99	2	107	31	0	13	44	2	94	11	107	0	0	0	0	258
07:30 AM	8	105	0	113	41	1	13	55	4	93	12	109	0	0	0	0	277
07:45 AM	15	143	2	160	56	1	25	82	3	142	19	164	2	1	1	4	410
Total	39	449	6	494	154	3	62	219	12	417	55	484	3	1	2	6	1203
08:00 AM	13	147	0	160	47	0	7	54	6	106	23	135	0	0	5	5	354
08:15 AM	9	110	1	120	64	2	14	80	2	110	19	131	2	0	4	6	337
08:30 AM	12	108	1	121	27	0	11	38	2	94	24	120	1	0	5	6	285
08:45 AM	9	106	2	117	57	0	10	67	2	87	23	112	0	1	5	6	302
Total	43	471	4	518	195	2	42	239	12	397	89	498	3	1	19	23	1278
04:00 PM	13	166	2	181	42	1	6	49	1	147	44	192	0	2	1	3	425
04:15 PM	15	124	2	141	44	2	11	57	6	146	45	197	3	0	5	8	403
04:30 PM	13	140	1	154	44	2	12	58	3	163	42	208	4	0	5	9	429
04:45 PM	10	128	0	138	38	0	11	49	2	161	45	208	4	1	1	6	401
Total	51	558	5	614	168	5	40	213	12	617	176	805	11	3	12	26	1658
05:00 PM	12	175	1	188	32	2	17	51	3	173	56	232	1	0	3	4	475
05:15 PM	11	154	1	166	46	0	14	60	2	172	63	237	6	0	2	8	471
05:30 PM	12	135	0	147	40	0	10	50	0	150	53	203	0	0	0	0	400
05:45 PM	12	111	0	123	27	1	15	43	1	133	67	201	0	0	0	0	367
Total	47	575	2	624	145	3	56	204	6	628	239	873	7	0	5	12	1713
Grand Total	180	2053	17	2250	662	13	200	875	42	2059	559	2660	24	5	38	67	5852
Apprch %	8	91.2	0.8		75.7	1.5	22.9		1.6	77.4	21		35.8	7.5	56.7		
Total %	3.1	35.1	0.3	38.4	11.3	0.2	3.4	15	0.7	35.2	9.6	45.5	0.4	0.1	0.6	1.1	

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 2

Groups Printed- Automobiles - Commercial

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	176	2018	17	2211	654	13	199	866	32	2029	556	2617	22	5	31	58	5752
% Automobiles	97.8	98.3	100	98.3	98.8	100	99.5	99	76.2	98.5	99.5	98.4	91.7	100	81.6	86.6	98.3
Commercial	4	35	0	39	8	0	1	9	10	30	3	43	2	0	7	9	100
% Commercial	2.2	1.7	0	1.7	1.2	0	0.5	1	23.8	1.5	0.5	1.6	8.3	0	18.4	13.4	1.7

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

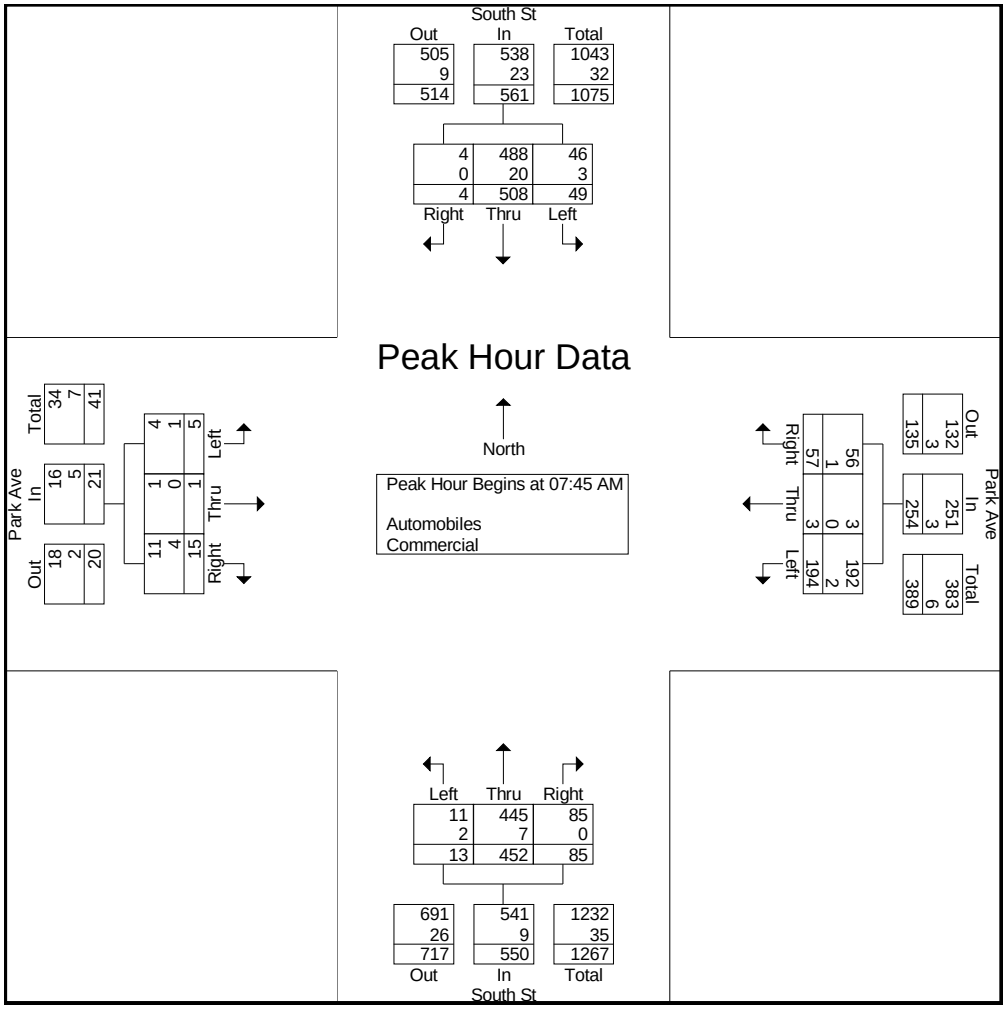
File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 3

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	143	2	160	56	1	25	82	3	142	19	164	2	1	1	4	410
08:00 AM	13	147	0	160	47	0	7	54	6	106	23	135	0	0	5	5	354
08:15 AM	9	110	1	120	64	2	14	80	2	110	19	131	2	0	4	6	337
08:30 AM	12	108	1	121	27	0	11	38	2	94	24	120	1	0	5	6	285
Total Volume	49	508	4	561	194	3	57	254	13	452	85	550	5	1	15	21	1386
% App. Total	8.7	90.6	0.7		76.4	1.2	22.4		2.4	82.2	15.5		23.8	4.8	71.4		
PHF	.817	.864	.500	.877	.758	.375	.570	.774	.542	.796	.885	.838	.625	.250	.750	.875	.845
Automobiles	46	488	4	538	192	3	56	251	11	445	85	541	4	1	11	16	1346
% Automobiles	93.9	96.1	100	95.9	99.0	100	98.2	98.8	84.6	98.5	100	98.4	80.0	100	73.3	76.2	97.1
Commercial	3	20	0	23	2	0	1	3	2	7	0	9	1	0	4	5	40
% Commercial	6.1	3.9	0	4.1	1.0	0	1.8	1.2	15.4	1.5	0	1.6	20.0	0	26.7	23.8	2.9

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 4



DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

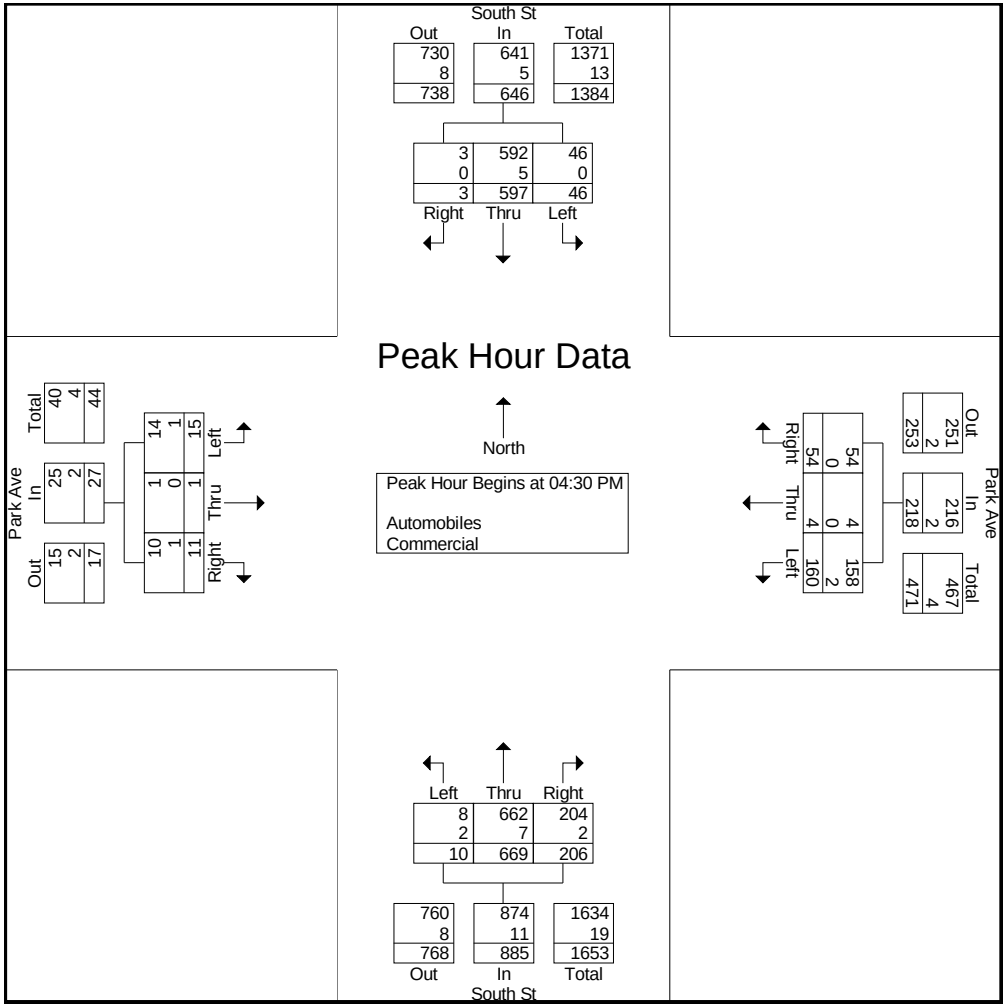
File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 5

	South St Southbound				Park Ave Westbound				South St Northbound				Park Ave Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	13	140	1	154	44	2	12	58	3	163	42	208	4	0	5	9	429
04:45 PM	10	128	0	138	38	0	11	49	2	161	45	208	4	1	1	6	401
05:00 PM	12	175	1	188	32	2	17	51	3	173	56	232	1	0	3	4	475
05:15 PM	11	154	1	166	46	0	14	60	2	172	63	237	6	0	2	8	471
Total Volume	46	597	3	646	160	4	54	218	10	669	206	885	15	1	11	27	1776
% App. Total	7.1	92.4	0.5		73.4	1.8	24.8		1.1	75.6	23.3		55.6	3.7	40.7		
PHF	.885	.853	.750	.859	.870	.500	.794	.908	.833	.967	.817	.934	.625	.250	.550	.750	.935
Automobiles	46	592	3	641	158	4	54	216	8	662	204	874	14	1	10	25	1756
% Automobiles	100	99.2	100	99.2	98.8	100	100	99.1	80.0	99.0	99.0	98.8	93.3	100	90.9	92.6	98.9
Commercial	0	5	0	5	2	0	0	2	2	7	2	11	1	0	1	2	20
% Commercial	0	0.8	0	0.8	1.3	0	0	0.9	20.0	1.0	1.0	1.2	6.7	0	9.1	7.4	1.1

DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 6



DE TRAFFIC

http:de-traffic.com
South St at Park Ave
Brevard County, FL

File Name : South at Park
Site Code : 00000001
Start Date : 1/23/2018
Page No : 7

Groups Printed- Peds

	South St Southbound					Park Ave Westbound					South St Northbound					Park Ave Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
07:45 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2	4
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	4	4	7
08:00 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
Grand Total	0	0	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	6	6	18
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	66.7	66.7	0	0	0	0	0	0	0	0	33.3	33.3	



SB Approach



EB Approach



WB Approach

de traffic	Carpenter Rd at Fox Lake Rd	Brevard County
	www.de-traffic.com 299 McGregor Rd. DeLand Fl. 32720	Project Number: L18-004 / Sheet Number: 1



NB Approach



SB Approach



EB Approach



WB Approach

de traffic	South St at Fox Lake Rd/Harrison St	Brevard County
	www.de-traffic.com 299 McGregor Rd. DeLand Fl. 32720	Project Number: L18-004 / Sheet Number: 2



NB Approach



SB Approach



EB Approach



WB Approach

de traffic	South St at Park Ave	Brevard County
	www.de-traffic.com	Project Number: L18-004 / Sheet Number: 3
	299 McGregor Rd. DeLand Fl. 32720	

APPENDIX D

Unsignalized Intersection HCS Worksheets – Existing Conditions

HCS7 Two-Way Stop-Control Report

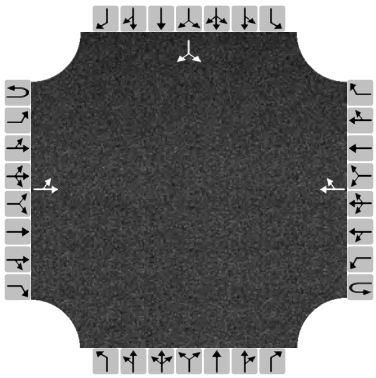
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Exising A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	82						187		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													211	
Capacity, c (veh/h)		1486													912	
v/c Ratio		0.00													0.23	
95% Queue Length, Q_{95} (veh)		0.0													0.9	
Control Delay (s/veh)		7.4													10.1	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.1		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

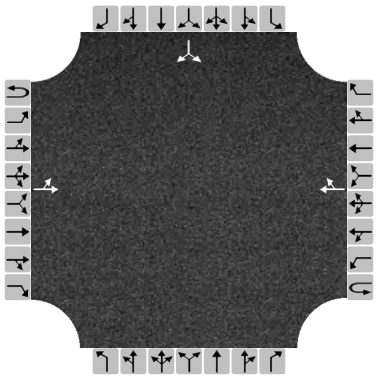
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Exising P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	33				27	205						127		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													152	
Capacity, c (veh/h)		1296													767	
v/c Ratio		0.01													0.20	
95% Queue Length, Q_{95} (veh)		0.0													0.7	
Control Delay (s/veh)		7.8													10.9	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.3												10.9		
Approach LOS														B		

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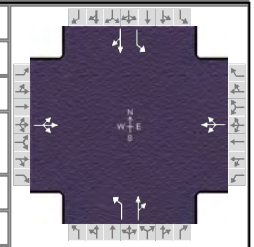
APPENDIX E

Signalized Intersection HCS Worksheets – Existing Conditions

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Existing A…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	91	114	74	45	81	38	375	90	99	365	8

Signal Information			
Cycle, s	47.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.3	1.7	17.7	10.1	0.0	0.0	1	2	3	4		
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	5	6	7	8		
Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.1		15.1	7.6	23.0	9.3	24.7
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		8.8		8.9	2.8	15.7	3.8	11.3
Green Extension Time (g_e), s		1.1		1.1	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.45	1.00	0.79	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		263			241		46	560		119	449	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1688			1488		1560	1732		1691	1752	
Queue Service Time (g_s), s		0.0			0.2		0.8	13.7		1.8	9.3	
Cycle Queue Clearance Time (g_c), s		6.8			6.9		0.8	13.7		1.8	9.3	
Green Ratio (*g/C*)		0.23			0.23		0.47	0.39		0.50	0.43	
Capacity (*c*), veh/h		440			421		402	648		415	718	
Volume-to-Capacity Ratio (*X*)		0.597			0.572		0.114	0.865		0.287	0.626	
Back of Queue (*Q*), ft/ln (95 th percentile)		104.3			96.1		7.7	179.7		18.3	112.1	
Back of Queue (*Q*), veh/ln (95 th percentile)		4.1			3.8		0.3	7.1		0.7	4.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.04	0.00		0.10	0.00	
Uniform Delay (d_1), s/veh		17.2			17.2		8.2	12.9		8.7	10.3	
Incremental Delay (d_2), s/veh		0.5			0.5		0.0	1.4		0.1	0.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		17.7			17.7		8.3	14.3		8.8	10.7	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	17.7	B		17.7	B		13.9	B		10.3	B	
Intersection Delay, s/veh / LOS	13.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.9	A	0.9	A	1.5	A	1.4	A

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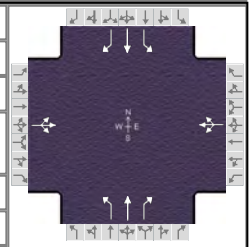
HCS 2010 Signalized Intersection Results Summary

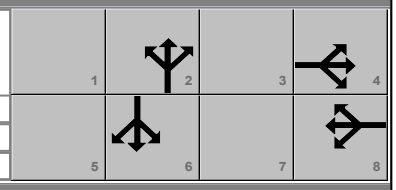
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Existing AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	194	3	57	13	452	85	49	508	4

Signal Information			
Cycle, s	39.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.0	13.6	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.6		18.6		21.0		21.0
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.2		13.6		13.4
Green Extension Time (g_e), s		0.6		0.6		2.5		2.5
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.00		0.00		0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			299		15	532	100	58	598	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1609			1450		725	1863	1579	836	1827	1579
Queue Service Time (g_s), s		0.0			6.6		0.8	8.8	1.7	2.6	10.7	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.2		11.6	8.8	1.7	11.4	10.7	0.1
Green Ratio (*g/C*)		0.38			0.38		0.44	0.44	0.44	0.44	0.44	0.44
Capacity (*c*), veh/h		584			585		241	824	559	290	808	559
Volume-to-Capacity Ratio (*X*)		0.042			0.511		0.063	0.645	0.179	0.199	0.740	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.4			81.5		4.5	76.3	15.5	16.1	91.7	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.2		0.2	3.0	0.6	0.6	3.6	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.04	0.00	0.00
Uniform Delay (d_1), s/veh		10.0			12.4		17.1	9.9	8.8	16.1	10.5	8.3
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.0			12.6		17.1	10.2	8.9	16.2	11.1	8.3
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.0	B		12.6	B		10.2	B		11.5	B	
Intersection Delay, s/veh / LOS	11.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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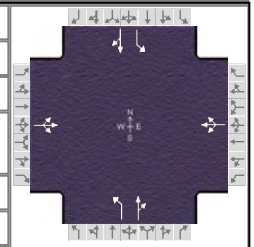
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Existing P…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	50	83	50	96	79	160	459	78	82	506	12

Signal Information			
Cycle, s	46.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	1.1	17.1	9.1	0.0	0.0	1	2	3	4	
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	5	6	7	8	
Red	1.0	0.0	1.0	1.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		14.1		14.1	9.8	23.5	8.7	22.4
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		5.7		8.4	4.8	15.2	3.3	15.0
Green Extension Time (g_e), s		0.8		0.8	0.2	2.1	0.1	2.1
Phase Call Probability		0.99		0.99	0.89	1.00	0.68	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		150			239		170	571		87	551	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1666			1612		1560	1747		1691	1752	
Queue Service Time (g_s), s		0.0			2.8		2.8	13.2		1.3	13.0	
Cycle Queue Clearance Time (g_c), s		3.7			6.4		2.8	13.2		1.3	13.0	
Green Ratio (*g/C*)		0.22			0.22		0.51	0.41		0.49	0.39	
Capacity (*c*), veh/h		411			413		424	688		369	649	
Volume-to-Capacity Ratio (*X*)		0.365			0.580		0.401	0.831		0.237	0.849	
Back of Queue (*Q*), ft/ln (95 th percentile)		55			93.6		25	164.3		13.2	167.7	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.2			3.7		1.0	6.5		0.5	6.6	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.12	0.00		0.07	0.00	
Uniform Delay (d_1), s/veh		16.3			17.2		8.6	11.9		9.2	12.5	
Incremental Delay (d_2), s/veh		0.2			0.5		0.2	1.0		0.1	1.2	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		16.5			17.7		8.8	12.9		9.3	13.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	16.5	B		17.7	B		12.0	B		13.1	B	
Intersection Delay, s/veh / LOS	13.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.7	A	0.9	A	1.7	A	1.5	A

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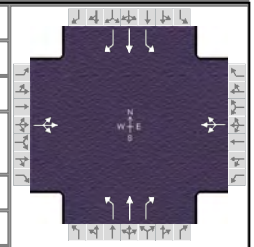
HCS 2010 Signalized Intersection Results Summary

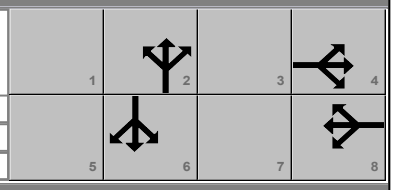
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Existing P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Existing PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	160	4	54	10	669	206	46	597	3

Signal Information			
Cycle, s	49.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	25.6	13.7	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.7		18.7		30.6		30.6
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		9.9		18.3		22.1
Green Extension Time (g_e), s		0.5		0.5		3.7		3.5
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.08		0.15

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			256		12	787	242	54	702	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1522			1463		658	1863	1579	659	1827	1579
Queue Service Time (g_s), s		0.0			7.2		0.7	16.3	4.7	3.8	13.9	0.1
Cycle Queue Clearance Time (g_c), s		0.7			7.9		14.7	16.3	4.7	20.1	13.9	0.1
Green Ratio (*g/C*)		0.31			0.31		0.55	0.55	0.55	0.55	0.55	0.55
Capacity (*c*), veh/h		476			475		274	1023	755	242	1003	755
Volume-to-Capacity Ratio (*X*)		0.067			0.540		0.043	0.770	0.321	0.223	0.700	0.005
Back of Queue (*Q*), ft/ln (95 th percentile)		10.9			105.6		3.9	148.7	41.8	21.1	118.1	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.4			4.2		0.2	5.9	1.6	0.8	4.6	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.12	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		14.5			17.2		16.3	9.9	7.9	19.6	9.3	6.7
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.1	0.1	0.2	0.4	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		14.5			17.6		16.3	11.0	8.0	19.8	9.6	6.7
Level of Service (LOS)		B			B		B	B	A	B	A	A
Approach Delay, s/veh / LOS	14.5	B		17.6	B		10.3	B		10.3	B	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.2	B	1.7	A

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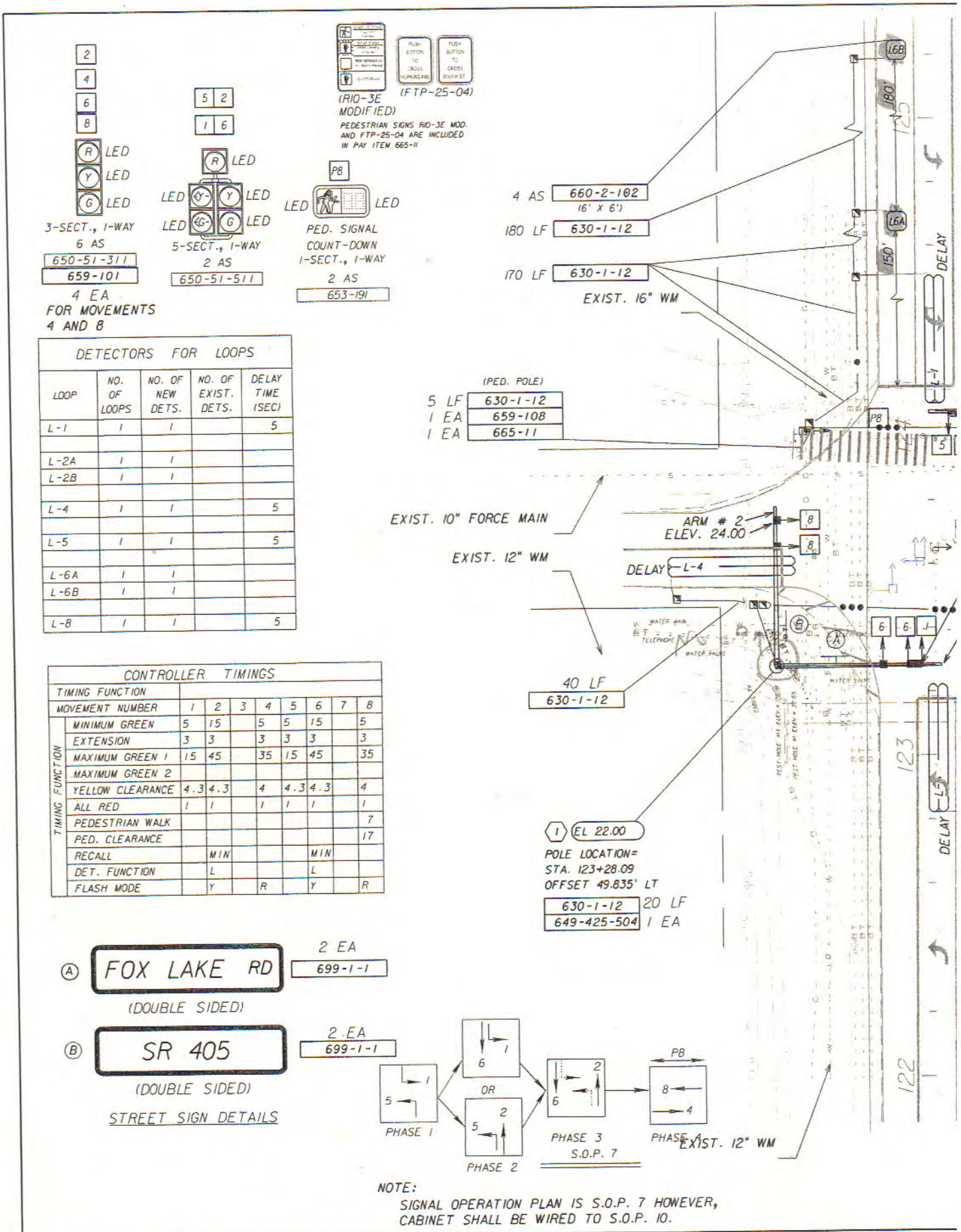
APPENDIX F
Signal Timing

#29



DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	NO. OF EXIST. DETS.	DELAY TIME (SEC)
L-1	1	1		5
L-2A	1	1		
L-2B	1	1		
L-4	1	1		5
L-5	1	1		5
L-6A	1	1		
L-6B	1	1		
L-8	1	1		5

CONTROLLER TIMINGS								
TIMING FUNCTION								
MOVEMENT NUMBER	1	2	3	4	5	6	7	8
TIMING FUNCTION: MINIMUM GREEN	5	15		5	5	15		5
EXTENSION	3	3		3	3	3		3
MAXIMUM GREEN 1	15	45		35	15	45		35
MAXIMUM GREEN 2								
YELLOW CLEARANCE	4.3	4.3		4	4.3	4.3		4
ALL RED	1	1		1	1	1		1
PEDESTRIAN WALK								7
PED. CLEARANCE								17
RECALL		MIN				MIN		
DET. FUNCTION		L				L		
FLASH MODE		Y		R		Y		R

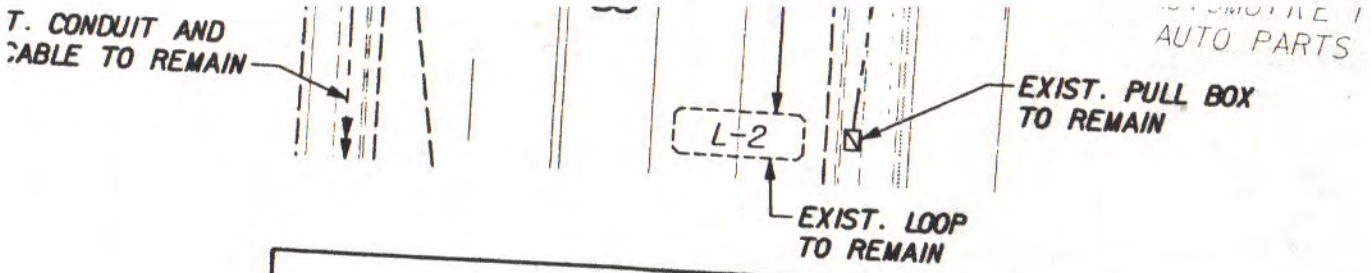
NOTE:
SIGNAL OPERATION PLAN IS S.O.P. 7 HOWEVER, CABINET SHALL BE WIRED TO S.O.P. 10.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

MICHAEL L. M
P.E. LICENSE
Ghyabi & Assoc
214 East New Y
Deland, FL 32
Phone: 386 469
Fax. 386/469
C.A. # 7311

#30

PARK Ave. SR405 (South St)



SUGGESTED INITIAL CONTROLLER TIMING

MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN		14		8		14		8
EXTENSION		3.5		3.5		3.5		3.5
MAXIMUM GREEN 1		29		36		29		36
MAXIMUM GREEN 2		0		0		0		0
YELLOW CLEARANCE		4		4		4		4
ALL RED		1		1		1		1
PEDESTRIAN WALK		8		8		8		8
PED. CLEARANCE		14		24		14		24
RECALL		MIN		OFF		MIN		OFF
DETECTOR FUNCTION		LOCK		NON-LOCK		LOCK		NON-LOCK
FLASHING MODE		YELLOW		RED		YELLOW		RED

SIGNAL TIMING IS INITIAL AND MAY BE ADJUSTED BY THE MAINTAINING AGENCY.

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SIGNALIZATION PLAN

SHEET NO.

-

APPENDIX G

Unsignalized Intersection HCS Worksheets – Background Conditions

HCS7 Two-Way Stop-Control Report

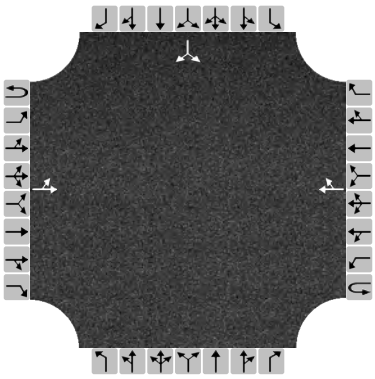
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Background A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	84						191		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													216	
Capacity, c (veh/h)		1484													910	
v/c Ratio		0.00													0.24	
95% Queue Length, Q_{95} (veh)		0.0													0.9	
Control Delay (s/veh)		7.4													10.2	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.2		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

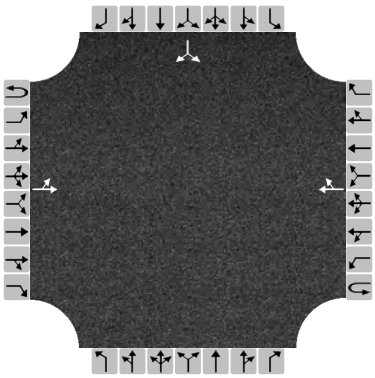
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Background P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	34				28	209						130		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													155	
Capacity, c (veh/h)		1290													762	
v/c Ratio		0.01													0.20	
95% Queue Length, Q_{95} (veh)		0.0													0.8	
Control Delay (s/veh)		7.8													10.9	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.2												10.9		
Approach LOS														B		

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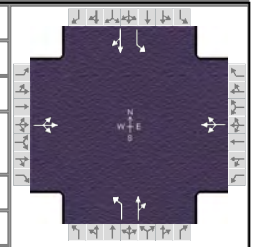
APPENDIX H

Signalized Intersection HCS Worksheets – Background Conditions

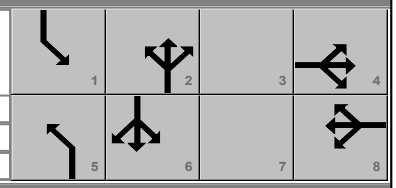
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Backgrou…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	93	116	75	46	83	39	383	92	101	372	8

Signal Information					EB			WB			NB			SB		
Cycle, s	48.4	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	2.4	1.7		18.4	10.4	0.0	0.0					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.3	0.0		4.3	4.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.0	1.0	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.4		15.4	7.7	23.7	9.3	25.3
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		9.0		9.3	2.8	16.4	3.9	11.7
Green Extension Time (g_e), s		1.1		1.1	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.47	1.00	0.81	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		267			246		47	572		122	458	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1689			1487		1560	1732		1691	1753	
Queue Service Time (g_s), s		0.0			0.3		0.8	14.4		1.9	9.7	
Cycle Queue Clearance Time (g_c), s		7.0			7.3		0.8	14.4		1.9	9.7	
Green Ratio (*g/C*)		0.24			0.24		0.47	0.40		0.51	0.43	
Capacity (*c*), veh/h		442			422		399	658		408	726	
Volume-to-Capacity Ratio (*X*)		0.605			0.583		0.118	0.870		0.298	0.630	
Back of Queue (*Q*), ft/ln (95 th percentile)		110			101.2		8.1	189.8		19.2	118.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		4.3			4.0		0.3	7.5		0.8	4.7	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.04	0.00		0.10	0.00	
Uniform Delay (d_1), s/veh		17.5			17.6		8.3	13.1		8.9	10.5	
Incremental Delay (d_2), s/veh		0.5			0.5		0.0	1.4		0.2	0.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.0			18.1		8.4	14.6		9.1	10.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.0	B		18.1	B		14.1	B		10.5	B	
Intersection Delay, s/veh / LOS	14.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.9	A	0.9	A	1.5	A	1.4	A

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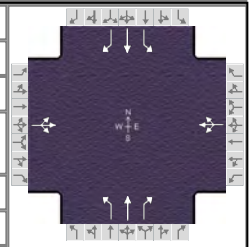
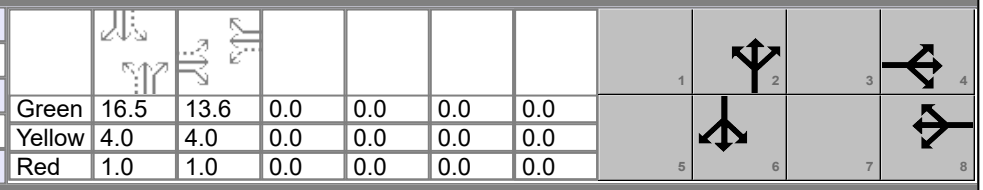
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Background AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	198	3	58	13	461	87	50	518	4

Signal Information			
Cycle, s	40.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	16.5	13.6	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	1.0	1.0	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.6		18.6		21.5		21.5
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.5		13.9		13.8
Green Extension Time (g_e), s		0.6		0.6		2.5		2.5
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.00		0.00		0.01		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			305		15	542	102	59	609	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1613			1450		717	1863	1579	828	1827	1579
Queue Service Time (g_s), s		0.0			6.9		0.8	9.1	1.8	2.7	11.1	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.5		11.9	9.1	1.8	11.8	11.1	0.1
Green Ratio (*g/C*)		0.38			0.38		0.45	0.45	0.45	0.45	0.45	0.45
Capacity (*c*), veh/h		580			579		239	834	569	289	818	569
Volume-to-Capacity Ratio (*X*)		0.043			0.526		0.064	0.650	0.180	0.203	0.745	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.5			85.9		4.6	79.1	16	16.8	95.8	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.4		0.2	3.1	0.6	0.7	3.8	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.04	0.00	0.00
Uniform Delay (d_1), s/veh		10.2			12.7		17.2	9.9	8.8	16.2	10.6	8.2
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.2			13.0		17.3	10.2	8.8	16.4	11.1	8.2
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.2	B		13.0	B		10.1	B		11.5	B	
Intersection Delay, s/veh / LOS	11.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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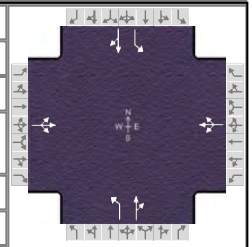
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Backgrou…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	51	85	51	98	81	163	468	80	84	516	12

Signal Information			
Cycle, s	47.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.5	1.1	17.8	9.5	0.0	0.0	1	2	3	4		
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	5	6	7	8		
Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		14.5		14.5	9.9	24.2	8.8	23.1
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		5.8		8.7	4.9	15.9	3.4	15.6
Green Extension Time (g_e), s		0.8		0.8	0.2	2.2	0.1	2.2
Phase Call Probability		0.99		0.99	0.90	1.00	0.69	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		153			245		173	583		89	562	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1666			1611		1560	1747		1691	1752	
Queue Service Time (g_s), s		0.0			2.9		2.9	13.9		1.4	13.6	
Cycle Queue Clearance Time (g_c), s		3.8			6.7		2.9	13.9		1.4	13.6	
Green Ratio (*g/C*)		0.22			0.22		0.52	0.42		0.49	0.40	
Capacity (*c*), veh/h		413			414		419	697		364	658	
Volume-to-Capacity Ratio (*X*)		0.371			0.590		0.414	0.836		0.246	0.854	
Back of Queue (*Q*), ft/ln (95 th percentile)		57.9			99.1		26.4	176		14.2	178.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.3			3.9		1.0	6.9		0.6	7.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.13	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh		16.6			17.6		8.8	12.1		9.4	12.8	
Incremental Delay (d_2), s/veh		0.2			0.5		0.2	1.0		0.1	1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		16.8			18.1		9.1	13.1		9.6	14.0	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	16.8	B		18.1	B		12.2	B		13.4	B	
Intersection Delay, s/veh / LOS	13.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.7	A	0.9	A	1.7	A	1.6	A

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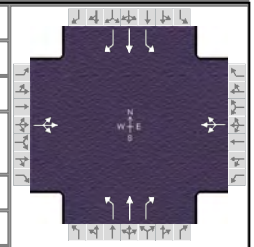
HCS 2010 Signalized Intersection Results Summary

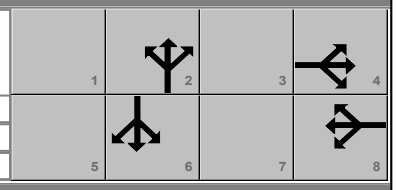
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Background P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Background PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	163	4	55	10	682	210	47	609	3

Signal Information			
Cycle, s	50.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	26.4	13.8	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.8		18.8		31.4		31.4
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		10.3		18.8		22.9
Green Extension Time (g_e), s		0.5		0.5		3.8		3.6
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.10		0.19

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			261		12	802	247	55	716	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1524			1463		649	1863	1579	650	1827	1579
Queue Service Time (g_s), s		0.0			7.5		0.7	16.8	4.8	4.0	14.4	0.1
Cycle Queue Clearance Time (g_c), s		0.7			8.3		15.2	16.8	4.8	20.9	14.4	0.1
Green Ratio (*g/C*)		0.30			0.30		0.56	0.56	0.56	0.56	0.56	0.56
Capacity (*c*), veh/h		469			468		272	1036	767	240	1016	767
Volume-to-Capacity Ratio (*X*)		0.068			0.558		0.043	0.775	0.322	0.231	0.705	0.005
Back of Queue (*Q*), ft/ln (95 th percentile)		11.3			111.3		4	156.7	42.9	22.2	123.3	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.4			4.4		0.2	6.2	1.7	0.9	4.9	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.13	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		14.9			17.7		16.4	9.9	7.8	19.9	9.2	6.6
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.3	0.1	0.2	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		14.9			18.1		16.5	11.2	7.9	20.1	9.8	6.6
Level of Service (LOS)		B			B		B	B	A	C	A	A
Approach Delay, s/veh / LOS	14.9	B		18.1	B		10.5	B		10.5	B	
Intersection Delay, s/veh / LOS	11.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.2	B	1.8	A

