



**506 WEST BERCKMAN STREET  
FRUITLAND PARK, FL 34731**

**PHONE: 352 360-6727  
FAX: 352 360-6652**

**TRC COFP Members:**

City Manager, Chairman  
Police Chief, Vice Chair  
Attorney  
Building Official  
CDD  
Code Enforcement Officer  
Engineer Halff  
Fire Chief  
Fire Inspector  
Land Planner LPG  
Public Works Director

**TRC Members:**

City of Leesburg Utilities  
Lake County School Board  
Lake County Public Works Department  
Lake County Economic Development

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**AGENDA**

**TECHNICAL REVIEW COMMITTEE**

**JULY 6, 2021**

**10:00AM**

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**I. MEETING START TIME:**

**II. MEMBERS PRESENT:**

**III. MEETING NOTES FROM PREVIOUS MEETING:** Meeting notes from June 1, 2021 included for review/comment.

**IV. OLD BUSINESS: NONE**

**NEW BUSINESS:**

**A. Terra Promessa Preserve – Preliminary Subdivision Plan (Alternate Key: 1289785)**

Application submitted by James P. Senatore (owner) for Preliminary Subdivision Plan for Terra Promessa Preserve. Applicant proposing to develop approximately 18.78± acres of property currently zoned R-3A (Multi-Family High Density Residential) into 11 individual lots with well and septic. The subject site is generally located north of Lewis Road on the west side of CR 468.

**B. Mirror Lake Phase II – Preliminary Subdivision Plan (Alternate Key: 3897102)**

Application submitted on behalf of Fruitland Park LLC, by Mr. Isaiah Cottle of GSL Holdings I, LLC. Applicant proposing Preliminary Subdivision Plan for Phase II of Mirror Lake Estates. Property is approximately 14.92 ± acres of vacant land currently zoned PUD. Phase II will consist of seventy-six (76) single family residential homes. Property is generally located north of Urick Street and west of Seminole Boulevard.

**C. City of Fruitland Park-Grocer (Alternate Key: 1288151 and 1699665)**

Application submitted by Chad Tullos, Chief Investment Officer-Stafford Properties, Inc., on behalf of Larry M. Phillips Trustee, Larry M. and Linda S. Phillips (owner). Applicant proposing a Major Site Plan for the development of 8.29 ± acres of property to allow for a 47,647-sf grocer with 2 outparcels for future development.

**MEMBERS' COMMENTS:**

**ADJOURNMENT:**





**City of Fruitland Park, Florida**  
**Community Development Department**  
 506 W. Berckman St., Fruitland Park, Florida 34731  
 Tel: (352) 360-6727 Fax: (352) 360-6652  
 www.fruitlandpark.org

<i>Sta Use Only</i>	
Case No.:	_____
Fee Paid:	_____
Receipt No.:	_____

## Development Application

Contact Information:

Owner Name: James P. Senatore  
 Address: 1317 Sumter Street, Leesburg Florida 34748  
 Phone: 352-787-1121 Email: senatoreinc@gmail.com

Applicant Name: James P. Senatore  
 Address: 1317 Sumter Street, Leesburg Florida 34748  
 Phone: 352-787-1121 Email: senatoreinc@gmail.com

Engineer Name: Richard A. Campanale, P.E.  
 Address: 127 Slade Drive, Longwood Florida 32750  
 Phone: 407-898-8942 Email: rcampanalepe@gmail.com

Property and Project Information:

**PROJECT NAME\*:** Terra Promesso Preserve Subdivision Project  
 \*A project name is required for all submissions. Please choose a name representative of the project for ease of reference.

Property Address: 33811 County Road 468, Leesburg Florida 34748

Parcel Number(s): 16-19-24-0002-000-01000 Section: 16 Township: 19 Range 24

Area of Property: 18.78 acres Nearest Intersection: CR 468 and Centennial Blvd.

Existing Zoning: R-3A Existing Future Land Use Designation: MFHD

Proposed Zoning: Low Density Residential Proposed Future Land Use Designation: \_\_\_\_\_

The property is presently used for: Single Family Residential

The property is proposed to be used for: Single Family Residential

Do you currently have City Utilities? No City or County Utilities On-site

Application Type:

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Annexation      | <input type="checkbox"/> Comp Plan Amendment         | <input type="checkbox"/> Rezoning               | <input type="checkbox"/> Planned Development |
| <input type="checkbox"/> Variance        | <input type="checkbox"/> Special Exception Use       | <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Final Plat          |
| <input type="checkbox"/> Minor Lot Split | <input checked="" type="checkbox"/> Preliminary Plan | <input type="checkbox"/> Construction Plan      | <input type="checkbox"/> ROW/Plat Vacate     |
| <input type="checkbox"/> Site Plan       | <input type="checkbox"/> Minor Site Plan             | <input type="checkbox"/> Replat of Subdivision  |  |

Please describe your request in detail: Maintain single family residential using low impact development for Preliminary Subdivision Plan review.

**Required Data, Documents, Forms & Fees**

Attached to this application is a list of **REQUIRED** data, documents and forms for each application type as well as the adopted fee schedule. These items must be included when submitting the application package. Failure to include the supporting data will deem your application package **INCOMPLETE** and will not be processed for review.

Printed Name: James P. Senatore

Signature: \_\_\_\_\_ Date: 6/15/21

If application is being submitted by any person other than the legal owner(s) of the property, the applicant must have written authorization from the owner to submit application.

# Development Application Checklist

## The Following are Required for ALL Development Applications:

- Legal Description (Word file req'd)     Current Deed     Aerial Photo  
 Property Appraiser Information     Electronic Copy of Application     Location Map

Pre-application conferences are strongly encouraged. Submit TWO CDs with ALL documents in pdf; those that are generated as CAD files should be submitted in pdf and dwg formats. . Legal Descriptions should also come with a MS Word file of the legal description. Most maps are accessible through [www.lakecountyfl.gov/maps/](http://www.lakecountyfl.gov/maps/). Note: All maps are required to depict adjacent properties at a minimum.

**Failure to provide adequate maps may delay the application process.**

## Other Required Analyses and Maps:

### Small Scale Comprehensive Plan Amendment Applications:

- Justification for Amendment     Environmental Constraints Map     Requested FLU Map

### Large Scale Comprehensive Plan Amendment Applications:

Maps:     Environmental Constraints     Soils     Requested FLUM Designation     Requested Zoning Map Designation

Analyses:     Environmental Assessment     Utility Availability Analysis     Urban Sprawl Analysis     School Impact Analysis  
 Traffic Impact Analysis     Consistency with the Comp Plan     Florida Master Site File sign-off or Archaeological Survey

Rezoning Applications:     Requested Zoning Map     Justification for Rezoning

### Planned Development Applications:

Maps/Plans:     Conceptual Plan as Described in LDRs Chapter 154, Section 154.030,10,G     Environmental Constraints

Analyses:     Environmental Assessment     Traffic Impact Analysis     Preliminary Concurrency Analysis

Variance Applications:     Justification for Variance

### Special Exception Use Applications:

- Justification for Special Exception Use  
 Site Sketch     List of Special Requirements as Described in LDRs, Chapter 155

### Conditional Use Permit Applications:

- Proposed List of Conditions and Safeguards  
 Site Plan as Described in LDRs, Chapter 155     Written Statement as Described in LDRs, Chapter 155

### Subdivision Applications:

(Preliminary Plan, Improvement Plan and Final Plat)

- As Described in LDRs, Chapter 157

### Minor Subdivision Applications:

- As Described in LDRs, Chapter 157

### Site Plan Applications:

- As Described in LDRs, Chapter 160

APPLICANT AFFIDAVIT

STATE OF FLORIDA

COUNTY OF LAKE

Before me the undersigned authority, personally appeared JAMES P. SENATORE

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

1) That he/she affirms and certifies that he/she understands and will comply with all ordinances, regulations, and provisions of the City of Fruitland Park, Florida, and that all statements and diagrams submitted herewith are true and accurate to the best of his/her knowledge and belief, and further that this application and attachments shall become part of the Official Records of the City of Fruitland Park, Florida, and are not returnable.

2) That the submittal requirements for the application have been completed and attached hereto as part of that application.

3) That he/she desires CITY OF F.P. to allow JAMES SENATORE  
TO DEVELOP 18.3 ACRES ON 468  
TO 12 PARCELS / LOTS - SUBDIVISION 1

\_\_\_\_\_  
Affiant (Applicant's Signature)

State of Florida  
County of LAKE

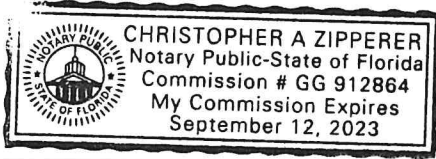
The Foregoing instrument was acknowledged before me this 18 day of JUNE, 20 21,  
by JAMES SENATORE who is personally known to me or has produced  
KNOWN as identification and who did or did not take an oath

(Notary Seal)

Notary Public - State of Florida  
Commission No GG912864  
My Commission Expires 9.12.23

Chris Zipperer  
Signature

Chris Zipperer  
Printed Name



OWNER'S AFFIDAVIT

STATE OF FLORIDA

COUNTY OF LAKE

Before me the undersigned authority, personally appeared JAMES P. SENATORE

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

1) That he/she is the fee-simple owner of the property legally described on attached page of this application.

2) That he/she desires CITY OF FRUITLAND PK. to allow JAMES P. SENATORE  
TO DEVELOPE A SUBDIVISION.

3) That he/she has appointed JAMES SENATORE & CHRIS ZIPPERER to act as agent on his/her behalf to accomplish the above. The owner is required to complete the Applicant's Affidavit of this application if no agent is appointed to act on his/her behalf.

[Signature]  
Affiant (Owner's Signature)

State of Florida

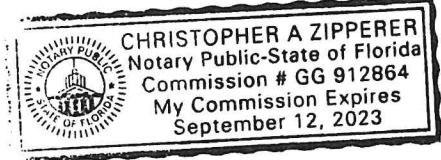
County of LAKE

The Foregoing instrument was acknowledged before me this 18 day of JUNE, 20 21,  
by JAMES SENATORE who is personally known to me or has produced  
KNOWN as identification and who did or did not take an oath

(Notary Seal)

Notary Public - State of Florida  
Commission No 66917864  
My Commission Expires 9.12.23

[Signature]  
Signature  
CHRIS ZIPPERER  
Printed Name





**FURTHER ASSURANCE AGREEMENT**

**BUYER:** James P. Senatore

**SELLER:** 468, L.L.C., a Florida limited liability company

**CLOSING AGENT:** McLin & Burnsed P.A.

**CLOSING DATE:** May 28, 2021

**LEGAL DESCRIPTION:** NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS THE NORTH 693 FEET THEREOF, AND LESS THE RIGHT OF WAY FOR STATE ROAD NO. S-468.

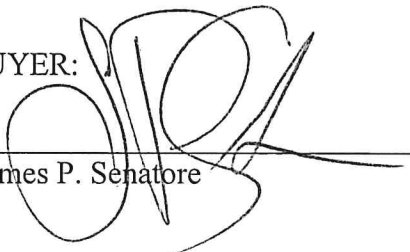
The undersigned agree to cooperate, adjust, initial, re-execute and re-deliver any and all closing documents, fees, taxes, interest or other costs or expenses, if deemed necessary or desirable in the reasonable discretion of closing agent. It is the intention of the undersigned that all documentation for this transaction and all payments or disbursement made shall be an accurate reflection of the parties' agreement; that each party should pay all costs and expenses contemplated by their agreement and/or dictated by custom and usage in this area.

The undersigned do hereby so agree and covenant to assure that this transaction and its documentation will conform to the parties' agreement and it is understood that McLin & Burnsed P.A. will rely upon this Agreement and covenants contained herein in closing this transaction.

The undersigned further agree to comply with all above noted requests by the Closing Agent within 30 days from date of mailing of said requests. The undersigned agree to assume all costs including, by way of illustration and not limitation, actual expenses and legal fees for failing to comply with the request in the above noted time period.

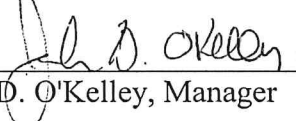
McLin & Burnsed P.A. shall have the right to bring suit to enforce the obligations incurred in connection with this Agreement, and in the event any suit is brought to enforce this Agreement, the McLin & Burnsed P.A. shall be entitled to recover all costs and expenses incurred, including a reasonable attorney's fee.

Dated the 28/1 day of May, 2021

BUYER:  (Seal)  
James P. Senatore

SELLER:

468, LLC, a Florida limited liability company

By:   
John D. O'Kelley, Manager

## **Terra Promessa PUD**

### LEGAL DESCRIPTION:

NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 19 SOUTH,  
RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS THE NORTH 693 FEET THEREOF, AND  
LESS THE RIGHT OF WAY FOR STATE ROAD NO. S-468  
SUBJECT TO ALL EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.

**Richard A. Campanale, P.E.**

Civil Design and Permitting Services

127 Slade Drive  
Longwood, Florida 32750  
407-878-8942  
rcampanalepe@gmail.com

Development Application Document  
City of Fruitland Park  
Lake County, Florida

Proposed Name: Terra Promessa Preserve Subdivision Project  
Location: 33811 CR 468, Leesburg Florida 34748  
Date: 6/15/2021

**General Description:**

The proposed subdivision is located on CR 468 with Alt.Key ID #1289785. The property is approximately 18.78 acres of single family residential wooded property with two depressional areas in the rear of the property. The property is currently zoned R-3A with future landuse MFHD (Multi-Family High Density). The proposed subdivision will be designed as low impact development with an eleven (11) Lot Subdivision. The applicant is requesting a permission for a low density residential development.

**Legal Description:**

Northwest ¼ of the Northwest ¼ of Section 16, Township 19 South, Range 24 East, Lake County, Florida, Less the North 693 Feet Thereof, and Less the Right-of-Way for State Road No. S-468. Subject to All Easements, Rights – of - Way and Restrictions of Record, If Any.

**Location / Aerial / FEMA / Zoning / FLU Maps:**

Attached for the File.

**Property Appraiser Information:**

Attached for the File.

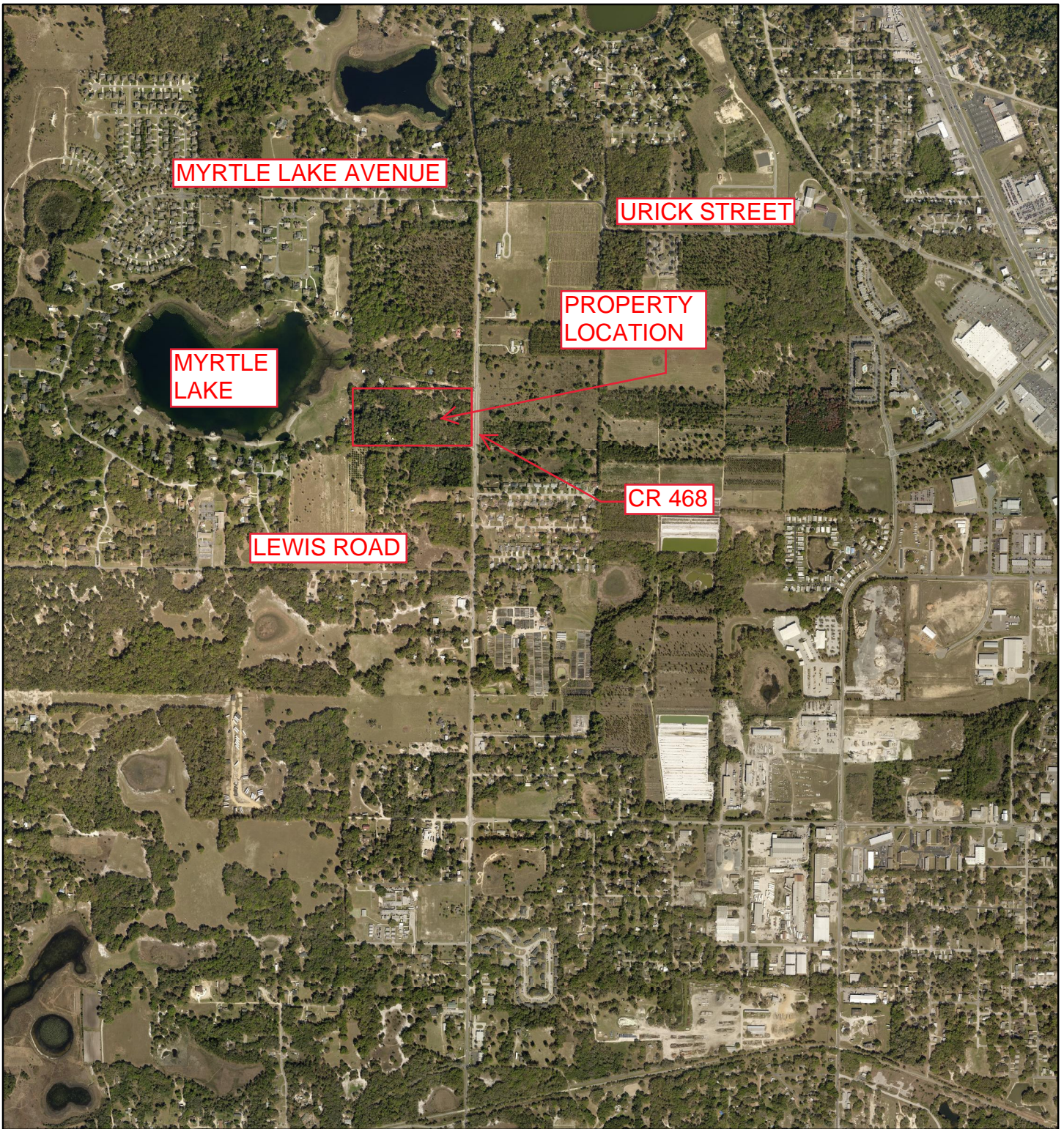
**Current Deed:**

Attached for the File.

**Plans:**

Preliminary Subdivision Plan is provided for TRC review.





September 8, 2020

CITY OF FRUITLAND PARK  
TERRA PROMESSA PRESERVE- SUBDIVISION  
PROJECT  
AERIAL MAP

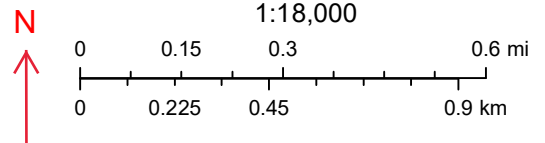







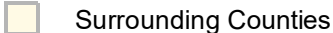



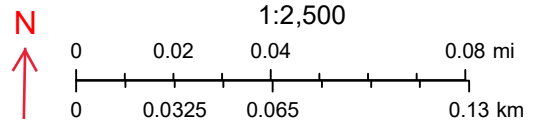
EXHIBIT 2





September 8, 2020

- |   |                         |   |                           |
|---|-------------------------|---|---------------------------|
|  | County Boundary         |  | Property Name             |
|  | Street Names            |  | Tax Parcels Alternate Key |
|  | Local Streets           |  | Tax Parcels               |
|  | Subdivision Lot Numbers |  | Surrounding Counties      |
|  | Address Locations       |   |                           |



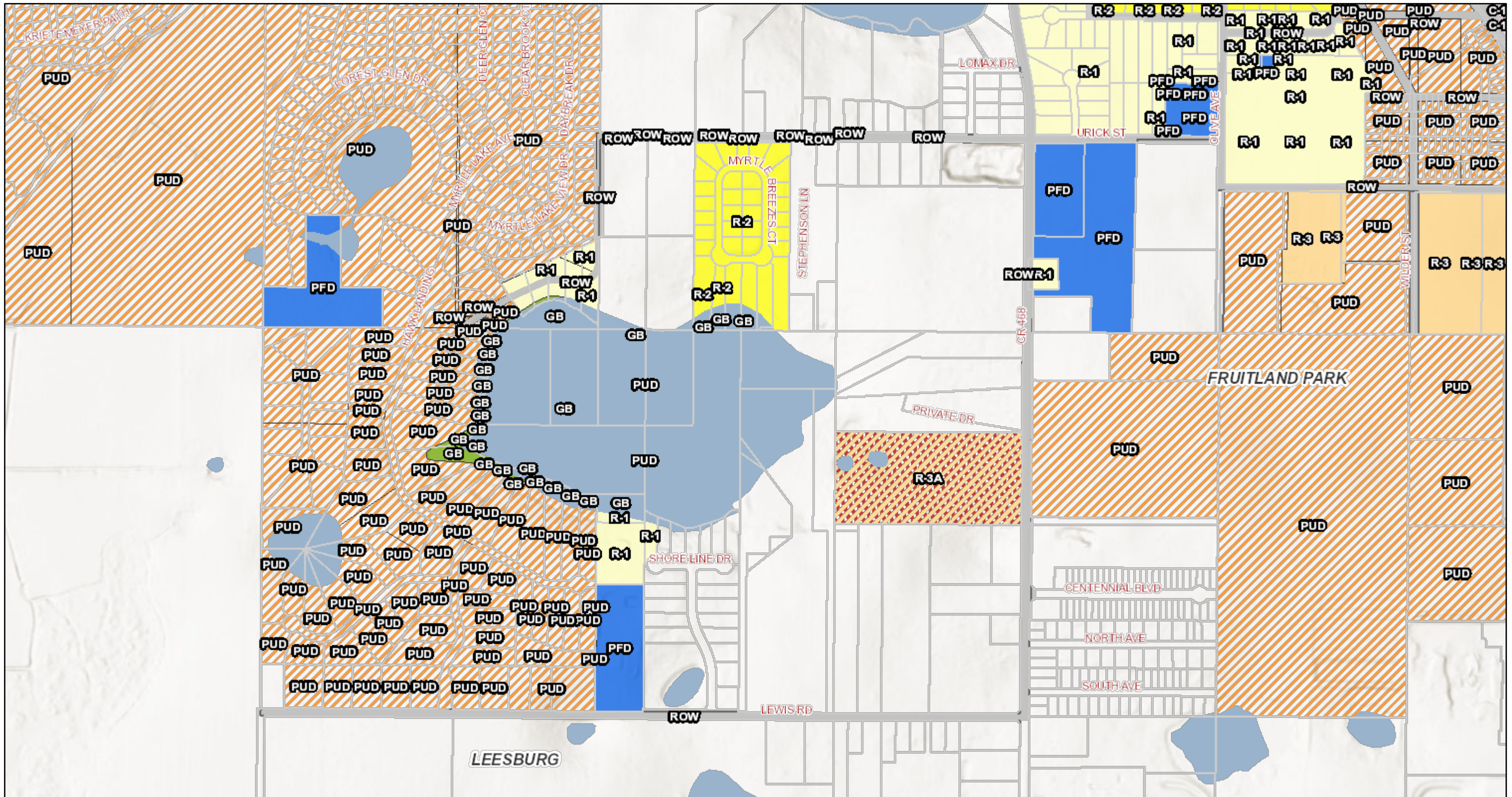
Lake BCC

**EXHIBIT 3**

**TERRA PROMESSA PRESERVE  
SUBDIVISION PROJECT**



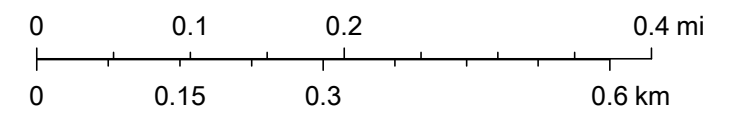
# City View



September 9, 2020

CITY OF FRUITLAND PARK  
 TERRA PROMESSA PRESERVE SUBDIVISION  
 CURRENT ZONING MAP

1:9,028

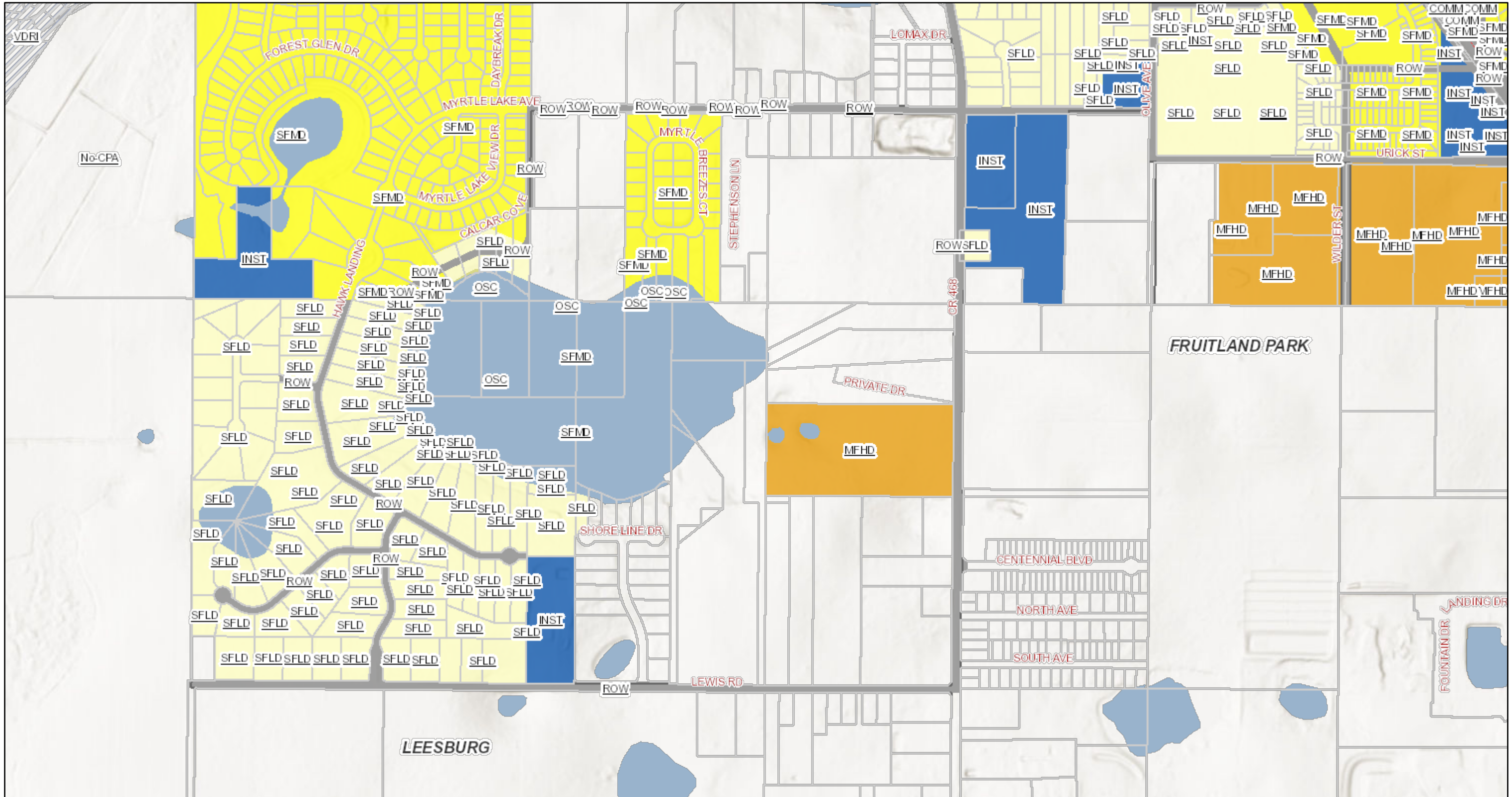


Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Various municipalities

EXHIBIT 4



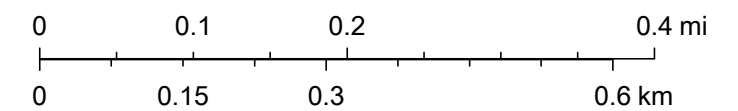
# City View



September 9, 2020

CITY OF FRUITLAND PARK  
TERRA PROMESSA PRESERVE SUBDIVISION  
FUTURE LAND USE MAP

1:9,028



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Various municipalities

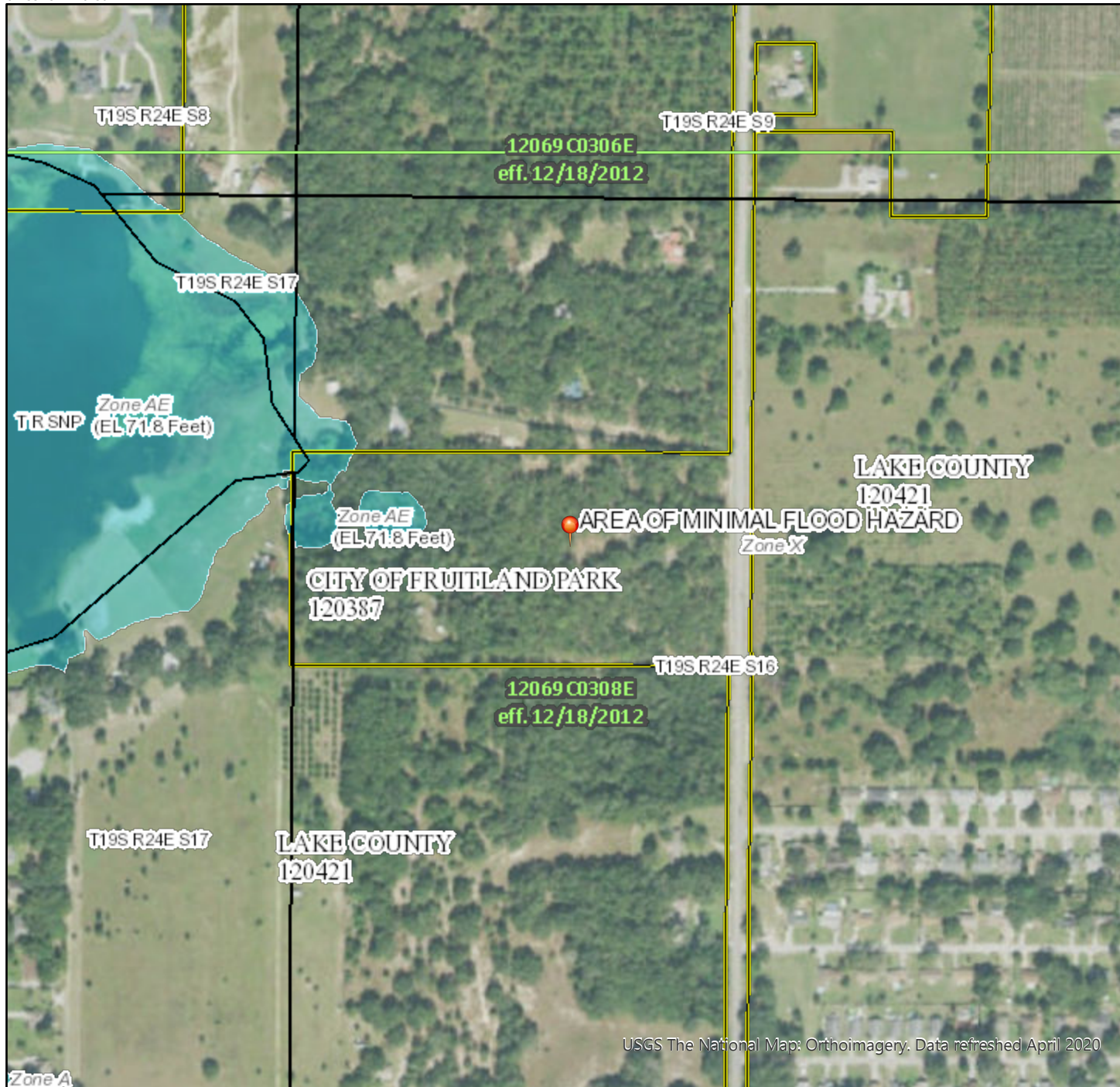
EXHIBIT 5

# National Flood Hazard Layer FIRMette



**TERRA PROMESSA  
SUBDIVISION**

81°55'23"W 28°50'42"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway	

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes. Zone X
	Area with Flood Risk due to Levee Zone D

OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall

OTHER FEATURES	20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
	17.5 Coastal Transect
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature

MAP PANELS	Digital Data Available
	No Digital Data Available
	Unmapped

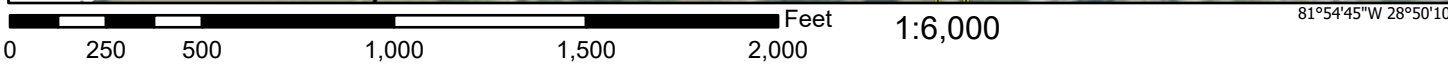
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/3/2020 at 2:28 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

**EXHIBIT 6**



USGS The National Map: Orthoimagery. Data refreshed April 2020



# PROPERTY RECORD CARD

## General Information

<b>Name:</b>	468 LLC	<b>Alternate Key:</b>	1289785
<b>Mailing Address:</b> 117 N 7TH ST LEESBURG, FL 34748 <a href="#">Update Mailing Address</a>		<b>Parcel Number:</b> ⓘ	16-19-24-0002-000-01000
		<b>Millage Group and City:</b>	000F (FRUITLAND PARK)
		<b>2019 Total Certified Millage Rate:</b>	17.9898
		<b>Trash/Recycling/Water/Info:</b>	<a href="#">My Public Services Map</a> ⓘ
<b>Property Location:</b> 33811 COUNTY ROAD 468 LEESBURG FL 34748 <a href="#">Update Property Location</a> ⓘ		<b>Property Name:</b>	-- <a href="#">Submit Property Name</a> ⓘ
		<b>School Information:</b>	<a href="#">School Locator &amp; Bus Stop Map</a> ⓘ <a href="#">School Boundary Maps</a> ⓘ
<b>Property Description:</b>	S 627 FT OF NW 1/4 OF NW 1/4   ORB 2835 PG 2409		
<small>NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.</small>			

## Land Data

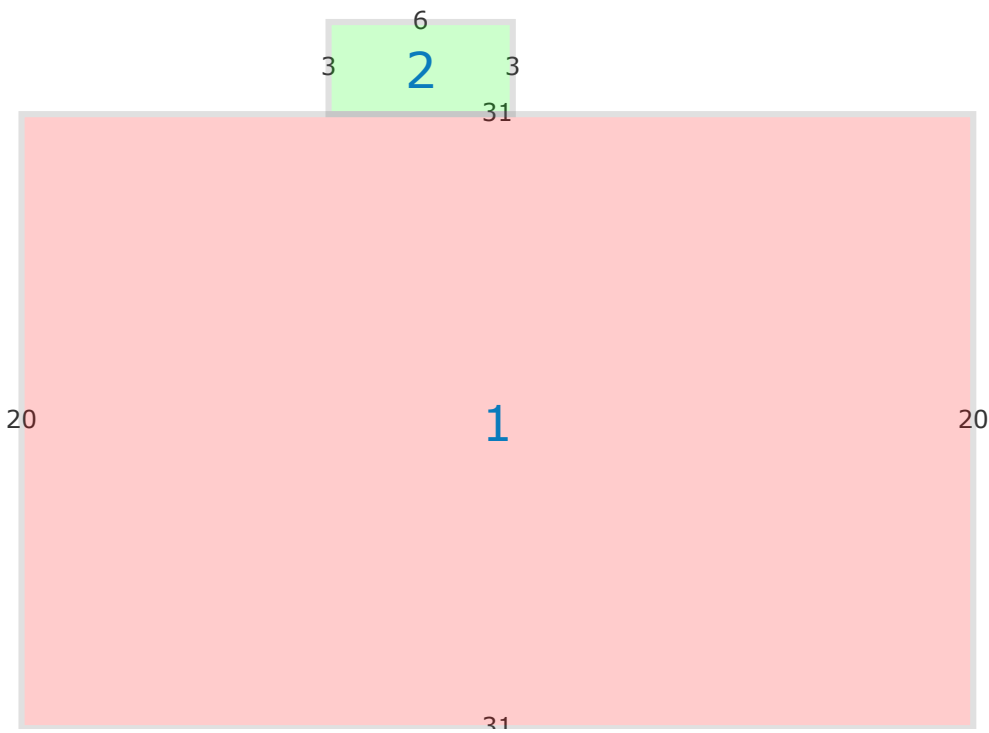
Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class	Value	Land Value
1	SINGLE FAMILY (0100)	0	0		19	AC		\$0.00	\$194,750.00

[Click here for Zoning Info](#) ⓘ [FEMA Flood Map](#)

## Residential Building(s)

### Building 001

Residential	Single Family	Building Value: \$8,639.00						
<b>Summary</b>								
Year Built: 1953	Total Living Area: 620 ⓘ	Central A/C: No	Attached Garage: No					
Bedrooms: 1	Full Bathrooms: 1	Half Bathrooms: 0	Fireplaces: 0					
<a href="#">Incorrect Bedroom, Bath, or other information?</a> ⓘ								
<b>Section(s)</b>								
Section No.	Section Type	Ext. Wall Type	No. Stories	Floor Area	Finished Attic	Basement	Basement Finished	Map Color
1	FINISHED LIVING AREA (FLA)	Block (002)	1	620	N	0%	0%	<input type="checkbox"/>
2	OPEN PORCH UNFINISHED (OPU)	No Wall Type (000)	1	18	N	0%	0%	<input type="checkbox"/>
<a href="#">View Larger / Print / Save</a>								



## Miscellaneous Improvements

There is no improvement information to display.

## Sales History

**NOTE:** This section is not intended to be a complete chain of title. Additional official book/page numbers may be listed in the property description above and/or recorded and indexed with the Clerk of Court. [Follow this link to search all documents by owner's name.](#)

Book/Page	Sale Date	Instrument	Qualified/Unqualified	Vacant/Improved	Sale Price
<a href="#">3357 / 1236</a>	1/10/2007	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">3357 / 1237</a>	12/21/2006	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2954 / 2209</a>	8/27/2005	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2916 / 254</a>	5/23/2005	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2835 / 2409</a>	5/17/2005	Warranty Deed	Qualified	Improved	\$368,600.00
<a href="#">2916 / 255</a>	5/15/2005	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2916 / 251</a>	5/9/2005	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2916 / 250</a>	5/6/2005	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">2534 / 103</a>	3/23/2004	Warranty Deed	Qualified	Improved	\$200,000.00
<a href="#">1676 / 2193</a>	12/30/1998	Personal Rep Deed	Unqualified	Improved	\$0.00
<a href="#">1111 / 1199</a>	5/1/1991	Misc Deed/Document	Unqualified	Improved	\$0.00
<a href="#">643 / 1222</a>	1/1/1977	Misc Deed/Document	Qualified	Improved	\$70,000.00

[Click here to search for mortgages, liens, and other legal documents.](#) ⓘ

## Values and Estimated Ad Valorem Taxes ⓘ



**SHEET INDEX**

- C-0 COVER SHEET
- C-1 PRELIMINARY SUBDIVISION LAYOUT PLAN

**PERMIT PLANS  
FOR**

**PRELIMINARY SUBDIVISION PLANS  
TERRA PROMESSO PRESERVE**

**LEGAL DESCRIPTION**

Northwest 1/4 of the Northwest 1/4 of Section 16,  
Township 19 South, Range 24 East, Lake County, Florida,  
LESS the North 693 feet thereof, and LESS the right of  
way for State Road No. S-468.

LANDSCAPING AND IRRIGATION PLANS (PROVIDED BY OTHERS)  
LIGHTING PLAN (PROVIDED BY OTHERS)

PROPERTY ADDRESS: 33811 COUNTY ROAD 468  
LEESBURG, LAKE COUNTY, FLORIDA 34748  
(Section 16, Township 19 South, Range 24 East)  
Parcel ID# 16-19-24-0002-000-01000

**OWNER**

JAMES P. SENATORE  
Mailing Address: 1317 Sumter Street  
Leesburg, FL 34748  
Cell (352) 205-2369  
email: senatoreinc@gmail.com

**SURVEYOR**

FREELAND - CLINKSCALES & ASSOCIATES, INC OF NC  
814 E. Alfred Street  
Tavares, Florida 32778  
Ph (352) 609-2830  
email: surveyquote@aol.com

**DEVELOPER / ARCHITECT**

James P. Senatore, Architect & Contractor  
1317 Sumter Street, Leesburg, FL 34748  
Office (352) 787-1121  
Cell (352) 205-2369  
Fax (352) 728-8292  
email: senatoreinc@gmail.com

**CIVIL ENGINEER**

Richard A. Campanale, P.E.  
Contact Location: 1317 Sumter Street, Leesburg, FL 34748  
Cell (407) 878-8942  
Fax (352) 728-8292  
email: rcampanalepe@gmail.com

**UTILITIES/AGENCIES**

**CITY OF FRUITLAND PARK**

COMMUNITY DEVELOPMENT  
506 W. BERKMAN STREET  
FRUITLAND PARK, FL 34731  
352-360-6727

PUBLIC WORKS DEVELOPMENT  
FRUITLAND PARK, FL 34731  
352-360-6795

**SJRWMD**

MAITLAND SERVICE CENTER  
MAITLAND, FL 32751  
407-659-4800

CONTRACTOR TO CALL SUNSHINE ONE AT 1-800-432-4770  
TO VERIFY LOCATION OF ALL EXISTING UNDERGROUND UTILITIES

**LAKE COUNTY**

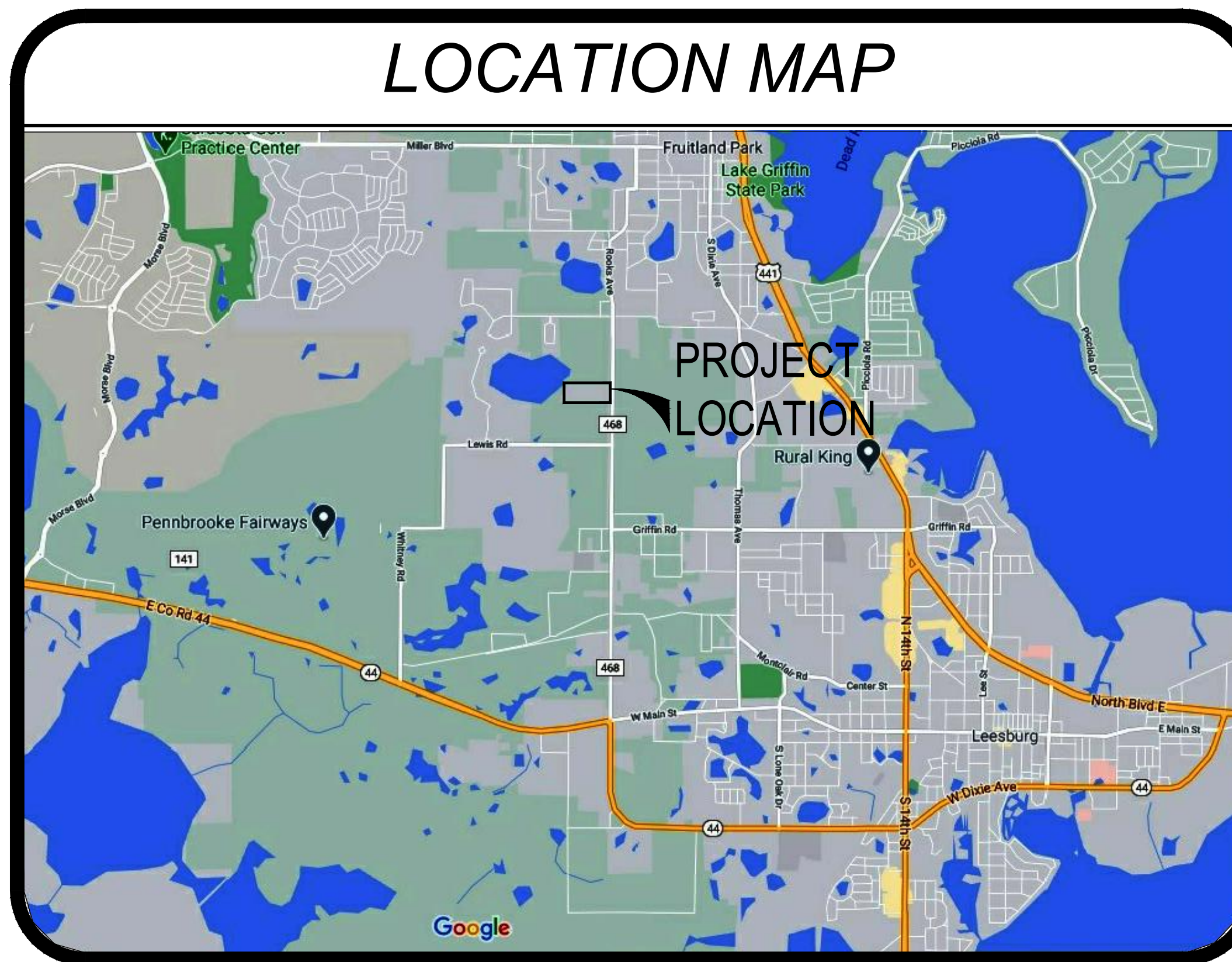
ENGINEERING DEPARTMENT  
350 N. SINCLAIR AVENUE  
TAVARES, FL 32778  
352-253-6000

**FDEP**

CENTRAL DISTRICT ORLANDO  
ORLANDO, FL 32803  
407-897-4100

48 HOURS BEFORE DIGGING  
CALL TOLL FREE  
**1-800-432-4770**  
SUNSHINE STATE ONE CALL  
OF FLORIDA, INC.

**LOCATION MAP**

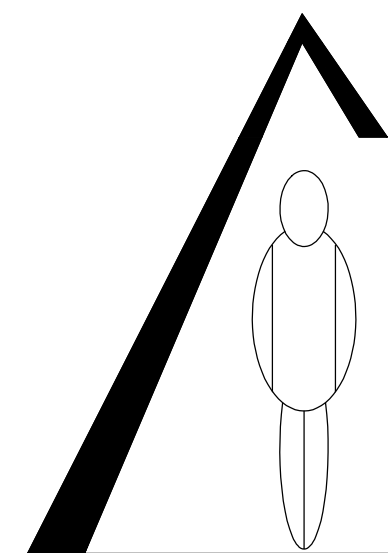


**GENERAL NOTES**

1. INTENDED USE IS RESIDENTIAL SUBDIVISION.
2. CONTRACTOR IS REQUIRED TO CONSTRUCT WATER, SEWER, ROADWAY AND STORMWATER IMPROVEMENTS IN ACCORDANCE WITH THE STANDARD CONSTRUCTION SPECIFICATIONS OF CITY OF FRUITLAND PARK AND LAKE COUNTY.
3. CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION AND BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER OR ARCHITECT.
4. ALL DISTURBED OPEN AREAS SHALL BE SODDED OR SEEDDED AND MULCHED IMMEDIATELY FOLLOWING COMPLETION OF THE BUILDING CONSTRUCTION AS SHOWN ELSEWHERE IN THESE PLANS.
5. OWNER/CONTRACTOR SHALL SUPPLY THE ENGINEER WITH "AS-BUILT" CONDITIONS OF ACTUAL CONSTRUCTION.
6. CONSTRUCTION SURVEYING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
7. ENGINEER NOT RESPONSIBLE FOR PREPARING SUMMARY OF CONSTRUCTION QUANTITIES FOR BIDDING PURPOSES.
8. CONSTRUCTION TESTING OF SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO WATER LINES AND DENSITY TESTING, SOIL COMPACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
9. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL SITE IMPROVEMENTS AND MATERIALS TO BE REVIEWED AND APPROVED BY THE ENGINEER, UNLESS WAIVED BY THE OWNER OR OWNER AGENT IN WRITING.
10. ANY SOIL MATERIAL (EITHER ON-SITE OR IMPORTED) UTILIZED FOR THE CONSTRUCTION SHALL BE CLEAN FINE SAND (SP) AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM. FINES (MATERIAL PASSING THE NO. 200 SIEVE) SHALL BE LESS THAN 5%.
11. FLORIDA FRIENDLY LANDSCAPING AND XERISCAPING SHALL BE USED FOR ALL LANDSCAPING SPECIES AT SITE.
12. THE CONTRACTOR SHALL OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT AS REGULATED BY THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP). CONTRACTOR SHALL BECOME FAMILIAR WITH THE NPDES PERMITTING REQUIREMENTS, IMPLEMENT AT A MINIMUM A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE CONSTRUCTION SITE IS IN COMPLIANCE WITH NPDES REGULATIONS AND WILL BE RESPONSIBLE FOR ANY VIOLATIONS CITED BY DEP DURING CONSTRUCTION. INFORMATION PERTAINING TO THE NPDES PROGRAM IS AVAILABLE ON LINE AT WWW.DEP.STATE.FL.US/WATER/STORMWATER/NPDES OR BY CALLING FDEP NPDES STORMWATER SECTION AT 850-245-7522.

NOTE:  
THIS PLAN IS NOT VALID FOR CONSTRUCTION  
UNLESS SIGNED AND SEALED BY THE ENGINEER  
OF RECORD OR APPROVED SIGNATURES BY JURISDICTIONAL AGENCY

REV.	SUMMARY OF REVISIONS - DESCRIPTION	BY	DATE



DESIGN / BUILD SPECIALISTS  
**SENATORE INC.**  
JAMES P. SENATORE, ARCHITECT • SENATORE CONSTRUCTION

1317 Sumter Street Leesburg, FL 34748 • P: 352-787-1121 • F: 352-728-8292 • AR0006808 • CB C060129

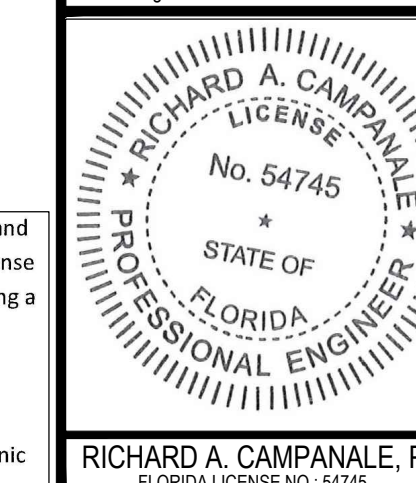
NOTICE : The Information on This Sheet Is The Property of James P. Senatore Architect, State Reg. # 6808,  
and Is Not To Be Copied In Whole or Part Without The Written Permission of James P. Senatore, Architect.

N O R T H



**NOTICE TO DRAWING HOLDER**

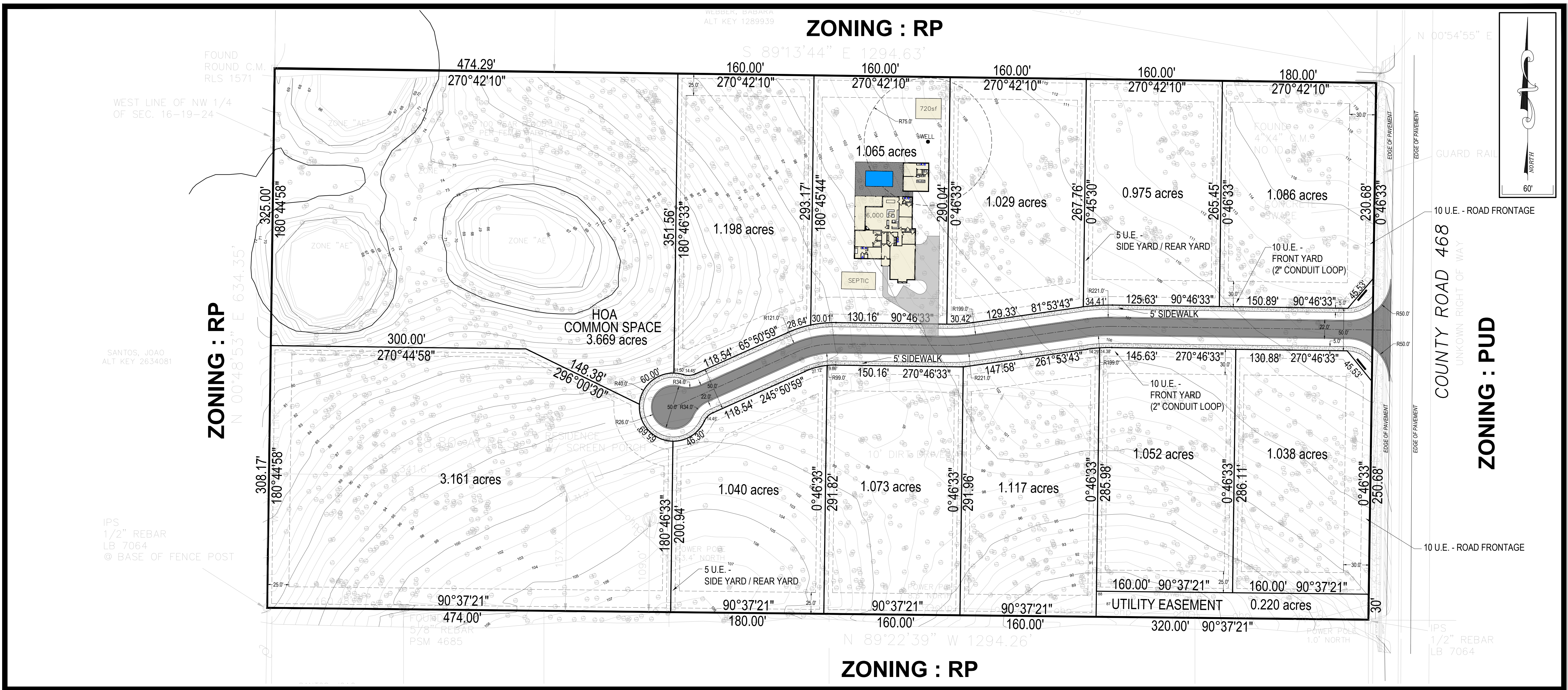
The Engineer prepared and furnished this drawing to the owner for use on this project only. This drawing should not be used on extensions of this project or on any other project. Any reuse of this drawing, without written verification of adoption by the engineer, shall be at the reuser's sole risk and the reuser shall indemnify and hold harmless the engineer from all claims, damages, losses, expenses, including attorney's fees arising out of or resulting therefrom.



This item has been electronically signed and sealed by Richard A. Campanale, P.E. License #54745, on (date/time stamp 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.

FILED: C:\P\FILES\CDP - Current Projects\Terra Promesso\Drawings\DWG\Terra Promesso.dwg





#	REVISION DESCRIPTION	BY	DATE

**ENGINEER OF RECORD**  
**RICHARD A. CAMPANALE, P.E.**  
 FLORIDA LICENSE NO. 54745

**SENATORE INC.**  
 DESIGN / ARCHITECTURE / CONSTRUCTION  
 1317 Sumner Street, Leesburg, FL 34748 • P: 352-297-1121 • F: 352-278-8297 • A00000000 • C01000129  
 601 S.W. 15th Street, Suite 100, Ft. Lauderdale, FL 33304 • P: 954-525-1111 • F: 954-525-1112

**PRELIMINARY SITE DATA INFORMATION**

**PARCEL NUMBER**  
 PARCEL ID#: 16-19-24-0002-000-01000  
 OWNER: JAMES SENATORE, 1317 SUMNER STREET, LEESBURG

**LEGAL DESCRIPTION**  
 NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS THE NORTH 693 FEET THEREOF, AND LESS THE RIGHT OF WAY FOR STATE ROAD NO. 468. SUBJECT TO ALL EASEMENTS, RIGHT OF WAY AND RESTRICTIONS OF RECORD, IF ANY.

**GENERAL DESCRIPTION**  
 INTENDED USE - RESIDENTIAL SUBDIVISION  
 11 LOT SUBDIVISION

**ZONING - CURRENT**  
 R-3A ZONING DISTRICT

**FUTURE LANDUSE**  
 MULTI-FAMILY HIGH DENSITY (MFHD)

**NATURAL FEATURES INFORMATION**  
 MYRTLE LAKE (EASTERN CONNECTION) AND WETLANDS EXIST ON-SITE  
 ISOLATED WETLAND SYSTEM LOCATED IN LOW AREA IS APPROXIMATELY 0.29 ACRES

**SURVEY DATUM**  
 ELEVATIONS BASED ON N.A.V.D. 1988 DATUM.

**FLOOD ZONE**

ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP OF LAKE COUNTY, FLORIDA, COMMUNITY PANEL NO. 120421-0308-D, DATED 7/3/02, THIS PROPERTY LIES IN FLOOD ZONES "X" AND "AE". (ZONE LINE SCALED ON SURVEY).  
 ZONE "AE" = 71.8 FT FOR 100-YEAR BASE FLOOD ELEVATION

**OPEN SPACE REQUIREMENT**

REQUIRED OPEN SPACE OF 25% OF TOTAL PROJECT / PROPERTY AREA  
 0.25 x 18.78 ACRES = 4.69 ACRES.