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APPENDIX I

Unsignalized Intersections HCS Worksheets – Build-Out Conditions

HCS7 Two-Way Stop-Control Report

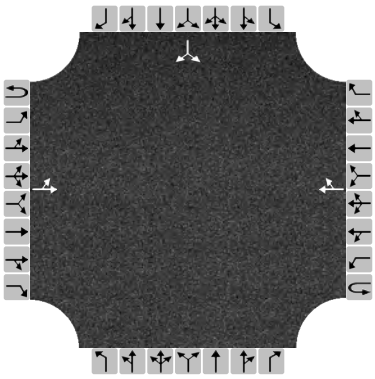
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Build-Out A.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		4	19				11	97						230		1
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													259	
Capacity, c (veh/h)		1465													901	
v/c Ratio		0.00													0.29	
95% Queue Length, Q_{95} (veh)		0.0													1.2	
Control Delay (s/veh)		7.5													10.6	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		1.2												10.6		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

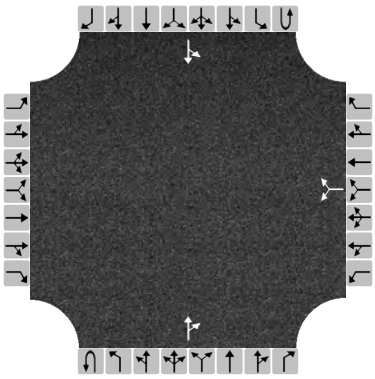
General Information

Analyst	SD
Agency/Co.	LTG
Date Performed	1/29/2018
Analysis Year	2018
Time Analyzed	Build-Out A.M. Peak Hour
Intersection Orientation	North-South
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Carpenter at Project Driv
Jurisdiction	City of Titusville
East/West Street	Project Driveway
North/South Street	Carpenter Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						39		5			88	13		2	192	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							47							2		
Capacity, c (veh/h)							695							1472		
v/c Ratio							0.07							0.00		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							10.6							7.4		
Level of Service, LOS							B							A		
Approach Delay (s/veh)						10.6								0.1		
Approach LOS						B										

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HCS7 Two-Way Stop-Control Report

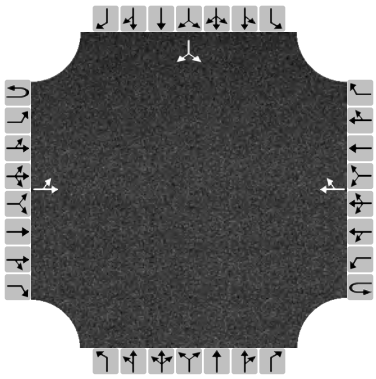
General Information

Analyst	LAE
Agency/Co.	LTG
Date Performed	1/16/2018
Analysis Year	2018
Time Analyzed	Build-Out P.M. Peak-Hour
Intersection Orientation	East-West
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Fox Lade Rd at Carpenter
Jurisdiction	City of Titusville
East/West Street	Fox Lake Rd
North/South Street	Carpenter Rd
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume, V (veh/h)		13	34				28	251						155		5
Percent Heavy Vehicles (%)		2												2		2
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		15													184	
Capacity, c (veh/h)		1238													737	
v/c Ratio		0.01													0.25	
95% Queue Length, Q_{95} (veh)		0.0													1.0	
Control Delay (s/veh)		7.9													11.5	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		2.3												11.5		
Approach LOS														B		

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HCS7 Two-Way Stop-Control Report

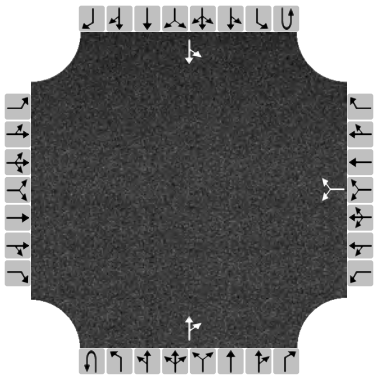
General Information

Analyst	SD
Agency/Co.	LTG
Date Performed	1/29/2018
Analysis Year	2018
Time Analyzed	Build-Out P.M. Peak Hour
Intersection Orientation	North-South
Project Description	4511.02 - South Carpenter Estates

Site Information

Intersection	Carpenter at Project Driv
Jurisdiction	City of Titusville
East/West Street	Project Driveway
North/South Street	Carpenter Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						25		3			222	42		6	135	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)							30							7		
Capacity, c (veh/h)							595							1268		
v/c Ratio							0.05							0.01		
95% Queue Length, Q_{95} (veh)							0.2							0.0		
Control Delay (s/veh)							11.4							7.9		
Level of Service, LOS							B							A		
Approach Delay (s/veh)						11.4								0.4		
Approach LOS						B										

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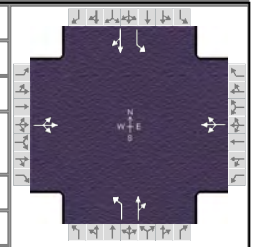
APPENDIX J

Signalized Intersections HCS Worksheets – Build-Out Conditions

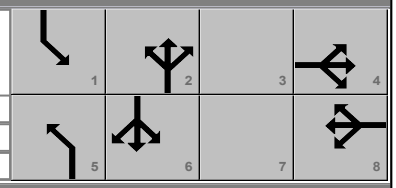
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out A.M. Peak-Hour	PHF	0.83
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Build-Out…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	23	100	137	75	48	83	46	383	92	101	372	11

Signal Information												
Cycle, s	51.2	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	2.7	1.4	19.3	12.2	0.0	0.0		
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.3	0.0	4.3	4.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		17.2		17.2	8.0	24.6	9.4	26.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.3		3.3	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		10.9		9.5	3.0	17.3	4.0	12.6
Green Extension Time (g_e), s		1.2		1.2	0.0	1.9	0.1	1.9
Phase Call Probability		1.00		1.00	0.55	1.00	0.82	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		313			248		55	572		122	461	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1671			1479		1560	1732		1691	1750	
Queue Service Time (g_s), s		1.4			0.0		1.0	15.3		2.0	10.6	
Cycle Queue Clearance Time (g_c), s		8.9			7.5		1.0	15.3		2.0	10.6	
Green Ratio (*g/C*)		0.26			0.26		0.47	0.40		0.50	0.42	
Capacity (*c*), veh/h		474			448		385	654		389	708	
Volume-to-Capacity Ratio (*X*)		0.661			0.555		0.144	0.875		0.313	0.652	
Back of Queue (*Q*), ft/ln (95 th percentile)		137.9			105.7		10.7	207.1		22.3	137.2	
Back of Queue (*Q*), veh/ln (95 th percentile)		5.4			4.2		0.4	8.2		0.9	5.4	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.05	0.00		0.12	0.00	
Uniform Delay (d_1), s/veh		18.1			17.5		9.0	14.0		9.7	11.6	
Incremental Delay (d_2), s/veh		0.6			0.4		0.1	1.5		0.2	0.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.7			17.9		9.1	15.5		9.8	12.0	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.7	B		17.9	B		15.0	B		11.5	B	
Intersection Delay, s/veh / LOS	14.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.0	A	0.9	A	1.5	A	1.4	A

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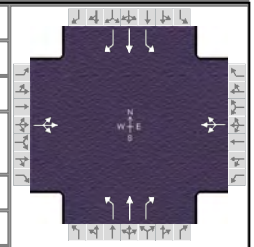
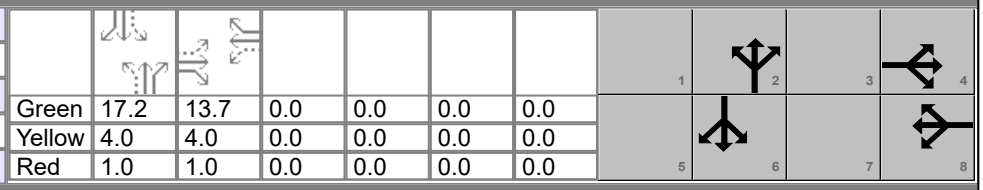
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out A.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Build-Out AM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	1	15	198	3	59	13	467	87	52	536	4

Signal Information			
Cycle, s	40.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	17.2	13.7	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	1.0	1.0	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.7		18.7		22.2		22.2
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.4		9.7		14.6		14.1
Green Extension Time (g_e), s		0.6		0.6		2.6		2.6
Phase Call Probability		0.98		0.98		1.00		1.00
Max Out Probability		0.00		0.00		0.01		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		25			306		15	549	102	61	631	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1616			1451		703	1863	1579	822	1827	1579
Queue Service Time (g_s), s		0.0			7.1		0.8	9.3	1.8	2.8	11.7	0.1
Cycle Queue Clearance Time (g_c), s		0.4			7.7		12.6	9.3	1.8	12.1	11.7	0.1
Green Ratio (*g/C*)		0.37			0.37		0.46	0.46	0.46	0.46	0.46	0.46
Capacity (*c*), veh/h		571			570		235	851	586	294	835	586
Volume-to-Capacity Ratio (*X*)		0.043			0.537		0.065	0.645	0.175	0.208	0.755	0.008
Back of Queue (*Q*), ft/ln (95 th percentile)		5.8			89.8		4.7	79.4	15.9	17.7	100.1	0.7
Back of Queue (*Q*), veh/ln (95 th percentile)		0.2			3.5		0.2	3.1	0.6	0.7	3.9	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.05	0.05	0.00	0.00
Uniform Delay (d_1), s/veh		10.5			13.1		17.5	9.8	8.6	16.2	10.6	8.1
Incremental Delay (d_2), s/veh		0.0			0.3		0.0	0.3	0.1	0.1	0.5	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		10.5			13.4		17.6	10.1	8.7	16.3	11.1	8.1
Level of Service (LOS)		B			B		B	B	A	B	B	A
Approach Delay, s/veh / LOS	10.5	B		13.4	B		10.0	B		11.5	B	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	1.0	A	1.6	A	1.6	A

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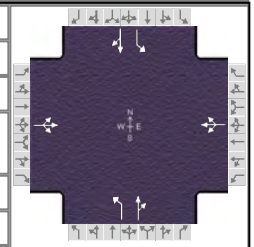
HCS 2010 Signalized Intersection Results Summary

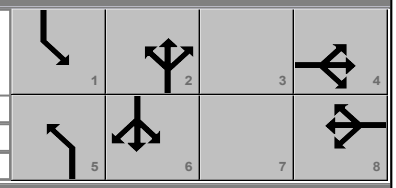
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out P.M. Peak-Hour	PHF	0.94
Urban Street	SR 405/South Street	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Fox Lake Rd	File Name	2 Fox Lake or Harrison St at South St - Build-Out…		
Project Description	4511.02 South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	56	98	51	106	81	185	468	80	84	516	23

Signal Information			
Cycle, s	50.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.6	1.7	19.0	10.2	0.0	0.0	
Yellow	4.3	0.0	4.3	4.0	0.0	0.0	
Red	1.0	0.0	1.0	1.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		8.0		8.0	1.1	4.0	1.1	4.0
Phase Duration, s		15.2		15.2	10.6	26.1	8.9	24.3
Change Period, ($Y+R_c$), s		5.0		5.0	5.3	5.3	5.3	5.3
Max Allow Headway (*MAH*), s		3.2		3.2	3.0	3.0	3.0	3.0
Queue Clearance Time (g_s), s		6.8		9.3	5.4	16.3	3.4	16.8
Green Extension Time (g_e), s		0.9		0.9	0.2	2.2	0.1	2.2
Phase Call Probability		1.00		1.00	0.94	1.00	0.71	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		180			253		197	583		89	573	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1665			1618		1560	1747		1691	1746	
Queue Service Time (g_s), s		0.0			2.5		3.4	14.3		1.4	14.8	
Cycle Queue Clearance Time (g_c), s		4.8			7.3		3.4	14.3		1.4	14.8	
Green Ratio (*g/C*)		0.22			0.22		0.53	0.43		0.49	0.40	
Capacity (*c*), veh/h		416			416		419	725		371	664	
Volume-to-Capacity Ratio (*X*)		0.432			0.609		0.470	0.804		0.241	0.864	
Back of Queue (*Q*), ft/ln (95 th percentile)		74.5			110.6		32.6	182.9		15.7	198.3	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.9			4.4		1.3	7.2		0.6	7.8	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.16	0.00		0.08	0.00	
Uniform Delay (d_1), s/veh		17.7			18.6		9.4	12.1		9.5	13.5	
Incremental Delay (d_2), s/veh		0.3			0.5		0.3	0.8		0.1	1.3	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		18.0			19.1		9.7	12.9		9.7	14.8	
Level of Service (LOS)		B			B		A	B		A	B	
Approach Delay, s/veh / LOS	18.0	B		19.1	B		12.1	B		14.1	B	
Intersection Delay, s/veh / LOS	14.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.8	A	0.9	A	1.8	A	1.6	A

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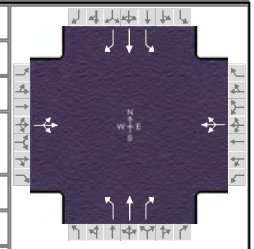
HCS 2010 Signalized Intersection Results Summary

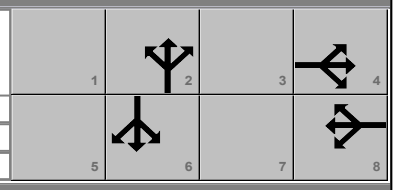
General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	LAE	Analysis Date	Jan 16, 2018	Area Type	Other
Jurisdiction	City of Titusville	Time Period	Build-Out P.M. Peak-Hour	PHF	0.85
Urban Street	SR 405/South St	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	South St at Park Ave	File Name	3 South St at Park Ave - Build-Out PM.xus		
Project Description	4511.02 - South Carpenter Estates				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	15	1	11	163	4	57	10	702	210	48	621	3

Signal Information			
Cycle, s	51.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	27.6	13.8	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		5.0		5.0
Phase Duration, s		18.8		18.8		32.6		32.6
Change Period, ($Y+R_c$), s		5.0		5.0		5.0		5.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.0		3.0
Queue Clearance Time (g_s), s		2.7		10.6		19.8		24.1
Green Extension Time (g_e), s		0.6		0.5		3.9		3.6
Phase Call Probability		0.99		0.99		1.00		1.00
Max Out Probability		0.00		0.00		0.12		0.24

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		32			264		12	826	247	56	731	4
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1524			1464		641	1863	1579	636	1827	1579
Queue Service Time (g_s), s		0.0			7.9		0.8	17.8	4.8	4.3	14.9	0.1
Cycle Queue Clearance Time (g_c), s		0.7			8.6		15.7	17.8	4.8	22.1	14.9	0.1
Green Ratio (*g/C*)		0.30			0.30		0.57	0.57	0.57	0.57	0.57	0.57
Capacity (*c*), veh/h		459			458		273	1054	785	236	1034	785
Volume-to-Capacity Ratio (*X*)		0.069			0.576		0.043	0.784	0.315	0.240	0.707	0.004
Back of Queue (*Q*), ft/ln (95 th percentile)		11.8			117.4		4.1	169.4	42.9	23.5	129.8	0.5
Back of Queue (*Q*), veh/ln (95 th percentile)		0.5			4.6		0.2	6.7	1.7	0.9	5.1	0.0
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00	0.13	0.06	0.00	0.00
Uniform Delay (d_1), s/veh		15.5			18.4		16.5	9.9	7.7	20.4	9.2	6.5
Incremental Delay (d_2), s/veh		0.0			0.4		0.0	1.7	0.1	0.2	0.7	0.0
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		15.5			18.9		16.5	11.6	7.8	20.5	9.8	6.5
Level of Service (LOS)		B			B		B	B	A	C	A	A
Approach Delay, s/veh / LOS	15.5	B		18.9	B		10.8	B		10.6	B	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.4	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	0.5	A	0.9	A	2.3	B	1.8	A

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APPENDIX K

ARTPLAN Result - SR 405 / South Street from Fox Lake Road to SR 50

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SD	**Arterial Name**	SR 405/South St	**Study Period**	**Standard K**
Date Prepared	2/13/2018 1:21:07 PM	**From**	Fox Lake Rd	**Modal Analysis**	Auto Only
Agency	LTG	**To**	SR 50	**Program**	ARTPLAN 2012
Area Type	Transitioning/Urban	**Peak Direction**	Southbound	**Version Date**	12/12/2012
Arterial Class	1				
File Name	X:\jobs\4500\4511.02\data\Artplan\SR 405 from SR 50 to Fox Lake.xap				
User Notes					

Arterial Data

K	0.09	**PHF**	0.845	**Control Type**	CoordinatedActuated
D	0.53	**% Heavy Vehicles**	3	**Base Sat. Flow Rate**	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Park Ave	120	0.48	3	1	14	2	Yes	ProtPerm	1	410	0.15	Yes
SR 50	120	0.44	5	2	25	15	Yes	Protected	1	450	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Park Ave)	4100	18573	886	1	55	60	Restrictive	No	N/A
2 (to SR 50)	7300	18573	886	1	55	60	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Park Ave)	881	1818	0.976	37.86	D	0.27	31.92	B
2 (to SR 50)	629	3101	0.358	9.97	A	0.74	50.62	A

Arterial Length	2.1727	Weighted g/C	0.46	FFS Delay	57.60	Threshold Delay	0.00	Auto Speed	41.79	Auto LOS	A

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	880	990	1040	***	***
2	1810	2000	2120	***	***
3	2740	3030	3200	***	***
4	3670	4060	4280	***	***
*	890	1000	1040	***	***
Lanes	**Hourly Volume In Both Directions**				
2	1670	1870	1970	***	***
4	3420	3780	4000	***	***
6	5170	5720	6030	***	***
8	6930	7670	8060	***	***
*	1680	1890	1970	***	***
Lanes	**Annual Average Daily Traffic**				
2	18500	20800	21900	***	***
4	38000	42000	44500	***	***
6	57500	63600	67000	***	***
8	77000	85200	89600	***	***
*	18700	21000	21900	***	***

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

APPENDIX L
NCHRP 457 Reports

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

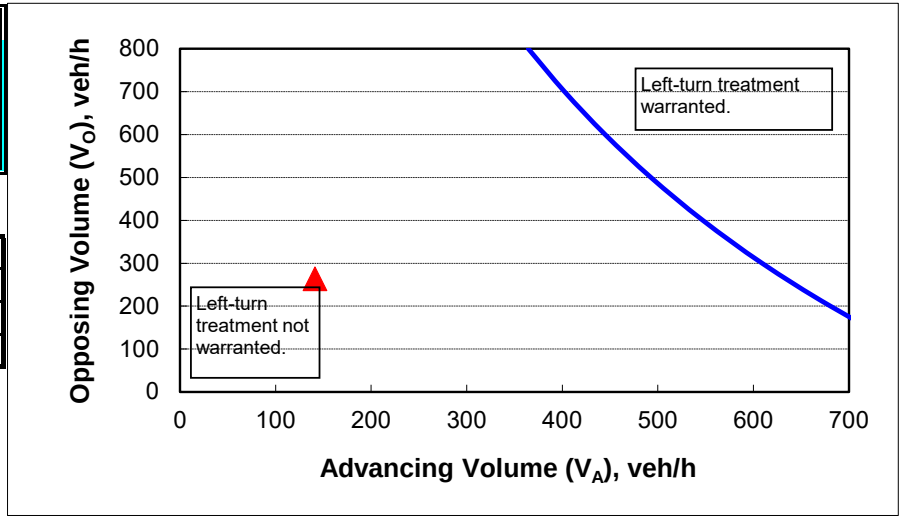
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	141
Opposing volume (V_O), veh/h:	264

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	634
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

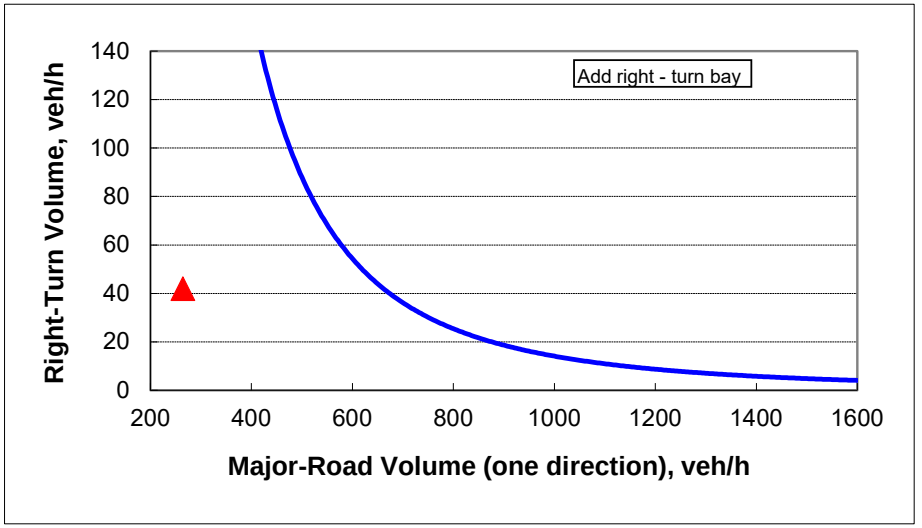
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	264
Right-turn volume, veh/h:	42

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	475
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



TRAFFIC IMPACT STUDY

STEP BY STEP LEARNING CENTER
TITUSVILLE, FLORIDA

Prepared for:

Space Coast Step by Step Early Learning Center
801 South Park Avenue
Titusville, Florida 32796

Prepared by:

Traffic Planning and Design, Inc.
535 Versailles Drive
Maitland, Florida 32751
407-628-9955

November 2018

TPD № 5157

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic Planning & Design, Inc., a corporation authorized to operate as an engineering business, EB-3702, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Step by Step Learning Center

LOCATION: Titusville, Florida

CLIENT: Space Coast Step by Step Early Learning Center

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

NAME: Turgut Dervish, P.E.

P.E. №: 20400

DATE: November 21, 2018

SIGNATURE:



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B Traffic Count Database
C Turning Movement Counts
D Peak Season Category report/Signal Timings
E Existing Capacity Analysis Worksheet
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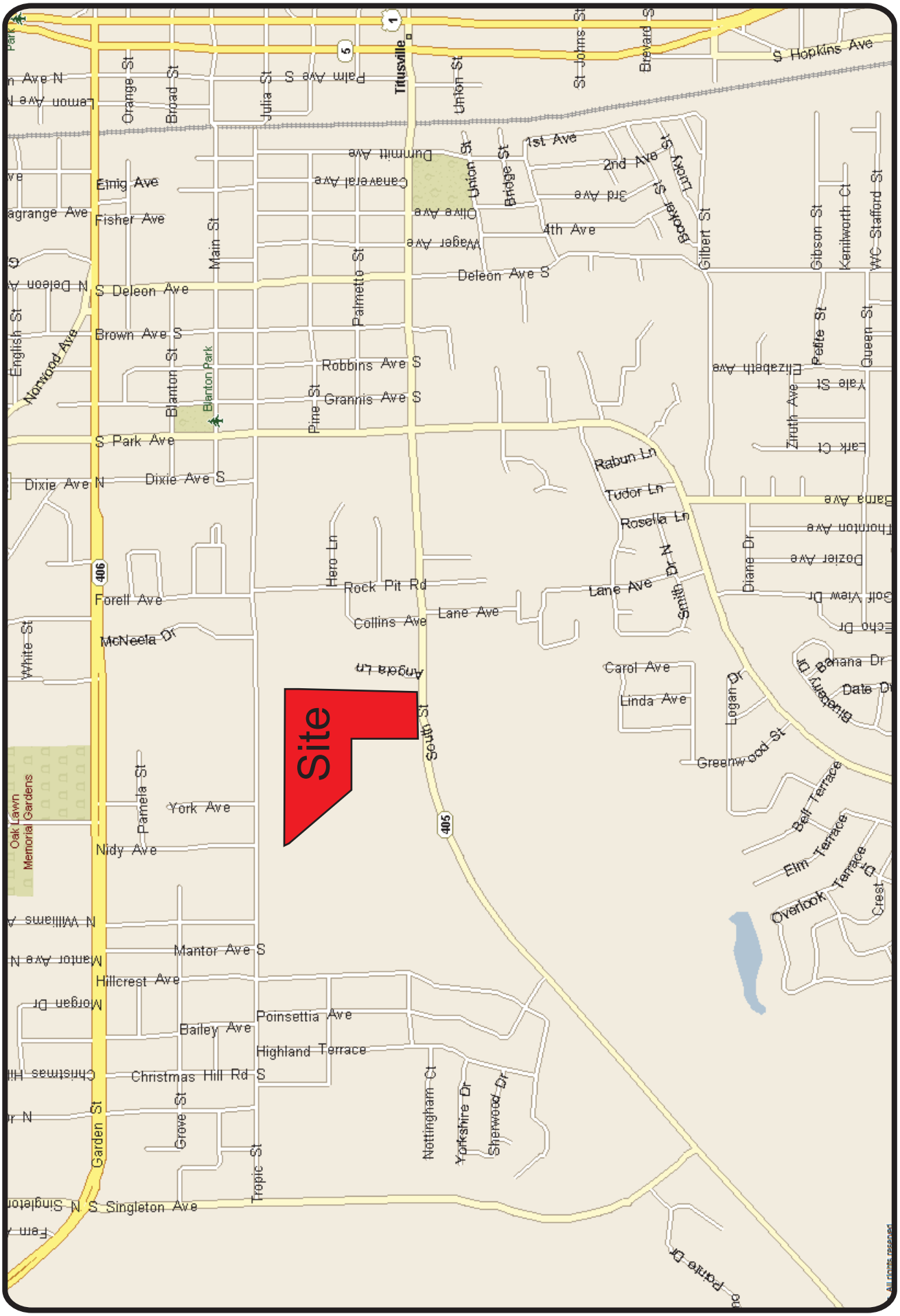
INTRODUCTION

This traffic study was performed to assess the impact of a proposed day care center in Titusville, Florida. The proposed center will consist of an 18,000 square foot building located on SR 405 just west of Angela Lane. Access to the site will be provided via an existing driveway which currently serves the Space Coast Unity Church. **Figure 1** depicts the site location and the area roadways.

The roadway segment of SR 405 from South Singleton Avenue to South Park Avenue and the following intersections were included in the analysis:

- SR 405 and South Park Avenue
- SR 405 and Site Entrance

The traffic study was conducted in accordance with the study methodology submitted to and reviewed by the City. The methodology document and related correspondence are included in **Appendix A.** Data used in the analysis consisted of the site plan/development information provided by Project Engineers, traffic volume data obtained from the Florida DOT and Space Coast TPO, and field data acquired by Traffic Planning and Design, Inc. (TPD).



Site Location

Childcare Facility @ SR 405
Project № 5157
Figure 1

EXISTING TRAFFIC CONDITIONS

A capacity analysis was performed for the study roadway segment and intersections in order to establish their current Level of Service (LOS) for existing conditions. The roadway segment was analyzed for daily traffic conditions and the intersections were analyzed for P.M. peak hour conditions.

Roadway Capacity Analysis

Table 1 presents a summary of the existing conditions for the roadway segment using existing daily traffic volumes. The Roadway segment was analyzed by comparing the existing traffic volume of the segment with its corresponding capacity. The existing traffic volumes and adopted LOS and capacities were obtained from the Space Coast TPO Traffic Counts Spreadsheets. The pertinent page from the Traffic Count database is included in **Appendix B**.

Table 1
Existing Conditions- Roadway Analysis

ID	Roadway Segment	Function/ Class	# of Lns	Adopted LOS	Daily Capacity*	Daily Volume*	LOS
SR 405/South Street							
215	Singleton Ave to Angela Ln	U/Minor	2	D	17,700	6,630	C
	Angela Ln to Park Ave	U/Minor	4	D	37,810	6,630	C

* Obtained from the Space Coast TPO counts: 2007-2016 spreadsheets

The results of the analysis indicate that the study segment of SR 405 currently operates at satisfactory Levels of Service.

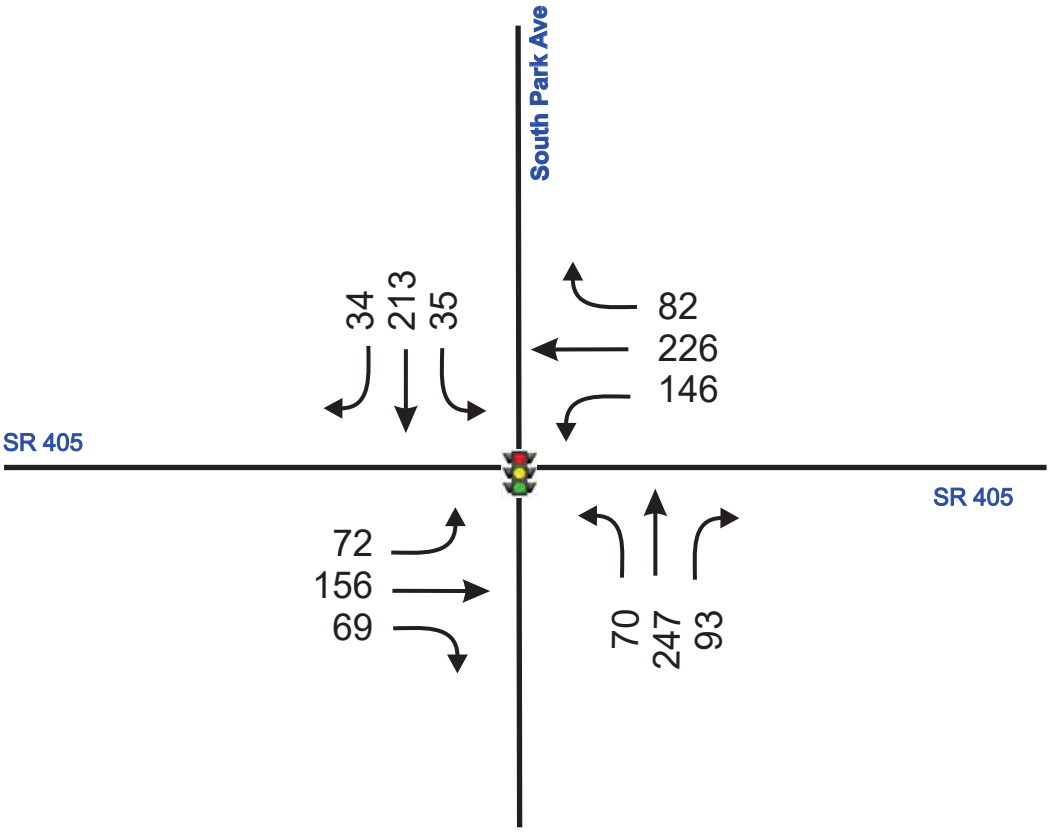
Intersection Capacity Analysis

The capacity analysis for the SR 405/South Park Avenue intersection was conducted using the existing P.M. peak hour volumes, the existing intersection geometry and traffic controls. The existing P.M. peak hour traffic volumes are summarized in **Figure 2**. These counts determined from 4-6 P.M. turning movement counts included in **Appendix C** were adjusted as per FDOT's Peak Season Factor Category Report for Brevard County. The Peak Season Category report along with the signal timing data are included in **Appendix D.**

The analysis was based on the ***Highway Capacity Software (HCS)*** in accordance with the procedures of the ***2010 Highway Capacity Manual*** for intersections. The results of the capacity analysis are summarized in **Table 2,** which shows that the study intersection currently operates at satisfactory Levels of Service. A detailed capacity analysis worksheet is included in **Appendix E**.

Table 2
Existing Intersection Level of Service

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 405 & Park Ave	Signal	13.7	B	20.6	C	19.1	B	21.0	C	18.8	B



Childcare Facility @ SR 405
Project № 5157
Figure 2

Existing PM Peak Hour Traffic Volumes

TRIP GENERATION AND PROPOSED DEVELOPMENT

The proposed development will consist of an 18,000 square foot day care center. **Figure 3** depicts the site plan of the development and its access configuration. To determine the impact of this development, an analysis of its trip generation characteristics was performed. This included a determination of the number of trips generated and their distribution and assignment onto the surrounding transportation network.

Trip Generation

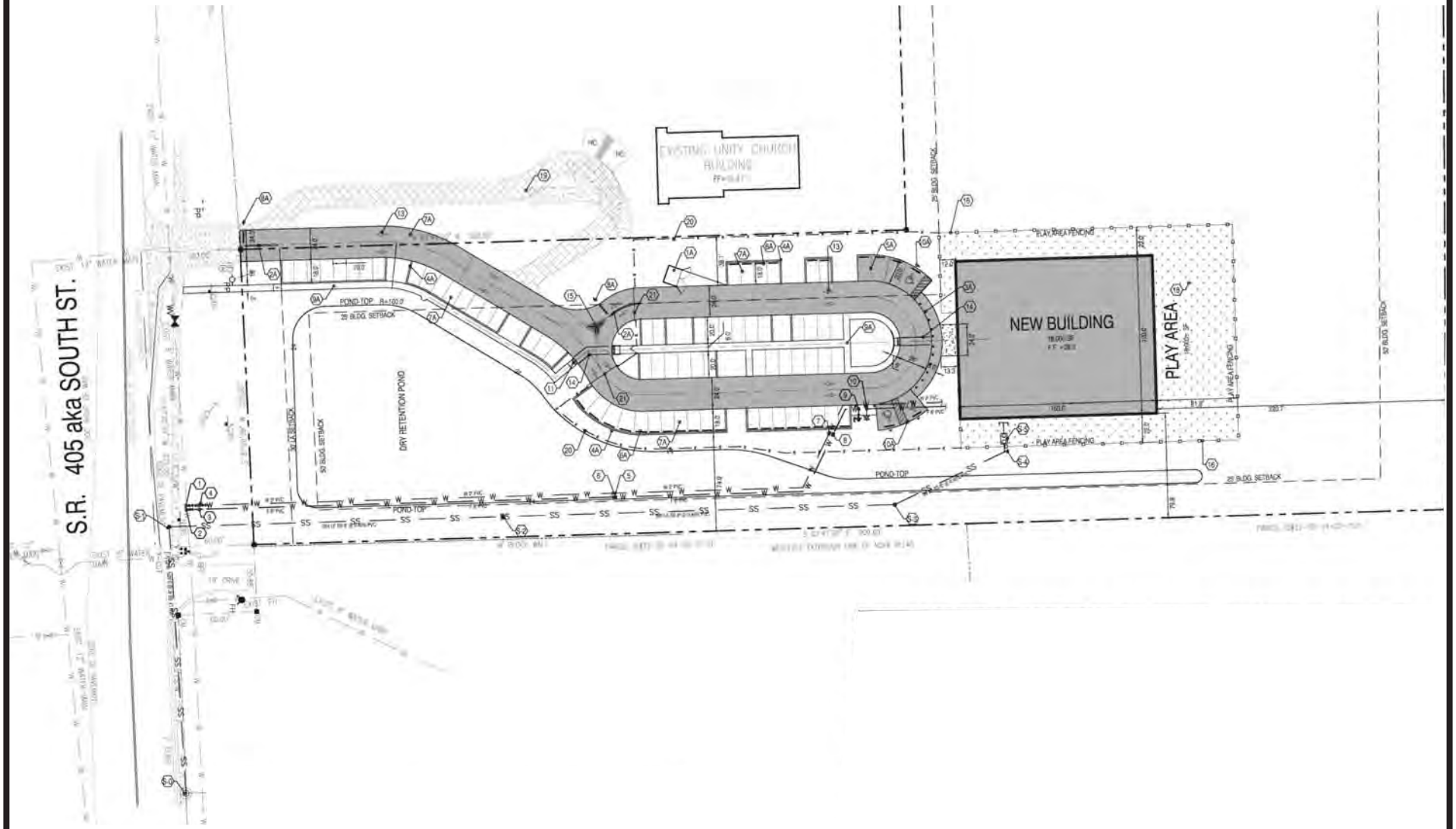
The trip generation of the proposed development was calculated using data from the 10th Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual.* The proposed project is expected to generate 857 daily trips and 200 P.M. peak hour trips, 94 entering and 106 exiting. **Table 3** provides a summary of the trip generation calculation. The ITE trip generation sheets are included in **Appendix F.**

Table 3
Trip Generation Summary

ITE Code	Land Use	Size	Daily Generation		P.M. Peak Hour Generation			
			Rate	Trips	Rate	Enter	Exit	Total
565	Day Care Center	18,000 Sq Ft	47.62	857	11.12	94	106	200

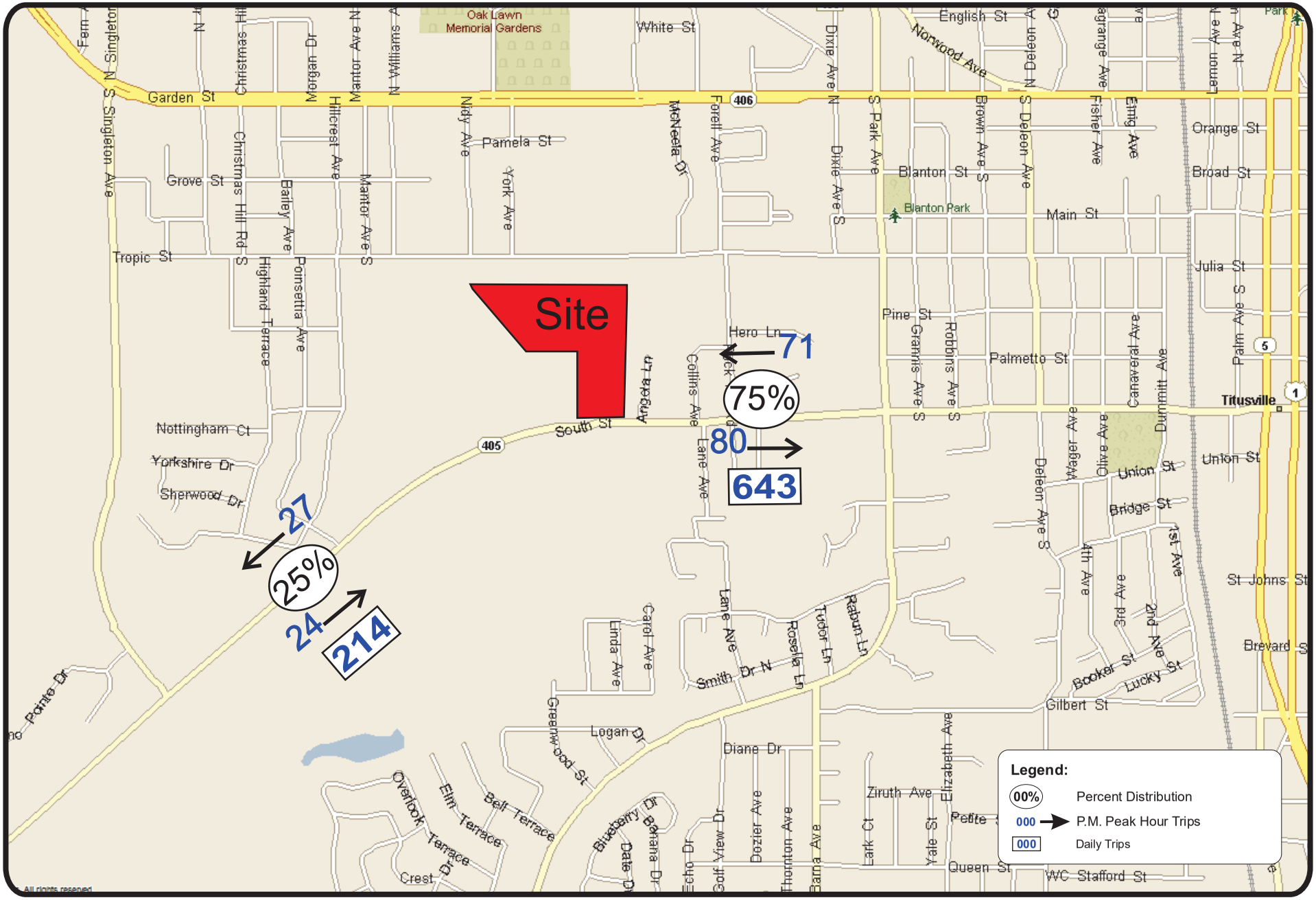
Trip Distribution and Assignment

The trip distribution for the proposed development was based upon information provided by the Developer/Owner and review of existing P.M. peak hour counts at the SR 405/S. Park Avenue intersection. The distribution thus determined on the area roadways is shown in **Figure 4**. The figure also shows the project trips assigned to the roadways.



Childcare Facility @ SR 405
Project № 5157
Figure 3

Site Plan



Childcare Facility @ SR 405
Project № 5157
Figure 4

Trip Distribution/Assignment

NTS

PROJECTED TRAFFIC CONDITIONS

Projected traffic conditions were analyzed similar to existing conditions utilizing daily traffic volumes for the roadways and P.M. peak hour traffic volumes for the study intersections. The roadway analysis consisted of a generalized capacity analysis with the projected traffic consisting of background traffic, vested trips and project trips. Background traffic was estimated with the use of an annual growth of 2%. Vested trips were determined from the respective traffic studies for South Carpenter Estates and Titusville Pointe provided by the City.

Roadway Capacity Analysis

A roadway segment analysis was performed for the study roadway segment by comparing the total daily traffic volumes with the corresponding capacity of the segment. The roadway segment analysis is shown in **Table 4**.

Table 4
Projected Daily Conditions Roadway Analysis

ID	Roadway Segment	Function/ Class	# of Lns	Adopted LOS	Daily Cap.	B'grnd Volume*	Vested Trips	Project Trips	Total Trips	LOS
215	Singleton Ave to Angela Ln	U/Minor	2	D	17,700	6,895	300	214	7,409	C
	Angela Ln to Park Ave	U/Minor	4	D	37,810	6,895	300	643	7,838	C

* Existing x 1.04

The results of the analysis indicate that the study roadway segment is projected to operate at satisfactory Levels of Service.

Intersection Capacity Analysis

Projected P.M. peak hour traffic conditions at the study intersections were estimated by combining project trips with background traffic plus vested trips as shown in **Figure 5**. An analysis of projected peak hour traffic conditions was performed using the ***Highway Capacity Software (HCS7)*** and procedures of the ***2010 Highway Capacity Manual*** for intersections. The results of the capacity analysis are included in **Appendix G** and summarized in **Table 5**.

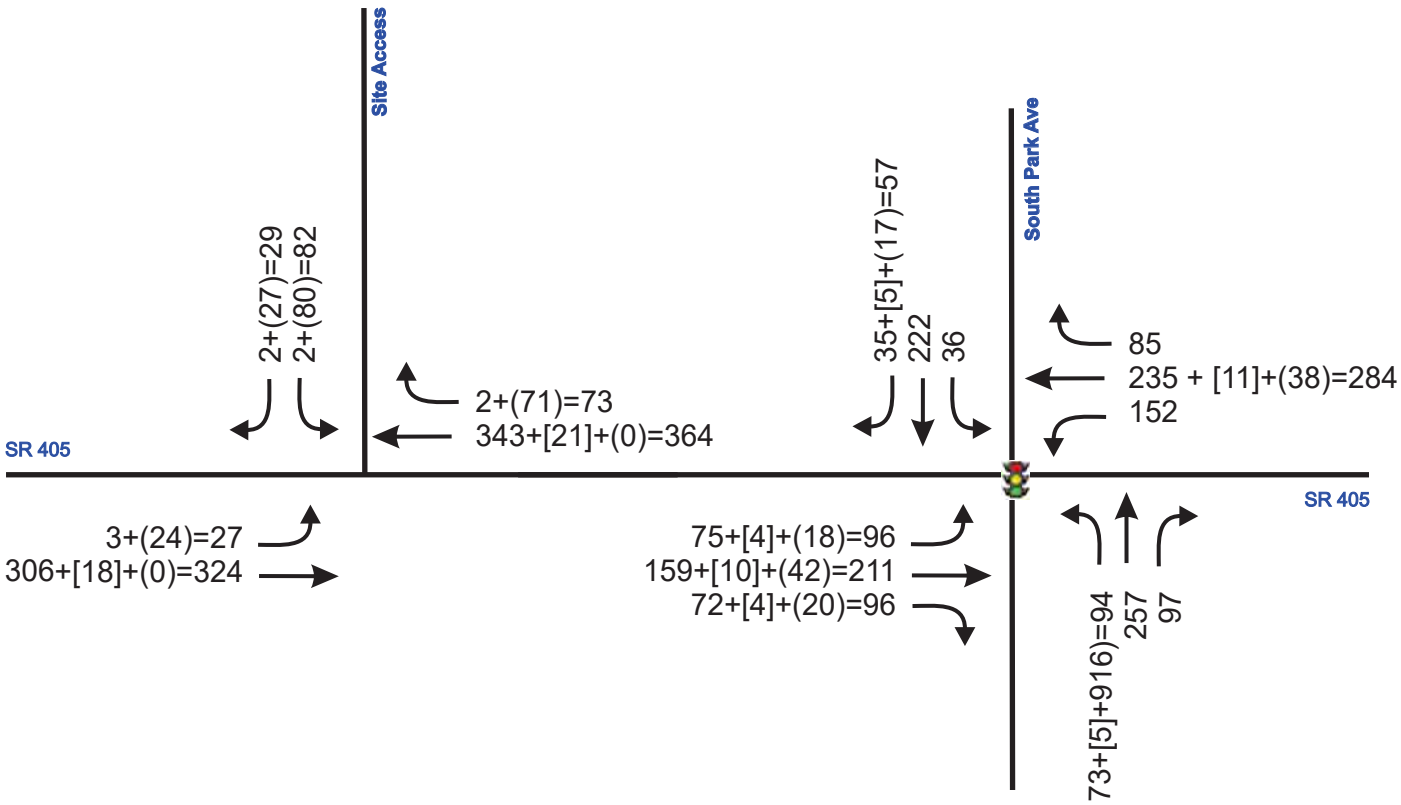
Table 5
Projected Intersection Level of Service

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
SR 405 & Park Ave	Signal	20.0	C	52.2	D	21.1	C	23.6	C	30.9	C
Site Entrance	Stop	8.4	A	---	---	---	---	19.4	C	---	---

This analysis shows that with the addition of projected trips, the intersections will operate at satisfactory Levels of Service.

Turn Lane Analysis

The proposed development will be served by the existing driveway which currently serves the Space Coast Unity Church. This driveway has a 100-foot taper for right turning vehicles. As per the FDOT Driveway Information Guide a right turn lane would not be warranted. However, a separate left turn lane for vehicles approaching from the west is recommended due to the relatively high travel speeds. The minimum length of this turn lane should be 185 feet.



Legend:
000 + [000]+ (000) = 000

- Total Traffic
- Project Trips
- S. Carpenter Estates +Titusville Pointe
- Background Traffic

Childcare Facility @ SR 405
Project № 5157
Figure 5

Projected PM Peak Hour Traffic Volumes

N
NTS

CONCLUSIONS

This study was undertaken in order to assess the traffic impact of a proposed day care center in Titusville, Florida. The site is located on SR 405 just west of Angela Lane. The proposed development will consist of an 18,000 square foot building. Access to the site will be provided via one full access on SR 405. The results of the study documented in this report are presented below:

- The proposed project will generate 857 daily trips and 200 P.M. peak hour trips.

- The study roadway segment currently operates within its adopted Level of Service and will continue to do so with the completion of the project.

- The study intersection currently operates within its adopted Level of Service under existing traffic conditions. Under the projected traffic conditions, the study intersection will continue to operate within its LOS standard.

- The development is proposed to be served by a full access driveway on SR 405. A separate left turn lane should be provided to serve project trips from the west. As per FDOT's Driveway Information Guide, a right turn lane will not be required. A 100-foot taper is already existing.

APPENDICES

APPENDIX A

Study Methodology and Related Correspondence

Rita Merhi

From: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent: Tuesday, October 23, 2018 12:28 PM
To: Turgut Dervish
Cc: Z. Sid Chehayeb, PE [CCEI]; Traphagen, Trevor
Subject: RE: Titusville Childcare @ SR 405
Attachments: Titusville Point Revised Traffic Impact Analysis.pdf; TIS South Carpenter Estates.pdf

Turgut,

The methodology is OK. Please consider the following projects for vested trips.

South Carpenter Estates (residential subdivision)
Titusville Pointe (multi use, commercial)
Brookshire (residential subdivision) – currently in progress

Thanks.
KB

From: Turgut Dervish [mailto:turgut@tpdtraffic.com]
Sent: Friday, October 19, 2018 10:51 AM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Z. Sid Chehayeb, PE [CCEI] <sid@cceifl.com>
Subject: RE: Titusville Childcare @ SR 405

Kwabena,
Attached is our traffic study methodology for a proposed childcare center on SR 405 in Titusville. Please review and provide us with any comments you may have.
Thanks,
Turgut

Turgut Dervish, P.E., President
TRAFFIC PLANNING AND DESIGN, INC.
535 Versailles Drive
Maitland, Florida 32751
407-628-9955
407-628-8850 FAX
turgut@tpdtraffic.com

TO: Kwabena Ofosu , P.E.
City Engineer

FROM: Turgut Dervish, P.E.

DATE: October 19, 2018

RE: Childcare Facility at SR 405
Traffic Study Methodology
Titusville, Florida
TPD № 5157

The following is an outline of the traffic study methodology to be followed in the conduct of a traffic study for a Childcare Facility in Titusville, Florida. Located on SR 405 just west of Angela Lane, the proposed childcare will consist of and 18,000 square foot building. See **Figure 1** for site location. **Figure 2** depicts the conceptual site plan.

Trip Generation

To be calculated with the use of the trip generation rates from the 10th *Edition of the ITE Trip Generation Manual as follows:*

- ITE Code, 565- Daycare Center.
- Daily Generation, 47.62 trips per 10,000 square feet.
- P.M. Peak hour Generation, 11.12 trips per 1,000 square feet (47% Entering/53% Exiting).
- See attached ITE trip generation sheets.

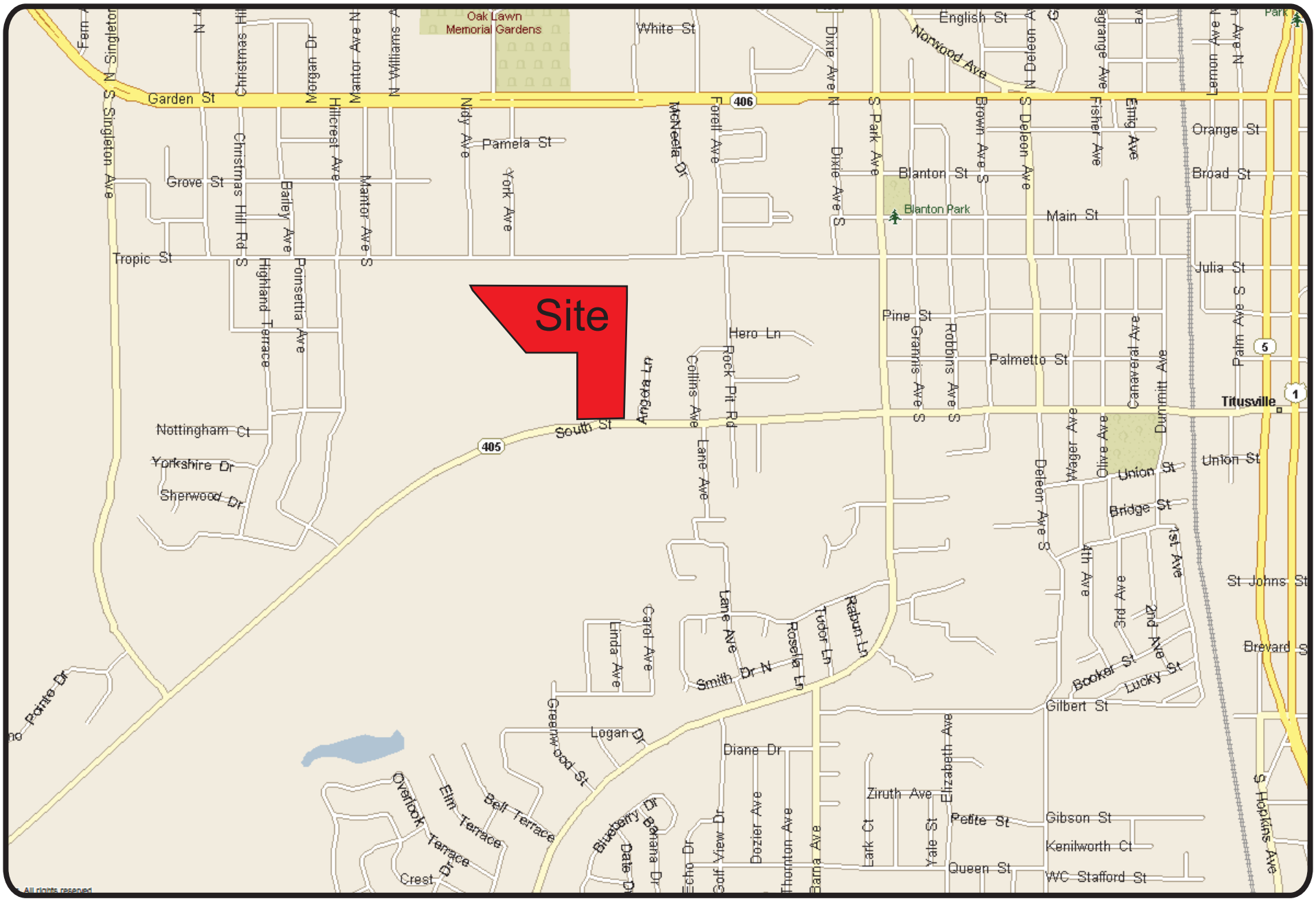
Based upon these rates, the proposed childcare will generate 857 daily trips and 200 P.M. Peak hour trips, 94 entering and 106 exiting.

Trip Distribution

Based upon review of existing turning counts at SR 405 and information provided by the Developer/Owner, the following distribution pattern was determined:

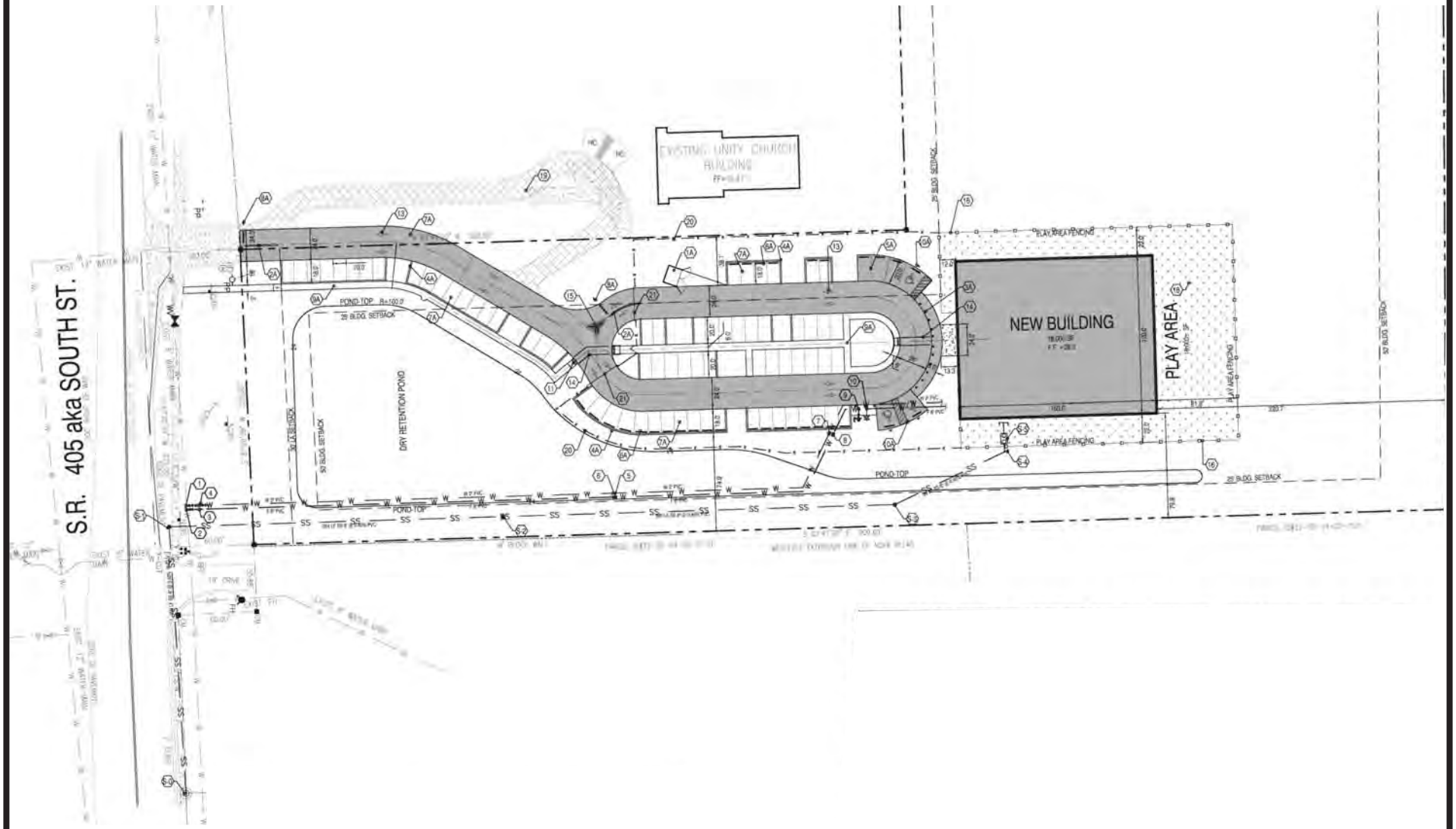
- To/From East of SR 405 75%
- To/From West of SR 405 25%

The distribution of the generated trips at the SR 405/South Park Avenue intersection will be based upon P.M. peak hour timing movement counts to be made.



Childcare Facility @ SR 405
Project № 5157
Figure 1

Site Location



Childcare Facility @ SR 405
Project № 5157
Figure 2

Site Plan

N
NTS

Study Area and Trip Assignment

A study area along SR 405 from south Singleton to south Park Avenue is proposed including the following intersections:

- SR 405 and south Park Avenue
- SR 405 and Site Entrance

The daily and P.M. peak hour trips to be generated will be assigned to SR 405 and the SR 405/south Park Avenue intersection based upon the distribution pattern as described herein.

Traffic Analysis

The analysis will be conducted for the project's buildout year 2020. Existing traffic will be expanded to this year using historical growth rates plus vested trips available with the City to obtain background traffic volumes. Based upon a trend analysis of historical traffic data on SR 405, an annual growth rate of 1.59% was determined but a minimum of 2.00% will be used. The trend chart is attached. Project trips will be combined with background traffic to obtain total traffic to be used in the analysis. In the analysis the FDOT/City LOS standards for roadways and HCS software for intersections will be utilized.

Traffic Report

A traffic report will be prepared summarizing the analysis and results.

* * * * * * * * * * * *

Please review and provide any comments you may have.

ATTACHMENT

ITE Trip Generation Sheets

Day Care Center
(565)

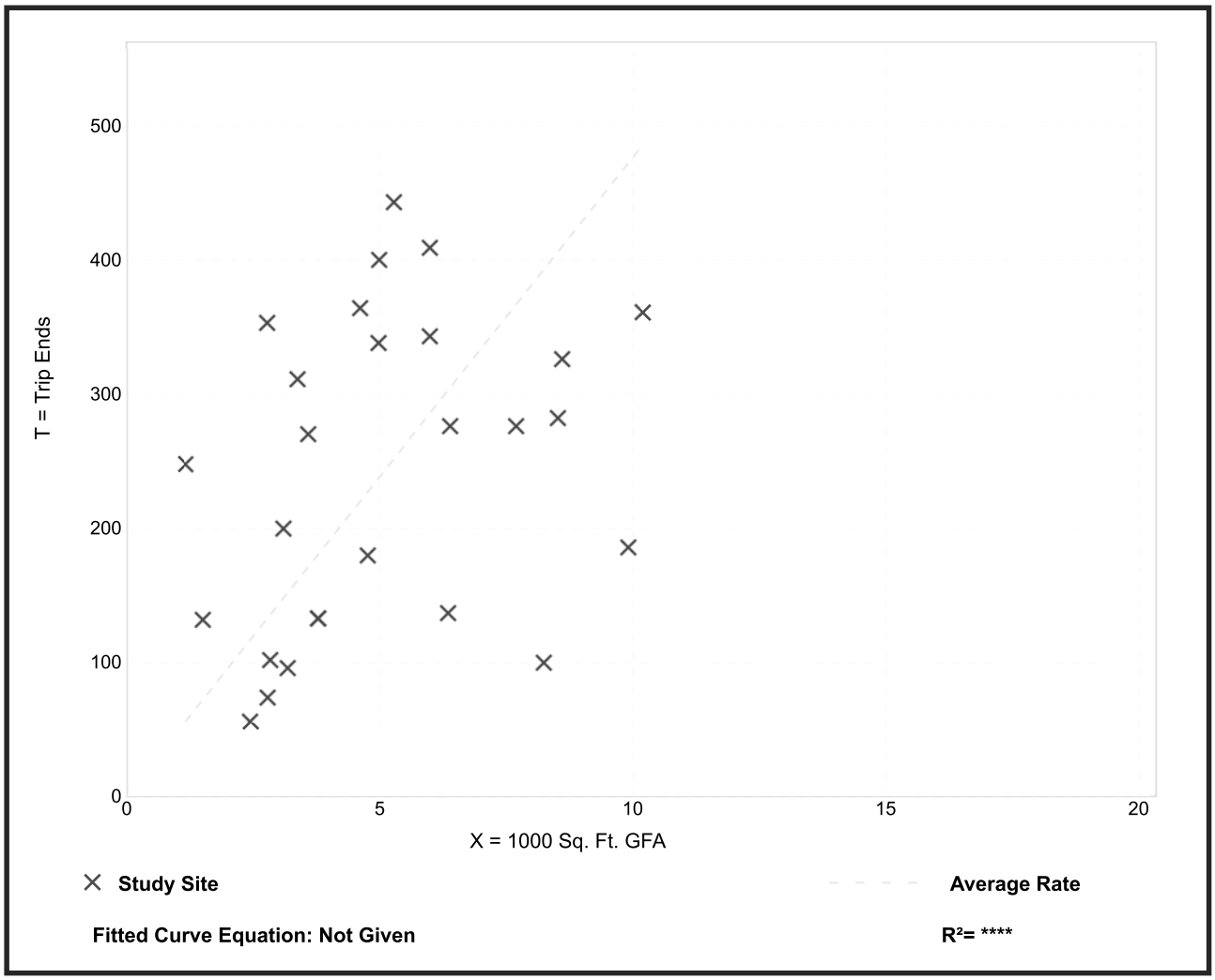
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

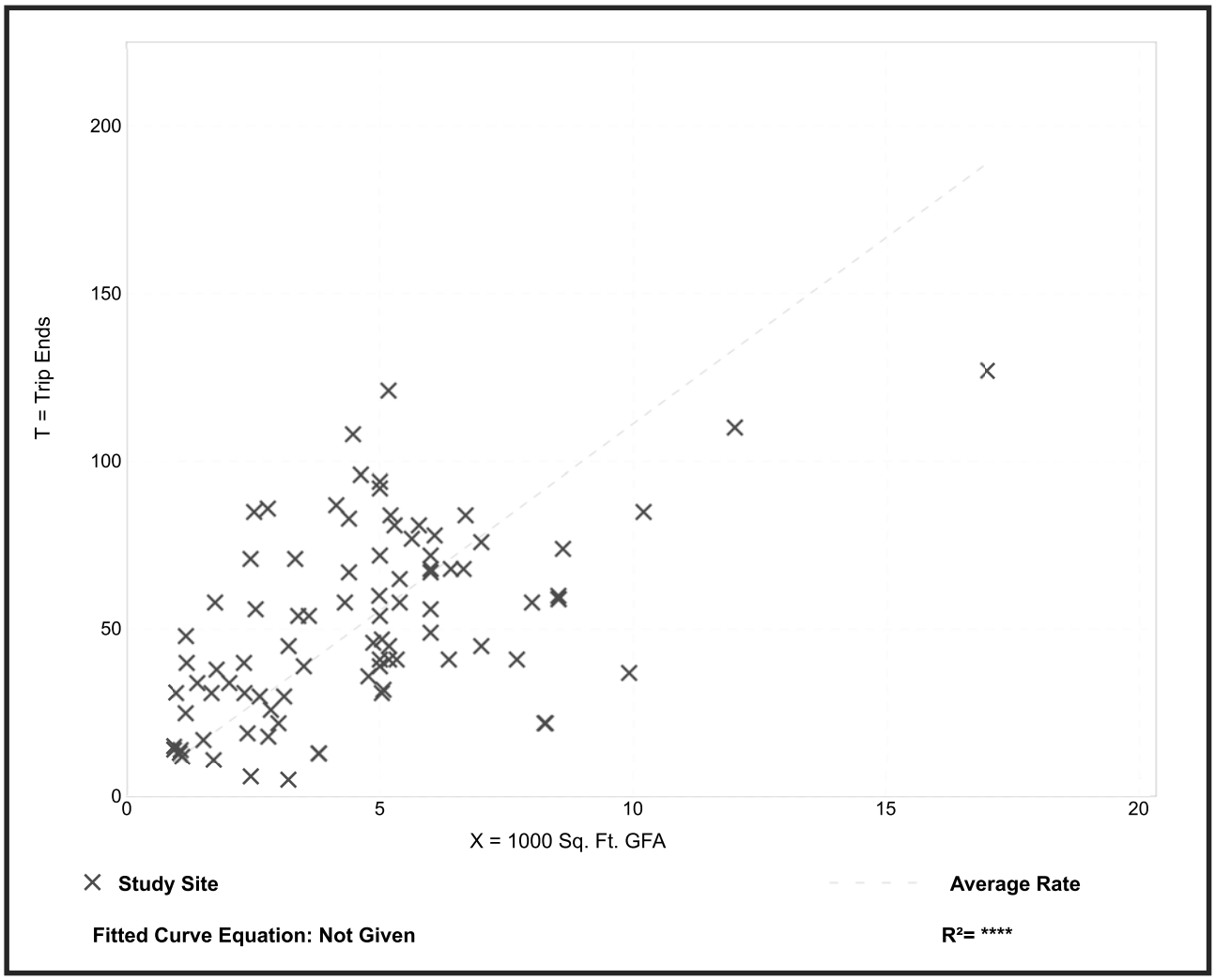
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 90
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

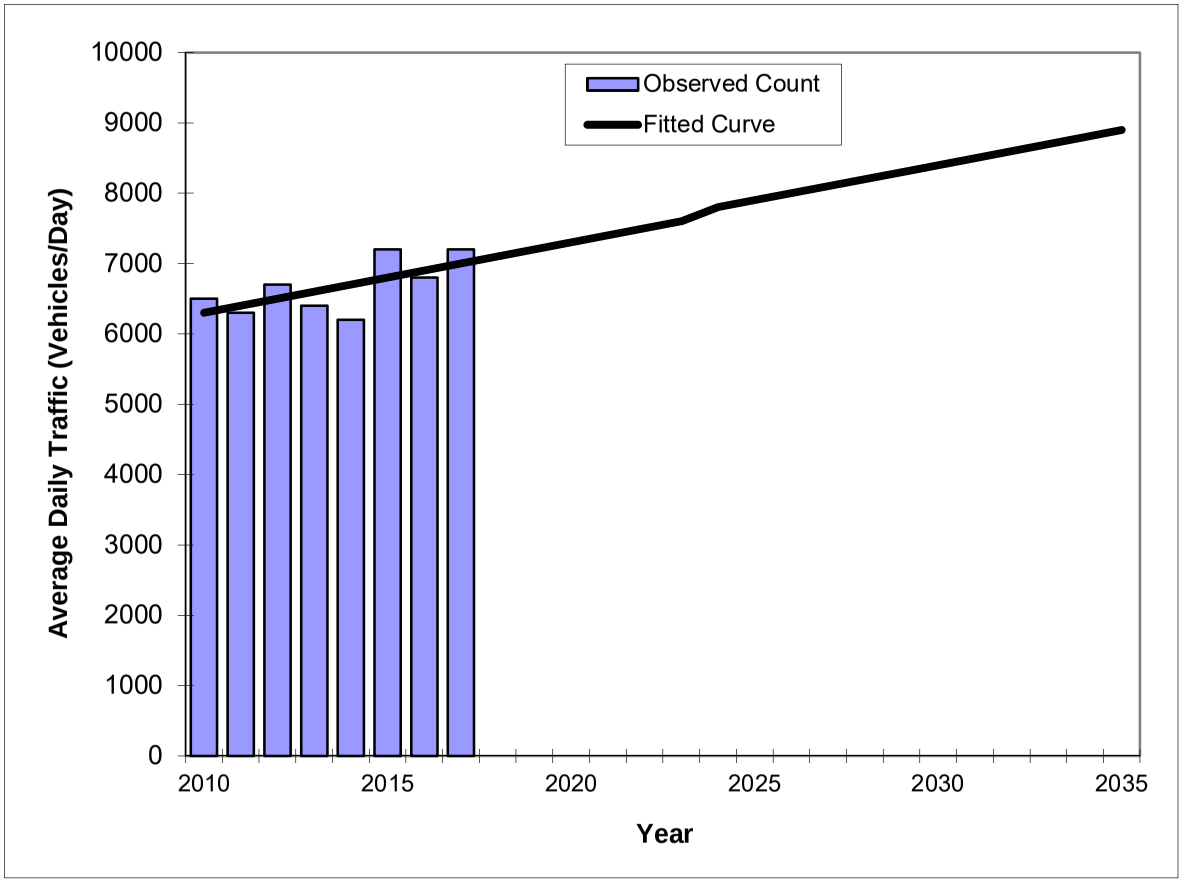
Trend Analysis Chart

Traffic Trends - V3.0

SR 405 -- W of S. Park Avenue

FIN#	0
Location	1

County:	Brevard (70)
Station #:	5139
Highway:	SR 405



Year	Traffic (ADT/AADT) Count*	Trend**
2010	6500	6300
2011	6300	6400
2012	6700	6500
2013	6400	6600
2014	6200	6700
2015	7200	6800
2016	6800	6900
2017	7200	7000
2020 Opening Year Trend		
2020	N/A	7300
2023 Mid-Year Trend		
2023	N/A	7600
2025 Design Year Trend		
2025	N/A	7900
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	104
Trend R-squared:	43.37%
Trend Annual Historic Growth Rate:	1.59%
Trend Growth Rate (2017 to Design Year):	1.61%
Printed:	18-Oct-18

Straight Line Growth Option

APPENDIX B

Traffic Count Database

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2008 - 2017

ID	ROAD	SEGMENT (Sections)	2008 AADT	2009 AADT	2010 AADT	2011 AADT	2012 AADT	2013 AADT	2014 AADT	2015 AADT	2016 AADT	2,017 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH															
239	OLD DIXIE	GARDEN-DAIRY	1,380	NC	1,200	NC	1,320	NC	1,190	NC	NC	NC	15,600	12/9/2014	Urban Major Collector
240	OLD DIXIE	DAIRY-PARKER	NC	930	NC	960	NC	910	NC	860	NC	940	15,600	11/8/2017	Urban Major Collector
	PARRISH	HOLDER-US 1	700	1,290	600	1,320	690	1,340	780	1,240	850	1,210			
242	PARRISH	HOLDER-SINGLETON	700	NC	600	NC	690	NC	780	NC	840	NC	15,600	11/9/2016	Urban Major Collector
241	PARRISH	SINGLETON-US 1	NC	1,290	NC	1,320	NC	1,340	NC	1,240	NC	1,210	15,600	12/13/2017	Urban Major Collector
211	PT ST JOHN PKWY	I-95-GRISSOM	7,910	8,440	8,410	8,570	8,210	8,890	9,960	10,550	10,370	10,990	39,800	11/8/2017	Urban Minor Arterial
	SINGLETON	SR 405 (SOUTH ST)-SR 46	4,965	8,430	4,705	7,830	4,270	7,730	1,680			8,180			
578	SINGLETON	SR 405 (SOUTH ST)-GARDEN					6,970	NC	NC	NC	NC	7,570	17,700	11/8/2017	Urban Major Collector
238	SINGLETON	GARDEN-DAIRY	8,260	8,430	7,970	7,830	NC	7,730	NC	NC	NC	8,790	15,600	11/8/2017	Urban Major Collector
547	SINGLETON	DAIRY-SR 46	1,670	NC	1,440	NC	1,570	NC	1,680	NC	NC	NC	15,600	12/16/2014	Urban Major Collector
	SISSON	SR 405-SR 50	6,125	6,770	6,200	6,365	6,025	6,150	6,770	6,825	7,500	7,905			
234	SISSON	SR 405-SAN MATEO BLVD	5,590	6,170	5,520	5,650	5,340	5,300	5,870	5,980	6,450	6,980	15,600	12/12/2017	Urban Major Collector
550	SISSON	SAN MATEO BLVD-SR 50	6,660	7,370	6,880	7,080	6,710	7,000	7,670	7,670	8,550	8,830	15,600	11/29/2017	Urban Major Collector
201	SR 46	VOLUSIA CO-FAWN LAKE	5,420	5,500	5,520	5,760	5,640	5,750	5,970	5,680	7,230	7,070	8,400	12/13/2017	Rural Principal Arterial Other
	SR 46	FAWN LAKE-US 1	9,380	9,280	9,230	9,420	9,140	9,325	9,605	11,000	10,755	11,040			
200	SR 46	FAWN LAKE-I-95	8,820	8,730	8,590	8,960	8,580	8,970	9,080	NC	9,930	10,360	14,160	11/29/2017	Urban Principal Arterial-Other
199	SR 46	I-95-US 1	9,940	9,830	9,870	9,880	9,700	9,680	10,130	11,000	11,580	11,720	14,160	11/7/2017	Urban Principal Arterial-Other
231	SR 50	ORANGE CO-I-95	11,070	11,540	10,760	10,290	UC	9,160	10,190	10,270	10,470	11,500	40,300	11/28/2017	Rural Principal Arterial Other
	SR 50	I 95-US 1	20,628	21,476	20,018	20,004	UC	18,923	18,487	21,715	20,268	21,568			
232	SR 50	I-95-SR 405	26,010	26,710	26,290	25,080	UC	24,260	UC	27,980	23,810	30,320	41,790	11/8/2017	Urban Principal Arterial-Other
164	SR 50	SR 405-BARNA	20,690	21,560	20,260	20,580	UC	19,220	NC	24,080	NC	23,350	41,790	12/13/2017	Urban Minor Arterial
163	SR 50	BARNA-SISSON	20,370	21,880	20,230	20,280	UC	NC	20,800	NC	21,360	NC	41,790	11/8/2016	Urban Minor Arterial
162	SR 50	SISSON-HOPKINS	20,710	21,400	18,940	19,680	UC	18,620	20,460	20,240	20,900	16,660	34,020	11/29/2017	Urban Minor Arterial
161	SR 50	HOPKINS-US 1	15,360	15,830	14,370	14,400	UC	13,590	14,200	14,560	15,000	15,940	34,020	12/12/2017	Urban Minor Arterial
	SR 405 (COLUMBIA)	SR 50-US 1	19,416	19,668	17,762	17,338	16,786	16,330	16,710	17,004	17,604	18,292			
218	SR 405 (COLUMBIA)	SR 50-BARNA	20,780	20,010	18,580	18,920	18,510	17,090	19,070	19,500	19,110	20,210	41,790	11/28/2017	Urban Principal Arterial-Other
219	SR 405 (COLUMBIA)	BARNA-SR 407	20,200	20,970	19,030	18,820	18,350	17,220	16,850	17,740	17,950	18,510	41,790	11/28/2017	Urban Principal Arterial-Other
220	SR 405 (COLUMBIA)	SR 407-GRISSOM	22,350	23,210	20,900	20,110	19,550	19,660	19,730	20,020	21,110	21,370	41,790	11/28/2017	Urban Principal Arterial-Other
221	SR 405 (COLUMBIA)	GRISSOM-SISSON	18,050	18,320	16,280	15,880	15,060	15,200	16,080	15,730	17,140	17,060	41,790	11/28/2017	Urban Principal Arterial-Other
222	SR 405 (COLUMBIA)	SISSON-US 1	15,700	15,830	14,020	12,960	12,460	12,480	11,820	12,030	12,710	14,310	41,790	12/12/2017	Urban Principal Arterial-Other
	SR 405 (SOUTH)	SR 50-SINGLETON(END 2L)	15,520	15,780	15,180	15,750	15,040	14,605	15,095	14,265	15,690	16,130			
217	SR 405 (SOUTH)	SR 50-FOX LAKE	18,180	18,210	17,510	18,440	17,550	16,940	17,720	16,910	18,210	18,840	18,590	11/8/2017	Urban Minor Arterial
216	SR 405 (SOUTH)	FOX LAKE-SINGLETON	12,860	13,350	12,850	13,060	12,530	12,270	12,470	11,620	13,170	13,420	17,700	11/8/2017	Urban Minor Arterial
	SR 405 (SOUTH)	SINGLETON(END 2L)-US 1	7,005	6,565	6,185	6,245	5,830	6,480	6,070	6,930	6,480	6,630			
215	SR 405 (SOUTH)	SINGLETON-PARK	7,480	7,160	6,870	6,910	6,440	6,480	6,660	6,930	6,960	6,630	37,810	12/13/2017	Urban Minor Arterial
214	SR 405 (SOUTH)	PARK-US 1	6,530	5,970	5,500	5,580	5,220	NC	5,290	NC	5,520	NC	34,020	11/9/2016	Urban Minor Arterial
595	SR 406 (GARDEN)	CARPENTER-I-95							6,260	NC	6,960	NC	15,600	11/9/2016	Urban Major Collector
	SR 406 (GARDEN)	I-95-WASHINGTON	13,125	13,030	12,038	11,920	11,698	11,345	11,890	12,833	13,613	13,243			
202	SR 406 (GARDEN)	I-95-SINGLETON	13,440	13,810	13,940	12,960	12,530	11,670	12,800	13,850	14,510	14,730	41,790	12/13/2017	Urban Principal Arterial-Other
203	SR 406 (GARDEN)	SINGLETON-PARK	16,850	16,250	15,470	15,700	15,410	14,980	15,690	18,060	16,180	16,930	39,800	11/29/2017	Urban Principal Arterial-Other
204	SR 406 (GARDEN)	PARK-HOPKINS	12,400	11,740	10,000	10,510	10,480	10,080	10,960	10,940	13,780	10,930	39,800	12/13/2017	Urban Principal Arterial-Other
205	SR 406 (GARDEN)	HOPKINS-WASHINGTON	9,810	10,320	8,740	8,510	8,370	8,650	8,110	8,480	9,980	10,380	32,400	11/29/2017	Urban Principal Arterial-Other
233	SR 406 (GARDEN)	WASHINGTON-BLACK POINT RD.	5,350	5,210	5,560	4,370	4,800	4,510	4,030	4,900	5,960	5,290	14,800	12/13/2017	Urban Principal Arterial-Other
	SR 407	SR 528-SR 405	6,463	6,487	6,413	6,380	6,070	5,867	6,833	7,210	8,550	8,693			
225	SR 407	SR 528-I-95	6,930	6,360	6,660	6,990	6,340	6,140	6,830	7,220	8,750	9,150	8,820	12/13/2017	Rural Principal Arterial - Freeways & Expressways
548	SR 407	I-95-SHEPARD DR	6,710	7,060	6,630	6,500	6,320	6,290	7,460	7,660	9,190	8,980	24,200	12/12/2017	Urban Principal Arterial - Freeways & Expressways
224	SR 407	SHEPARD DR-SR 405	5,750	6,040	5,950	5,650	5,550	5,170	6,210	6,750	7,710	7,950	24,200	11/28/2017	Urban Principal Arterial - Freeways & Expressways