PROVIDED OPEN SPACE INCLUDES CONSERVATION AREA, LANDSCAPING AREAS, RETENTION AREA = 5.10 ACRES

**LOT DIMENSION REQUIREMENTS**

R-3 SINGLE FAMILY - MIN. LOT AREA / DU = 10,000 SF;  
 MIN. LOT WIDTH = 80 FT;  
 BUILDING COVERAGE = 30%;  
 MIN. OPEN SPACE = 25%;  
 MAX. BUILDING HEIGHT = 35 FT

**LOT SETBACK REQUIREMENTS**

FRONT 30-FT  
 REAR 25-FT  
 SIDE YARD 10-FT  
 UTILITY EASEMENT FRONT YARD AND CR 468 10-FT  
 UTILITY EASEMENT SIDE YARD 5-FT

**RESIDENTIAL DWELLING REQUIREMENTS**

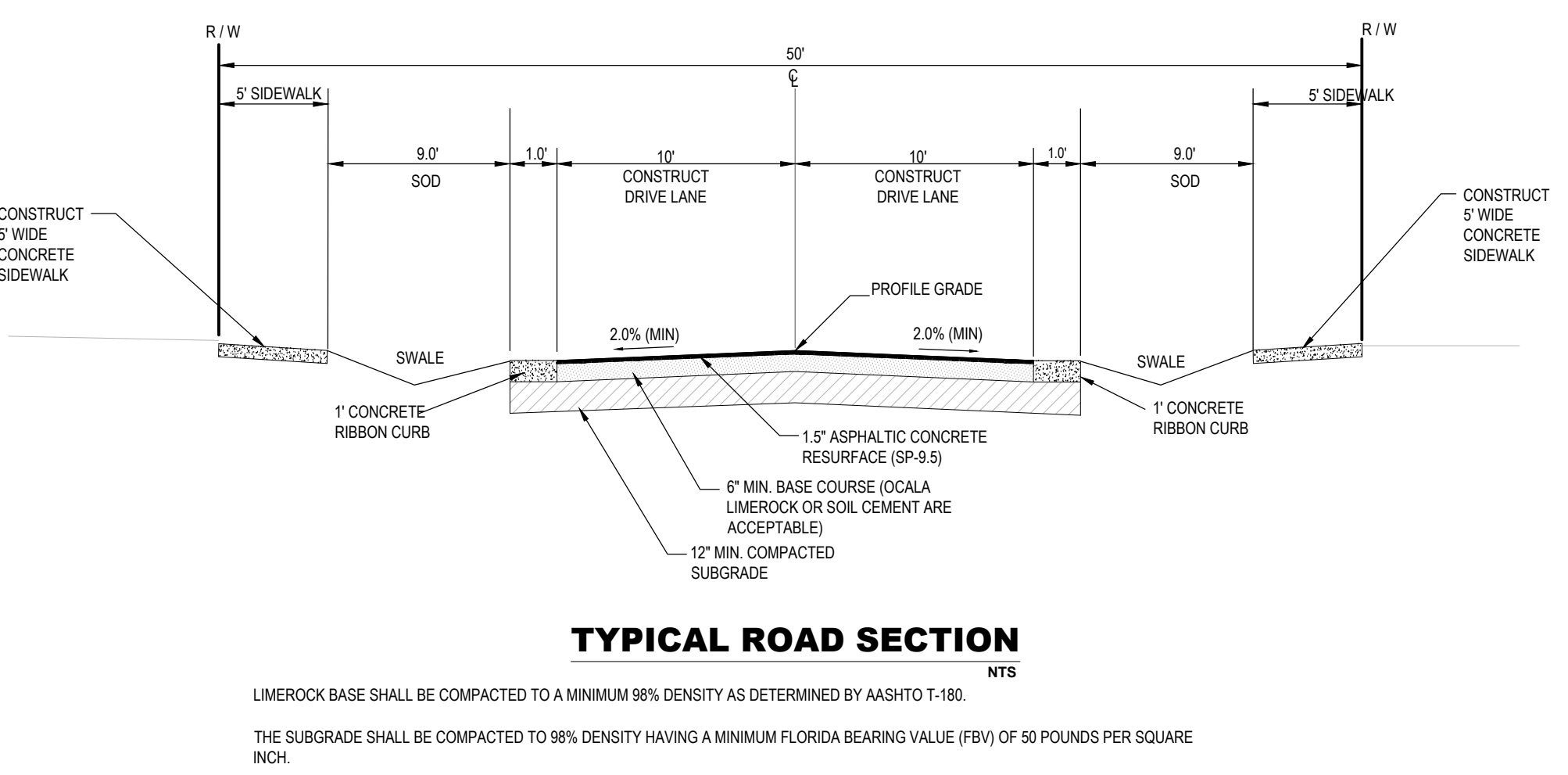
NET LIVING SPACE AREA FOR EACH DWELLING UNIT WILL NOT BE LESS THAN 2,000-SF.

**SOIL TYPES**

THE SOIL TYPES AS RECORDED BY NATURAL RESOURCES CONSERVATION SERVICES SOILS MAP - LAKE COUNTY INDICATE  
 UNIT SYMBOL 8 AND 9 - CANDLER SAND HSG 'A'  
 UNIT SYMBOL 40 - PLACID AND MYAKKA SANDS HSG 'A/D'

**PERMITS REQUIRED**

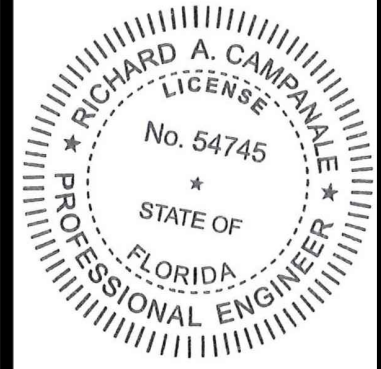
CITY OF FRUITLAND PARK REZONING - COMMUNITY DEVELOPMENT  
 CITY OF FRUITLAND PARK COMMUNITY DEVELOPMENT - SUBDIVISION AND PLAT APPROVAL  
 LAKE COUNTY USE PERMIT FOR DRIVEWAY  
 CITY OF FRUITLAND WATER AND WASTEWATER PERMITTING  
 SJRWMD ENVIRONMENTAL RESOURCE PERMIT  
 FDP WATER AND WASTEWATER  
 N.P.D.E.S. CONSTRUCTION, S.W.P.P.P.



**TYPICAL ROAD SECTION**  
 NTS  
 LIMEROCK BASE SHALL BE COMPACTED TO A MINIMUM 98% DENSITY AS DETERMINED BY AASHTO T-180.  
 THE SUBGRADE SHALL BE COMPACTED TO 98% DENSITY HAVING A MINIMUM FLORIDA BEARING VALUE (FBV) OF 50 POUNDS PER SQUARE INCH.

SEC 16	TWN 19S	RNG 24E
PRELIMINARY SUBDIVISION PLANS TERRA PROMESSO PRESERVE		
PRELIMINARY SUBDIVISION LAYOUT PLAN		
6/20/21	Subd. Plan App.	SHEET
		C-1
		OF

RICHARD A. CAMPANALE, P.E.  
 FLORIDA LICENSE NO. 54745



This form has been electronically signed and sealed by Richard A. Campanale, P.E. License #54745, on 06/20/21 (time stamp 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.





**DEVELOPMENT REVIEW LETTER  
TERRA PROMESSO PRESERVE SUBDIVISION  
PRELIMINARY PLAT REVIEW APPLICATION  
JUNE 29, 2021**

**Property Owner(s):** James P. Senatore  
**Engineer/Agent:** Richard A. Campanale, P.E. (Engineer)  
**Phone:** 407-898-8942 (Engineer)  
**Email:** rcampanalepe@gmail.com  
**Mailing Address:** 127 Slade Drive  
Longwood, FL 32750

**Project Name:** Terra Promesso Preserve Subdivision  
**Parcel ID:** 16-19-24-0002-000-01000  
**Alt Key:** 1289785  
**Project Address:** Vacant Land  
33811 County Road 468  
Leesburg, FL 34748

Mr. Campanale:

Contained herein are the comments following informal TRC review. The referenced project is tentatively scheduled before Technical Review Committee (TRC) on July 6, 2021 at 10:00AM.

**Development Review:**

The *initial application fees* are as follows:

Development Application Fees (City)	\$210.00 PAID
LPG (Land Planner)	\$750.00 PAID
HALFF (Engineer)	\$700.00 PAID

Per City Ordinance 2008-023 these are the applicable fees as of date; however, there may be additional fees associated with the application(s) that will be passed to the applicant(s), including Contractual Services.

**City Attorney Review:**

No comment at time of review letter.

**City Engineer (BESH) Review:**

See attached staff report.

**City Land Planner Review:**

No comment at time of review letter.

**City Building Review:**

Zoning is R3; will triplexes be allowed to be built, or limited to SFR's? Triplex buildings will require sprinklers and should be considered for water line sizing. If limited to SFR's only, then no comments.

**City Code Enforcement Review:**

No comment at time of review letter.

**City Fire Review:**

No comment at time of review letter.

**City Police Review:**

No comments or concern from law enforcement at this time.

**City Public Works Department Review:**

No comment at time of review letter.

**City of Leesburg Utilities Review:**

No comment at time of review letter.

**Lake County Public Schools Review:**

Residential projects of more than 4 dwelling units are subject to school concurrency review. Please refer applicant for more information on review process.

**Lake County Public Works Review:**

No comment at time of review letter.

Enc (1)



**City of Fruitland Park, Florida**  
**Community Development Department**  
 506 W. Berckman St., Fruitland Park, Florida 34731  
 Tel: (352) 360-6727 Fax: (352) 360-6652  
 www.fruitlandpark.org

<i>Staff Use Only</i>	
Case No.:	_____
Fee Paid:	_____
Receipt No.:	_____

## Development Application

**Contact Information:**

Owner Name: Fruitland Park LLC  
 Address: 941 W Morse BLVD STE 315  
 Phone: 407-422-8191 Email: \_\_\_\_\_

Applicant Name: GSL Holdings I LLC  
 Address: 1705 Edgewater Drive Unit #540104 ORLANDO, FL 32804  
 Phone: 407-926-0206 Email: ike@greenslateland.com

Engineer Name: Dustin Brinkman  
 Address: 6300 Hazeltine National Dr Suite 118 Orlando, Fl 32822  
 Phone: 407-994-4456 Email: dbrinkman@kpmfranklin.com

**Property and Project Information:**

**PROJECT NAME\*:** Mirror Lake - Phase II  
 \*A project name is required for all submissions. Please choose a name representative of the project for ease of reference.

Property Address: ATLANTIC AVE FRUITLAND PARK, FL 34731

Parcel Number(s): PID: 09-19-24-1400-00F-00000 Section: 9 Township: 19 Range: 24

Area of Property: 14.19 AC. Nearest Intersection: Urick St & Thomas Ave

Existing Zoning: PUD Existing Future Land Use Designation: SINGLE FAMILY MEDIUM DENSITY

Proposed Zoning: PUD Proposed Future Land Use Designation: SINGLE FAMILY MEDIUM DENSITY

The property is presently used for: Vacant - undeveloped

The property is proposed to be used for: SINGLE FAMILY RESIDENTIAL

Do you currently have City Utilities? Yes

**Application Type:**

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Annexation      | <input type="checkbox"/> Comp Plan Amendment         | <input type="checkbox"/> Rezoning               | <input type="checkbox"/> Planned Development |
| <input type="checkbox"/> Variance        | <input type="checkbox"/> Special Exception Use       | <input type="checkbox"/> Conditional Use Permit | <input type="checkbox"/> Final Plat          |
| <input type="checkbox"/> Minor Lot Split | <input checked="" type="checkbox"/> Preliminary Plan | <input type="checkbox"/> Construction Plan      | <input type="checkbox"/> ROW/Plat Vacate     |
| <input type="checkbox"/> Site Plan       | <input type="checkbox"/> Minor Site Plan             | <input type="checkbox"/> Replat of Subdivision  |  |

Please describe your request in detail: Proposed Phase II development of Mirror Lake Single Family Residential Subdivision

**Required Data, Documents, Forms & Fees**

Attached to this application is a list of **REQUIRED** data, documents and forms for each application type as well as the adopted fee schedule. These items must be included when submitting the application package. Failure to include the supporting data will deem your application package **INCOMPLETE** and will not be processed for review.

Printed Name: Isaiah Cottle MGR of Cottle Enterprises LLC, it's MGR

Signature:  Date: May 12, 2021

If application is being submitted by any person other than the legal owner(s) of the property, the applicant must have written authorization from the owner to submit application.

## Development Application Checklist

### The Following are Required for ALL Development Applications:

- Legal Description (Word file req'd)     Current Deed     Aerial Photo  
 Property Appraiser Information     Electronic Copy of Application     Location Map

Pre-application conferences are strongly encouraged. Submit TWO CDs with ALL documents in pdf; those that are generated as CAD files should be submitted in pdf and dwg formats. . Legal Descriptions should also come with a MS Word file of the legal description. Most maps are accessible through [www.lakecountyfl.gov/maps/](http://www.lakecountyfl.gov/maps/). Note: All maps are required to depict adjacent properties at a minimum.

**Failure to provide adequate maps may delay the application process.**

### Other Required Analyses and Maps:

#### Small Scale Comprehensive Plan Amendment Applications:

- Justification for Amendment     Environmental Constraints Map     Requested FLU Map

#### Large Scale Comprehensive Plan Amendment Applications:

Maps:     Environmental Constraints     Soils     Requested FLUM Designation     Requested Zoning Map Designation

Analyses:     Environmental Assessment     Utility Availability Analysis     Urban Sprawl Analysis     School Impact Analysis

Traffic Impact Analysis     Consistency with the Comp Plan     Florida Master Site File sign-off or Archaeological Survey

#### Rezoning Applications:

- Requested Zoning Map     Justification for Rezoning

#### Planned Development Applications:

Maps/Plans:     Conceptual Plan as Described in LDRs Chapter 154, Section 154.030,10,G     Environmental Constraints

Analyses:     Environmental Assessment     Traffic Impact Analysis     Preliminary Concurrency Analysis

#### Variance Applications:

- Justification for Variance

#### Special Exception Use Applications:

- Justification for Special Exception Use  
 Site Sketch     List of Special Requirements as Described in LDRs, Chapter 155

#### Conditional Use Permit Applications:

- Proposed List of Conditions and Safeguards  
 Site Plan as Described in LDRs, Chapter 155     Written Statement as Described in LDRs, Chapter 155

#### Subdivision Applications:

(Preliminary Plan, Improvement Plan and Final Plat)

- As Described in LDRs, Chapter 157

#### Minor Subdivision Applications:

- As Described in LDRs, Chapter 157

#### Site Plan Applications:

- As Described in LDRs, Chapter 160

OWNER'S AFFIDAVIT

STATE OF FLORIDA

COUNTY OF LAKE

Before me the undersigned authority, personally appeared Mary Demetree - MGR of Fruitland Park LLC

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

- 1) That he/she is the fee-simple owner of the property legally described on attached page of this application.
- 2) That he/she desires City of Fruitland Park to allow for the submission of the Preliminary Plat, Final Plat, Construction Plans, Tree Removal Permits, and Building permits for phase 2 of Mirror Lake Estates.

- 3) That he/she has appointed Isaiah Cottle -GSL HOLDINGS I LLC to act as agent on his/her behalf to accomplish the above. The owner is required to complete the Applicant's Affidavit of this application if no agent is appointed to act on his/her behalf.

*Mary Demetree*  
 Affiant (Owner's Signature)

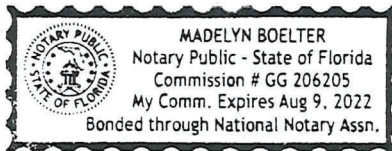
State of Florida

County of Orange

The foregoing instrument was acknowledged before me this 7<sup>th</sup> day of May, 20 21,  
 by Mary L. Demetree who is personally known to me or has produced  
N/A as identification and who did or did not take an oath  
 (Notary Seal)

Notary Public - State of Florida  
 Commission No \_\_\_\_\_  
 My Commission Expires \_\_\_\_\_

*Madelyn Boelter*  
 Signature  
 \_\_\_\_\_  
 Printed Name



CFN 2005164152  
Bk 02981 Pgs 0179 - 181; (3pgs)  
DATE: 10/18/2005 11:04:14 AM  
JAMES C. WATKINS, CLERK OF COURT  
LAKE COUNTY  
RECORDING FEES 27.00  
DEED DOC B,719.90

*R*  
This Document Prepared By and Return to:  
Robert Q. Williams, Esquire  
Williams, Smith & Summers, P.A.  
380 West Alfred Street  
Tavares, Florida 32778

Parcel ID Number:

# Warranty Deed

This Indenture, Made this *14th* day of **October**, 2005 A.D., **Between**  
**Cynthia A. Fricke, a single woman**

of the County of **Lake**, State of **Florida**, **grantor**, and  
**Fruitland Park, LLC, a Florida limited liability company**

whose address is: **3348 Edgewater Drive, Orlando, FL 32804**

of the County of **Orange**, State of **Florida**, **grantee**.

**Witnesseth** that the GRANTOR, for and in consideration of the sum of  
-----**TEN DOLLARS (\$10)**----- DOLLARS,  
and other good and valuable consideration to GRANTOR in hand paid by GRANTEE, the receipt whereof is hereby acknowledged, has  
granted, bargained and sold to the said GRANTEE and GRANTEE'S heirs, successors and assigns forever, the following described land, situate,  
lying and being in the County of **Lake** State of **Florida** to wit:  
**See Exhibit "A"**

**Subject to all other easements, restrictions, rights-of-way, and  
reservations of record and taxes accruing subsequent to December 31,  
2004.**

and the grantor does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever.

**In Witness Whereof**, the grantor has hereunto set her hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

*[Signature]*  
Printed Name: **Richard J. Fritch**  
Witness

*[Signature]* (Seal)  
Cynthia A. Fricke  
P.O. Address: 460 Newell Road, Leesburg, FL 34748

*[Signature]*  
Printed Name: **Robert Williams**  
Witness

STATE OF **Florida**  
COUNTY OF **Lake**

The foregoing instrument was acknowledged before me this *14th* day of **October**  
**Cynthia A. Fricke, a single woman**

she is personally known to me or she has produced her

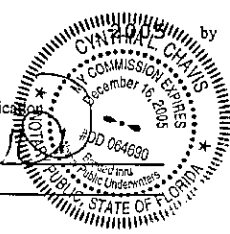
*[Signature]* as identification  
Printed Name: **Cynthia J. Chavis**  
Notary Public  
My Commission Expires:  


EXHIBIT "A"

TRACT #1:

Lot 8 of Block 43, according to the Plat of Fruitland Park recorded in Plat Book 3, Page 8, Public Records of Lake County, Florida. ALSO: From the SW corner of the SE 1/4 of Section 9, Township 19 South, Range 24 East, Lake County, Florida. run South 89°46'00" East, along the South boundary of the SE 1/4 of said Section 9, for a distance of 1344.96 feet to a 4-inch round concrete monument located on the East boundary of the 60 foot wide Wilder Street: thence North 0°26'10" East, along the East boundary of said Wilder Street, for a distance of 1024.85 feet to a 4-inch round concrete monument located on the North boundary of 50 foot wide Urick Street; said point being the P.O.B. of this description: From said P.O.B., run North 0°26'10" East, along the East boundary of said Wilder Street, for a distance of 643.20 feet to a 4-inch round concrete monument; thence North 29°45'50" West, along the East boundary of 60 foot wide Lemon Avenue, for a distance of 843.20 feet to a 4-inch round concrete monument; thence North 52°38'20" East for a distance of 206.20 feet to a 4-inch round concrete monument; thence North 32°04'20" West for a distance of 117.00 feet to a 4-inch round concrete monument; thence North 49°39'10" East for a distance of 414.55 feet to a 4-inch round concrete monument located on the Westerly boundary of the right-of-way of the Atlantic Coast Line Railroad; thence Southeasterly, along said West boundary of said right-of-way which is parallel with and 17.5 feet from the centerline of the mainline of said railroad, along a curve to the left whose radius is 1927.36 feet, for an arc distance of 455.50 feet to a point of tangency; thence South 36°59'00" East, along said Westerly boundary of said railroad right-of-way which is parallel with and 17.5 feet Southwesterly of, when measured at right angles thereto, of the centerline of the mainline of the said railroad, for a distance of 1745.50 feet to a 4-inch round concrete monument, located on the East boundary of the aforesaid Section 9, thence South 0°17'30" West, along the said East boundary of Section 9, for a distance of 92.00 feet to a 4-inch round concrete monument, located on the North boundary of the 50 foot wide Urick Street; thence North 89°29'50" West, along the said North boundary of Urick Street, for a distance of 1282.35 feet to the P.O.B. The last description above being a part of Blocks 39, 43, 40 and 44 of the Plat of Fruitland Park, according to the Plat thereof recorded in Plat Book 3, Page 8, Public Records of Lake County, Florida.

TRACT #2;

From the SW corner of the SE 1/4 of Section 9, Township 19 South, Range 24 East, Lake County, Florida, run South 89°46'00" East, along the South boundary of said SE 1/4 of Section 9 for a distance of 1284.95 feet to a 4-inch round concrete monument located on the West boundary of the 60 foot wide Wilder Street; thence North 0°26'10" East, along the said West boundary of Wilder Street, for a distance of 1651.85 feet to a 4-inch round concrete monument, said point being the P.O.B. of this description: From said P.O.B. run North 29°45'50" West, along the West boundary of the 60 foot wide Lemon Avenue, for a distance of 819.20 feet to a 4-inch round concrete monument; thence West for a distance of 161.00 feet to a 4-inch round concrete monument; thence South 29°50'10" East for a distance of 810.15 feet to a steel marker, thence South 87°04'00" East for a distance of 164.75 feet to the P.O.B.

TRACT #3:

From the SW corner of the SE 1/4 of Section 9, Township 19 South, Range 24 East, Lake County, Florida, run South 89°46'00" East, along the South boundary of the SE 1/4 of said Section 9, for a distance of 1344.95 feet to a 4-inch round concrete monument, located on the East boundary of the 60 foot wide Wilder Street; thence North 0°26'10" East along the East boundary of said Wilder Street for a distance of 1668.05 feet; thence North 29°45'50" West, along the East boundary of 60 foot wide Lemon Avenue, for a distance of 843.20 feet to a 4-inch round concrete monument, for the Point of Beginning; thence run North

(Continued on Attached)

52°38'20" East for a distance of 206.20 feet to a 4-inch round concrete monument; thence North 32°04'20" West for a distance of 117.00 feet to a 4-inch round concrete monument; thence North 49°39'10" East for a distance of 414.55 feet to a 4-inch round concrete monument located on the Westerly boundary of the right-of-way of the Atlantic Coast Line Railroad, thence Northwesterly along said West boundary of said right-of-way 315.55 feet, more or less, to a concrete monument located on the South boundary line of DeSoto Avenue; thence North 68°22'40" West along the South boundary of said DeSoto Avenue and DeSoto Avenue extended to a point in Mirror Lake; Begin again at the Point of Beginning, run thence Northwesterly along the East line of Lemon Avenue as existing to and into Mirror Lake to intersect first line. Subject to right of way for Lake Shore Drive.

LESS:

Lot 7 and the East 69 Feet of Lot 6 in Block 44, according to the Map of Fruitland Park, recorded in Plat Book 3, Pages 8 and 9, Public Records of Lake County, Florida.

LESS:

Lot 6 in Block 44, according to the Map of Fruitland Park, recorded in Plat Book 3, Pages 8 and 9, Public Records of Lake County, Florida, less the East 69 feet thereof.

AND LESS:

That part of Block 40, Plan of Fruitland Park, Plat Book 3, Page 8, described as follows:

From the SW corner of the SE 1/4 of Section 9, Township 19 South, Range 24 East, Lake County, Florida, run South 89°46'00" East, along the South boundary of the SE 1/4 of said Section 9, for a distance of 1344.95 feet to a concrete monument, located on the East boundary of the 60 foot wide Wilder Street; thence North 0°26'10" East along the East boundary of said Wilder Street for a distance of 1668.05 feet; thence North 29°45'50" West, along the East boundary of 60 foot wide Lemon Avenue, for a distance of 1078.20 feet, for the Point of Beginning; thence run North 60°14'10" East for a distance of 300.00 feet; thence North 44°37'43" West, extended to a point in Mirror Lake. Begin again at Point of Beginning, run thence Northwesterly along the East line of Lemon Avenue as existing to and into Mirror Lake to intersect first line. Less right of way for East Mirror Lake Drive, also known as Lake Shore Drive, Lake County, Florida.

AND ALSO LESS:

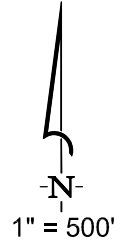
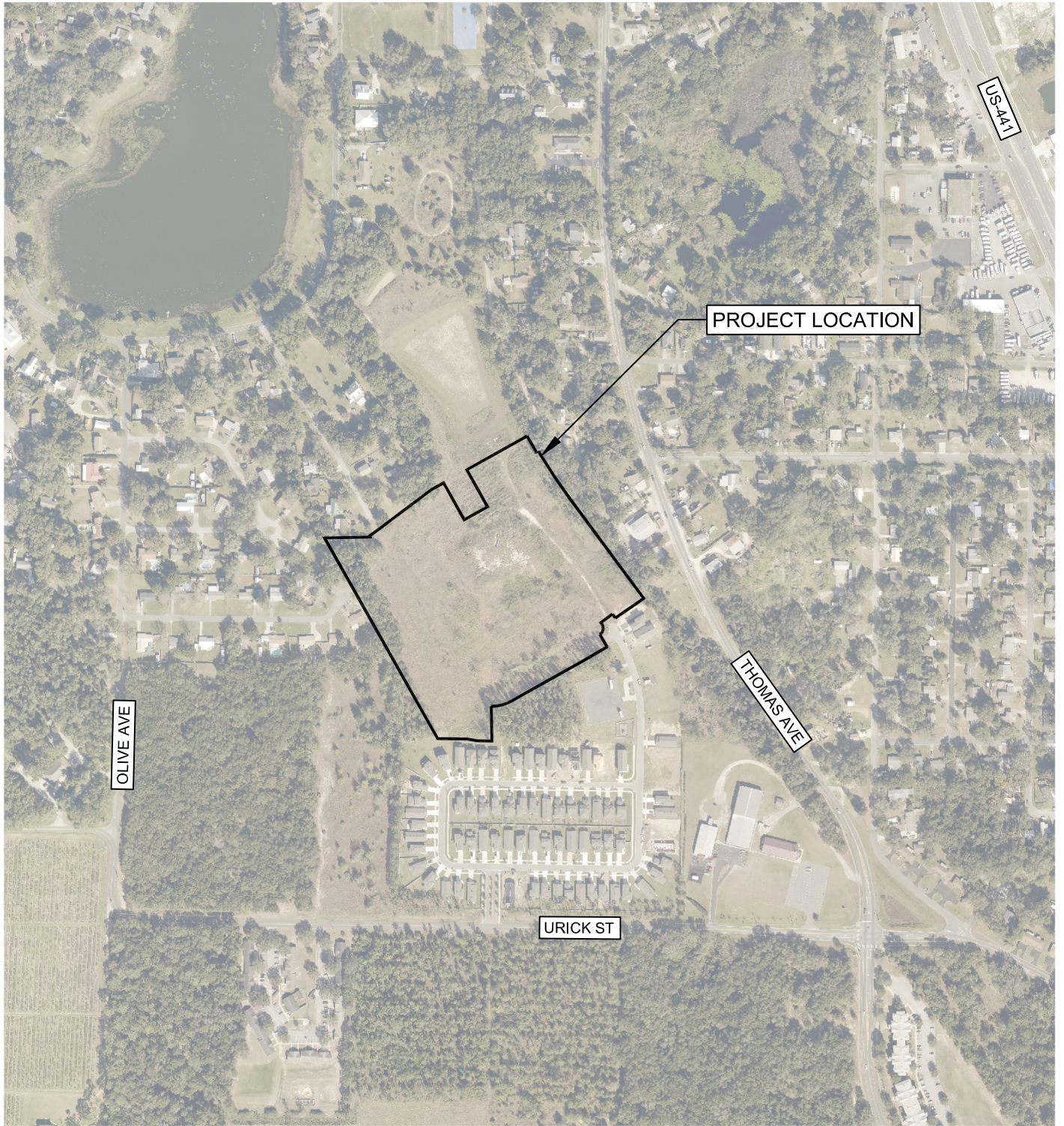
That part of Block 40, Plan of Fruitland Park, Plat Book 3, Page 8, Public Records of Lake County, Florida, described as follows:

From the Southwest corner of the SE 1/4 of Section 9, Township 19 South, Range 24 East, Lake County, Florida, run S 89°46'00" E along the South boundary of the SE 1/4 of said Section 9, for a distance of 1344.95 feet, to a concrete monument, located on the East boundary of 60 feet wide Wilder Street, thence N 00°26'10" E along the East boundary of Wilder Street for a distance of 1668.05 feet, thence N 29°45'50" W along the Easterly boundary of 60 feet wide Lemon Avenue for a distance of 1078.20 feet, for the Point of Beginning, departing said Easterly boundary, thence N 60°14'10" E for a distance of 196.20 feet, thence run S 32°04'20" E, a distance of 207.83 feet, thence run S 52°38'20" W, a distance of 206.20 feet, to a point on the Easterly boundary of Lemon Avenue, from said point run N 29°45'50" W 234.93 feet along the Easterly boundary of Lemon Avenue to the Point of Beginning.



## **Fruit Park Estates - Legal Description**

TRACT "F", MIRROR LAKE VILLAGE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 66, PAGES 92 THROUGH 96 OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA.



FILE: Drainage Exhibits\_ABC\_096.dwg

**KPMFranklin**  
 ENGINEERS • PLANNERS • SURVEYORS  
 6300 HAZELTINE NATIONAL DRIVE, STE. 118  
 ORLANDO, FL 32822. PHONE (407) 410.8624  
 CERTIFICATE OF AUTHORIZATION: 32059

# AERIAL MAP

MIRROR LAKE - PHASE II  
 ATLANTIC AVE  
 FRUITLAND PARK, FL 34731

CADD	NAME	DATE
DESIGNED BY	RAG	04/21
DRAWN BY	JEG	04/21
CHECKED BY	RGB	04/21
APPROVED BY	JCK	04/21

PROJECT NO.	20-077.000
DATE	April, 2021
SCALE	NTS

SHEET

2



# PROPERTY RECORD CARD

## General Information

<b>Name:</b>	FRUITLAND PARK LLC	<b>Alternate Key:</b>	3897102
<b>Mailing Address:</b>	941 W MORSE BLVD STE 315 WINTER PARK, FL 32789 <a href="#">Update Mailing Address</a>	<b>Parcel Number:</b> ⓘ	09-19-24-1400-00F-00000
		<b>Millage Group and City:</b>	00F2 (FRUITLAND PARK)
		<b>2020 Total Certified Millage Rate:</b>	17.6785
		<b>Trash/Recycling/Water/Info:</b>	<a href="#">My Public Services Map</a> ⓘ
<b>Property Location:</b>	ATLANTIC AVE FRUITLAND PARK FL 34731 <a href="#">Update Property Location</a> ⓘ	<b>Property Name:</b>	-- <a href="#">Submit Property Name</a> ⓘ
		<b>School Information:</b>	<a href="#">School Locator &amp; Bus Stop Map</a> ⓘ <a href="#">School Boundary Maps</a> ⓘ
<b>Property Description:</b>	MIRROR LAKE VILLAGE PB 66 PG 92-96 TRACT F		
<p><small>NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.</small></p>			

## Land Data

Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class Value	Land Value
1	VACANT RESIDENTIAL (0000)	0	0		14.17	AC	\$0.00	\$284,094.00

[Click here for Zoning Info](#) ⓘ

[FEMA Flood Map](#)

## Miscellaneous Improvements

There is no improvement information to display.

## Sales History

NOTE: This section is not intended to be a complete chain of title. Additional official book/page numbers may be listed in the property description above and/or recorded and indexed with the Clerk of Court. [Follow this link to search all documents by owner's name.](#)

There is no sales history information to display.

[Click here to search for mortgages, liens, and other legal documents.](#) ⓘ

## Values and Estimated Ad Valorem Taxes ⓘ

**Values shown below are 2021 WORKING VALUES that are subject to change until certified.**

The Market Value listed below is not intended to represent the anticipated selling price of the property and should not be relied upon by any individual or entity as a determination of current market value.

Tax Authority	Market Value	Assessed Value	Taxable Value	Millage	Estimated Taxes
LAKE COUNTY BCC GENERAL FUND	\$284,094	\$284,094	\$284,094	5.03270	\$1,429.76
LAKE COUNTY MSTU AMBULANCE	\$284,094	\$284,094	\$284,094	0.46290	\$131.51
LAKE COUNTY MSTU FIRE	\$284,094	\$284,094	\$284,094	0.47040	\$133.64

SCHOOL BOARD STATE	\$284,094	\$284,094	\$284,094	3.70100	\$1,051.43
SCHOOL BOARD LOCAL	\$284,094	\$284,094	\$284,094	2.99800	\$851.71
CITY OF FRUITLAND PARK	\$284,094	\$284,094	\$284,094	3.91340	\$1,111.77
ST JOHNS RIVER FL WATER MGMT DIST	\$284,094	\$284,094	\$284,094	0.22870	\$64.97
LAKE COUNTY VOTED DEBT SERVICE	\$284,094	\$284,094	\$284,094	0.11000	\$31.25
LAKE COUNTY WATER AUTHORITY	\$284,094	\$284,094	\$284,094	0.33680	\$95.68
NORTH LAKE HOSPITAL DIST	\$284,094	\$284,094	\$284,094	0.89500	\$254.26
				<b>Total:</b> 18.1489	<b>Total:</b> \$5,155.98

## Exemptions Information

This property is benefitting from the following exemptions with a checkmark ✓

Homestead Exemption (first exemption up to \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Additional Homestead Exemption (up to an additional \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior Exemption (applied to county millage - up to \$50,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior Exemption (applied to city millage - up to \$25,000) ⓘ	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior 25 Year Residency (county millage only-exemption amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Widow / Widower Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Blind Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Disability Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Disability Exemption (\$5000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Combat Related Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Deployed Servicemember Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
First Responder Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Surviving Spouse of First Responder Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Conservation Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Tangible Personal Property Exemption (up to \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Religious, Charitable, Institutional, and Organizational Exemptions (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Economic Development Exemption	<a href="#">Learn More</a> <a href="#">View the Law</a>
Government Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>

## Exemption Savings ⓘ

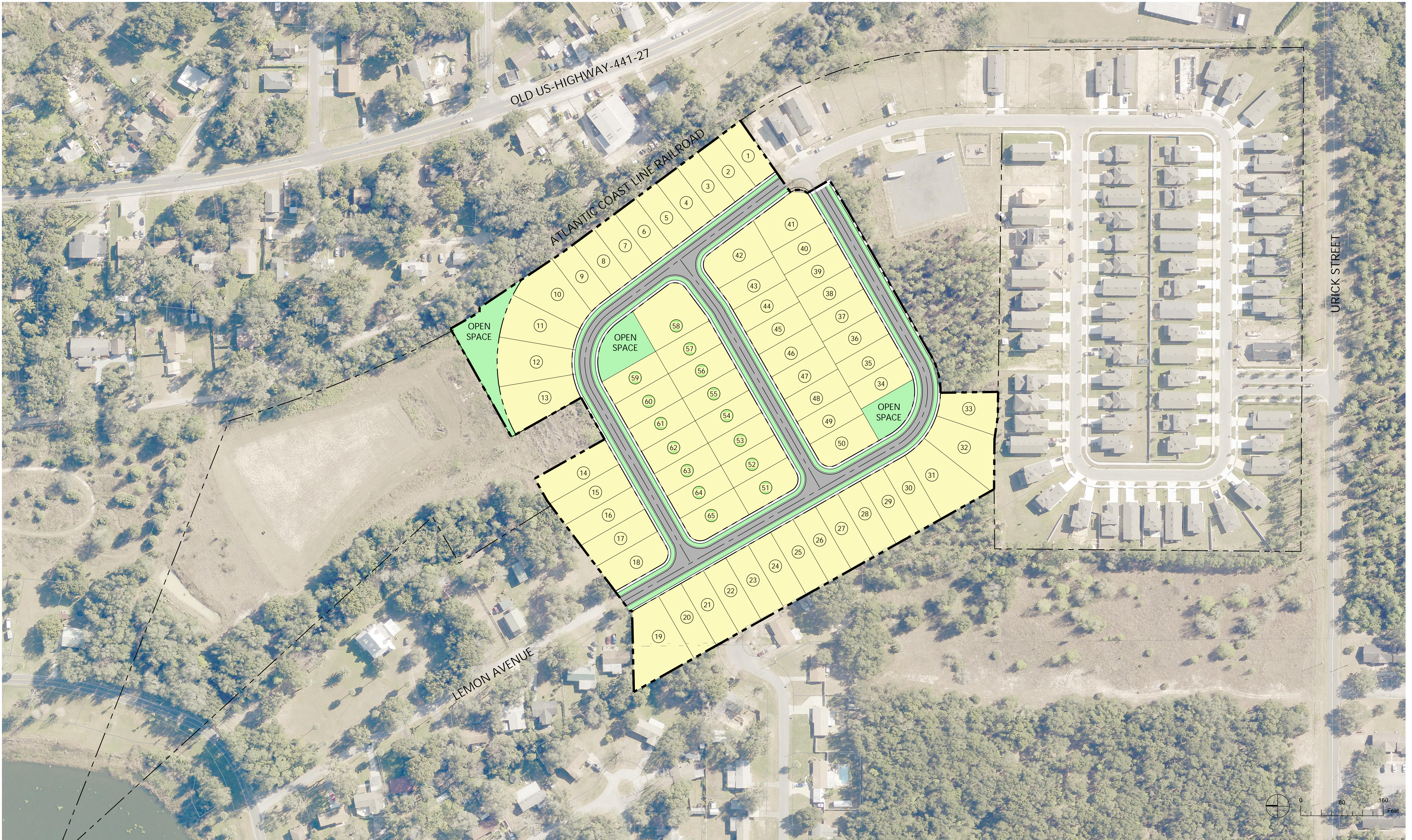
The exemptions marked with a ✓ above are providing a tax dollar savings of: **\$0.00**

## Assessment Reduction Information (3% cap, 10% cap, Agricultural, Portability, etc.)

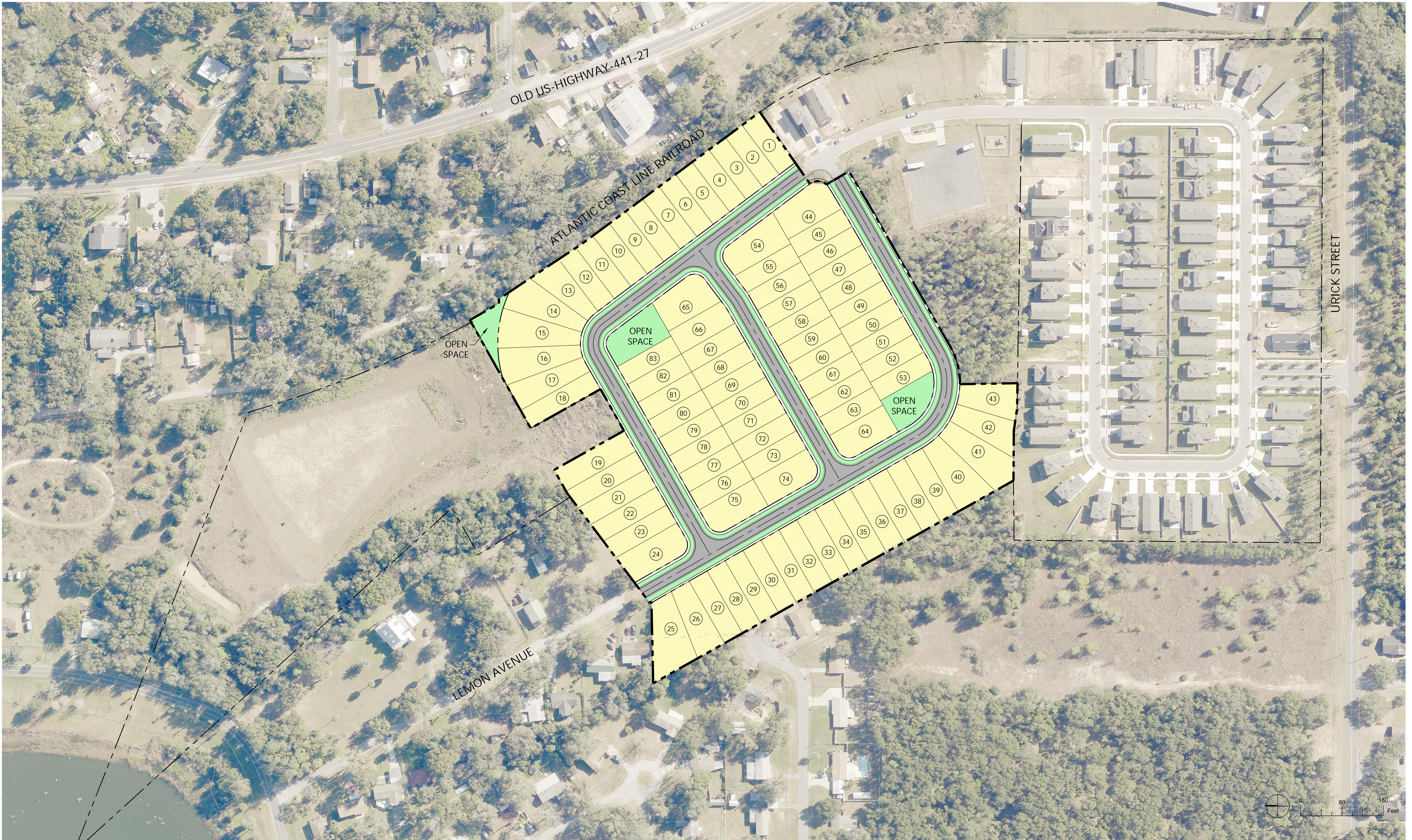
This property is benefitting from the following assessment reductions with a checkmark ✓

Save Our Homes Assessment Limitation (3% assessed value cap)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Save Our Homes Assessment Transfer (Portability)	<a href="#">Learn More</a> <a href="#">View the Law</a>









MIRROR LAKE VILLAGE  
 FRUITLAND PARK DENSITY STUDY (40'x120' LOTS)

LAKE COUNTY, FL  
 FEBRUARY 18, 2021









March 15, 2021

Adilia Richemond  
**Green Slate Land**  
1427 Alden Road  
Orlando, Florida 32803

**Proj: Mirror Lake Phase 2 Property –  
Fruitland Park, Lake County, Florida  
Parcel ID #09-19-24-1400-00F-00000  
Section 9, Township 19 South, Range 24 East  
(BTC File #654-25)**  
**Re: Environmental Assessment Report**

Dear Ms. Richemond:

In March of 2021, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 14.17-acre Mirror Lake Phase 2 Property. This site is located in the City of Fruitland Park, west of the intersection of U.S. Highway 27 and Palm Street, at the northern terminus of Atlantic Avenue, within Section 9, Township 19 South, Range 24 East; Lake County, Florida (Figures 1 and 2). This environmental assessment includes the following elements:

- Review of soil types mapped within the property boundaries;
- evaluation of land use types/vegetative communities present;
- field review for occurrence of protected flora and fauna; and,
- an overview of all potential permitting constraints.

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

Vero Beach Office  
4445 N A1A  
Suite 221  
Vero Beach, FL 32963

Jacksonville Office  
1157 Beach Boulevard  
Jacksonville Beach, FL 32250

Tampa Office  
6011 Benjamin Road  
Suite 101 B  
Tampa, FL 33634

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

Aquatic & Land  
Management Operations  
3825 Rouse Road  
Orlando, FL 32817

407.894.5969  
877.894.5969  
407.894.5970 fax



## **TOPOGRAPHY**

Based upon a review of the USGS Topographic Map presented in Figure 3 (Leesburg West, Florida Quadrangle – 1966/Photorevised 1980), elevations range from highs between +140 and +135 feet above the National Geodetic Vertical Datum of 1929 (NGVD) on the southwestern portion of the parcel, to below +120 feet NGVD on the eastern portion of the property. In general, it would appear that higher elevations located on the southwestern portion of the property slope towards lower areas in the northern, northeastern and eastern portions of the site.

## **SOILS**

According to the Soil Survey of Lake County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), one (1) soil type occurs within the subject property boundaries (Figure 4). These soils include the following:

- **Apopka sand, 0 to 5 percent slopes (#5)**

The following presents a brief description of the soil types mapped for the site:

**Apopka sand, 0 to 5 percent slopes (#5)** is a nearly level to gently sloping, well drained sandy soil that has a sandy clay loam subsoil at a depth of about 55 inches. Typically, the surface layer of this soil type is dark gray sand about 6 inches thick. The water table for this soil type is at a depth of more than 84 inches. Permeability of this soil type is rapid in the sandy surface and subsurface layers and moderate or moderately rapid in the subsoil.

Pursuant to the Hydric Soils of Florida Handbook, Fourth Edition, March 2007, the Florida Association of Environmental Soil Scientists does not consider any of the main components or inclusions found in the soil type associated with the subject property to be hydric.

## **LAND USE TYPES/VEGETATIVE COMMUNITIES**

The Mirror Lake Phase 2 Property currently supports three (3) land use types/vegetative communities. These land use types/vegetative communities were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 2004) (Figure 5). The on-site upland land use types/vegetative communities are classified as Open Land (190), Mixed Pines (415), and Mixed Hardwoods (438). The site does not contain any wetland/surface water land use types/vegetative communities. The following provides a brief description of the on-site land use types/vegetative communities.

## **Uplands:**

### **190 Open Land**

The majority of the site contained areas previously cleared with a large fill pile in the center of the site. This area is best classified as Open Land (190), per the FLUCFCS. Vegetative species identified within this community type include camphor tree (*Cinnamomum camphora*), broomsedge (*Andropogon virginicus*), caesarweed (*Urena lobata*), dogfennel (*Eupatorium capillifolium*), southern crabgrass (*Digitaria ciliaris*), spiderwort (*Tradescantia ohiensis*), beggars ticks (*Bidens alba*), bahiagrass (*Paspalum notatum*), pricklypear cactus (*Opuntia humifusa*), hairy cowpea (*Vigna luteola*), lantana (*Lantana camara*), and blackberry (*Rubus cuneifolius*).

### **415 Mixed Pines**

The western and southern boundary areas of the site contained forested areas dominated by pine trees that would be best classified as Mixed Pines (415), per the FLUCFCS. Vegetative species identified within this community type include slash pine (*Pinus elliottii*), camphor tree (*Cinnamomum camphora*), laurel oak (*Quercus laurifolia*), cabbage palm (*Sabal palmetto*), beggars ticks (*Bidens alba*), dogfennel (*Eupatorium capillifolium*), broomsedge (*Andropogon virginicus*), southern crabgrass (*Digitaria ciliaris*), lantana (*Lantana camara*), bahiagrass (*Paspalum notatum*), caesarweed (*Urena lobata*), blackberry (*Rubus cuneifolius*), and grapevine (*Vitis* spp.)

### **438 Mixed Hardwoods**

The eastern boundary area of the site contained a forested area dominated by hardwood species that would be best classified as Mixed Hardwoods (438), per the FLUCFCS. Vegetative species identified within this community type include camphor tree (*Cinnamomum camphora*), laurel oak (*Quercus laurifolia*), cabbage palm (*Sabal palmetto*), beggars ticks (*Bidens alba*), dogfennel (*Eupatorium capillifolium*), broomsedge (*Andropogon virginicus*), southern crabgrass (*Digitaria ciliaris*), cupid's shaving brush (*Emilia sonchifolia*), bahiagrass (*Paspalum notatum*), caesarweed (*Urena lobata*), blackberry (*Rubus cuneifolius*), lantana (*Lantana camara*), rosary pea (*Abrus precatorius*), virginia creeper (*Parthenocissus quinquefolia*), Asiatic jasmine (*Trachelospermum asiaticum*), and grapevine (*Vitis* spp.)

## **PROTECTED SPECIES**

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); and Florida Fish and Wildlife Conservation Commission's (FFWCC's) Gopher Tortoise Permitting Guidelines (April 2008 – revised July 2020); an assessment for "listed" floral and faunal species was conducted at the site on March 10, 2021. The survey included both direct observations and indirect evidence, such as tracks, burrows, tree markings and vocalizations that indicated the

presence of species observed. The assessment focused on species that are “listed” by the FFWCC’s Official Lists - Florida’s Endangered Species, Threatened Species and Species of Special Concern (updated December 2018) that have the potential to occur in Lake County (Table 1). The following is a list of those wildlife species identified during the evaluation of the site:

**Reptiles and Amphibians**

**gopher tortoise (*Gopherus polyphemus*)**

eastern black racer (*Coluber constrictor*)

brown anole (*Anolis sagrei*)

**Birds**

Turkey Vulture (*Cathartes aura*)

Northern Cardinal (*Cardinalis cardinalis*)

Northern Mockingbird (*Mimus polyglottos*)

Red-tailed Hawk (*Buteo jamaicensis*)

**Mammals**

raccoon (*Procyon lotor*)

nine-banded armadillo (*Dasypus novemcinctus*)

eastern gray squirrel (*Sciurus carolinensis*)

One (1) of the above wildlife species, the gopher tortoise (*Gopherus polyphemus*), was identified in the FFWCC’s Official Lists - Florida’s Endangered Species, Threatened Species and Species of Special Concern (December 2018). The following provides a brief description of particular wildlife species as they relate to the development of the property.

**Gopher Tortoise (*Gopherus polyphemus*)**

*State Listed as “Threatened” by FFWCC*

Currently the gopher tortoise (*Gopherus polyphemus*) is classified as a “Category 2 Candidate Species” by 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 xeric pine-oak hammock, scrub, pine flatwoods, pastures and abandoned citrus groves. Several other protected species known to occur in Orange 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 surveys conducted.

The subject site was surveyed for the existence of gopher tortoises through the use of pedestrian transects. The survey covered approximately 100% of the suitable habitat present within the site boundary. Five (5) active/inactive gopher tortoise burrows were observed and recorded using GPS

technology (Figure 6). Due to a small population size, 100% occupancy is recommended for estimating the relocation costs. Based on five (5) potentially occupied burrows, it is estimated that all five (5) burrows may be occupied by a gopher tortoise. Therefore, for the purpose of estimating the relocation costs associated with the site, as many as five (5) gopher tortoises are estimated to occupy these burrows.

The FFWCC provides three (3) options for developers that have gopher tortoises on their property. These options include: 1) avoidance (i.e., maintain a minimum 25-foot distance from any construction activity), 2) preservation of habitat (i.e., on-site relocation), and 3) off-site relocation to a FFWCC approved recipient site. As such, resolution of the gopher tortoise issue will need to be permitted through FFWCC prior to any construction activities.

Based on the tortoise population that exists within the site and the expected residential development plan for the site, there is only one potential option for resolving the gopher tortoise issue. This option is off-site relocation and would require that any tortoise within 25-feet of proposed construction activities be relocated off-site to an approved recipient site.

Independent to the costs associated with gopher tortoise relocations (i.e., recipient site fees, excavation, silt fencing, transportation costs, etc.), FFWCC will be assessing a one-time mitigation fee for all on-site gopher tortoises that are captured and relocated. Based on the estimated five (5) gopher tortoises, a one-time mitigation fee of \$220.00 (10 or fewer gopher tortoises) would be required to be paid to FFWCC prior to obtaining any permit (i.e. off-site relocation permit). This FFWCC mitigation fee requirement began after April 2009.

**Eastern Indigo Snake (*Drymarchon couperi*)**  
*Federally Listed as “Threatened” by USFWS*

The indigo snake (*Drymarchon couperi*) is a federally threatened species. The basis for this listing was a result of dramatic population declines caused by over-collecting for the domestic and international pet trade as well as mortalities caused by rattlesnake collectors who gassed gopher tortoise burrows to collect snakes. Since its listing, habitat loss and fragmentation by residential and commercial expansion have become much more significant threats to the eastern indigo snake. This species is widely distributed throughout central and south Florida and primarily occurs in sandhill habitat in northern Florida and southern Georgia.

Due to the presence of gopher tortoises, a formal indigo snake survey may be required if requested by the USFWS. The survey can be accomplished from October 1st - April 30th for a minimum of five (5) surveys with two (2) days of optimal weather (overnight low temperature above 60° F). Typically, USFWS requires indigo snake surveys on sites with more than 25 gopher tortoise burrows. Based on the number of burrows identified on the site, a formal indigo snake survey is not likely to be required.

At a minimum, the Corps permit will be conditioned for the use of the USFWS’s “Standard Protection Measures for the Eastern Indigo Snake.” It will also be conditioned “such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity.” Any permit will also be conditioned “such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.” As long as the above mentioned “Standard Protection Measures” are adhered to, the development activities associated with the site would result in a key determination of “may affect but not likely to adversely affect” (NLAA) the eastern indigo snake.

It should also be noted that eastern indigo snake mitigation may be purchased in lieu of conducting the indigo snake survey. Additionally, during site clearing, the USFWS may also require following the recommendations in the Service’s Standard Protection Measures for the Eastern Indigo Snake which may include posting eastern indigo snake identification signage and educational material at the 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 Leuchocephalus*)).

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 of FFWCC's database and Audubon's Eagle Watch program database for recorded Bald Eagle nests within the surrounding 660 feet of the site (Figure 7 and Eagle Watch Map). This review revealed that there are no Bald Eagle nests through the 2019-2020 nesting season, within 660 feet of the project site's boundaries. Thus, no developmental constraints are expected with respect to Bald Eagle nests.

## **USFWS CONSULTATION AREAS**

The U.S. Fish and Wildlife Service have established "consultation areas" for certain listed species. Generally, these consultation areas only become an issue if USFWS consultation is required, which is usually associated with permitting through the U.S. Army Corps of Engineers. It should be noted that a species presence and need for additional review are often determined to be unnecessary early in the permit review process due to lack of appropriate habitat or other conditions. However, the USFWS makes the final determination.

Consultation areas are typically very regional in size, often spanning multiple counties where the species in question is known to exist. Consultation areas by themselves do not indicate the presence of a listed species. They only indicate an area where there is a potential for a listed species to occur and that additional review might be necessary to confirm or rule-out the presence of the species. The additional review typically includes the application of species-specific criteria to rule-out or confirm the presence of the species in question. Such criteria might consist of a simple review for critical habitat types. In other cases, the review might include the need for species-specific surveys using established methodologies that have been approved by the USFWS.

The following paragraphs include a list of the USFWS Consultation Areas associated with the site and a brief description of the respective species habitat and potential for additional review.

### **Everglade Snail Kite (*Rostrhamus sociabilis*)**

*Federally Listed as "Endangered" by USFWS*

The site is located within the USFWS Consultation Area for the Everglade Snail Kite. Currently the Everglade Snail Kite is listed as "Endangered" by the USFWS. Everglade Snail Kites are similar in size to Red-shouldered Hawks. All Everglade Snail Kites have deep red eyes and a white rump patch. Males are slate gray, and females and juveniles vary in amounts of white, light brown, and dark brown, but the females always have white on their chin. Everglade Snail Kites vocalize mainly during courtship and nesting. They may occur in nearly all of the wetlands of central and southern Florida. They regularly occur in lake shallows along the shores and islands of many major lakes, including Lakes Okeechobee, Kissimmee, Tohopekaliga (Toho) and East Toho. They also regularly occur in the expansive marshes of southern Florida such as Water Conservation Areas 1, 2, and 3, Everglades National Park, the upper St. John's River marshes and Grassy Waters Preserve.



No Everglade Snail Kites were observed within the subject site during the wildlife survey conducted by BTC. As no suitable habitat exists for this species within the limits of this site, it is not anticipated that a formal survey would be required by the USFWS or another agency to determine if any Everglade Snail Kites utilize any portions of the site.

**Florida Scrub-Jay (*Aphelocoma coerulescens*)**

*Federally Listed as “Threatened” by USFWS*

Currently the Florida Scrub-Jay is listed as threatened by the USFWS. Florida Scrub Jays are largely restricted to scattered, often small and isolated patches of sand pine scrub, xeric oak, scrubby flatwoods, and scrubby coastal stands in peninsular Florida (Woolfenden 1978a, Fitzpatrick et al. 1991).

They avoid wetlands and forests, including canopied sand pine stands. Optimal Scrub-Jay habitat is dominated by shrubby scrub, live oaks, myrtle oaks, or scrub oaks from 1 to 3 m (3 to 10 ft.) tall, covering 50% to 90 % of the area; bare ground or sparse vegetation less than 15 cm (6 in) tall covering 10% to 50% of the area; and scattered trees with no more than 20% canopy cover (Fitzpatrick et al. 1991).

No Florida Scrub-Jays were observed within the site during the wildlife survey conducted by BTC. As little suitable habitat exists for this species within the limits of this site, it is not anticipated that a formal survey would be required by the USFWS or another agency to determine if any Florida Scrub-Jays utilize any portions of the site.

**Florida Sand Skink (*Neoseps reynoldsi*)**

*Federally Listed as “Threatened” by USFWS*

This site is located within the Florida Sand Skink Consultation Area for the United States Fish and Wildlife Service (USFWS). The Florida sand skink is listed as “Threatened” by the USFWS. The Florida sand skink exists in areas vegetated with sand pine (*Pinus clausa*) - rosemary (*Ceratiola ericoides*) scrub or a long leaf pine (*Pinus palustris*) - turkey oak (*Quercus laevis*) association. Habitat destruction is the primary threat to this species’ survival. Citrus groves, residential, commercial and recreational facilities have depleted the xeric upland habitat of the Florida sand skink. All properties within the limits of this consultation area that are located at elevations greater than 80’ and contain suitable (moderate-to-well drained soils) soils are believed by USFWS to be areas of potential Florida sand skink habitat.

The results of the wildlife survey showed no evidence (i.e. sinusoidal tracks) that indicate the presence of the sand skink. However, the site is within the USFWS Sand Skink Consultation Area, the entire site is above the 80-foot above sea level requirement and the uplands within the site contain an appropriate soil type for the sand skink. Due to these factors, it is advisable to conduct a formal sand skink survey, as it may be required by federal, state, and/or local government permitting agencies. The survey will need to be conducted between March 1 and May 15, in which

2' x 2' boards will be placed in the open sandy areas at a density of approximately forty (40) boards per acre and checked once per week for four (4) consecutive weeks. The main objective of the survey is to determine whether sand skinks inhabit the subject site.

## **DEVELOPMENT CONSTRAINTS**

Permitting through the St. Johns River Water Management District (SJRWMD) and Florida Department of Environmental Protection (FDEP) would be required to develop the project site. The site resides in the Southern Ocklawaha River basin.

### **St. Johns River Water Management District (SJRWMD)**

The Mirror Lake Ph 2 site had been previously permitted under various iterations of ERPs with the SJRWMD. The following provides a brief permitting history on the subject site:

- Permit 40-069-100697-1 approved a 166-lot residential attached housing subdivision with a dry stormwater management system on January 31, 2006 and expired on January 31, 2011.
- Permit 40-069-100697-2 approved the modification of permit -1 to replace a permitted retention system, with a dry detention with underdrain on May 11, 2011 and expired on May 11, 2016.
- Permit 40-069-100697-3, approved the permit transfer from Atlantic Development of Titusville, Inc. to Fruitland Park, LLC on March 14, 2011.
- Permit IND-069-100697-4 approved the construction of Phase 2 of the residential plans, previously approved in -1 and -2, on February 06, 2014 and expired on February 06, 2019.
- Application 100697-5 requests a modification of the -4 permit to remove the underdrain system and to increase the impervious area to allow 50% ISR for each residential lot, which was received on January 18, 2019 and, at the time of this report, a request for additional information (RAI) was sent out to Mirror Lake Village HOA, Inc. and SJRWMD staff is waiting on a response.