**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

APPENDIX C

Turning Movement Counts

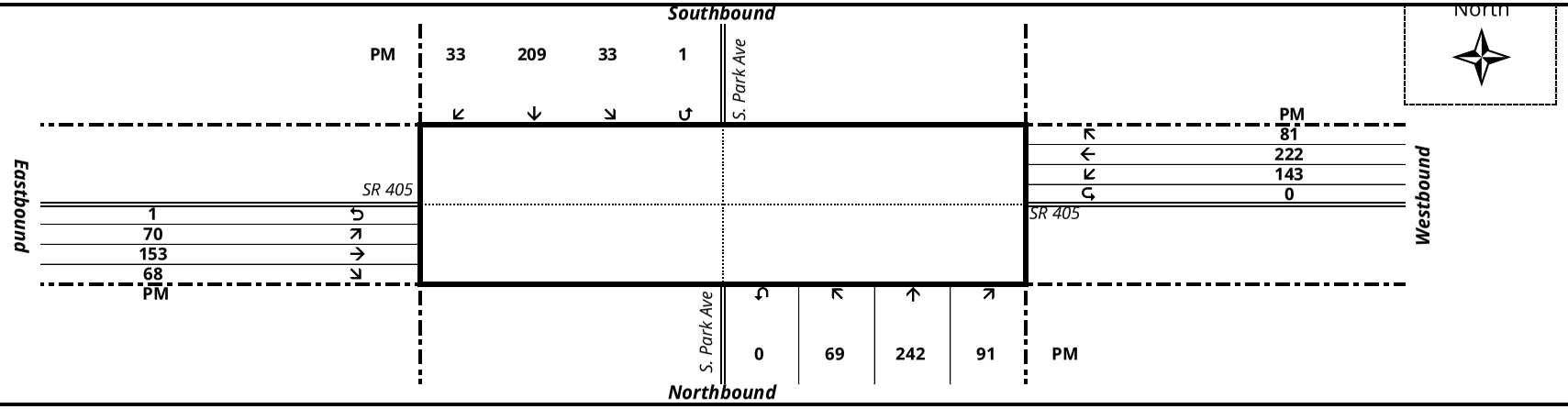
15 MINUTE TURNING MOVEMENT COUNTS

(Cars and Trucks)

DATE: November 15, 2018 (Thursday) **CITY:** Titusville **LATITUDE:** 0

LOCATION: S. Park Ave & SR 405 **COUNTY:** Brevard County **LONGITUDE:** 0

	S. Park Ave					S. Park Ave						SR 405					SR 405						
TIME	NORTHBOUND					SOUTHBOUND					N/S	EASTBOUND					WESTBOUND					E/W	GRAND
BEGIN	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	TOTAL
04:00 PM	10	58	15	0	**83**	8	46	12	0	**66**	**149**	21	36	14	0	**71**	47	55	21	1	**124**	**195**	**344**
04:15 PM	7	42	9	0	**58**	12	44	7	0	**63**	**121**	8	39	11	0	**58**	17	43	15	0	**75**	**133**	**254**
04:30 PM	12	52	22	0	**86**	4	54	9	0	**67**	**153**	14	40	21	1	**76**	40	64	25	0	**129**	**205**	**358**
04:45 PM	13	45	13	0	**71**	8	46	7	1	**62**	**133**	16	49	13	0	**78**	16	41	26	0	**83**	**161**	**294**
TOTAL	42	197	59	0	**298**	32	190	35	1	**258**	**556**	59	164	59	1	**283**	120	203	87	1	**411**	**694**	**1,250**
05:00 PM	24	75	29	0	**128**	14	66	10	0	**90**	**218**	26	36	20	0	**82**	47	74	18	0	**139**	**221**	**439**
05:15 PM	20	70	27	0	**117**	7	43	7	0	**57**	**174**	14	28	14	0	**56**	40	43	12	0	**95**	**151**	**325**
05:30 PM	12	36	18	0	**66**	4	43	7	0	**54**	**120**	19	28	11	0	**58**	21	29	14	0	**64**	**122**	**242**
05:45 PM	5	23	13	0	**41**	10	26	9	0	**45**	**86**	17	37	10	0	**64**	22	34	20	2	**78**	**142**	**228**
TOTAL	61	204	87	0	**352**	35	178	33	0	**246**	**598**	76	129	55	0	**260**	130	180	64	2	**376**	**636**	**1,234**
PM Peak																						**Peak Hour Factor:**	**0.806**
04:30 PM to 05:30 PM	**69**	**242**	**91**	**0**	**402**	**33**	**209**	**33**	**1**	**276**	**678**	**70**	**153**	**68**	**1**	**292**	**143**	**222**	**81**	**0**	**446**	**738**	**1,416**



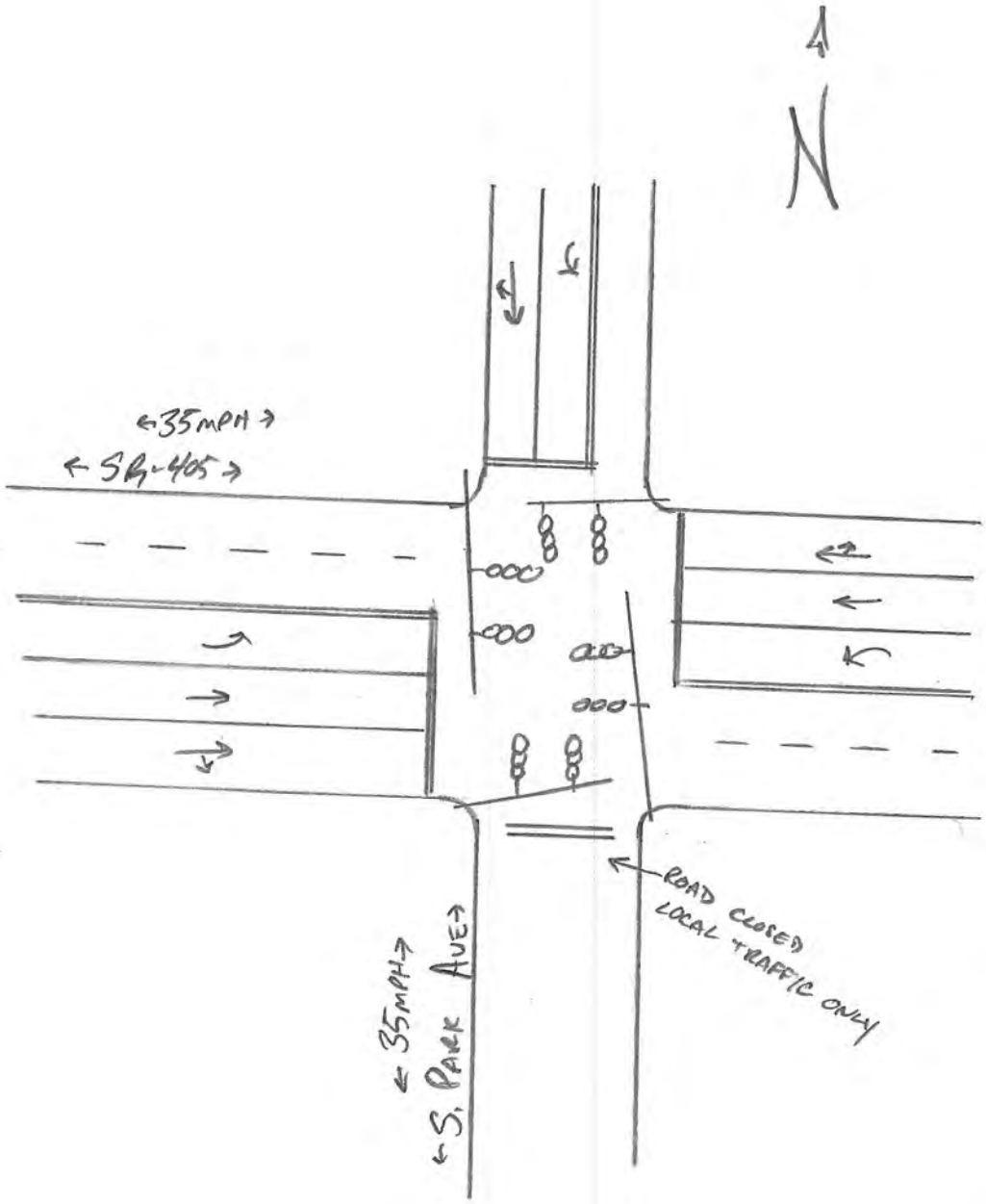
15 MINUTE TURNING MOVEMENT COUNTS

(Trucks Only)

DATE: November 15, 2018 (Thursday) **CITY:** Titusville **LATITUDE:** 0

LOCATION: S. Park Ave & SR 405 **COUNTY:** Brevard County **LONGITUDE:** 0

	S. Park Ave					S. Park Ave						SR 405					SR 405						
TIME	NORTHBOUND					SOUTHBOUND					N/S	EASTBOUND					WESTBOUND					E/W	GRAND
BEGIN	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	L	T	R	*U-turn*	TOTAL	L	T	R	*U-turn*	TOTAL	TOTAL	TOTAL
04:00 PM	1	0	0	0	**1**	0	1	0	0	**1**	**2**	1	0	1	0	**2**	0	1	0	0	**1**	**3**	**5**
04:15 PM	0	0	0	0	**0**	0	1	0	0	**1**	**1**	1	1	0	0	**2**	0	0	0	0	**0**	**2**	**3**
04:30 PM	0	1	0	0	**1**	0	1	0	0	**1**	**2**	0	0	2	0	**2**	0	1	0	0	**1**	**3**	**5**
04:45 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	1	0	0	**1**	0	1	0	0	**1**	**2**	**2**
TOTAL	1	1	0	0	**2**	0	3	0	0	**3**	**5**	2	2	3	0	**7**	0	3	0	0	**3**	**10**	**15**
05:00 PM	0	2	0	0	**2**	0	0	0	0	**0**	**2**	0	0	0	0	**0**	0	0	0	0	**0**	**0**	**2**
05:15 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	0	0	0	**0**	1	0	0	0	**1**	**1**	**1**
05:30 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	1	0	0	**1**	0	0	0	0	**0**	**1**	**1**
05:45 PM	0	0	0	0	**0**	0	0	0	0	**0**	**0**	0	0	0	0	**0**	0	0	1	0	**1**	**1**	**1**
TOTAL	0	2	0	0	**2**	0	0	0	0	**0**	**2**	0	1	0	0	**1**	1	0	1	0	**2**	**3**	**5**
PM Peak																							
04:30 PM to 05:30 PM	**0**	**3**	**0**	**0**	**3**	**0**	**1**	**0**	**0**	**1**	**4**	**0**	**1**	**2**	**0**	**3**	**1**	**2**	**0**	**0**	**3**	**6**	**10**


N
←35MPH→
← SR-405 →
ROAD CLOSED
LOCAL TRAFFIC ONLY
←35MPH→
← S. PARK AVE →

APPENDIX D

Peak Season Category Report/Signal Timings

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.92

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	1.00	1.09
2	01/08/2017 - 01/14/2017	0.99	1.08
3	01/15/2017 - 01/21/2017	0.98	1.07
4	01/22/2017 - 01/28/2017	0.96	1.04
* 5	01/29/2017 - 02/04/2017	0.95	1.03
* 6	02/05/2017 - 02/11/2017	0.93	1.01
* 7	02/12/2017 - 02/18/2017	0.92	1.00
* 8	02/19/2017 - 02/25/2017	0.91	0.99
* 9	02/26/2017 - 03/04/2017	0.90	0.98
*10	03/05/2017 - 03/11/2017	0.89	0.97
*11	03/12/2017 - 03/18/2017	0.88	0.96
*12	03/19/2017 - 03/25/2017	0.89	0.97
*13	03/26/2017 - 04/01/2017	0.91	0.99
*14	04/02/2017 - 04/08/2017	0.92	1.00
*15	04/09/2017 - 04/15/2017	0.94	1.02
*16	04/16/2017 - 04/22/2017	0.95	1.03
*17	04/23/2017 - 04/29/2017	0.96	1.04
18	04/30/2017 - 05/06/2017	0.97	1.05
19	05/07/2017 - 05/13/2017	0.98	1.07
20	05/14/2017 - 05/20/2017	0.99	1.08
21	05/21/2017 - 05/27/2017	1.00	1.09
22	05/28/2017 - 06/03/2017	1.02	1.11
23	06/04/2017 - 06/10/2017	1.03	1.12
24	06/11/2017 - 06/17/2017	1.04	1.13
25	06/18/2017 - 06/24/2017	1.04	1.13
26	06/25/2017 - 07/01/2017	1.03	1.12
27	07/02/2017 - 07/08/2017	1.03	1.12
28	07/09/2017 - 07/15/2017	1.02	1.11
29	07/16/2017 - 07/22/2017	1.03	1.12
30	07/23/2017 - 07/29/2017	1.03	1.12
31	07/30/2017 - 08/05/2017	1.04	1.13
32	08/06/2017 - 08/12/2017	1.04	1.13
33	08/13/2017 - 08/19/2017	1.05	1.14
34	08/20/2017 - 08/26/2017	1.08	1.17
35	08/27/2017 - 09/02/2017	1.12	1.22
36	09/03/2017 - 09/09/2017	1.15	1.25
37	09/10/2017 - 09/16/2017	1.19	1.29
38	09/17/2017 - 09/23/2017	1.16	1.26
39	09/24/2017 - 09/30/2017	1.13	1.23
40	10/01/2017 - 10/07/2017	1.10	1.20
41	10/08/2017 - 10/14/2017	1.08	1.17
42	10/15/2017 - 10/21/2017	1.05	1.14
43	10/22/2017 - 10/28/2017	1.04	1.13
44	10/29/2017 - 11/04/2017	1.03	1.12
45	11/05/2017 - 11/11/2017	1.02	1.11
46	11/12/2017 - 11/18/2017	1.02	1.11
47	11/19/2017 - 11/25/2017	1.01	1.10
48	11/26/2017 - 12/02/2017	1.01	1.10
49	12/03/2017 - 12/09/2017	1.01	1.10
50	12/10/2017 - 12/16/2017	1.00	1.09
51	12/17/2017 - 12/23/2017	0.99	1.08
52	12/24/2017 - 12/30/2017	0.98	1.07
53	12/31/2017 - 12/31/2017	0.98	1.07

* PEAK SEASON

02-MAR-2018 15:35:06 830UPD 5_7000_PKSEASON.TXT

#38

DETAIL OF SIGNAL HEADS

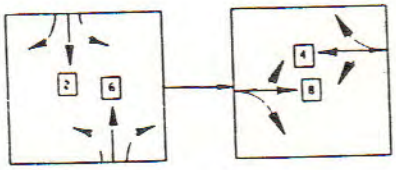


RED
YELLOW
GREEN

NO. REQ'D 8 AS.

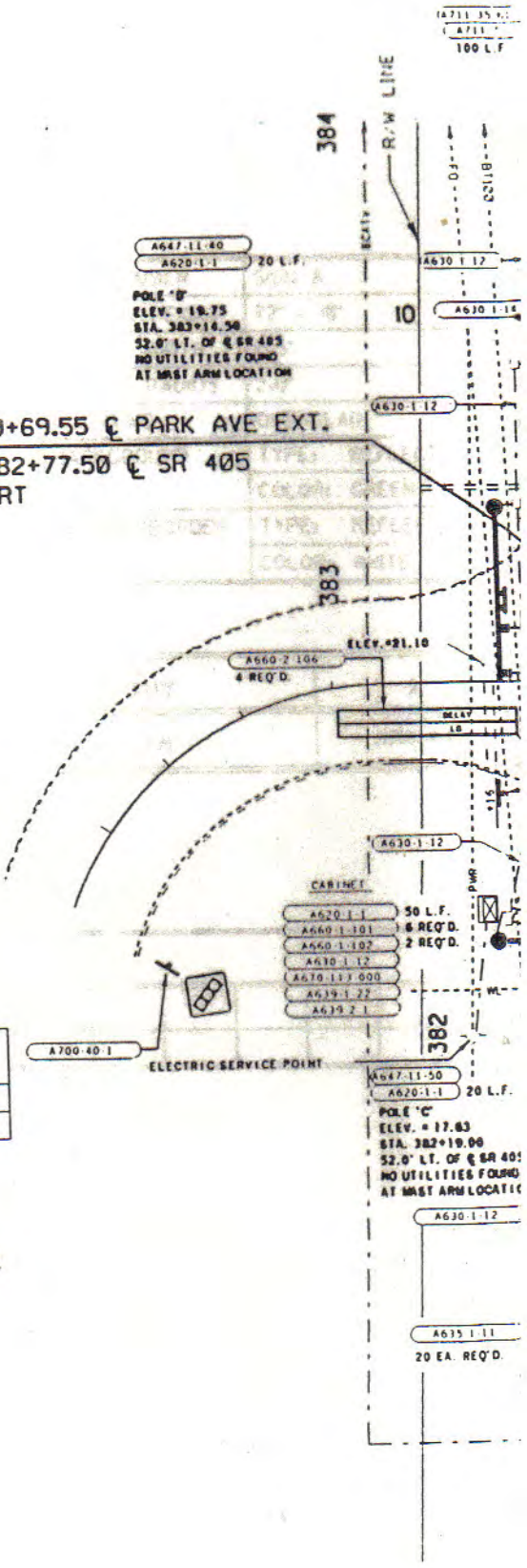
ITEM NO. 650-1-131

MOVEMENT DIAGRAM



CONTROLLER TIMINGS

MOVEMENT	MIN	EXT	MAX	CL	ALL RED	WALK	FDW	RECALL	DETECTOR FUNCTION	FLASH
2+6	17	3	50	4	1	-	-	MIN.	LOCK	YELLOW
4+8	6	3	15	4	1	-	-	OFF	NL	RED



SR 405 + PARK South of Fox lAKe

UTILITY CONTACTS:

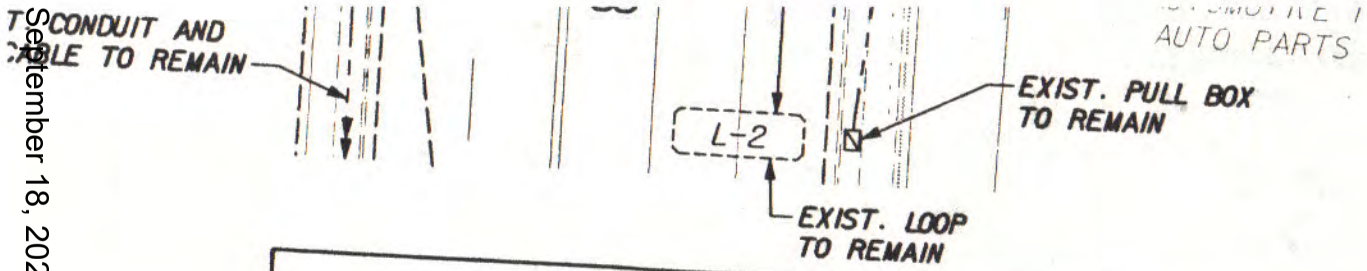
BELLSOUTH TELECOMUNICATIONS, INC.	407-455-7133.
CONTACT FLORIDA POWER AND LIGHT COMPANY	407-726-4820.
TIME WARNER CABLE	407-631-3770.
CITY GAS COMPANY OF FLORIDA	407-632-1735.
CITY OF TITUSVILLE COMPANY	407-268-6050.
BREVARD COUNTY	407-633-2041.

REVISIONS

BY	DESCRIPTION	DATE	BY	DESCRIPTION

#30

PARK Ave. SR405 (South St)



SUGGESTED INITIAL CONTROLLER TIMING

MOVEMENT NUMBER	1	2	3	4	5	6	7	8
MINIMUM GREEN		14		8		14		8
EXTENSION		3.5		3.5		3.5		3.5
MAXIMUM GREEN 1		29		36		29		36
MAXIMUM GREEN 2		0		0		0		0
YELLOW CLEARANCE		4		4		4		4
ALL RED		1		1		1		1
PEDESTRIAN WALK		8		8		8		8
PED. CLEARANCE		14		24		14		24
RECALL		MIN		OFF		MIN		OFF
DETECTOR FUNCTION		LOCK		NON-LOCK		LOCK		NON-LOCK
FLASHING MODE		YELLOW		RED		YELLOW		RED

SIGNAL TIMING IS INITIAL AND MAY BE ADJUSTED BY THE MAINTAINING AGENCY.

le Florida

SIGNALIZATION PLAN

SHEET NO.

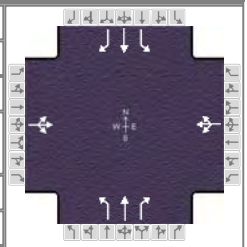
-

APPENDIX E

Existing Capacity Analysis Worksheet

HCS7 Signalized Intersection Results Summary

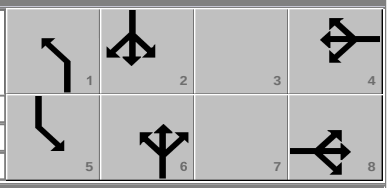
General Information				Intersection Information	
Agency	TPD, Inc.			Duration, h	0.25
Analyst	TPD, Inc.	Analysis Date	11/19/2018	Area Type	Other
Jurisdiction	Titusville	Time Period	P.M. Peak Hour (Existing)	PHF	0.81
Urban Street	SR 405	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	SR 405 & S Park Ave	File Name	SR 405 & S Park Ave.xus		
Project Description	Step by Step learning center TPD (5157)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	72	156	69	146	226	82	70	247	93	35	213	34

Signal Information			
Cycle, s	60.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.1	2.0	14.0	25.1	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	1.0	0.0	1.0	1.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		8.0		8.0	1.1	3.0	1.1	3.0
Phase Duration, s		30.1		30.1	11.1	21.0	9.1	19.0
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		4.8		4.8	4.6	4.6	4.6	4.6
Queue Clearance Time (g_s), s		12.1		22.1	4.0	10.5	3.0	9.5
Green Extension Time (g_e), s		4.9		2.9	0.3	3.7	0.1	3.7
Phase Call Probability		1.00		1.00	0.76	1.00	0.51	1.00
Max Out Probability		0.17		0.74	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		367			560		86	305	115	43	263	42
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1521			1531		1795	1885	1598	1795	1885	1598
Queue Service Time (g_s), s		0.0			10.2		2.0	8.5	3.4	1.0	7.5	1.2
Cycle Queue Clearance Time (g_c), s		10.1			20.1		2.0	8.5	3.4	1.0	7.5	1.2
Green Ratio (*g/C*)		0.42			0.42		0.33	0.27	0.27	0.30	0.23	0.23
Capacity (*c*), veh/h		708			717		423	501	424	340	438	371
Volume-to-Capacity Ratio (*X*)		0.518			0.782		0.204	0.609	0.271	0.127	0.600	0.113
Back of Queue (*Q*), ft/ln (95 th percentile)		144.9			277.4		34.4	160.5	53.7	18	143.7	19.8
Back of Queue (*Q*), veh/ln (95 th percentile)		5.8			11.0		1.4	6.4	2.1	0.7	5.7	0.8
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		13.0			15.9		14.5	19.4	17.5	15.7	20.6	18.2
Incremental Delay (d_2), s/veh		0.7			4.6		0.3	1.4	0.4	0.2	1.6	0.2
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		13.7			20.6		14.8	20.8	17.9	15.9	22.2	18.4
Level of Service (LOS)		B			C		B	C	B	B	C	B
Approach Delay, s/veh / LOS	13.7	B		20.6	C		19.1	B		21.0	C	
Intersection Delay, s/veh / LOS	18.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.08	B	1.68	B	1.69	B
Bicycle LOS Score / LOS	1.09	A	1.41	A	1.32	A	1.06	A

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APPENDIX F

ITE Trip Generation Sheets

Day Care Center
(565)

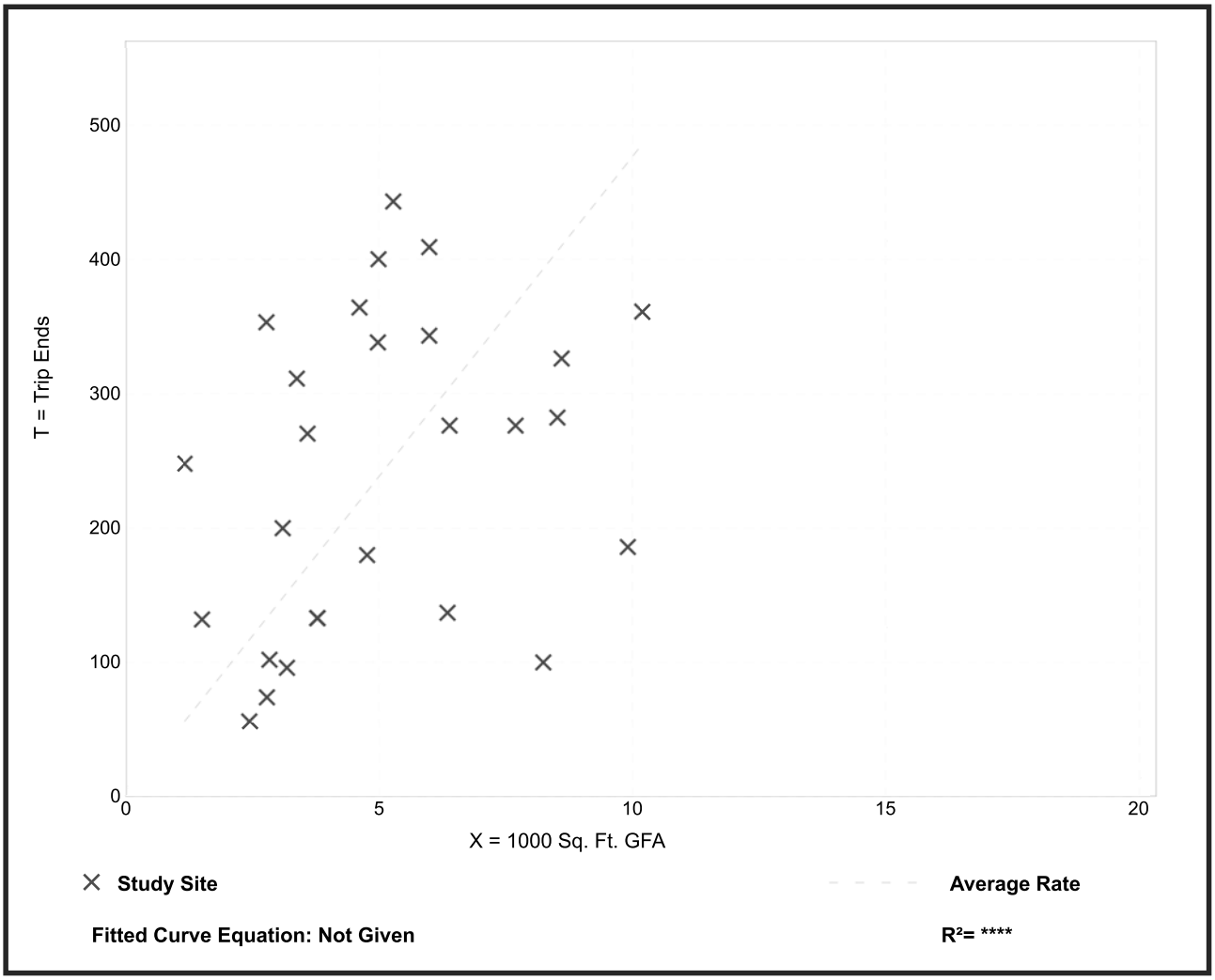
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
47.62	12.12 - 211.06	29.78

Data Plot and Equation



Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

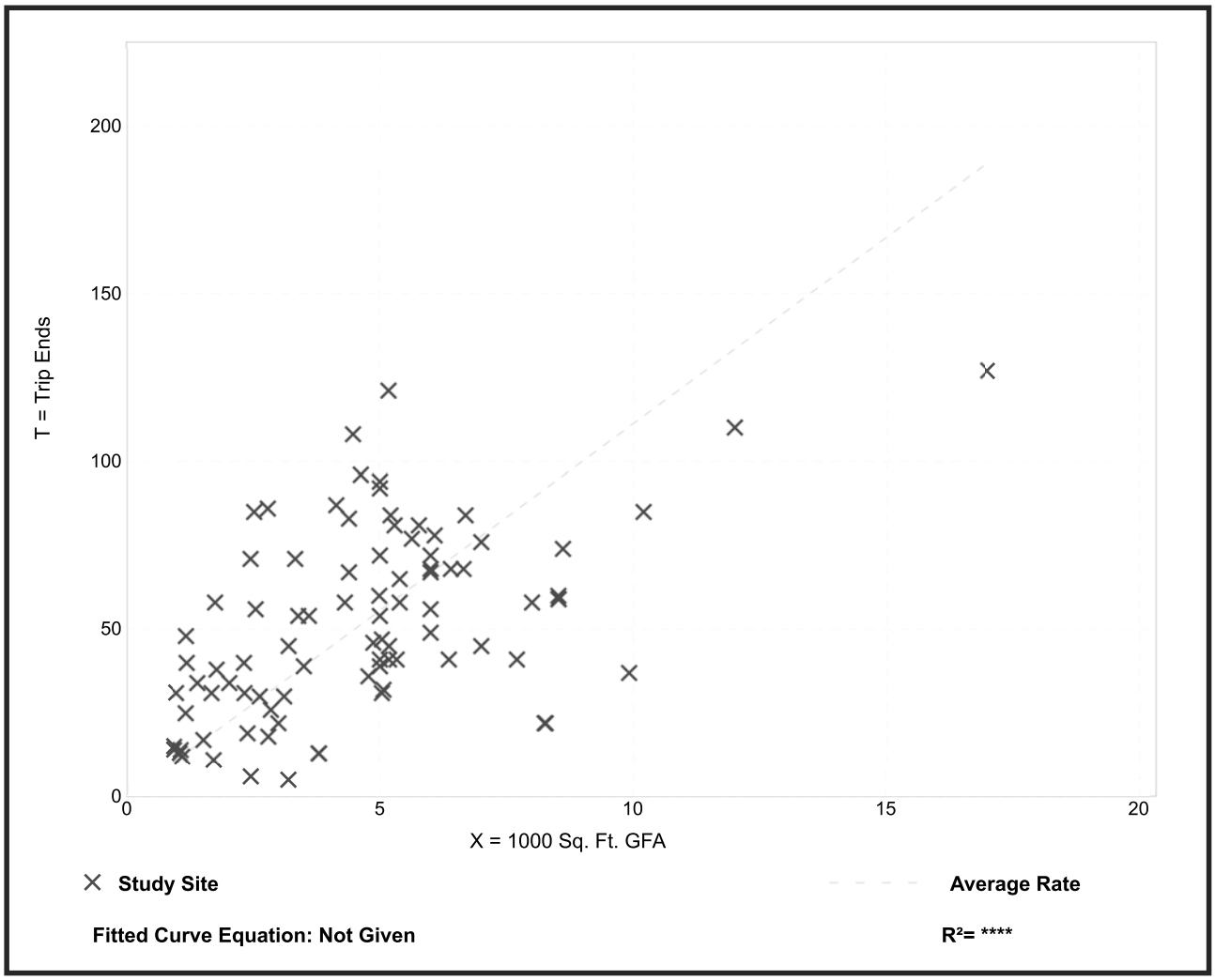
Day Care Center
(565)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 90
Avg. 1000 Sq. Ft. GFA: 5
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.12	1.56 - 40.85	6.28

Data Plot and Equation



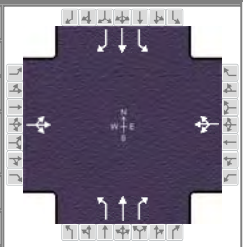
Trip Generation Manual, 10th Edition ● Institute of Transportation Engineers

APPENDIX G

Projected Capacity Analysis Worksheets

HCS7 Signalized Intersection Results Summary

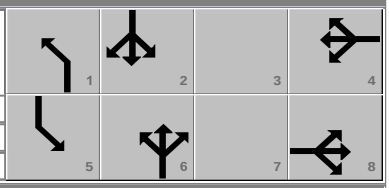
General Information				Intersection Information	
Agency	TPD, Inc.			Duration, h	0.25
Analyst	TPD, Inc.	Analysis Date	11/19/2018	Area Type	Other
Jurisdiction	Titusville	Time Period	P.M. Peak Hour (Projected)	PHF	0.81
Urban Street	SR 405	Analysis Year	2018	Analysis Period	1> 7:00
Intersection	SR 405 & S Park Ave	File Name	SR 405 & S Park Ave.xus		
Project Description	Step by Step learning center TPD (5157)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	96	211	96	152	284	85	94	257	97	36	222	57

Signal Information			
Cycle, s	65.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.5	2.6	14.7	29.0	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	1.0	0.0	1.0	1.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		8.0		8.0	1.1	3.0	1.1	3.0
Phase Duration, s		34.0		34.0	12.0	22.3	9.5	19.7
Change Period, ($Y+R_c$), s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway (*MAH*), s		4.9		4.9	4.6	4.6	4.6	4.6
Queue Clearance Time (g_s), s		22.3		31.0	5.0	11.8	3.2	10.7
Green Extension Time (g_e), s		3.6		0.0	0.5	4.0	0.1	4.0
Phase Call Probability		1.00		1.00	0.88	1.00	0.56	1.00
Max Out Probability		0.83		1.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		498			643		116	317	120	44	274	70
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1358			1315		1795	1885	1598	1795	1885	1598
Queue Service Time (g_s), s		0.0			8.7		3.0	9.8	3.9	1.2	8.7	2.4
Cycle Queue Clearance Time (g_c), s		20.3			29.0		3.0	9.8	3.9	1.2	8.7	2.4
Green Ratio (*g/C*)		0.44			0.44		0.33	0.26	0.26	0.29	0.22	0.22
Capacity (*c*), veh/h		667			651		404	496	420	321	422	357
Volume-to-Capacity Ratio (*X*)		0.746			0.988		0.287	0.640	0.285	0.138	0.650	0.197
Back of Queue (*Q*), ft/ln (95 th percentile)		259.2			535.7		53.4	189.5	63.2	21.1	171.8	38.4
Back of Queue (*Q*), veh/ln (95 th percentile)		10.3			21.3		2.1	7.5	2.5	0.8	6.8	1.5
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		15.3			19.9		16.4	21.5	19.3	17.6	23.2	20.7
Incremental Delay (d_2), s/veh		4.8			32.2		0.5	1.7	0.4	0.2	2.0	0.3
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		20.0			52.2		16.8	23.1	19.7	17.8	25.2	21.0
Level of Service (LOS)		C			D		B	C	B	B	C	C
Approach Delay, s/veh / LOS	20.0	C		52.2	D		21.1	C		23.6	C	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	2.08	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.31	A	1.55	B	1.40	A	1.13	A

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HCS7 Two-Way Stop-Control Report

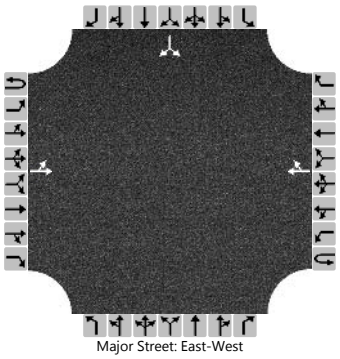
General Information

Analyst	TPD, Inc.
Agency/Co.	TPD, Inc.
Date Performed	11/19/2018
Analysis Year	2018
Time Analyzed	P.M. Peak Hour Projected
Intersection Orientation	East-West
Project Description	Step by Step Learning Center

Site Information

Intersection	SR 405 & Site Access
Jurisdiction	Titusville
East/West Street	SR 405
North/South Street	Site Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		27	324				364	73						82		29
Percent Heavy Vehicles (%)		1												1		1
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type | Storage																

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.11												6.41		6.21
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.51		3.31

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		29													121	
Capacity, c (veh/h)		1092													369	
v/c Ratio		0.03													0.33	
95% Queue Length, Q_{95} (veh)		0.1													1.4	
Control Delay (s/veh)		8.4													19.4	
Level of Service (LOS)		A													C	
Approach Delay (s/veh)		0.9												19.4		
Approach LOS														C		

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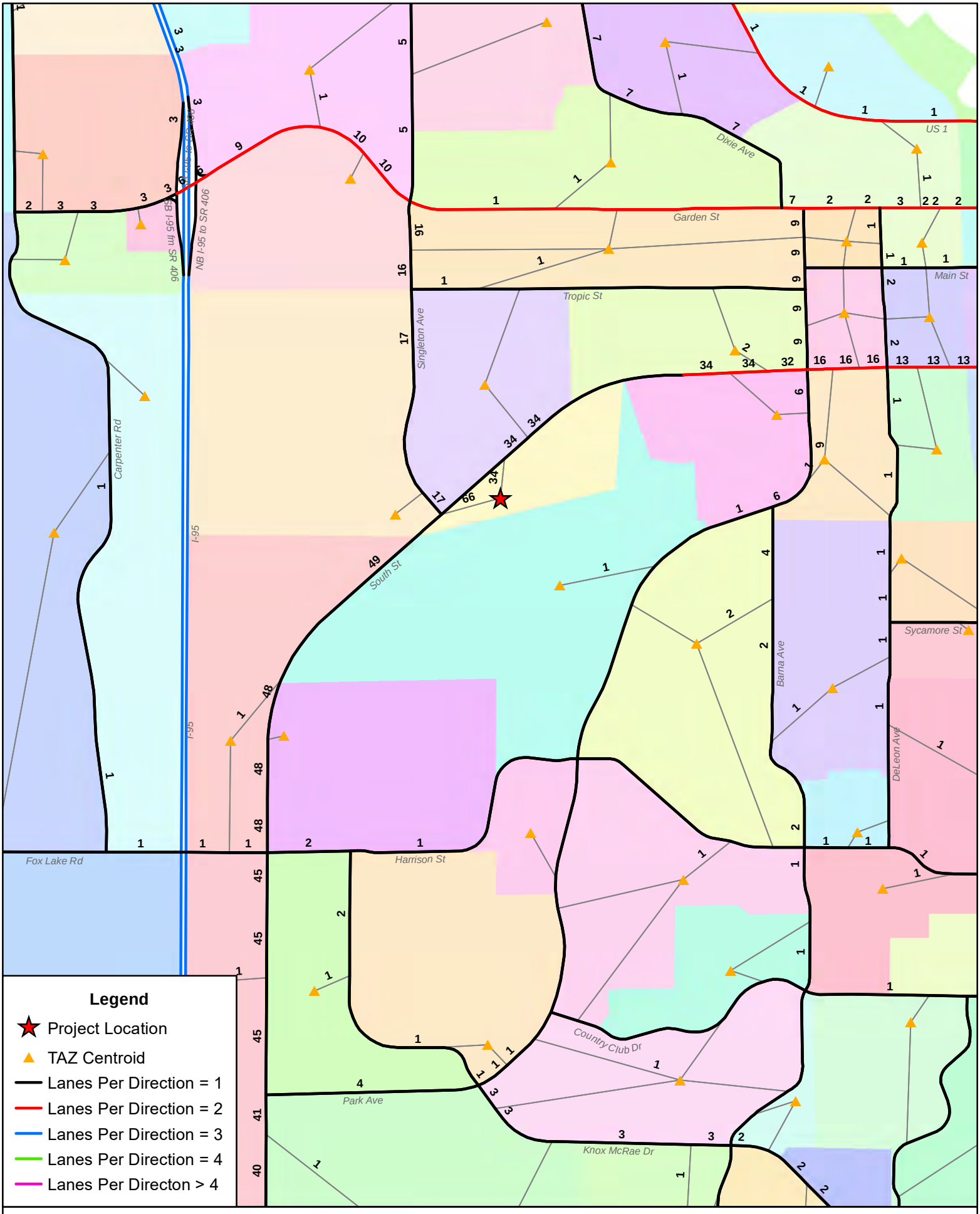
APPENDIX K

CFRPM Model



Trip Distribution - Titusville South in Brevard County

APPENDIX L

NCHRP Outputs

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

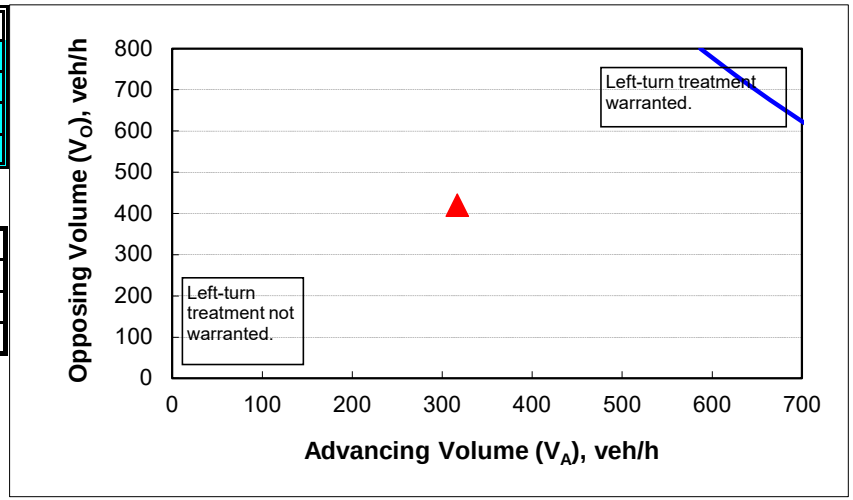
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	30
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	317
Opposing volume (V_O), veh/h:	420

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	863
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	420
Right-turn volume, veh/h:	18

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1278
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

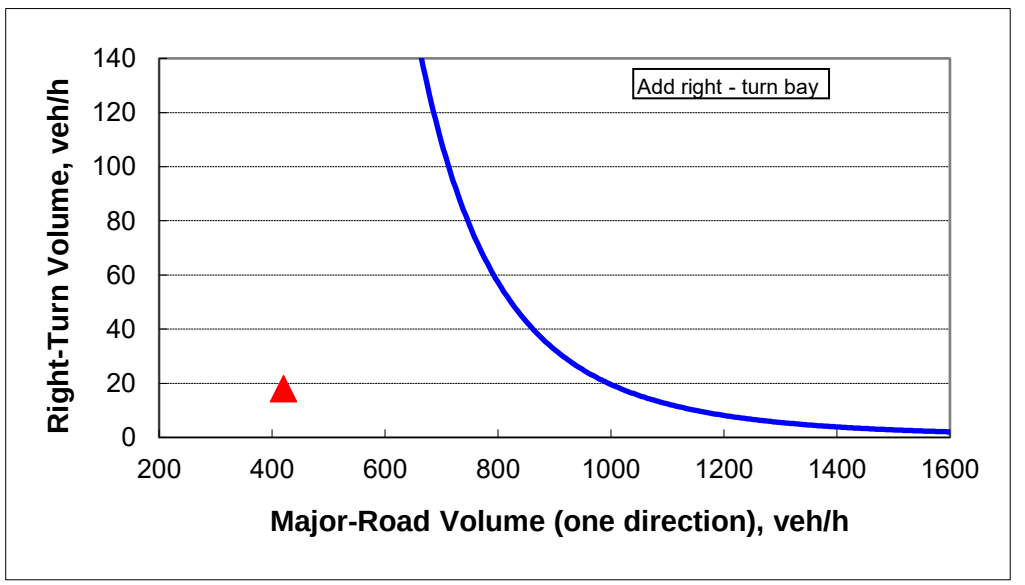


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

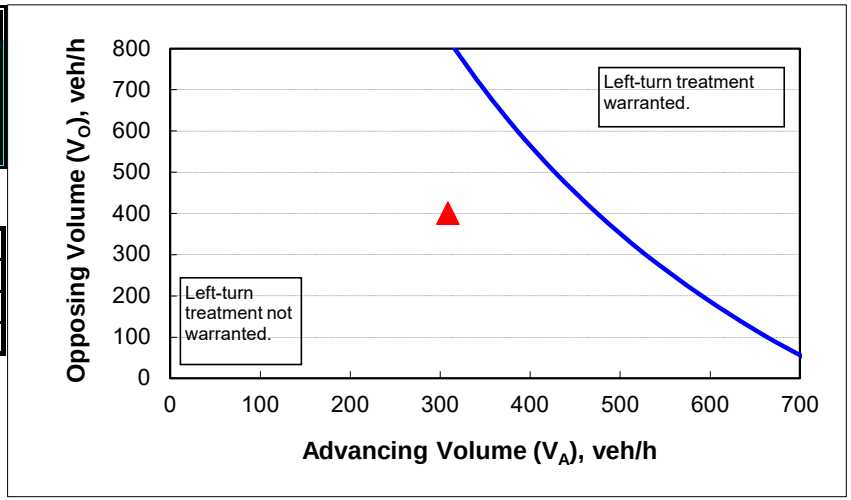
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	309
Opposing volume (V_O), veh/h:	400

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	475
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	309
Right-turn volume, veh/h:	14

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	23
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

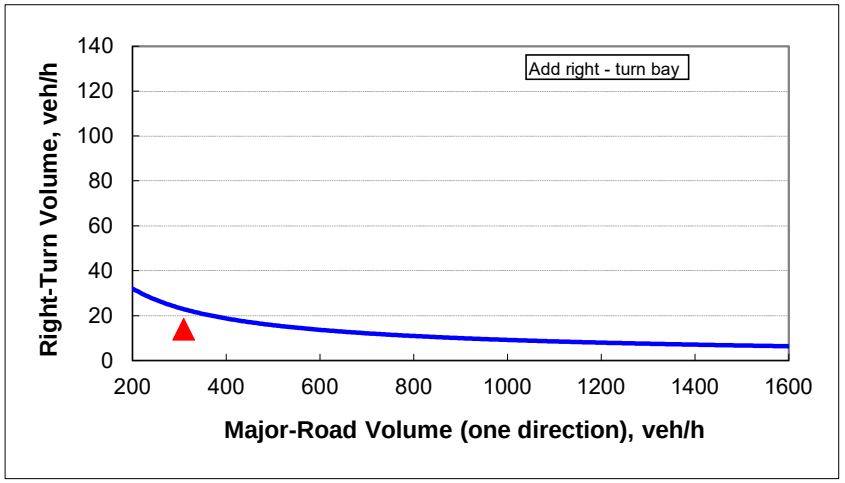


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

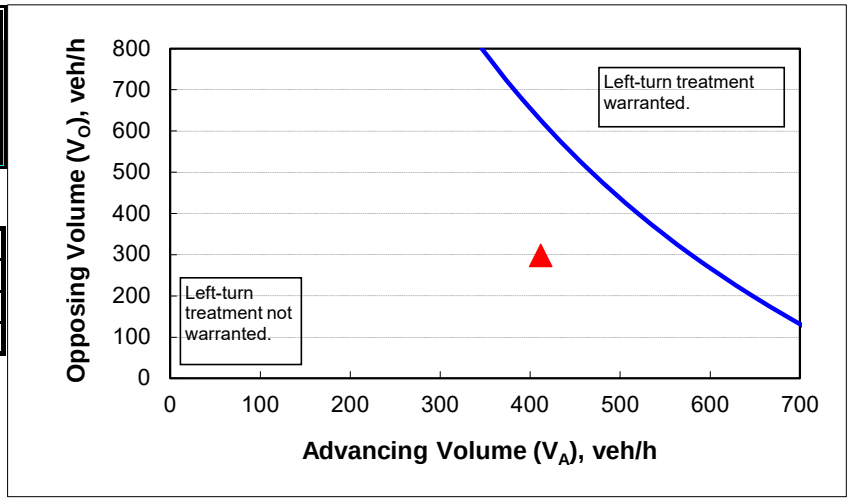
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	3%
Advancing volume (V_A), veh/h:	412
Opposing volume (V_O), veh/h:	298

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	580
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

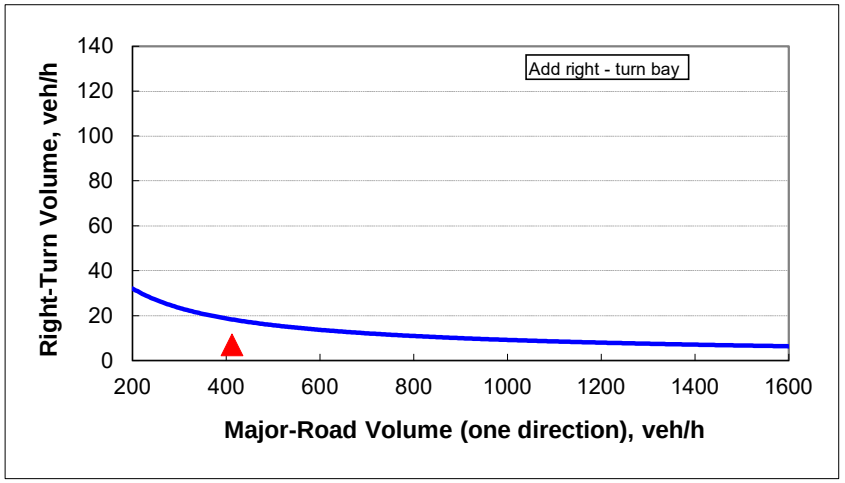
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	55
Major-road volume (one direction), veh/h:	412
Right-turn volume, veh/h:	7

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	18
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



School Board of Brevard County
2700 Judge Fran Jamieson Way • Viera, FL 32940-6699
Dr. Mark J. Rendell, Ed.D., Superintendent

Brevard Public Schools

February 26, 2024

Mr. Eddy Galindo, AICP
Senior Planner
City of Titusville
555 S. Washington Ave.
Titusville, Florida 32781

RE: Proposed SR405 and Singleton PD-South Development
School Impact Analysis – Capacity Determination CD-2024-03

Dear Mr. Galindo,

We received a completed *School Facility Planning & Concurrency Application* for the referenced development. The subject property is Tax Account 2203599 (Parcel ID: 22-35-08-00-1), Tax Account 3028883 (Parcel ID: 22-35-05-00-758, Tax Account 3028884 (Parcel ID: 22-35-05-00-759), Tax Account 3028885 (Parcel ID: 22-35-05-00-760) and a portion of Tax Account 2202226 (Parcel ID: 22-35-05-00-752) containing approximately 66.50 acres south of SR405 in The City of Titusville, Brevard County, Florida. The proposed development includes sixty-seven (66) single-family townhomes. The School Impact Analysis of this proposed development has been undertaken and the following information is provided for your use.

The calculations used to analyze the prospective student impact are consistent with the methodology outlined in Section 13.2 and Amended Appendix "A"-School District Student Generation Multiplier (approved April 11, 2022) of the *Interlocal Agreement for Public School Facility Planning & School Concurrency (ILA-2014)*. The following capacity analysis is performed using capacities/projected students as shown in years 2024-25 to 2028-29 of the *Brevard County Public Schools Financially Feasible Plan for School Years 2023-24 to 2028-29 which* is attached for reference.

Single-Family Homes	66		
Students Generated	**Student Generation Rates**	**Calculated Students Generated**	**Rounded Number of Students Generated**
Elementary	0.24	15.84	16
Middle	0.07	4.62	5
High	0.12	7.92	8
Total	0.43		**29**

Planning & Project Management
Facilities Services
Phone: (321) 633-1000 x11418 • FAX: (321) 633-4646

An Equal Opportunity Employer

FISH Capacity (including relocatable classrooms) from the Financially Feasible Plan (FFP) Data and Analysis for School Years 2024-25 to 2028-29

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	902	902	902	902	902
Jackson	660	660	660	660	660
Titusville	1,801	1,801	1,801	1,801	1,801

Projected Student Membership

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	616	633	642	637	641
Jackson	575	501	482	505	517
Titusville	1,293	1,322	1,330	1,317	1,317

Students Generated by Newly Issued SCADL Reservations Since FFP

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	-	-	-	-	-
Jackson	5	10	10	10	10
Titusville	13	24	24	24	24

Cumulative Students Generated by Proposed Development

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	-	16	16	16	16
Jackson	-	5	5	5	5
Titusville	-	8	8	8	8

Total Projected Student Membership (includes Cumulative Impact of Proposed Development)

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	616	649	658	653	657
Jackson	580	516	497	520	532
Titusville	1,306	1,354	1,362	1,349	1,349

Projected Available Capacity = FISH Capacity - Total Projected Student Membership

School	2024-25	2025-26	2026-27	2027-28	2028-29
Apollo	286	253	244	249	245
Jackson	80	144	163	140	128
Titusville	495	447	439	452	452

At this time, Apollo Elementary, Jackson Middle School and Titusville High School are projected to have enough capacity for the total of projected and potential students from the SR405 and Singleton PD-South development.

This is a **non-binding** review; a *Concurrency Determination* must be performed by the School District prior to a Final Development Order and the issuance of a Concurrency Evaluation Finding of Nondeficiency by the Local Government.

We appreciate the opportunity to review this proposed project. Please let us know if you require additional information.

Sincerely,

Karen M. Black, AICP
Manager – Facilities Planning & Intergovernmental Coordination
Planning & Project Management, Facilities Services

Enclosure: *Brevard County Public Schools Financially Feasible Plan for School Years 2023-2024 to 2028-29*

Copy: Susan Hann, AICP, Assistant Superintendent of Facility Services
File CD-2024-04

David G. Lindemann, AICP, Director of Planning & Project Management, Facilities Services
File CD-2024-04

SR 405 and Singleton PD-South Development Location Map

Brevard Public Schools

N

SR 405 and Singleton PD-South
CD-2024-04
66 Single-Family Townhome Units

Indian River

Titusville

City of Titusville

Titusville High School

Apollo Elementary School

Jackson Middle School

Schools Affected by Development:
Apollo Elementary School
Andrew Jackson Middle School
Titusville High School

Drawn By:
Planning & Project Management
Karen M. Black
February 26, 2024

0 0.5 1 2 Miles

FDEP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Brevard County Public Schools
Financially Feasible Plan To Maintain Utilization Rates Lower than the 100% Level of Service
Data and Analysis for School Years 2023-24 to 2028-29

Summary	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Highest Utilization Elementary Schools:	101%	101%	98%	97%	100%	100%
Highest Utilization Middle Schools:	86%	87%	87%	92%	98%	100%
Highest Utilization Jr / Sr High Schools:	80%	80%	79%	81%	82%	82%
Highest Utilization High Schools:	97%	97%	99%	99%	99%	100%

				School Year 2023-24			School Year 2024-25			School Year 2025-26			School Year 2026-27			School Year 2027-28			School Year 2028-29		
School	Type	Grades	Utilization Factor	FISH Capacity	10/13/23 Member-ship	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization
Elementary School Concurrency Service Areas																					
Allen	Elementary	PK-6	100%	751	583	78%	751	559	74%	751	602	80%	751	634	84%	751	653	87%	773	649	84%
Andersen	Elementary	K-6	100%	884	525	59%	884	493	56%	884	476	54%	884	478	54%	884	446	50%	884	433	49%
Apollo	Elementary	K-6	100%	902	643	71%	902	616	68%	902	633	70%	902	642	71%	902	637	71%	902	641	71%
Atlantis	Elementary	PK-6	100%	739	635	86%	739	660	89%	739	661	89%	739	667	90%	739	682	92%	739	688	93%
Audubon	Elementary	PK-6	100%	761	420	55%	761	408	54%	761	415	55%	761	438	58%	761	442	58%	761	447	59%
Cambridge	Elementary	PK-6	100%	787	504	64%	787	505	64%	787	519	66%	787	532	68%	787	546	69%	787	564	72%
Cape View	Elementary	PK-6	100%	570	295	52%	570	291	51%	570	284	50%	570	282	49%	570	286	50%	570	285	50%
Carroll	Elementary	K-6	100%	751	628	84%	751	645	86%	751	626	83%	751	622	83%	751	606	81%	751	594	79%
Challenger 7	Elementary	PK-6	100%	573	481	84%	573	470	82%	573	469	82%	573	457	80%	573	431	75%	573	416	73%
Columbia	Elementary	PK-6	100%	751	558	74%	751	573	76%	751	560	75%	751	570	76%	751	566	75%	751	561	75%
Coquina	Elementary	K-6	100%	711	488	69%	711	472	66%	711	481	68%	711	477	67%	711	476	67%	711	470	66%
Creel	Elementary	PK-6	100%	1,114	589	53%	1,114	575	52%	1,114	576	52%	1,114	584	52%	1,114	564	51%	1,114	543	49%
Croton	Elementary	PK-6	100%	795	484	61%	795	491	62%	795	518	65%	795	551	69%	795	565	71%	795	589	74%
Discovery	Elementary	PK-6	100%	980	682	70%	980	724	74%	980	738	75%	980	750	77%	980	753	77%	980	764	78%
Endeavour	Elementary	PK-6	100%	968	720	74%	968	740	76%	968	750	77%	968	749	77%	968	739	76%	968	708	73%
Enterprise	Elementary	K-6	100%	729	610	84%	729	621	85%	729	625	86%	729	622	85%	729	634	87%	729	644	88%
Fairglen	Elementary	PK-6	100%	789	517	66%	789	492	62%	789	511	65%	789	540	68%	789	531	67%	789	534	68%
Gemini	Elementary	K-6	100%	711	445	63%	711	437	61%	711	442	62%	711	426	60%	711	428	60%	711	433	61%
Golfview	Elementary	PK-6	100%	777	459	59%	777	477	61%	777	500	64%	777	503	65%	777	505	65%	777	506	65%
Harbor City	Elementary	PK-6	100%	629	397	63%	629	412	66%	629	425	68%	629	448	71%	629	463	74%	629	477	76%
Holland	Elementary	PK-6	100%	605	435	72%	605	436	72%	605	433	72%	605	435	72%	605	420	69%	605	425	70%
Imperial Estates	Elementary	K-6	100%	729	671	92%	729	674	92%	729	656	90%	729	650	89%	729	640	88%	729	628	86%
Indialantic	Elementary	K-6	100%	798	680	85%	798	682	85%	798	671	84%	798	672	84%	798	646	81%	798	662	83%
Jupiter	Elementary	PK-6	100%	930	851	92%	930	892	96%	974	941	97%	1,018	992	97%	1,062	1,061	100%	1,084	1,072	99%
Lockmar	Elementary	PK-6	100%	892	601	67%	892	582	65%	892	570	64%	892	577	65%	892	564	63%	892	567	64%
Longleaf	Elementary	PK-6	100%	790	607	77%	790	596	75%	790	581	74%	790	570	72%	790	548	69%	790	554	70%
Manatee	Elementary	K-6	100%	998	876	88%	998	869	87%	998	823	82%	998	800	80%	998	773	77%	998	757	76%
McAuliffe	Elementary	PK-6	100%	838	648	77%	838	644	77%	838	642	77%	838	627	75%	838	611	73%	838	601	72%
Meadowlane Intermediate	Elementary	3-6	100%	1,114	655	59%	1,114	793	71%	1,114	779	70%	1,114	773	69%	1,114	805	72%	1,114	843	76%
Meadowlane Primary	Elementary	K-6	100%	824	797	97%	824	621	75%	824	660	80%	824	630	76%	824	618	75%	824	613	74%
Mila	Elementary	PK-6	100%	707	431	61%	707	439	62%	707	430	61%	707	441	62%	707	429	61%	707	416	59%
Mims	Elementary	PK-6	100%	725	416	57%	725	414	57%	725	490	68%	725	497	69%	725	466	64%	725	441	61%
Oak Park	Elementary	PK-6	100%	968	472	49%	968	441	46%	968	449	46%	968	453	47%	968	428	44%	968	403	42%
Ocean Breeze	Elementary	PK-6	100%	654	529	81%	654	513	78%	654	494	76%	654	477	73%	654	459	70%	654	437	67%
Palm Bay Elem	Elementary	PK-6	100%	983	623	63%	983	636	65%	983	660	67%	983	683	69%	983	685	70%	983	684	70%
Pinewood	Elementary	PK-6	100%	613	529	86%	613	532	87%	613	558	91%	613	586	96%	613	582	95%	613	570	93%
Port Malabar	Elementary	PK-6	100%	852	605	71%	852	613	72%	852	654	77%	852	657	77%	852	677	79%	852	713	84%
Quest	Elementary	PK-6	100%	932	712	76%	932	719	77%	932	715	77%	932	704	76%	932	701	75%	932	689	74%
Riviera	Elementary	PK-6	100%	777	647	83%	777	627	81%	777	664	85%	777	688	89%	777	735	95%	777	741	95%
Roosevelt	Elementary	K-6	100%	599	268	45%	599	280	47%	599	288	48%	599	285	48%	599	285	48%	599	292	49%
Sabal	Elementary	PK-6	100%	785	514	65%	785	517	66%	785	523	67%	785	537	68%	785	532	68%	785	542	69%
Saturn	Elementary	PK-6	100%	998	589	59%	998	614	62%	998	634	64%	998	638	64%	998	632	63%	998	644	65%
Sea Park	Elementary	PK-6	100%	461	327	71%	461	347	75%	461	351	76%	461	362	79%	461	365	79%	461	375	81%
Sherwood	Elementary	PK-6	100%	609	468	77%	609	477	78%	609	492	81%	609	495	81%	609	493	81%	609	502	82%
Sunrise	Elementary	PK-6	100%	913	867	95%	957	942	98%	957	917	96%	957	927	97%	957	907	95%	957	909	95%
Suntree	Elementary	K-6	100%	755	601	80%	755	604	80%	755	604	80%	755	595	79%	755	584	77%	755	583	77%
Surfside	Elementary	K-6	100%	541	419	77%	541	410	76%	541	397	73%	541	388	72%	541	364	67%	541	353	65%
Tropical	Elementary	K-6	100%	910	619	68%	910	611	67%	910	580	64%	910	565	62%	910	547	60%	910	516	57%
Turner	Elementary	PK-6	100%	874	578	66%	874	623	71%	874	672	77%	874	739	85%	874	807	92%	874	854	98%
University Park	Elementary	PK-6	100%	811	495	61%	811	505	62%	811	533	66%	811	565	70%	811	577	71%	811	590	73%
Viera Elem	Elementary	K-6	100%	1,030	784	76%	1,030	854	83%	1,096	997	91%	1,184	1,115	94%	1,272	1,262	99%	1,360	1,359	100%
Westside	Elementary	K-6	100%	857	867	101%	945	950	101%	1,033	1,016	98%	1,121	1,075	96%	1,209	1,170	97%	1,209	1,155	96%
Williams	Elementary	PK-6	100%	715	443	62%	715	427	60%	715	390	55%	715	380	53%	715	371	52%	715	359	50%
Elementary Totals				42,259	30,287		42,391	30,545		42,589	31,075		42,809	31,550		43,029	31,697		43,161	31,795	

School	Type	Grades	Utilization Factor	School Year 2023-24			School Year 2024-25			School Year 2025-26			School Year 2026-27			School Year 2027-28			School Year 2028-29		
				FISH Capacity	10/13/23 Member-ship	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization
Middle School Concurrency Service Areas																				
Central	Middle	7-8	90%	1,514	1,061	70%	1,514	1,110	73%	1,514	1,184	78%	1,514	1,213	80%	1,514	1,272	84%	1,514	1,348	89%
DeLaura	Middle	7-8	90%	960	823	86%	960	517	54%	960	432	45%	960	411	43%	960	439	46%	960	429	45%
Hoover	Middle	7-8	90%	680	442	65%	680	475	70%	680	498	73%	680	470	69%	680	479	70%	680	463	68%
Jackson	Middle	7-8	90%	660	561	85%	660	575	87%	660	501	76%	660	482	73%	660	505	77%	660	517	78%
Jefferson	Middle	7-8	90%	873	541	62%	873	521	60%	873	523	60%	873	480	55%	873	479	55%	873	540	62%
Johnson	Middle	7-8	90%	1,064	555	52%	1,064	588	55%	1,064	575	54%	1,064	548	52%	1,064	620	58%	1,064	640	60%
Kennedy	Middle	7-8	90%	869	667	77%	869	436	50%	869	391	45%	869	373	43%	869	412	47%	869	433	50%
Madison	Middle	7-8	90%	781	429	55%	781	431	55%	781	374	48%	781	336	43%	781	426	55%	781	469	60%
McNair	Middle	7-8	90%	616	355	58%	616	290	47%	616	284	46%	616	281	46%	616	299	49%	616	330	54%
Southwest	Middle	7-8	90%	1,281	900	70%	1,281	980	77%	1,281	1,118	87%	1,281	1,176	92%	1,321	1,290	98%	1,380	1,376	100%
Stone	Middle	7-8	90%	1,076	584	54%	1,076	571	53%	1,076	640	59%	1,076	710	66%	1,076	783	73%	1,076	822	76%
Viera Middle	Middle	7-8	90%	-	-	0%	900	656	73%	900	755	84%	900	805	89%	900	830	92%	900	869	97%
Middle Totals				**10,374**	**6,918**		**11,274**	**7,150**		**11,274**	**7,275**		**11,274**	**7,285**		**11,314**	**7,834**		**11,373**	**8,236**	
Junior / Senior High School Concurrency Service Areas																				
Cocoa	Jr / Sr High	PK, 7-12	90%	2,085	1,474	71%	2,085	1,480	71%	2,085	1,441	69%	2,085	1,421	68%	2,085	1,444	69%	2,085	1,437	69%
Cocoa Beach	Jr / Sr High	7-12	90%	1,445	1,028	71%	1,445	1,025	71%	1,445	967	67%	1,445	938	65%	1,445	873	60%	1,445	831	58%
Space Coast	Jr / Sr High	7-12	90%	1,852	1,488	80%	1,852	1,483	80%	1,852	1,469	79%	1,852	1,503	81%	1,852	1,510	82%	1,852	1,513	82%
Jr / Sr High Totals				**5,382**	**3,990**		**5,382**	**3,988**		**5,382**	**3,877**		**5,382**	**3,862**		**5,382**	**3,827**		**5,382**	**3,781**	
Senior High School Concurrency Service Areas																				
Astronaut	High	9-12	95%	1,451	1,056	73%	1,451	1,046	72%	1,451	1,008	69%	1,451	1,024	71%	1,451	985	68%	1,451	975	67%
Bayside	High	9-12	95%	2,263	2,039	90%	2,263	2,166	96%	2,263	2,241	99%	2,334	2,316	99%	2,406	2,391	99%	2,477	2,466	100%
Eau Gallie	High	PK, 9-12	95%	2,211	1,489	67%	2,211	1,470	66%	2,211	1,490	67%	2,211	1,440	65%	2,211	1,395	63%	2,211	1,440	65%
Heritage	High	9-12	95%	2,314	2,037	88%	2,314	2,053	89%	2,314	2,023	87%	2,314	2,118	92%	2,314	2,160	93%	2,314	2,246	97%
Melbourne	High	9-12	95%	2,370	2,178	92%	2,370	2,148	91%	2,370	2,145	91%	2,370	2,188	92%	2,370	2,265	96%	2,417	2,395	99%
Merritt Island	High	PK, 9-12	95%	1,966	1,481	75%	1,966	1,443	73%	1,966	1,376	70%	1,966	1,352	69%	1,966	1,360	69%	1,966	1,306	66%
Palm Bay	High	PK, 9-12	95%	2,657	1,410	53%	2,657	1,413	53%	2,657	1,442	54%	2,657	1,482	56%	2,657	1,507	57%	2,657	1,605	60%
Rockledge	High	9-12	95%	1,836	1,544	84%	1,836	1,601	87%	1,836	1,675	91%	1,836	1,671	91%	1,836	1,660	90%	1,836	1,623	88%
Satellite	High	PK, 9-12	95%	1,551	1,506	97%	1,551	1,497	97%	1,551	1,483	96%	1,551	1,393	90%	1,551	1,287	83%	1,551	1,269	82%
Titusville	High	9-12	95%	1,801	1,309	73%	1,801	1,293	72%	1,801	1,322	73%	1,801	1,330	74%	1,801	1,317	73%	1,801	1,317	73%
Viera	High	PK, 9-12	95%	2,461	2,312	94%	2,461	2,349	95%	2,461	2,364	96%	2,461	2,388	97%	2,461	2,420	98%	2,461	2,441	99%
High Totals				**22,881**	**18,361**		**22,881**	**18,479**		**22,881**	**18,569**		**22,952**	**18,702**		**23,024**	**18,747**		**23,142**	**19,083**	
Schools of Choice (Not Concurrency Service Areas)																				
Freedom 7	Elementary	K-6	100%	475	407	86%	475	407	86%	475	407	86%	475	407	86%	475	407	86%	475	407	86%
Stevenson	Elementary	K-6	100%	569	505	89%	569	499	88%	569	499	88%	569	499	88%	569	499	88%	569	499	88%
South Lake	Elementary	K-6	100%	639	446	70%	639	489	77%	639	489	77%	639	489	77%	639	489	77%	639	489	77%
West Melbourne	Elementary	K-6	100%	618	550	89%	618	606	98%	794	692	87%	794	692	87%	794	692	87%	794	692	87%
Edgewood	Jr / Sr High	7-12	90%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%	1,077	935	87%
West Shore	Jr / Sr High	7-12	90%	1,264	931	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%	1,264	940	74%
Schools of Choice				**4,642**	**3,774**		**4,642**	**3,876**		**4,818**	**3,962**		**4,818**	**3,962**		**4,818**	**3,962**		**4,818**	**3,962**	
Brevard Totals				**85,538**	**63,330**		**86,570**	**64,038**		**86,944**	**64,758**		**87,235**	**65,361**		**87,567**	**66,067**		**87,876**	**66,857**	

Notes

1. FISH Capacity is the sum of the factored permanent capacity and the factored relocatable capacity. Permanent and relocatable capacities for 2023-24 are reported from the FISH database as of October 11, 2023.
2. Student Membership is reported from the Fall Final Membership Count (10/13/2023).
3. Davis Demographics SchoolSite Enrollment Forecasting Extension for ArcGIS estimates future student populations by analyzing the following data:
   - Development Projections from Brevard County Local Government Jurisdictions
   - Brevard County School Concurrency Student Generation Multipliers (SGM)
   - Fall Membership student addresses and corresponding concurrency service areas
   - Student Mobility Rates / Cohort Survival Rates
   - Brevard County Birth rates by zip code
4. Davis Demographics estimates are then adjusted using the following factors:
   - PK (Pre-Kindengarten) and AH (daycare for students with infants) enrollment number are assumed to be constant
   - Current From/To attendance patterns are assumed to remain constant.
   - Nongeocoded student addresses are assumed to continue in their attendance schools.
   - Charter School Growth.
5. In order to maintain utilization rates lower than the 100% Level of Service, Permanent Capacity and Relocatable Classrooms are assumed to add future student stations as necessary.
6. If student projections are accurate, the school board could add additional classroom capacity, implement attendance boundary changes, or add relocatable classrooms. A south area elementary school is planned for the future growth, but the exact timing hasn't been established. If only relocatable classrooms are used for the next 5 years, the following changes would be needed to accommodate projected growth. These schools are being analyzed for the best options to accommodate additional students.
   - Primary relocatable classrooms (Grades K-3) = 18 student stations, Intermediate (Grades 4-8) relocatable classrooms = 22 student stations, and High School (Grades 9-12) relocatable classrooms = 25 student stations
   For school year 2024-25, a total of 6 intermediate classrooms are projected for Westside (4) and Sunrise (2) Elementary Schools.
   For school year 2025-26, a total of 9 intermediate classrooms are projected for Westside (4), Viera (2), and Jupiter (2) Elementary Schools.
   For school year 2026-27, a total of 10 intermediate classrooms are projected for Westside (4), Viera (4), and Jupiter (2) Elementary Schools and 3 High School relocatable classrooms are proposed for Bayside High School.
   For school year 2027-28, a total of 12 intermediate classrooms are projected for Westside (4), Viera (4), and Jupiter (2) Elementary Schools, Southwest Middle School (2) and 3 High School relocatable classrooms are proposed for Bayside High School.
   For school year 2028-29, a total of 9 intermediate classrooms are projected for Viera (4), and Jupiter (3) Elementary Schools, Southwest Middle School (3) and 5 High School relocatable classrooms are proposed for Bayside (3) and Melbourne (2) High Schools.
9. A classroom addition is planned for construction at West Melbourne School of Science for 2024-25. The factored capacity is adjusted for the proposed 176 student stations.

Category: 9.
Item: C.

City of Titusville

"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Planning and Zoning Commission Members

From: Brad Parrish, Community Development Director

Subject: Comprehensive Plan Amendment (CPA) No. 1-2024 Future Land Use, Transportation and Housing Elements, Downtown and Gateways Objectives, Policies and Strategies and new City-wide Element

Department/Office: Community Development

Recommended Action:

Conduct the public hearing and recommend approval of Comprehensive Plan Amendment (CPA) No. 1-2024 Future Land Use, Transportation and Housing Elements, Downtown and Gateways Objectives, Policies and Strategies and new City-wide Element

The public hearing is scheduled to be held by the City Council on October 8, 2024, beginning at 6:30 PM.

Summary Explanation & Background:

Summary
The amendment includes a new City-wide Goal with Objectives and Policies, amendments to objectives and policies in the Future Land Use Element, Transportation Element and Housing Element of the comprehensive plan. The amendment primarily addresses redevelopment incentives in the Downtown and the City's major commercial corridors (Gateways).

The amendment does not include draft changes to Urban Mixed Use objectives and policies in the Future Land Use Element. A separate amendment will be scheduled at a later date.

Background
On April 27, 2022, the Council directed the staff to propose a strategy whereby certain portions of the Draft 2040 TitusvilleTomorrow Comprehensive Plan may be incorporated into the adopted comprehensive plan. The staff recommended adopting four separate amendments, which included Mobility (Transportation), Housing and Historic Preservation, Land Use and Environmental.

The City's consultant, Kimley-Horn (formerly Canin Associates of Orlando), held a public engagement meeting on February 4, 2023, and presented draft Goals, Objectives and Policies (GOPs) to the Future Land Use, Transportation and Housing Elements of the Comprehensive Plan. The consultant also presented draft Land Development Regulations to help implement the GOPs. Environment related comprehensive plan amendments are being addressed as part

of a future project. The consultant subsequently presented various iterations of the comprehensive plan amendments and code changes to the City Council at the March 28, April 25 and May 23, 2023, presentation meetings.

On August 8, 2023, the Council directed the staff to obtain public input on the draft comprehensive plan amendments and proposed changes to the Land Development Regulations. Three public meetings were held September 18, September 28 and October 5. More than 100 members of the public participated. On October 24, 2023, the staff presented to the Council a summary of the public input. On November 28, 2023, the Council directed the staff to schedule the comprehensive plan amendment Transmittal hearings.

On February 13, 2024, the City Council Transmitted the amendment to the state's Land Planning Agency (LPA) for review. The state reviewed the amendment and had no objections. Enclosed are comment letters from the Florida Department of Commerce, Department of Transportation (FDOT) and the St. Johns River Water Management District (SJRWMD).

Alternatives:

- Recommend approval with changes.
- Do not recommend approval.

Item Budgeted:

Source/use of funds/Budget Book Page:

Strategic Plan:

No. 1 – Quality of LifeNo. 2 – Efficient and Effective ServicesNo. 3 – Financial StabilityNo. 4 – Economic DevelopmentNo. 5 – Effective Governance

Strategic Plan Impact:

The City's comprehensive plan supports all aspects of the City's strategic plan.

ATTACHMENTS:

	Description	Upload Date	Type
🗋	City-wide Element	9/12/2024	Backup Material
🗋	FLUE Downtown Obj and TE	9/12/2024	Backup Material
🗋	FLUE Gateway Obj	9/12/2024	Backup Material
🗋	Housing Element	9/12/2024	Backup Material
🗋	ad	9/12/2024	Backup Material
🗋	Dept of Commerce comment	9/12/2024	Backup Material
🗋	FDOT comment letter	9/12/2024	Backup Material
🗋	SJRWMD comment letter	9/12/2024	Backup Material
🗋	background info part 1	9/12/2024	Backup Material
🗋	background info part 2a	9/12/2024	Backup Material
🗋	background info part 2b	9/12/2024	Backup Material

	background info part 3	9/12/2024	Backup Material
	background info part 4	9/12/2024	Backup Material

City-Wide Element Amendment

Comprehensive plan (CPA) 1-2024

The ordinance proposes a new City-Wide Element with a Goal, Objectives, Policies and Strategies (GOPS) that reflects the overall vision and intent realized out of the titusvilletomorrow 2018 Vision document and subsequent public engagement and community meetings.

The new element provides a purpose for the comprehensive plan. The objectives address

1. regional economy,
2. quality of life,
3. place-based design and
4. employment.

ORDINANCE NO. ___- 2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY ADDING A NEW CITY-WIDE ELEMENT GOAL, OBJECTIVES AND POLICIES TO ADDRESS THE REGIONAL ECONOMY, QUALITY OF LIFE, PLACE-BASED DESIGN AND EMPLOYMENT; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville has received and considered the written objections, recommendations, and comments of the State Land Planning Agency and any other person, agency, or governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

WHEREAS, the City Council of the City of Titusville desires to add a new City-Wide Element to the Comprehensive Plan.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 creating the City-Wide Element as follows:

CITY-WIDE ELEMENT

Goal 1:

For Titusville to be a thriving, historic city with a vibrant economy; a welcoming, small-town ambiance; and a healthy, active waterfront enjoyed by residents and visitors.

Objective 1.1:

Capitalize on the dynamic regional economic forces in the Space Coast to attract residents and employers.

Policy 1.1.1:

Coordinate with state and regional economic development agencies to attract and retain employers and talent.

Policy 1.1.2:

Develop a unified community image that is attractive to potential employers and residents.

Objective 1.2:

Create a high quality of life for residents and visitors.

Policy 1.2.1:

Facilitate the creation of mixed-use gathering places that are attractive to residents and employees.

Policy 1.2.2:

Ensure publicly accessible civic and open spaces are available to residents and visitors for passive and active recreation.

Policy 1.2.3:

Encourage walking for transportation and leisure through landscaping and streetscaping standards that provide shade and a visually appealing sidewalk experience.

Policy 1.2.4:

Promote energy-efficient non-motorized and public transit options and reduction in vehicle miles traveled through infrastructure planning, land use regulation, and investment of impact fees.

Objective 1.3:

Retain and build on the comfortable scale of the City with place-based design reflecting the small-town character residents appreciate.

Policy 1.3.1:

Encourage the preservation of historic districts, sites, and buildings with architectural value or historic significance.

Policy 1.3.2:

Adopt pedestrian-oriented design features to be incorporated into new and renovated buildings such as building entrances located close to the public sidewalk and the inclusion of pedestrian-scale architectural features.

Objective 1.4:

Create a variety of business and employment opportunities accessible to the population that capitalize on the dynamic economic forces in the Space Coast to attract high technology, space-based commerce, and research.

Policy 1.4.1:

Provide employment opportunities throughout the City at intensities and scales appropriate to each area.

Policy 1.4.2:

Compatible, employment opportunities, such as small-scale office and retail, live/work units and home-based businesses, should be incorporated in or adjacent to Neighborhoods within walking distance of residents.

Policy 1.4.3:

Identify and designate locations appropriate for larger-scale employment centers.

Policy 1.4.4:

In planning for employment areas, take into account the need for multimodal access to employment opportunities and the necessity for truck or rail access for employment uses that rely on freight.

SECTION 3. Severability. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. Repeal of Prior Inconsistent Ordinances. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict.