Due to the expiration of Permit IND-069-100697-4, a new Environmental Resource Permit (ERP) will be required through the SJRWMD to authorize the construction and operation of a stormwater management system for the site.

### **Florida Department of Environmental Protection (FDEP)**

In December of 2020, the Florida Department of Environmental Protection (FDEP) “assumed” federal permitting authority for all wetland and surface water resources under Section 404 of the Clean Water Act (CWA). The State 404 Program is a separate program from the existing ERP Program described above. For those project sites 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 U.S. Army Corps of Engineers (ACOE) will “retain” federal permitting authority. These “retained” resources also include wetlands and/or other surface waters that fall within the 300-foot guide line established from the ordinary high-water mark or mean high tide line of the retained waters. With respect to the subject property, there are no wetlands and/or surface waters and thus no further action should be required as it pertains to the FDEP.

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.

Regards,




Rae Burns  
Field Biologist

Attachments



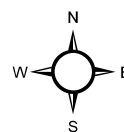


**Legend**

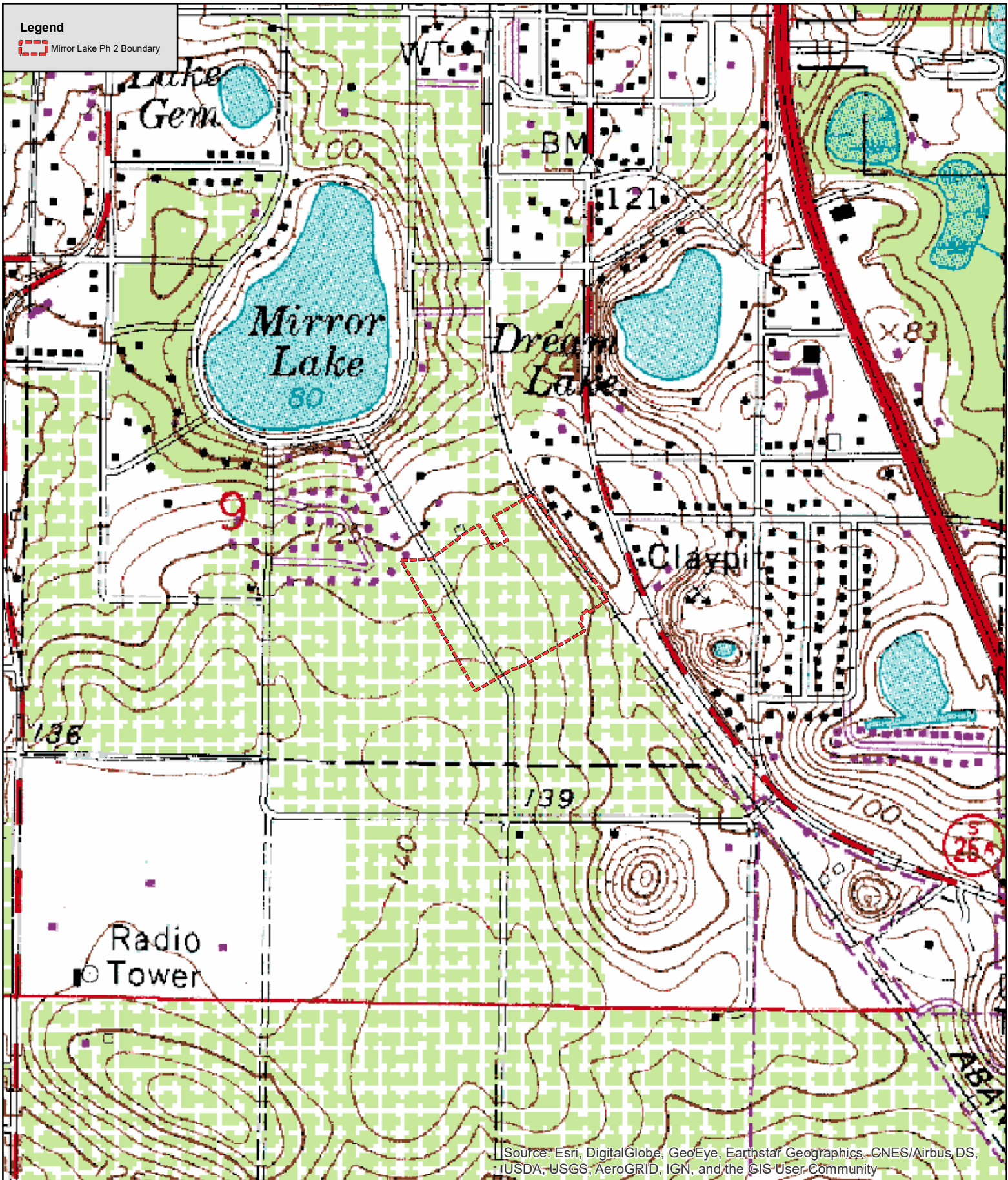
 Mirror Lake Ph 2 Boundary



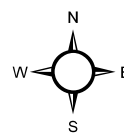
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community







Mirror Lake Phase 2  
 Figure 3  
 Lake County, Florida  
 USGS Topographic Map



740  
 Feet


Project #: 654-25  
 Produced By: RAB  
 Date: 3/4/2021



**Legend**

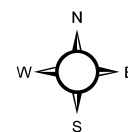
 Mirror Lake Ph 2 Boundary

**Lake County Soil Types**

 5: Apopka sand, 0 to 5 percent slopes




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community







**Legend**

 Mirror Lake Ph 2 Boundary

**FLUCCS Categories**

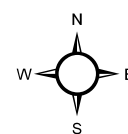
 190: Open Land

 415: Mixed Pines

 438: Mixed Hardwoods




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community








**Legend**

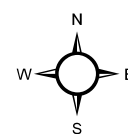
 Mirror Lake Ph 2 Boundary

**Burrow Type**

 Abandoned (3)







 Armadillo (1)

 Potentially Occupied (5)



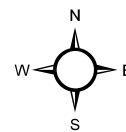


**Legend**

-  Mirror Lake Ph 2 Boundary
-  Eagle Nests 2016
-  330 ft\_Eagle\_Nest\_Buffer
-  660 ft\_Eagle\_Nest\_Buffer
-  Scrub-jays
-  Wood Stork Nesting Colony Core Foraging Areas



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





**Legend**

 Mirror Lake Ph 2 Boundary

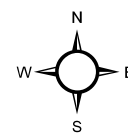


Table 1 :		Potentially Occuring Listed Wildlife and Plant Species in Lake County, Florida	
Scientific Name	Common Name	Federal Status	State Status
<b>FISH</b>			
<i>Pteronotropis welaka</i>	bluenose shiner	N	ST
<b>REPTILES</b>			
<i>Alligator mississippiensis</i>	American alligator	SAT	FT(S/A)
<i>Drymarchon corais couperi</i>	eastern indigo snake	LT	FT
<i>Gopherus polyphemus</i>	gopher tortoise	C	ST
<i>Lampropeltis extenuata</i>	short-tailed snake	N	ST
<i>Pituophis melanoleucus mugitus</i>	Florida pine snake	N	ST
<i>Plestiodon reynoldsi</i>	sand skink	LT	FT
<b>BIRDS</b>			
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	LT	FT
<i>Athene cunicularia floridana</i>	Florida burrowing owl	N	ST
<i>Egretta caerulea</i>	little blue heron	N	ST
<i>Egretta tricolor</i>	tricolored heron	N	ST
<i>Falco sparverius paulus</i>	southeastern American kestrel	N	ST
<i>Grus canadensis pratensis</i>	Florida sandhill crane	N	ST
<i>Haliaeetus leucocephalus</i>	bald eagle	N	**
<i>Mycteria americana</i>	wood stork	LT	FT
<i>Pandion haliaetus</i>	osprey	N	SSC*
<i>Picoides borealis</i>	red-cockaded woodpecker	LE	FE
<i>Sterna antillarum</i>	least tern	N	ST
<b>MAMMALS</b>			
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	N	SSC
<i>Trichechus manatus</i>	West Indian manatee	LE	FE
<b>VASCULAR PLANTS</b>			
<i>Bonamia grandiflora</i>	Florida bonamia	LT	E
<i>Carex chapmanii</i>	Chapman's Sedge	N	T
<i>Centrosema arenicola</i>	Sand Butterfly Pea	N	E
<i>Chionanthus pygmaeus</i>	pygmy fringe tree	LE	E
<i>Clitoria fragrans</i>	scrub pigeon-wing	LT	E
<i>Coelorachis tuberculosa</i>	Piedmont Jointgrass	N	T
<i>Cucurbita okeechobeensis</i>	Okeechobee Gourd	LE	E
<i>Drosera intermedia</i>	spoon-leaved sundew	N	T
<i>Eriogonum longifolium</i> var <i>gnaphalifolium</i>	scrub buckwheat	LT	E
<i>Hartwrightia floridana</i>	hartwrightia	N	T
<i>Hasteola robertorum</i>	Florida hasteola	N	E
<i>Illicium parviflorum</i>	star anise	N	E
<i>Monotropa hypopithys</i>	pinemap	N	E
<i>Najas filifolia</i>	narrowleaf naiad	N	T
<i>Nemastylis floridana</i>	Celestial Lily	N	E
<i>Nolina brittoniana</i>	Britton's beargrass	LE	E
<i>Panicum abscissum</i>	Cutthroat Grass	N	E
<i>Paronychia chartacea</i> ssp <i>chartacea</i>	paper-like nailwort	LT	E
<i>Polygala lewtonii</i>	Lewton's polygala	LE	E
<i>Prunus geniculata</i>	scrub plum	LE	E



<i>Pteroglossaspis ecristata</i>	Giant Orchid	N	T
<i>Salix floridana</i>	Florida willow	N	E
<i>Sideroxylon alachuense</i>	Silver Buckthorn	N	E
<i>Stylisma abdita</i>	scrub stylisma	N	E
<i>Vicia ocalensis</i>	ocala vetch	N	E
<i>Warea amplexifolia</i>	clasping warea	LE	E
<i>Warea carteri</i>	Carter's warea	LE	E

**FEDERAL LEGAL STATUS**

**LE**-Endangered: species in danger of extinction throughout all or a significant portion of its range.

**LT**-Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.

**SAT**-Endangered due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.

**C**-Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.

**XN**-Non-essential experimental population.

**N**-Not currently listed, nor currently being considered for listing as Endangered or Threatened.

**STATE LEGAL STATUS - ANIMALS**

**FE**- Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service

**FT**- Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service

**FXN**- Federal listed as an experimental population in Florida

**FT(S/A)**- Federal Threatened due to similarity of appearance

**ST**- State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

**SSC**-Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC\* for Pandion haliaetus (Osprey) indicates that this status applies in Monroe county only.)

**N**-Not currently listed, nor currently being considered for listing.

**\*\* 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)**

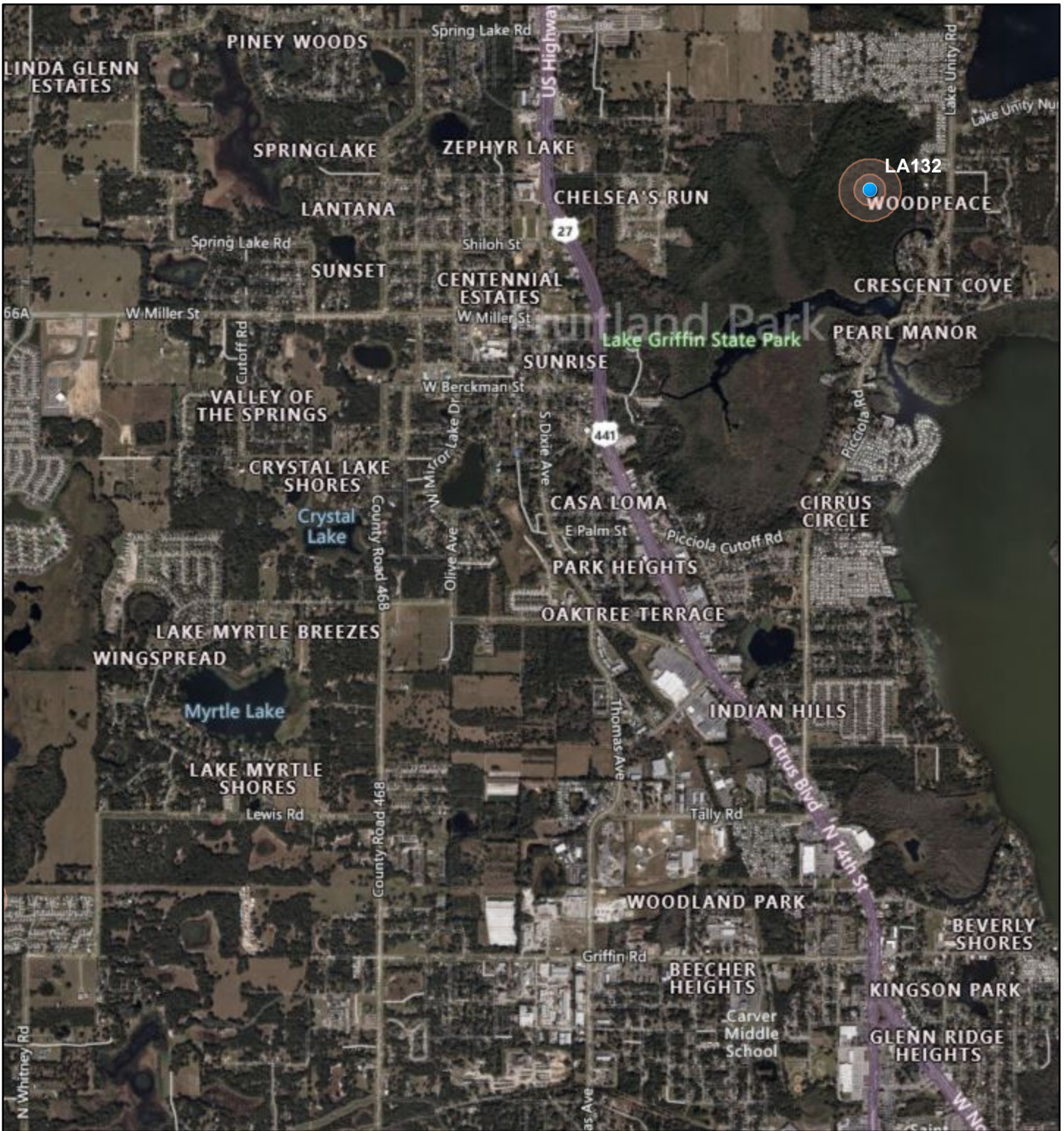
**STATE LEGAL STATUS - PLANTS**

**E**-Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.




**T**-Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.

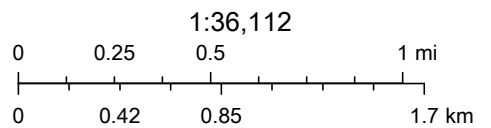
**N**-Not currently listed, nor currently being considered for listing.

# EagleWatch Map



3/4/2021, 2:15:30 PM

-  Bald Eagle Nest Locations
-  330ft Buffer Around Nest Locations
-  660ft Buffer Around Nest Locations



© 2021 Microsoft Corporation © 2021 Maxar ©CNES (2021) Distribution Airbus DS © 2021 TomTom



**March 1, 2021  
GPGT-21-020**

**To: Green Slate Land & Development  
1427 Alden Road  
Orlando, Florida 32803**

**Attention: Mr. Ike Cottle  
President**

**Subject: Preliminary Geotechnical Investigation Summary Report, Mirror Lake  
Village, Fruitland Park, Lake County, Florida**

---

Dear Mr. Cottle:

As requested, Andreyev Engineering, Inc. (AEI) has completed a preliminary geotechnical engineering evaluation for the proposed undeveloped lot and roadway areas at the above referenced project location. In addition, this report includes a preliminary summary of the soil and groundwater conditions encountered at the eight piezometer locations. This report also presents a preliminary evaluation of the soils encountered within the existing on-site stockpile location.

### **SITE LOCATION AND PROJECT DESCRIPTION**

The site is located within Section 9, Township 19 South and Range 24 East, in Fruitland Park, Lake County, Florida. We have included the U.S.G.S. Topographic Map, which depicts the location of the site, on the attached **Figure 1**. In addition, the Natural Resources Conservation Service (NRCS) Soil Map, which depicts the location and general soil types of the subject site and is presented on the attached **Figure 2**.

### **SCOPE OF FIELD EXPLORATION**

The scope of our field exploration consisted of performing the following:

- Mobilized crew and drilling equipment to the site.
- Drilled five (5) machine auger borings, designated as AB-1 through AB-5, to a depth of 20 feet below ground surface, within the proposed undeveloped lot and roadway areas, for preliminary evaluation and characterization of the shallow subsurface soil and groundwater conditions.



- Drilled eight (8) machine auger borings and installed eight (8) piezometers within the open boreholes, designated as PZ-1 through PZ-8, to depths of 15 to 40 feet below ground surface, within and adjacent to the existing stormwater retention pond area, for characterization of the shallow subsurface conditions, to monitor groundwater levels over time, and to assist with groundwater modeling.
- Drilled two (2) manual auger borings, designated as HA-1 and HA-2, to a depth of 8 feet below the surface along the top of the existing on-site fill stockpile, for preliminary evaluation.

Samples were recovered from the borings, neatly packaged, and returned to AEI's laboratory for visual classification and stratification. Soil strata were classified according to the Unified Soil Classification System (USCS). The boring locations are shown on **Figure 3**, results of the machine auger and manual auger borings, in profile form, are presented on **Figure 4**. On the profiles, horizontal lines designating the interface between differing materials represent approximate boundaries. The actual transition between layers is typically gradual.

### **NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY**

The publication titled "Soil Survey of Lake County, Florida" published by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) was reviewed. For your reference, we have included a portion of the NRCS Soil Map which depicts the location of the subject site on the attached **Figure 2**. The two soil map units identified to exist within the subject project location are identified as:

**Soil Map Unit 5:      *Apopka Sand, 0 to 5 Percent Slopes***

**Brief Description:**      "This soil is a nearly level to gently sloping, well-drained sandy soil that has a sandy clay loam subsoil at a depth of 55 inches. This soil has the profile described as representative for the series. In a representative profile the surface layer is very dark gray sand about 6 inches thick. The subsurface layers are yellowish-brown and light yellowish-brown sand to a depth of about 55 inches. The subsoil is red sandy clay loam to a depth of about 84 inches. The water table is at a depth of more than 84 inches. The sandy surface and subsurface layers are rapidly permeable and have very low available water capacity. Permeability in the subsoil is moderate or moderately rapid, and available water capacity is medium to high."

**\*Soil Map Unit 25:      *Kendrick Sand, 5 to 8 Percent Slopes***

**Brief Description:**      "This is a well drained, sloping soil that occurs as small areas in the uplands. The water table is at a depth of more than 72 inches. Surface runoff is medium, and the hazard of erosion is moderate. The available water capacity is low. Permeability is considered moderately high to high"

\* This soil map unit description is not presented in the 1975 NRCS "Soil Survey of Lake County, Florida" publication including revisions made to soil descriptions in 2004. These soil descriptions are interpreted from corresponding soil survey map units published from adjacent or nearby counties.



## **SOIL AND GROUNDWATER CONDITIONS**

The soil types encountered at the boring locations are presented in the form of soil profiles on the attached **Figure 4**. The stratification presented is based on visual examination of the recovered soil samples and the interpretation of the field logs by a geotechnical engineer.

In general, the borings encountered the following soil Strata:

- Brown to Yellowish Brown to Dark Grayish Brown to Dark Reddish Brown Fine Sand (Stratum 1)
- Grayish Brown to Yellowish Brown to Brownish Gray to Pinkish Gray Clayey Fine Sand to Sandy Clay (Stratum 2)
- Brownish Gray to Light Brown to Light Yellowish Brown to Light Pinkish Gray to Light Gray Slightly Silty to Silty Fine Sand (Stratum 3)
- Dark Gray to Dark Grayish Brown to Dark Brown Slightly Silty to Silty Fine Sand (Stratum 4)
- Light Gray to Light Pinkish Gray Silty Clay (Stratum 5)

A. With Roots

Please refer to **Figures 3 and 4** for boring locations, strata depths, and encountered soil conditions. The stratification lines represent the approximate boundaries between soil types. The actual transition may be gradual. Minor variations not considered important to our engineering evaluations may have been abbreviated or omitted for clarity.

### **Groundwater Conditions**

At the time of drilling AB-1 through AB-5, groundwater was not encountered, between the ground surface and the drilled depth of 20 feet. After allowing for stabilization, groundwater was measured between depths of 10 to 37.3 feet. At HA-1 and HA-2, groundwater was not encountered within the drilled depth of 8 feet. Based on the encountered subsurface conditions, our local experience, NRCS soil survey, and antecedent rainfall conditions, it is our opinion that the normal seasonal high groundwater level is generally estimated to exist in a temporary perched condition, slightly above the Stratum 2 clayey fine sand during periods of heavy or extended rainfall.

### **Laboratory Results**

The results of the laboratory classification tests selected for moisture content and percent of fines passing a US #200 Sieve are presented as follows:

#### **PZ-5**

Sample Depth:	6.5 feet
Classification:	Stratum 2 Clayey Fine Sand
Moisture Content:	8.3.0%
Percent of Fines Passing a US #200 Sieve:	19.7%

**PZ-5**

Sample Depth: 12.0 feet  
Classification: Stratum 3 Slightly Silty to Silty Fine Sand  
Moisture Content: 14.5%  
Percent of Fines Passing a US #200 Sieve: 29.4%

**PZ-8**

Sample Depth: 5.0 feet  
Classification: Stratum 2 Clayey Fine Sand  
Moisture Content: 13.2%  
Percent of Fines Passing a US #200 Sieve: 19.6%

**PZ-8**

Sample Depth: 16.5 feet  
Classification: Stratum 3 Slightly Silty to Silty Fine Sand  
Moisture Content: 17.6%  
Percent of Fines Passing a US #200 Sieve: 23.4%

**HA-1**

Sample Depth: 2.5 feet  
Classification: Stratum Clayey 2 Fine Sand  
Moisture Content: 10.4%  
Percent of Fines Passing a US #200 Sieve: 17.6%

**HA-1**

Sample Depth: 6.5 feet  
Classification: Stratum 3 Slightly Silty to Silty Fine Sand  
Moisture Content: 6.4%  
Percent of Fines Passing a US #200 Sieve: 10.4%

**HA-2**

Sample Depth: 2.5 feet  
Classification: Stratum Clayey 2 Fine Sand  
Moisture Content: 8.9%  
Percent of Fines Passing a US #200 Sieve: 14.6%

**HA-2**

Sample Depth: 6.5 feet  
Classification: Stratum Clayey 2 Fine Sand  
Moisture Content: 18.5%  
Percent of Fines Passing a US #200 Sieve: 20.8%

The results of the laboratory classification tests for moisture content and percent of fines passing a US #200 Sieve are shown adjacent to the tested depth and corresponding soil profile on **Figure 4**.

## **PRELIMINARY EVALUATIONS AND RECOMMENDATIONS**

### **General**

Based on the results of this preliminary investigation, laboratory testing, and our evaluation of the encountered subsurface conditions, it is our opinion that the site soils appear suitable to support the proposed residential development at this site. Dependent on planned site grades, a two-foot separation should be maintained between the bottom of building slabs, bottom of footing elevations, bottom of pavement base and the top of any Strata 2 clayey fine sand. This soil can exhibit variable plasticity characteristics and may be difficult to properly compact. It is critical that site preparation and soil densification procedures are thorough to ensure consistent and uniform support conditions for the proposed site improvements.

Conventional pavement section design and construction using flexible or semi flexible pavement sections will also be possible at this site, provided that a two-foot separation is maintained between the bottom of the pavement base and the top of any Stratum 2 clayey fine sand in order to prevent perched groundwater from affecting the pavement section.

### **Preliminary Site Preparation Recommendations**

The initial step in routine site preparation should be the complete removal of all topsoil, trees, major root systems, debris, and any other deleterious materials to a minimum of 5 feet beyond outer lines of proposed structures and roadways. A two-foot separation should be maintained between the bottom of building slabs, bottom of footing elevations, bottom of the pavement base and the top of any Stratum 2 clay soils in order to limit differential settlement to the proposed overlying supported structures. After this initial stripping, the site should be proof-rolled using a large vibratory roller. Vibratory compaction equipment should not be used in areas where there are adjacent or nearby existing structures present. The purpose of the proof-rolling will be to detect any areas where unsuitable soils are present as well as to densify the near-surface loose soils. Materials which yield excessively during the proof-rolling should be undercut and replaced with well-compacted, engineered structural fill. All backfilling of over-excavated areas shall follow the "Fill Placement" recommendations below.

### **Fill Placement**

For mass grading purposes, all fill required to bring the site to final grade shall be incrementally placed and properly compacted. All imported fill should be inorganic, non-plastic, granular soil with less than 10% passing the U.S. #200 sieve. The fill should be placed in level lifts not to exceed 12 inches loose and should be compacted to a minimum of 95% of the soil's modified Proctor maximum dry density as determined by ASTM Specification D-1557. In-place density tests should be performed on each lift by an experienced engineering technician working under the direction of a registered geotechnical engineer to verify that the recommended degree of compaction has been achieved. For fill placed in restricted working areas, compaction should be accomplished with lightweight, hand-guided compaction equipment and lift thicknesses should be limited to a maximum of 4 inches loose in thickness.

### **Foundations**

Provided that the site soils have been properly prepared and compacted, the proposed residential buildings can be constructed on a system of conventional shallow spread or strip footings bearing at minimum depths below the finished floor elevations provided a two-foot separation is maintained between the bottom of building slabs and bottom of footing elevations and the top of

any Stratum 2 clayey fine sand. Footings which bear in new structural fill may be designed based on a maximum allowable bearing pressure of 2,000 pounds per square foot.

Based on the soils data obtained from our investigations, and the anticipated foundation construction using a monolithic slab with thickened edges, we recommend that footings for this type of foundation bear at least 12 inches below finished exterior grades. Footing subgrade soils should be approved by the geotechnical engineer prior to placement of concrete and steel. Please note that these building foundation recommendations should be considered preliminary in nature. AEI recommends that soil and groundwater conditions be verified by additional geotechnical investigations, after the site plans and structural layouts have been finalized.

### **Floor Slab Recommendations**

We have assumed that no unusual floor loads will be applied to the floor slabs due to vibration, impact, or high intensity contact pressures. A modulus of subgrade reaction of 200 pounds per cubic inch may be used for floor slab design purposed if the slab is placed on structural fill or in-situ soils that have been prepared and densified in accordance with the recommendations presented in this report. This modulus of subgrade reaction is based on the assumption that the soil beneath the slab has been properly compacted to a minimum of 95% of the soil's modified Proctor maximum dry density. The subgrade should also be covered with an effective vapor barrier to reduce the possibility of slab dampness.

### **Paved Roadway Areas**

In general, the compacted subsurface soils will be suitable for support of a flexible (limerock) or semi-flexible (soil-cement) type pavement base after subgrade preparation provided a two-foot separation is maintained between the bottom of pavement base and the top of any Stratum 2 clayey fine sand to prevent perched groundwater from adversely affecting the pavement section. The use of one system over another is normally governed by the depth to the encountered and/or seasonal high groundwater table. Soil cement is typically used in areas where the wet season groundwater table levels are within 12 inches of the proposed bottom of the pavement subbase. Given the deeper groundwater conditions at this site, a limerock base material will be suitable for paved roadways constructed at this site. To ensure proper planning, design, and site preparation of future roadway areas, additional investigations of specific paved areas of the planned development are recommended.

### **Stockpiled Fill Area**

Based on the results of this preliminary investigation and subsequent laboratory testing of soil samples retrieved from manual auger borings HA-1 and HA-2, that were performed along the top of the on-site fill stockpile, the stockpiled soil appears to primarily consist of Strata 2 and 3 clayey fine sand and slightly silty to silty fine sand, to a depth of 8 feet, at these two locations. AEI presents the following evaluations and recommendations for fill material preparation and fill placement.

The stockpiled Stratum 2 clay soils should not be used for direct foundation support or placed in near-surface areas, due to their moisture retention properties, difficulties with compaction, and drainage issues associated with higher surface runoff volumes, from the poorly permeable soils, when compacted. The Stratum 2 clayey fine sand can also expose overlying supported structures to increased levels of differential settlement, so their use should also be minimized in settlement sensitive project areas.



Stratum 3 slightly silty to silty fine sand may be used as general fill material, however; additional soil preparation efforts should be anticipated. Due to the high percent of fines content of this soil, this soil type will exhibit a high level of moisture retention characteristics. Additional soil preparation efforts, in order to properly dry the silty fine sand and maintain the moisture content near optimum, will be needed prior to fill placement and compaction of the stockpiled Stratum 3 soils.

### LIMITATIONS

This geotechnical report should be considered preliminary in nature and has been prepared for the exclusive use of Green Slate Land & Development and their designers, based on our understanding of the project, as stated in this report. Any modifications in design concepts from the description stated in this report should be made known to AEI for possible modification of recommendations presented in this report. This exploration was performed in accordance with generally accepted soil and geotechnical engineering practices. No other warranty, expressed or implied, is made as to the professional advice presented herein. Statements regarding all geotechnical recommendations are for use by the designers and are not intended for use by potential contractors. The geotechnical exploration and recommendations submitted herein are based on the data obtained from the soil borings presented on **Figure 4**. The report does not reflect any variations which may occur adjacent to, between, or away from the borings. The nature and extent of the variations between the borings may not become evident until during construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations presented in this report. An on-site visit may be required by a geotechnical engineer to note the characteristics of the variations during the construction period. This geotechnical study investigated the soil conditions to drilled depths of 8 to 40 feet below ground surface and was not intended to investigate deeper soil conditions with regard to the presence or absence of Karst activity. As previously noted, AEI recommends that additional geotechnical investigations be performed at the proposed subdivision location, in order to provide a more thorough evaluation of the site's soil and groundwater conditions and prepare a design level geotechnical report, to assist with final design, planning, and permitting for this project.

### CLOSURE

AEI appreciates the opportunity to participate in this project, and we trust that the information herein is sufficient for your immediate needs. If you have any questions or comments concerning the contents of this report, please do not hesitate to contact the undersigned.

Sincerely,

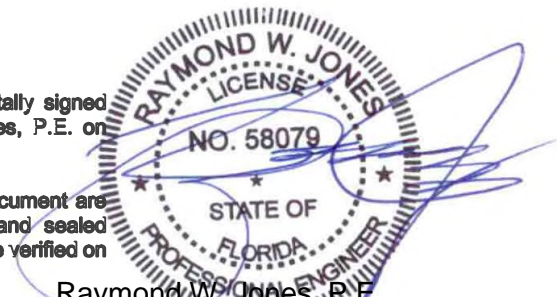
ANDREYEV ENGINEERING, INC.



Mark L. Jung  
Senior Project Manager

This item has been digitally signed  
and sealed by Ray Jones, P.E. on  
3/3/21.

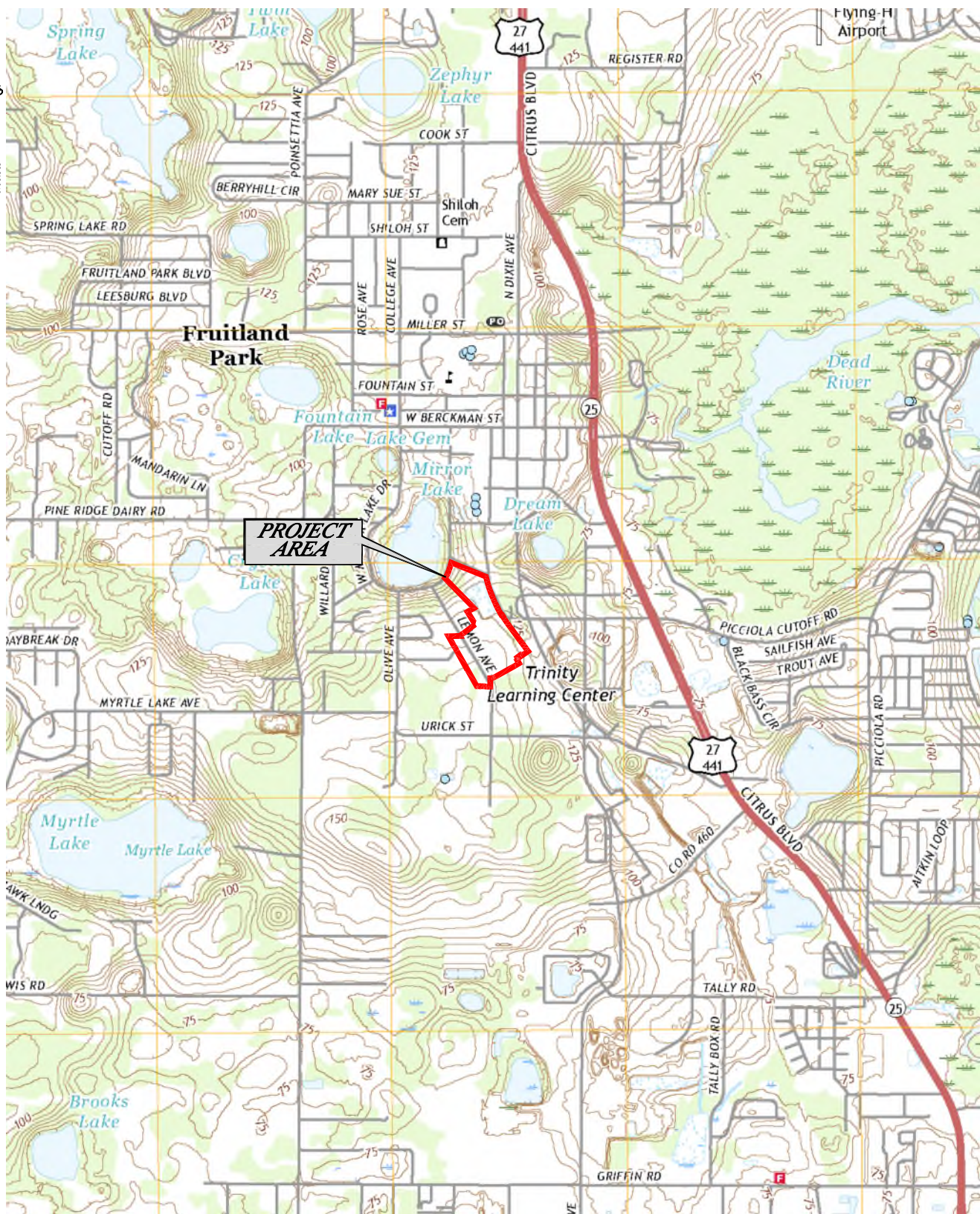
Printed copies of this document are  
not considered signed and sealed  
and the signature must be verified on  
any electronic copies.



Raymond W. Jones, P.E.  
Vice President  
Florida Registration No.58079

## **FIGURES**





REFERENCE:  
 U.S.G.S. LEESBURG WEST, FLA.  
 QUADRANGLE MAP  
 DATED 2018  
 SECTION 9  
 TOWNSHIP 19 SOUTH  
 RANGE 24 EAST



**Andreyev  
 Engineering,  
 Inc.**

PRELIMINARY GEOTECHNICAL INVESTIGATION

**MIRROR LAKE VILLAGE**

FRUITLAND PARK, LAKE COUNTY, FL

APPROXIMATE SCALE:

1" = 2000'

DATE: 02/17/21

PN: GPGT-21-020

ENGINEER: RJ

DRAWN BY: DLS

U.S.G.S. TOPOGRAPHIC MAP

FIGURE 1





**LEGEND:**

- 5 APOPKA SAND  
0 TO 5% SLOPES
- 25 KENDRICK SAND  
5 TO 8% SLOPES

**REFERENCE:**

U.S.D.A. N.R.C.S. WEB SOIL SURVEY



**Andreyev  
Engineering,  
Inc.**

PRELIMINARY GEOTECHNICAL INVESTIGATION

**MIRROR LAKE VILLAGE**

FRUITLAND PARK, LAKE COUNTY, FL

N.R.C.S. SOIL SURVEY MAP

APPROXIMATE SCALE:

1"=300'

DATE: 02/17/21

ENGINEER: RJ

PN: GPGT-21-020

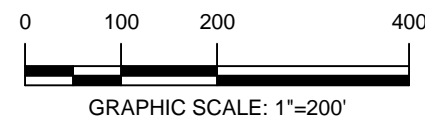
DRAWN BY: DLS


FIGURE 2



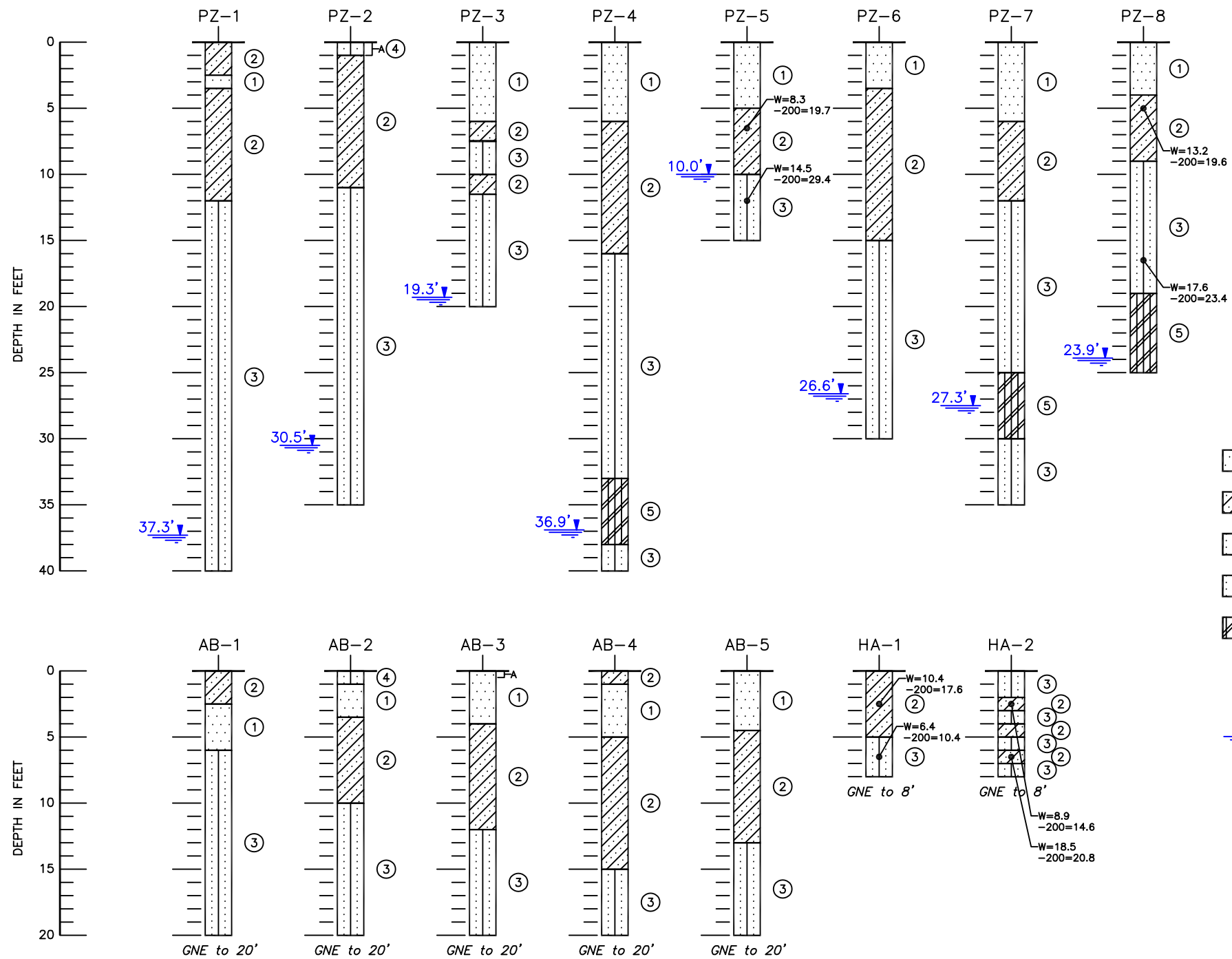


- LEGEND:**
- ▲ APPROXIMATE LOCATION OF MACHINE AUGER BORING/PIEZOMETER
  - APPROXIMATE LOCATION OF MACHINE AUGER BORING
  - ⊙ APPROXIMATE LOCATION OF HAND AUGER BORING




 <b>Andreyev Engineering, Inc.</b>	PRELIMINARY GEOTECHNICAL INVESTIGATION		<b>MIRROR LAKE VILLAGE</b> FRUITLAND PARK, LAKE COUNTY, FL
	APPROXIMATE SCALE: 1" = 200'	DATE: 02/19/21 PN: GPGT-21-020	





- LEGEND:**
- ① BROWN TO YELLOWISH BROWN TO DARK GRAYISH BROWN TO DARK REDDISH BROWN FINE SAND (SP)
  - ② GRAYISH BROWN TO YELLOWISH BROWN TO BROWNISH GRAY TO PINKISH GRAY CLAYEY FINE SAND (SC)
  - ③ BROWNISH GRAY TO LIGHT BROWN TO LIGHT YELLOWISH BROWN TO LIGHT PINKISH GRAY TO LIGHT GRAY SLIGHTLY SILTY TO SILTY FINE SAND (SP-SM)(SM)
  - ④ DARK GRAY TO DARK GRAYISH BROWN TO DARK BROWN SLIGHTLY SILTY TO SILTY FINE SAND (SP-SM)(SM)
  - ⑤ LIGHT GRAY TO LIGHT PINKISH GRAY SILTY CLAY (SM)(CL)
- A WITH ROOTS
- (SP) UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL
- 1.0' DEPTH TO GROUNDWATER, FEBRUARY 18 20201
- GNE GROUNDWATER NOT ENCOUNTERED
- W MOISTURE CONTENT, IN PERCENT
- 200 PERCENT OF FINES PASSING THE U.S. No. 200 SIEVE

 <b>Andreyev Engineering, Inc.</b>	PRELIMINARY GEOTECHNICAL INVESTIGATION	
	<b>MIRROR LAKE VILLAGE</b> FRUITLAND PARK, LAKE COUNTY, FL	
APPROXIMATE SCALE: 1"=10'	DATE: 03/01/21	ENGINEER: RJ
	PN: GPGT-21-020	DRAWN BY: DLS
SOIL PROFILES		FIGURE 4





**DEVELOPMENT REVIEW LETTER  
FRUITLAND PARK, LLC  
PRELIMINARY PLAT  
JUNE 25, 2021**

**Property Owner(s):** Fruitland Park, LLC  
**Engineer/Agent:** Dustin Brinkman (Engineer)  
**Phone:** 407-994-4456 (Engineer)  
**Email:** dbrinkman@kpmfranklin.com  
**Mailing Address:** 6300 Hazeltine National Drive, STE 118  
Orlando, FL 32822

**Project Name:** Fruitland Park, LLC  
**Parcel ID:** 09-19-24-1400-00F-00000  
**Alt Key:** 3897102  
**Project Address:** Vacant Land  
Atlantic Avenue  
Fruitland Park, FL 34731

Mr. Brinkman:

Contained herein are the comments following informal TRC review. The referenced project is tentatively scheduled before Technical Review Committee (TRC) on July 6, 2021 at 10:00AM.

**Development Review:**

The *initial application fees* are as follows:

Payment 6/21/2021	Check #1067	\$1,280.00
City of Fruitland Park Application Fee (76 proposed lots)		(530.00)
City Land Planner Application Fee		(750.00)
<b>City Engineer Application Fee (25&gt;lots)</b>		<b>700.00</b>
<b>Balance Due</b>		<b>700.00</b>

Per City Ordinance 2008-023 these are the applicable fees as of date; however, there may be additional fees associated with the application(s) that will be passed to the applicant(s), including Contractual Services.

**City Attorney Review:**

No comment at time of review letter.

**City Engineer Review:**

1. Atlantic Ave. is used for two different streets. An additional street name will need to be selected. Street name to be submitted to Lake County Office of Public Safety.
2. Dimension lot lines and road center line.



3. Provide the acreage in lots, common areas and other uses.
4. Environmental assessment shows gopher tortoise. Proper permitting will be required with FWC.
5. Provide traffic study
6. Provide typical roadway section in compliance with Fruitland Park LDRs.
7. Water model and offsite utility plan will be required at construction plan submittal.
8. The existing master stormwater pond had underdrains installed many years ago. The pond underdrains drain to a spreader swale which overflows to mirror lake drive. The underdrain system allows the pond to recovery very quickly in times of heavy rainfall, which has caused the spreader swale to wash out through the adjacent woods, causing dirt, debris, and erosion problems for mirror lake drive. The city has had conversations with previous owners/developers that this issue will need to be rectified before homes in phase II can be constructed. During the construction plan phase of review, solutions to this issue should be proposed and permitted along with the phase II plans.

**City Land Planner Review:**

No comment at time of review letter.

**City Building Review:**

No comments.

**City Code Enforcement Review:**

No comments at this time

**City Fire Review:**

No comments. Reviewed plan for access and fire hydrant placement.

**Any Errors or omissions in these plans/specs shall be made to conform to the Florida Fire Life Safety Code.**

**City Police Review:**

No comments at this time.

**City Public Works Department Review:**

No comment at time of review letter.

**City of Leesburg Utilities Review:**

No comment at time of review letter.

**Lake County Public Schools Review:**

No comment at time of review letter.

**Lake County Public Works Review:**

No comment at time of review letter.





**City of Fruitland Park, Florida**  
**Community Development Department**  
 506 W. Berckman St., Fruitland Park, Florida 34731  
 Tel: (352) 360-6727 Fax: (352) 360-6652  
 www.fruitlandpark.org

*Sta Use Only*

Case No.: \_\_\_\_\_

Fee Paid: \_\_\_\_\_

Receipt No.: \_\_\_\_\_

## Development Application

Contact Information:

Owner Name: PHILLIPS LARRY M TRUSTEE & PHILLIPS LARRY M & LINDA S

Address: PO BOX 491907 LEESBURG, FL 34749-1907

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Applicant Name: Chad Tullos (Chief Investment Officer-Stafford Properties, Inc. as Authorized Agent for Stafford 500 West 2nd Street, LLC)

Address: 229 Peachtree St NE Suite 2150 Atlanta, Georgia 30303

Phone: 404-256-9100 Email: stephanieruffin@staffordprop.com

Engineer Name: Tim Johnson, P.E.

Address: 1410 N. Westshore Blvd. Suite 111

Phone: 813-642-4924 Email: mstorum@bowmanconsulting.com

Property and Project Information:

**PROJECT NAME\*:** City of Fruitland Park-Grocer

\*A project name is required for all submissions. Please choose a name representative of the project for ease of reference.

Property Address: \_\_\_\_\_

Parcel Number(s): 06-19-24-0004-000-02700 & 06-19-24-0004-000-02703 Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range \_\_\_\_\_

Area of Property: 8.29 acres Nearest Intersection: Miller Blvd. & MicroRacetrack Rd.

Existing Zoning: C-2 Existing Future Land Use Designation: General Commercial

Proposed Zoning: C-2 Proposed Future Land Use Designation: General Commercial

The property is presently used for: Vacant Commercial

The property is proposed to be used for: Grocery Store and Outparcels for future development

Do you currently have City Utilities? No

Application Type:

<input type="checkbox"/> Annexation	<input type="checkbox"/> Comp Plan Amendment	<input type="checkbox"/> Rezoning	<input type="checkbox"/> Planned Development
<input type="checkbox"/> Variance	<input type="checkbox"/> Special Exception Use	<input type="checkbox"/> Conditional Use Permit	<input type="checkbox"/> Final Plat
<input type="checkbox"/> Minor Lot Split	<input type="checkbox"/> Preliminary Plan	<input type="checkbox"/> Construction Plan	<input type="checkbox"/> ROW/Plat Vacate
<input checked="" type="checkbox"/> Site Plan	<input type="checkbox"/> Minor Site Plan	<input type="checkbox"/> Replat of Subdivision	

Please describe your request in detail: Submittal for a Major Site Plan for the development of a 8.29 acre site for a 47,647 SF grocer building and 2 outparcel areas for future development.

**Required Data, Documents, Forms & Fees**

Attached to this application is a list of **REQUIRED** data, documents and forms for each application type as well as the adopted fee schedule. These items must be included when submitting the application package. Failure to include the supporting data will deem your application package **INCOMPLETE** and will not be processed for review.

Printed Name: Chad Tullos

Signature:  Date: 5/6/21

If application is being submitted by any person other than the legal owner(s) of the property, the applicant must have written authorization from the owner to submit application.



# Development Application Checklist

## The Following are Required for ALL Development Applications:

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Legal Description (Word file req'd) | <input checked="" type="checkbox"/> Current Deed                   | <input checked="" type="checkbox"/> Aerial Photo |
| <input checked="" type="checkbox"/> Property Appraiser Information      | <input checked="" type="checkbox"/> Electronic Copy of Application | <input checked="" type="checkbox"/> Location Map |

Pre-application conferences are strongly encouraged. Submit TWO CDs with ALL documents in pdf; those that are generated as CAD files should be submitted in pdf and dwg formats. . Legal Descriptions should also come with a MS Word file of the legal description. Most maps are accessible through [www.lakecountyfl.gov/maps/](http://www.lakecountyfl.gov/maps/). Note: All maps are required to depict adjacent properties at a minimum.

**Failure to provide adequate maps may delay the application process.**

## Other Required Analyses and Maps:

### Small Scale Comprehensive Plan Amendment Applications:

- Justification for Amendment    Environmental Constraints Map    Requested FLU Map

### Large Scale Comprehensive Plan Amendment Applications:

- Maps:    Environmental Constraints    Soils    Requested FLUM Designation    Requested Zoning Map Designation
- Analyses:    Environmental Assessment    Utility Availability Analysis    Urban Sprawl Analysis    School Impact Analysis
- Traffic Impact Analysis    Consistency with the Comp Plan    Florida Master Site File sign-off or Archaeological Survey

### Rezoning Applications:   Requested Zoning Map   Justification for Rezoning

### Planned Development Applications:

- Maps/Plans:    Conceptual Plan as Described in LDRs Chapter 154, Section 154.030,10,G    Environmental Constraints
- Analyses:    Environmental Assessment    Traffic Impact Analysis    Preliminary Concurrency Analysis

### Variance Applications:   Justification for Variance

- Special Exception Use Applications:    Justification for Special Exception Use
- Site Sketch    List of Special Requirements as Described in LDRs, Chapter 155

- Conditional Use Permit Applications:    Proposed List of Conditions and Safeguards
- Site Plan as Described in LDRs, Chapter 155    Written Statement as Described in LDRs, Chapter 155

- Subdivision Applications:    As Described in LDRs, Chapter 157  
(Preliminary Plan, Improvement Plan and Final Plat)

- Minor Subdivision Applications:    As Described in LDRs, Chapter 157

- Site Plan Applications:    As Described in LDRs, Chapter 160



OWNER'S AFFIDAVIT

STATE OF FLORIDA

COUNTY OF LAKE

Before me the undersigned authority, personally appeared Larry M. Phillips, Trustee

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

1) That he/she is the fee-simple owner of the property legally described on attached page of this application.

2) That he/she desires City of Fruitland Park to allow Bowman Consulting & Stafford

to act as applicant for all associated development & permitting.

3) That he/she has appointed Bowman Consulting & Stafford to act as agent on his/her behalf to accomplish the above. The owner is required to complete the Applicant's Affidavit of this application if no agent is appointed to act on his/her behalf.

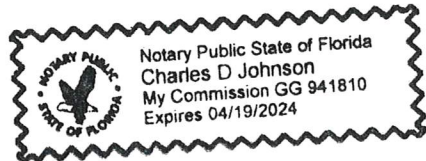
*Larry M. Phillips*  
Affiant (Owner's Signature)

State of Florida  
County of Lake

The Foregoing instrument was acknowledged before me this 6th day of May, 20 21,  
by Larry M. Phillips, Trustee who is personally known to me or has produced  
\_\_\_\_\_ as identification and who did or did not take an oath  
(Notary Seal)

Notary Public - State of Florida  
Commission No \_\_\_\_\_  
My Commission Expires \_\_\_\_\_

\_\_\_\_\_  
Signature  
\_\_\_\_\_  
Printed Name





OWNER'S AFFIDAVIT

STATE OF FLORIDA

COUNTY OF LAKE

Before me the undersigned authority, personally appeared Larry M. Phillips & Linda S. Phillip

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

- 1) That he/she is the fee-simple owner of the property legally described on attached page of this application.
- 2) That he/she desires City of Fruitland Park to allow Bowman Consulting & Stafford to act as applicant for all associated development & permitting.

- 3) That he/she has appointed Bowman Consulting & Stafford to act as agent on his/her behalf to accomplish the above. The owner is required to complete the Applicant's Affidavit of this application if no agent is appointed to act on his/her behalf.

X Larry M. Phillips  
 Affiant (Owner's Signature)  
 X Linda S. Phillip

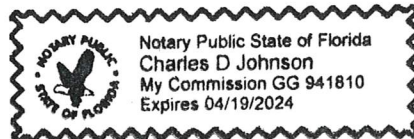
State of Florida  
 County of Lake

The Foregoing instrument was acknowledged before me this 6th day of May, 20 21,  
 by Larry M. Phillips & Linda S. Phillips who is personally known to me or has produced  
 \_\_\_\_\_ as identification and who did or did not take an oath  
 (Notary Seal)

Notary Public - State of Florida  
 Commission No \_\_\_\_\_  
 My Commission Expires \_\_\_\_\_

[Signature]  
 Signature

Printed Name





APPLICANT AFFIDAVIT

STATE OF FLORIDA  
COUNTY OF LAKE

Before me the undersigned authority, personally appeared Chad Tullos, as Vice President and Authorized Agent for Applicant

\_\_\_\_\_, who being by me first duly sworn on oath deposes and says:

- 1) That he/she affirms and certifies that he/she understands and will comply with all ordinances, regulations, and provisions of the City of Fruitland Park, Florida, and that all statements and diagrams submitted herewith are true and accurate to the best of his/her knowledge and belief, and further that this application and attachments shall become part of the Official Records of the City of Fruitland Park, Florida, and are not returnable.
- 2) That the submittal requirements for the application have been completed and attached hereto as part of that application.
- 3) That he/she desires City of Fruitland Park to allow Bowman Consulting & Stafford to act as applicant for all associated development and permitting.

*Chad Tullos*  
Affiant (Applicant's Signature)

State of Georgia  
County of Tift

The Foregoing instrument was acknowledged before me this 6<sup>th</sup> day of May, 20 21,  
by Chad Tullos who is personally known to me or has produced  
\_\_\_\_\_ as identification and who did or did not take an oath

(Notary Seal)

*Sherri W Moore*

Signature  
Sherri W Moore  
Printed Name



Notary Public - State of Georgia  
Commission No N/A  
My Commission Expires April 25, 2024



CFN 2007058530  
Bk 03421 Pg 1142 (1pg)  
DATE: 04/30/2007 11:03:46 AM  
JAMES C. WATKINS, CLERK OF COURT  
LAKE COUNTY  
RECORDING FEES 10.00  
DEED DOC 5,180.00

This Instrument Prepared by:  
Randall N. Thornton, Attorney at Law  
P. O. Box 58 Lake Panasoffkee, FL 33538

STATUTORY WARRANTY DEED

THIS INDENTURE, made this April 24, 2007, between Brenda Rimes, a single person and Jeanne McDonald and Christy Cason and Brett Rimes, Post Office Box 256 Wildwood, FL 34785 (Grantor) and Larry M. Phillips as Trustee of the Larry M. Phillips Family Trust dated September 21, 1989, Post Office Box 491907 Leesburg, FL 34749-1907 and whose social security number is \_\_\_\_\_, (Grantee).

WITNESSETH, that Grantor, for and in consideration of the sum of \$10.00 and other good and valuable consideration to Grantor in hand paid by Grantee, the receipt of which is acknowledged, has granted, bargained and sold to Grantee and Grantee's heirs and assigns forever the following described land situated in Lake County, Florida, tax parcel # 0619240004-000-02703.

The North 260 feet of the Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 6, Township 19 South, Range 24 East, Lake County, Florida, LESS County Road right-of-way.

GRANTORS, JEANNE MCDONALD, CHRISTY CASON AND BRETT RIMES HEREBY CERTIFY THAT THE ABOVE DESCRIBED PROPERTY DOES NOT CONSTITUTE THEIR HOMESTEAD PROPERTY.

And said grantor does hereby fully warrant the title to said land, and will defend that same against the lawful claims of all persons whomsoever.

In Witness Whereof, Grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence.

Sign: <u><i>[Signature]</i></u>	<u><i>Brenda Rimes</i></u> Brenda Rimes
Print: <u><i>Danny Smith</i></u>	<u><i>Jeanne McDonald</i></u> Jeanne McDonald
Sign: <u><i>[Signature]</i></u>	<u><i>Christy Cason</i></u> Christy Cason
Print: <u>RANDALL N. THORNTON</u>	<u><i>Brett Rimes</i></u> Brett Rimes

STATE OF FLORIDA  
COUNTY OF SUMTER

I HEREBY CERTIFY that on this 24th day of April, 2007, before me an officer duly qualified to take acknowledgments, personally appeared Brenda Rimes and Jeanne McDonald and Christy Cason and Brett Rimes who are [ ] personally known to me; or [ ] produced \_\_\_\_\_ as identification, and who acknowledged that they executed the foregoing instrument.

*[Signature]*  
NOTARY PUBLIC STATE OF FLORIDA  
Print Name:  
My Commission Expires:





MCLIN AND BURSED PA  
PO Box 491357  
LEESBURG FL 34749-1357



This Instrument Prepared By and Return to:  
Alexander L. Van Heyde, Esq.  
DEAN, MEAD, EGERTON, BLOODWORTH,  
CAPOUANO & BOZARTH, P.A.  
Post Office Box 2346  
Orlando, Florida 32802-2346  
(407) 841-1200

Parcel Identification No.: 06-19-24-000400002700

QUIT CLAIM DEED

THIS QUIT CLAIM DEED is made the 24 day of July, 2017, by PURVIS TAYLOR and JULIE TAYLOR, husband and wife, whose post office address is 8837 Lower Burningtown Road, Franklin, North Carolina 28734 (hereinafter collectively referred to as the "Grantor"), to LARRY M. PHILLIPS and LINDA S. PHILLIPS, husband and wife, whose post office address is P.O. Box 491907, Leesburg, Florida 34749-1907 (hereinafter collectively referred to as the "Grantee").

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of trustees, corporations and partnerships.)

WITNESSETH:

That Grantor, for and in consideration of the sum of Ten Dollars (\$10.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto Grantee, all of Grantor's right, title and interest in and to that certain real property situate, lying and being in Lake County, Florida (hereinafter referred to as the "Property"), and being more particularly described one Exhibit "A", attached hereto and made a part hereof.

TOGETHER with all of the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in fee simple forever.

This conveyance is subject to taxes accruing subsequent to December 31, 2016, and to easements, restrictions, agreements, conditions, limitations, reservations and matters of record, if any, but this reference to the foregoing shall not operate to reimpose the same.

Grantor certifies that on the date of execution, delivery and recordation of this instrument, neither Grantor nor any member of Grantor's family resided upon any portion of the Property, or any property contiguous thereto. The Property is not the constitutional homestead of Grantor.



The scrivener of this instrument has not examined title to the Property, has utilized legal descriptions provided by Grantor, and has relied upon the representations of Grantor that Grantor is the holder of title to the Property. Accordingly, the scrivener disclaims any liability or responsibility which may result from the failure of Grantor to hold such title in the manner represented.

*[Signature and notary acknowledgement on following page]*



IN WITNESS WHEREOF, Grantor has executed and delivered this instrument and has intended this instrument to be and become effective as of the day and year first above written.

Signed, sealed and delivered in the presence of:

"GRANTOR"

Deanna Olvera  
Print Name: Deanna Olvera

Purvis M Taylor  
PURVIS TAYLOR

Gale Hendry  
Print Name: GALE HENDRY

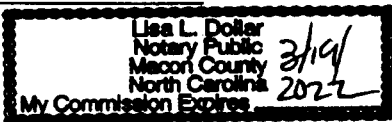
Kacie Perk  
Print Name: Kacie Perk

Julie Taylor  
JULIE TAYLOR

Toni Hendrix  
Print Name: Toni Hendrix

STATE OF North Carolina  
COUNTY OF Macon

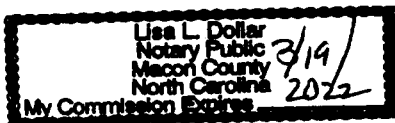
The foregoing instrument was acknowledged before me this 24 day of July, 2017, by PURVIS TAYLOR. Said person (check one): [] is personally known to me, [ ] produced a driver's license (issued by a state of the United States within the last five (5) years) as identification, or [ ] produced other identification, to wit:



Lisa L Dollar  
Print Name: Lisa L. Dollar  
Notary Public, State of North Carolina

STATE OF North Carolina  
COUNTY OF Macon

The foregoing instrument was acknowledged before me this 24 day of July, 2017, by JULIE TAYLOR. Said person (check one): [] is personally known to me, [ ] produced a driver's license (issued by a state of the United States within the last five (5) years) as identification, or [ ] produced other identification, to wit:



Lisa L Dollar  
Print Name: Lisa L. Dollar  
Notary Public, North Carolina



**EXHIBIT "A"**

The Southwest 1/4 of the Northwest 1/4 of the Southeast 1/4 in Section 6, Township 19 South, Range 24 East in Lake County, Florida, LESS the East 100 feet thereof and LESS the North 260 feet thereof, and LESS the right of way for County Road on the West thereof, and LESS State Road No. 466A on the South thereof.

ALSO LESS AND EXCEPT that portion conveyed to Lake County, a political subdivision of the State of Florida for road right of way as set forth in that Warranty Deed recorded in Official Records Book 4515, Page 1619, Public Records of Lake County, Florida, being more particularly described as follows:

A parcel of land lying in the Southeast 1/4 of Section 6, Township 19 South, Range 24 East Lake County, Florida, being more particularly described as follows; Begin at the intersection of the North right of way line of County Road 466-A and the East line of the Southwest 1/4 of said Section 6; thence S 89°14'41" E 319.35 feet along said North right of way line; thence N 00°45'19" E 19.00 feet; thence N 89°14' 41" W 236.21 feet; thence N 56°43'41" W 55.81 feet; thence N 00°50'54" E 105.97 feet; thence N 10°49'17" W 82.78 feet; thence N 01°01'34" E 122.70 feet; thence N 89°01'34" W 19.64 feet to said East line of the Southwest 1/4 of Section 6; thence S 00°50'54" W 358.83 feet along said East line of the Southwest 1/4 of Section 6 to the Point of Beginning.



**LEGAL DESCRIPTION**

(PER SURVEY)

PARCEL 1

THE NORTH 260 FEET OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS COUNTY ROAD RIGHT OF WAY.

PARCEL 2

THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 IN SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST IN LAKE COUNTY, FLORIDA, LESS THE EAST 100 FEET THEREOF AND LESS THE NORTH 260 FEET THEREOF, AND LESS THE RIGHT OF WAY FOR COUNTY ROAD ON THE WEST THEREOF, AND LESS STATE ROAD NO. 466A ON THE SOUTH THEREOF.

ALSO LESS AND EXCEPT THAT PORTION CONVEYED TO LAKE COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA FOR ROAD RIGHT OF WAY AS SET FORTH IN THAT WARRANTY DEED

RECORDED IN OFFICIAL RECORDS BOOK 4515, PAGE 1619, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING IN THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; BEGIN AT THE

INTERSECTION OF THE NORTH RIGHT OF WAY LINE OF COUNTY ROAD 466-A AND THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 6; THENCE SOUTH 89 DEGREES 14 MINUTES 41 SECONDS

EAST 319.35 FEET ALONG SAID NORTH RIGHT OF WAY LINE; THENCE NORTH 00 DEGREES 45 MINUTES 19 SECONDS EAST 19.00 FEET; THENCE NORTH 89 DEGREES 14 MINUTES 41 SECONDS WEST

236.21 FEET; THENCE NORTH 56 DEGREES 43 MINUTES 41 SECONDS WEST 55.81 FEET; THENCE NORTH 00 DEGREES 50 MINUTES 54 SECONDS EAST 105.97 FEET; THENCE NORTH 10 DEGREES 49

MINUTES 17 SECONDS WEST 82.78 FEET; THENCE NORTH 01 DEGREES 01 MINUTES 34 SECONDS EAST 122.70 FEET; THENCE NORTH 89 DEGREES 01 MINUTES 34 SECONDS WEST 19.64 FEET TO SAID

EAST LINE OF THE SOUTHWEST 1/4 OF SECTION 6; THENCE SOUTH 00 DEGREES 50 MINUTES 54 SECONDS WEST 358.83 FEET ALONG SAID EAST LINE OF THE SOUTHWEST 1/4 OF SECTION 6 TO THE

POINT OF BEGINNING.



# PROPERTY RECORD CARD

## General Information

<b>Name:</b>	PHILLIPS LARRY M & LINDA S	<b>Alternate Key:</b>	1288151
<b>Mailing Address:</b>	PO BOX 491907 LEESBURG, FL 34749-1907 <a href="#">Update Mailing Address</a>	<b>Parcel Number:</b> ⓘ	06-19-24-0004-000-02700
		<b>Millage Group and City:</b>	00F2 (FRUITLAND PARK)
		<b>2020 Total Certified Millage Rate:</b>	17.6785
		<b>Trash/Recycling/Water/Info:</b>	<a href="#">My Public Services Map</a> ⓘ
<b>Property Location:</b>	MICRO RACETRACK RD FRUITLAND PARK FL 34731 <a href="#">Update Property Location</a> ⓘ	<b>Property Name:</b>	-- <a href="#">Submit Property Name</a> ⓘ
		<b>School Information:</b>	<a href="#">School Locator &amp; Bus Stop Map</a> ⓘ <a href="#">School Boundary Maps</a> ⓘ
<b>Property Description:</b>	S 400 FT OF W 560 FT OF SW 1/4 OF NW 1/4 OF SE 1/4--LESS RD   R/W & LESS BEG AT INTERSECTION OF N R/W LINE OF CR 466-A & E   LINE OF SW 1/4, RUN S 89-14-41 E 319.35 FT ALONG SAID N R/W   LINE, THENCE N 0-45-19 E 19 FT, N 89-14-41 W 236.21 FT, N   56-43-41 W 55.81 FT, N 0-50-54 E 105.97 FT, N 10-49-17 W   82.78 FT, N 01-01-34 E 122.70 FT, N 89-01-34 W 19.64 FT TO E   LINE OF SW 1/4, S 0-50-54 W 358.83 FT TO POB FOR ADDITIONAL   RD R/W--   ORB 1949 PG 1687 ORB 4982 PG 421		
<small>NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.</small>			

## Land Data

Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class Value	Land Value
1	VACANT COMMERCIAL (1000)	0	0		4.43	AC	\$0.00	\$819,550.00

[Click here for Zoning Info](#) ⓘ      [FEMA Flood Map](#)

## Miscellaneous Improvements

There is no improvement information to display.

## Sales History

NOTE: This section is not intended to be a complete chain of title. Additional official book/page numbers may be listed in the property description above and/or recorded and indexed with the Clerk of Court. [Follow this link to search all documents by owner's name.](#)

Book/Page	Sale Date	Instrument	Qualified/Unqualified	Vacant/Improved	Sale Price
<a href="#">4982 / 421</a>	7/24/2017	Quit Claim Deed	Unqualified	Vacant	\$100.00
<a href="#">1949 / 1687</a>	5/14/2001	Warranty Deed	Qualified	Vacant	\$48,000.00
<a href="#">1293 / 2354</a>	5/1/1994	Quit Claim Deed	Unqualified	Vacant	\$0.00
<a href="#">818 / 1839</a>	9/1/1984	Warranty Deed	Qualified	Vacant	\$21,000.00

[Click here to search for mortgages, liens, and other legal documents.](#) ⓘ



## Values and Estimated Ad Valorem Taxes

Values shown below are 2021 WORKING VALUES that are subject to change until certified.

The Market Value listed below is not intended to represent the anticipated selling price of the property and should not be relied upon by any individual or entity as a determination of current market value.

Tax Authority	Market Value	Assessed Value	Taxable Value	Millage	Estimated Taxes
LAKE COUNTY BCC GENERAL FUND	\$819,550	\$819,550	\$819,550	5.03270	\$4,124.55
LAKE COUNTY MSTU AMBULANCE	\$819,550	\$819,550	\$819,550	0.46290	\$379.37
SCHOOL BOARD STATE	\$819,550	\$819,550	\$819,550	3.70100	\$3,033.15
SCHOOL BOARD LOCAL	\$819,550	\$819,550	\$819,550	2.99800	\$2,457.01
CITY OF FRUITLAND PARK	\$819,550	\$819,550	\$819,550	3.91340	\$3,207.23
ST JOHNS RIVER FL WATER MGMT DIST	\$819,550	\$819,550	\$819,550	0.22870	\$187.43
LAKE COUNTY VOTED DEBT SERVICE	\$819,550	\$819,550	\$819,550	0.11000	\$90.15
LAKE COUNTY WATER AUTHORITY	\$819,550	\$819,550	\$819,550	0.33680	\$276.02
NORTH LAKE HOSPITAL DIST	\$819,550	\$819,550	\$819,550	0.89500	\$733.50
				<b>Total:</b>	<b>Total:</b>
				17.6785	\$14,488.41

## Exemptions Information

This property is benefitting from the following exemptions with a checkmark 

Homestead Exemption (first exemption up to \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Additional Homestead Exemption (up to an additional \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior Exemption (applied to county millage - up to \$50,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior Exemption (applied to city millage - up to \$25,000) 	<a href="#">Learn More</a> <a href="#">View the Law</a>
Limited Income Senior 25 Year Residency (county millage only-exemption amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Widow / Widower Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Blind Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Disability Exemption (up to \$500)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Disability Exemption (\$5000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Veteran's Combat Related Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Deployed Servicemember Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
First Responder Total and Permanent Disability Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Surviving Spouse of First Responder Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Conservation Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Tangible Personal Property Exemption (up to \$25,000)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Religious, Charitable, Institutional, and Organizational Exemptions (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>
Economic Development Exemption	<a href="#">Learn More</a> <a href="#">View the Law</a>
Government Exemption (amount varies)	<a href="#">Learn More</a> <a href="#">View the Law</a>

## Exemption Savings

The exemptions marked with a  above are providing a tax dollar savings of: **\$0.00**



# PROPERTY RECORD CARD

## General Information

<b>Name:</b>	PHILLIPS LARRY M TRUSTEE	<b>Alternate Key:</b>	1699665
<b>Mailing Address:</b>	PO BOX 491907 LEESBURG, FL 34749-1907 <a href="#">Update Mailing Address</a>	<b>Parcel Number:</b> ⓘ	06-19-24-0004-000-02703
		<b>Millage Group and City:</b>	000F (FRUITLAND PARK)
		<b>2020 Total Certified Millage Rate:</b>	17.6785
		<b>Trash/Recycling/Water/Info:</b>	<a href="#">My Public Services Map</a> ⓘ
<b>Property Location:</b>	35326 MICRO RACE TRACK RD FRUITLAND PARK FL 34731 <a href="#">Update Property Location</a> ⓘ	<b>Property Name:</b>	BRIAN TERRY VINYL <a href="#">Submit Property Name</a> ⓘ
		<b>School Information:</b>	<a href="#">School Locator &amp; Bus Stop Map</a> ⓘ <a href="#">School Boundary Maps</a> ⓘ
<b>Property Description:</b>	N 260 FT OF SW 1/4 OF NW 1/4 OF SE 1/4   ORB 3421 PG 1142		
<small>NOTE: This property description is a condensed/abbreviated version of the original description as recorded on deeds or other legal instruments in the public records of the Lake County Clerk of Court. It may not include the Public Land Survey System's Section, Township, Range information or the county in which the property is located. It is intended to represent the land boundary only and does not include easements or other interests of record. This description should not be used for purposes of conveying property title. The Property Appraiser assumes no responsibility for the consequences of inappropriate uses or interpretations of the property description.</small>			

## Land Data

Line	Land Use	Frontage	Depth	Notes	No. Units	Type	Class Value	Land Value
1	STORE/RESIDENCE COMBO (1200)	0	0		3.9	AC	\$0.00	\$557,700.00

[Click here for Zoning Info](#) ⓘ      [FEMA Flood Map](#)

## Commercial Building(s)

### Building 1

Commercial	Building Value: \$79,418.00							
<b>Summary</b>	<b>Section(s)</b>							
Year Built: 2005	<b>Section No.</b>	<b>Section Type</b>	<b>Wall Height</b>	<b>No. Stories</b>	<b>Ground Floor Area</b>	<b>Basement</b>	<b>Basement Finished</b>	<b>Map Color</b>
Total Square Footage: 2800	1	FINISHED LIVING AREA (FLA)	16	1	2800	0%	0%	<input type="checkbox"/>
Full Bathrooms: 1	<b>Interior Finish</b>		<b>Percent</b>		<b>Sprinkler</b>		<b>A/C</b>	
Half Bathrooms: 0	(48C)		65.00 %		No		Yes	
Elevators: 0	(01C)		35.00 %		No		Yes	
Elevator Landings: 0								
Escalators: 0								
Residential 1								



Units:

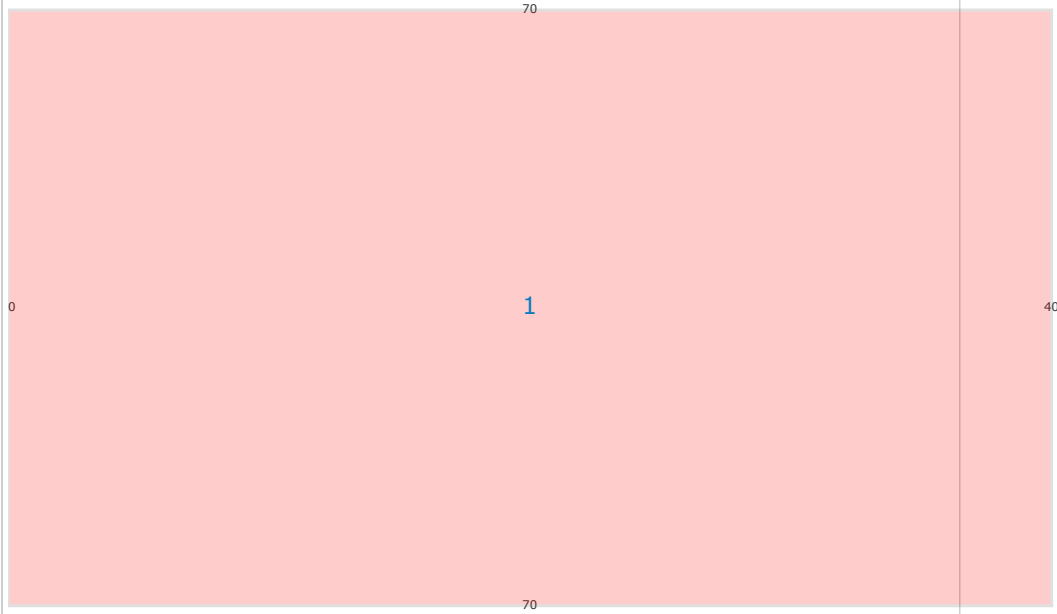
Kitchens: 1

Fireplaces: 0

Structure Type:  
Wood or Steel  
Open Stud  
Frame

Exterior Walls:

05 : 100.00 %



[View Larger](#)

### Miscellaneous Improvements

No.	Type	No. Units	Unit Type	Year	Depreciated Value
0001	UTILITY BUILDING - UNFINISHED (UBU)	100	SF	1976	\$160.00
0002	PAVING (PAV)	2723	SF	2006	\$3,812.00

### Sales History

**NOTE:** This section is not intended to be a complete chain of title. Additional official book/page numbers may be listed in the property description above and/or recorded and indexed with the Clerk of Court. [Follow this link to search all documents by owner's name.](#)

Book/Page	Sale Date	Instrument	Qualified/Unqualified	Vacant/Improved	Sale Price
<a href="#">3421 / 1142</a>	4/24/2007	Warranty Deed	Unqualified	Improved	\$740,000.00
<a href="#">3139 / 953</a>	4/17/2006	Personal Rep Deed	Unqualified	Improved	\$0.00
<a href="#">3124 / 962</a>	3/27/2006	Probate Order	Unqualified	Improved	\$0.00
<a href="#">2453 / 787</a>	8/1/2003	Warranty Deed	Qualified	Vacant	\$25,000.00
<a href="#">1008 / 632</a>	3/1/1989	Warranty Deed	Unqualified	Improved	\$0.00
<a href="#">893 / 147</a>	10/1/1986	Quit Claim Deed	Unqualified	Vacant	\$1.00
<a href="#">893 / 148</a>	10/1/1986	Quit Claim Deed	Unqualified	Vacant	\$1.00
<a href="#">893 / 149</a>	10/1/1986	Warranty Deed	Qualified	Improved	\$40,000.00
<a href="#">704 / 1886</a>	7/1/1980	Quit Claim Deed	Unqualified	Vacant	\$1.00

[Click here to search for mortgages, liens, and other legal documents.](#)

### Values and Estimated Ad Valorem Taxes

Values shown below are 2021 WORKING VALUES that are subject to change until certified.

The Market Value listed below is not intended to represent the anticipated selling price of the property and should not be relied upon by any individual or entity as a determination of current market value.

Tax Authority	Market Value	Assessed Value	Taxable Value	Millage	Estimated Taxes
LAKE COUNTY BCC GENERAL FUND	\$641,090	\$539,345	\$539,345	5.03270	\$2,714.36
LAKE COUNTY MSTU AMBULANCE	\$641,090	\$539,345	\$539,345	0.46290	\$249.66
SCHOOL BOARD STATE	\$641,090	\$641,090	\$641,090	3.70100	\$2,372.67



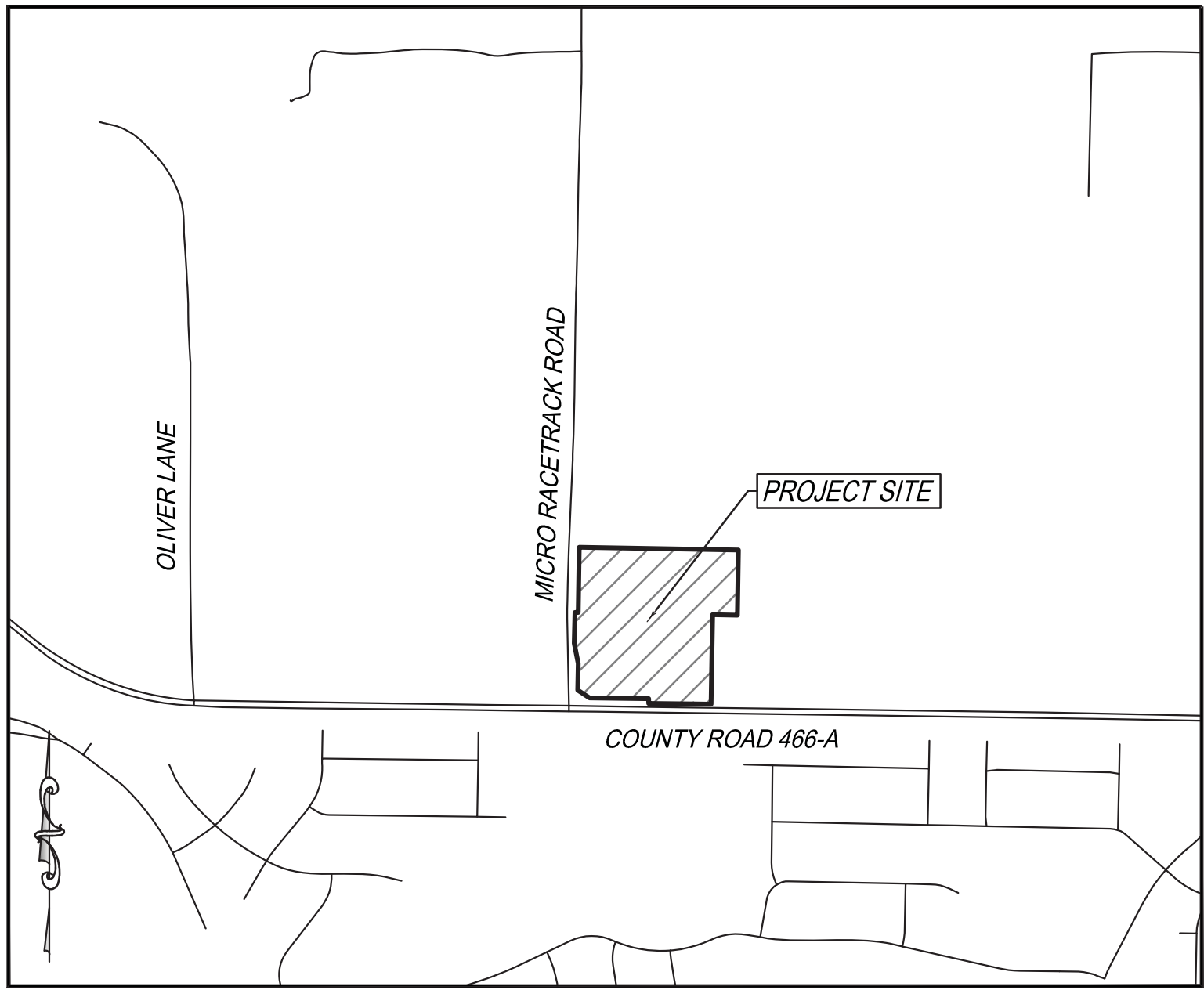
INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	BOUNDARY SURVEY & KEY MAP
3-5	TOPOGRAPHIC DETAILS

# ALTA/NSPS LAND TITLE SURVEY BOUNDARY & TOPOGRAPHIC SURVEY

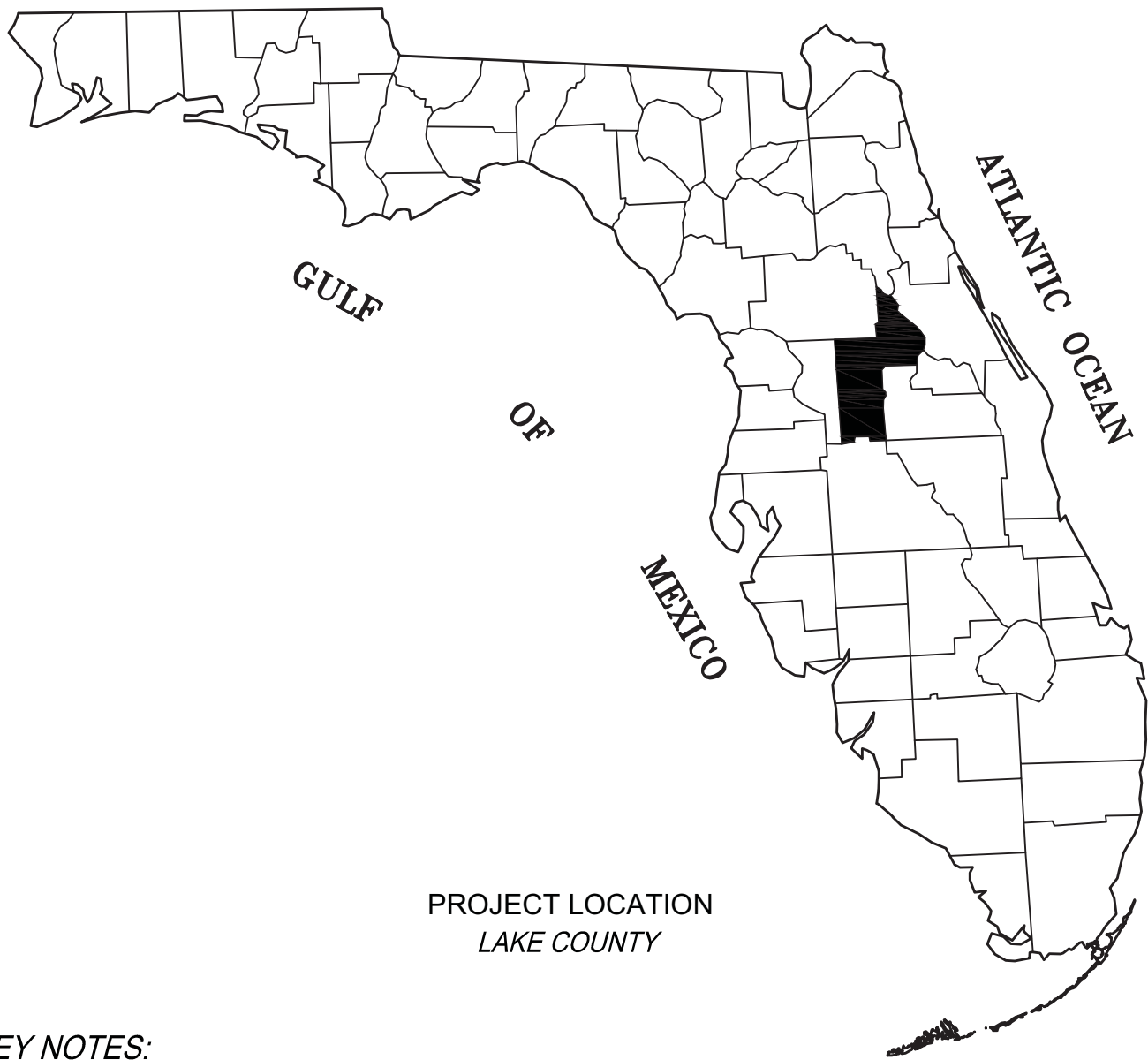
-FOR-  
**STAFFORD 500 WEST 2ND STREET, LLC**

LAKE COUNTY GROCERY  
SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST  
LAKE COUNTY, FLORIDA

VICINITY MAP



SCALE:  
1" = 600'



PROJECT LOCATION  
LAKE COUNTY

**LEGAL DESCRIPTION:**

**PARCEL 1**  
THE NORTH 260 FEET OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS COUNTY ROAD RIGHT OF WAY.

**PARCEL 2**  
THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 IN SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST IN LAKE COUNTY, FLORIDA, LESS THE EAST 100 FEET THEREOF AND LESS THE NORTH 260 FEET THEREOF, AND LESS THE RIGHT OF WAY FOR COUNTY ROAD ON THE WEST THEREOF, AND LESS STATE ROAD NO. 466A ON THE SOUTH THEREOF.

ALSO LESS AND EXCEPT THAT PORTION CONVEYED TO LAKE COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA FOR ROAD RIGHT OF WAY AS SET FORTH IN THAT WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 4515, PAGE 1619, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PARCEL OF LAND LYING IN THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST LAKE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; BEGIN AT THE INTERSECTION OF THE NORTH RIGHT OF WAY LINE OF COUNTY ROAD 466-A AND THE EAST LINE OF THE SOUTHWEST 1/4 OF SAID SECTION 6; THENCE SOUTH 89 DEGREES 14 MINUTES 41 SECONDS EAST 319.35 FEET ALONG SAID NORTH RIGHT OF WAY LINE; THENCE NORTH 00 DEGREES 45 MINUTES 19 SECONDS EAST 19.00 FEET; THENCE NORTH 89 DEGREES 14 MINUTES 41 SECONDS WEST 236.21 FEET; THENCE NORTH 56 DEGREES 43 MINUTES 41 SECONDS WEST 55.81 FEET; THENCE NORTH 00 DEGREES 50 MINUTES 54 SECONDS EAST 105.97 FEET; THENCE NORTH 10 DEGREES 49 MINUTES 17 SECONDS WEST 82.78 FEET; THENCE NORTH 01 DEGREES 01 MINUTES 34 SECONDS EAST 122.70 FEET; THENCE NORTH 89 DEGREES 01 MINUTES 34 SECONDS WEST 19.64 FEET TO SAID EAST LINE OF THE SOUTHWEST 1/4 OF SECTION 6; THENCE SOUTH 00 DEGREES 50 MINUTES 54 SECONDS WEST 358.83 FEET ALONG SAID EAST LINE OF THE SOUTHWEST 1/4 OF SECTION 6 TO THE POINT OF BEGINNING.

**SURVEY NOTES:**

- THIS IS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DEFINED IN CHAPTER 5J-17.050 (11) FLORIDA ADMINISTRATIVE CODE.
- BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN DATUM (NAD) OF 1983 WITH 2011 ADJUSTMENT, AS A REFERENCE FOR THIS SURVEY, THE NORTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST AS BEING SOUTH 89°01'33" EAST.
- ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP (FIRM) NUMBER 12069C0305E, CITY OF FRUITLAND PARK, FLORIDA, MAP REVISED DATE OF DECEMBER 18, 2012, THE PROPERTY DESCRIBED HEREON LIES PARTIALLY WITHIN ZONE "X" (AREAS OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD).
- THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE COMMITMENT PREPARED BY WESTCOR LAND TITLE INSURANCE COMPANY, PLANT FILE NUMBER 20-26992, EFFECTIVE MAY 1, 2020 AT 8:00 A.M.
- NORTH-SOUTH AND EAST-WEST TIES TO FOUND MONUMENTATION AND IMPROVEMENTS ARE BASED ON CARDINAL DIRECTION, UNLESS ENDING IN "-LY" (NLY, ELY, SLY, WLY) WHICH ARE PERPENDICULAR TIES TO THE BOUNDARY LINE.
- WETLAND AREAS, IF EXISTING, WERE NOT ADDRESSED AS A PART OF THIS SURVEY.
- UNDERGROUND UTILITIES AND FOUNDATIONS WERE NOT LOCATED.
- THIS SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE ORIGINAL OR ELECTRONIC SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
- RECORDING REFERENCES (SUCH AS OFFICIAL RECORDS BOOK AND PAGE, AND PLAT BOOK AND PAGE) SHOWN HEREON, REFER TO DOCUMENTS RECORDED IN THE OFFICIAL RECORDS OF LAKE COUNTY, FLORIDA.
- ELEVATIONS SHOWN HEREON ARE BASED ON LAKE COUNTY BENCHMARK LK 103, SAID POINT BEING A 4"x4" CONCRETE MONUMENT WITH LAKE COUNTY GEODETIC CONTROL CAP STAMPED "LK103 1997" LOCATED APPROXIMATELY 2,400 FEET SOUTH OF THE INTERSECTION OF MICRO RACETRACK ROAD AND LAKE ELLA ROAD AND APPROXIMATELY 14 FEET EAST OF THE EAST EDGE OF PAVEMENT OF MICRO RACETRACK ROAD. SAID POINT HAVING AN ELEVATION OF 81.29 FEET, PURSUANT TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- THERE ARE 0 PARKING SPACES IN THE SUBJECT PARCEL.
- NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS WAS OBSERVED DURING THE TIME FIELD WORK WAS PERFORMED ON THE SUBJECT PARCEL.
- DISTANCES AND ACREAGES SHOWN HEREON ARE MEASURED IN U.S. SURVEY FEET AND DECIMALS THEREOF. MEASUREMENTS DEPICTED HEREON ARE FIELD DERIVED UNLESS OTHERWISE NOTED.
- WHILE CONDUCTING RESEARCH ON THE SUBJECT PARCEL, NO PROPOSED CHANGES IN STREET RIGHT-OF-WAY LINES WERE FOUND BY THIS SURVEYOR. NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS WAS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WORK ON THE SUBJECT PARCEL.
- SUBJECT PARCEL CONTAINS: ±8.287 ACRES  
C-2 (GENERAL COMMERCIAL PER CITY OF FRUITLAND PARK ZONING MAP)  
SETBACKS:  
MINIMUM FRONT YARD = 50 FEET  
MINIMUM SIDE YARD = 10 FEET. HOWEVER, A ZERO LOT LINE IS ALLOWED ON ONE SIDE SETBACK ONLY WITH A MINIMUM SETBACK OF 10 FEET ON THE OPPOSITE SIDE  
MINIMUM REAR YARD = 15 FEET  
MAXIMUM BUILDING HEIGHT = 35 FEET  
MINIMUM OPEN SPACE: 30%  
MAXIMUM BUILDING COVERAGE: N/A

\*SETBACK INFORMATION OBTAINED FROM SCHEDULE OF DIMENSIONAL REQUIREMENTS, CITY OF FRUITLAND PARK LAND DEVELOPMENT CODE.

A ZONING LETTER OR REPORT WAS NOT PROVIDED TO THIS FIRM TO VERIFY THE INFORMATION ABOVE.

- LEGAL DESCRIPTION DEPICTED HEREON WAS PROVIDED BY THE TITLE COMMITMENT IDENTIFIED IN SURVEY NOTE # 4 ABOVE.
- THE AERIAL IMAGE DEPICTED ON SHEET 2 IS DATED 2017 AND WAS OBTAINED FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION.

**SURVEYOR'S CERTIFICATE:**

TO STAFFORD 500 WEST 2ND STREET, LLC; WESTCOR LAND TITLE INSURANCE COMPANY; SELLAR, SEWELL, RUSS, SAYLOR & JOHNSON, PA:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 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, 5, 6(A), 7(A), 7(B)(1), 8, 9, 11 (ABOVE GROUND EVIDENCE ONLY), 13, 14, 16, AND 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 15, 2020

DATE OF PLAT OR MAP: DECEMBER 21, 2020

I FURTHER CERTIFY THIS SURVEY MEETS THE APPLICABLE "STANDARDS OF PRACTICE" AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN RULE 5J17.050-.052, FLORIDA ADMINISTRATIVE CODE.

**LEGEND**

±	MORE OR LESS
ACSM	AMERICAN CONGRESS ON SURVEYING & MAPPING
ALTA	AMERICAN LAND TITLE ASSOCIATION
EL	ELEVATION
LB	LICENSED BUSINESS
RLS	REGISTERED LAND SURVEYOR
LS	LAND SURVEYOR
PSM	PROFESSIONAL SURVEYOR & MAPPER
NO.	NUMBER
I.D.	IDENTIFICATION
ORB	OFFICIAL RECORDS BOOK
PG.	PAGE
NSPS	NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
NAVD	NORTH AMERICAN VERTICAL DATUM
RCP	REINFORCED CONCRETE PIPE
(D)	DEED MEASUREMENT
□	FOUND CONCRETE MONUMENT (AS NOTED)
●	FOUND 5/8" IRON ROD & CAP (AS NOTED)
⊙	SET NAIL & DISK (LB 4709)
⊙	SET 5/8" IRON ROD AND CAP (LB 4709)
⊙	SITE BENCHMARK (AS NOTED)
⊙	STORM MANHOLE
⊙	SANITARY MANHOLE
⊙	SEWER VALVE
⊙	ELECTRIC TRANSFORMER
⊙	CATCH BASIN
⊙	WOOD UTILITY POLE
⊙	GUY ANCHOR
⊙	WATER SPIGOT
⊙	LIGHT POLE
⊙	SIGN
⊙	UNDERGROUND FIBER OPTIC CABLE MARKER
⊙	UNDERGROUND CABLE TELEVISION MARKER
⊙	PULLBOX (FIBER)
⊙	PULLBOX (TELEPHONE)
⊙	PULLBOX (TRAFFIC)
⊙	TELEVISION RISER
⊙	MAILBOX
⊙	GATE POST
—x—	BARBED WIRE OR WIRE FENCE
—o—	OVERHEAD UTILITY LINE
—TB—	TOP OF BANK
—TS—	TOE OF SLOPE
---6---	EXISTING CONTOUR
■	ASPHALT AREA
x 10.00	SPOT ELEVATION (HARD SURFACE)
x 10.0	SPOT ELEVATION (GROUND)

**TREE LEGEND:**  
(CALIPER NOTED INSIDE SYMBOL)

⊙	CAMPHOR
⊙	CHERRY
⊙	LAUREL OAK
⊙	LIVE OAK
⊙	MIMOSA
⊙	PALM

**SCHEDULE B, SECTION II EXCEPTIONS:**  
(SEE SURVEY NOTE #4)

- ITEMS 1-7: NOT ADDRESSED (STANDARD EXCEPTIONS)
- PERPETUAL RIGHT-OF-WAY EASEMENT IN FAVOR OF SUMTER ELECTRIC COOPERATIVE INC. RECORDED IN OFFICIAL RECORDS BOOK 3421, PAGE 1139, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA. (PARCEL 1). AFFECTS PROPERTY-PLOTTED. PLEASE NOTE THAT THE DESCRIPTION IDENTIFIED IN SAID DOCUMENT CONTAINS A SCRIVENER'S ERROR. THE DOCUMENT DESCRIBES THE EASEMENT AS BEING THE WEST 33 FEET OF THE FOLLOWING DESCRIBED LANDS: THE NORTH 260 FEET OF THE \*\*SOUTHEAST 1/4\*\* OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY FLORIDA, LESS COUNTY ROAD RIGHT OF WAY AS DESCRIBED IN OFFICIAL RECORDS BOOK 893, PAGE 149, PUBLIC RECORDS OF LAKE COUNTY, FLORIDA. THE DESCRIPTION CONTAINED IN SAID OFFICIAL RECORDS BOOK 893, PAGE 149 DESCRIBES THE LANDS AS THE NORTH 260 FEET OF THE \*\*SOUTHWEST 1/4\*\* OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 IN SECTION 6, TOWNSHIP 19 SOUTH, RANGE 24 EAST, LAKE COUNTY, FLORIDA, LESS COUNTY ROAD RIGHT-OF-WAY. THE DIFFERENCES BETWEEN THE TWO DOCUMENTS IS DENOTED BY \*\*. FOR THE PURPOSES OF THIS SURVEY, IT IS BELIEVED THAT THE LANDS LYING WITHIN THE SOUTHWEST 1/4 IS THE INTENDED LOCATION FOR THIS EASEMENT.
  - PERMANENT GRADING, UTILITY AND DRAINAGE EASEMENT IN FAVOR OF LAKE COUNTY GROCERY RECORDED IN OFFICIAL RECORDS BOOK 4515, PAGE 1623, OF THE PUBLIC RECORDS OF LAKE COUNTY, FLORIDA. (PARCEL 2) AFFECTS PROPERTY-PLOTTED.



*J. Hallick*  
JEREMY D. HALLICK, FLORIDA LICENSED SURVEYOR & MAPPER  
FLORIDA REGISTRATION NO. 6715

**CFB**  
CLYMER  
BARLEY  
BARLEY

---

DATE: \_\_\_\_\_

---

REVISIONS

NO.	DATE	DESCRIPTION

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CLIENT: STAFFORD 500 WEST 2ND STREET, LLC  
JOB NO.: S20278.0000  
DRAWING DATE: 12/21/2020  
DATE OF SURVEY: 12/15/2020  
DRAWN BY: JDH  
CHECKED BY: JDH  
FIELD BOOK: V02-73, PAGE: 29-51

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LAKE COUNTY GROCERY  
SECTIONS  
TOWNSHIP 19 SOUTH, RANGE 24 EAST  
LAKE COUNTY, FLORIDA

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BOUNDARY & TOPOGRAPHIC SURVEY  
FOR  
STAFFORD 500 WEST 2ND STREET, LLC

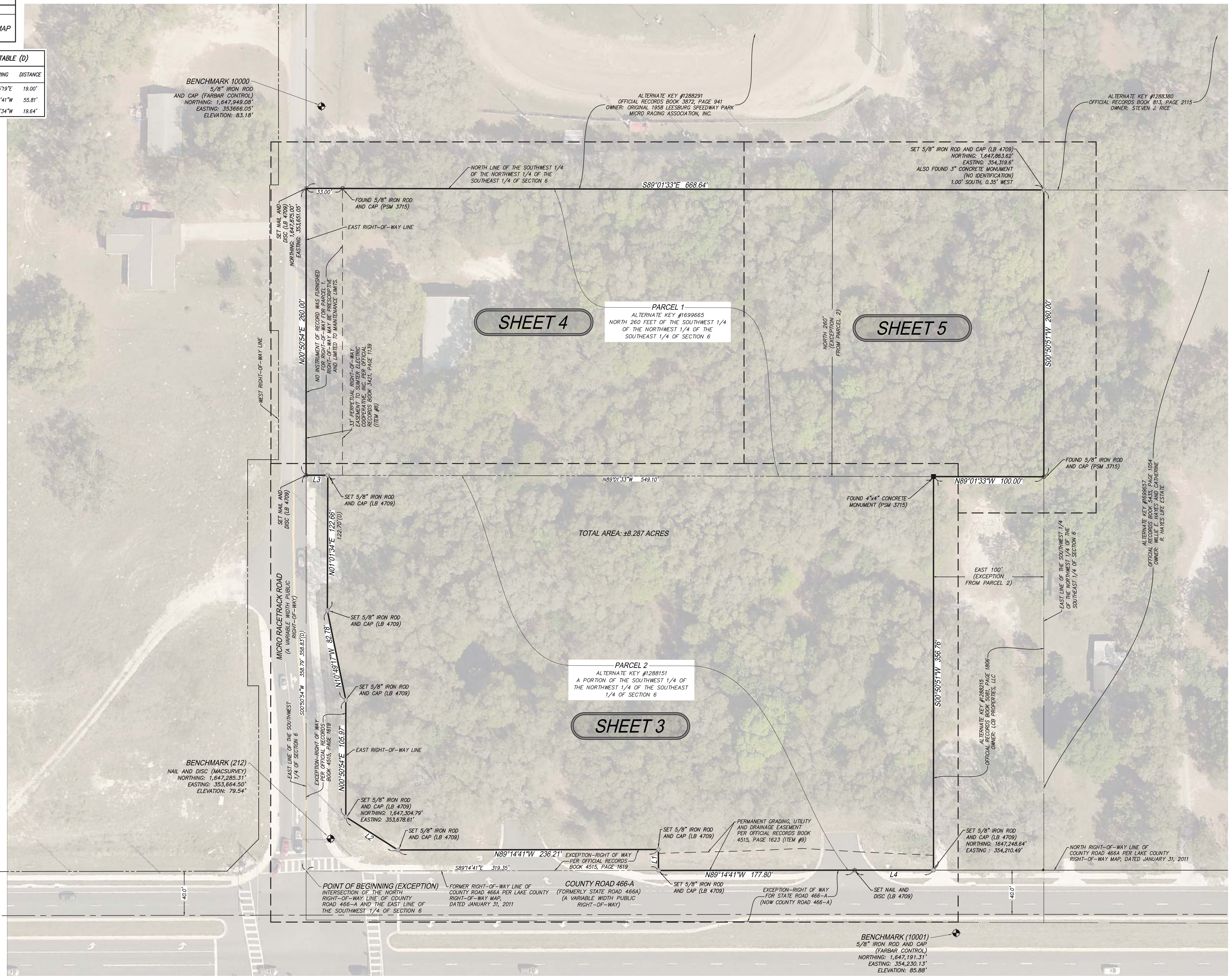
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3-5	TOPOGRAPHIC DETAILS

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LINE TAG	BEARING	DISTANCE	LINE TAG	BEARING	DISTANCE
L1	N00°45'19"E	19.00'	L1	N00°45'19"E	19.00'
L2	N56°44'03"W	55.80'	L2	N56°43'41"W	55.81'
L3	N89°01'33"W	19.64'	L3	N89°01'34"W	19.64'
L4	N89°07'41"W	71.50'			



BENCHMARK 10000  
5/8" IRON ROD  
AND CAP (FARBAR CONTROL)  
NORTHING: 1,647,949.08'  
EASTING: 353,666.05'  
ELEVATION: 83.18'

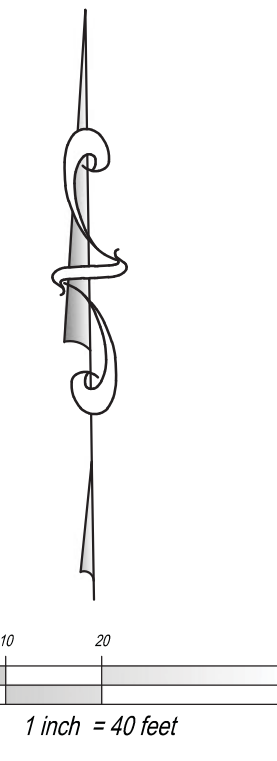
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ALTERNATE KEY #1699865  
NORTH 260 FEET OF THE SOUTHWEST 1/4  
OF THE NORTHWEST 1/4 OF THE  
SOUTHEAST 1/4 OF SECTION 6

PARCEL 2  
ALTERNATE KEY #1288151  
A PORTION OF THE SOUTHWEST 1/4 OF  
THE NORTHWEST 1/4 OF THE SOUTHEAST  
1/4 OF SECTION 6

BENCHMARK (212)  
NAIL AND DISC (MACSURVEY)  
NORTHING: 1,647,285.31'  
EASTING: 353,664.50'  
ELEVATION: 79.54'

BENCHMARK (10001)  
5/8" IRON ROD AND CAP  
(FARBAR CONTROL)  
NORTHING: 1,647,191.31'  
EASTING: 354,230.13'  
ELEVATION: 85.88'

TOTAL AREA: ±8.287 ACRES



**CLYMER  
BARLEY**

REGISTERED PROFESSIONAL SURVEYOR  
FLORIDA LICENSE NO. 12000

CLIENT: STAFFORD 500 WEST 2ND STREET, LLC

JOB NO.: S207260000

DRAWING DATE: 12/21/2020

DRAWN BY: JDH

FIELD BOOK: V20-73

DATE: \_\_\_\_\_

REVISIONS: \_\_\_\_\_

DATE OF SURVEY: 12/15/2020

CHECKED BY: JDH

PAGE: 29-51

LAKE COUNTY GROCERY  
SECTIONS  
TOWNSHIP 19 SOUTH, RANGE 24 EAST  
LAKE COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY  
FOR  
STAFFORD 500 WEST 2ND STREET, LLC

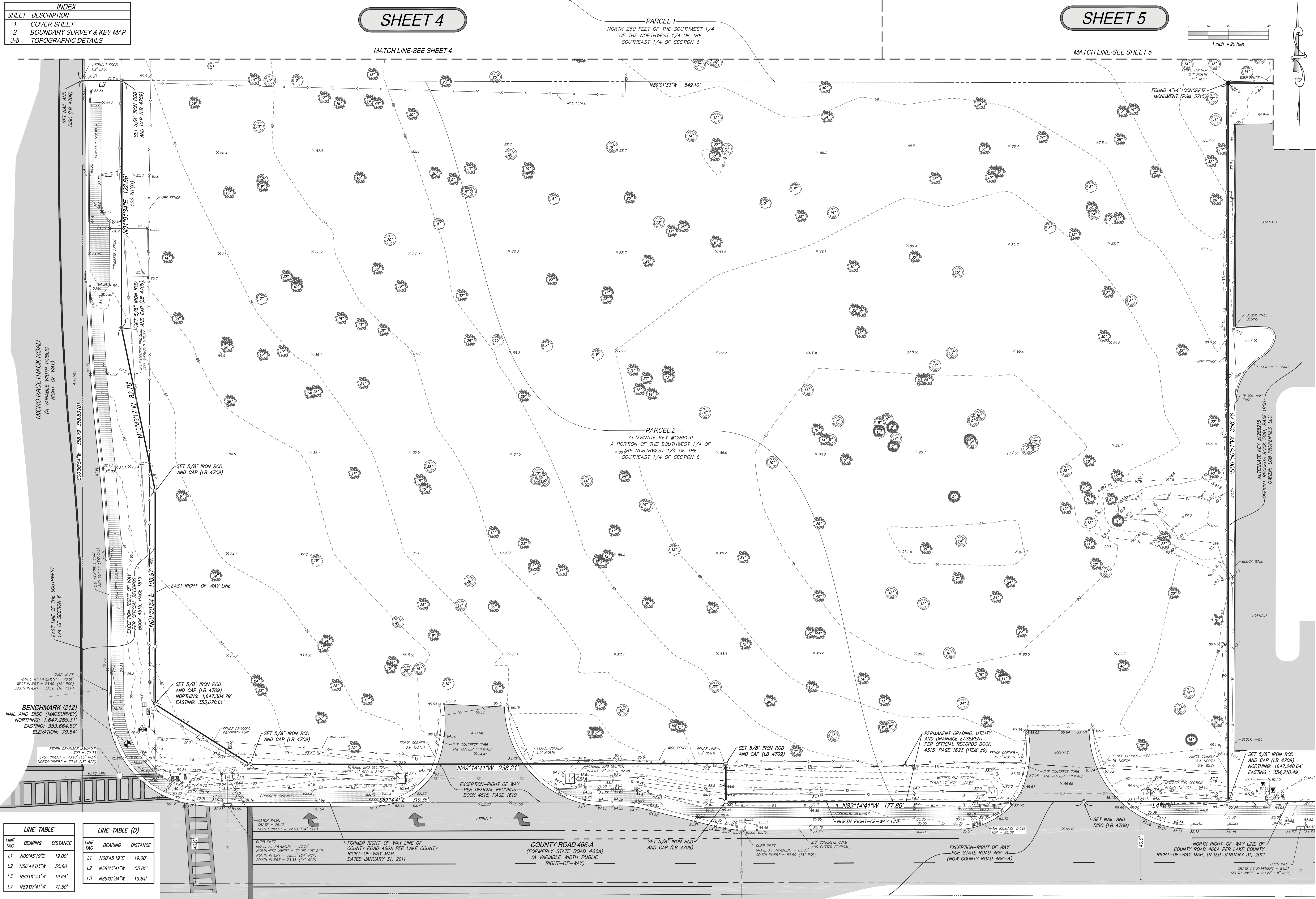
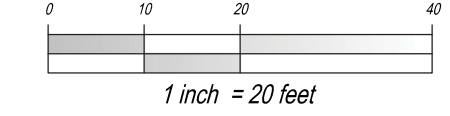
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**SHEET 5**



LINE TABLE			LINE TABLE (D)		
LINE TAG	BEARING	DISTANCE	LINE TAG	BEARING	DISTANCE
L1	N00°45'19"E	19.00'	L1	N00°45'19"E	19.00'
L2	N56°44'03"W	55.80'	L2	N56°43'41"W	55.81'
L3	N89°01'33"W	19.64'	L3	N89°01'34"W	19.64'
L4	N89°07'41"W	71.50'			

**CLYMER  
BARLEY  
BARLEY**

REGISTERED PROFESSIONAL SURVEYOR  
FLORIDA LICENSE NO. 12881

CLIENT: STAFFORD 500 WEST 2ND STREET, LLC

JOB NO.: 520726.0000

DRAWING DATE: 12/21/2020

DRAWN BY: JDH

FIELD BOOK: V20-73, PAGE: 29-51

REVISIONS

NO.	DATE	DESCRIPTION

DATE OF SURVEY: 12/15/2020

CHECKED BY: JDM

LAKE COUNTY GROCERY SECTIONS

TOWNSHIP 19 SOUTH, RANGE 24 EAST

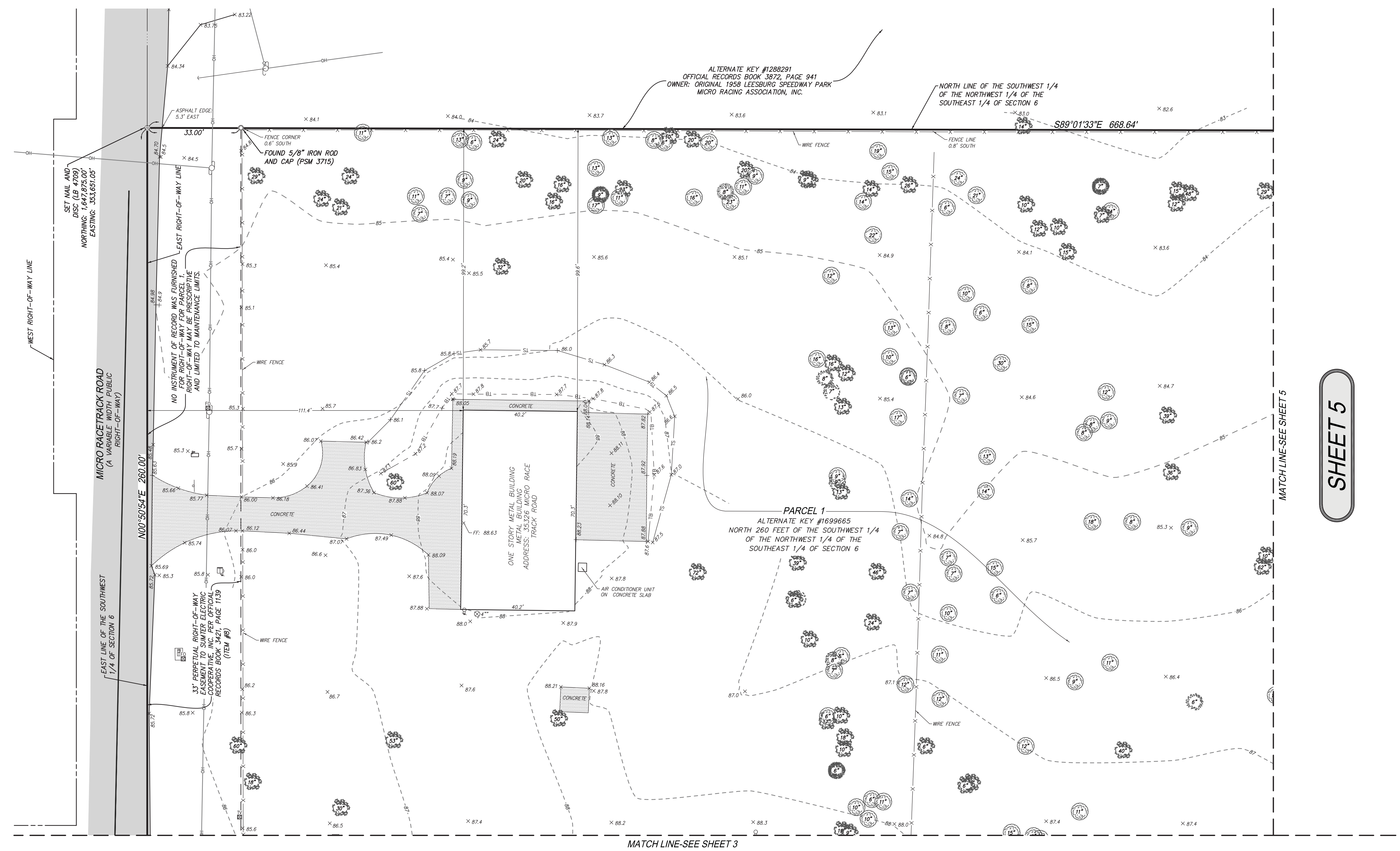
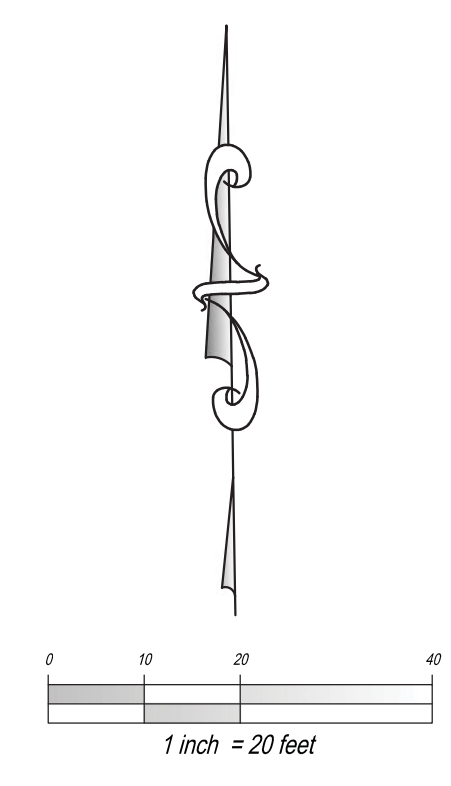
LAKE COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY FOR STAFFORD 500 WEST 2ND STREET, LLC

SHEET 03 OF 05



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**SHEET 3**

**SHEET 5**

**CLYMER**  
**BARLEY**

REGISTERED PROFESSIONAL SURVEYOR  
FLORIDA LICENSE NO. 12000

CLIENT: STAFFORD 500 WEST 2ND STREET, LLC

JOB NO.: S207260000

DRAWING DATE: 12/21/2020

DRAWN BY: JDH

FIELD BOOK: V20-73, PAGE: 29-51

REVISIONS

NO.	DATE	DESCRIPTION

DATE

LAKE COUNTY GROCERY SECTIONS

TOWNSHIP 19 SOUTH, RANGE 24 EAST

LAKE COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY FOR STAFFORD 500 WEST 2ND STREET, LLC

SHEET 04 OF 05

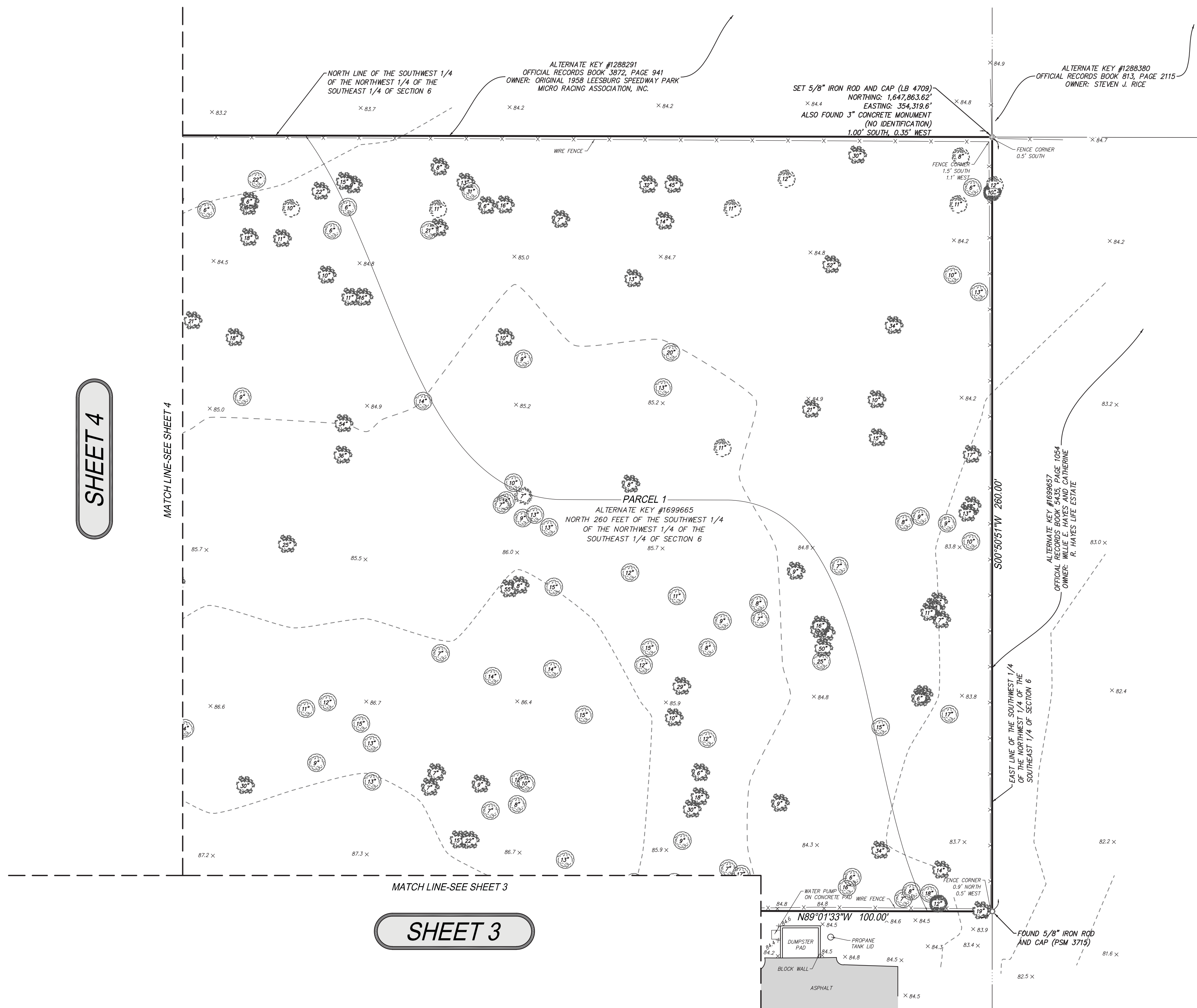
CHECKED BY: JDM



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SHEET 4

SHEET 3



**CLYMER**  
**BARLEY**

REGISTERED PROFESSIONAL SURVEYOR  
FLORIDA LICENSE NO. 12000

CLIENT: STAFFORD 500 WEST 2ND STREET, LLC

DATE: \_\_\_\_\_

JOB NO.: S207260000

DATE OF SURVEY: 12/15/2020

DRAWN BY: JDH

CHECKED BY: JDH

FIELD BOOK: V20-73, PAGE: 29-51

LAKE COUNTY GROCERY

SECTIONS:

TOWNSHIP 19 SOUTH, RANGE 24 EAST

LAKE COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY

FOR

STAFFORD 500 WEST 2ND STREET 1, LLC

SHEET 05 OF 05





# ECS Florida, LLC

## Geotechnical Engineering Report The Villages Grocery

Miller Boulevard & Micro Racetrack Road  
The Villages, Lake County, Florida 34787

ECS Project No. 24:6724

December 18, 2020







December 18, 2020

Bowman Consulting Group  
4450 W. Eau Gallie Boulevard  
Suite 232  
Melbourne, FL 32934

Attention: Ms. Nim Robinson

ECS Project No. 24:6724

Reference: Geotechnical Engineering Report  
**The Villages Grocery**  
Miller Boulevard & Micro Racetrack Road  
The Villages, Lake County, Florida 34787

Dear Ms. Robinson:

ECS Florida, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our Proposal No. 24:13979-GP dated September 28, 2020. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our design and construction recommendations.