SECTION 5. Incorporation into the Comprehensive Plan. Upon the effective date of the Comprehensive Plan Amendment adopted by this Ordinance, said Amendment

shall be incorporated into the City of Titusville Comprehensive Plan and any section or paragraph number or letter and any heading may be changed or modified as necessary to effectuate the foregoing.

SECTION 6. Effective Date. The effective date of this plan amendment shall be the date a final order is issued by the Department of Commerce or Administrative Commission finding the amendment in compliance in accordance with Section 163.3184, Florida Statutes, whichever occurs first. If a final order of noncompliance is issued by the Administrative Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be sent to the Department of Commerce, Bureau of Local Planning, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100.

PASSED AND ADOPTED, this _____th day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

Downtown, Transportation Amendment

Comprehensive plan (CPA) 1-2024

The ordinance proposes revisions to the Goals, Objectives, Policies and Strategies (GOPS) in the Future Land Use and Transportation Elements to encourage (re)development primarily in the Downtown and existing urban areas. The ordinance revises the way residential density is calculated in the Downtown, proposes new urban design and streetscape statements, emphasizes adaptive reuse of existing buildings, discourages urban sprawl by directing growth to urban areas. The ordinance also proposes new transportation and parking strategies.

ORDINANCE NO. ___- 2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY AMENDING THE EXISTING FUTURE LAND USE ELEMENT AND TRANSPORTATION ELEMENT, SPECIFICALLY AMENDING OBJECTIVES 1.1 CHARACTER LAND USE DISTRICTS, 1.2 REDEVELOPMENT AND ADAPTIVE REUSE, 1.10 DOWNTOWN LAND USE, 1.21 DENSITY AND INTENSITY LAND USE CRITERIA AND ASSOCIATED POLICES AND STRATEGIES OF THE FUTURE LAND USE ELEMENT, AMENDING THE POLICIES AND STRATEGIES OF OBJECTIVE 1.1 OF THE TRANSPORTATION ELEMENT AND ADDING OBJECTIVE 1.9 AND ASSOCIATED POLICIES AND STRATEGIES TO THE TRANSPORTATION ELEMENT; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville has received and considered the written objections, recommendations, and comments of the State Land Planning Agency and any other person, agency, or governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

WHEREAS, the City Council of the City of Titusville desires to amend its Future Land Use Element and Transportation Element with the intent of expanding incentives for (re)development in the Downtown, revising the way residential density is calculated in the Downtown, promoting adaptive reuse of existing buildings, and proposing new transportation and parking strategies.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 amending Goal 1 Growth Management and Land Uses and Objectives 1.1 Character Land Use Districts, 1.2 Redevelopment and Adaptive Reuse, 1.10 Downtown, and 1.21 Density and Intensity Land Use Criteria and subsequent Policies and Strategies of the Future Land Use Element as follows:

FUTURE LAND USE ELEMENT

Goal 1: Growth Management and Land Uses.

To direct growth to suitable areas that make use of existing infrastructure investments, create compact, connected, and complete neighborhoods, and facilitate access to services, amenities, and economic opportunities ~~and regulate land development, to provide for the location and distribution of the most appropriate density and intensity of the land~~ while protecting the public health, safety and welfare.

Objective 1.1: Character Land Use Districts.

The City shall develop, through small area studies, neighborhood plans, and corridor studies, specific land use strategies based on the character and needs of unique character districts or areas of the City for the purpose of providing more comprehensive and holistic planned policies and strategies for areas that are experiencing growth and redevelopment.

Policy 1.1.1:

The City shall identify specific areas in the City based on the unique character of the area, neighborhood, or community as character districts. Specific character districts could include areas with similar development patterns, shared major infrastructure, physical and natural boundaries, and may be recognized as special areas of the City by the general community.

Policy 1.1.2:

The City shall prioritize specific areas of the City to conduct studies and/or plan to provide the data and analysis for the development of the character district goals, objectives and policies.

Policy 1.1.3:

The City shall promote single-family development and redevelopment by restricting the proliferation of multifamily dwellings within ~~neighborhoods, such as~~ the Indian River City subdivision area, which have developed

primarily with traditional, detached, low-density single-family dwelling units on individual lots.

Policy 1.1.4:

The City shall not introduce, approve or allow other land uses in an area where single family land uses are the predominant land use of the area unless the proposed new land use is consistent with a redevelopment plan or formal study adopted by City Council.

Policy 1.1.5:

The City shall develop a master plan for the State Road 50 corridor to ensure quality economic growth and public spaces within this corridor.

Policy 1.1.6:

The City shall prepare a master plan for the Spaceport Commerce Park and the Enterprise Park to establish a harmonized and coordinated planning process for these areas.

Policy 1.1.7:

As properties along Riveredge Drive are annexed, the Riveredge Drive Small Area Plan (approved by Council November 23, 2004) shall be a guideline when land use and development review decisions are made.

Policy 1.1.8:

Urban Design and landscaping strategies should be used to create transitions between zones of different intensity.

Objective 1.2: Redevelopment and Adaptive Reuse.

The City shall encourage the redevelopment and adaptive reuse of commercial, office and residential properties along transportation corridors in the City ~~that are aging and/or experiencing decline.~~ to create new opportunities for residents and small businesses, discourage urban sprawl, and maximize the return on investments in infrastructure.

Policy 1.2.1:

The City shall promote vertical and horizontal mixed-use development in the form of interconnected centers that site complementary uses within walking distance and along major corridors, especially those with transit service. ~~The City shall e~~ Encourage multi-story construction to optimize the development of land, creation of more efficient parking strategies, and visually appealing buildings.

Policy 1.2.2:

The City shall encourage shared stormwater and parking strategies among adjacent developments to encourage greater efficiency and aesthetics.

Policy 1.2.3:

The City shall encourage commercial redevelopment and reuse of residential properties for commercial uses to orient the development at intersections and deter dependency on collector and arterial road frontage. [Initially deleted but retained by City Council]

Policy 1.2.4:

The City shall provide an administrative process for zoning and site development requirement waivers for redevelopment and reuse commercial development projects.

Policy 1.2.5:

The City shall research and if appropriate designate areas and/or properties in the City as "brownfields" to promote redevelopment and reuse.

Policy 1.2.6:

The City shall identify funding mechanisms and provide infrastructure sufficient to support redevelopment in target areas.

Policy 1.2.7:

The City shall encourage the redevelopment of underutilized sites into compatible and complementary mixed-use developments through supportive land development regulations and other incentives.

Objective 1.10: Downtown ~~Land Uses~~:

Downtown is the heart of Titusville. Downtown should have a memorable identity, foster a great variety of activities, and attract a critical mass of people to live, work, visit, and enjoy the small-town ambiance of the community's center. ~~The City of Titusville shall pursue the renewal of Downtown Titusville as the center of professional, governmental, financial and unique retail and redevelop blighted areas through the designation of downtown Titusville as a~~ Downtown Titusville shall have a unique Downtown Mixed Use (DMU) on the Future Land Use Map which responds to the specific needs of the core downtown and nearby related areas. ~~and pursue appropriate strategies based upon the following general factors and performance requirements.~~

Policy 1.10.1:

Encourage development and redevelopment that allows a large variety of uses and increases the residential population including residential, civic, and employment uses to support a vibrant, active downtown. ~~Enhance the visual attractiveness of the downtown area through creation of gateways at entry points of the downtown area and also as an entrance to the Canaveral National Seashore and the Merritt Island National Wildlife Refuge, with streetscape improvements, architectural continuity, and coordinated commercial signage along the major corridors entering the downtown area including but not limited to U.S. #1, Indian River Avenue, Main Street, and Washington Avenue.~~

Strategy 1.10.1.1:

Permit a variety of business, civic, residential, and mixed-use development in the sub-areas of the Downtown Mixed Use district through adaptive reuse of existing building and new construction, as provided for in the Land Development Regulations, including office, retail, service, financial, restaurant, entertainment, lodging and residential uses. (Some of the language originally came from Policy 1.10.5)

Strategy 1.10.1.2:

Promote infill and redevelopment through market analysis, public improvements and incentives as well as land development regulations. Identify needs and invest in common facilities to reduce barriers to redevelopment and provide more efficient and holistic solutions. Study the opportunity for a master stormwater system integrated with open space in downtown.

Strategy 1.10.1.3:

Identify streets which are locally controlled and do not require coordination with other agencies, such as Palm Avenue, to fully implement slow-speed pedestrian-oriented environments that create gathering places and add value to downtown.

Strategy 1.10.1.4:

Establish an active, pedestrian-oriented environment in the vicinity of existing arts activities including establishing public realm standards and identifying opportunities for public-private partnerships.

Strategy 1.10.1.5:

Maintain a robust presence of civic facilities, government offices, arts and performance venues, and government services to support activity in the downtown and ensure public access by locating facilities with multimodal access opportunities.

Strategy 1.10.1.6:

Support the redevelopment agency in the solicitation of development projects that further the downtown objectives by assisting in identification of sites, land assemblage, acquisition of permits, and appropriate financing. (Originally Policy 1.10.7)

Policy 1.10.2:

Encourage a substantial and diverse residential population downtown to serve a wide range of household types and incomes by encouraging investment in a mix of housing options. ~~Utilize a waterfront orientation to link the downtown area with the Indian River, East Coast Greenway and Kennedy Space Center through the use of trails, pedestrian walkways, boardwalks, interpretive displays, educational programs, and launch and river viewing areas to create a unique office/retail/residential/open space environment.~~

Strategy 1.10.2.1:

Permit a variety of housing typologies including a broad range of unit types and sizes.

Strategy 1.10.2.2:

Facilitate the ability of families with children to live and work downtown by encouraging or providing family-friendly facilities such as playgrounds and daycare facilities.

Strategy 1.10.2.3:

Encourage a balance of rental and for-sale housing including the re-establishment of affordable owner-occupied neighborhoods in the Downtown Mixed Use district to create a mix of residential housing choices of different types and intensities. (Some of the language originally Policy 1.10.9)

Strategy 1.10.2.4:

Residential density in the Downtown sub-district of the Downtown Mixed Use district shall be calculated based on a parcel acreage of the entire

sub-district and not on an individual property basis. Residential density in the downtown subdistrict shall be known as the Downtown Residential Density Pool.

Strategy 1.10.2.5:

In order to increase the quality and volume of activity in the Downtown, incentives are to be established for the Downtown subdistrict of the Downtown Mixed Use district. Development projects that provide a significant public benefit, may access the Downtown Residential Density Pool to provide additional residential units above the base density. Significant public benefits may be defined in the Land Development Regulations and include the following:

- Utilizing tax increment recapture programs, cost-share reimbursement grants, tax abatement programs, City and County impact fee assistance, rental subsidies for targeted businesses, and ad valorem incentives for affordable or workforce housing.
- Providing a dedicated easement to expand the public realm on designated streets.
- Participation in constructing an enhanced public realm on designated streets.
- Providing certified affordable or workforce housing.
- Providing additional publicly accessible parking.
- Providing for active ground floor uses that enhance street life.
- Assisting in improving parks or landscaping.

Policy 1.10.3:

Create a multi-modal environment in Downtown to support a high level of activity in the downtown area. Prioritize pedestrian and bicycle circulation. ~~Encourage, promote and provide active and intimate pedestrian outdoor spaces (plazas, waterfront walks, shopping arcades, café's) with pedestrian scaled amenities (street furniture, lighting, shade trees, canopy features) in conjunction with all public infrastructure projects in the Downtown Mixed Use district.~~

Strategy 1.10.3.1:

Ensure building and site plans are oriented to promote pedestrian activity in Downtown to encourage active transportation and support

businesses. Buildings should be sited and oriented to encourage pedestrian access including direct access between the public sidewalk and main entry without intervening parking areas.

Strategy 1.10.3.2:

Encourage active ground-floor uses adjacent to public sidewalks that promote active pedestrian circulation including but not limited to retail, restaurants, lobbies, galleries, civic uses, sidewalk sales, dining, and direct entrances to residential or office units.

Strategy 1.10.3.3

Street design should prioritize pedestrian and bicycle activity through the allocation of right-of-way and supportive design elements. Motor vehicle traffic shall be calmed to a speed that complements a safe and comfortable pedestrian and bicycle precinct.

Strategy 1.10.3.4:

Canopy street trees, arcades and other architecture and landscape features should shade walkways, sidewalks, and plazas to allow pedestrians to comfortably navigate downtown in hot weather. A consistent tree canopy should be planted throughout Downtown through a combination of public investment and maintenance, and standards for new development.

Strategy 1.10.3.5:

Bikeways providing access to various destinations in Downtown should be appropriate for riders of various ages and abilities and connect to existing and proposed trail networks.

Strategy 1.10.3.6:

Solutions that reduce demand for parking should be implemented including shared parking, connectivity, transportation demand management, and “park once” strategies. The City will continue to plan for shared and publicly accessible parking facilities to efficiently meet the parking needs for new downtown developments through public and private partnerships. (Some of the language originally Policy 1.10.10)

Strategy 1.10.3.7:

Motor vehicle access should be well-organized with minimal disruption to pedestrian circulation, including the provision of cross-access where feasible and curb management that anticipates commercial loading, ride-sharing, and autonomous vehicles.

Policy 1.10.4:

~~Provide for public use of existing and new created waterfront access areas through the utilization of such mechanisms as public access easements, visual corridors/breezeways and river front acquisition programs.~~ Enhance the visual attractiveness of the downtown area by enhancing streetscapes, creating a network of public spaces, and enhancing gateways into downtown. (Originally Policy 1.10.1 in part)

Strategy 1.10.4.1:

Open spaces within Downtown should include a variety of typologies including pocket parks to serve daily needs, family-friendly playgrounds and play spaces, and one or more major open space to accommodate community gatherings. Leverage existing public land to create high value open spaces that provides great gathering places for residents and incentivize private sector redevelopment in the near term.

Strategy 1.10.4.2:

Identify at least one significant green space opportunity to provide a central gathering space connecting business activities with the waterfront and providing space for community-wide events.

Strategy 1.10.4.3:

Reconceptualize an existing public area, such as Mariners Way, to better serve existing and future activities in Downtown.

Strategy 1.10.4.4

The Land Development Regulations should identify a Primary Downtown Pedestrian Network and prioritize a high-value public realm on these streets including enhanced streetscaping, wider sidewalks and active frontages. The City may identify funding sources including public-private partnerships to implement these improvements, including incentives.

Strategy 1.10.4.5:

Plan for underground utilities, including alternate implementation strategies, with a priority on the Primary Downtown Pedestrian Network. (Some of the language originally Policy 1.10.11)

Strategy 1.10.4.6:

Enhance entry points of the downtown area and also as an entrance to the Canaveral National Seashore and the Merritt Island National Wildlife

Refuge, with streetscape improvements, architectural continuity, and coordinated commercial signage along the major corridors entering the downtown area including but not limited to U.S. #1, Indian River Avenue, Main Street, and Washington Avenue. (Originally Policy 1.10.1 in part)

Policy 1.10.5:

Prioritize connections between Downtown and the waterfront to increase public access and views of the Indian River. ~~Encourage mixed-use development in the sub-areas of the Downtown Mixed Use district, as provided for in the Land Development Regulations, including office, retail, service, financial, restaurant, entertainment, lodging and residential uses through market analysis, adaptive reuse, public improvements and incentives as well as land development regulations.~~

Strategy 1.10.5.1:

Utilize a waterfront orientation to link the downtown area with the Indian River, East Coast Greenway and Kennedy Space Center through the use of trails, pedestrian walkways, boardwalks, interpretive displays, educational programs, and launch and river viewing areas to create a unique office/retail/residential/open space environment. (Originally Policy 1.10.2)

Strategy 1.10.5.2:

Provide for public use of existing and newly created waterfront access areas through the utilization of mechanisms such as public access easements, visual corridors/breezeways and river front acquisition programs. (Originally Policy 1.10.4)

Policy 1.10.6:

The Downtown Mixed Use (DMU) category may recognize the variety of character areas encompassed by Downtown and its adjoining neighborhoods and corridors. ~~Encourage the location of future civic facilities downtown by identifying parcels, which could be combined to provide the acreage, needed to support such development and identify support facility needs.~~

Strategy 1.10.6.1:

The Land Development Code shall identify subdistricts with unique standards for a variety of character areas within the Downtown Mixed Use category.

~~Policy 1.10.7:~~

~~Support the redevelopment agency in the solicitation of development projects that further the downtown objectives by assisting in identification of sites, land assemblage, acquisition of permits, and appropriate financing.~~ (Moved to Strategy 1.10.1.6)

~~Policy 1.10.8:~~

~~Emphasize development east of U.S. 1 Hwy during initial redevelopment phases that can use the waterfront amenity to capture development interests and act as a catalyst for development of the Downtown Mixed Use district.~~

~~Policy 1.10.9:~~

~~The City shall encourage permanent residency and the re-establishment of affordable owner occupied neighborhoods in the Downtown Mixed Use district to create a mix of residential housing choices of different types of intensities.~~ (Moved to Strategy 1.10.2.3)

~~Policy 1.10.10:~~

~~The City shall continue to plan to meet the parking needs for new downtown developments through public and private partnerships.~~ (Moved to Strategy 1.10.3.6)

~~Policy 1.10.11:~~

~~Determine the feasibility of underground utilities, including alternate implementation strategies.~~

Objective 1.21: Density and Intensity Land Use Criteria.

The City of Titusville will establish standards for density and/or intensity of use for each future land use category.

Policy 1.21.1:

The following standards for densities or intensities of use shall apply to each future land use category as indicated below:

Land Use[3]	Objective	Density[4] (Residential Use)	Intensity[4] (Non-Residential Use)
Industrial	1.8	n/a	1.0 FAR ²
Planned Industrial Park	1.8	n/a	1.5 FAR ²
Commercial High Intensity	1.9	n/a	1.0 FAR ²
Commercial Low Intensity	1.9	n/a	1.0 FAR ²
Downtown Mixed Use	1.10	20 du/acre; 30 du/acre In the Downtown Sub-district & Uptown Sub-district.	5.0 FAR ²
Urban Mixed Use	1.11	15 du/acre	1.0 FAR ²
Shoreline Mixed Use	1.12	20 du/acre	1.0 FAR ²
Residential One	1.14	1 du/acre	.2 FAR ²
Residential Two	1.14	2 du/acre	.2 FAR ²
Low Density Residential	1.14	5 du/acre	.2 FAR ²
Medium Density Residential	1.14	10 du/acre	.2 FAR ²
High Density Residential	1.14	15 du/acre	.2 FAR ²

Land Use[3]	Objective	Density[4] (Residential Use)	Intensity[4] (Non-Residential Use)
Public/Semi-public	1.15	n/a	.2 FAR [2]
Conservation	1.16	1 du/5 acres	n/a
Planned Unit Development	1.19	12 du/acre	.2 FAR [2]
Regional Mixed Use[1]	1.20	Policy 1.20.2	Policy 1.20.2

[1] Density/Intensity standards for Regional Mixed Use are contained in Objective 1.20, Policy 1.20.2

[2]FAR will be applied to individually developed lots/parcels. Where a planned/mixed use development is proposed and common amenities (i.e., parking, stormwater retention, open space, etc.) are provided, the FAR will apply to the total planned/mixed use development; however, individual parcels within the planned/mixed use development will be allowed at a high FAR based upon site specific impacts.

[3] The density in this category may be increased by 50% when using Transfer of Development Rights as specified in Policy 2, Strategy 3.

[4] Maximums unless approved through density or intensity bonuses as described in Strategies 1.10.2.5 and 1.24.3.2.

Policy 1.21.2:

The City of Titusville shall encourage higher densities in areas more suitable for development while preserving historic and public resources by recognizing Transfer of Development Rights (TDRs).

Strategy 1.21.2.1:

Transfer of Development Rights (TDRs) may be obtained through the conditional use permit process to direct residential development to areas which are suitable for growth with the intent of furthering City goals related to preservation of historic preservation, downtown

revitalization, quality affordable housing, and quality public infrastructure.

Strategy 1.21.2.2:

TDRs may be transferred from sending districts as authorized by the Land Development Regulations.

Strategy 1.21.2.3:

The following land use designations may be considered receiving districts for Transfer of Development Rights: Downtown Mixed Use.

Strategy 1.21.2.4:

The density bonus for a project receiving TDRs shall not exceed 50% of the density permitted in the designated land use category. The maximum allowable density of a development shall take into consideration all other requirements of the Comprehensive Plan.

Strategy 1.21.2.5:

TDRs may be considered to protect historic resources, and public infrastructure; to encourage the revitalization of the Downtown, and to encourage the development of affordable housing.

Strategy 1.21.2.6:

Applications for TDR projects shall include an analysis describing the estimated impacts the increased density will have on neighboring developments and the public infrastructure.

SECTION 3. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 amending the Transportation Element as follows:

TRANSPORTATION ELEMENT

Goal 1:

A safe, convenient and energy efficient transportation system in the City of Titusville that serves the needs of all residents and visitors. The system shall promote multiple modes of transportation for goods and people to encourage stability and an improved quality of life.

Objective 1.1:

The City shall improve and maintain safety, convenience, connectivity, and energy efficiency within the transportation system.

Policy 1.1.1:

A Level of Service (LOS) E is established for arterial and Collector roadways. A Level of Service (LOS) D is established for roadways on the Florida Intra-state Highway System (FIHS) and Strategic Intermodal System (SIS) per the Florida Department of Transportation

Strategy 1.1.1.1:

The City should study the opportunity to transition to a Multimodal Level of Service / Multimodal Quality of Service that takes into account all modes of transportation.

Policy 1.1.2:

The City shall require transportation connectivity between land uses and development sites in the Land Development Regulations to provide for multiple access points for emergency management and to facilitate multiple modes of transportation.

Policy 1.1.3:

Parking facilities will be convenient to major generators and attractors and intermodal terminals within the City and provisions for adequate parking shall be included in the City's Land Development Regulations.

Strategy 1.1.3.1:

Develop innovative solutions to reduce parking requirements, including provision for shared parking open to the public that serve multiple uses, utilize connectivity strategies such as alleys and shared driveways, and adopt district-wide transportation demand management programs as redevelopment occurs.

Strategy 1.1.3.2:

Parking requirements for multi-phase projects should be flexible and anticipate potential changes in parking demand.

Strategy 1.1.3.3:

Parking arrangements should be flexible, and long-term planning should anticipate a reduced need for parking as development patterns increase non-automobile trips, and as autonomous vehicles and ride-sharing services become more prevalent.

Policy 1.1.4:

The City shall cooperate with Brevard County and the Space Coast Transportation Planning Organization in the use of transportation demand management strategies as a means to reduce peak hour travel demand and the number of vehicle miles traveled.

Policy 1.1.5:

The City shall cooperate with Brevard County and the Space Coast Transportation Planning Organization in the use of transportation systems management strategies to preserve the capacity of existing transportation systems.

Policy 1.1.6:

The City shall participate with Brevard County, the Space Coast Transportation Planning Organization, and Florida Department of Transportation to establish a performance monitoring system for the transportation system.

Policy 1.1.7:

Standards for safe and convenient on-site traffic flow are contained in the City's Land Development Regulations. On-site circulation standards should account for all user types including motor vehicles, bicycles, and pedestrians.

Policy 1.1.8:

The City shall evaluate and whenever feasible, support transportation systems management activities that will reduce motor vehicle miles traveled ~~travel demands~~, or increase the use of energy-efficient non-motorized vehicles, public transit, and micro-mobility options ~~alternative modes of transportation~~ to conserve energy, reduce greenhouse gases, reduce noise, water and air pollution and discourage urban sprawl.

Strategy 1.1.8.1:

All alternatives should be considered prior to increasing motor vehicle capacity through lane addition to existing roadways, including multimodal improvements, connectivity improvements, construction of parallel facilities, operational improvements, and intersection improvements.

Policy 1.1.9:

The City shall require new ~~DRI or~~ large scale planned development to make contributions, enhancements or provisions towards the public transportation system to promote energy conservation and reduce greenhouse gases.

Objective 1.9:

Application of transportation solutions should be context-sensitive.

Policy 1.9.1:

Context-sensitive solutions recognize that roadway design should respond to the intensity and configuration of existing and planned land uses surrounding the facility. Areas with features such as higher density, higher intensity, transit access, civic facilities, facilities for children or the elderly, high street connectivity, or traditional, pedestrian-oriented pattern should prioritize non-motorized travel and micro-mobility. Areas with features such as lower density, lower intensity, low street connectivity, high-volume trucking, or critical regional motor vehicle routes may prioritize motor vehicle circulation. All facilities should provide sidewalks or other pedestrian accommodation.

Policy 1.9.2:

Downtown: The City shall prioritize pedestrian and bicycle circulation to support a high level of activity in the downtown area.

Strategy 1.9.2.1

Street design should be place-based and contribute to the urban design of downtown.

Strategy 1.9.2.2

Motor vehicle traffic should be calmed to a speed that complements a safe and comfortable pedestrian and bicycle precinct.

Strategy 1.9.2.3

Downtown should have shaded walkways, sidewalks and plazas to allow pedestrians to comfortably navigate downtown in hot weather.

Strategy 1.9.2.4

Bikeways providing access to various destinations in Downtown should be appropriate for riders of various ages and abilities and connect to existing and proposed trail networks.

SECTION 4. Severability. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. Repeal of Prior Inconsistent Ordinances. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict.

SECTION 6. Incorporation into the Comprehensive Plan. Upon the effective date of the Comprehensive Plan Amendment adopted by this Ordinance, said Amendment shall be incorporated into the City of Titusville Comprehensive Plan and any section or paragraph number or letter and any heading may be changed or modified as necessary to effectuate the foregoing.

SECTION 7. Effective Date. The effective date of this plan amendment shall be the date a final order is issued by the Department of Commerce or Administrative Commission finding the amendment in compliance in accordance with Section 163.3184, Florida Statutes, whichever occurs first. If a final order of noncompliance is issued by the Administrative Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be sent to the Department of Commerce, Bureau of Local Planning, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100.

PASSED AND ADOPTED, this _____th day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

Gateway Corridors Amendment

Comprehensive plan (CPA) 1-2024

The ordinance proposes a new Future Land Use Element Objective 1.24 with Policies and Strategies to encourage redevelopment and mixed-use development along the City's major commercial corridors. A new zoning overlay would be established in the Land Development Regulations that offer residential density and other incentives provided certain urban design and streetscape improvements are incorporated into new and redevelopment projects. The overlay will be optional unless a rezoning is requested.

The ordinance proposes revisions to the Goals, Objectives, Policies and Strategies (GOPS) in the Future Land Use Element to encourage (re)development primarily in the Downtown and existing urban areas. The ordinance redirects growth away from sensitive lands, discourages urban sprawl by directing growth on major commercial and transportation corridors with the option of consolidating commercial and residential uses in a mixed use development. The amendment proposes changes to the Objectives, Policies and Strategies related to natural resources, greenhouse gases, urban sprawl and the Shoreline Land Use category to support the new Gateway Corridor Objective.

ORDINANCE NO. ___- 2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 TO ADD A NEW GATEWAY CORRIDOR OBJECTIVE, POLICIES AND STRATEGIES TO ENCOURAGE REDEVELOPMENT ON COMMERCIAL CORRIDORS AND STRENGTHEN POLICIES RELATED TO NATURAL RESOURCE PROTECTION, LANDSCAPING, AND DISCOURAGE URBAN SPRAWL BY AMENDING THE EXISTING FUTURE LAND USE ELEMENT OBJECTIVES 1.5 AND 1.7 AND ASSOCIATED POLICIES AND STRATEGIES RELATED TO NATURAL RESOURCES, GREENHOUSE GASES AND URBAN SPRAWL, AMENDING THE SHORELINE MIXED USE OBJECTIVE 1.12 AND ASSOCIATED POLICIES AND STRATEGIES AND ADDING A NEW GATEWAY CORRIDOR OBJECTIVE 1.24 AND ASSOCIATED POLICIES AND STRATEGIES; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville has received and considered the written objections, recommendations, and comments of the State Land Planning Agency and any other person, agency, or governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

WHEREAS, the City Council of the City of Titusville desires to add a new Gateway Corridor Objective, Policies and Strategies to encourage redevelopment on commercial corridors and strengthen policies related to the natural resource protection, landscaping, and discourage urban sprawl.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 amending Objective 1.5

Natural Resources and reductions in Greenhouse Gases, amending Objective 1.7 Urban Sprawl, and amending Objective 1.12 Shoreline Mixed Use and subsequent Policies and Strategies in the Future Land Use Element as follows:

Objective 1.5: Natural Resources and reductions in Greenhouse Gases.

The City shall ~~implement measures to reduce greenhouse gas emissions.~~ support the natural environment through sustainable practices and conservation of natural resources.

Policy 1.5.1:

The City shall reduce greenhouse gas emissions by promoting compact development and alternative transportation choices such as pedestrian, bicycling and transit.

Policy 1.5.2:

The City shall ~~consider energy, water conservation and habitat while building for all public projects.~~ permit and incentivize water and energy-saving features in new private development and evaluate such features for inclusion in public investments.

Policy 1.5.3:

The energy-efficiency of proposed new development shall be considered when land use and development review decisions are made.

Policy 1.5.4:

The City shall develop an incentive program for developers to promote ride sharing and/or the use of public transportation.

Policy 1.5.5:

The City shall develop an incentive program to encourage the generation of local renewable energy.

Policy 1.5.6:

The City shall draft policies to facilitate higher intensities for commercial use in concentrated areas to reduce and mitigate greenhouse gas emissions.

Policy 1.5.7:

Protect environmentally sensitive natural resources, including water bodies and wildlife habitats, through preservation and conservation best practices.

Policy 1.5.8:

Encourage Florida-friendly and native vegetation as the primary design element in new landscaping.

Objective 1.7: Urban Sprawl.

The City of Titusville shall discourage the proliferation of urban sprawl through the appropriate land use designation on the land use map.

Policy 1.7.1:

The City shall coordinate with Brevard County in implementing the Interlocal Agreement for areas in and immediately adjacent to the City of Titusville.

Policy 1.7.2:

In considering annexations, the city shall require the availability of essential public facilities, considering whether proposed density is sufficient to support maintenance of expanded services, and assess the level of service of the facilities to support urban development incorporating into the City of Titusville. As a minimum, the level of service standards set forth under Objective 1.5 of the Capital Improvements Element shall be maintained.

Policy 1.7.3:

The City shall ensure availability of suitable land for public utility facilities necessary to support the City's urban services area and the servicing of individual parcels of land through a permitted use designation in applicable land development regulations.

Policy 1.7.4:

The City shall discourage sprawl by preparing character district plans as in Objective 1.1, which will promote compact development and improve blighted areas.

Policy 1.7.5:

The City shall encourage the establishment of neighborhood centers including small multi-family buildings ~~residential~~, neighborhood retail, office, and civic uses of appropriate scale within ¼ mile of most residents ~~neighborhood centers~~ as an effective way to reduce vehicular trips and promote transit, walking and bicycling.

Policy 1.7.6:

The City shall encourage retail and office buildings to be placed close to the streetside sidewalk to promote pedestrian travel along roadways.

Policy 1.7.7:

The City shall define and designate infill development as vacant, skipped-over parcels of land in built up areas that have been platted or previously developed more than 20 years ago. Infill development properties must also meet one or more of the following characteristics:

1) Is in a subdivision that is more than 80 percent built out and that was platted more than 20 years ago.

2) Is within an area that contains lots of two acres or less where 80 percent or more of the lots or tracts are developed and have been for at least 20 years.

3) Is within a blighted area as defined by state law or is within the City's Community Development Block Grant Target areas.

4) Contains an original structure or use that is no longer viable or which is not economically feasible to renovate.

5) Contains an existing structure that does not comply with current development and/or zoning code requirements.

6) Is a lot that does not comply with current zoning or development code requirements and has been developed in the past.

Policy 1.7.8:

A development must be readily accessible to infrastructure, services and public facilities to be designated as infill development.

Policy 1.7.9:

The City shall provide standards and administrative process to facilitate infill development. The Land Development Regulations shall be amended to provide flexibility in site development.

Objective 1.12: Shoreline Mixed Use:

The City of Titusville shall pursue ~~the preservation~~ a moderately scaled mix of ~~the~~ commercial, residential, recreational, and public and semi-public mixed-use ~~area~~ that are water-enhanced or water dependent ~~adjacent~~ to the Indian River Lagoon and redevelop blighted areas through the designation of the Shoreline Mixed Use land use category on the Future Land Use Map. Waterfront recreation should be supported by complementary businesses and nearby neighborhoods and development areas should be enhanced by access to waterfront amenities and views.

Policy 1.12.1:

Preserve and enhance the visual and functional relationship in this unique strip of Indian Riverfront land as a liner link between the industrial/Space Center land uses to the south and the historic/commercial/residential land use to the north.

Policy 1.12.2:

Provide public access/recreation sites to the waterfront that are coordinated with existing and proposed residential/commercial locations to the west of Washington Avenue. Priority shall be given to existing and proposed east/west collector and arterial street extensions. ~~Link these sites with a pedestrian/bikeway system on the north/south axis.~~

Strategy 1.12.2.1:

Work with property owners to secure land or easements to support the development of a continuous multimodal trail east of the US 1 Highway.

Strategy 1.12.2.2:

New development should maintain public access to water views where feasible. Provide for visual access locations as part of all development proposals. (Second sentence originally Policy 1.12.2 in part)

Policy 1.12.3:

Encourage appropriate land uses based upon a survey of existing uses, market forces, public facilities and services, and environmental concerns set forth in the other elements of the Comprehensive Plan. Develop a flexible set of land development regulations that will provide for mixed use opportunities that, at a minimum, include both low and high intensity residential uses, tourist uses, commercial uses, public and private recreational uses, including wet docking and boat slips, but not marine service activities.

Strategy 1.12.3.1:

Encourage recreation-oriented venues, activities, and businesses within the Waterfront district.

Strategy 1.12.3.2

Water-dependent and water-enhanced businesses may be permitted and encouraged east of the US 1 Highway where practical.

Strategy 1.12.3.3

Support moderately scaled mixed-use development on the US 1 Highway that benefits from proximity to the waterfront.

SECTION 3. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 adding Objective 1.24 Gateway Corridors with new Policies and Strategies in the Future Land Use Element as follows:

Objective 1.24: Gateway Corridors.

The City's major roadways shall be treated as Gateways critical to the City's image. Gateway corridors shall accommodate a wide variety and intensity of land uses within a framework that enhances the visual identity of the corridors to create a favorable impression for visitors.

Policy 1.24.1:

The Gateway Corridors shall be defined as properties with along the following roadways:

- US-1
- Garden Street / S.R. 406
- South Street / S.R. 405
- Cheney Highway / S.R. 50

Policy 1.24.2:

As the first impression that many visitors will have of the City, properties and public improvements in the Gateway Corridor should have a consistent and attractive appearance.

Strategy 1.24.2.1:

The Land Development Regulations shall develop a zoning overlay with required elements of landscaping, tree planting, maintenance, signage, and other public-facing characteristics in development within the overlay zone consistent with the policies of the Gateway Corridors objective. The overlay may be mandatory as determined in the Land Development Regulations.

Policy 1.24.3:

Targeted investment in the overlay shall be supported by the Gateway Corridor objective that encourages horizontal and vertical mixed-use development and redevelopment with quality landscaping and design that will contribute to a positive image of the City.

Strategy 1.24.3.1:

Future development within Gateway Corridor should be composed primarily of commercial, mixed-use, and multi-family development.

Strategy 1.24.3.2:

The Land Development Code shall include in the zoning overlay incentive bonuses permitting higher density multifamily residential uses and non-residential or mixed-use development up to 2.0 FAR and 40

units per acre with building heights not to exceed five stories. Incentive bonuses shall be based on contributions to the public realm including landscaping, green infrastructure, bicycle and pedestrian infrastructure, and other improvements which implement the policies of the Gateway Corridor objective and exceed the minimum requirements for the overlay.

Strategy 1.24.3.3:

Urban design standards shall provide for an attractive environment that balances auto-oriented and pedestrian-oriented design features.

Strategy 1.24.3.4:

Higher intensity development along corridors shall transition to existing single-family neighborhoods in an orderly fashion.

Policy 1.24.4:

The City shall encourage the development of higher density housing in appropriate locations along Gateway Corridors to increase housing supply while discouraging urban sprawl.

Strategy 1.24.4.1:

Encourage and incentivize through flexible zoning the development of multi-family housing on underutilized commercial or vacant parcels along corridors consistent with the infill policies.

Strategy 1.24.4.2:

Encourage the development of more affordable housing in locations within a ¼ mile to public transit.

Policy 1.24.5:

The City shall ensure that the Gateway Corridors have appropriate open spaces to provide aesthetic value for the city and recreational opportunities for those who live and work along the corridors.

Strategy 1.24.5.1:

Open spaces such as parks or plazas should be included in developments along the corridors for the use of residents, employees, and visitors.

Strategy 1.24.5.2:

As redevelopment occurs, the City shall identify new recreation needs and opportunities to create new public or private open spaces with parks and recreation to serve them.

Policy 1.24.6:

The Gateway Corridors shall provide for long distance motor vehicle movement along major roads while providing safe, multimodal access to uses and activity centers.

Strategy 1.24.6.1:

Operational improvements that maintain or improve traffic flow along major roadways shall be identified and implemented.

Strategy 1.24.6.2:

Safe crossings for people walking and biking shall be provided at regular intervals where development is located on both sides of a roadway.

Strategy 1.24.6.3:

Access to development areas from Gateway roads should be consolidated, including using existing streets where existing intersections are frequent, to limit the number of access points on major roadways and to limit sidewalk and bikeway conflicts.

Strategy 1.24.6.4:

Where feasible, new development shall provide cross-access to existing or undeveloped parcels and existing streets to mitigate the impact of new development on traffic operations of the major road.

Strategy 1.24.6.5:

Shared parking, structured parking, and design strategies should be encouraged in order to minimize the visual and environmental impacts of surface parking lots.

SECTION 4. Severability. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. Repeal of Prior Inconsistent Ordinances. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict.

SECTION 6. Incorporation into the Comprehensive Plan. Upon the effective date of the Comprehensive Plan Amendment adopted by this Ordinance, said Amendment shall be incorporated into the City of Titusville Comprehensive Plan and any section or paragraph number or letter and any heading may be changed or modified as necessary to effectuate the foregoing.

SECTION 7. Effective Date. The effective date of this plan amendment shall be the date a final order is issued by the Department of Commerce or Administrative Commission finding the amendment in compliance in accordance with Section 163.3184,

Florida Statutes, whichever occurs first. If a final order of noncompliance is issued by the Administrative Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be sent to the Department of Commerce, Bureau of Local Planning, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100.

PASSED AND ADOPTED, this _____th day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

Housing Element Amendment

Comprehensive plan (CPA) 1-2024

The ordinance proposes revisions to the Objectives, Policies and Strategies (GOPS) in the Housing Element. The ordinance strengthens language in support of various housing types, encourages the integration of affordable units in market rate developments and promotes the use of green or sustainable building techniques.

ORDINANCE NO. ___- 2024

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY AMENDING THE EXISTING HOUSING ELEMENT, SPECIFICALLY AMENDING OBJECTIVE 1.1, 1.2, 1.9 AND 1.10 AND SUBSEQUENT POLICIES AND STRATEGIES RELATED TO HOUSING TYPES, AFFORDABLE HOUSING, AND SUSTAINABLE BUILDING PRACTICES; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

WHEREAS, the City of Titusville, pursuant to Chapter 163, Florida Statutes, desires to amend its Comprehensive Plan adopted by Ordinance No. 60-1988; and

WHEREAS, a first and second public hearing has been held on the Comprehensive Plan amendments before the Local Planning Agency and the local governing body; and

WHEREAS, the City of Titusville has received and considered the written objections, recommendations, and comments of the State Land Planning Agency and any other person, agency, or governing body; and

WHEREAS, the City of Titusville finds that said Comprehensive Plan Amendment has been processed in accordance with the applicable law and desires to amend the Comprehensive Plan.