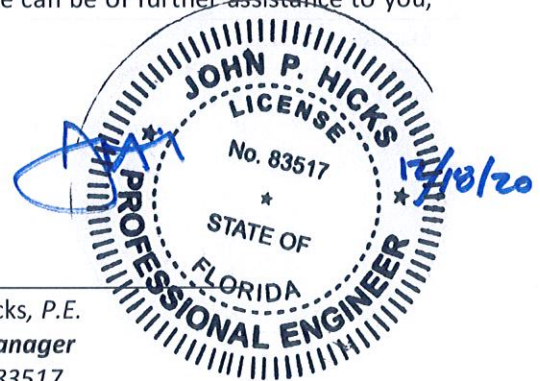
It has been our pleasure to be of service to Bowman Consulting Group during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this preliminary letter report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Florida, LLC

  
Mark Wright, E.I.  
**Geotechnical Project Manager**  
[mwright1@ecslimited.com](mailto:mwright1@ecslimited.com)

John P. Hicks, P.E.  
**Branch Manager**  
FL PE No. 83517  
[jhicks@ecslimited.com](mailto:jhicks@ecslimited.com)



MW/JPH/mw



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## **APPENDICES**

### **Appendix A – Diagrams**

- Site Location Diagram
- Test Location Diagram
- Soil Map

### **Appendix B – Field Operations**

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
- Boring Logs B-1 through B-10, P-1 through P-4, R-1 through R-7
- Cross Section A-A'

### **Appendix C – Laboratory Testing**

- Laboratory Test Results Summary



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## EXECUTIVE SUMMARY

The following paragraphs provide a brief discussion of our findings and recommendations. Please refer to the complete report for more detailed discussion.

ECS Florida, LLC (ECS) has completed the subsurface exploration for the proposed gas shopping center facility located at located northeast of the intersection of Miller Boulevard & Micro Racetrack Road in the Villages, Lake County, Florida. The project information summarized below is based exclusively on the information made available to us by Bowman Consulting Group at the time of this report. Our findings, conclusions and recommendations are summarized below.

### **PROJECT INFORMATION:**

- Site Location: Miller Boulevard & Micro Racetrack Road, the Villages, Lake County, FL
- Building Scope: Three (3) one-story retail buildings, one (1) stormwater pond area, one (1) fuel canopy and associated parking and driveway areas
- Building Type: Shallow foundations, slab-on-grade, concrete masonry unit
- Assumed Loads: Max. column loads = 75 kips, Max. wall loads = 5 klf
- Earthwork: Estimated cuts/fills of up to 2 feet

### **SUBSURFACE CONDITIONS:**

- Field Exploration: Twenty-one (21) SPT borings to depths on the order of 10 feet to 25 feet below existing ground
- Site Conditions: Wooded Parcel
- Probable Fill: Not encountered within the depths of borings
- Natural Soils: SAND (SP), SAND WITH CLAY (SP-SC), CLAYEY SAND (SC), SAND WITH SILT (SP-SM), SILTY SAND (SM) and FAT CLAY (CH)
- Refusal Materials: Not encountered within the depths of borings
- Groundwater: Not encountered in remaining borings prior to introduction of drilling fluid in borings B-1 through B-10 and P-1 through P-4 and not encountered prior to termination in borings R-1 through R-7, seasonal high water table is anticipated to be perched between 2 feet and 10 feet below the existing grades, partly due to a perched water condition caused by high fines materials

### **GEOTECHNICAL & CONSTRUCTABILITY CONSIDERATIONS:**

- **Very Loose to High Fines Soils:** Encountered within the upper 10 feet of the soils during this exploration. Earthwork operations during the preparation of the building pad area and excavations of foundations will require continuous observation of yielding areas and a contingency should be included in the budget for isolated undercutting during proofroll operations. Construction dewatering may be required at this site to remove accumulated rainwater and perched groundwater from excavation where shallow high fines material is encountered; particularly on the southern portion of the site.



**DESIGN & CONSTRUCTION RECOMMENDATIONS:**

- Shallow foundations:
  - Max. Net Allow. Bearing Pressure = 3,000 psf
  - Min. Exterior (Unheated) Embedment = 18 inches
  - Min. Column/Strip Footing Width = 24 inches/18 inches
- Slab Subgrade Modulus: = 150 pci

This summary should not be considered apart from the entire text of the report with all the qualifications and considerations mentioned herein. Details of our conclusions and recommendations are discussed in the report text.



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## 1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the design of structure foundations and construction consideration and recommendations for the proposed shopping center. This report includes recommendations regarding the new building, pavements, stormwater management area, canopy, and associated utilities. The recommendations developed for this report are based on a Conceptual Design dated September 15, 2020 prepared by Bowman Consulting Group.

Our services were provided in accordance with our Proposal No. 24:13979, dated September 28, 2020, as authorized by Bowman Consulting Group on November 17, 2020, which includes our Terms and Conditions of Service.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project.

The report includes the following items.

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of area and site geologic conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Final copies of our soil test boring logs.
- Recommendations for site preparation and construction of compacted fills, including an evaluation of on-site soils for use as compacted fills and delineation of potentially unsuitable soils and/or soils exhibiting excessive moisture at the time of sampling.
- Evaluation and recommendations relative to groundwater control.
- Recommended net allowable bearing capacity and anticipated settlements for the proposed foundation construction.
- Recommended slab-on-grade design and construction.
- Recommended subsurface input design parameters for stormwater pond design
- General recommendations for pavement design.

## 2.0 PROJECT INFORMATION

### 2.1 PROJECT LOCATION/CURRENT SITE USE/PAST SITE USE

The subject site is located northeast of the intersection of Miller Boulevard & Micro Racetrack Road in the Villages, Lake County, Florida. The subject property consists of one (1) Lake County parcel (approximately 7.8 acres in size in total) identified as Parcel Identification Number (PIN) 06-19-24-0004-000-02700. The subject property consists of a mostly wooded land with a one-story commercial building within the northwestern portion generally bounded to the north and east by residential properties, to the south by Miller Boulevard, and to the west by a Micro Racetrack Road. A Site Location Drawing is included below and within Appendix A of this report.





**Figure 2.1.1. Site Location**

Based on our site reconnaissance and review of available topographic information the site is currently an undeveloped field. The site slopes down from the northern portion to the southern portion with existing grades varying between approximately EL. +83 feet-datum and EL. +92 feet-datum. Our assumed surface elevations are interpolated from publicly available topographic information and should be considered approximate to the nearest foot.

Based upon our review of historical aerials that date back to 1964, the site appears to have been a vacant grassed parcel prior to 1964. At some point between 1964 and 1999 the property became heavily wooded. In 2005 a commercial building was constructed within the northwest corner of the property and has remained unchanged to present day.

## **2.2 PROPOSED CONSTRUCTION**

Based upon the Conceptual Design dated September 15, 2020 prepared by Bowman Consulting Group, ECS understands that a three (3) one-story retail buildings, one (1) stormwater pond area, one (1) fuel canopy, utilities and associated parking and driveway areas.

We would anticipate based on current site grading and the publicly available topographic information that the structure may be supported on conventional shallow foundations bearing at an assumed elevation of EL. +86 feet-datum on natural soils or controlled compacted fill material. We have assumed that finished floor elevation of the proposed car wash structure would be approximately at EL. +88 feet-datum. Based on the existing and proposed grades, we expect maximum cuts and fills for the structures to be on the order of 2 feet given the current conceptual drawings for the development.



We have assumed structural loads for the structure will be up to approximately 75 kips for column loading, and we have assumed continuous wall loading up to about 5 kips per linear foot. If the stated loading is different from the actual loading provided by your structural engineer, please notify ECS immediately.

### **3.0 FIELD EXPLORATION AND LABORATORY TESTING**

Our exploration procedures are explained in greater detail in Appendix B including the insert titled Subsurface Exploration Procedures. Our scope of work included drilling twenty (21) SPT borings. Our borings and soundings were located with a handheld GPS unit and their approximate locations are shown on the Boring Location Diagram in Appendix A.

#### **3.1 REGIONAL/SITE GEOLOGY**

Based on the Geologic Map of Florida, Central Florida geologic conditions can generally be described in terms of three basic sedimentary layers. The near-surface layer is primarily composed of sands containing varying amounts of silt and clay fines that are underlain by a layer of clay, clayey sand, locally referred to as the "Hawthorn Group" which is underlain by phosphate, and limestone. The thickness of these strata varies throughout Central Florida. In general, the surficial sands typically extend to depths of 40 feet to 70 feet below the ground surface, while the "Hawthorn Group" ranges from nearly absent in some locations to thicknesses greater than 100 feet. The limestone formation may be several thousand feet thick.

The groundwater hydrogeology of Central Florida can be described in terms of the nature and relationship of the three basic geologic strata. The near surface and upper stratum are fairly permeable and comprise the water table (unconfined) aquifer. The deep limestone formation of the Floridian aquifer is highly permeable due to the presence of large interconnected channels and cavities throughout the rock. The Floridian aquifer is the primary source of drinking water in Central Florida. These two permeable strata are separated by the relatively low permeability clays in the "Hawthorn Group." The amount of groundwater flow between the two aquifer systems is dependent on the thickness and consistency of the "Hawthorn Group" clay confining beds which, as previously stated, varies widely throughout Central Florida.

#### **3.2 SUBSURFACE CHARACTERIZATION**

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil. Please refer to the boring logs in Appendix B.

The soils encountered during this exploration are generally consistent with the Regional Geology and are described within the table below.



Approximate Depth (ft)	Elevation <sup>(1)</sup> (ft)	Stratum	Description	Ranges of SPT <sup>(2)</sup> N-values (bpf)
0 ft - 25 ft	EL. +92 to EL. +61	I	SAND (SP), SAND WITH CLAY (SP-SC), CLAYEY SAND (SC), SAND WITH SILT (SP-SM) and SILTY SAND (SM)	2 to 67
17 ft - 25 ft	EL. +72 to EL. +62	II <sup>(3)</sup>	FAT CLAY (CH)	10 to 21

Notes:

- (1) Elevations at the boring locations were obtained using publicly available topographic information and should be considered approximate to the nearest foot.
- (2) Standard Penetration Testing.
- (3) Fat Clay (CH) was encountered in borings B-1, B-3 and B-4.

A graphical presentation of the subsurface conditions is shown on the Subsurface Cross Section Diagram(s) included in Appendix A.

### 3.3 GROUNDWATER OBSERVATIONS

Water levels were measured in our boring logs in Appendix B. Groundwater depths were not encountered in remaining borings prior to introduction of drilling fluid in borings B-1 through B-10 and P-1 through P-4 not encountered prior to termination in borings R-1 through R-7. Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors. Based upon our interpretation of the subsurface data, the seasonal high groundwater level is anticipated to be perched between 2 feet and 10 feet below the existing grades, partly due to an anticipated perched water condition caused by high fines materials.

### 3.4 KARST GEOLOGY

Areas within Central Florida are known to have karst geology. Karst terrain is characterized by voids, soil domes, soil raveling, interrupted drainage, disappearing streams, and topographical features such as sinkholes and closed depressions. These features are the result of the dissolution of soluble bedrock such as limestone by groundwater and/or the infiltration of surface water.

As water enters fractures, bedding planes, and other bedrock discontinuities within soluble bedrock, it slowly dissolves the rock and enlarges the discontinuities. Over geologic time, this results in the formation of solution channels or underground passages and ravines which may develop into surficial manifestations such as sinkholes and closed depressions. The dissolution of bedrock is generally a very slow process. However, soil may be eroded or raveled into the enlarged bedrock fractures, creating soil domes. Eventually, soil in these features can be lost through groundwater movement, resulting in surface depressions and potential sudden ground subsidence.

The soils derived from and overlying the carbonate bedrock are typically a clayey and silty soil with varying amounts of sand and rock fragments. The bedrock within the general geographic region is characterized by jointed and faulted soluble carbonate lithologies interbedded with non-carbonate lithologies. These carbonate formations are generally moderately to highly solution prone.



The degree of weathering or solutioning is often controlled by lithological variations and structural orientations. Where structural discontinuities intersect or in areas which are highly fractured, solutioning is intensified creating low areas and seams that are typically filled with residual clayey soils. Conversely, more competent, high areas represent slightly- to non-fractured lithologies that are often coarser grained and only slightly solution prone.

The underlying carbonate formations of the project geographic area are susceptible to Karst-related sinkhole development. Contributing characteristics and factors controlling the development include subsurface structural deformation, joint sets, and thick carbonate bedding within the area. Due to the shallow nature of the exploration performed, the borings did not reveal overt signs of soils associated with karst activity or carbonate rocks.

### **3.5 LABORATORY TESTING**

The laboratory testing consisted of selected tests performed on samples obtained during our field exploration operations. Classification and index property tests were performed on representative soil samples. The index testing program included natural moisture content tests (ASTM D 2216), percent passing the No. 200 sieve (ASTM D 6913), and falling head permeability tests (ASTM D2434).

Each sample was visually classified on the basis of texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including USCS classification symbols, and ASTM D2487 Standard Practice for Classification for Engineering Purposes (Unified Soil Classification System (USCS)). After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

## **4.0 DESIGN RECOMMENDATIONS**

### **4.1 FOUNDATIONS**

Provided subgrades and structural fills are prepared as recommended in this report, the proposed structure can be supported by shallow foundations including column footings and continuous wall footings. We recommend the foundation design use the following parameters.

The site is currently developed with a structure within the northwestern portion of the property. Existing structures, concrete foundation slabs, and associated utilities that still remain from the previous site use will need to be removed prior to the development.

As mentioned in Section 3.1, very loose sandy soils were encountered in the upper 10 feet below the existing ground surface at several boring locations within the proposed building footprints. As outlined in Section 5.1.3, a heavy vibratory roller should be used to compact the surface soils in the area of the building footprints. Dynamic cone penetrometer (DCP) soundings, performed by hand, should also be performed subsequent to the surface soil heavy compaction operations to confirm densification of the very loose soils within the upper 6 feet of the finished floor elevations.



Design Parameter	Column Footing	Wall Footing
Net Allowable Bearing Pressure <sup>(1)</sup>	3,000 psf	3,000 psf
Acceptable Bearing Soil Material	SAND (SP), SAND WITH CLAY (SP-SC) - Stratum I	SAND (SP), SAND WITH CLAY (SP-SC) - Stratum I
Minimum Width	24 inches	18 inches
Min. Footing Embedment Depth (below slab or finished grade)	18 inches	18 inches
Estimated Total Settlement <sup>(2)</sup>	Less than 1- inch	Less than 1- inch
Estimated Differential Settlement <sup>(3)</sup>	Less than ¾ inches between columns	Less than ¾ inches

Notes:

- (1) Net allowable bearing pressure is the applied pressure in excess of the surrounding overburden soils above the base of the foundation.
- (2) Based on assumed structural loads. If final loads are different, ECS must be contacted to update foundation recommendations and settlement calculations.
- (3) Based on maximum column/wall loads and variability in borings. Differential settlement can be re-evaluated once the foundation plans are more complete.

**Potential Undercuts:** Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. If soils with excessive organics (> 6%), soft or unsuitable soils are observed at the footing bearing elevations, the unsuitable soils should be undercut and removed. Any undercut should be backfilled with lean concrete ( $f'_c \geq 1,000$  psi at 28 days) up to the original design bottom of footing elevation; the original footing shall be constructed on top of the hardened lean concrete.

#### 4.1.1 Canopy Foundation

In order to evaluate foundation systems for the fuel canopy structure, the soil profile information from soil test borings B-9 and B-10 were considered.

The proposed canopy can be supported by a spread footing foundation with the lateral load for the design of fuel canopy structure assumed not to be exceeding 10 kips as per our analysis. The design of the canopy foundation shall utilize the parameters shown below in table 4.1.1.1.

**Table 4.1.1.1 Canopy Foundation Design**

Design Parameters	Column Footing
Net Allowable Soil Pressure	3,000 psf
Acceptable Maximum Temporary Soil Pressure Due To Overturning Live Load	3,000 psf
Acceptable Bearing Soil Material	(SP) Medium Dense SAND (Compacted)
Minimum Width	36 inches
Minimum Footing Embedment Depth (below slab or finished grade)	24 inches



For the design of the canopy foundation to resist uplift and overturning, the following soil parameters in Table 4.1.1.2 can be utilized. These parameters assume the foundation is in contact with stable, undisturbed natural soils or properly placed and compacted engineered fill.

**Table 4.1.1.2 Soil Parameters**

SOIL PARAMETER	EST. VALUE (SP, SP-SC, SC)
Coefficient of Earth Pressure at Rest (K <sub>o</sub> ):	0.5
Coefficient of Active Pressure at Rest (K <sub>a</sub> ):	0.33
Coefficient of Passive Earth Pressure (K <sub>p</sub> ):	3.00
Soil Moist Unit Weight (σ):	110 pcf
Cohesion (c):	0 psf
Angle of Internal Friction (φ):	30°
Sliding Friction Coefficient [Concrete on Soil] (μ):	0.35
Skin Friction [Concrete cast against Soil] (F <sub>s</sub> ):	250 psf

#### 4.2 SLABS ON GRADE

Provided subgrades and structural fills are prepared as discussed herein, the proposed floor slabs can be constructed as Ground Supported Slabs (or Slab-On-Grade). Based on an assumed lowest finished floor elevation of EL. +88 feet, it appears that the slabs will bear on Stratum I – SAND (SP) or SAND WITH CLAY (SP-SC). Soft or yielding soils may be encountered in some areas. Those soils should be removed and replaced with compacted Structural Fill in accordance with the recommendations included in this report.

**Subgrade Modulus:** Provided the Structural Fill and Granular Drainage Layer are constructed in accordance with our recommendations, the slab may be designed assuming a modulus of subgrade reaction,  $k_1$  of 150 pci (lbs./cu. inch). The modulus of subgrade reaction value is based on a 1 ft by 1 ft plate load test basis.

**Vapor Barrier:** Before the placement of concrete, a vapor barrier may be placed on top of the granular drainage layer to provide additional protection against moisture penetration through the floor slab. When a vapor barrier is used, special attention should be given to surface curing of the slab to reduce the potential for uneven drying, curling and/or cracking of the slab. Depending on proposed flooring material types, the structural engineer and/or the architect may choose to eliminate the vapor barrier.

**Slab Isolation:** Soil-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration prevents the use of a free-floating slab such as in a drop down footing/monolithic slab configuration, the slab should be designed with suitable reinforcement and load transfer devices to preclude overstressing of the slab.



### 4.3 PAVEMENTS

**Subgrade Characteristics:** Based on the results of our borings, it appears that the pavement subgrades in cuts will consist mainly of SAND (SP) material.

Our scope of services did not include extensive sampling and Limerock Bearing Ratio (LBR) testing of existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, we have assumed pavement-related design parameters that are considered to be typical for the area soil types and roadway type as per the “FDOT Standards & Specifications”. The recommended pavement thicknesses presented in this report section are considered typical and minimum for the assumed parameters in the general site area. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented. However, the client, the owner, and the project designers should be aware that thinner pavement sections may result in increased maintenance costs and lower than anticipated pavement life.

The preliminary pavement sections below are guidelines that may or may not comply with local jurisdictional minimums.

PROPOSED PAVEMENT SECTIONS				
Component	Asphalt		Concrete	
	Standard	Heavy	Standard	Heavy
Stabilized Subgrade	12"	12"	12"	12"
Base Course	6"	8"	N/A	N/A
Surface Course	1.5"	2"	5"	6"

In general, heavy duty sections are areas that will be subjected to trucks, buses, or other similar vehicles including main drive lanes of the development. Light duty sections are appropriate for vehicular traffic and parking areas. In lieu of stabilized sub-grade, the base course material can be used at 1.5X the thickness as noted above.

Large, front loading trash dumpsters frequently impose concentrated front wheel loads on pavements during loading. This type of loading typically results in rutting of asphalt pavement and ultimately pavement failures. For preliminary design purposes, we recommend that the pavement in trash pickup areas consist of a 6-inch thick, 4,000 psi, reinforced concrete slab over 6-inches of dense graded aggregate. When traffic loading becomes available ECS or the Civil Engineer can design the pavements.

Prior to subbase placement and paving, LBR testing of the subgrade soils (both natural and fill soils) should be performed to determine the soil engineering properties for final pavement design.

In areas where Portland cement concrete pavement is planned, the concrete should be placed upon a minimum of 12 inches of compacted, free draining material and compacted to 98 percent of the Modified Proctor maximum dry density (ASTM D1557).

In areas where asphaltic concrete pavements are used, we suggest stabilizing the subgrade materials to a minimum Florida Bearing Value (FBV) of 75 pounds per square inch (psi). As an alternate for the FBV, materials can have a LBR of 40 percent. All stabilized subgrade materials should be compacted to 98 percent of the Modified Proctor (ASTM D-1557) maximum dry density and meet specification

requirements for Type B or Type C Stabilized Subgrade by the Florida Department of Transportation (FDOT). The stabilized subgrade may consist of imported material or a blend of on-site soils and imported materials. If a blend is proposed, we recommend that the contractor performs a mix design to find the optimum mix proportions.

**Base Course:** Based on the groundwater conditions encountered at the subject property, it is our professional opinion that crushed concrete or limerock are likely to be the economical and feasible base course options for this project.

Limerock should follow a minimum LBR of 100 percent and should be mined from an FDOT approved source. Place limerock in maximum six-inch lifts and compact each lift to a minimum density of 95 percent of the Modified Proctor maximum dry density (ASTM D-1557).

Crushed concrete should follow the FDOT specification for material qualifications and placement. Place crushed concrete base in maximum 6-inch lifts and compact to a minimum density of 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density according to their specification. Perform compliance testing for the base course to a depth of one foot at a frequency of one test per 5,000 square feet, or at a minimum of two test locations, whichever is greater.

**Effects of Groundwater:** One of the most critical influences on the pavement performance in Central Florida is the relationship between the pavement subgrade and the seasonal high groundwater level. Roadways and parking areas that have not considered these effects typically exhibit signs of deterioration due to degradation of the base and the base/surface course bond. We recommend that the seasonal high groundwater (SHGWT) and the bottom of the base course be separated by at least 12 inches for crushed concrete and 18 inches for limerock. Please note that a higher separation criterion between SHGWT and bottom of the base course may be required based on reviewing agency indication.

**Landscape Drains and Curbing:** If needed, where landscaped sections are located adjacent to parking lots or driveways, we recommend that drains be installed around these landscaped sections to protect the asphalt pavement from excess rainfall and over irrigation. Migration of irrigation water from the landscape areas to the interface between the asphalt and the base usually occurs unless landscape drains are installed. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration. The underdrains or strip drains should be routed to a positive outfall at the pavement area catch basins.

It is recommended that curbing around landscaped sections adjacent to parking lots and driveways be constructed with full-depth curb sections. Using extended curb sections which lie directly on top of the final asphalt level, or eliminating curbing entirely, can allow migration of irrigation water from the landscaped areas to the interface between the asphalt and the base. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration.

#### **4.4 STORMWATER MANAGEMENT STRUCTURES**

It is our understanding that the proposed facility will include a stormwater management pond in the northeastern portion of the site. Based on the laboratory test results for samples obtained from the SPT borings performed within to the pond footprint (P-1 through P-4), the upper stratum is classified



predominantly as SAND (SP), SAND WITH CLAY (SP-SC), CLAYEY SAND (SC) to the maximum termination of depth of borings (25 feet below existing grades).

The groundwater table was not encountered within the borings prior to boring termination at 25 feet at the boring locations P-1 through P-4. The seasonal high groundwater level is estimated to be approximately 4 feet to 7 feet below existing grades within the general vicinity of the proposed pond due to a temporary transient perched water condition caused by high fines soils.

The table below outlines the recommended design parameters for the proposed stormwater pond area.

Stormwater System ID	Boring ID	Average Seasonal High Ground Water Table Elevation (ft-datum)*	Average Base of Aquifer Elevation (ft-datum) *	Fillable Porosity	Average Horizontal Saturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kh (ft/day)**	Average Vertical Unsaturated Hydraulic Conductivity of Mobilized Surficial Aquifer, Kv (ft/day)**
Northwestern Pond	P-1 through P-4	80.5	80.0	0.25	17.7	11.8

Notes: \* Elevations at the boring locations were obtained using publicly available topographic information and should be considered approximate to the nearest foot.

\*\* The Kh and Kv values are laboratory values and are unfactored. The design engineer should take this into consideration for their design and apply an appropriate factor of safety as necessary.

ECS can perform a baseflow/groundwater seepage analysis once the stormwater pond configuration has been established. The stormwater pond bottom and side slopes should be stabilized according to applicable Water Management district and local municipality guidelines.

**We recommend that the permeability values given above should at a minimum include a factor of safety of 2 for design.**

For dry detention ponds bottoms, do not use muck grown sod. It will slow infiltration in the pond and the pond will not work as designed. All fill material used to bring the ponds to final grades should be clean, inorganic, granular soil (fine sand) with a fines content of no more than 5 percent. Care should be taken not to overcompact the pond bottom during excavation and grading of the ponds. The soil encountered at the site may be susceptible to overcompaction which can significantly decrease the infiltration capacity of the pond.

In addition, sediment control measures should be employed during the construction process to keep the pond from receiving significant amounts of stormwater runoff from the surrounding construction site. This runoff is likely to contain suspended fine-grained soil particles that can impede the infiltration capacity of the ponds if allowed to settle out on the pond bottoms. If dewatering effluent or stormwater runoff from the active construction site is discharged to the pond, we recommend scraping and removal of fine-grained sediments that may have accumulated on the pond bottom.

ECS should be present to observe the condition of the dry detention ponds upon excavation to confirm the geotechnical recommendations within this report as well as prior to completion of the pond to observe that the accumulated sedimentation has been removed as described above. These observations are considered critical with respect to the performance of the dry detention pond areas. The bottoms of the pond area should be free of debris and impermeable materials (as evaluated by ECS) and if observed, these materials should be removed and replaced within soils that contain less than 5 percent overall fines content. Finally, the dry detention pond bottom should be carefully surveyed in order to confirm that the graded pond bottom is at the appropriate design elevation according to the correct design datum. **ECS is not responsible for the performance of the dry detention ponds which are constructed without continuous observations by our group.**

## 5.0 SITE CONSTRUCTION RECOMMENDATIONS

### 5.1 SUBGRADE PREPARATION

#### 5.1.1 Stripping and Grubbing

The subgrade preparation should consist of stripping all vegetation, rootmat, topsoil, existing fill, and any soft or unsuitable materials from the 10-foot expanded building and 5-foot expanded pavement limits, and 5 feet beyond the toe of structural fills. Any encountered topsoil and unsuitable materials should be removed prior to the placement of structural fill or construction of structures. Additionally, any underground utilities or underground tanks that will not be part of the new construction should be properly capped and abandoned or removed. ECS should be retained to verify the topsoil and unsuitable surface materials have been removed prior to the placement of structural fill or construction of structures.

#### 5.1.2 Proofrolling

Prior to fill placement or other construction on subgrades, the subgrades should be evaluated by an ECS field technician. The exposed subgrade should be thoroughly proofrolled with construction equipment having a minimum axle load of 20 tons [e.g. fully loaded tandem-axle dump truck]. Proofrolling should be traversed in two perpendicular directions with overlapping passes of the vehicle under the observation of an ECS technician. This procedure is intended to assist in identifying any localized yielding materials.

Where proofrolling identifies areas that are unstable or “pumping” subgrade those areas should be repaired prior to the placement of any subsequent structural fill or other construction materials. Methods of stabilization include undercutting, moisture conditioning, or chemical stabilization. The situation should be discussed with ECS to determine the appropriate procedure. Test pits may be excavated to explore the shallow subsurface materials to help in determining the cause of the observed unstable materials, and to assist in the evaluation of appropriate remedial actions to stabilize the subgrade.

#### 5.1.3 Site Temporary Dewatering

**Limited Excavation Dewatering:** Based upon our subsurface exploration at this site, as well as significant experience on sites in nearby areas of similar geologic setting, we believe construction dewatering at this site will be mainly limited to removing accumulated rain water and during the installation of the proposed exfiltration system.



Deep wells should not be required for the temporary dewatering system. However, the dewatering operations can be handled by the use of conventional submersible pumps directly in the excavation, temporary trenches, or French drains.

If temporary sump pits are used, we recommend they be established at a depth of 3 feet to 5 feet below the bottom of the excavation subgrade or bottom of footing. A perforated 55 gallon drum or other temporary structure could be used to house the pump. We recommend continuous dewatering of the excavations using electric pumps or manned gasoline pumps be used during construction. If utilized, the french drain should consist of a filter fabric lined trench filled with FDOT No. 57 stone or equivalent open graded stone. A minimum of 4-inch diameter PVC pipe should be placed in the stone bed to enhance water flow. After the installation has been completed, the filter fabric should be wrapped over the top of the gravel and pipe whereupon placement of fill may proceed to grade.

## **5.2 EARTHWORK OPERATIONS**

### **5.2.1 Structural Fill**

After subgrade preparation and observation has been completed and a stable subgrade exists, fill placement may begin. Structural fill materials should not be placed on soils which have been recently subjected to precipitation. Wet soils should be removed prior to the placement of engineered fill, granular sub-base materials, foundation/slab concrete, or paving materials.

Materials used as structural fill for shallow fill areas should consist of approved material classified as SP, SP-SM, SM, SC or more granular, which are free of debris, particles larger than 3 inches in diameter (4-inches for trench/utility backfill), organic inclusions, cinders, ash, or excess moisture.

Prior to placement of structural fill, representative bulk samples (about 50 pounds) of on-site and off-site borrow should be submitted to ECS for laboratory testing, which will include natural moisture content, grain-size distribution, and moisture-density relationships for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications.

The structural fill, consisting of suitable on-site soils or off-site granular borrow material, or a mixture thereof, should be placed in essentially horizontal lifts with a maximum loose thickness of 8 inches and moisture conditioned to within  $\pm 3$  percentage points of the optimum moisture content. Structural fill should be placed and compacted to a minimum compaction of 95% of the maximum dry density in accordance with the Modified Proctor method (ASTM D1557).

Each lift of compacted engineered fill should be tested by a representative of the geotechnical engineer prior to placement of subsequent lifts. Compaction testing should be performed at the rate of at least 1 test per 2,500 square feet for each lift of fill within the building pad and at the rate of at least 1 test per 5,000 square feet for each lift of fill outside of the building pad, with a minimum of 3 tests per lift of fill within the building footprint. The elevation and location of the tests should be accurately identified at the time of fill placement. Areas which fail to achieve the required degree of compaction should be recompacted and retested until minimum compaction is achieved. Failing test areas may require adjustments in moisture content or other suitable remedial activities in order to achieve the required compaction.

The expanded limits of the proposed construction areas should be well defined, including the limits of the fill zones for buildings, pavements, and slopes, etc., at the time of fill placement. Grade controls should be maintained throughout the filling operations.

Compaction equipment suitable to the soil type being compacted should be used to compact the subgrades and fill materials. Sheepsfoot compaction equipment should be suitable for the fine-grained soils (Clays and Silts). A vibratory steel drum roller should be used for compaction of coarse-grained soils (Sands) as well as for sealing compacted surfaces. In confined areas such as utility trenches, portable compaction equipment and thin lifts of 3 to 4 inches may be required to achieve specified degrees of compaction.

At the end of each work day, all fill areas should be graded to facilitate drainage of any precipitation and the surface should be sealed by use of a smooth-drum roller to limit infiltration of surface water. During placement and compaction of new fill at the beginning of each workday, the contractor may need to scarify existing subgrades to a depth on the order of 4 inches so that a weak plane will not be formed between the new fill and the existing subgrade soils.

Positive site drainage should be maintained during earthwork operations in an effort to maintain the integrity of the site surface soil. When wet, the site soils may degrade quickly with disturbance from contractor operations and will be extremely difficult to stabilize for fill placement. Consequently, the contractor should be prepared to implement aggressive mechanical or chemical drying, depending upon the actual site conditions. We strongly recommend that mass grading for the project be performed during the drier months to help facilitate favorable moisture conditions for the site soils. If water must be added to raise the moisture content of the soil, it should be uniformly applied and thoroughly mixed into the soil. In addition to maintaining proper site drainage for the purpose of maintaining the integrity of the site soils, care must be taken to control the surface water flow due to the inherent risks associated with risk for sinkhole development as previously discussed.

### 5.3 FOUNDATION AND SLAB OBSERVATIONS

**Protection of Foundation Excavations:** Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation concrete should be placed the same day that excavations are made. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, a 1 to 3-inch thick “mud mat” of “lean” concrete should be placed on the bearing soils before the placement of reinforcing steel.

**Footing Subgrade Observations:** Most of the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. It is important to have ECS observe the foundation subgrade prior to placing foundation concrete, to confirm the bearing soils are what was anticipated.

**Slab Subgrade Verification:** Prior to placement of a drainage layer, the subgrade should be prepared in accordance with the recommendations found in **Section 5.1.2 Proofrolling**.



## 5.4 UTILITY INSTALLATIONS

**Utility Subgrades and Excavation:** The soils encountered in our exploration are expected to be generally suitable for support of utility pipes to include an underground storage tank (UST). The pipe subgrade, especially where existing fill was encountered, should be observed and probed for stability by the testing agency to evaluate the suitability of the materials encountered. Any loose or unsuitable materials encountered at the utility pipe subgrade elevation should be removed and replaced with suitable compacted structural fill or pipe bedding material. Based upon the type of soils encountered on site, the contractor will need to consider installing trench boxes during deep utility and UST excavations.

**Utility Backfilling:** The granular bedding material (often AASHTO #57 stone) should be at least 4 inches thick, but not less than that specified by the civil engineer's project drawings and specifications. We recommend that the bedding materials be placed up to the springline of the pipe. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for Structural Fill and Fill Placement.

**Excavation Safety:** All excavations and slopes should be constructed and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing, constructing, and maintaining stable temporary excavations and slopes. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

## 6.0 CLOSING

ECS has prepared this report to guide the geotechnical-related design and construction aspects of the project. We performed these services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report.

The description of the proposed project is based on information provided to ECS by Bowman Consulting Group. If any of this information is inaccurate or changes, either because of our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted so we can review our recommendations and provide additional or alternate recommendations that reflect the proposed construction.

We recommend that ECS review the project plans and specifications so we can confirm that those plans/specifications are in accordance with the recommendations of this geotechnical report.

Field observations, and quality assurance testing during earthwork and foundation installation are an extension of, and integral to, the geotechnical design. We recommend that ECS be retained to apply our expertise throughout the geotechnical phases of construction, and to provide consultation and recommendation should issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.



## **APPENDIX A – Diagrams**

Site Location Diagram  
Boring Location Diagram  
Soil Survey



# Site Location Diagram THE VILLAGES GROCERY




MILLER BLVD & MICRO RACETRACK RD, THE VILLAGES, FLORIDA  
BOWMAN CONSULTING GROUP

ENGINEER JPH
SCALE AS NOTED
PROJECT NO. 24:6724
SHEET 1 OF 1
DATE 12/14/2020





**Legend**

-  Approx. Building Boring Locations
-  Approx. Pond Boring Locations
-  Approx. Roadway Boring Locations

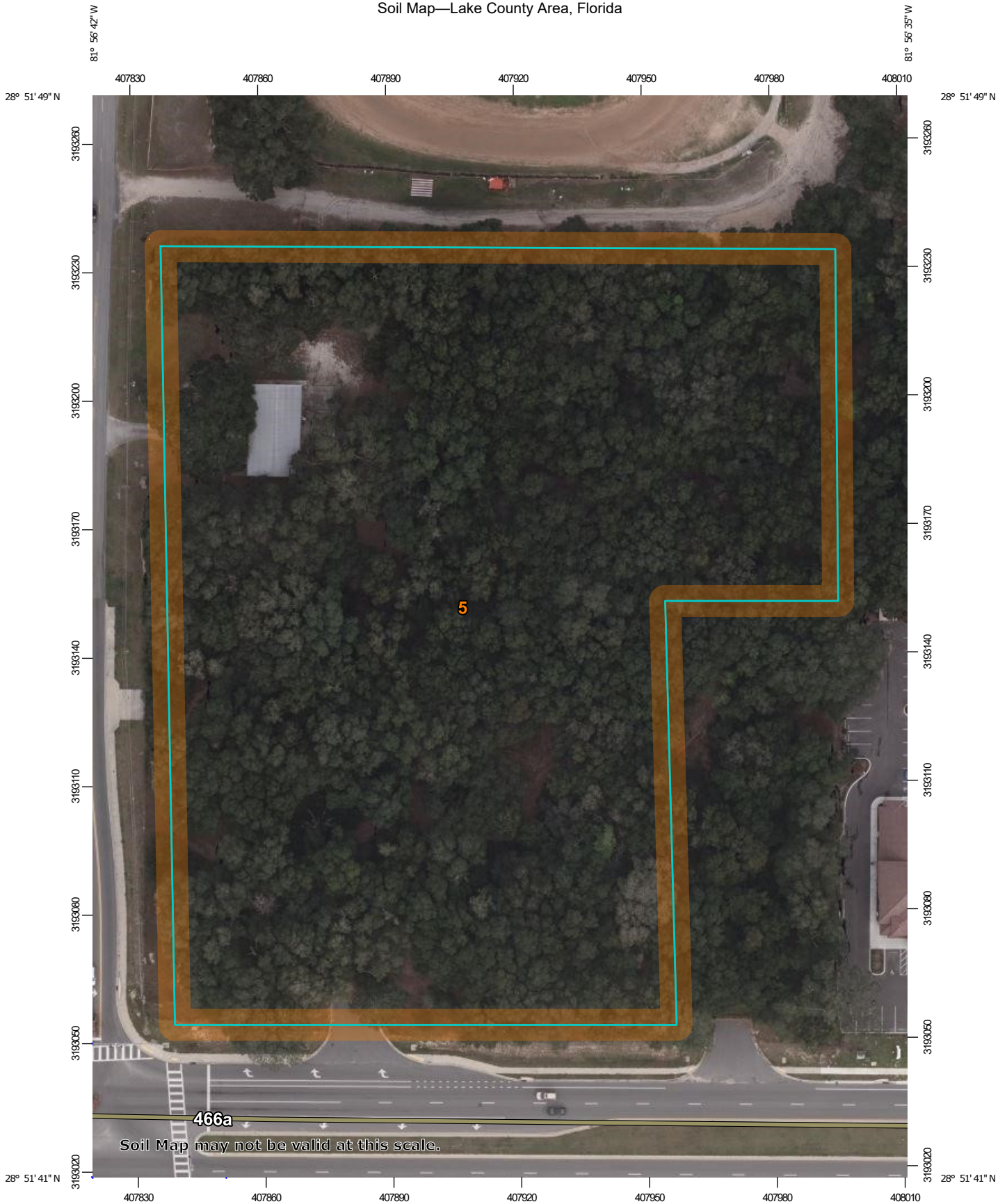


**Boring Location Diagram**  
**THE VILLAGES GROCERY**  
 MILLER BLVD & MICRO RACETRACK RD  
 THE VILLAGES , FLORIDA  
 BOWMAN CONSULTING GROUP

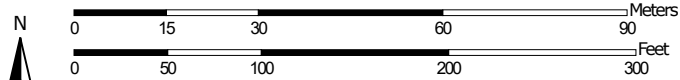
ENGINEER JPH
SCALE AS NOTED
PROJECT NO. 24:6724
SHEET 1 OF 1
DATE 12/14/2020



Soil Map—Lake County Area, Florida



Map Scale: 1:1,230 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84





## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County Area, Florida

Survey Area Data: Version 20, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 15, 2020—Jan 26, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Apopka sand, 0 to 5 percent slopes	6.1	100.0%
<b>Totals for Area of Interest</b>		<b>6.1</b>	<b>100.0%</b>



## **APPENDIX B – Field Operations**

Reference Notes for Boring Logs

Subsurface Exploration Procedure: Standard Penetration Testing (SPT)

Boring Logs B-1 through B-10, P-1 through P-4 and R-1 through R-7

Cross-Section A-A'

Cross-Section B-B'

Cross-Section C-C'

# REFERENCE NOTES FOR BORING LOGS

MATERIAL <sup>1,2</sup>	
	<b>ASPHALT</b>
	<b>CONCRETE</b>
	<b>GRAVEL</b>
	<b>TOPSOIL</b>
	<b>VOID</b>
	<b>BRICK</b>
	<b>AGGREGATE BASE COURSE</b>
	<b>GW WELL-GRADED GRAVEL</b> gravel-sand mixtures, little or no fines
	<b>GP POORLY-GRADED GRAVEL</b> gravel-sand mixtures, little or no fines
	<b>GM SILTY GRAVEL</b> gravel-sand-silt mixtures
	<b>GC CLAYEY GRAVEL</b> gravel-sand-clay mixtures
	<b>SW WELL-GRADED SAND</b> gravelly sand, little or no fines
	<b>SP POORLY-GRADED SAND</b> gravelly sand, little or no fines
	<b>SM SILTY SAND</b> sand-silt mixtures
	<b>SC CLAYEY SAND</b> sand-clay mixtures
	<b>ML SILT</b> non-plastic to medium plasticity
	<b>MH ELASTIC SILT</b> high plasticity
	<b>CL LEAN CLAY</b> low to medium plasticity
	<b>CH FAT CLAY</b> high plasticity
	<b>OL ORGANIC SILT or CLAY</b> non-plastic to low plasticity
	<b>OH ORGANIC SILT or CLAY</b> high plasticity
	<b>PT PEAT</b> highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION	PARTICLE SIZES	
Boulders	12 inches (300 mm) or larger	
Cobbles	3 inches to 12 inches (75 mm to 300 mm)	
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")	<0.074 mm (smaller than a No. 200 sieve)	

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, QP <sup>4</sup>	SPT <sup>5</sup> (BPF)	CONSISTENCY <sup>7</sup> (COHESIVE)
<0.25	<3	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT <sup>7</sup>	COARSE GRAINED (%) <sup>8</sup>	FINE GRAINED (%) <sup>8</sup>
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective (ex: "Silty")	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT <sup>5</sup>	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS <sup>6</sup>	
	WL (First Encountered)
	WL (Completion)
	WL (Seasonal High Water)
	WL (Stabilized)

FILL AND ROCK			
FILL	POSSIBLE FILL	PROBABLE FILL	ROCK

<sup>1</sup>Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

<sup>2</sup>To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

<sup>3</sup>Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

<sup>4</sup>Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

<sup>5</sup>Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

<sup>6</sup>The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

<sup>7</sup>Minor deviation from ASTM D 2488-17 Note 14.

<sup>8</sup>Percentages are estimated to the nearest 5% per ASTM D 2488-17.





## SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

### SPT Procedure:

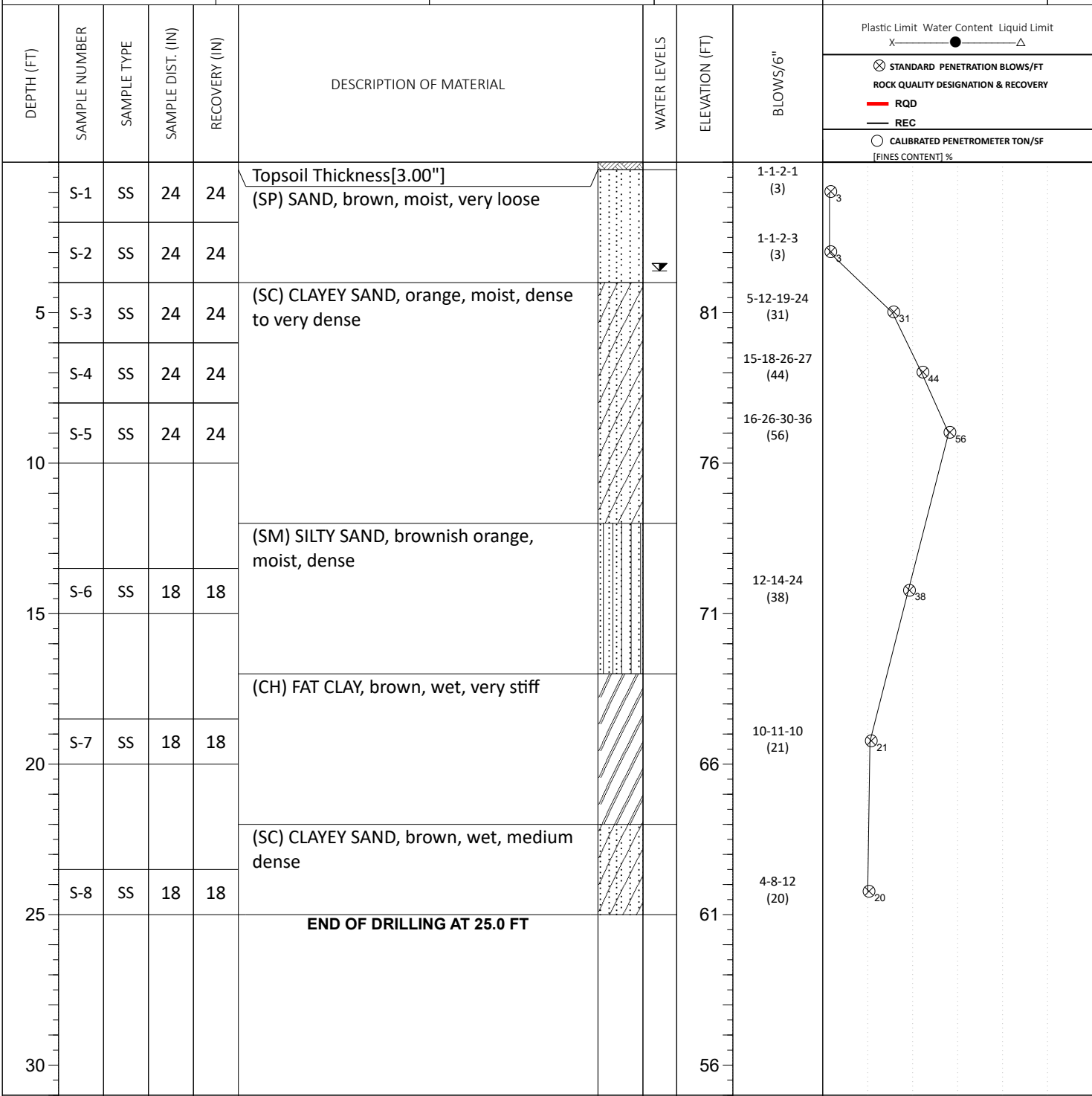
- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)
- Auger is advanced\* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet
- Obtain two-inch diameter soil sample



*\*Drilling Methods May Vary*— The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646540.9</b>	EASTING: <b>673992.9</b>	STATION:	SURFACE ELEVATION: <b>86.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

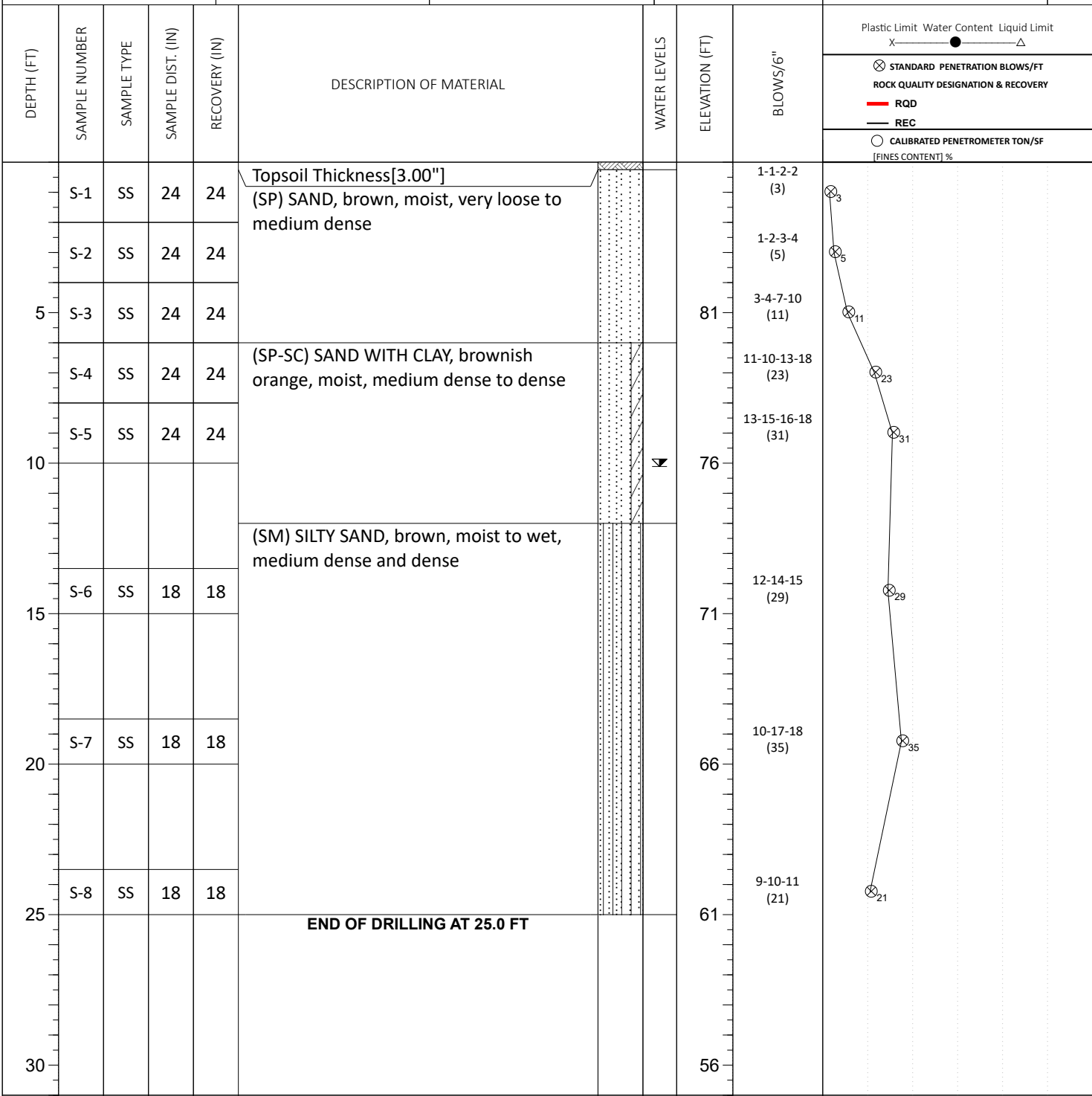
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>3.50</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646542.7</b>	EASTING: <b>674212.6</b>	STATION:	SURFACE ELEVATION: <b>86.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



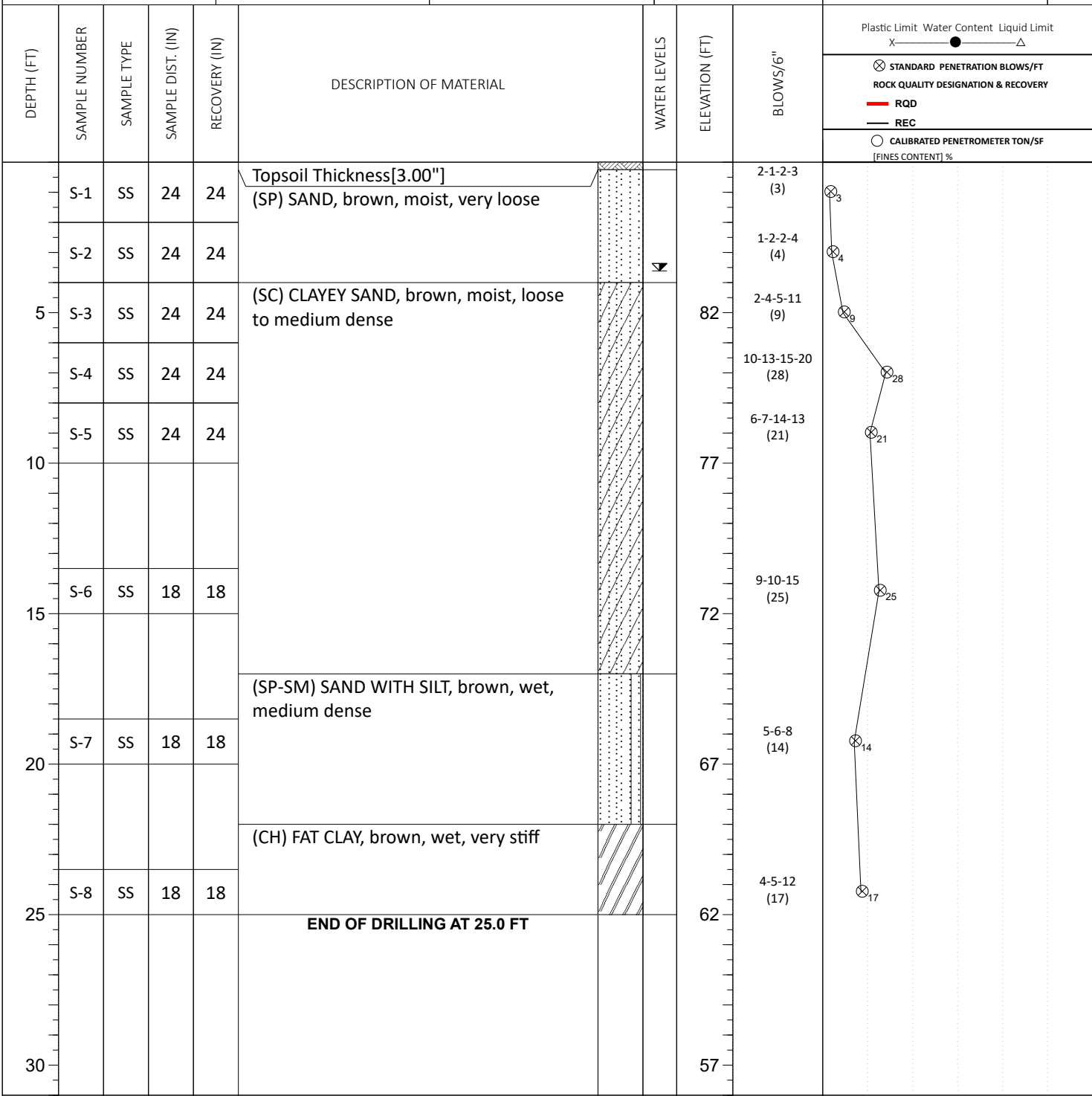
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>10.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> LOGGED BY: DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646472.6</b>	EASTING: <b>674102.8</b>	STATION:	SURFACE ELEVATION: <b>87.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

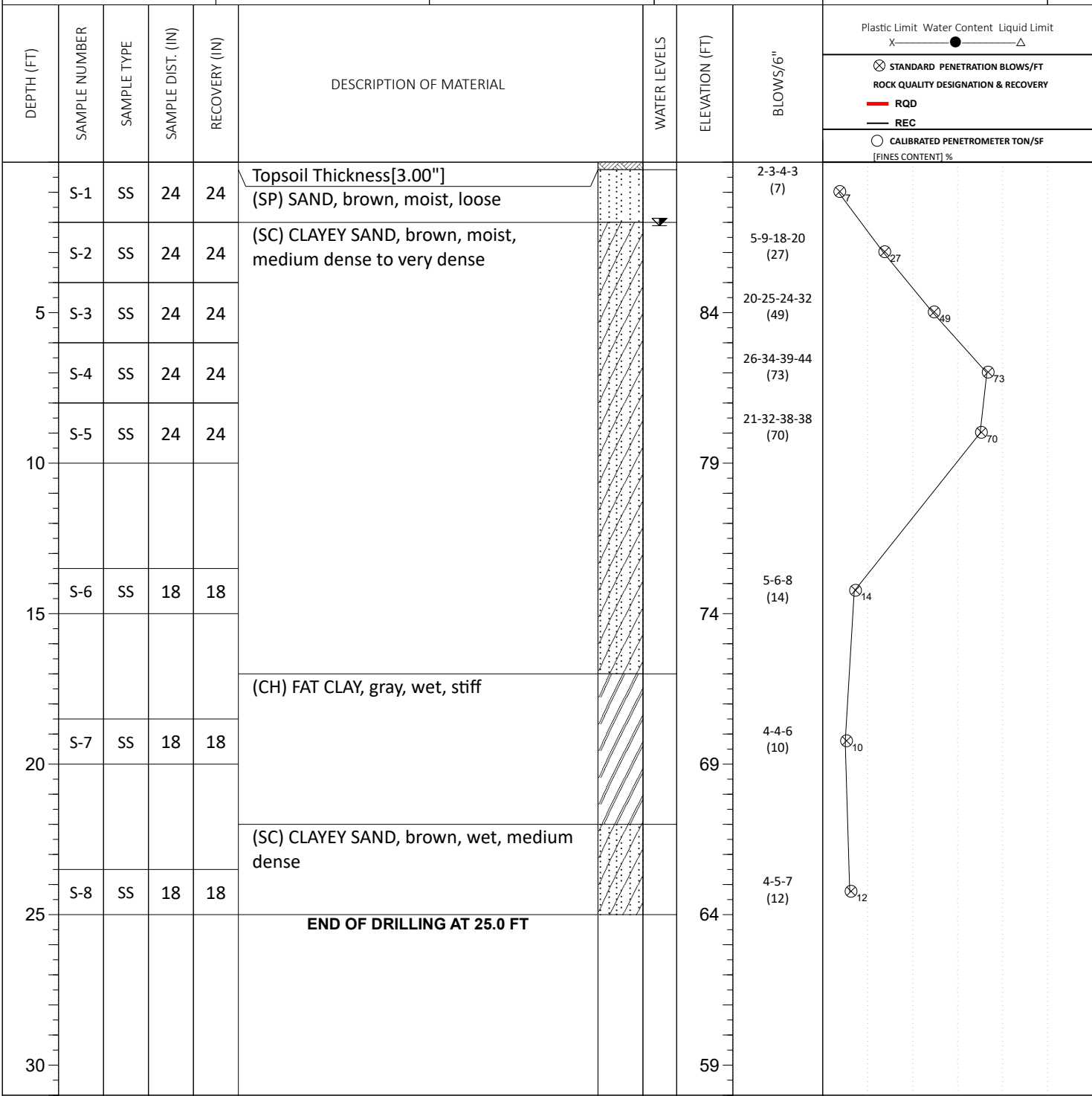
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>3.50</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646421.3</b>	EASTING: <b>673915.6</b>	STATION:	SURFACE ELEVATION: <b>89.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



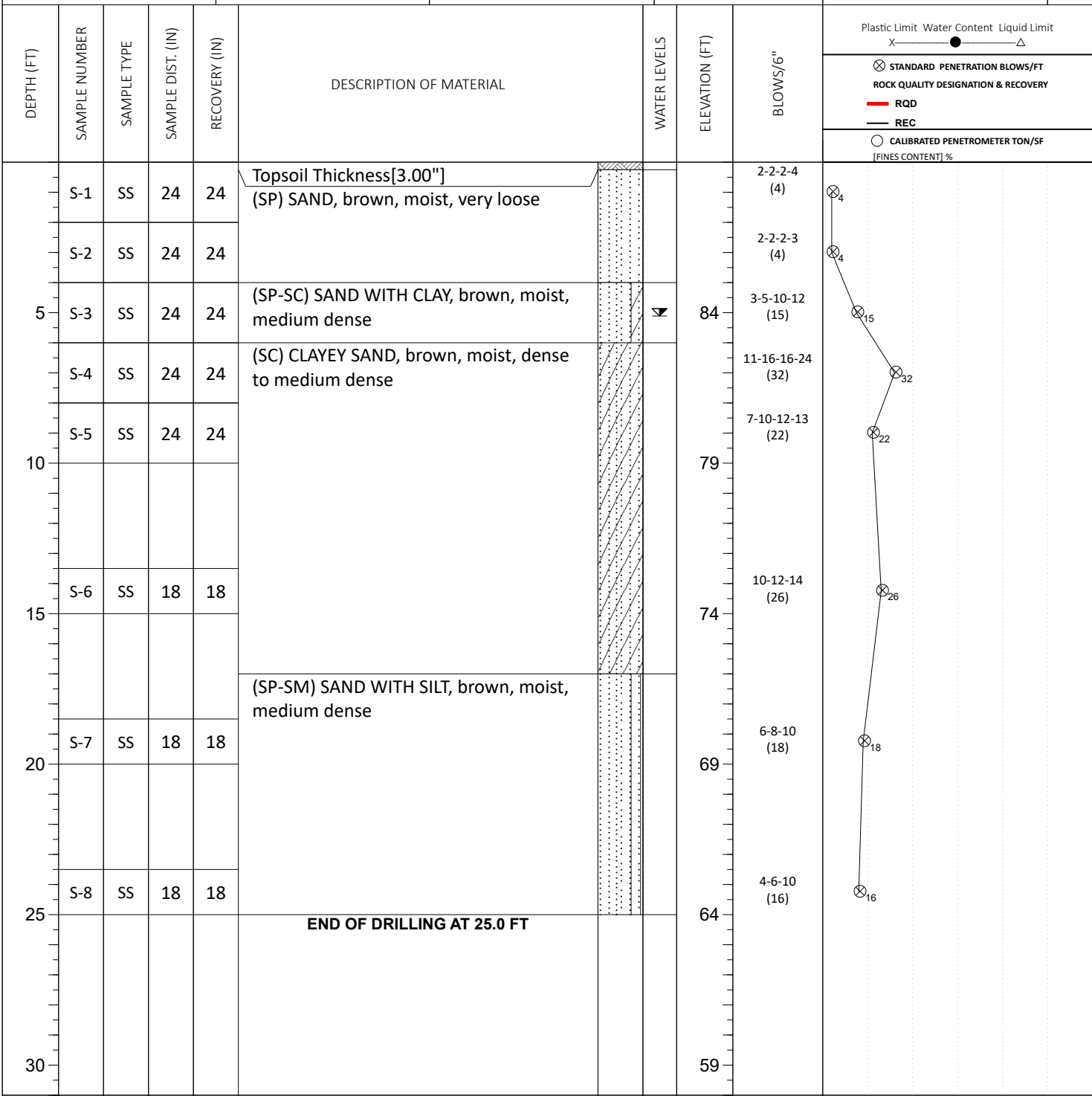
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>2.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646402.6</b>	EASTING: <b>674011.8</b>	STATION:	SURFACE ELEVATION: <b>89.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

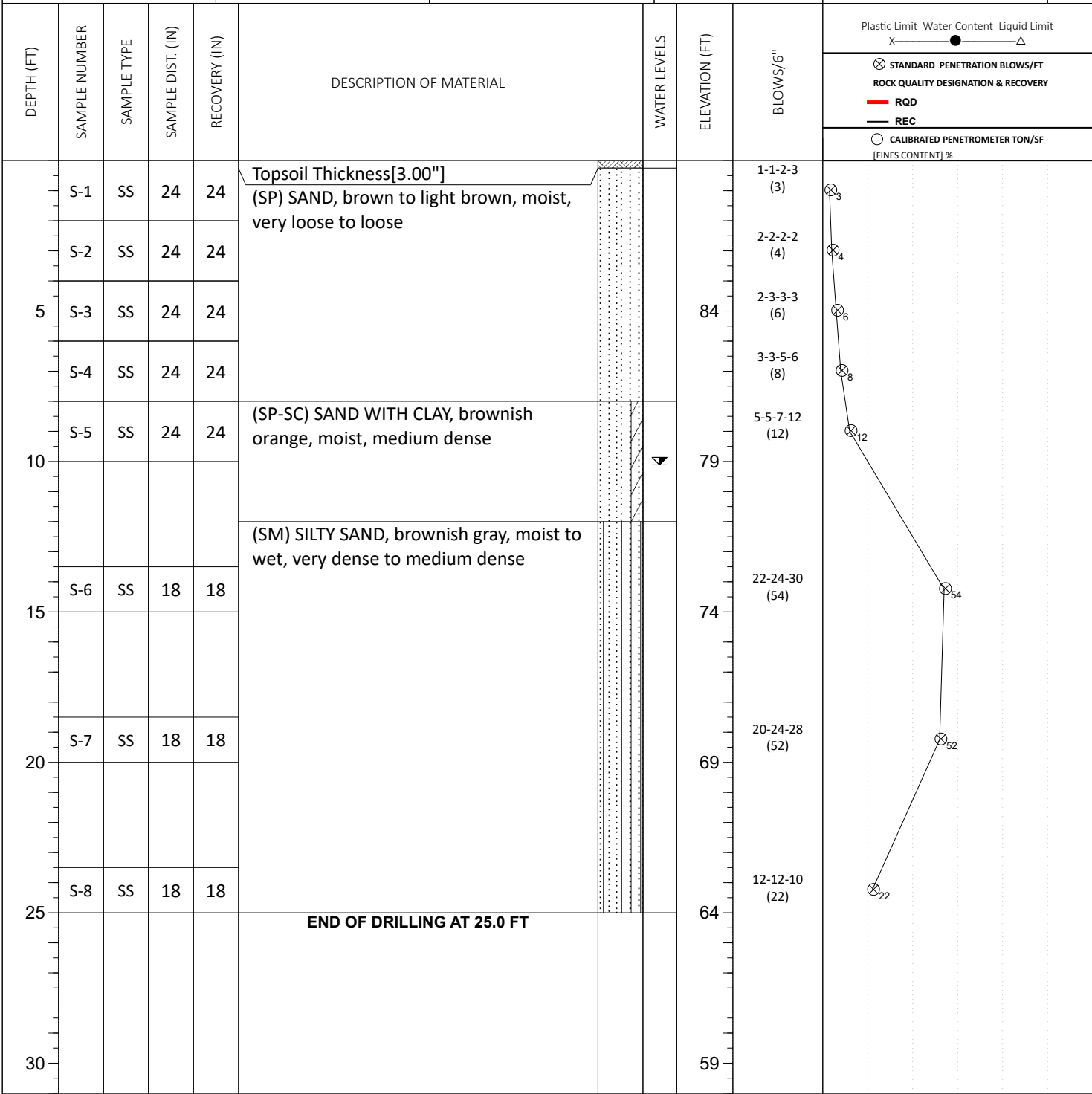
▼ WL (First Encountered) ▼ WL (Completion) ▼ WL (Seasonal High Water) <b>5.00</b> ▼ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	LOGGED BY:	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646400.9</b>	EASTING: <b>674211.0</b>	STATION:	SURFACE ELEVATION: <b>89.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



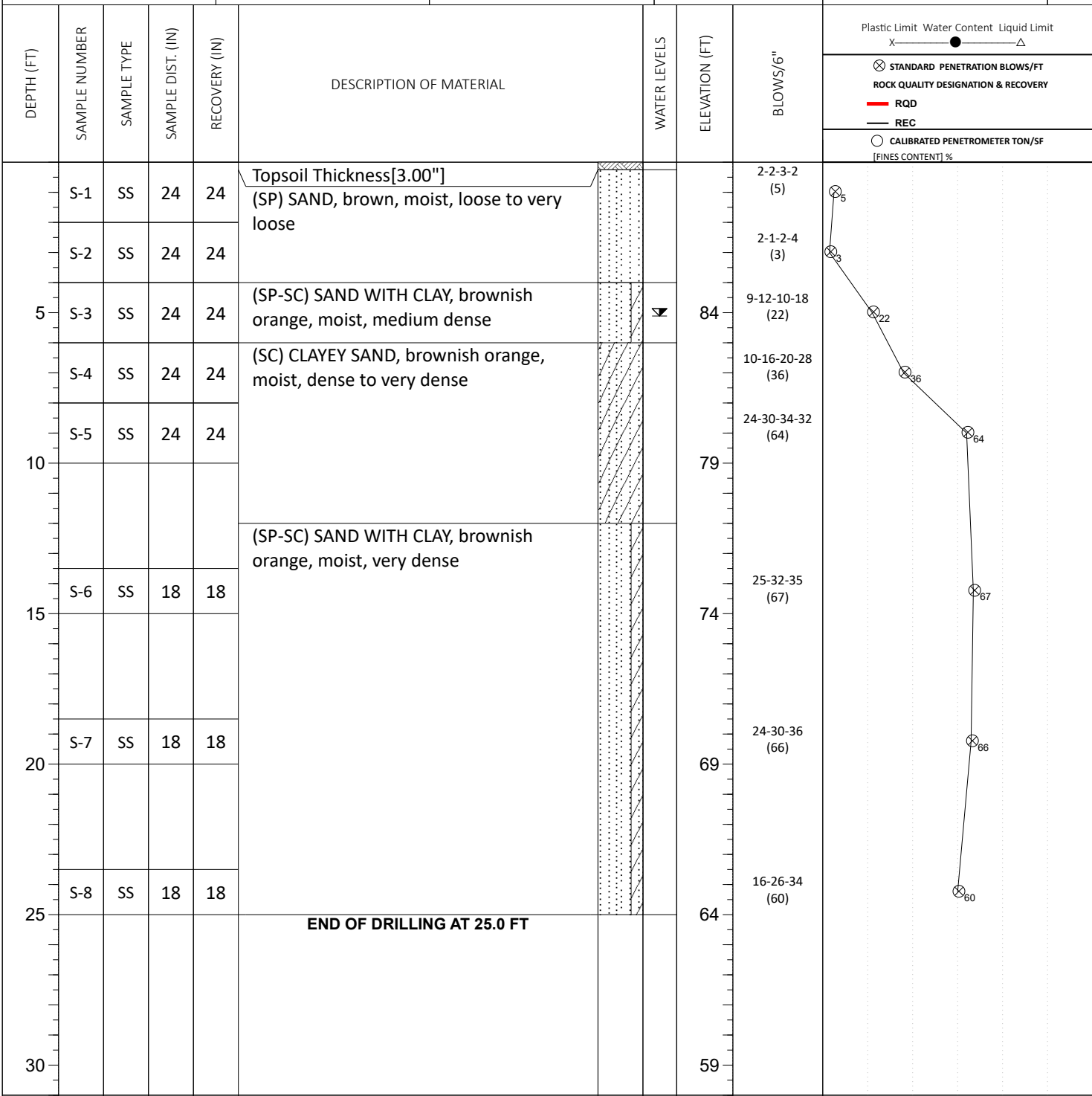
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>10.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646250.5</b>	EASTING: <b>673962.1</b>	STATION:	SURFACE ELEVATION: <b>89.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

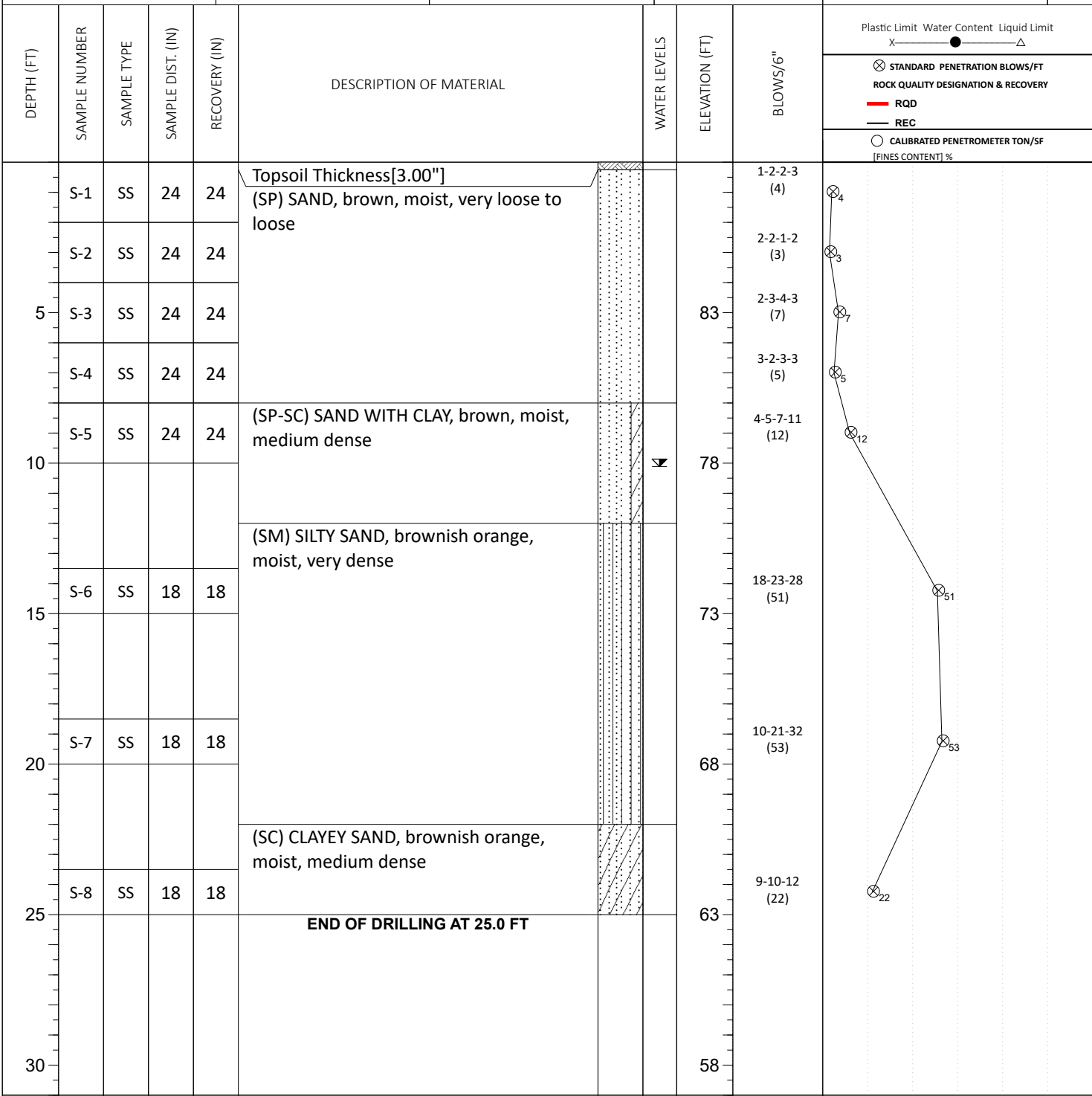
▼ WL (First Encountered) ▼ WL (Completion) ▼ WL (Seasonal High Water) <b>5.00</b> ▼ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> LOGGED BY: DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646173.6</b>	EASTING: <b>673967.3</b>	STATION:	SURFACE ELEVATION: <b>88.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



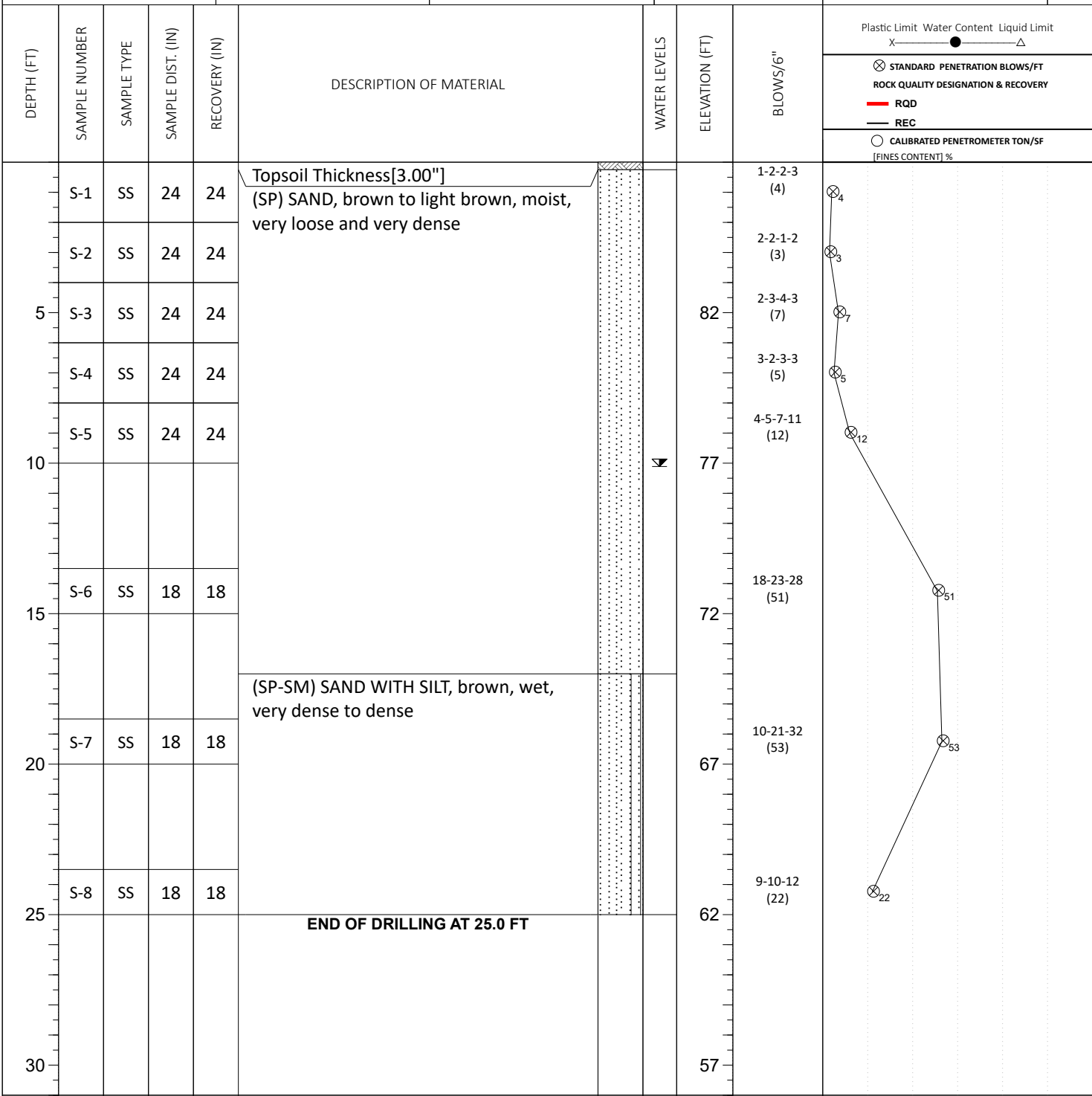
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>10.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> LOGGED BY: DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646253.9</b>	EASTING: <b>673848.8</b>	STATION:	SURFACE ELEVATION: <b>87.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

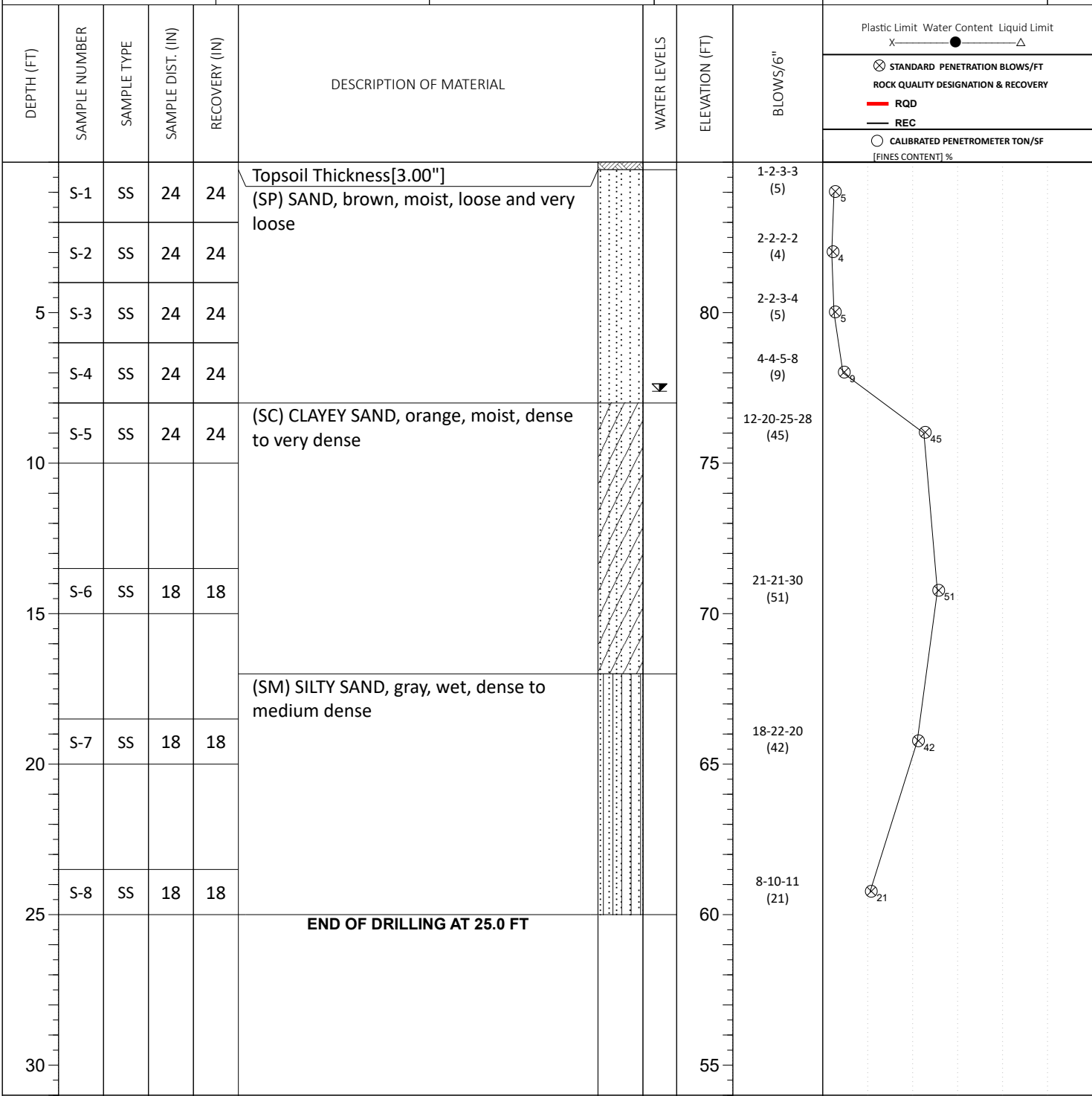
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>10.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> LOGGED BY: DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646153.1</b>	EASTING: <b>673850.5</b>	STATION:	SURFACE ELEVATION: <b>85.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



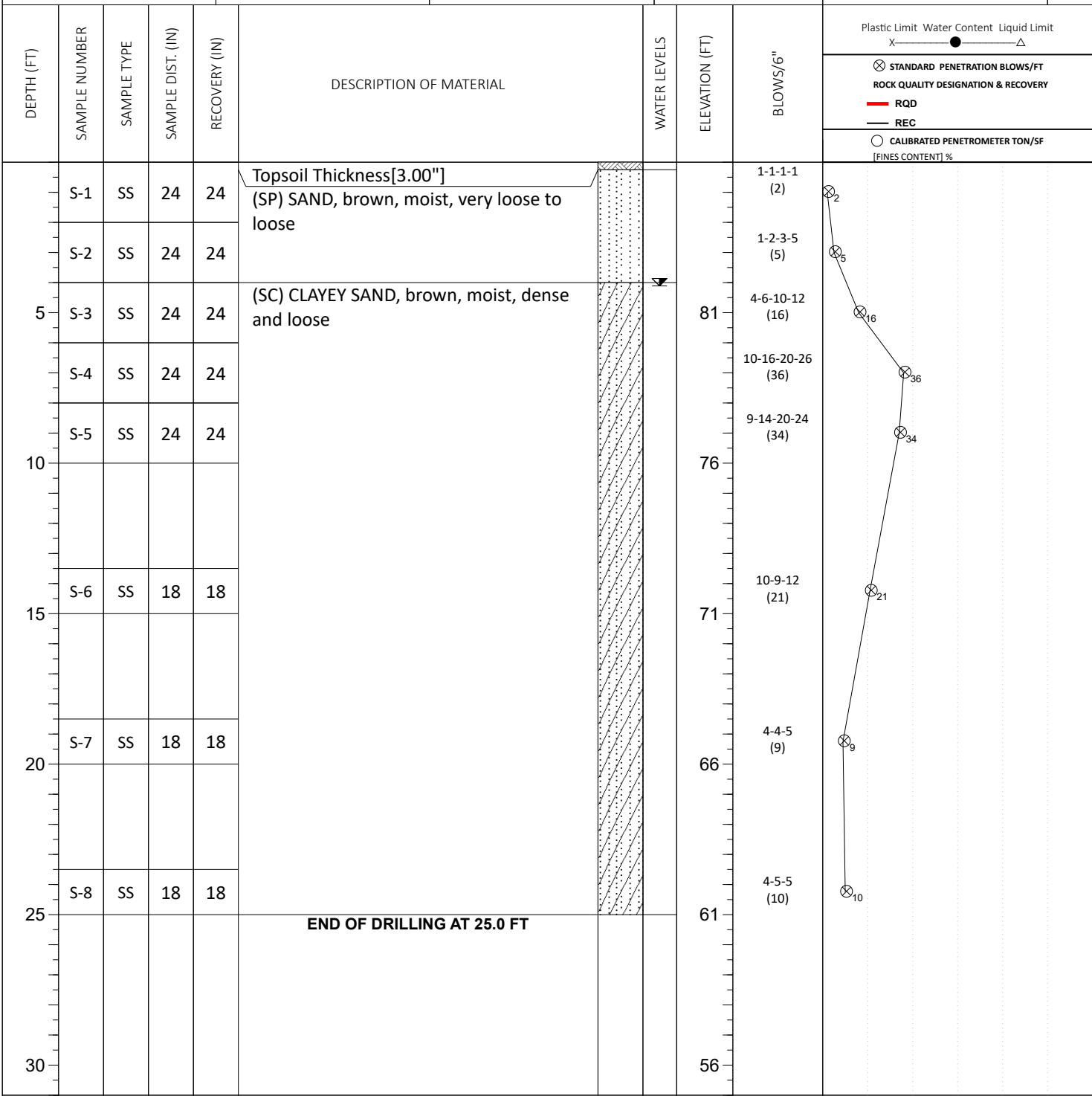
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>7.50</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646645.0</b>	EASTING: <b>673814.2</b>	STATION:	SURFACE ELEVATION: <b>86.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

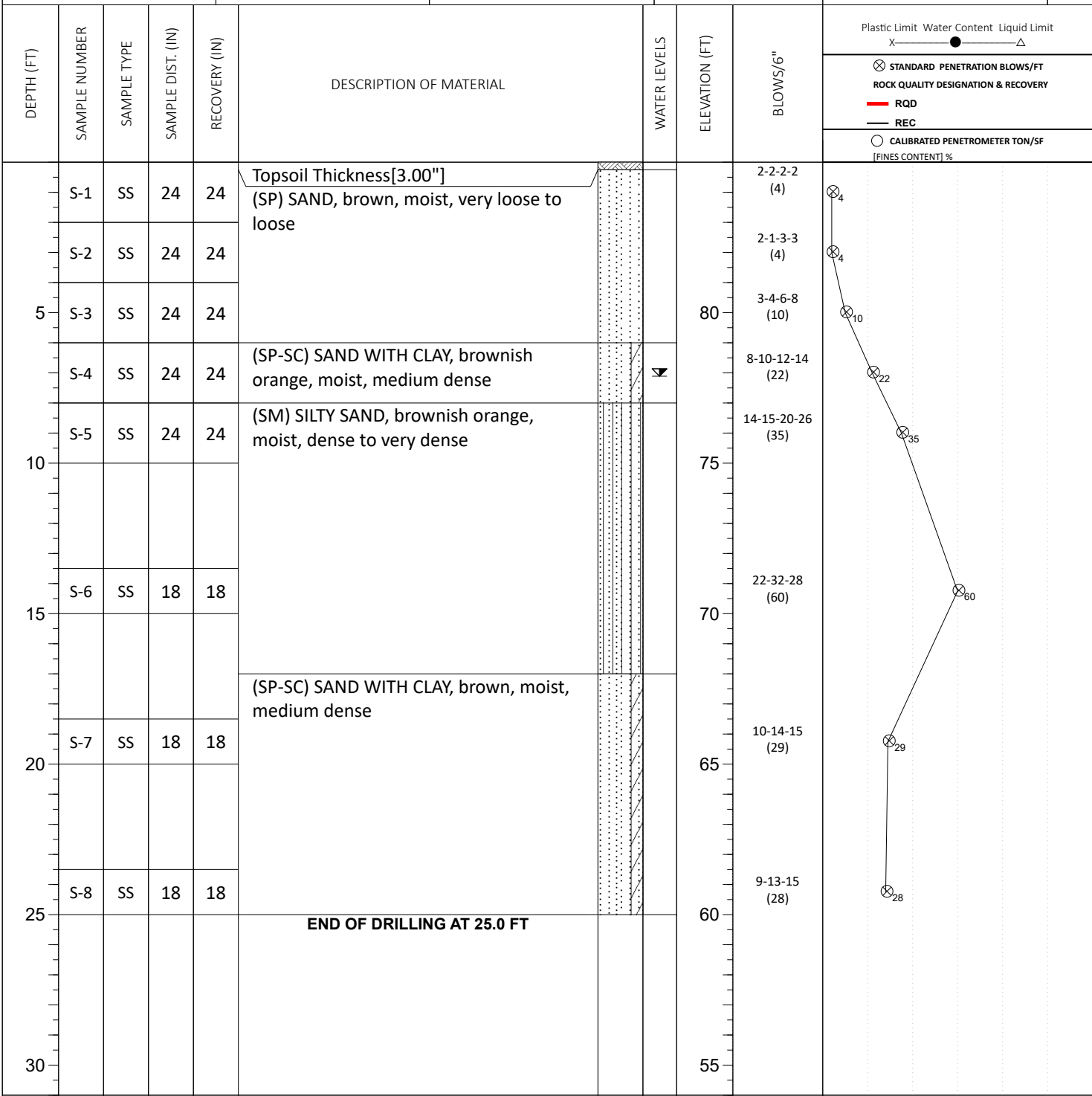
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>4.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>	
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646641.7</b>	EASTING: <b>674099.3</b>	STATION:	SURFACE ELEVATION: <b>85.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



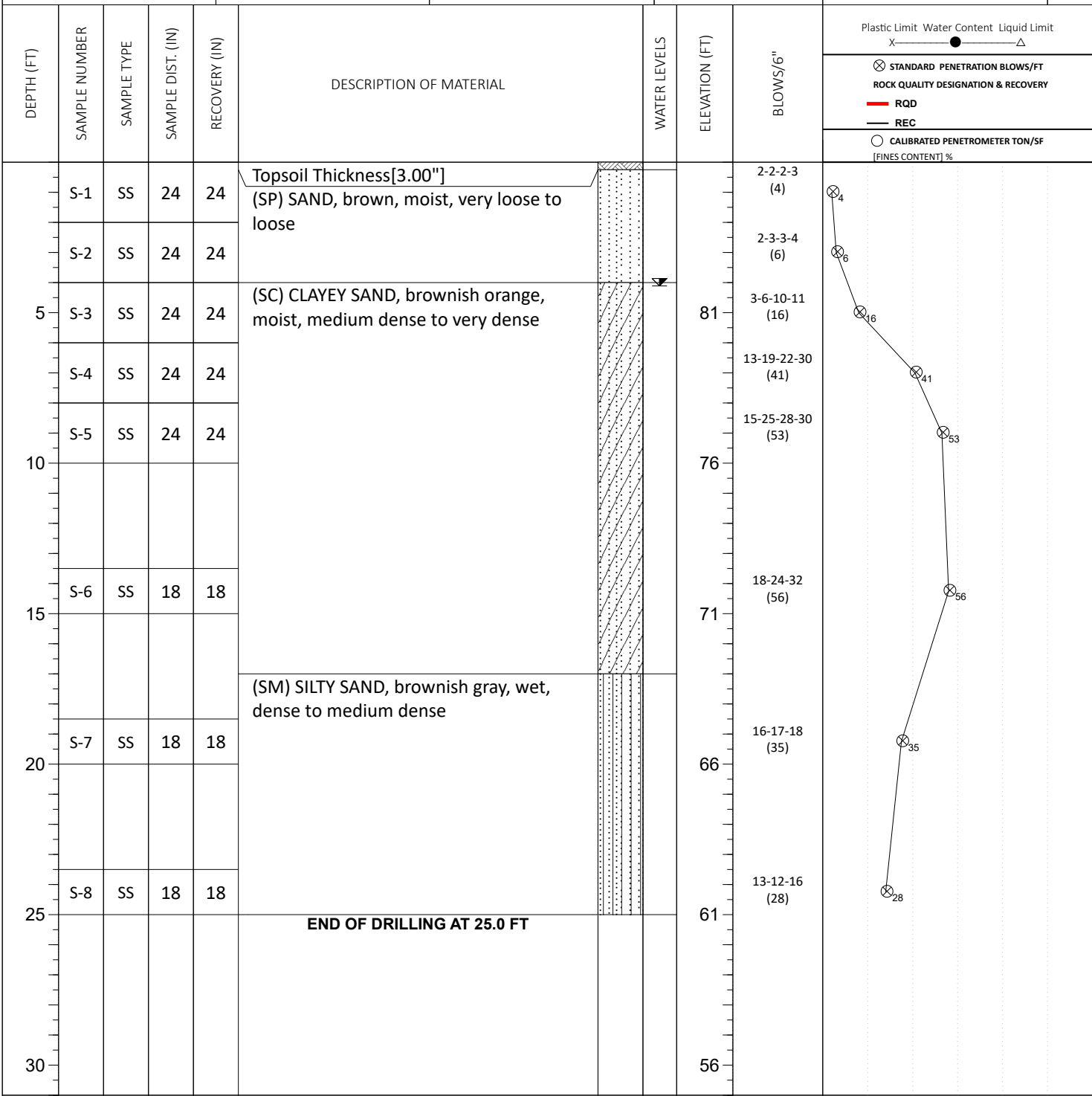
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

◊ WL (First Encountered) ▼ WL (Completion) ▽ WL (Seasonal High Water) <b>7.00</b> ◊ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> LOGGED BY: DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646629.9</b>	EASTING: <b>674334.5</b>	STATION:	SURFACE ELEVATION: <b>86.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

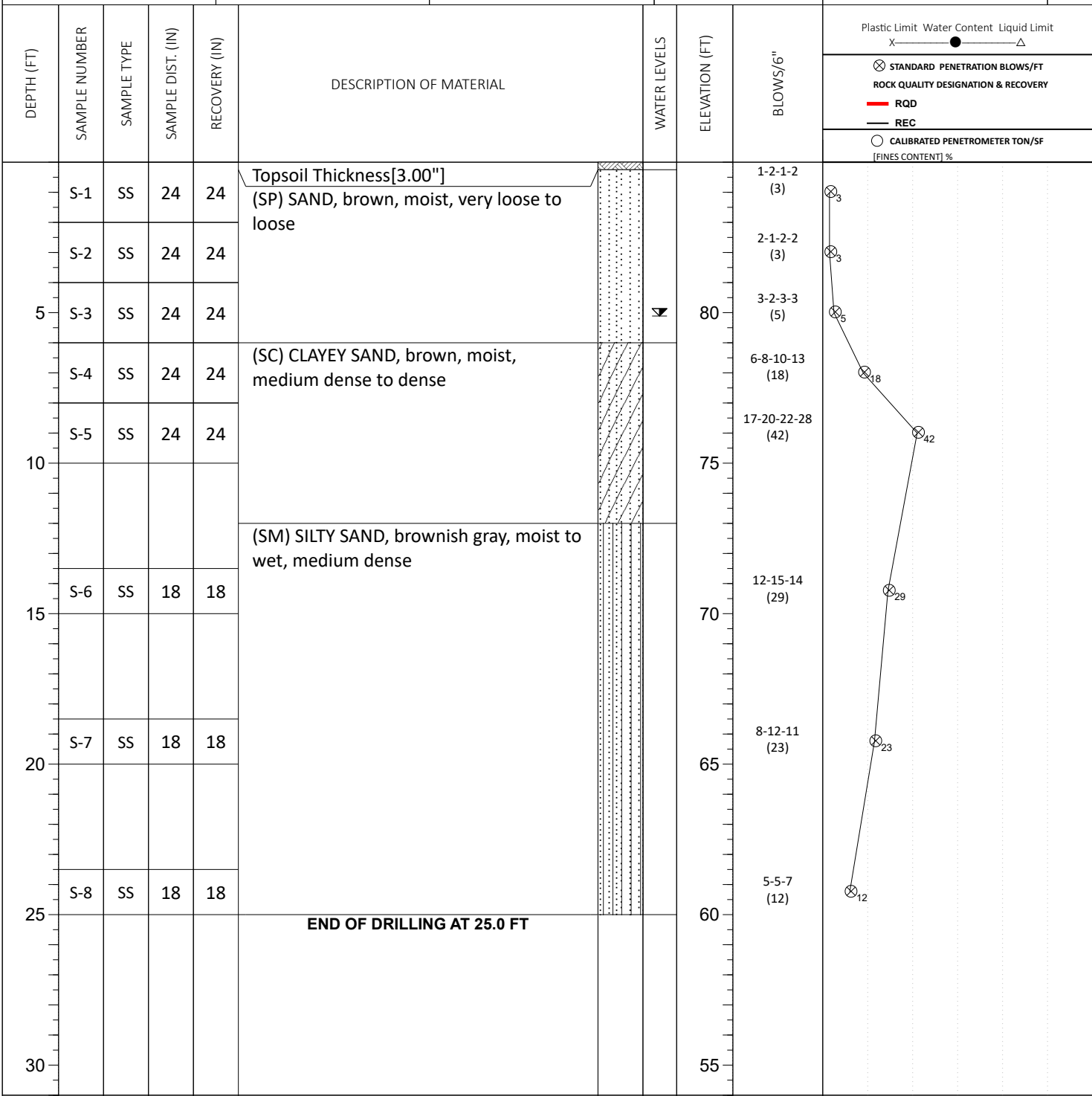
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>4.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646460.8</b>	EASTING: <b>674346.6</b>	STATION:	SURFACE ELEVATION: <b>85.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



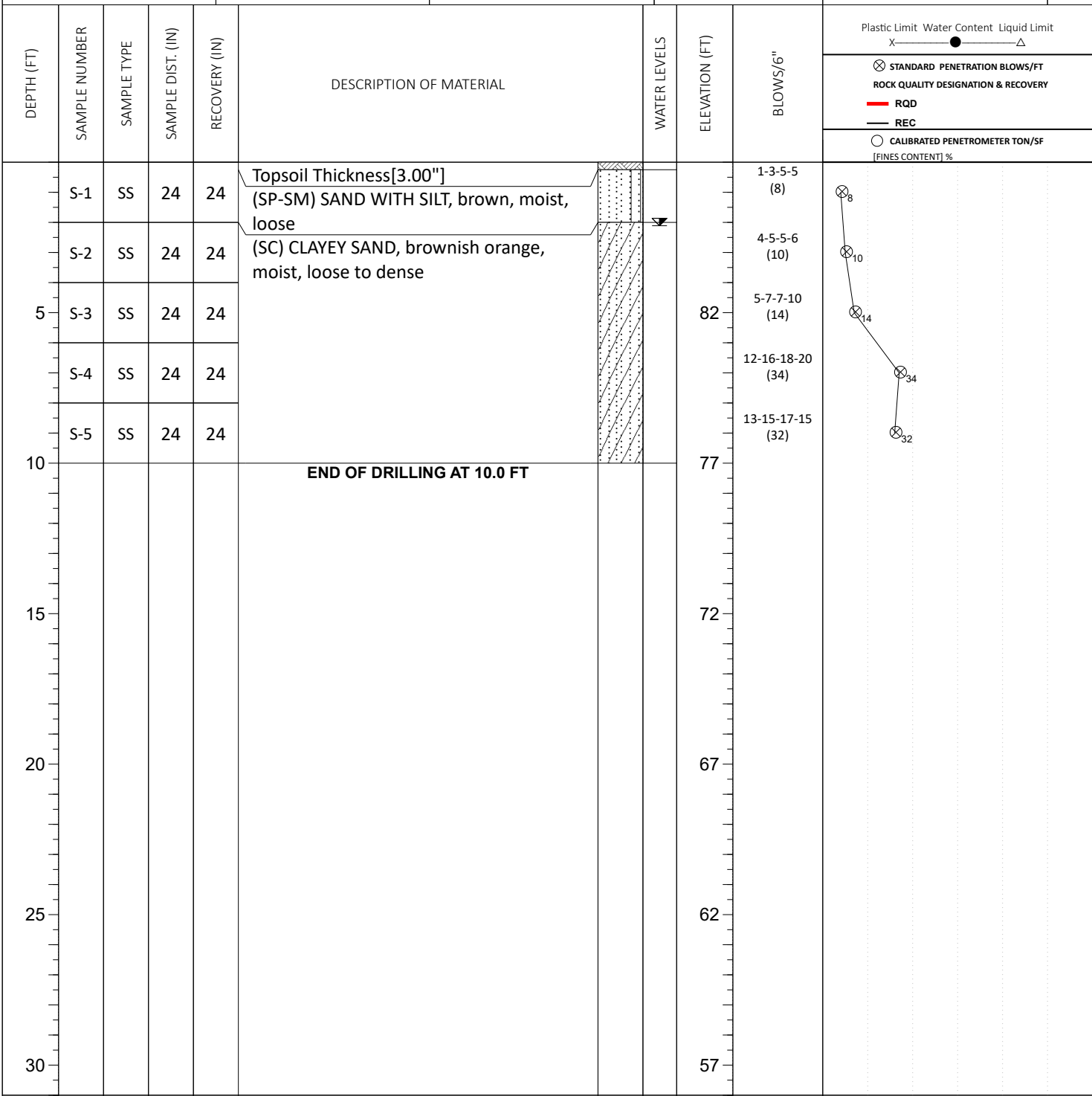
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>5.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646558.0</b>	EASTING: <b>673929.3</b>	STATION:	SURFACE ELEVATION: <b>87.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

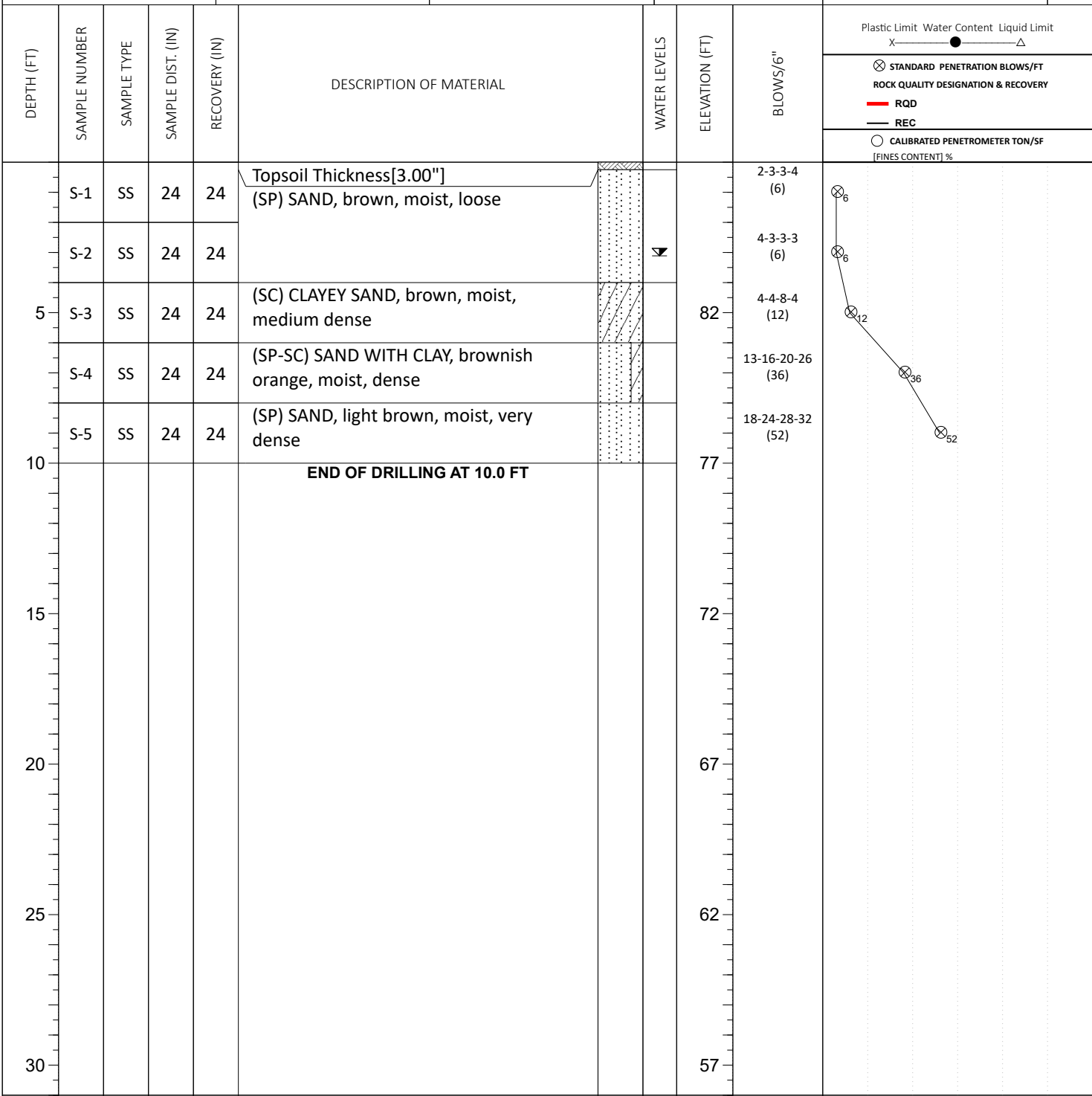
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<input checked="" type="checkbox"/> WL (Completion)	BORING COMPLETED: <b>Nov 24 2020</b>	HAMMER TYPE: <b>Manual</b>
<input checked="" type="checkbox"/> WL (Seasonal High Water) <b>2.00</b>	EQUIPMENT: <b>ATV</b>	LOGGED BY:
<input checked="" type="checkbox"/> WL (Stabilized)		DRILLING METHOD: <b>Mud rotary</b>

**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646440.0</b>	EASTING: <b>673812.6</b>	STATION:	SURFACE ELEVATION: <b>87.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



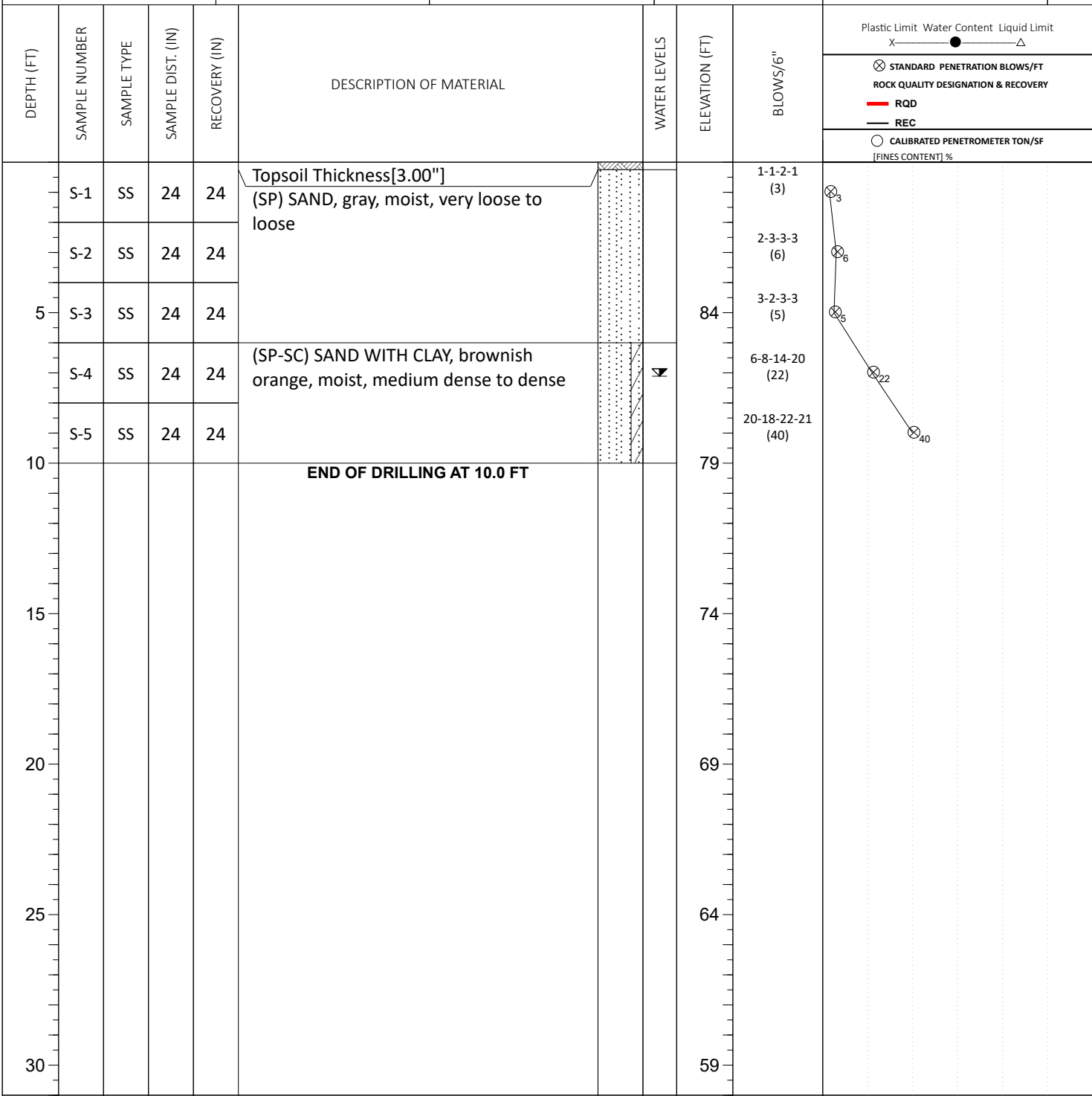
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>3.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>	
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**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646330.8</b>	EASTING: <b>673915.7</b>	STATION:	SURFACE ELEVATION: <b>89.0</b>	LOSS OF CIRCULATION 
				BOTTOM OF CASING 