WHEREAS, the City Council of the City of Titusville desires to amend its Housing Elements by promoting various housing types, workforce housing, the integration of affordable units in market rate developments and encouraging sustainable building practices.

NOW, THEREFORE, BE IT ENACTED by the City of Titusville, Florida as follows:

SECTION 1: Recitals. The foregoing recitals are deemed true and correct and are hereby adopted and incorporated herein by this reference.

SECTION 2. The City of Titusville's Comprehensive Plan is hereby amended by adopting Comprehensive Plan Amendment Number 1-2024 amending the Housing Element as follows:

HOUSING ELEMENT

Goals 1:

The City of Titusville shall, through its comprehensive plan, make provision for adequate and affordable housing that meet the physical and social needs of all segments of the current and future population of the City.

Objective 1.1:

The City shall provide ~~an adequate environment~~ for a variety of housing types and price levels for all residents living in or migrating to the area. Employees of businesses within Titusville and high-tech businesses on the Space Coast should have opportunities to live in high quality housing within the City.

Policy 1.1.1:

~~The City shall support a suitable mix of housing by:~~ The City shall encourage a substantial and diverse residential population downtown and city-wide by providing a mix of housing options to serve a wide range of household types and incomes.

Strategy 1.1.1.1:

The City shall coordinate ~~Coordinating the~~ residential growth with the Land Use Plan and respective zoning.

Policy 1.1.2:

~~The City shall enact development regulations that establish a broad range of minimum square footage of dwelling units in the land development regulations.~~ The City shall support the availability of attainable housing both by minimizing barriers to the private provision of market-rate housing to increase housing supply and by collaborating with public and non-profit entities on the provision of subsidized housing for lower income households.

Policy 1.1.3:

The City shall enact development regulations that provide for a mix of housing types and sizes within a development.

Strategy 1.1.3.1:

Permit a range of housing typologies within neighborhoods to accommodate a range of household types including accessory dwelling units, duplexes, townhouse, and quadruplexes.

Objective 1.2:

The City of Titusville should identify opportunities to preserve a healthy proportion of affordable housing as property values rise within the City. The City should, within its realm of responsibility, act to make affordable housing available through housing implementation programs, especially to meet the needs of very low income households, for existing and future residents.

Policy 1.2.1:

The City of Titusville uses the HUD definition of affordable housing which means housing affordable to those with incomes at or below 80%, (low income), 50% (very low income), and 30% (extremely low income) of the median income of the metropolitan area who pay no more than 30% of their gross income for housing.

Policy 1.2.2:

The City shall provide an education program such as homebuyer education and counseling to prepare low income families for homeownership. Financial and technical assistance shall be provided to low income homebuyers whenever economically feasible.

Policy 1.2.3:

The City shall continue to use the Community Development Block Grant (CDBG) Program and other programs to construct and/or rehabilitate housing units that will increase the availability of affordable housing for very low income and extremely low income households and other groups with special needs.

Policy 1.2.4

Affordable housing should blend in style and character with market rate-development.

Objective 1.9:

The City shall continue to promote the preservation of historically significant housing and encourage its utility for residential use or adaptive reuse.

Policy 1.9.1:

The City shall continue to identify, evaluate, protect and preserve housing which is historically significant. Historically significant housing would include those houses listed on the National Register of Historic Place and the Florida Master Site File.

Policy 1.9.2:

The City shall continue to provide technical assistance to owners of historically significant housing or other individuals that are interested in preservation activities.

Policy 1.9.3:

The City shall pursue available Federal, State, and local funding sources which support efforts to preserve or protect historically significant housing.

Objective 1.10:

The City shall ~~implement measures to reduce greenhouse gas emissions by requiring that new construction and rehabilitation of affordable housing be energy efficient and use renewable energy sources.~~ promote the use of green housing construction, renovation, and rehabilitation techniques for affordable housing that make housing units affordable over the long term by reducing energy consumption, lowering utility bills, and decreasing maintenance costs.

Policy 1.10.1:

The City shall obtain Leadership in Energy and Environmental Design (LEEDS), or US Green Building Council's (USGBC) or Florida Green Building Coalition (FGBC) certification when constructing new affordable housing funded by the City.

Policy 1.10.2:

The City shall promote the use of green housing construction and renovation and rehabilitation techniques of affordable housing. Sustainable building techniques will make the housing units affordable over the long term by reducing energy consumption, lowering utility bills and decreasing maintenance costs.

Policy 1.10.3:

The City shall encourage the use of renewable energy source and will promote new housing design to include energy saving features.

SECTION 3. Severability. If any provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 4. Repeal of Prior Inconsistent Ordinances. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict.

SECTION 5. Incorporation into the Comprehensive Plan. Upon the effective date of the Comprehensive Plan Amendment adopted by this Ordinance, said Amendment shall be incorporated into the City of Titusville Comprehensive Plan and any section or paragraph number or letter and any heading may be changed or modified as necessary to effectuate the foregoing.

SECTION 6. Effective Date. The effective date of this plan amendment shall be the date a final order is issued by the Department of Commerce or Administrative Commission finding the amendment in compliance in accordance with Section 163.3184, Florida Statutes, whichever occurs first. If a final order of noncompliance is issued by the Administrative Commission, this amendment may nevertheless be made effective by adoption of a resolution affirming its effective status, a copy of which resolution shall be sent to the Department of Commerce, Bureau of Local Planning, 2555 Shumard Oak Boulevard, Tallahassee, FL 32399-2100.

PASSED AND ADOPTED, this _____th day of _____, 2024.

_____

Daniel E. Diesel, Mayor

ATTEST:

_____

Wanda F. Wells, City Clerk

CITY OF TITUSVILLE NOTICE OF PUBLIC HEARINGS REGARDING TEXT AMENDMENTS TO THE FUTURE LAND USE, TRANSPORTATION AND HOUSING ELEMENTS OF THE COMPREHENSIVE PLAN AND ADDING NEW CITY-WIDE ELEMENT TO THE COMPREHENSIVE PLAN

PLEASE TAKE NOTICE that at a regular meeting of the Titusville City Council to be held on Tuesday, **October 8, 2024**, in the Council chamber, on the second floor of City Hall, 555 South Washington Avenue, Titusville, FL, 32796, **commencing at 6:30 p.m.,** the City of Titusville City Council will hold a public hearing to consider adopting the following proposed ordinances amending the City's Comprehensive Plan, by adding a City-wide Element and by amending the Future Land Use, Transportation and Housing Elements, as related to Comprehensive Plan Amendment (CPA) Application No. 1-2024. At the same meeting, the City Council proposes to enact the following ordinances.

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY ADDING A NEW CITY-WIDE ELEMENT GOAL, OBJECTIVES AND POLICIES TO ADDRESS THE REGIONAL ECONOMY, QUALITY OF LIFE, PLACE-BASED DESIGN AND EMPLOYMENT; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY AMENDING THE EXISTING FUTURE LAND USE ELEMENT AND TRANSPORTATION ELEMENT, SPECIFICALLY AMENDING OBJECTIVES 1.1 CHARACTER LAND USE DISTRICTS, 1.2 REDEVELOPMENT AND ADAPTIVE REUSE, 1.10 DOWNTOWN LAND USE, 1.21 DENSITY AND INTENSITY LAND USE CRITERIA AND ASSOCIATED POLICES AND STRATEGIES OF THE FUTURE LAND USE ELEMENT; BY AMENDING THE POLICIES AND STRATEGIES OF OBJECTIVE 1.1 OF THE TRANSPORTATION ELEMENT AND ADDING OBJECTIVE 1.9 AND ASSOCIATED POLICIES AND STRATEGIES TO THE TRANSPORTATION ELEMENT; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 TO ADD A NEW GATEWAY CORRIDOR OBJECTIVE, POLICIES AND STRATEGIES TO ENCOURAGE REDEVELOPMENT ON COMMERCIAL CORRIDORS AND STRENGTHEN POLICIES RELATED TO NATURAL RESOURCE PROTECTION, LANDSCAPING, AND DISCOURAGE URBAN SPRAWL BY AMENDING THE EXISTING FUTURE LAND USE ELEMENT OBJECTIVES 1.5 AND 1.7 AND ASSOCIATED POLICIES AND STRATEGIES RELATED TO NATURAL RESOURCES, GREENHOUSE GASES AND URBAN SPRAWL; BY AMENDING THE SHORELINE MIXED USE OBJECTIVE 1.12 AND ASSOCIATED POLICIES AND STRATEGIES AND ADDING A NEW GATEWAY CORRIDOR OBJECTIVE 1.24 AND ASSOCIATED POLICIES AND STRATEGIES; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

AN ORDINANCE OF THE CITY OF TITUSVILLE, FLORIDA, AMENDING THE CODE OF ORDINANCES BY AMENDING ORDINANCE NO. 60-1988, WHICH ADOPTED THE COMPREHENSIVE PLAN OF THE CITY OF TITUSVILLE, BY ADOPTING COMPREHENSIVE PLAN AMENDMENT 1-2024 BY AMENDING THE EXISTING HOUSING ELEMENT, SPECIFICALLY AMENDING OBJECTIVES 1.1, 1.2, 1.9 AND 1.10 AND SUBSEQUENT POLICIES AND STRATEGIES RELATED TO HOUSING TYPES, AFFORDABLE HOUSING, AND SUSTAINABLE BUILDING PRACTICES; PROVIDING FOR SEVERABILITY, REPEAL OF PRIOR INCONSISTENT ORDINANCES, INCORPORATION INTO THE COMPREHENSIVE PLAN AND EFFECTIVE DATE.

PLEASE ALSO TAKE NOTICE that on **Wednesday, September 18, 2024**, at a meeting commencing at **6:00 p.m.,** the Planning and Zoning Commission, acting as Local Planning Agency, will hold a public hearing to hear interested persons with regard to these issues and the aforementioned proposed ordinance for recommendation to City Council. This meeting will be held in the Council chamber, on the second floor of the City Hall, 555 S. Washington Avenue, Titusville, FL 32796.

Interested parties may appear at said meetings and be heard with respect to adoption of the proposed ordinance. The proposed Comprehensive Plan update may be inspected by the public in the City Clerk's Office at City Hall.

Any person who decides to appeal any decision of the Planning and Zoning Commission, acting as Local Planning Agency, or the City Council with respect to any matter being considered at these meetings will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

The City desires to accommodate persons with disabilities. Accordingly, any physically handicapped person, pursuant to Chapter 286.26 *Florida Statutes,* should, at least 48 hours prior to the meeting, submit a written request that the physically handicapped person desires to attend the meeting to the City Clerk's Office.

P and Z Regular - September 18, 2024

Vonda F. Wells, MMC, City Clerk
Titusville City Hall, 555 S. Washington Avenue, P.O. Box 2806, Titusville, Florida 32781-2806
Phone: (321) 567-3686 and Fax: (321) 567-3686

FT-40229691

March 21, 2024

The Honorable Daniel Diesel
Mayor, City of Titusville
P.O. Box 2806
555 South Washington Avenue
Titusville, Florida 32796

Dear Mayor Diesel:

The Florida Department of Commerce (FloridaCommerce) has reviewed the proposed comprehensive plan amendment for the City of Titusville (Amendment No. 24-01ESR) received on February 20, 2024. The review was completed under the expedited state review process. We have no comment on the proposed amendment.

The City should act by choosing to adopt, adopt with changes, or not adopt the proposed amendment. For your assistance, we have enclosed the procedures for adoption and transmittal of the comprehensive plan amendment. In addition, the City is reminded that:

- Section 163.3184(3)(b), F.S., authorizes other reviewing agencies to provide comments directly to the City. **If the City receives reviewing agency comments and they are not resolved, these comments could form the basis for a challenge to the amendment after adoption**.

- **The second public hearing,** which shall be a hearing on whether to adopt one or more comprehensive plan amendments, **must be held within 180 days** of your receipt of agency comments or the amendment shall be **deemed withdrawn** unless extended by agreement with notice to FloridaCommerce and any affected party that provided comment on the amendment pursuant to Section 163.3184(3)(c)1., F.S.

- **The adopted amendment must be transmitted to FloridaCommerce within ten working days after the second public hearing pursuant to 163.3184(3)(c)2., F.S.** Under Section 163.3184(3)(c)2. and 4., F.S., the **amendment effective date** is 31 days after FloridaCommerce notifies the City that the amendment package is complete or, if challenged, until it is found to be in compliance by FloridaCommerce or the Administration Commission.

An equal opportunity employer/program. Auxiliary aids and service are available upon request to individuals with disabilities. All voice telephone numbers on this document may be reached by persons using TTY/TTD equipment via the Florida Relay Service at 711.

If you have any questions concerning this review, please contact Jon Coulter, Planning Analyst, by telephone at (850)-717-8421 or by email at jon.coulter@commerce.fl.gov.

Sincerely,

James D. Stansbury, Chief
Bureau of Community Planning and Growth

JDS /jc

Enclosure(s): Procedures for Adoption

cc: Bradley Parrish, AICP, Community Development Director
Tara McCue, Executive Director, East Central Florida Regional Planning Council

An equal opportunity employer/program. Auxiliary aids and service are available upon request to individuals with disabilities. All voice telephone numbers on this document may be reached by persons using TTY/TTD equipment via the Florida Relay Service at 711.

SUBMITTAL OF ADOPTED COMPREHENSIVE PLAN AMENDMENTS

FOR EXPEDITED STATE REVIEW

Section 163.3184(3), Florida Statutes

NUMBER OF COPIES TO BE SUBMITTED: Please submit electronically using FloridaCommerce's electronic amendment submittal portal "**Comprehensive Plan and Amendment Upload**" (*https://fldeo.my.salesforce-sites.com/cp/*) **or** submit three complete copies of all comprehensive plan materials, of which one complete paper copy and two complete electronic copies on CD ROM in Portable Document Format (PDF) to the State Land Planning Agency and one copy to each entity below that provided timely comments to the local government: the appropriate Regional Planning Council; Water Management District; Department of Transportation; Department of Environmental Protection; Department of State; the appropriate county (municipal amendments only); the Florida Fish and Wildlife Conservation Commission and the Department of Agriculture and Consumer Services (county plan amendments only); and the Department of Education (amendments relating to public schools); and for certain local governments, the appropriate military installation and any other local government or governmental agency that has filed a written request.

SUBMITTAL LETTER: Please include the following information in the cover letter transmitting the adopted amendment:

_____ State Land Planning Agency identification number for adopted amendment package;

_____ Summary description of the adoption package, including any amendments proposed but not adopted;

_____ Identify if concurrency has been rescinded and indicate for which public facilities. (Transportation, schools, recreation and open space).

_____ Ordinance number and adoption date;

_____ Certification that the adopted amendment(s) has been submitted to all parties that provided timely comments to the local government;

_____ Name, title, address, telephone, FAX number and e-mail address of local government contact;

_____ Letter signed by the chief elected official or the person designated by the local government.

ADOPTION AMENDMENT PACKAGE: Please include the following information in the amendment package:

_____ In the case of text amendments, changes should be shown in strike-through/underline format.

_____ In the case of future land use map amendments, an adopted future land use map, **in color format,** clearly depicting the parcel, its future land use designation, and its adopted designation.

_____ A copy of any data and analyses the local government deems appropriate.

Note: If the local government is relying on previously submitted data and analysis, no additional data and analysis is required;

_____ Copy of the executed ordinance adopting the comprehensive plan amendment(s);

Suggested effective date language for the adoption ordinance for expedited review:

> "The effective date of this plan amendment, if the amendment is not timely challenged, shall be 31 days after the state land planning agency notifies the local government that the plan amendment package is complete. If the amendment is timely challenged, this amendment shall become effective on the date the state land planning agency or the Administration Commission enters a final order determining this adopted amendment to be in compliance."

_____ List of additional changes made in the adopted amendment that the State Land Planning Agency did not previously review;

_____ List of findings of the local governing body, if any, that were not included in the ordinance and which provided the basis of the adoption or determination not to adopt the proposed amendment;

_____ Statement indicating the relationship of the additional changes not previously reviewed by the State Land Planning Agency in response to the comment letter from the State Land Planning Agency.

Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Boulevard
DeLand, Florida 32720

JARED W. PERDUE, P.E.
SECRETARY

March 15th, 2024

Mr. Brad Parrish, AICP
Planning Manager, City of Titusville
Community Development-Planning
555 South Washington Avenue
Post Office Box
Titusville, Florida 32796-2806

Subject: City of Titusville 24-01ESR
Response Type: ***No Comments***

Dear Mr. Parrish,

Pursuant to Section 163.3184(3), Florida Statutes (F.S.), in its role as a reviewing agency as identified in Section 163.3184(1)(c), F.S., the Florida Department of Transportation (FDOT) reviewed the amendment of City of Titusville's Proposed 24-01ESR, as requested in your transmittal letter, dated February 20, 2024.

Proposed Ordinance:
This comprehensive plan amendment proposes to amend the Future Land Use, Transportation, and Housing elements of the City of Titusville's Comprehensive Plan, and adopt a City-wide Goal with Objectives and Policies.

Result:
FDOT has reviewed the transmitted amendment for the City of Titusville pursuant to Section 163.3184(3), Florida Statutes. The proposed amendment is not anticipated to have significant adverse impacts to transportation resources or facilities of state importance. We appreciate the opportunity to review the proposed amendment and request that a copy of the adopted amendment, along with the supporting data and analysis, such as the proposed development's specific impacts on the transportation network, be transmitted to the Department. Thank you for coordinating on the review of this proposed amendment with FDOT. If you have any questions, please do not hesitate to contact me by email at james.rodriguez@dot.state.fl.us or by phone at *386-943-5457*.

Sincerely,

James Rodriguez

James Rodriguez, D5 Growth Management Coordinator

cc: *Jeffrey Ball, Brevard County*
D. Ray Eubanks, DEO
Barbara Powell, DEO
Jennifer Carver, FDOT
Melissa McKinney, FDOT
Tiffany Hill, FDOT

Parrish, Bradley

From: Steve Fitzgibbons <SFitzgibbons@sjrwmd.com>
Sent: Friday, March 8, 2024 9:34 AM
To: Parrish, Bradley
Cc: DCPexternalagencycomments@deo.myflorida.com; Amick, Kim
Subject: City of Titusville proposed comprehensive plan amendment 24-1ESR

Dear Mr. Parrish,

St. Johns River Water Management District (District) staff have reviewed City of Titusville proposed comprehensive plan amendment 24-1ESR in accordance with the provisions of Chapter 163, Florida Statutes. Based on review of the submitted materials, District staff have no comments on the proposed amendment. If you have any questions or need additional information, please contact me.

Please note that all proposed and adopted comprehensive plan amendments can be submitted to the District by email at sfitzgibbons@sjrwmd.com.

Sincerely,
Steve Fitzgibbons

Steven Fitzgibbons, AICP
Intergovernmental Planner
St. Johns River Water Management District
7775 Baymeadows Way, Suite 102
Jacksonville, FL 32256
Office (386) 312-2369
Email: sfitzgib@sjrwmd.com
Website: www.sjrwmd.com
Connect with us: Newsletter, Facebook, Twitter, Instagram, YouTube, Pinterest



www.sjrwmd.com/ePermit

We value your opinion. Please take a few minutes to share your comments on the service you received from the District by clicking this link

Notices
• Emails to and from the St. Johns River Water Management District are archived and, unless exempt or confidential by law, are subject to being made available to the public upon request. Users should not have an expectation of confidentiality or privacy.
• Individuals lobbying the District must be registered as lobbyists (§112.3261, Florida Statutes). Details, applicability and the registration form are available at http://www.sjrwmd.com/lobbyist/

CITY OF Titusville FLORIDA

Vision Focus Areas: Community Meeting

March 28, 2023

Kimley»Horn + CPMN associates


COMMEMORATIVE ISSUE

The Titusville Times

WWW.TITUSVILLE.COM

Thursday, November 11, 2032

MAYOR OF TITUSVILLE INTERVIEWED
HOW THE VISION WAS ACHIEVED

BY KEVIN JONES

What Does Titusville Have in Store for the Next 10 Years?

Titusville has developed a town" in Central Florida and has vibrant growing economy attractive pedestrian and bike thriving on redevelopment friendly streets lined with signature in the older neighborhoods, the canopy trees and other attractive Downtown and on the major landscaping. Cultural events are roadways leading into town. It's a an important aspect of the Town great place to start a new business with an active and thriving artist or relocate an existing business in community and live music as neighborhoods that are attractive part of its many street festivals. to young people. The City is very businessfriendlyandhasstreamlined The 25-block downtown core and its processes to make it attractive surrounding area are postcards to developers and builders. We for an effective neighborhood now have a 3% annual growth rate. revitalization program energized by young first adopters who have

The City is very walkable and pioneered the redevelopment and bike friendly and is highly revitalization of these important amenitized with parks and trails areas that serve and support the that enhance the waterfront Downtown local businesses. experience. The continuous 12-mile waterfront has a multi-modal Downtown is the shining face of trail with many restaurants and Titusville with its exciting and businesses overlooking the river. beautiful new public squares and urban parks that are hos to many community events an activities catering to all a as well as visitors w



TODAY'S MEETING

AGENDA:

1. **Project Background**
2. **Focus Area Concepts**
   a) Downtown
   b) West Downtown
   c) Gateway Corridors
3. **Comments & Questions**
4. **Next Steps**

Goals of Today's Meeting

- Brief background of the project
- Share an overview of the draft vision for the three focus areas
- Outline policies and standards that would assist in implementing the visions
- Solicit Council feedback on the draft concepts



PROJECT BACKGROUND

Key Points of the Titusville Tomorrow Vision Plan

- The favorable regional context is a big opportunity for Titusville
- The City is growing very slowly
- The City must grow “smartly,” primarily through quality redevelopment and infill
- Place-making creates economic and social value

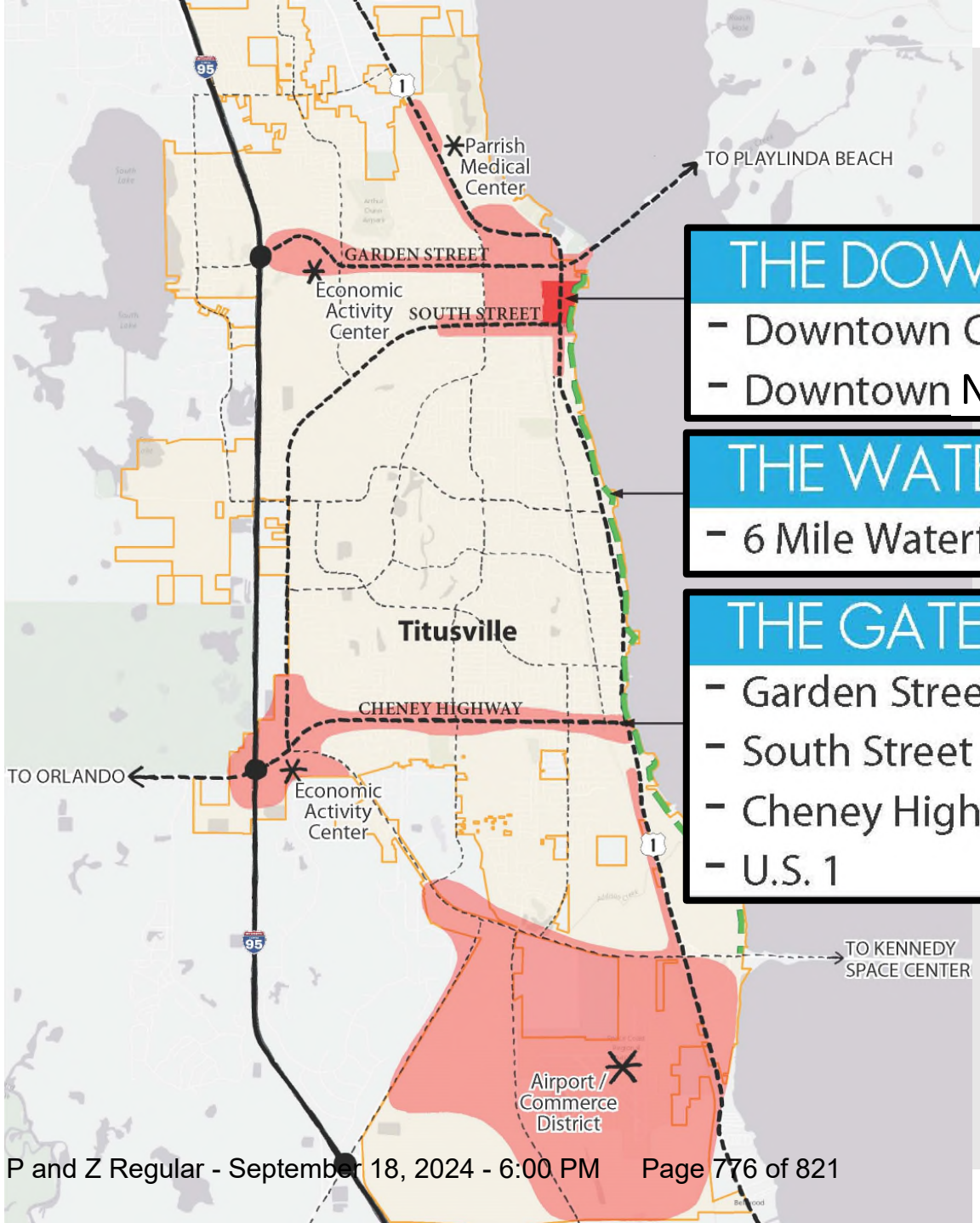
Vision Plan Consensus:

- The City needs to **reimagine 3 key areas**: the Downtown, the Waterfront, and the Gateways.
- The City needs to develop an **effective redevelopment/infill** strategy.
- A **vibrant downtown is an essential** element in the overall economic development strategy.
- These initiatives will **effectively reposition the City** in a very positive way.



Creating Value

- For citizens
- For businesses
- For the City



THE DOWNTOWN

- Downtown Core
- Downtown Neighborhoods

THE WATERFRONT

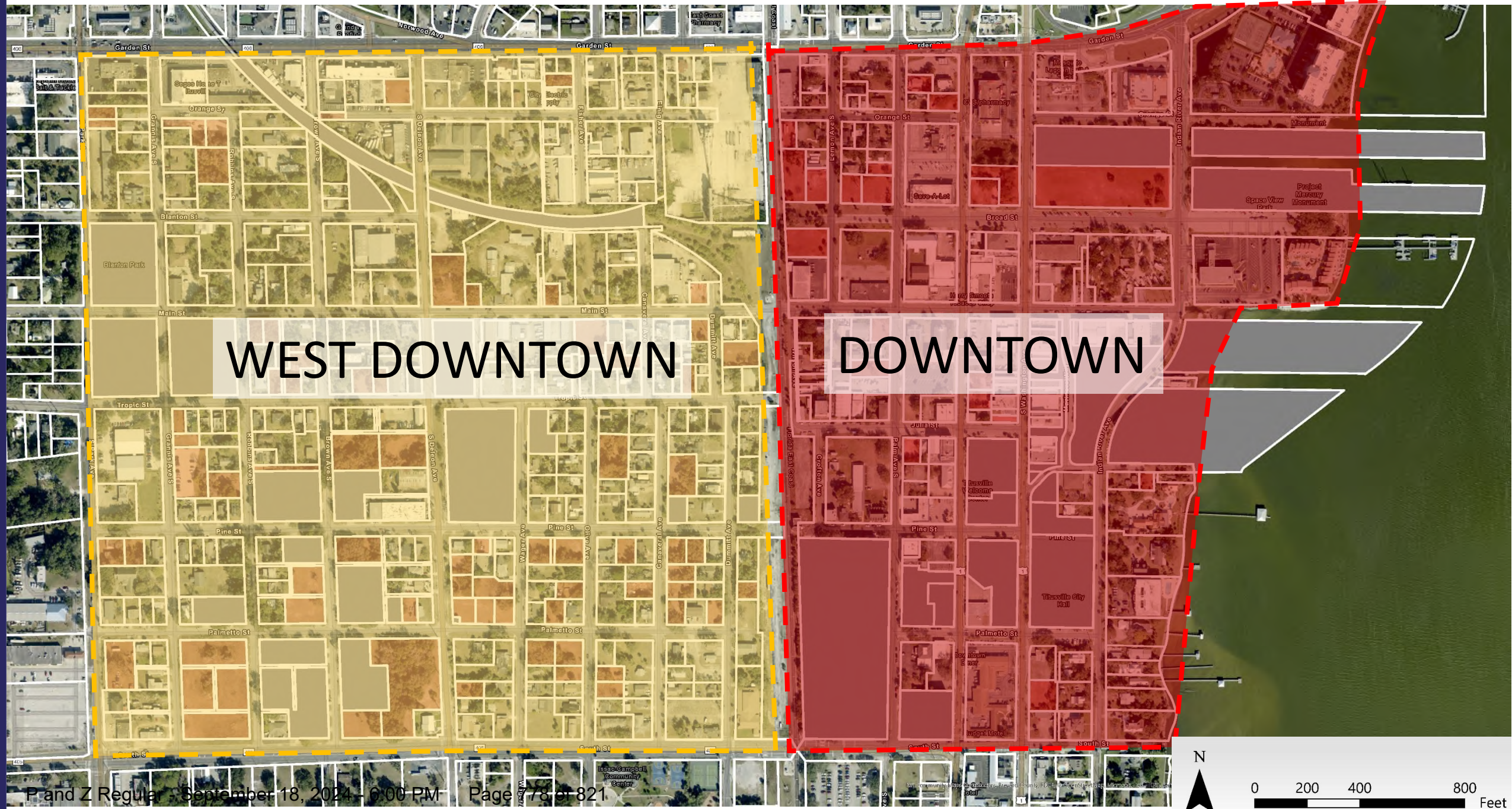
- 6 Mile Waterfront Trail

THE GATEWAYS

- Garden Street
- South Street
- Cheney Highway
- U.S. 1

3 Keys to the Titusville Tomorrow Vision Plan

DOWNTOWN


WEST DOWNTOWN
DOWNTOWN
Garden St
Orange St
Blanton St
Main St
Tropic St
Pine St
Palmetto St
South St
Broad St
Julia St
Blanton Park
Space View Park
Project Mercury Monument
Tlusville City Hall
Issac Campbell Community Center
N
0
200
400
800
Feet

Vision Plan - Downtown Goals

- Create a **sense of place** and memorable identity (**with a new main street**)
- Make Downtown more **walkable and bike-friendly** with a variety of traffic-calming options and a multimodal trail network(s)
- Integrate **more attractive green park spaces** for community events
- **Generate more activity and residential population** to help existing and new businesses grow and thrive
- A re-imagined Downtown can also **enrich the adjacent neighborhoods** (West Downtown)
- Create a **near-term transformative place**
- Enable small scale **attractive redevelopment**



How to Enhance Downtown

- **18-hour place**
  - More people call downtown home
  - More 9-to-5 workplaces
- **More walkable and active streetscapes**
  - Slower driving speeds
  - Shady, wide sidewalks
  - Interesting things to see
  - Attractive architecture and landscaping
- **Great Gathering Places**
  - Parks and plazas to celebrate



Leadership Feedback Summary

DOWNTOWN

Opportunities:

- Expansion of the Arts District
- Space tourism
- Bike tourism
- Waterfront gathering places
- Mariners way

Concerns: Lack of housing and affordability; economic viability; public safety; lack of walkability



A Near Term Opportunity Site on the Water

- Mariners Way opportunity
- Builds on the old town
- A waterfront view
- Public ownership is under utilized
- A dynamic setting for events
- Mature existing trees
- Recognized in leadership meetings



Mariners Way Today



Preliminary Concept

DOWNTOWN

Opportunities:

- A dynamic new open space park in downtown for gatherings, events and festivals
- A great near-term placemaking opportunity



A New Gathering Place



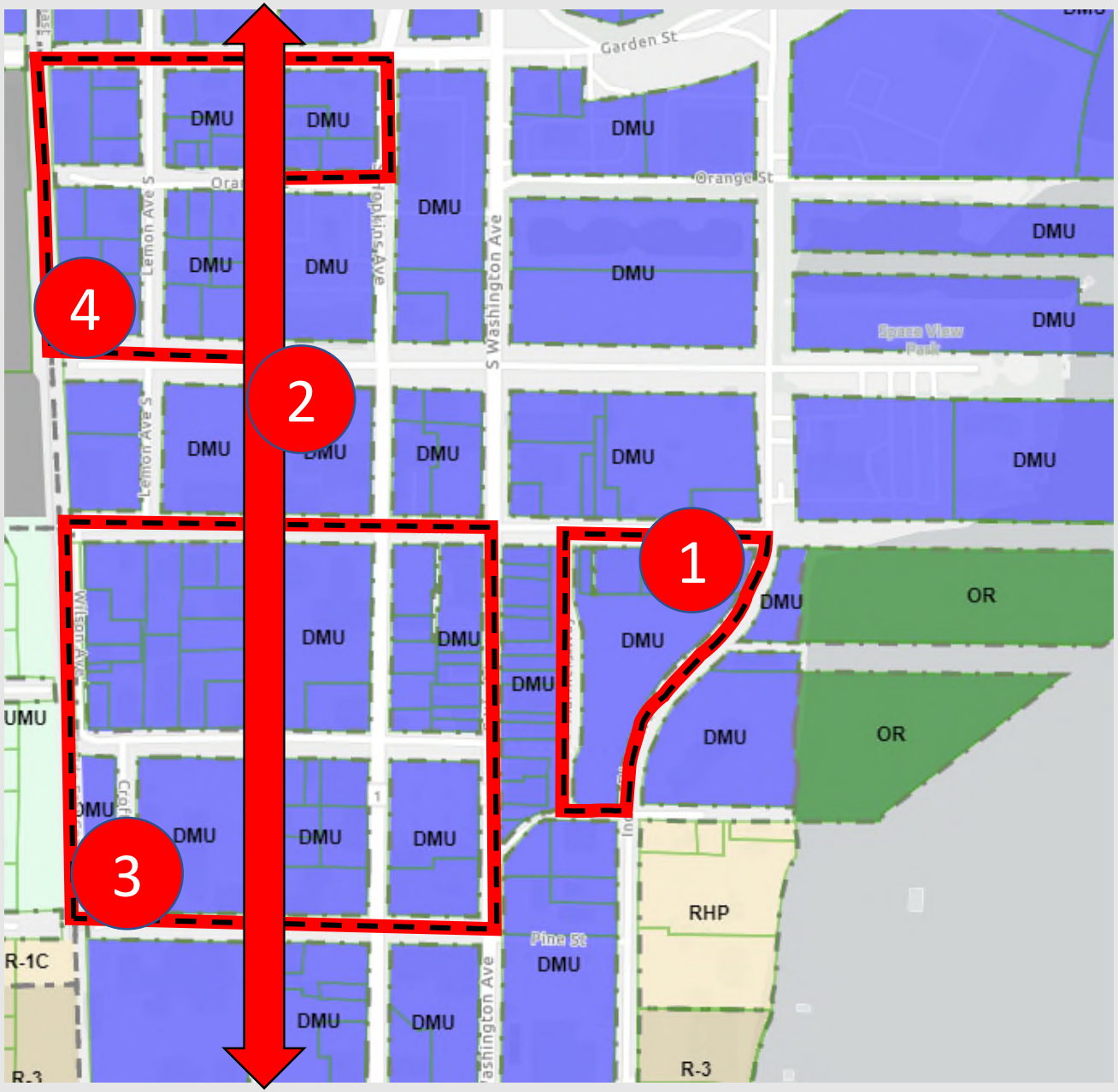
A New Waterfront Park, Pavilion, and Food Trucks



The Park Evolves and Becomes More Vibrant Over Time



New Entertainment Places



Downtown Redevelopment Initiatives

DOWNTOWN

1. Mariners Way Park
2. Palm Avenue Main Street
3. The Arts District (Titusville Playhouse)
4. New targeted overlay zone



Placemaking Concept

TYPICAL SMALL BLOCKS IN WEST DOWNTOWN & DOWNTOWN

Opportunities:

- Ways to integrate a larger variety of housing types and residential densities
- Provide street-level engagement along Garden Street and Palm Avenue (streetscape enhancements with mixed-use potential)



Palm Avenue Streetscape



Garden Street



Garden Street Frontage

Key Changes to Policies & Standards

DOWNTOWN

- **Enhance and clarify downtown standards**
  - Strengthen street tree and landscape standards
  - Clear build-to lines AND minimum sidewalk standards
  - Re-evaluate mixed-use and ground floor “active use” requirements to allow for evolution

GATEWAY CORRIDORS

Vision Plan Gateway Goals

- Rethink corridors to create **favorable first impressions** of the City by improving landscape design, maintenance, and signage
- Improve mobility with **walk/bike/transit-friendly edges**
- A key resource for **redevelopment and placemaking**



Leadership Feedback Summary

GATEWAY CORRIDORS

Opportunities:

- Beautification efforts to make gateways more attractive
- FDOT Corridor Studies
- High visibility with tourists and space employees

Concerns: Traffic; speed of cars; lack of sense of place; lack of trees/shade

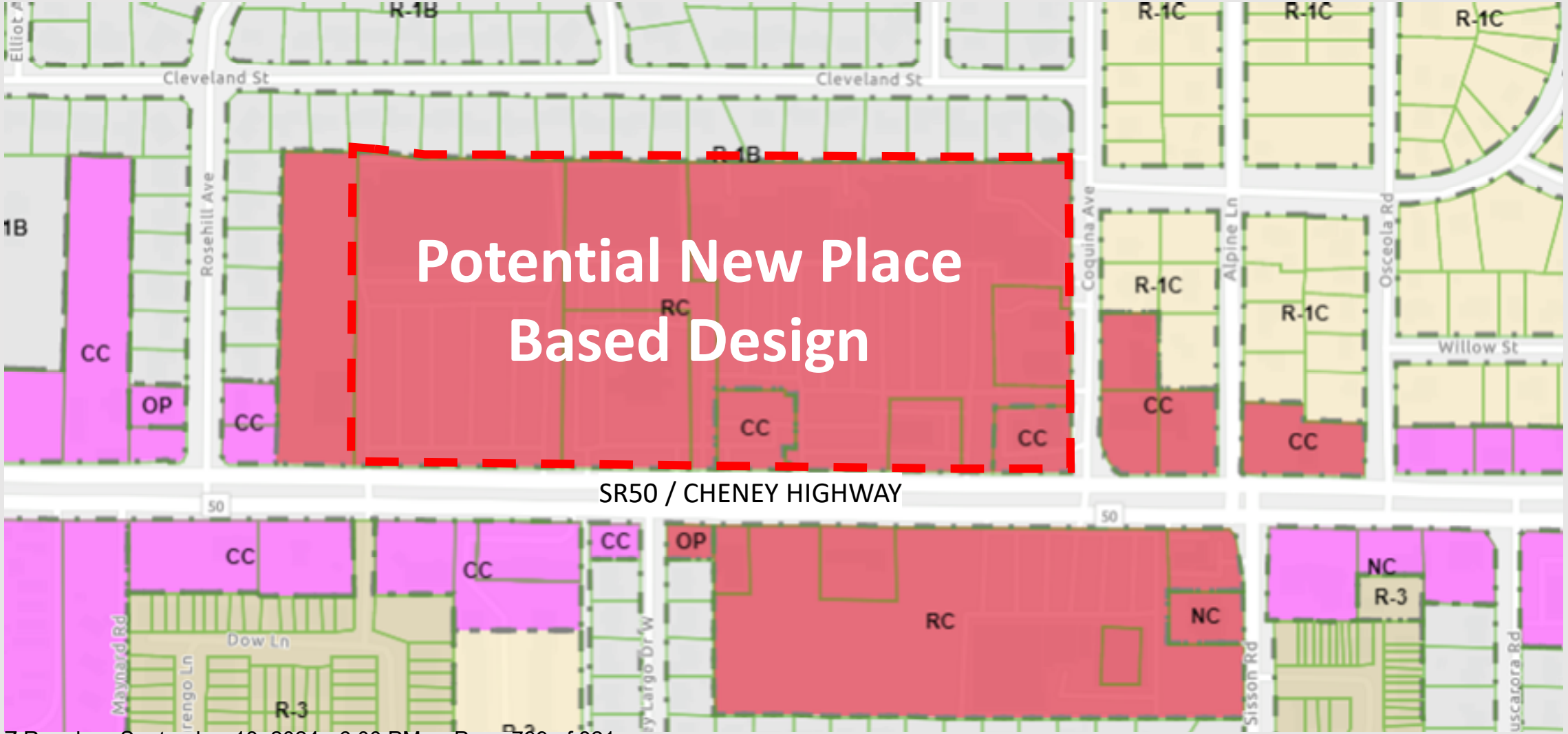
Opportunity Site

GATEWAY CORRIDORS



Future Land Use & Zoning

GATEWAY CORRIDORS



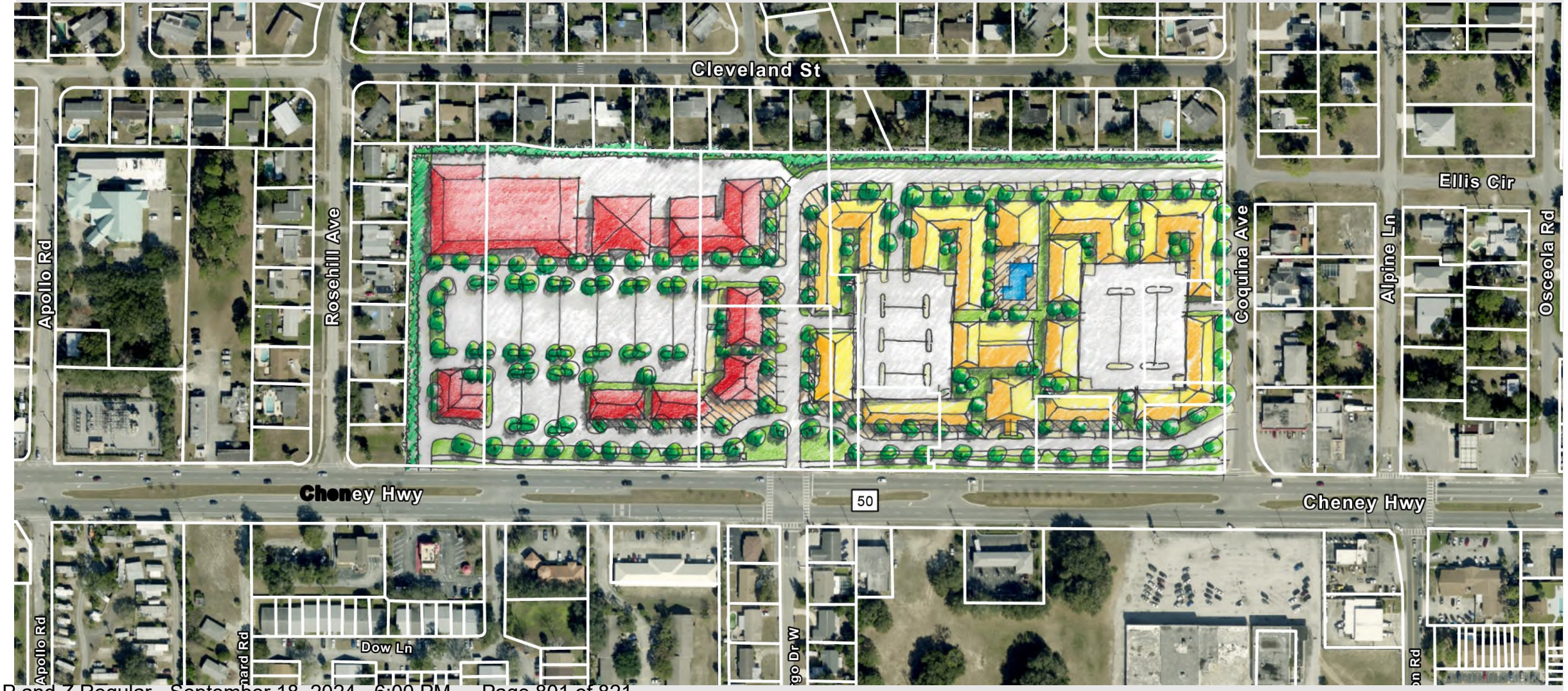
Lower-Intensity Mixed-Use Concept

GATEWAY CORRIDORS



Higher-Intensity Mixed-Use Concept

GATEWAY CORRIDORS



Key Changes to Policies & Standards

CORRIDORS – OVERLAY WITH OPTIONAL & MANDATORY ELEMENTS

- **For all properties:**
  - General standards for **trees, landscaping, signage,** and other elements to visually enhance the corridors
  - Multimodal connectivity standards workable in a suburban context
- **Opt-in:**
  - Mixed use as an optional overlay
  - Allowing for more intense mixed-use development with adherence to multi-modal and form-based standards

Next Steps


Garden St
Orange St
Florida East Coast
Lemon Ave S
Palm Ave S
S Hopkins Ave
Save-A-Lot
Broad St


Cherry St.
Clay St.