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

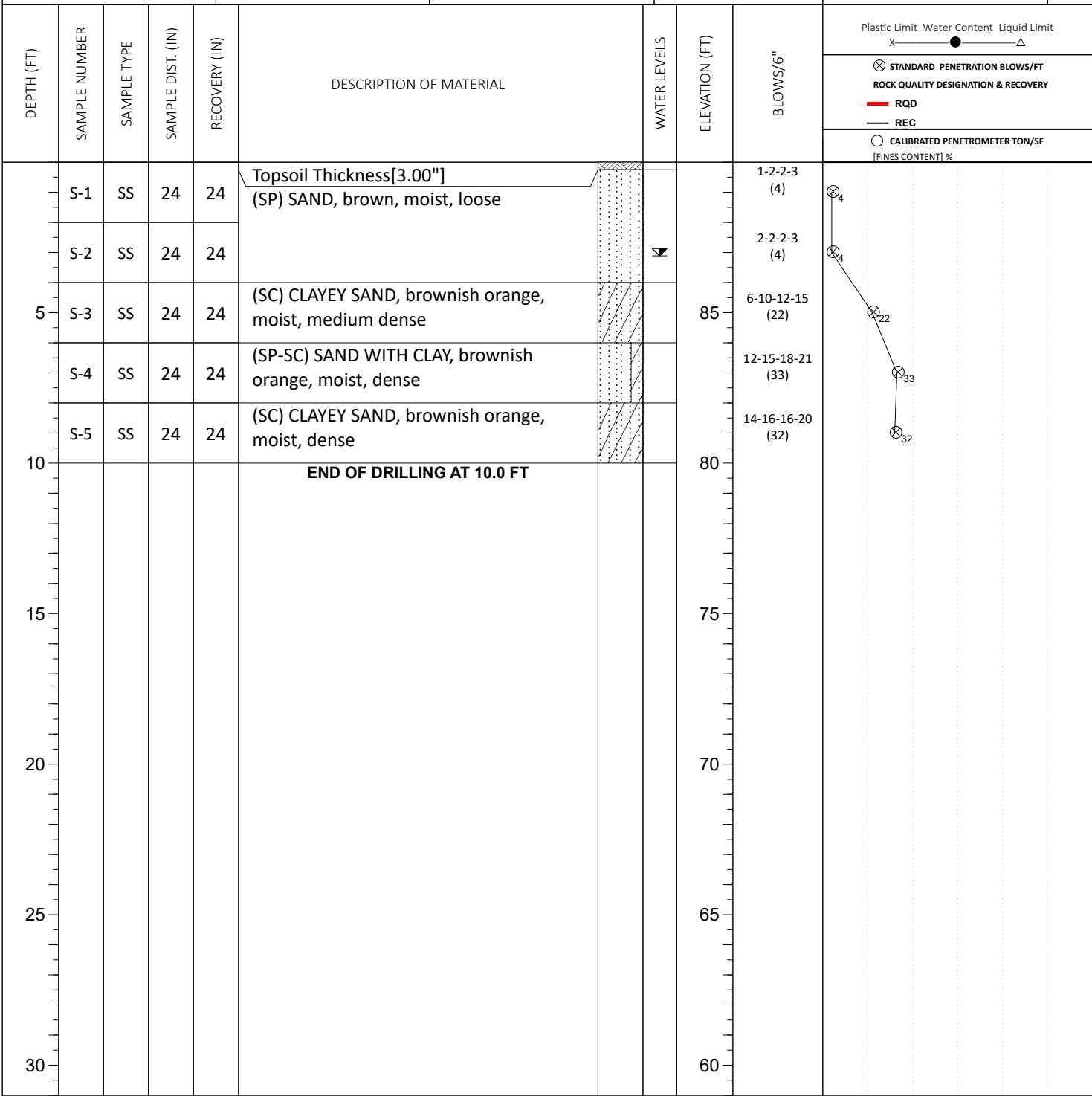
∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>7.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
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**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646279.6</b>	EASTING: <b>674070.2</b>	STATION:	SURFACE ELEVATION: <b>90.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



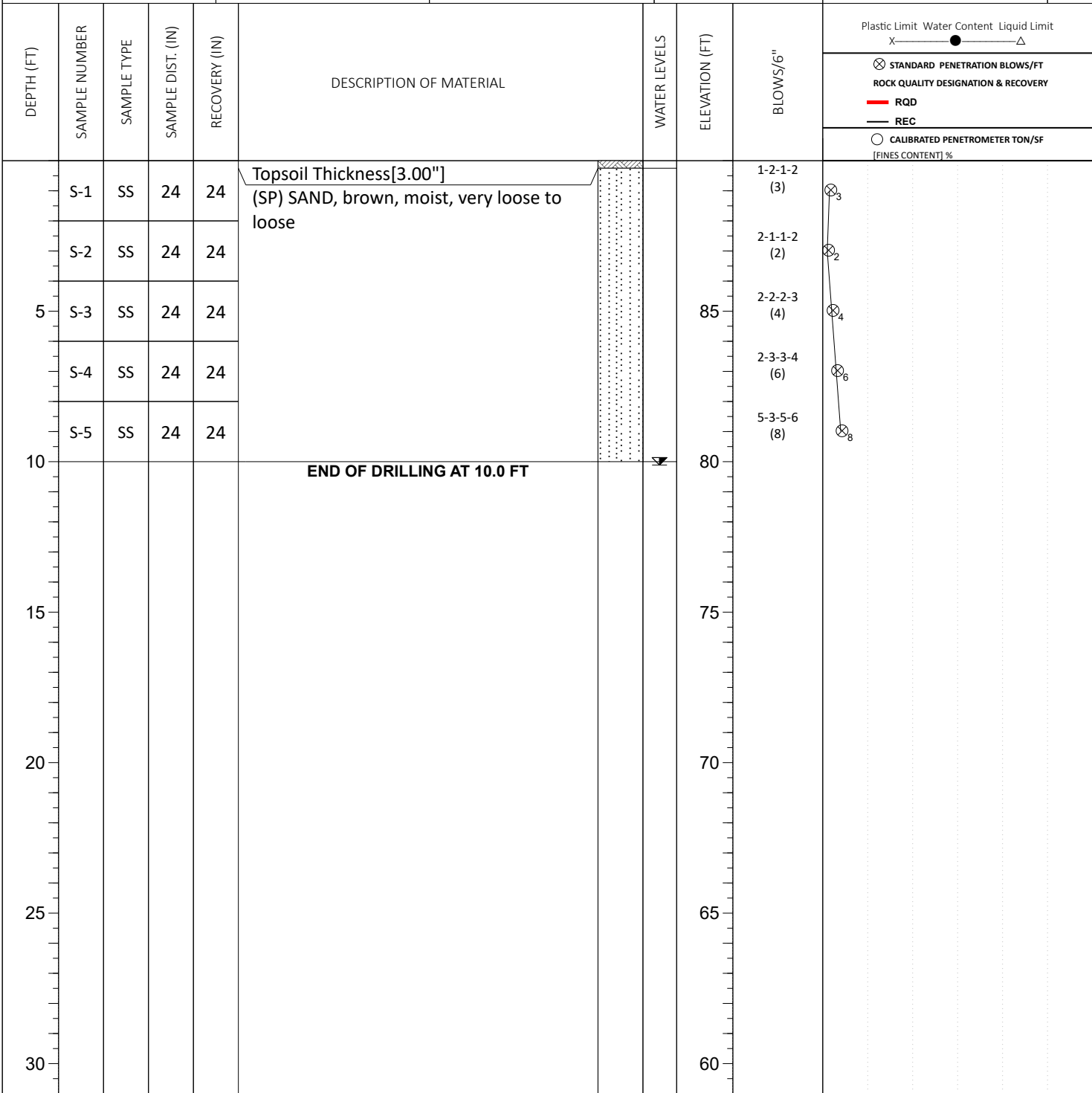
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

<input checked="" type="checkbox"/> WL (First Encountered) <input checked="" type="checkbox"/> WL (Completion) <input checked="" type="checkbox"/> WL (Seasonal High Water) <b>3.00</b> <input checked="" type="checkbox"/> WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>
--	---	--

**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646281.4</b>	EASTING: <b>674221.3</b>	STATION:	SURFACE ELEVATION: <b>90.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

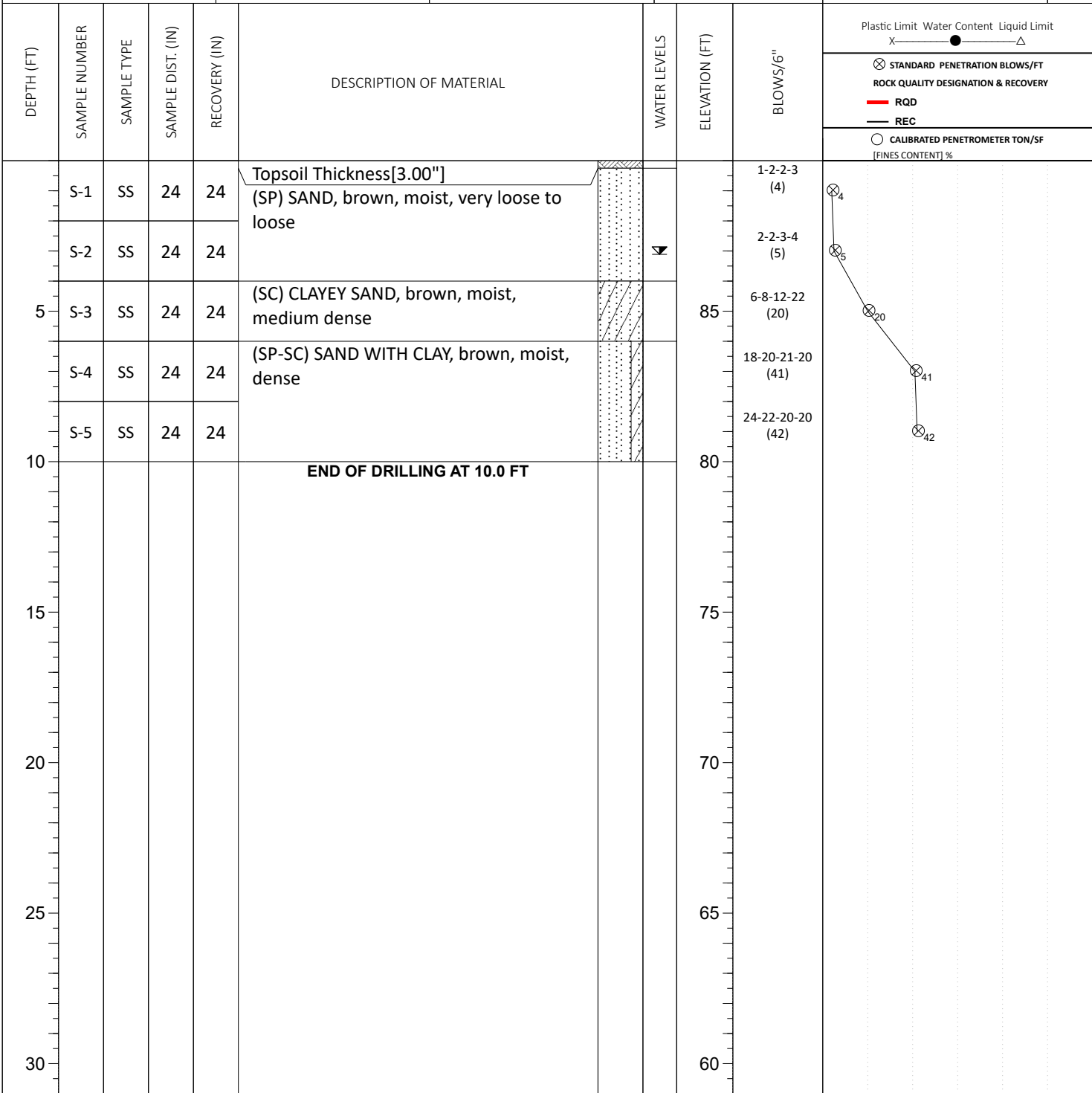
<input checked="" type="checkbox"/> WL (First Encountered)	BORING STARTED: <b>Nov 24 2020</b>	CAVE IN DEPTH:
<input checked="" type="checkbox"/> WL (Completion)	BORING COMPLETED: <b>Nov 24 2020</b>	HAMMER TYPE: <b>Manual</b>
<input checked="" type="checkbox"/> WL (Seasonal High Water) <span style="float: right;"><b>10.00</b></span>	EQUIPMENT: <b>ATV</b>	LOGGED BY:
<input checked="" type="checkbox"/> WL (Stabilized)		DRILLING METHOD: <b>Mud rotary</b>

**GEOTECHNICAL BOREHOLE LOG**



SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646158.3</b>	EASTING: <b>674066.9</b>	STATION:	SURFACE ELEVATION: <b>90.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING



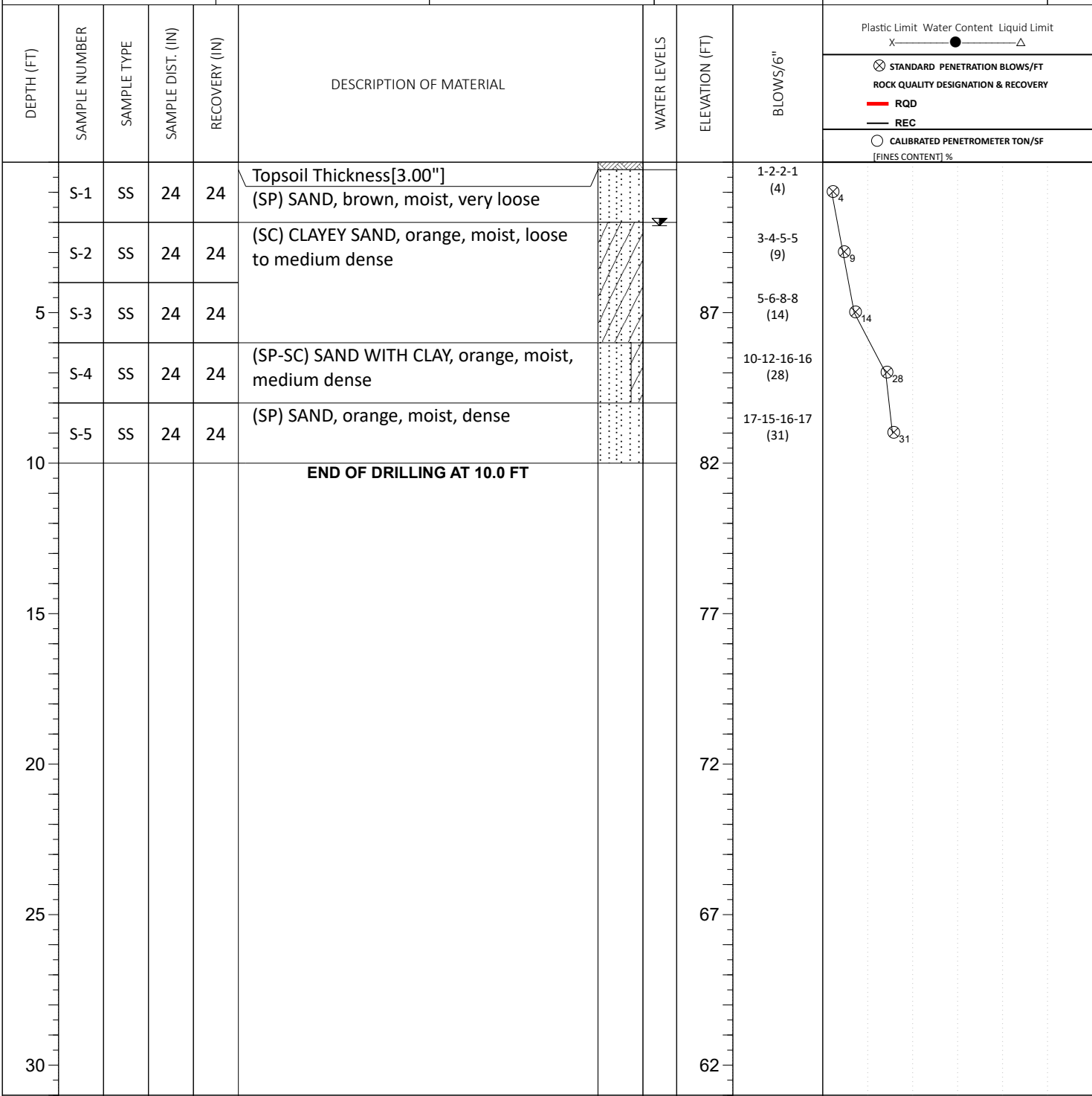
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) ∇ WL (Seasonal High Water) <b>3.00</b> ∇ WL (Stabilized)	BORING STARTED: <b>Nov 24 2020</b> BORING COMPLETED: <b>Nov 24 2020</b> EQUIPMENT: <b>ATV</b>	CAVE IN DEPTH: HAMMER TYPE: <b>Manual</b> DRILLING METHOD: <b>Mud rotary</b>	
--	---	--	--

**GEOTECHNICAL BOREHOLE LOG**

SITE LOCATION:  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

NORTHING: <b>1646165.2</b>	EASTING: <b>674214.5</b>	STATION:	SURFACE ELEVATION: <b>92.0</b>	LOSS OF CIRCULATION
				BOTTOM OF CASING

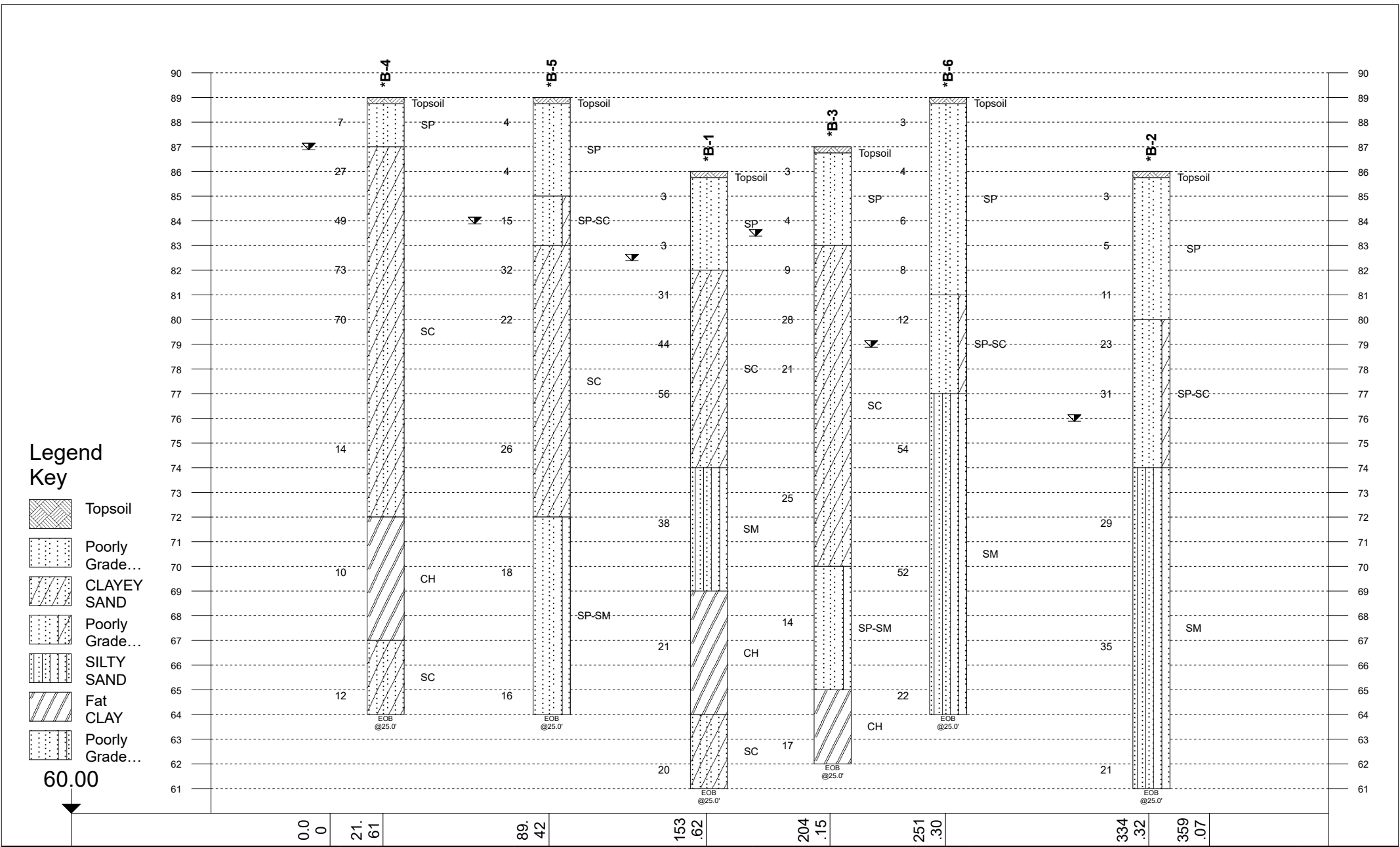


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

<input checked="" type="checkbox"/> WL (First Encountered)	BORING STARTED: <b>Nov 24 2020</b>	CAVE IN DEPTH:
<input checked="" type="checkbox"/> WL (Completion)	BORING COMPLETED: <b>Nov 24 2020</b>	HAMMER TYPE: <b>Manual</b>
<input checked="" type="checkbox"/> WL (Seasonal High Water) <span style="float: right;"><b>2.00</b></span>	EQUIPMENT: <b>ATV</b>	LOGGED BY:
<input checked="" type="checkbox"/> WL (Stabilized)		DRILLING METHOD: <b>Mud rotary</b>

**GEOTECHNICAL BOREHOLE LOG**





**Notes:**

- 1-EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
- 2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
- 3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
- 4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

WL (First Encountered)	Fill
WL (Completion)	Possible Fill
WL (Seasonal High Water)	Probable Fill
WL (Stabilized)	Rock

Plastic Limit Water Content Liquid Limit

X ● Δ

[Fines Content %]

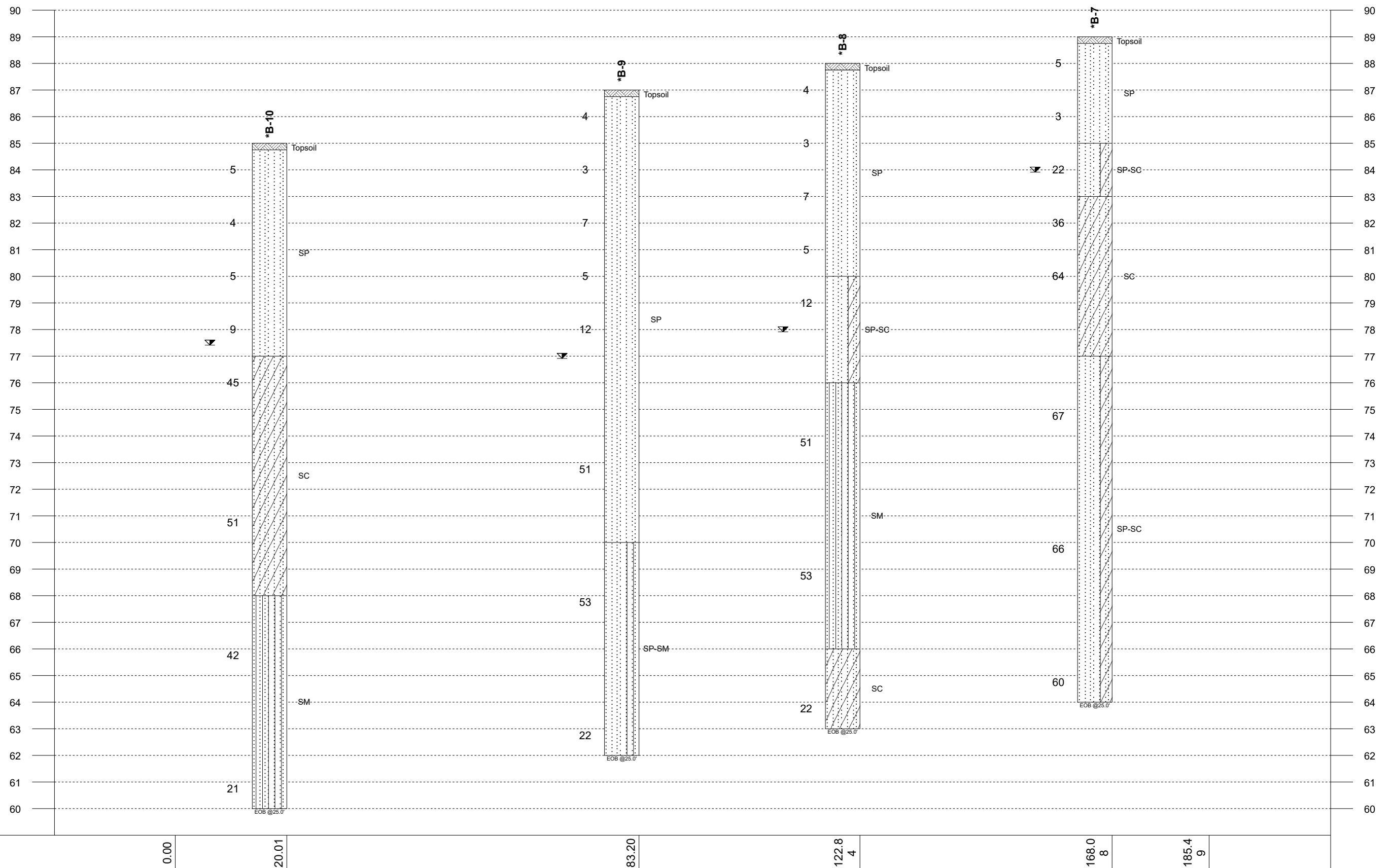
**GENERALIZED SUBSURFACE SOIL PROFILE A-A'**

**The Villages Grocery**

**Bowman Consulting Group**

**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

Project No: 24-6724      Date: 12/15/2020



**Legend Key**

- Topsoil
- Poorly Graded SAND
- Poorly Graded SAND w...
- CLAYEY SAND
- SILTY SAND
- Poorly Graded SAND w...

59.00

**Notes:**  
 1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.  
 2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.  
 3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.  
 4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit	Water Content	Liquid Limit	▽ WL (First Encountered)		Fill
X	●	△	▼ WL (Completion)		Possible Fill
[FINES CONTENT %]			▽ WL (Seasonal High Water)		Probable Fill
	BOTTOM OF CASING		▽ WL (Stabilized)		Rock
	LOSS OF CIRCULATION				

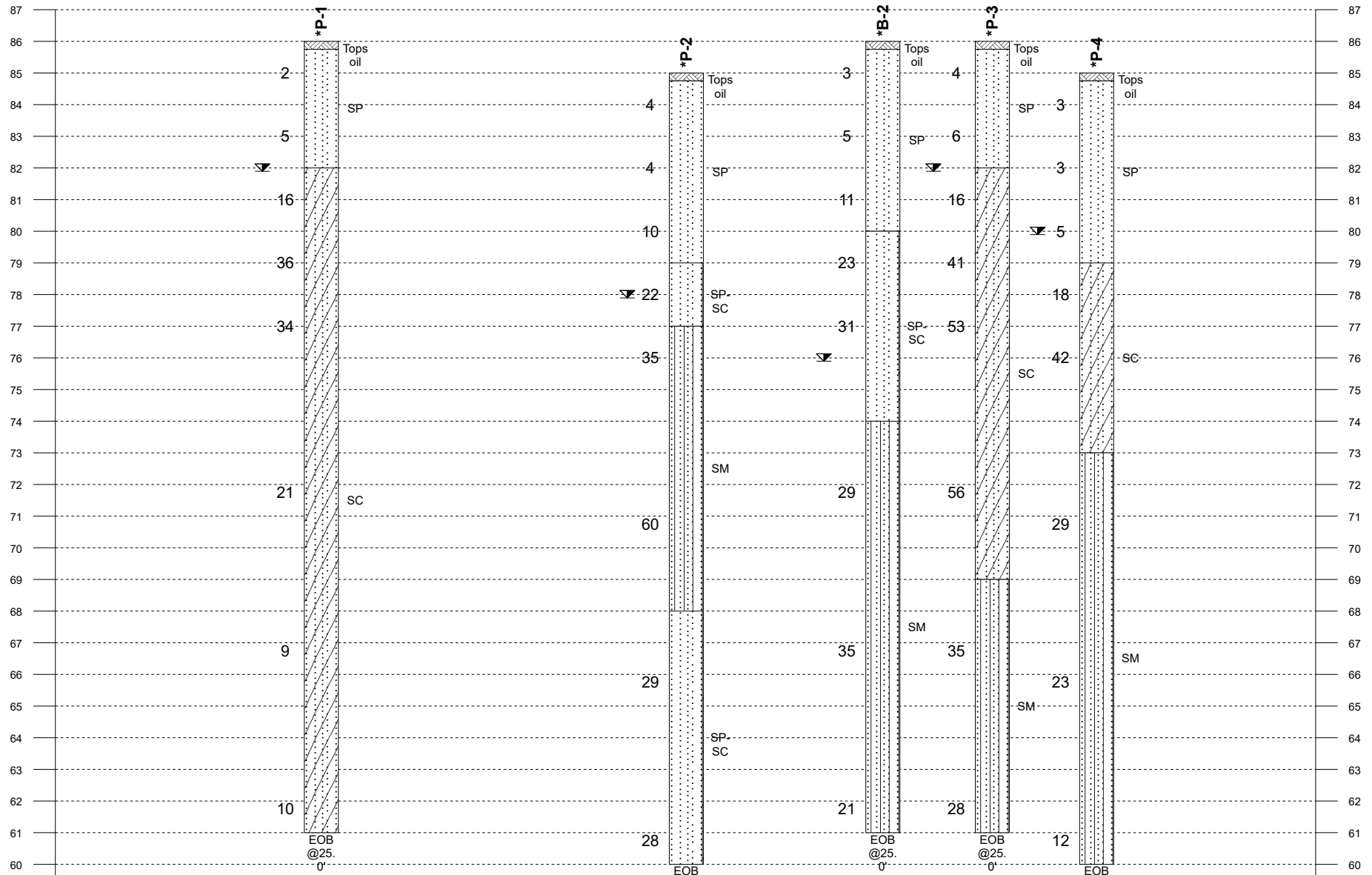


**GENERALIZED SUBSURFACE SOIL PROFILE Section line B-B'**

**The Villages Grocery**  
**Bowman Consulting Group**  
**Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731**

Project No: 24-6724 Date: 12/18/2020





**Legend Key**

- Topsoil
- Poorly Grade...
- CLAYEY SAND
- Poorly Grade...
- SILTY SAND

59.00

1- FOB: END OF BORING	AR: AUGER REFUSAL	0.00	Plastic Limit	321	.74	464	.30	543	.73	619	.38	666	.90
Notes:		Liquid Limit		WL (First Encountered)		Fill		GENERALIZED SUBSURFACE SOIL PROFILE C-C'					
2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.		[FINES-CONTENT%]		WL (Completion)		Possible Fill		The Villages Grocery					
3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.		BOTTOM OF CASING		WL (Seasonal High Water)		Probable Fill		Bowman Consulting Group					
4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).		CIRCULATION		WL (Stabilized)		Rock		Miller Blvd & Micro Racetrack Rd, The Villages, Florida 34731					
						ECS		Project No: 24-6724		Date: 12/15/2020			

## **APPENDIX C – Laboratory Testing**

Laboratory Test Results Summary




## Laboratory Testing Summary

Sample Source	Sample Number	Depth (feet)	MC (%)	Soil Type	Atterberg Limits			Percent Passing No. 200 Sieve	Moisture - Density		Organic Content (%)	Permeability (feet/day)
					LL	PL	PI		Maximum Density (pcf)	Optimum Moisture (%)		
B-4	S-8	18.5-20	45.5	CH				82.8				
B-7	S-5	8-10	8.8	SC				12.5				
B-10	S-2	2-4	3.8	SP				4.0				
P-1	S-1 & S-2	0-4	4.2	SP				3.3				Kh = 15.7 ft/day Kv = 10.5 ft/day
P-1	S-3	4-6	13.2	SC				35.8				
P-2	S-1	0-2	3.6	SP				3.7				Kh = 16.8 ft/day Kv = 11.2 ft/day
P-2	S-6	13.5-15	12.5	SM				17.6				
P-3	S-1 & S-2	0-4	5.1	SP				5.0				Kh = 18.0 ft/day Kv = 12.0 ft/day
P-3	S-3	4-6	11.6	SC				31.0				
P-4	S-3	4-6	4.7	SP				2.9				Kh = 20.4 ft/day Kv = 13.6 ft/day

**Notes:** See test reports for test method, \*ASTM D2488

**Definitions:** MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

Project:	The Village Grocery	Project No.:	24:6724
Client:	Bowman Consulting Group	Date Reported:	12/14/2020

Office / Lab	Address	Office Number / Fax
 ECS Florida LLC - Orlando	2815 Directors Row Suite 500 Orlando, FL 32809	(407)859-8378  (407)859-9599

# STAFFORD

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## Stormwater Management Report

The Villages Grocery Store  
NE C/O Miller Blvd. & Micro Racetrack Rd.  
Fruitland Park, Florida

COORDINATE: 28°51'45.5"N, 81°56'38"W

Project No.: 010755-01-001

Prepared By:



1410 N. Westshore Blvd, Suite 111

Tampa, FL 33607

Certificate of Authorization No. 30462

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**Timothy Johnson, P.E.**

**FL License No. 47054**

APRIL 12, 2021



## STORMWATER MANAGEMENT NARRATIVE

The purpose of this report is to demonstrate that the proposed project complies with the requirements of governmental agencies having jurisdiction over the stormwater management design. These agencies include the City of Fruitland Park, and the St. John’s River Water Management District (SJRWMD). The report consists of a review of available hydrologic data, method analyses, development of existing and proposed hydrographs, water quality and quantity evaluation, and proposed development information.

## SITE INFORMATION

The project is in the jurisdiction of the City of Fruitland Park and is located on the northeast corner of Miller Blvd. and Micro Racetrack Rd. The existing site has 8.29 acres and consist of mostly undeveloped wooded land except for a 2,826 sq.ft. building and associated pavement. The Pre-Development Basins are separated into 3 basins. Basin A overland flows West to Micro Racetrack Road, Basin B overland flows East to an on-site low spot and Basin C overland flows North to the adjacent property. The surrounding areas drain away from the site.

Table 1: Site Information

Parcel ID	06-19-24-0004-000-02703 & 06-19-24-0004-000-02700
Parcel Area	8.29 ± acres
Flood Zone	Zone ‘X’ from FEMA FIRM Map No. 12069C0305E, dated 12/18/12

The predominant on-site soils as defined by NRCS (National Resources Conservation Service) are described in Table 2. According to the Web Soil Survey, the subject site falls within the hydrologic soil group A. For the purposes of design, the same hydrologic group was utilized for both Pre and Post Development conditions, HSG Type A. FEMA Flood Maps and NRCS Web Soil Survey are included in Appendix A.

Table 2: Hydrologic Soil Groups

<u>Group</u>	<u>Description</u>
A	Apopka Sand – 0 to 5 percent slopes
A	Apopka Sand – 5 to 12 percent slopes

## DESIGN REQUIREMENTS

The stormwater management system is designed to meet City of Fruitland Park and the St. John’s River Water Management District criteria for water quality, and attenuation. Pre-development and post-development calculations, and ICPR computer models were developed to demonstrate that the project meets water quality requirements and peak discharge rate limitations. The project is not located in an impaired basin, so nutrient removal calculations will not be required. Also, the property is not located in the 100-year floodplain, therefore compensating storage will not be required. All elevations in this report are NAVD 88 datum VERTICAL DATUM

## RAINFALL DATA

Polk County rainfall amounts are listed below.

Table 3: Lake County Rainfall Data, Return Periods of 24 and 96 hours (Source: SWFWMD ERP Applicant's Handbook Volume II, Rainfall Maps)

10 yr – 24 hr	25 yr – 96 hr	100 yr – 24 hr
6.5"	11"	10"

## HYDROLOGY ANALYSIS AND CALCULATIONS

Hydrology and stormwater modeling calculations were performed using ICPR4. The Soil Conservation Service (NRCS TR-55) hydrologic method was utilized for the estimation of stormwater runoff peak rates and the generation of hydrographs. Input and results can be found summarized in tables throughout this report and in the appendices. No offsite areas drain through the site in both the pre- and post-development conditions.

## PRE-DEVELOPMENT CONDITIONS

The existing site has 8.29 acres and consist of mostly undeveloped wooded land except for a 2,826 sq.ft. building and associated pavement. The Pre-Development Basins are separated into 3 basins. Basin A overland flows West to Micro Racetrack Road, Basin B overland flows East to an on-site low spot and Basin C overland flows North to the adjacent property. The surrounding areas drain away from the site. A breakdown of the drainage basin areas, curve numbers, and time of concentrations are shown in Table 4 below and the time of concentration calculations are in the Appendix. A drainage map showing the Pre-Development Basin can be found in Appendix A.

Table 4: Pre-Development Basin Summaries

### Pre-Development Drainage Basin Data

Location	Land Use	Area [acres]	Composite Curve Number (CN)	Time of Concentration (Tc) [min.]
Basin A	Pervious (Fair)	3.24	41.1	52
	Bldg/Conc.	0.12		
	Total	3.36		
Basin B	Pervious (Fair)	0.32	39.0	15
Basin C	Pervious (Fair)	4.57	39.4	89
	Concrete	0.03		
	Total	4.60		

Asphalt CN = 98, Dirt Path CN = 72, Gravel CN = 76, and Pervious (Fair) CN = 39



## POST-DEVELOPMENT CONDITIONS

Development of the project site consists of construction of a 47,647 sq.ft. grocery store and two (2) outparcels. The post-development condition contains one basin, Basin 1. The characteristics for the post-development basins are shown below. A time of concentration of 10 minutes is assumed. A Post Development Drainage Basin Map can be found in Appendix A.

Table 5: Post Development Basin Summaries

### Post Development Drainage Basin Data

Location	Land Use	Area [acres]	Composite Curve Number (CN)	Time of Concentration (Tc) [min.]
Basin 1	Impervious	6.48	85.12	10
	Pervious	1.81		
	Total	8.29		

Impervious CN = 98 and Pervious CN = 39

## WATER QUANTITY

The on-site stormwater system was modeled using ICPR4 with the Basin routed through the dry retention Pond 1. The model shows the Basin's peak discharges and peak stages for the various design storm events. The pre- and post-development peak discharges for the site are presented below in Tables 6(a). The Proposed discharge point is the swale along the north property line. Please see Appendix B for the ICPR4 data.

Table 6(a): County/SFWMD Model Results for Basin 1

### Basin 1 (Discharge to Verano Subdivision)

Agency	Design Storm Event		Pre-Dev. (cfs)	Post-Dev. (cfs)	Post Dev. Peak Stage (ft)
	Frequency	Return			
City/SJRWMD	100 year	24 hour	1.62	0.83	85.68

Top of Bank elevation = 86.0'

## WATER QUALITY

Drainage on site is conveyed through a series of inlets and pipes into a dry retention pond. The dry retention pond contains a control structure that retain the required water quality volume and release discharge at a controlled rate. The retained volumes will infiltrate into the soil. The water quality calculations are shown below:

Basin 1 area = 8.29 acres  
 Impervious area = 6.48 acres  
 Pervious area = 1.81 acres  
 Composite Runoff Coefficient (c) =  $(0.95 \times 6.48 \text{ ac} + 0.25 \times 1.81 \text{ ac}) / 8.29 \text{ ac} = 0.80$   
 Required Water Quality Volume =  $c \times 1 \text{ inch} \times \text{Basin Area (ac)}$   
 Treatment Volume =  $0.80 \times 1 \text{ inch} \times 8.29 \text{ ac} = 0.69 \text{ ac-ft}$  (0.80 inches over the site)  
 Since 1 inch over the site is required, then:  
 Required Water Quality Volume =  $1 \text{ inch} \times \text{Basin Area (ac)}$   
 Treatment Volume =  $1 \text{ inch} \times 8.29 \text{ ac} = 0.69 \text{ ac-ft}$   
 Proposed weir elevation = 85.5'  
 Proposed Water Quality Provided = 0.69 ac-ft (30,056 cu. ft.)

## RECOVERY

Recovery of the treatment volume will occur through infiltration into the surrounding existing and imported soils. Recovery of the treatment volume occurs within 72 hours. The existing soils encountered consisted of a zone medium dense relatively low permeability sands with silt extending to 20 feet below ground surface underlain by a relatively hydraulically restrictive layer of silty clayey sands. The recovery ICPR model assumes this clayey layer is the aquifer based with the water table 5' above this elevation.

Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day):	17.70
Vertical Saturated Hydraulic Conductivity, [Kh] (ft/day):	11.80
Fillable Porosity, [n] (%):	25.00



## APPENDICES

### Appendix A: Maps

- Aerial Location Map
- NRCS Hydrologic Soil Map
- FEMA Firmette Flood Map
- Pre-Development Drainage Basin Map
- Post-Development Drainage Basin Map

### Appendix B: Calculations

- Stage – Storage Data
- Pre-Development Time of Concentration Calculation

### Appendix C: ICPR Model Data

- Pre-Development Network Map
- Pre-Development Input Data
- Pre-Development Model Results
- Post Development Network Map
- Post Development Input Data
- Post Development Model Results

### Appendix D: Recovery ICPR Model Data

- Network Map
- ICPR4 Percolation Link Map
- Recovery Input Data
- Recovery Model Results

### Appendix E: Storm Tabulations

- Storm Tabulations

APPENDIX A  
Maps



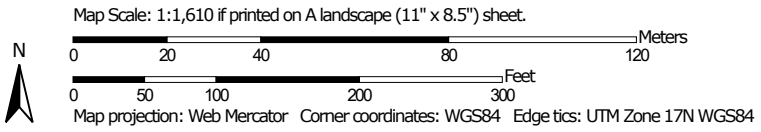
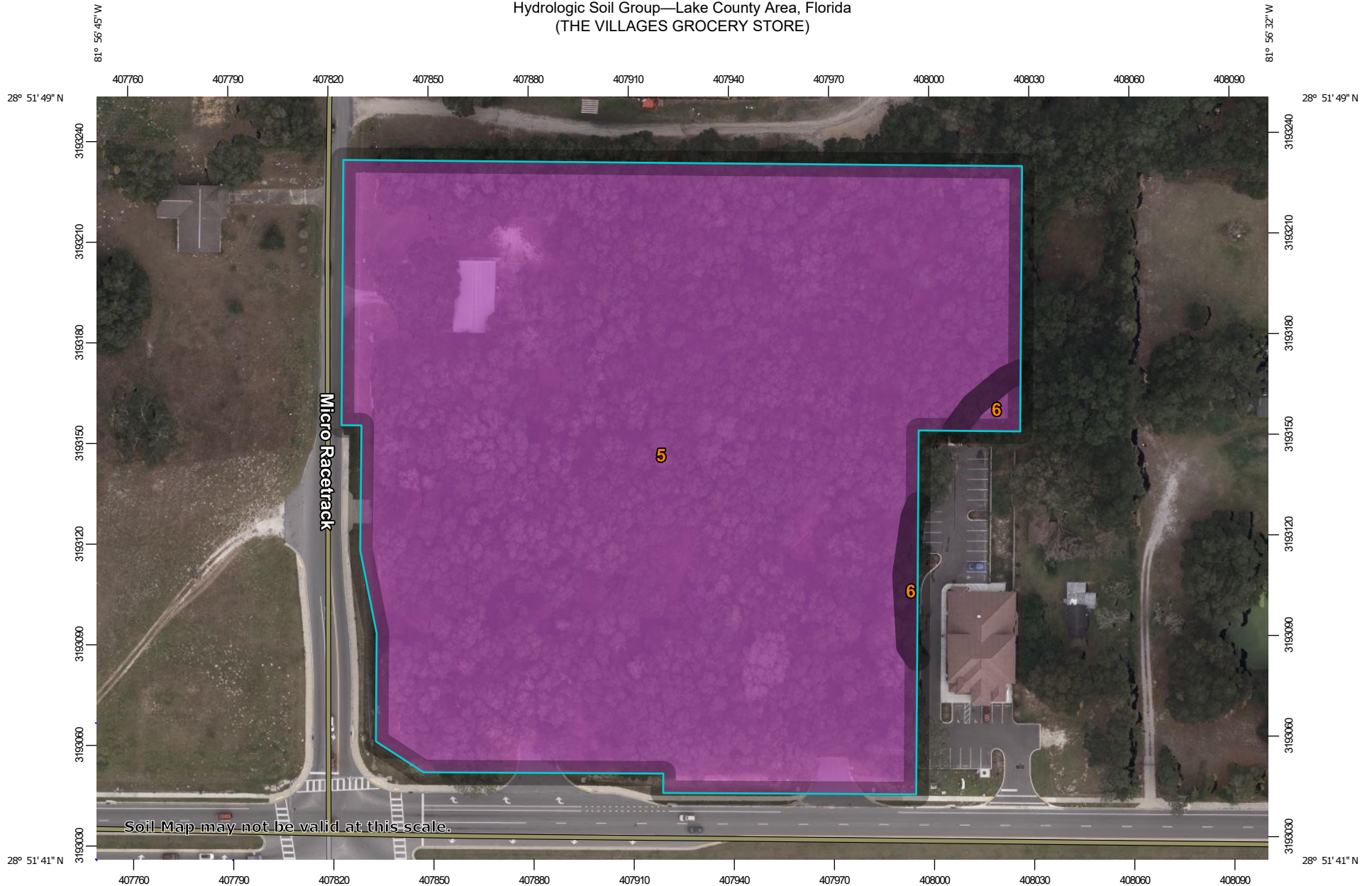
# AERIAL LOCATION MAP

The Villages Grocery Store, Fruitland Park, FL

NE C/O Miller Blvd. & Micro Racetrack Rd.



Hydrologic Soil Group—Lake County Area, Florida  
(THE VILLAGES GROCERY STORE)






Hydrologic Soil Group—Lake County Area, Florida  
(THE VILLAGES GROCERY STORE)

### MAP LEGEND

**Area of Interest (AOI)**









 Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**





-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Lines**

-  A
-  A/D
-  B
-  B/D
-  C
-  C/D
-  D
-  Not rated or not available

**Soil Rating Points**

-  A
-  A/D
-  B
-  B/D

-  C
-  C/D
-  D
-  Not rated or not available


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lake County Area, Florida  
Survey Area Data: Version 20, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 15, 2020—Jan 26, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5	Apopka sand, 0 to 5 percent slopes	A	8.2	99.0%
6	Apopka sand, 5 to 12 percent slopes	A	0.1	1.0%
<b>Totals for Area of Interest</b>			<b>8.3</b>	<b>100.0%</b>

### Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

### Rating Options

*Aggregation Method:* Dominant Condition



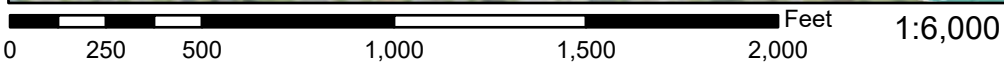
*Component Percent Cutoff: None Specified*

*Tie-break Rule: Higher*

# National Flood Hazard Layer FIRMMette



81°56'57"W 28°52'1"N



81°56'20"W 28°51'30"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                                    |  |   |
|------------------------------------|--|---|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  |  | Without Base Flood Elevation (BFE)<br>Zone A, V, A99  |
|                                    |  | With BFE or Depth Zone AE, AO, AH, VE, AR   |
|                                    |  | Regulatory Floodway   |
| <b>OTHER AREAS OF FLOOD HAZARD</b> |  | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
|                                    |  | Future Conditions 1% Annual Chance Flood Hazard Zone X  |
|                                    |  | Area with Reduced Flood Risk due to Levee. See Notes. Zone X  |
|                                    |  | Area with Flood Risk due to Levee Zone D  |
| <b>OTHER AREAS</b>                 |  | NO SCREEN Area of Minimal Flood Hazard Zone X   |
|                                    |  | Effective LOMRs   |
|                                    |  | Area of Undetermined Flood Hazard Zone D  |
| <b>GENERAL STRUCTURES</b>          |  | Channel, Culvert, or Storm Sewer  |
|                                    |  | Levee, Dike, or Floodwall   |
| <b>OTHER FEATURES</b>              |  | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation   |
|                                    |  | 17.5 Coastal Transect   |
|                                    |  | Base Flood Elevation Line (BFE)   |
|                                    |  | Limit of Study  |
|                                    |  | Jurisdiction Boundary   |
|                                    |  | Coastal Transect Baseline   |
|                                    |  | Profile Baseline  |
|                                    |  | Hydrographic Feature  |
| <b>MAP PANELS</b>                  |  | Digital Data Available  |
|                                    |  | No Digital Data Available   |
|                                    |  | Unmapped  |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

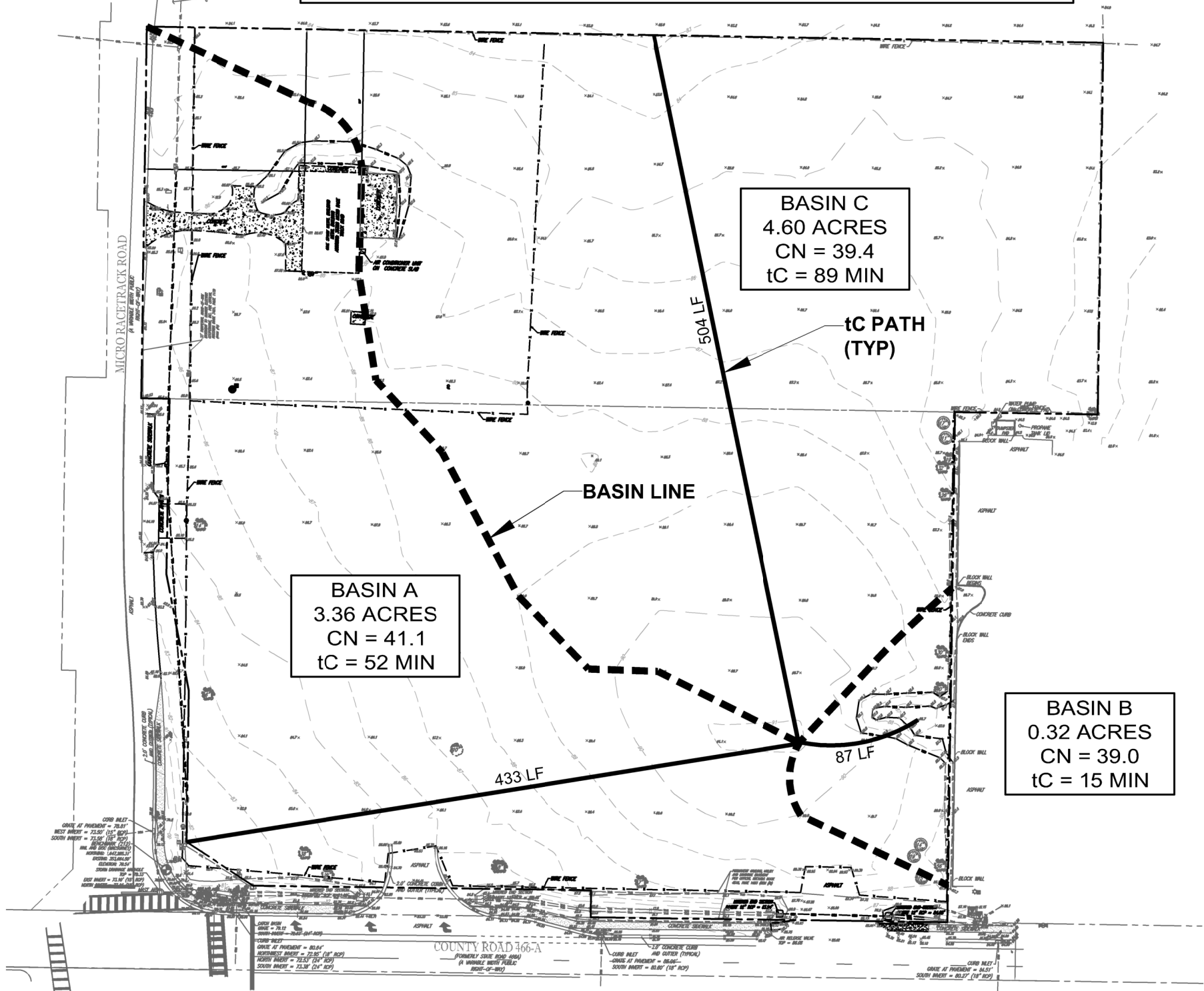
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/20/2020 at 8:24 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



# PRE-DEVELOPMENT BASIN MAP



**BASIN C**  
4.60 ACRES  
CN = 39.4  
tC = 89 MIN

**BASIN A**  
3.36 ACRES  
CN = 41.1  
tC = 52 MIN

**BASIN B**  
0.32 ACRES  
CN = 39.0  
tC = 15 MIN

504 LF

BASIN LINE

tC PATH (TYP)

433 LF

87 LF

CORNER AT PAVEMENT = 78.81'  
WEST BENCH = 23.50' (15' RCP)  
SOUTH BENCH = 23.50' (15' RCP)  
ASPHALT  
CONCRETE CURB  
CONCRETE CURB  
CONCRETE CURB

CORNER AT PAVEMENT = 80.84'  
WEST BENCH = 22.50' (15' RCP)  
SOUTH BENCH = 22.50' (15' RCP)  
ASPHALT  
CONCRETE CURB  
CONCRETE CURB

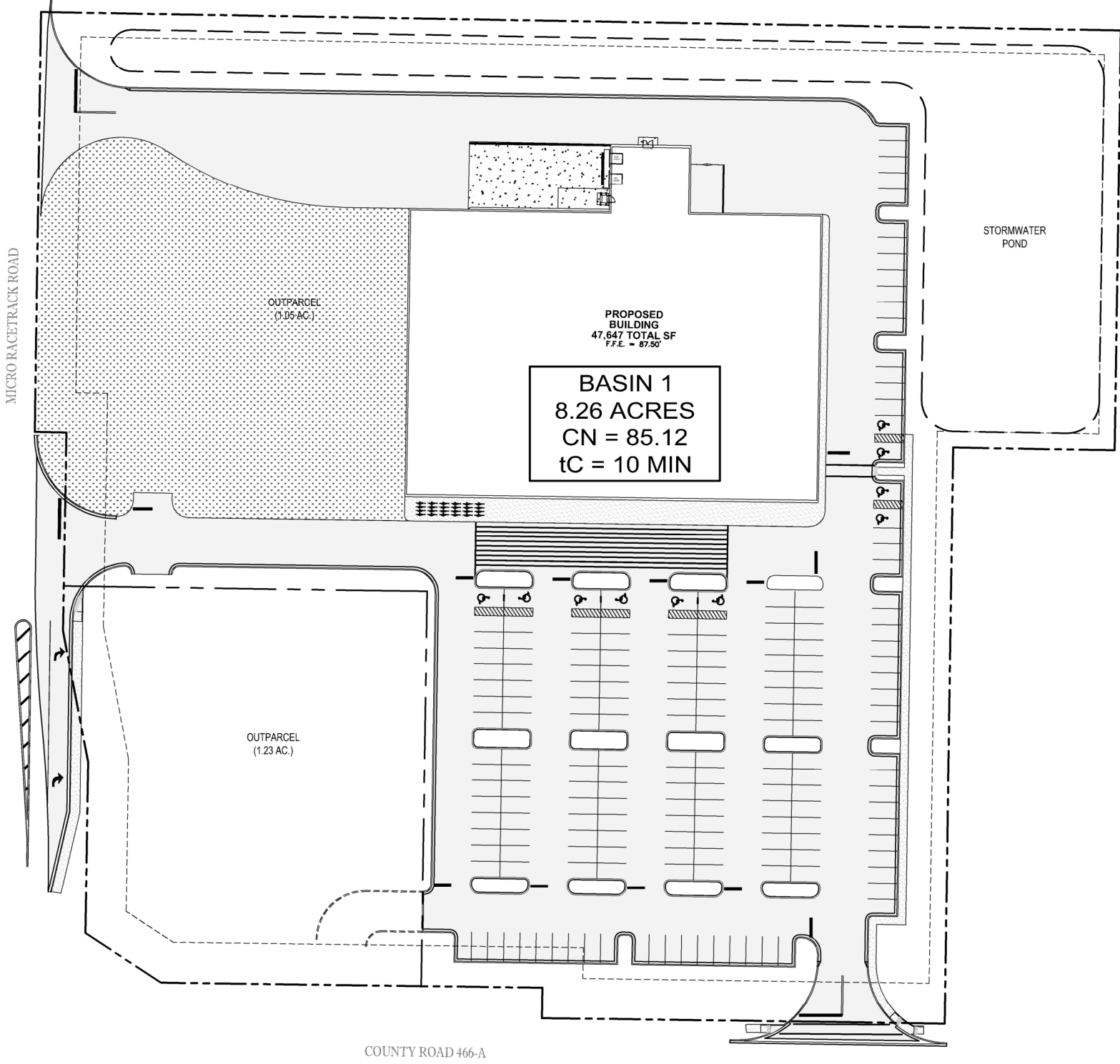
COUNTY ROAD 466-A  
FORMERLY STATE ROAD 466A  
IN WHOLE NORTH FIELD  
BENCH OF - 81.0'

CORNER AT PAVEMENT = 86.00'  
WEST BENCH = 18.00' (15' RCP)  
SOUTH BENCH = 18.00' (15' RCP)  
ASPHALT  
CONCRETE CURB  
CONCRETE CURB

CORNER AT PAVEMENT = 84.57'  
SOUTH BENCH = 84.57' (15' RCP)  
ASPHALT  
CONCRETE CURB  
CONCRETE CURB

BENCHMARK (1000)  
50' BENCH FROM R.O.P.  
BENCHMARK (1000)

# POST-DEVELOPMENT BASIN MAP



**BASIN 1**  
8.26 ACRES  
CN = 85.12  
tC = 10 MIN

PROPOSED  
BUILDING  
47,647 TOTAL SF  
F.F.E. = 87.50

OUTPARCEL  
(1.05 AC.)