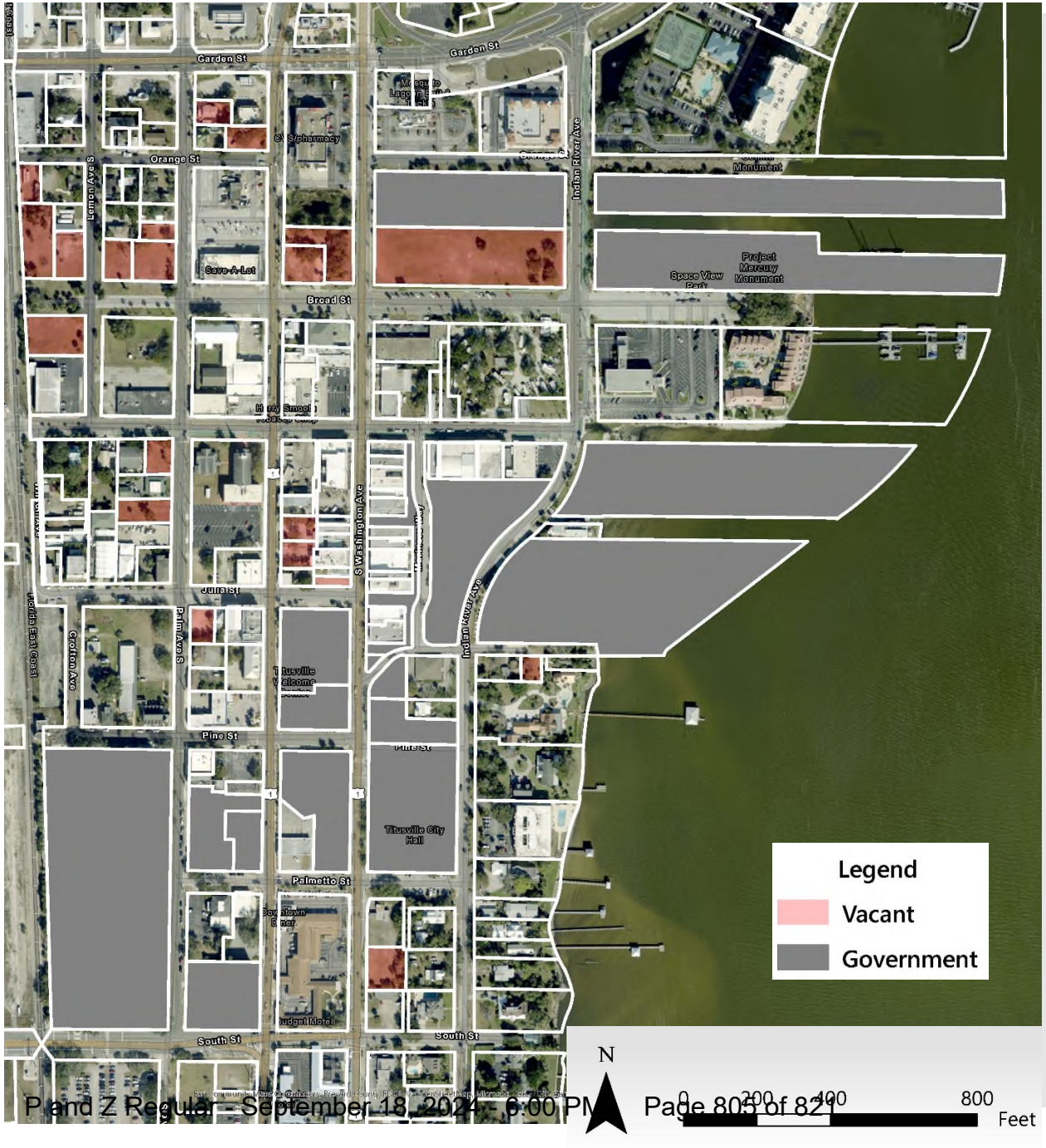
NEXT STEPS

City Council April 25th

Questions and comments?

Existing Condition

DOWNTOWN



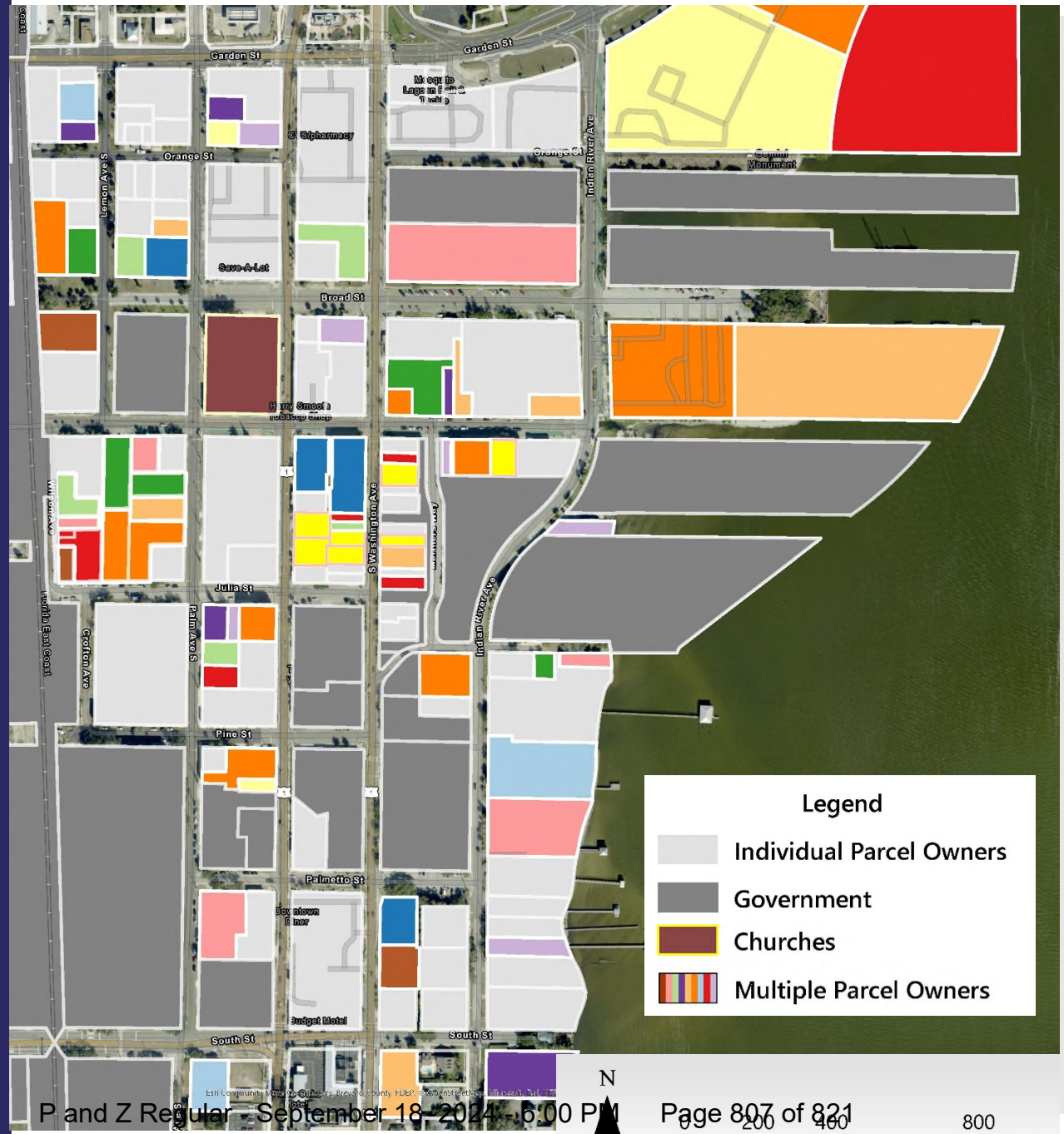
Existing Condition

DOWNTOWN



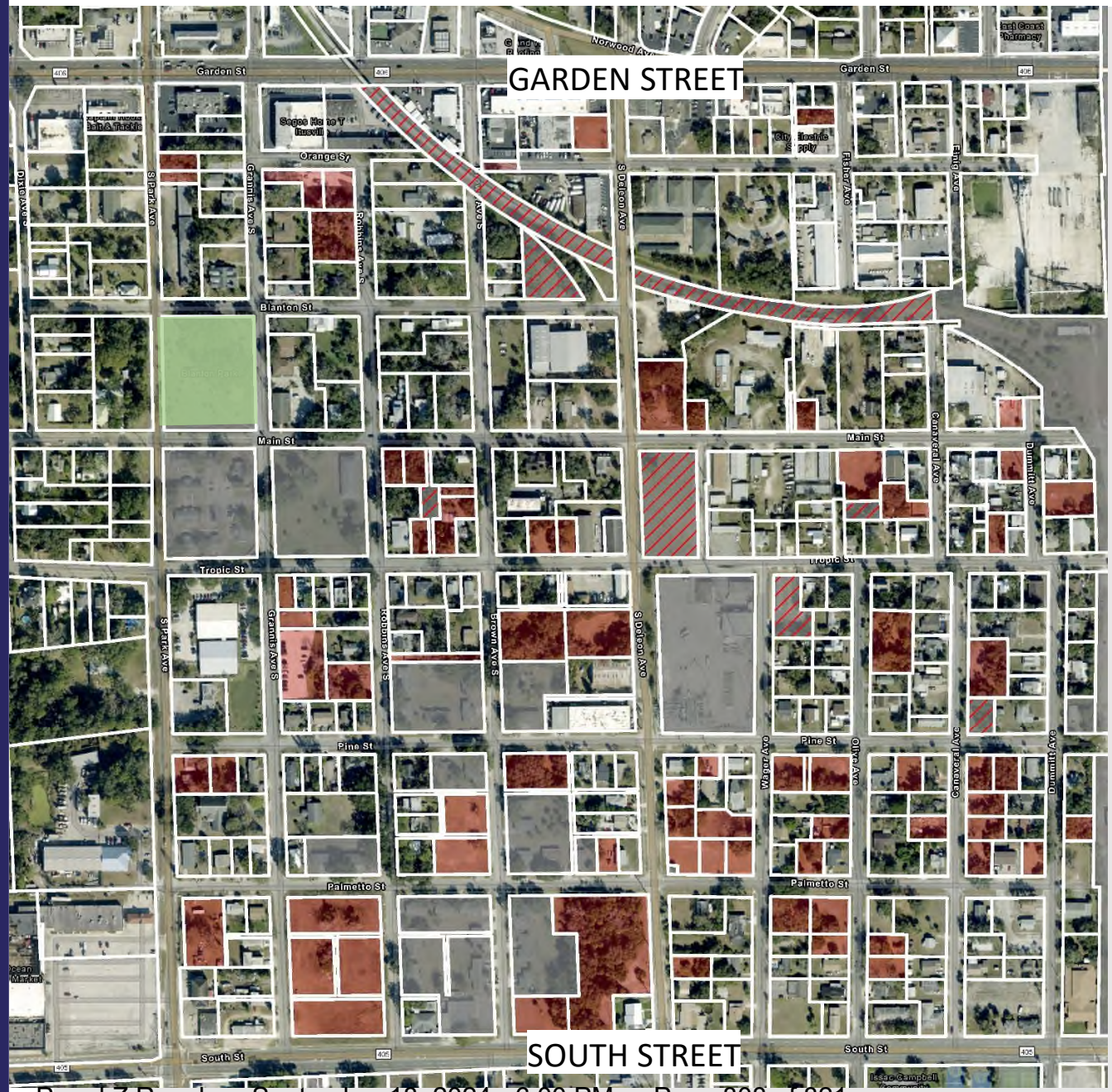
Existing Condition

DOWNTOWN



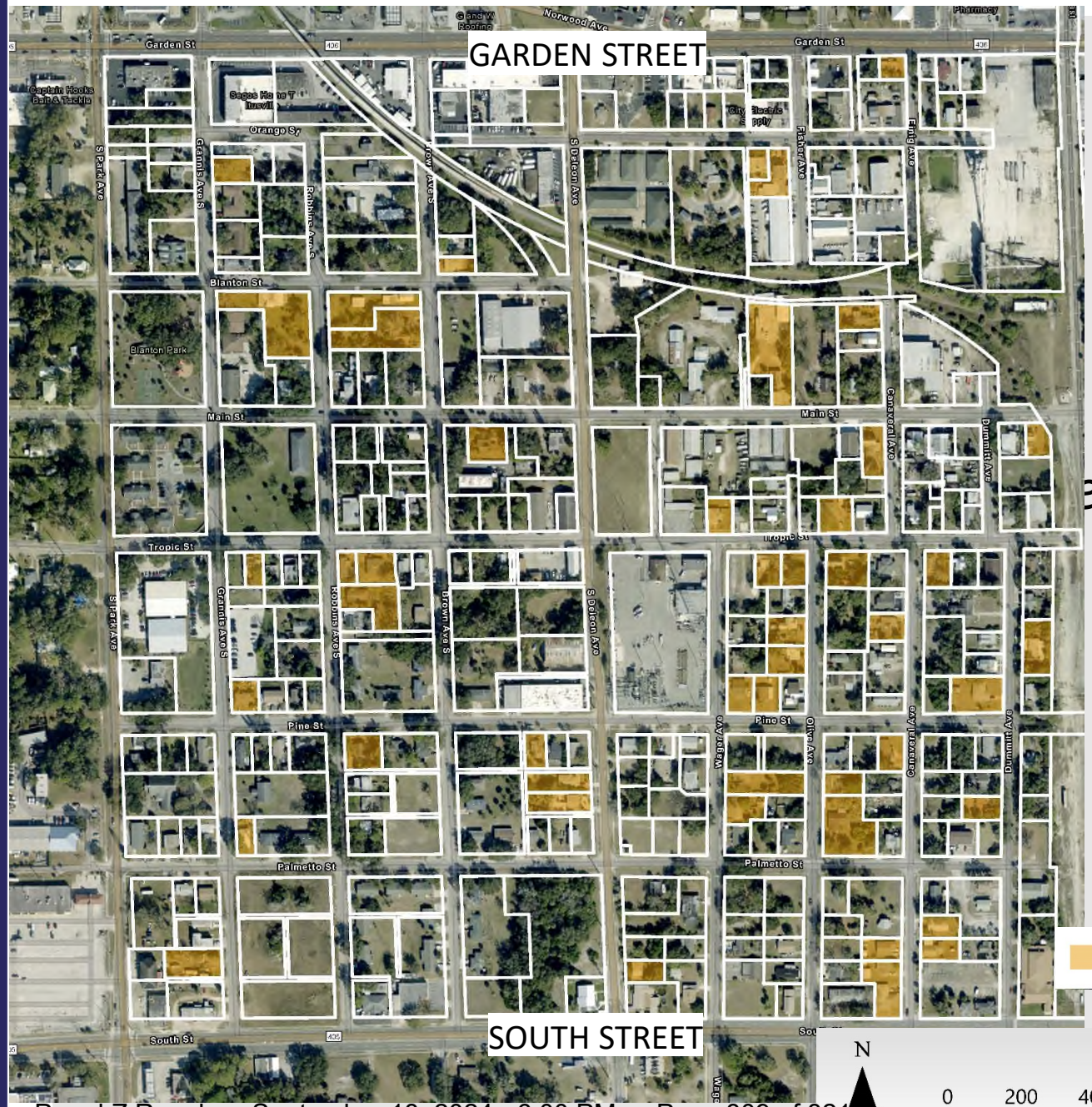
Existing Conditions

WEST DOWNTOWN



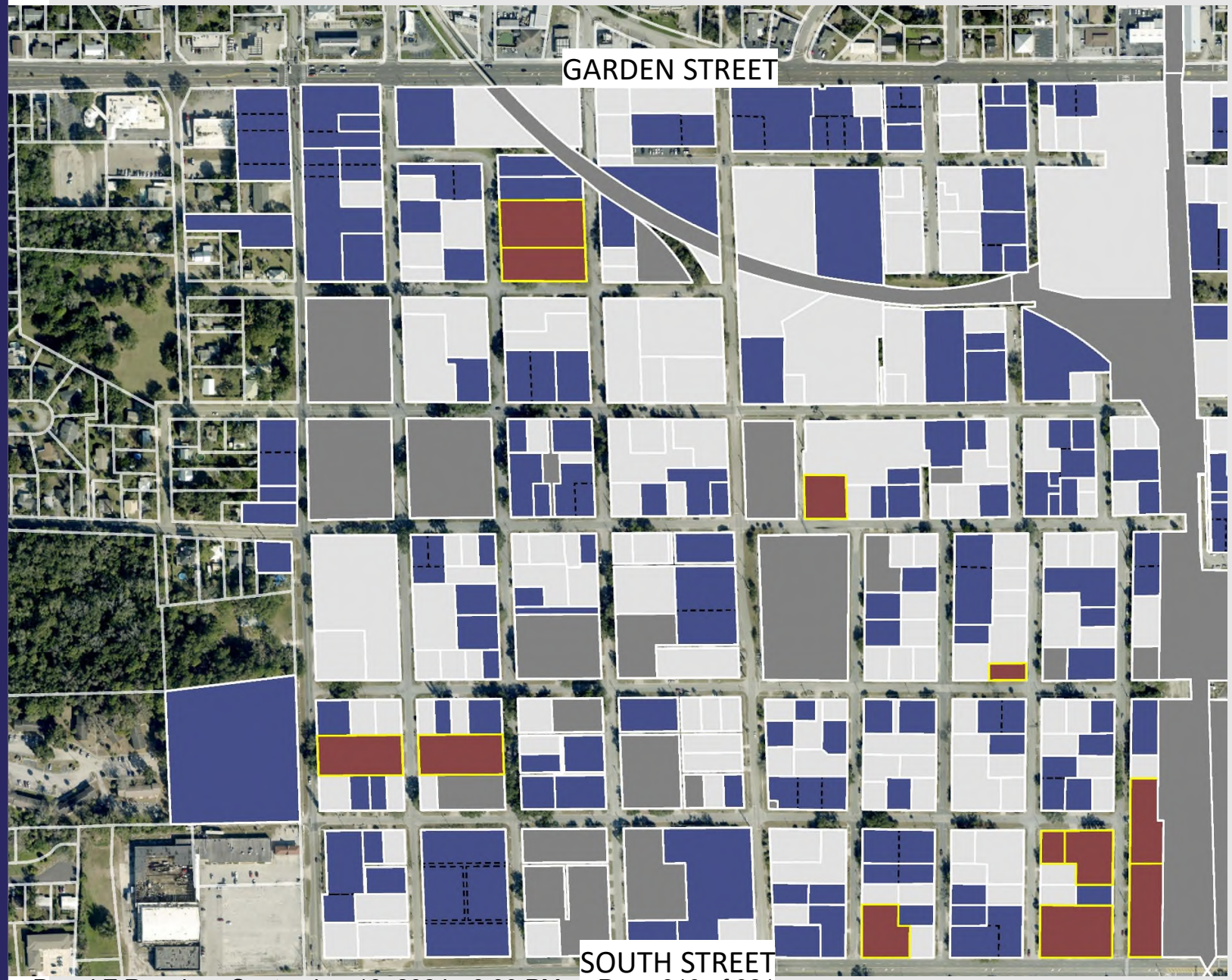
Existing Conditions

WEST DOWNTOWN



Ownership

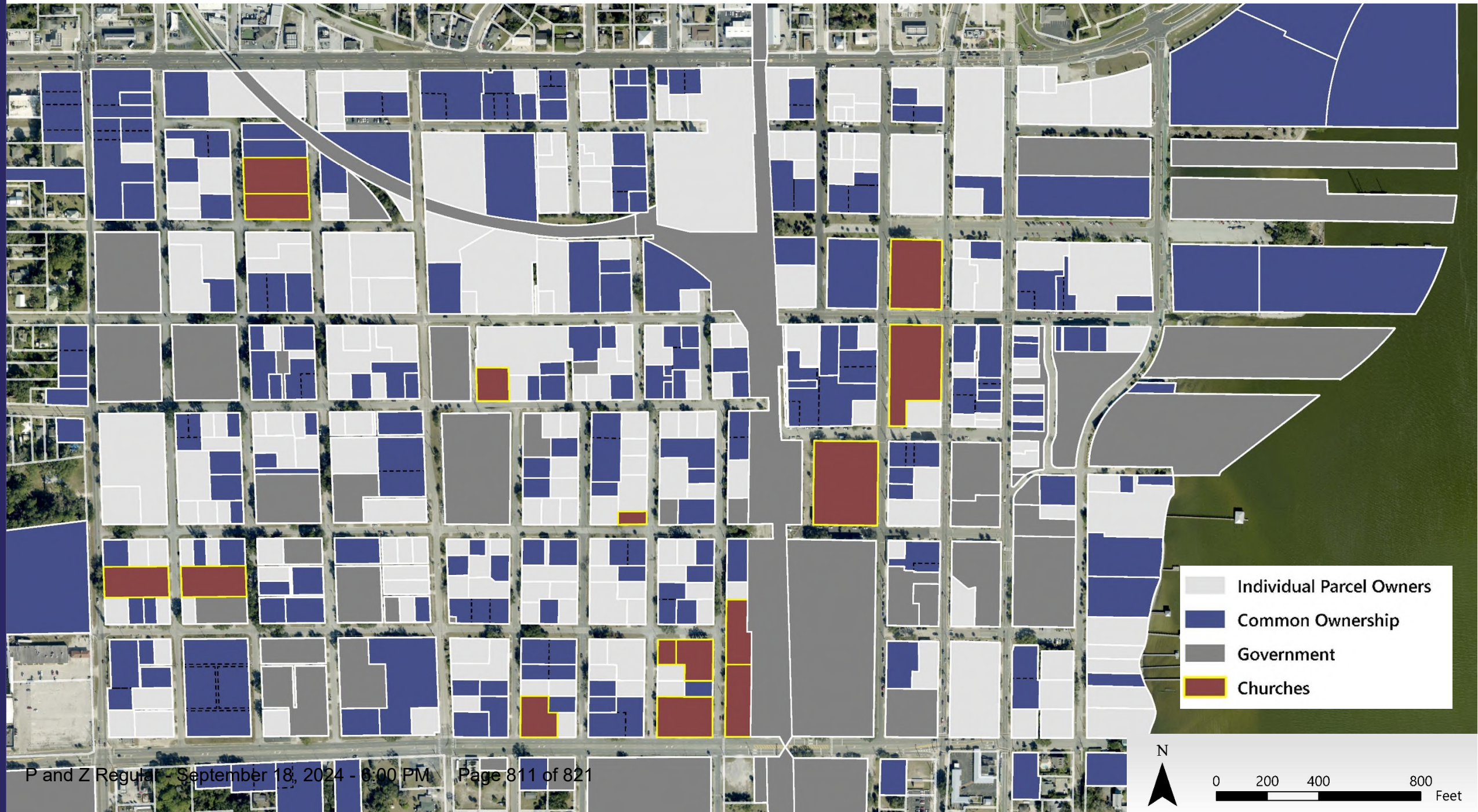
WEST DOWNTOWN



- Individual Parcel Owners
- Common Ownership
- Government
- Churches

N

0 200 400 800 Feet


Individual Parcel Owners
Common Ownership
Government
Churches
N
0
200
400
800
Feet

DOWNTOWN CAPITAL PROJECTS

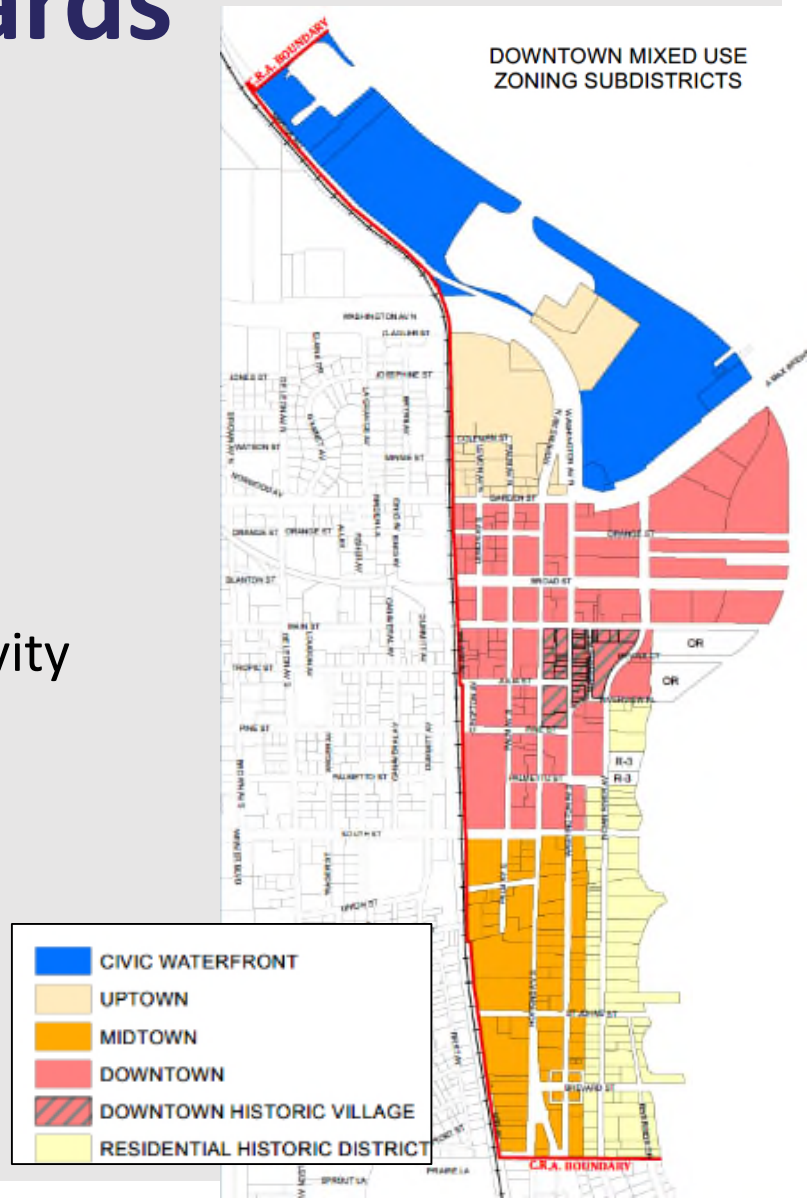
Dated Nov 9, 2022

1. **Sidewalk Infill & Repair:** The consultant DRMP, Inc. is currently developing a scope which will be on the November CRA agenda for approval.
2. **Spaceview Park Observation/Walkway Pier**: A permit exemption from the permitting agencies has been granted to the project. Taylor Engineering is proceeding with 100% design plans and specifications for bidding. Public Works will update a cost estimate and provide it to the CRA for review prior to bidding the project.
3. **Utilities Infrastructure Improvements:** The FY2022 CRA budget has $47,000 available for utility infrastructure improvements. The Water Resources Department will be developing plans to use the funds for a project in the CRA District.
4. **Street Resurfacing:** The paving of Julia Street between Hopkins Avenue and Palm Avenue is programmed in the FY2023 budget. The paving of Indian River Avenue between South Street and Palmetto Street will be done by Water Resources as part of a force main replacement project.
5. **Stormwater Infrastructure:** The projected grant award from Save Our Indian River Lagoon Grant Program for the tree box filters project in the Main Street – Indian River Ave. – Commons Parking area is in February of 2023.
6. **Whiteway Replacement:** The consultant DRMP, Inc. is currently developing a scope for the Whiteway Replacement.

Key Changes to Policies & Standards

DOWNTOWN

- Revise Downtown Mixed-Use (DMU) Standards
  - Focus on Downtown Subdistricts
  - Streamline guidance language
  - Simplify and clarify existing standards
  - Clear build-to lines AND minimum sidewalk standards
  - Enhance street tree and landscape standards
  - Establish standards for maintaining and increasing connectivity
  - Re-evaluate mixed-use requirements to allow for evolution
  - Re-evaluate ground floor “active use” locations
  - Create a pedestrian friendly “ main street” on Palm Avenue
  - Create a near term new dynamic gathering place on the waterfront in downtown
  - Develop a robust mixed use overlay model



Key Changes to Policies & Standards

DOWNTOWN

- Incentive-Driven Overlay Standards
  - Increase density consistent with existing permitted heights (5-6 stories)
  - Enhanced Public Realm Standards
  - Compliance with enhanced Design Guidelines
  - Negotiated public benefits which may include publicly accessible parking, privately-owned public spaces, active ground floor uses, enhanced building design, sidewalk and amenities.
  - Potential financial incentives and public commitments to facilitate intended outcome

Key Changes to Policies & Standards

DOWNTOWN

- Recommendations for future studies
  - Detailed master planning of downtown / specific streets
    - e.g. Palm Ave, Broad Street, Julia Street
  - Upgrade Urban Design Guidelines Document
  - Downtown Open Space plan/study

Category: 9.
Item: D.

City of Titusville

"Gateway to Nature and Space"

REPORT TO COUNCIL

To: Planning and Zoning Commission Members

From: Brad Parrish, Community Development Director

Subject: Titusville Plain Language Initiative

Department/Office: Planning

Recommended Action:

Consider a recommendation to City Council regarding a plain language initiative.

Summary Explanation & Background:

At the August 7, 2024 regular Planning and Zoning Commission meeting Chairman Richardson requested the commission members review an executive order signed by Maryland Governor Moore regarding the Administration of Plain Language. Executive Order 01.01.2024.25 of The State of Maryland Executive Department is attached.

In general, the purpose of the order is to create an "accessible, inclusive government" by "removing barriers that prevent engagement with government and access to public services."

This is achieved by "communicating in plain language, such that the audience can find what they need, understand what they find the first time they read or hear it, and use what they find to meet their needs."

The Commission agreed to consider this topic on a future agenda.

Alternatives:

1. No action required.

Item Budgeted:

NA

Source/use of funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:

	Description	Upload Date	Type
🗋	Maryland Executive Order	8/21/2024	Backup Material

The State of Maryland

Executive Department

EXECUTIVE ORDER
01.01.2024.25

Maryland Plain Language Initiative

WHEREAS, The State of Maryland is committed to creating an accessible, inclusive government that all Marylanders can easily access and to removing barriers that prevent engagement with government and access to public services;

WHEREAS, A consistent barrier to accessing government is ineffective communication; thus, State agencies must use more effective means of communication to ensure all Marylanders have equal access to government and equal opportunities to engage with government;

WHEREAS A State agency's use of communication methods that are easy to use and understand helps remove barriers so that all Marylanders can access government services and support;

WHEREAS, The right to communication access is reflected through protections enshrined in the Americans with Disabilities Act, Title VI of the Civil Rights Act of 1964, and Section 1557 of the Affordable Care Act of 2010;

WHEREAS, Communication access also is protected by the Plain Writing Act of 2010, which requires federal agencies use clear communication that the public can understand and use;

WHEREAS, Communicating in plain language, such that the audience can find what they need, understand what they find the first time they read or hear it, and use what they find to meet their needs, is an important tool for removing barriers to government and allowing people to access government independently;

WHEREAS, Maryland law already requires the translation of written communication into other languages, and the use of plain language as the standard for all written communication will make it easier to translate those communications into other languages;

WHEREAS, As Maryland continues its efforts to leave no one behind, it is critical that the State commits to increasing access to government by communicating with all Marylanders in an accessible, easy to understand way, which includes developing and using plain language standards for written communications.

NOW, THEREFORE, I, WES MOORE, GOVERNOR OF THE STATE OF MARYLAND, BY THE VIRTUE OF THE AUTHORITY VESTED IN ME BY THE CONSTITUTION AND LAWS OF MARYLAND, HEREBY PROCLAIM THE FOLLOWING EXECUTIVE ORDER, EFFECTIVE IMMEDIATELY:

A. Definitions.

(1) "Plain Language" means writing that is clear, concise, well-organized, and follows other best practices appropriate to the subject or field and intended audience.

(2) "State Agency" means a department, agency, commission, board, council, or other body of State government subject to the direction and supervision of the Governor.

(3) "Written Communication" means information on State agency websites and other written documents produced by State agencies intended for the public.

B. Establishment. There is a Maryland Plain Language Initiative, housed in the Maryland Digital Service in the Department of lnformation Technology.

C. Partners. The Maryland Digital Service will partner with the Department of Disabilities and the Governor's Office of Community Initiatives to leverage their expertise for content reviews and testing with individuals with disabilities. The Chief Digital Experience Officer will work with other relevant agencies and external stakeholders as necessary to implement the Maryland Plain Language Initiative.

D. Duties. The Maryland Plain Language Initiative shall include:

(1) An assessment of the State's capacity, needs, and resources to implement best practices in the use of plain language standards.

(2) The creation of the Maryland Plain Language Plan to enhance the accessibility of all written communication produced by State agencies, including through publishing plain language standards.

E. The Maryland Plain Language Plan shall:

(1) Include focused plain language efforts as part of any website design or redesign effort.

(2) Include plain language evaluation during discovery efforts to evaluate or improve any public facing application or system.

(3) Include recommendations to build capacity, develop resources, provide training, and conduct pilot projects.

(4) Identify plain language standards, which include the use of:

a. Everyday words that convey meanings clearly and directly;

b. Present tense and active voice;

c. Short, simple sentences;

d. Definitions of only those words that cannot be properly explained or qualified in the text; and

e. Layout and design that help the reader understand the meaning of the document, including adequate white space, bulleted lists, helpful headings, and other proven techniques.

(5) Consider the following in development:

a. Designating a plain language contact for each State agency;

b. Developing a style guide, templates, and resources for all State agencies;

c. Conducting pilot projects on written documents targeted at the public and collecting feedback to improve plain language efforts;

d. Developing a training plan so each State agency is trained about the use of plain language; and

e. Identifying available resources, including contracted services, to carry out any section of the Plan.

F. The Maryland Digital Service shall report to the Governor annually by December 31 on the State's progress toward achieving the goals of the Maryland Plain Language Initiative.

G. All State agencies shall, in support of Maryland's core mission to leave no one behind, implement the recommendations of the Maryland Plain Language Plan, in phases as outlined in the Plan.

H. This Executive Order shall be implemented in a manner that is consistent with all applicable statutes and regulations. Nothing in this Executive Order shall operate to contravene any State or federal law or to affect the State's receipt of federal funding.

I. If any provision of this Executive Order or its application to any person, entity, or circumstance is held invalid by any court of competent jurisdiction, all other provisions or applications of the Executive Order shall remain in effect to the extent possible without the invalid provision or application. To achieve this purpose, the provisions of this Executive Order are severable.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis, this 23rd Day of July 2024.

Wes Moore
Governor

ATTEST:

Susan C. Lee
Secretary of State