OUTPARCEL  
(1.23 AC.)

STORMWATER  
POND

MICRO RACETRACK ROAD

COUNTY ROAD 466-A



APPENDIX B  
Calculations

# The Villages Grocery Store

## Stormwater Management Report

### *Proposed Stage/Storage Data*

#### **POND 1 - DRY RETENTION POND**

<b>ELEVATION (feet)</b>	<b>AREA (acres)</b>	<b>AREA sq ft</b>	<b>TOTAL AVG AREA (acres)</b>	<b>DEPTH (feet)</b>	<b>STORAGE (ac-ft)</b>	<b>CUMULAT. STORAGE (ac-ft)</b>	<b>CUMULAT. STORAGE (ac-ft)</b>
77.00	0.150	6,534	0.170	1.00	0.170	0.000	0
78.00	0.190	8,276	0.210	1.00	0.210	0.170	7405
79.00	0.230	10,019	0.250	1.00	0.250	0.380	16553
80.00	0.270	11,761	0.295	1.00	0.295	0.630	27443
81.00	0.320	13,939	0.350	1.00	0.350	0.925	40293
82.00	0.380	16,553	0.415	1.00	0.415	1.275	55539
83.00	0.450	19,602	0.520	1.00	0.520	1.690	73616
84.00	0.590	25,700	0.665	1.00	0.665	2.210	96267
85.00	0.740	32,234	0.815	1.00	0.815	2.875	125234
86.00	0.890	38,768				3.690	160735



# The Villages Grocery Store - Fruitland Park, FL Stormwater Management Report

## Time of Concentration

Pre-Development

	Basin A	Basin B	Basin C
<b>Sheet Flow</b>			
Mannings n (Woods - Dense Underbrush)	0.8	0.8	0.8
Flow Length (ft)	433	87	916
3-year 24-hour rainfall (in)	5	5	5
Slope (ft/ft)	0.0208	0.0494	0.0159
Travel time (min)	52.1	15.4	88.6
$T_t = 0.93(L^{0.6})(n^{0.6})/(i^{0.4}s^{0.3})$			
<b>Shallow Concentrated Flow</b>			
Surface Description	Unpaved	Unpaved	Unpaved
Flow Length	0	0	0
Slope	0.02080	0.049400	0.015900
Average velocity (ft/s)	2.33	3.59	2.03
Travel time (min)	0.0	0.0	0.0
<b>Channel/Pipe Flow</b>			
Flow Length	0	0	0
Average velocity (ft/s)	3	3	3
Travel time (min)	0.0	0.0	0.0
<b>Time of Concentration (min)</b>	<b>52</b>	<b>15</b>	<b>89</b>
<b>Time of Concentration (hr)</b>	<b>0.9</b>	<b>0.3</b>	<b>1.5</b>
	Use 7 min Minum.	Use 7 min Minum.	Use 7 min Minum.

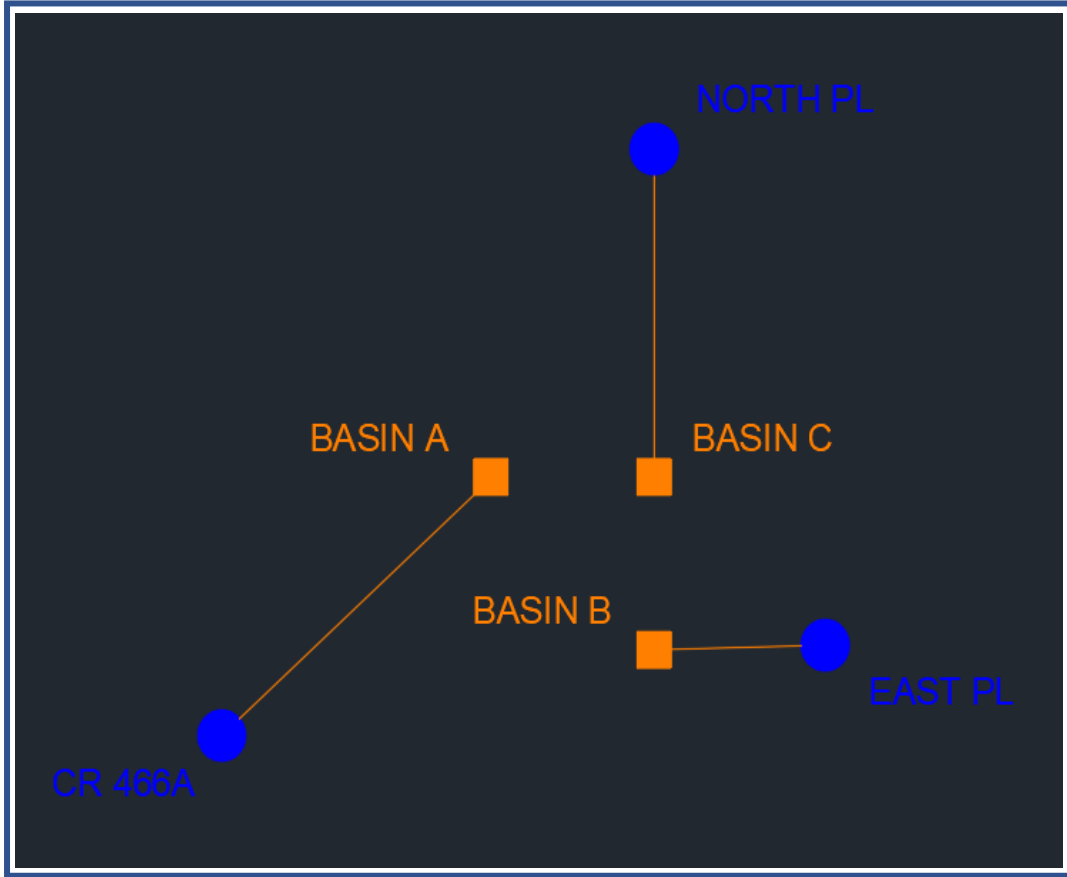
APPENDIX C  
ICPR Model Data



# PRE DEVELOPMENT NETWORK MAP

The Villages Grocery Store, Fruitland Park, FL

NE C/O Miller Blvd. & Micro Racetrack Rd.



## Simple Basin: BASIN A

Scenario: Scenario1  
Node:  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 52.0000 min  
Max Allowable Q: 0.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH256  
Peaking Factor: 256.0  
Area: 3.3600 ac  
Curve Number: 41.3  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: BASIN B

Scenario: Scenario1  
Node:  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 15.0000 min  
Max Allowable Q: 0.00 cfs  
Time Shift: 0.0000 hr  
Unit Hydrograph: UH256  
Peaking Factor: 256.0  
Area: 0.3200 ac  
Curve Number: 39.0  
% Impervious: 0.00  
% DCIA: 0.00  
% Direct: 0.00  
Rainfall Name:

Comment:

## Simple Basin: BASIN C

Scenario: Scenario1  
Node:  
Hydrograph Method: NRCS Unit Hydrograph  
Infiltration Method: Curve Number  
Time of Concentration: 89.0000 min  
Max Allowable Q: 0.00 cfs



Time Shift: 0.0000 hr  
 Unit Hydrograph: UH256  
 Peaking Factor: 256.0  
 Area: 4.6000 ac  
 Curve Number: 39.4  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Simulation: 100 YR - 24 HR

Scenario: Scenario1  
 Run Date/Time: 4/1/2021 2:46:54 PM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	60.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
Reference ET Folder:  
Unit Hydrograph  
Folder:

Lookup Tables

Boundary Stage Set:  
Extern Hydrograph Set:  
Curve Number Set:  
  
Green-Ampt Set:  
Vertical Layers Set:  
Impervious Set:  
Roughness Set:  
Crop Coef Set:  
Fillable Porosity Set:  
Conductivity Set:  
Leakage Set:

Tolerances & Options

Time Marching: SAOR  
Max Iterations: 6  
Over-Relax Weight: 0.5 dec  
Fact:  
dZ Tolerance: 0.0010 ft  
  
Max dZ: 1.0000 ft  
Link Optimizer Tol: 0.0001 ft  
  
Edge Length Option: Automatic  
  
Dflt Damping (2D): 0.0050 ft  
Min Node Srf Area: 100 ft2  
(2D):  
Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr  
ET for Manual Basins: False  
  
Smp/Man Basin Rain: Global  
Opt:  
OF Region Rain Opt: Global  
Rainfall Name: ~FLMOD  
Rainfall Amount: 10.00 in  
Storm Duration: 24.0000 hr  
  
Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area: 100 ft2  
(1D):  
Energy Switch (1D): Energy

Comment:

Simulation: 25 YR - 24 HR

Scenario: Scenario1  
Run Date/Time: 4/1/2021 2:50:56 PM  
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

Year Month Day Hour [hr]



Start Time: 0 0 0 0.0000  
 End Time: 0 0 0 24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
 Reference ET Folder:  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:  
 Roughness Set:  
 Crop Coef Set:  
 Fillable Porosity Set:  
 Conductivity Set:  
 Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	ET for Manual Basins: False
Over-Relax Weight 0.5 dec	
Fact:	

dZ Tolerance:	0.0010 ft	Smp/Man Basin Rain	Global
		Opt:	
Max dZ:	1.0000 ft	OF Region Rain Opt:	Global
Link Optimizer Tol:	0.0001 ft	Rainfall Name:	~FLMOD
		Rainfall Amount:	7.00 in
Edge Length Option:	Automatic	Storm Duration:	24.0000 hr
Dflt Damping (2D):	0.0050 ft	Dflt Damping (1D):	0.0050 ft
Min Node Srf Area	100 ft2	Min Node Srf Area	100 ft2
(2D):		(1D):	
Energy Switch (2D):	Energy	Energy Switch (1D):	Energy

Comment:
----------



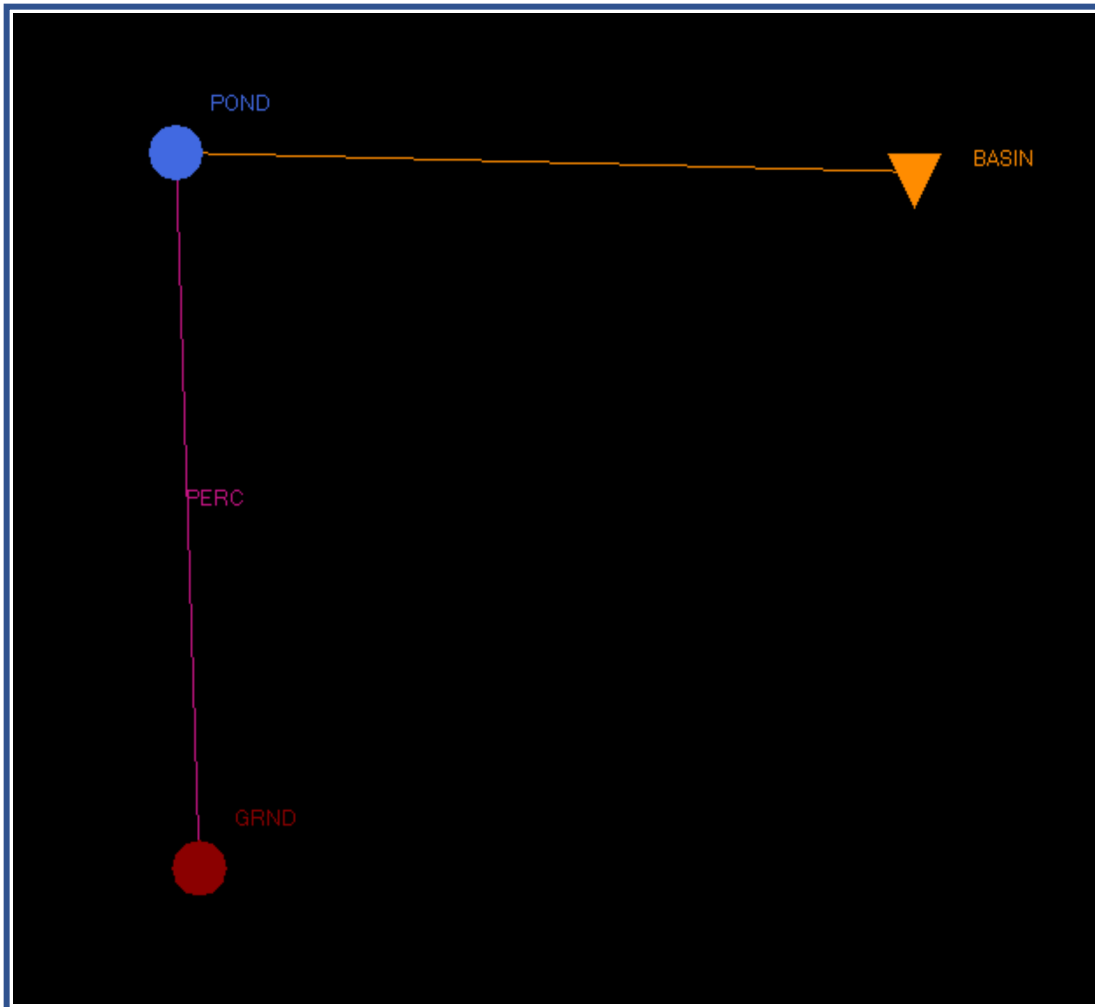
## Simple Basin Runoff Summary [Scenario1]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN A	100 YR - 24 HR	1.97	12.7167	10.00	2.37	3.3600	41.1	0.00	0.00
BASIN B	100 YR - 24 HR	0.31	12.1667	10.00	2.10	0.3200	39.0	0.00	0.00
BASIN C	100 YR - 24 HR	1.62	13.2833	10.00	2.15	4.6000	39.4	0.00	0.00
BASIN A	25 YR - 24 HR	0.60	12.8667	7.00	0.88	3.3600	41.1	0.00	0.00
BASIN B	25 YR - 24 HR	0.08	12.3500	7.00	0.76	0.3200	39.0	0.00	0.00
BASIN C	25 YR - 24 HR	0.47	13.6000	7.00	0.72	4.6000	39.4	0.00	0.00

# POST DEVELOPMENT NETWORK MAP

The Villages Grocery Store, Fruitland Park, FL

NE C/O Miller Blvd. & Micro Racetrack Rd.





Simple Basin: BASIN

Scenario: Scenario1  
 Node: POND  
 Hydrograph Method: NRCS Unit Hydrograph  
 Infiltration Method: Curve Number  
 Time of Concentration: 10.0000 min  
 Max Allowable Q: 0.00 cfs  
 Time Shift: 0.0000 hr  
 Unit Hydrograph: UH484  
 Peaking Factor: 484.0  
 Area: 8.1600 ac  
 Curve Number: 85.1  
 % Impervious: 0.00  
 % DCIA: 0.00  
 % Direct: 0.00  
 Rainfall Name:

Comment:

Node: GRND

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 75.00 ft  
 Warning Stage: 999.00 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	75.00
0	0	0	999.0000	75.00

Comment:

Node: OFFSITE

Scenario: Scenario1  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 83.00 ft  
 Warning Stage: 83.00 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	83.00
0	0	0	999.0000	83.00

Comment:

**Node: POND**

Scenario: Scenario1  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 77.00 ft  
 Warning Stage: 86.00 ft

Stage [ft]	Area [ac]	Area [ft2]
77.00	0.1500	6534
78.00	0.1900	8276
79.00	0.2300	10019
80.00	0.2700	11761
81.00	0.3200	13939
82.00	0.3800	16553
83.00	0.4500	19602
84.00	0.5900	25700
85.00	0.7400	32234
86.00	0.8900	38768

Comment:

**Drop Structure Link: CS1**

Scenario: Scenario1	Upstream Pipe Invert: 83.10 ft	Downstream Pipe Invert: 83.00 ft
From Node: POND	Manning's N: 0.0120	Manning's N: 0.0120
To Node: OFFSITE	Geometry: Circular	Geometry: Circular
Link Count: 1	Max Depth: 1.50 ft	Max Depth: 1.50 ft
Flow Direction: Both	Bottom Clip	
Solution: Combine	Default: 0.00 ft	Default: 0.00 ft
Increments: 0	Op Table:	Op Table:
Pipe Count: 1	Ref Node:	Ref Node:
Damping: 0.0000 ft	Manning's N: 0.0000	Manning's N: 0.0000
Length: 40.00 ft	Top Clip	
FHWA Code: 1	Default: 0.00 ft	Default: 0.00 ft
Entr Loss Coef: 0.50	Op Table:	Op Table:
Exit Loss Coef: 1.00	Ref Node:	Ref Node:
Bend Loss Coef: 0.00	Manning's N: 0.0000	Manning's N: 0.0000
Bend Location: 0.00 dec		
Energy Switch: Energy		

Pipe Comment:

**Weir Component**

Weir: 1 Bottom Clip  
 Weir Count: 1 Default: 0.00 ft



Weir Flow Direction: Both Damping: 0.0000 ft Weir Type: Horizontal Geometry Type: Rectangular Invert: 85.50 ft Control Elevation: 85.50 ft Max Depth: 2.75 ft Max Width: 3.75 ft Fillet: 0.00 ft	Op Table: Ref Node: Top Clip Default: 0.00 ft Op Table: Ref Node: Discharge Coefficients Weir Default: 3.200 Weir Table: Orifice Default: 0.600 Orifice Table:
--	--

Weir Comment:

Weir Component	
Weir: 2 Weir Count: 1 Weir Flow Direction: Both Damping: 0.0000 ft Weir Type: Sharp Crested Vertical Geometry Type: Circular Invert: 83.25 ft Control Elevation: 83.25 ft Max Depth: 0.17 ft	Bottom Clip Default: 0.00 ft Op Table: Ref Node: Top Clip Default: 0.00 ft Op Table: Ref Node: Discharge Coefficients Weir Default: 3.200 Weir Table: Orifice Default: 0.600 Orifice Table:

Weir Comment:

Drop Structure Comment:

Percolation Link: PERC	
Scenario: Scenario1 From Node: POND To Node: GRND Link Count: 1 Flow Direction: Both Aquifer Base Elevation: 75.00 ft Water Table Elevation: 75.50 ft Annual Recharge Rate: 0 ipy Horizontal Conductivity: 17.700 fpd Vertical Conductivity: 11.800 fpd Fillable Porosity: 0.250 Layer Thickness: 5.00 ft	Surface Area Option: Vary Based on Stage/Area Table Vertical Flow Termination: Horizontal Flow Algorithm Perimeter 1: 1667.00 ft Perimeter 2: 1968.00 ft Perimeter 3: 3447.00 ft Distance P1 to P2: 50.00 ft Distance P2 to P3: 250.00 ft # of Cells P1 to P2: 5 # of Cells P2 to P3: 25

Comment: Per Geotech Report, Max Percolation rates are 17.7 Ft/day Horizontal and 11.8 FT/Day Vertical

Simulation: 10 YR - 24 HR

Scenario: Scenario1  
 Run Date/Time: 4/9/2021 2:17:32 PM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	24.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
 Reference ET Folder:  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:  
 Roughness Set:  
 Crop Coef Set:  
 Fillable Porosity Set:



Conductivity Set:  
Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	ET for Manual Basins: False
Over-Relax Weight 0.5 dec	
Fact:	
dZ Tolerance: 0.0010 ft	Smp/Man Basin Rain Global
	Opt:
Max dZ: 1.0000 ft	OF Region Rain Opt: No Rainfall
Link Optimizer Tol: 0.0001 ft	Rainfall Name: ~FLMOD
	Rainfall Amount: 6.50 in
Edge Length Option: Automatic	Storm Duration: 24.0000 hr
Dflt Damping (2D): 0.0050 ft	Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2	Min Node Srf Area 100 ft2
(2D):	(1D):
Energy Switch (2D): Energy	Energy Switch (1D): Energy

Comment:

Simulation: 100YR24HR

Scenario: Scenario1  
Run Date/Time: 4/9/2021 2:19:14 PM  
Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	72.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	80.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	80.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
 Reference ET Folder:  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:  
 Roughness Set:  
 Crop Coef Set:  
 Fillable Porosity Set:  
 Conductivity Set:  
 Leakage Set:

Tolerances & Options

Time Marching: SAOR  
 Max Iterations: 6  
 Over-Relax Weight Fact: 0.5 dec  
 dZ Tolerance: 0.0010 ft  
  
 Max dZ: 1.0000 ft  
 Link Optimizer Tol: 0.0001 ft  
  
 Edge Length Option: Automatic  
  
 Dflt Damping (2D): 0.0050 ft  
 Min Node Srf Area (2D): 100 ft2  
 Energy Switch (2D): Energy

IA Recovery Time: 24.0000 hr  
 ET for Manual Basins: False  
  
 Smp/Man Basin Rain Opt: Global  
 OF Region Rain Opt: No Rainfall  
 Rainfall Name: ~FLMOD  
 Rainfall Amount: 10.00 in  
 Storm Duration: 24.0000 hr  
  
 Dflt Damping (1D): 0.0050 ft  
 Min Node Srf Area (1D): 100 ft2  
 Energy Switch (1D): Energy

Comment:



Simulation: 25 YR - 96 HR

Scenario: Scenario1  
 Run Date/Time: 4/9/2021 2:23:24 PM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	120.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
 Reference ET Folder:  
 Unit Hydrograph Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:  
 Curve Number Set:  
  
 Green-Ampt Set:  
 Vertical Layers Set:  
 Impervious Set:  
 Roughness Set:  
 Crop Coef Set:  
 Fillable Porosity Set:

Conductivity Set:  
Leakage Set:

Tolerances & Options

Time Marching: SAOR	IA Recovery Time: 24.0000 hr
Max Iterations: 6	ET for Manual Basins: False
Over-Relax Weight 0.5 dec	
Fact:	
dZ Tolerance: 0.0010 ft	Smp/Man Basin Rain Global
	Opt:
Max dZ: 1.0000 ft	OF Region Rain Opt: No Rainfall
Link Optimizer Tol: 0.0001 ft	Rainfall Name: ~SJRWMD-96
	Rainfall Amount: 11.00 in
Edge Length Option: Automatic	Storm Duration: 96.0000 hr
Dflt Damping (2D): 0.0050 ft	Dflt Damping (1D): 0.0050 ft
Min Node Srf Area 100 ft2	Min Node Srf Area 100 ft2
(2D):	(1D):
Energy Switch (2D): Energy	Energy Switch (1D): Energy

Comment:

## Simple Basin Runoff Summary [Scenario1]

Basin Name	Sim Name	Max Flow [cfs]	Time to Max Flow [hrs]	Total Rainfall [in]	Total Runoff [in]	Area [ac]	Equivalent Curve Number	% Imperv	% DCIA
BASIN	10 YR - 24 HR	33.73	12.0167	6.50	4.79	8.1600	85.1	0.00	0.00
BASIN	100YR24HR	55.59	12.0222	10.00	8.17	8.1600	85.1	0.00	0.00
BASIN	25 YR - 96 HR	45.74	60.0000	11.00	9.17	8.1600	85.1	0.00	0.00



## Node Max Conditions [Scenario1]

Node Name	Sim Name	Warning Stage [ft]	Max Stage [ft]	Min/Max Delta Stage [ft]	Max Total Inflow [cfs]	Max Total Outflow [cfs]	Max Surface Area [ft2]
GRND	10 YR - 24 HR	999.00	75.00	0.0000	2.78	0.00	0
OFFSITE	10 YR - 24 HR	83.00	83.00	0.0000	0.02	0.00	0
POND	10 YR - 24 HR	86.00	83.40	0.0010	33.73	2.78	22024
GRND	100YR24HR	999.00	75.00	0.0000	4.01	0.00	0
OFFSITE	100YR24HR	83.00	83.00	0.0000	0.83	0.00	0
POND	100YR24HR	86.00	85.56	0.0010	55.59	4.15	35924
GRND	25 YR - 96 HR	999.00	75.00	0.0000	3.14	0.00	0
OFFSITE	25 YR - 96 HR	83.00	83.00	0.0000	0.39	0.00	0
POND	25 YR - 96 HR	86.00	85.53	0.0010	45.74	3.28	35709

## Link Min/Max Conditions [Scenario1]

Link Name	Sim Name	Max Flow [cfs]	Min Flow [cfs]	Min/Max Delta Flow [cfs]	Max Us Velocity [fps]	Max Ds Velocity [fps]	Max Avg Velocity [fps]
CS1 - Pipe	10 YR - 24 HR	0.02	0.00	0.00	0.00	0.00	0.00
CS1 - Weir: 1	10 YR - 24 HR	0.00	0.00	0.00	0.00	0.00	0.00
CS1 - Weir: 2	10 YR - 24 HR	0.02	0.00	0.00	0.00	0.00	0.00
PERC	10 YR - 24 HR	2.78	0.00	-0.25	0.00	0.00	0.00
CS1 - Pipe	100YR24HR	0.83	0.00	0.01	0.00	0.00	0.00
CS1 - Weir: 1	100YR24HR	0.68	0.00	0.01	0.81	0.81	0.81
CS1 - Weir: 2	100YR24HR	0.16	0.00	0.00	0.00	0.00	0.00
PERC	100YR24HR	4.01	0.00	-0.32	0.00	0.00	0.00
CS1 - Pipe	25 YR - 96 HR	0.39	0.00	0.01	0.00	0.00	0.00
CS1 - Weir: 1	25 YR - 96 HR	0.23	0.00	0.01	0.00	0.00	0.00
CS1 - Weir: 2	25 YR - 96 HR	0.16	0.00	0.00	0.00	0.00	0.00
PERC	25 YR - 96 HR	3.14	0.00	-0.01	0.00	0.00	0.00

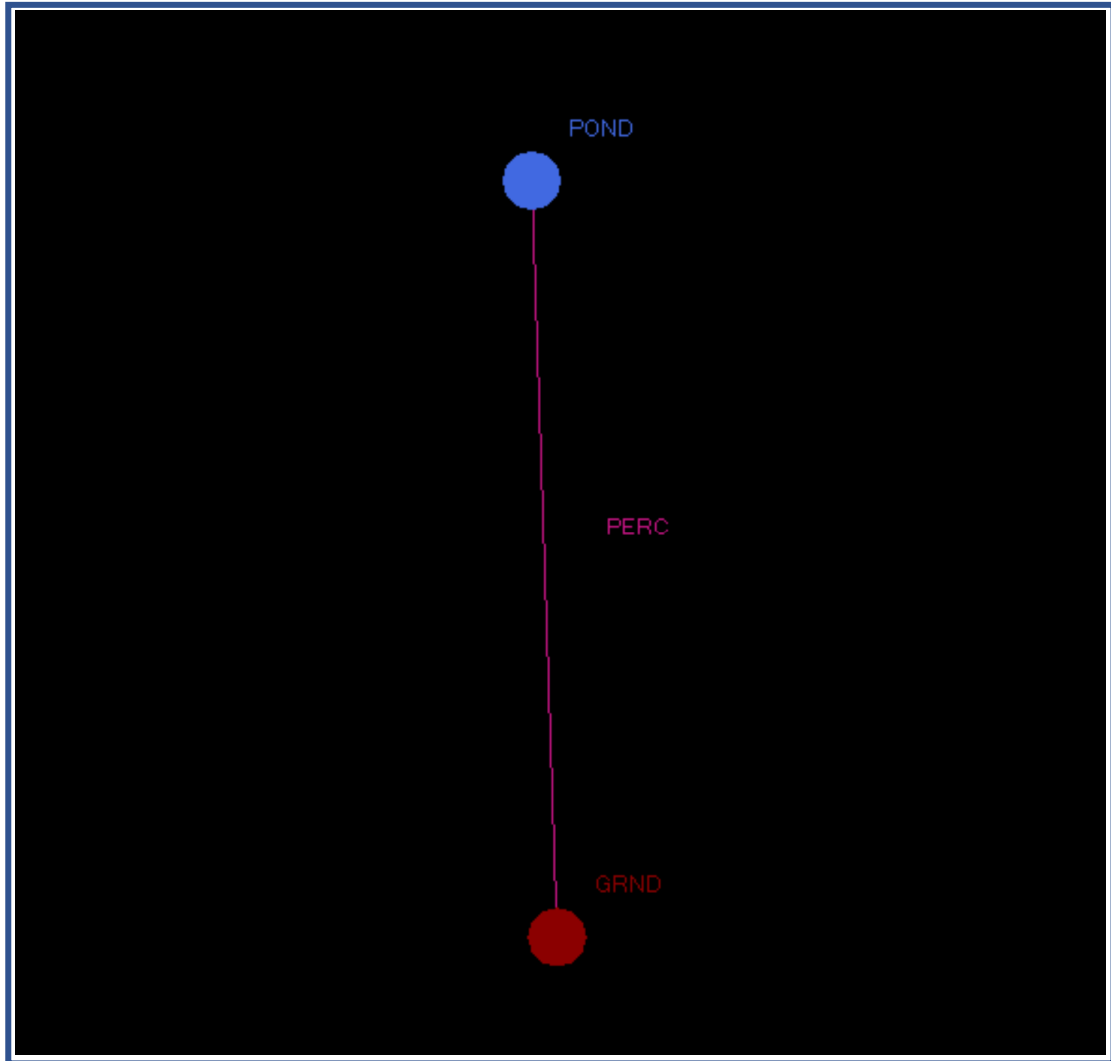
APPENDIX D  
Recovery ICPR Model Data



# RECOVERY NETWORK MAP

The Villages Grocery Store, Fruitland Park, FL

NE C/O Miller Blvd. & Micro Racetrack Rd.



**Node: GRND**

Scenario: Recovery  
 Type: Time/Stage  
 Base Flow: 0.00 cfs  
 Initial Stage: 75.00 ft  
 Warning Stage: 999.00 ft  
 Boundary Stage:

Year	Month	Day	Hour	Stage [ft]
0	0	0	0.0000	75.00
0	0	0	999.0000	75.00

Comment:

**Node: POND**

Scenario: Recovery  
 Type: Stage/Area  
 Base Flow: 0.00 cfs  
 Initial Stage: 81.50 ft  
 Warning Stage: 86.00 ft

Stage [ft]	Area [ac]	Area [ft2]
77.00	0.1500	6534
78.00	0.1900	8276
79.00	0.2300	10019
80.00	0.2700	11761
81.00	0.3200	13939
82.00	0.3800	16553
83.00	0.4500	19602
84.00	0.5900	25700
85.00	0.7400	32234
86.00	0.8900	38768

Comment:

**Percolation Link: PERC**

Scenario:	Recovery	Surface Area Option:	Vary Based on Stage/Area Table
From Node:	POND	Vertical Flow Termination:	Horizontal Flow Algorithm
To Node:	GRND	Perimeter 1:	1667.00 ft
Link Count:	1	Perimeter 2:	1968.00 ft
Flow Direction:	Both	Perimeter 3:	3447.00 ft
Aquifer Base Elevation:	75.00 ft	Distance P1 to P2:	50.00 ft
Water Table Elevation:	75.50 ft	Distance P2 to P3:	250.00 ft
Annual Recharge Rate:	0 ipy	# of Cells P1 to P2:	5
Horizontal Conductivity:	17.700 fpd		

Vertical Conductivity: 11.800 fpd  
 Fillable Porosity: 0.250  
 Layer Thickness: 5.00 ft

# of Cells P2 to P3: 25

Comment: Per Geotech Report, Max Percolation rates are 17.7 Ft/day Horizontal and 11.8 FT/Day Vertical

Simulation: RECOVERY

Scenario: Recovery  
 Run Date/Time: 4/13/2021 11:01:05 AM  
 Program Version: ICPR4 4.07.04

General

Run Mode: Normal

	Year	Month	Day	Hour [hr]
Start Time:	0	0	0	0.0000
End Time:	0	0	0	120.0000

	Hydrology [sec]	Surface Hydraulics [sec]	Groundwater [sec]
Min Calculation Time:	60.0000	0.1000	900.0000
Max Calculation Time:		30.0000	

Output Time Increments

Hydrology

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Surface Hydraulics

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	15.0000

Groundwater

Year	Month	Day	Hour [hr]	Time Increment [min]
0	0	0	0.0000	60.0000

Restart File

Save Restart: False

Resources & Lookup Tables

Resources

Rainfall Folder:  
 Reference ET Folder:

Lookup Tables

Boundary Stage Set:  
 Extern Hydrograph Set:



Unit Hydrograph  
Folder:

Curve Number Set:

Green-Ampt Set:  
Vertical Layers Set:  
Impervious Set:  
Roughness Set:  
Crop Coef Set:  
Fillable Porosity Set:  
Conductivity Set:  
Leakage Set:

Tolerances & Options

Time Marching: SAOR  
Max Iterations: 6  
Over-Relax Weight 0.5 dec  
Fact:  
dZ Tolerance: 0.0010 ft  
Max dZ: 1.0000 ft  
Link Optimizer Tol: 0.0001 ft

IA Recovery Time: 24.0000 hr  
ET for Manual Basins: False

Smp/Man Basin Rain Opt: No Rainfall  
OF Region Rain Opt: No Rainfall

Edge Length Option: Automatic

Dflt Damping (2D): 0.0050 ft  
Min Node Srf Area 100 ft2  
(2D):  
Energy Switch (2D): Energy

Dflt Damping (1D): 0.0050 ft  
Min Node Srf Area 100 ft2  
(1D):  
Energy Switch (1D): Energy

Comment:

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	0.0000	81.50	0
Recovery	RECOVERY	POND	0.2509	81.38	1861
Recovery	RECOVERY	POND	0.5012	81.25	3678
Recovery	RECOVERY	POND	0.7512	81.13	5453
Recovery	RECOVERY	POND	1.0009	81.01	7187
Recovery	RECOVERY	POND	1.2514	80.88	8889
Recovery	RECOVERY	POND	1.5011	80.76	10553
Recovery	RECOVERY	POND	1.7520	80.64	12158
Recovery	RECOVERY	POND	2.0013	80.53	13573
Recovery	RECOVERY	POND	2.2503	80.43	14825
Recovery	RECOVERY	POND	2.5001	80.35	15943
Recovery	RECOVERY	POND	2.7506	80.27	16945
Recovery	RECOVERY	POND	3.0017	80.19	17848
Recovery	RECOVERY	POND	3.2508	80.13	18657
Recovery	RECOVERY	POND	3.5017	80.06	19397
Recovery	RECOVERY	POND	3.7506	80.01	20066
Recovery	RECOVERY	POND	4.0034	79.95	20689
Recovery	RECOVERY	POND	4.2516	79.91	21253
Recovery	RECOVERY	POND	4.5015	79.86	21777
Recovery	RECOVERY	POND	4.7517	79.82	22266
Recovery	RECOVERY	POND	5.0042	79.78	22725
Recovery	RECOVERY	POND	5.2542	79.74	23151
Recovery	RECOVERY	POND	5.5060	79.70	23553
Recovery	RECOVERY	POND	5.7523	79.67	23925
Recovery	RECOVERY	POND	6.0012	79.64	24280
Recovery	RECOVERY	POND	6.2543	79.61	24623
Recovery	RECOVERY	POND	6.5059	79.58	24947
Recovery	RECOVERY	POND	6.7559	79.55	25253
Recovery	RECOVERY	POND	7.0059	79.52	25546
Recovery	RECOVERY	POND	7.2559	79.50	25827
Recovery	RECOVERY	POND	7.5059	79.47	26096
Recovery	RECOVERY	POND	7.7559	79.45	26354
Recovery	RECOVERY	POND	8.0059	79.43	26603
Recovery	RECOVERY	POND	8.2559	79.40	26843
Recovery	RECOVERY	POND	8.5059	79.38	27075
Recovery	RECOVERY	POND	8.7559	79.36	27299
Recovery	RECOVERY	POND	9.0059	79.34	27515
Recovery	RECOVERY	POND	9.2559	79.32	27725
Recovery	RECOVERY	POND	9.5059	79.30	27929
Recovery	RECOVERY	POND	9.7559	79.28	28127
Recovery	RECOVERY	POND	10.0059	79.27	28319
Recovery	RECOVERY	POND	10.2559	79.25	28505

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	10.5059	79.23	28687
Recovery	RECOVERY	POND	10.7559	79.21	28864
Recovery	RECOVERY	POND	11.0059	79.20	29036
Recovery	RECOVERY	POND	11.2559	79.18	29204
Recovery	RECOVERY	POND	11.5059	79.16	29368
Recovery	RECOVERY	POND	11.7559	79.15	29528
Recovery	RECOVERY	POND	12.0059	79.13	29685
Recovery	RECOVERY	POND	12.2559	79.12	29837
Recovery	RECOVERY	POND	12.5059	79.10	29987
Recovery	RECOVERY	POND	12.7559	79.09	30133
Recovery	RECOVERY	POND	13.0059	79.08	30276
Recovery	RECOVERY	POND	13.2559	79.06	30415
Recovery	RECOVERY	POND	13.5059	79.05	30552
Recovery	RECOVERY	POND	13.7559	79.03	30687
Recovery	RECOVERY	POND	14.0059	79.02	30818
Recovery	RECOVERY	POND	14.2559	79.01	30947
Recovery	RECOVERY	POND	14.5059	79.00	31074
Recovery	RECOVERY	POND	14.7559	78.98	31198
Recovery	RECOVERY	POND	15.0059	78.97	31320
Recovery	RECOVERY	POND	15.2559	78.96	31439
Recovery	RECOVERY	POND	15.5059	78.95	31557
Recovery	RECOVERY	POND	15.7559	78.94	31672
Recovery	RECOVERY	POND	16.0059	78.92	31785
Recovery	RECOVERY	POND	16.2559	78.91	31897
Recovery	RECOVERY	POND	16.5059	78.90	32006
Recovery	RECOVERY	POND	16.7559	78.89	32114
Recovery	RECOVERY	POND	17.0059	78.88	32220
Recovery	RECOVERY	POND	17.2559	78.87	32324
Recovery	RECOVERY	POND	17.5059	78.86	32426
Recovery	RECOVERY	POND	17.7559	78.85	32527
Recovery	RECOVERY	POND	18.0059	78.84	32627
Recovery	RECOVERY	POND	18.2559	78.83	32725
Recovery	RECOVERY	POND	18.5059	78.82	32821
Recovery	RECOVERY	POND	18.7559	78.81	32916
Recovery	RECOVERY	POND	19.0059	78.80	33009
Recovery	RECOVERY	POND	19.2559	78.79	33102
Recovery	RECOVERY	POND	19.5059	78.78	33193
Recovery	RECOVERY	POND	19.7559	78.77	33282
Recovery	RECOVERY	POND	20.0059	78.76	33370
Recovery	RECOVERY	POND	20.2559	78.75	33458
Recovery	RECOVERY	POND	20.5059	78.74	33543
Recovery	RECOVERY	POND	20.7559	78.74	33628

← TV RECOVERS IN 12.6 HOURS



Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	21.0059	78.73	33712
Recovery	RECOVERY	POND	21.2559	78.72	33794
Recovery	RECOVERY	POND	21.5059	78.71	33876
Recovery	RECOVERY	POND	21.7559	78.70	33956
Recovery	RECOVERY	POND	22.0059	78.69	34036
Recovery	RECOVERY	POND	22.2559	78.68	34114
Recovery	RECOVERY	POND	22.5059	78.68	34191
Recovery	RECOVERY	POND	22.7559	78.67	34268
Recovery	RECOVERY	POND	23.0059	78.66	34343
Recovery	RECOVERY	POND	23.2559	78.65	34418
Recovery	RECOVERY	POND	23.5059	78.64	34492
Recovery	RECOVERY	POND	23.7559	78.64	34564
Recovery	RECOVERY	POND	24.0059	78.63	34636
Recovery	RECOVERY	POND	24.2559	78.62	34708
Recovery	RECOVERY	POND	24.5059	78.61	34778
Recovery	RECOVERY	POND	24.7559	78.61	34847
Recovery	RECOVERY	POND	25.0059	78.60	34916
Recovery	RECOVERY	POND	25.2559	78.59	34984
Recovery	RECOVERY	POND	25.5059	78.58	35051
Recovery	RECOVERY	POND	25.7559	78.58	35118
Recovery	RECOVERY	POND	26.0059	78.57	35184
Recovery	RECOVERY	POND	26.2559	78.56	35249
Recovery	RECOVERY	POND	26.5059	78.56	35313
Recovery	RECOVERY	POND	26.7559	78.55	35377
Recovery	RECOVERY	POND	27.0059	78.54	35440
Recovery	RECOVERY	POND	27.2559	78.54	35502
Recovery	RECOVERY	POND	27.5059	78.53	35564
Recovery	RECOVERY	POND	27.7559	78.52	35625
Recovery	RECOVERY	POND	28.0059	78.52	35685
Recovery	RECOVERY	POND	28.2559	78.51	35745
Recovery	RECOVERY	POND	28.5059	78.50	35804
Recovery	RECOVERY	POND	28.7559	78.50	35863
Recovery	RECOVERY	POND	29.0059	78.49	35921
Recovery	RECOVERY	POND	29.2559	78.48	35978
Recovery	RECOVERY	POND	29.5059	78.48	36035
Recovery	RECOVERY	POND	29.7559	78.47	36092
Recovery	RECOVERY	POND	30.0059	78.46	36148
Recovery	RECOVERY	POND	30.2559	78.46	36203
Recovery	RECOVERY	POND	30.5059	78.45	36258
Recovery	RECOVERY	POND	30.7559	78.45	36312
Recovery	RECOVERY	POND	31.0059	78.44	36366
Recovery	RECOVERY	POND	31.2559	78.43	36419

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	31.5059	78.43	36472
Recovery	RECOVERY	POND	31.7559	78.42	36524
Recovery	RECOVERY	POND	32.0059	78.42	36576
Recovery	RECOVERY	POND	32.2559	78.41	36627
Recovery	RECOVERY	POND	32.5059	78.41	36678
Recovery	RECOVERY	POND	32.7559	78.40	36729
Recovery	RECOVERY	POND	33.0059	78.39	36779
Recovery	RECOVERY	POND	33.2559	78.39	36828
Recovery	RECOVERY	POND	33.5059	78.38	36878
Recovery	RECOVERY	POND	33.7559	78.38	36926
Recovery	RECOVERY	POND	34.0059	78.37	36975
Recovery	RECOVERY	POND	34.2559	78.37	37023
Recovery	RECOVERY	POND	34.5059	78.36	37070
Recovery	RECOVERY	POND	34.7559	78.36	37117
Recovery	RECOVERY	POND	35.0059	78.35	37164
Recovery	RECOVERY	POND	35.2559	78.35	37210
Recovery	RECOVERY	POND	35.5059	78.34	37256
Recovery	RECOVERY	POND	35.7559	78.34	37302
Recovery	RECOVERY	POND	36.0059	78.33	37347
Recovery	RECOVERY	POND	36.2559	78.33	37392
Recovery	RECOVERY	POND	36.5059	78.32	37437
Recovery	RECOVERY	POND	36.7559	78.32	37481
Recovery	RECOVERY	POND	37.0059	78.31	37525
Recovery	RECOVERY	POND	37.2559	78.31	37568
Recovery	RECOVERY	POND	37.5059	78.30	37611
Recovery	RECOVERY	POND	37.7559	78.30	37654
Recovery	RECOVERY	POND	38.0059	78.29	37696
Recovery	RECOVERY	POND	38.2559	78.29	37739
Recovery	RECOVERY	POND	38.5059	78.28	37780
Recovery	RECOVERY	POND	38.7559	78.28	37822
Recovery	RECOVERY	POND	39.0059	78.27	37863
Recovery	RECOVERY	POND	39.2559	78.27	37904
Recovery	RECOVERY	POND	39.5059	78.26	37944
Recovery	RECOVERY	POND	39.7559	78.26	37985
Recovery	RECOVERY	POND	40.0059	78.25	38025
Recovery	RECOVERY	POND	40.2559	78.25	38064
Recovery	RECOVERY	POND	40.5059	78.24	38104
Recovery	RECOVERY	POND	40.7559	78.24	38143
Recovery	RECOVERY	POND	41.0059	78.24	38182
Recovery	RECOVERY	POND	41.2559	78.23	38220
Recovery	RECOVERY	POND	41.5059	78.23	38259
Recovery	RECOVERY	POND	41.7559	78.22	38297

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	42.0059	78.22	38334
Recovery	RECOVERY	POND	42.2559	78.21	38372
Recovery	RECOVERY	POND	42.5059	78.21	38409
Recovery	RECOVERY	POND	42.7559	78.21	38446
Recovery	RECOVERY	POND	43.0059	78.20	38483
Recovery	RECOVERY	POND	43.2559	78.20	38519
Recovery	RECOVERY	POND	43.5059	78.19	38555
Recovery	RECOVERY	POND	43.7559	78.19	38591
Recovery	RECOVERY	POND	44.0059	78.18	38627
Recovery	RECOVERY	POND	44.2559	78.18	38662
Recovery	RECOVERY	POND	44.5059	78.18	38698
Recovery	RECOVERY	POND	44.7559	78.17	38733
Recovery	RECOVERY	POND	45.0059	78.17	38767
Recovery	RECOVERY	POND	45.2559	78.16	38802
Recovery	RECOVERY	POND	45.5059	78.16	38836
Recovery	RECOVERY	POND	45.7559	78.16	38870
Recovery	RECOVERY	POND	46.0059	78.15	38904
Recovery	RECOVERY	POND	46.2559	78.15	38938
Recovery	RECOVERY	POND	46.5059	78.14	38971
Recovery	RECOVERY	POND	46.7559	78.14	39005
Recovery	RECOVERY	POND	47.0059	78.14	39038
Recovery	RECOVERY	POND	47.2559	78.13	39070
Recovery	RECOVERY	POND	47.5059	78.13	39103
Recovery	RECOVERY	POND	47.7559	78.12	39135
Recovery	RECOVERY	POND	48.0059	78.12	39168
Recovery	RECOVERY	POND	48.2559	78.12	39200
Recovery	RECOVERY	POND	48.5059	78.11	39231
Recovery	RECOVERY	POND	48.7559	78.11	39263
Recovery	RECOVERY	POND	49.0059	78.11	39294
Recovery	RECOVERY	POND	49.2559	78.10	39326
Recovery	RECOVERY	POND	49.5059	78.10	39357
Recovery	RECOVERY	POND	49.7559	78.10	39387
Recovery	RECOVERY	POND	50.0059	78.09	39418
Recovery	RECOVERY	POND	50.2559	78.09	39448
Recovery	RECOVERY	POND	50.5059	78.08	39479
Recovery	RECOVERY	POND	50.7559	78.08	39509
Recovery	RECOVERY	POND	51.0059	78.08	39539
Recovery	RECOVERY	POND	51.2559	78.07	39569
Recovery	RECOVERY	POND	51.5059	78.07	39598
Recovery	RECOVERY	POND	51.7559	78.07	39627
Recovery	RECOVERY	POND	52.0059	78.06	39657
Recovery	RECOVERY	POND	52.2559	78.06	39686



Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	52.5059	78.06	39715
Recovery	RECOVERY	POND	52.7559	78.05	39743
Recovery	RECOVERY	POND	53.0059	78.05	39772
Recovery	RECOVERY	POND	53.2559	78.05	39800
Recovery	RECOVERY	POND	53.5059	78.04	39829
Recovery	RECOVERY	POND	53.7559	78.04	39857
Recovery	RECOVERY	POND	54.0059	78.04	39885
Recovery	RECOVERY	POND	54.2559	78.03	39912
Recovery	RECOVERY	POND	54.5059	78.03	39940
Recovery	RECOVERY	POND	54.7559	78.03	39967
Recovery	RECOVERY	POND	55.0059	78.02	39995
Recovery	RECOVERY	POND	55.2559	78.02	40022
Recovery	RECOVERY	POND	55.5059	78.02	40049
Recovery	RECOVERY	POND	55.7559	78.01	40076
Recovery	RECOVERY	POND	56.0059	78.01	40102
Recovery	RECOVERY	POND	56.2559	78.01	40129
Recovery	RECOVERY	POND	56.5059	78.00	40155
Recovery	RECOVERY	POND	56.7559	78.00	40182
Recovery	RECOVERY	POND	57.0059	78.00	40208
Recovery	RECOVERY	POND	57.2559	77.99	40234
Recovery	RECOVERY	POND	57.5059	77.99	40260
Recovery	RECOVERY	POND	57.7559	77.99	40285
Recovery	RECOVERY	POND	58.0059	77.98	40311
Recovery	RECOVERY	POND	58.2559	77.98	40336
Recovery	RECOVERY	POND	58.5059	77.98	40362
Recovery	RECOVERY	POND	58.7559	77.98	40387
Recovery	RECOVERY	POND	59.0059	77.97	40412
Recovery	RECOVERY	POND	59.2559	77.97	40437
Recovery	RECOVERY	POND	59.5059	77.97	40462
Recovery	RECOVERY	POND	59.7559	77.96	40486
Recovery	RECOVERY	POND	60.0059	77.96	40511
Recovery	RECOVERY	POND	60.2559	77.96	40535
Recovery	RECOVERY	POND	60.5059	77.95	40560
Recovery	RECOVERY	POND	60.7559	77.95	40584
Recovery	RECOVERY	POND	61.0059	77.95	40608
Recovery	RECOVERY	POND	61.2559	77.95	40632
Recovery	RECOVERY	POND	61.5059	77.94	40656
Recovery	RECOVERY	POND	61.7559	77.94	40679
Recovery	RECOVERY	POND	62.0059	77.94	40703
Recovery	RECOVERY	POND	62.2559	77.93	40726
Recovery	RECOVERY	POND	62.5059	77.93	40750
Recovery	RECOVERY	POND	62.7559	77.93	40773

Scenario	Sim	Node Name	Relative Time [hrs]	Stage [ft]	Total Outflow Volume [ft3]
Recovery	RECOVERY	POND	63.0059	77.93	40796
Recovery	RECOVERY	POND	63.2559	77.92	40819
Recovery	RECOVERY	POND	63.5059	77.92	40842
Recovery	RECOVERY	POND	63.7559	77.92	40865
Recovery	RECOVERY	POND	64.0059	77.91	40887
Recovery	RECOVERY	POND	64.2559	77.91	40910
Recovery	RECOVERY	POND	64.5059	77.91	40932
Recovery	RECOVERY	POND	64.7559	77.91	40955
Recovery	RECOVERY	POND	65.0059	77.90	40977
Recovery	RECOVERY	POND	65.2559	77.90	40999
Recovery	RECOVERY	POND	65.5059	77.90	41021
Recovery	RECOVERY	POND	65.7559	77.89	41043
Recovery	RECOVERY	POND	66.0059	77.89	41065
Recovery	RECOVERY	POND	66.2559	77.89	41087
Recovery	RECOVERY	POND	66.5059	77.89	41108
Recovery	RECOVERY	POND	66.7559	77.88	41130
Recovery	RECOVERY	POND	67.0059	77.88	41151
Recovery	RECOVERY	POND	67.2559	77.88	41172
Recovery	RECOVERY	POND	67.5059	77.88	41194
Recovery	RECOVERY	POND	67.7559	77.87	41215
Recovery	RECOVERY	POND	68.0059	77.87	41236
Recovery	RECOVERY	POND	68.2559	77.87	41257
Recovery	RECOVERY	POND	68.5059	77.87	41278
Recovery	RECOVERY	POND	68.7559	77.86	41298
Recovery	RECOVERY	POND	69.0059	77.86	41319
Recovery	RECOVERY	POND	69.2559	77.86	41340
Recovery	RECOVERY	POND	69.5059	77.86	41360
Recovery	RECOVERY	POND	69.7559	77.85	41380
Recovery	RECOVERY	POND	70.0059	77.85	41401
Recovery	RECOVERY	POND	70.2559	77.85	41421
Recovery	RECOVERY	POND	70.5059	77.85	41441
Recovery	RECOVERY	POND	70.7559	77.84	41461
Recovery	RECOVERY	POND	71.0059	77.84	41481
Recovery	RECOVERY	POND	71.2559	77.84	41501
Recovery	RECOVERY	POND	71.5059	77.84	41520
Recovery	RECOVERY	POND	71.7559	77.83	41540

APPENDIX D  
Recovery ICPR Model Data



# STORM DRAIN TABULATION

**THE VILLAGES GROCERY STORE  
SYSTEM 1**

**PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_**

STRUCTURE NUMBER	TYPE OF STRUCTURE / LINE	LENGTH (FT)	DRAINAGE AREA (AC)		SUB TOTAL C * A	INLET PIPE	TIME OF FLOW IN SECTION (MIN)	INTENSITY (IN/HR)	T O T	INCR. TOTAL	TOTAL RUNOFF (CFS)	INLET OR GUTTER ELEV. (FT)	HYD. GRADE LINE			TOTAL	DIAMETER (IN)	HYD. GRAD.		ZONE:	FREQ: (YEAR)								
			C = 0.95	C = 0.30									C = 0.25	MINOR	MINOR	PHYSICAL		7	10										
UPPER	TIME OF CONC. (MIN)	INCR.	TOTAL	TIME OF CONC. (MIN)	TIME OF FLOW IN SECTION (MIN)	INTENSITY (IN/HR)	T O T	INCR. TOTAL	TOTAL RUNOFF (CFS)	INLET OR GUTTER ELEV. (FT)	UPPER	LOWER	FALL (FT)	HEAD LOSS (FT)	LOSS COEFF.	DIAMETER (IN)	SLOPE (%)	VELOCITY (FPS)	FREQ. FACTOR: 1.00		REMARKS								
LOWER											END ELEV. (FT)	END ELEV. (FT)							MINOR	FRICT.		FRICT.	MIN. HGL COVER = 0.25	MIN. PIPE COVER = 1.50					
D-1	TYPE -9	112.0	0.42	0.42	0.40	10.00	0.61	7.47	0.40	0.00	2.98	85.00	84.85	84.77	0.08	0.08	18	0.07	1.7										
D-2			0.00	0.00	0.00								0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	3.1		
			0.00	0.00	0.00								10.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	2.5		
D-2	TYPE -9	285.0	0.54	0.96	0.91	10.00	1.32	7.31	0.92	0.00	6.73	85.50	84.77	84.50	0.27	0.27	24	0.07	2.1										
D-3			0.03	0.03	0.01								0.00	0.00	0.06	0.8		0.06	0.06	0.8	0.06	0.06	0.06	0.06	0.06	0.21	3.6		
			0.00	0.00	0.00								10.61	0.00	0.00	0.21		0.012	0.21	0.012	0.21	0.012	0.21	0.012	0.21	0.10	2.5		
D-4	TYPE -9	112.0	0.41	0.41	0.39	10.00	0.62	7.47	0.39	0.00	2.91	84.89	84.57	84.50	0.07	0.07	18	0.06	1.6										
D-3			0.00	0.00	0.00								0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	3.0		
			0.00	0.00	0.00								10.00	0.00	0.00	0.24		0.07	0.07	0.012	0.07	0.012	0.07	0.012	0.07	0.15	2.5		
D-3	TYPE -9	204.0	0.53	1.90	1.81	10.00	0.84	6.99	1.81	0.00	12.67	84.94	84.50	83.70	0.80	0.80	24	0.27	4.0										
D-5			0.00	0.03	0.01								0.00	0.00	0.25	1.0		0.25	1.0	0.25	1.0	0.25	1.0	0.25	1.0	0.20	3.5		
			0.00	0.00	0.00								11.94	0.00	0.00	0.40		0.54	0.012	0.40	0.54	0.012	0.40	0.54	0.012	0.10	2.5		
D-5	TYPE -9	22.0	0.18	2.08	1.98	10.00	0.08	6.80	2.01	0.00	13.67	86.02	83.70	<b>83.40</b>	0.30	0.30	24	0.31	4.4										
D-6			0.08	0.11	0.03								0.00	0.00	0.24	0.8		0.24	0.8	0.24	0.8	0.24	0.8	0.24	0.8	0.23	3.7		
			0.00	0.00	0.00								12.78	0.00	0.00	0.05		0.07	0.012	0.05	0.07	0.012	0.05	0.07	0.012	0.10	2.5		
D-7	TYPE -9	22.0	0.77	0.77	0.73	10.00	0.11	7.47	0.76	0.00	5.64	85.78	83.45	<b>83.40</b>	0.05	0.05	18	0.24	3.2										
D-8			0.08	0.08	0.02								0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	3.1		
			0.00	0.00	0.00								10.00	0.00	0.00	0.05		0.05	0.012	0.05	0.05	0.012	0.05	0.05	0.012	0.15	2.5		
D-10	MH	115.0	0.08	0.08	0.08	10.00	0.21	7.47	0.08	0.00	0.57	86.75	83.76	83.76	0.00	0.00	18	0.00	0.3										
D-11			0.00	0.00	0.00								0.00	0.00	0.00	1.0		0.00	1.0	0.00	1.0	0.00	1.0	0.00	1.0	1.96	9.0		
D-11			0.00	0.00	0.00								10.00	0.00	0.00	2.25		0.00	0.012	2.25	0.00	0.012	2.25	0.00	0.012	0.15	2.5		
D-11	TYPE -9	23.0	1.02	1.10	1.05	10.00	0.09	7.41	1.07	0.00	7.92	84.50	83.76	<b>83.40</b>	0.36	0.36	18	0.48	4.5										
D-12			0.08	0.08	0.02								0.00	0.00	0.25	0.8		0.25	0.8	0.25	0.8	0.25	0.8	0.25	0.8	0.22	3.0		
			0.00	0.00	0.00								10.21	0.00	0.00	0.05		0.11	0.012	0.05	0.11	0.012	0.05	0.11	0.012	0.15	2.5		
D-13	TYPE -9	112.0	1.32	1.32	1.25	10.00	0.52	7.47	1.25	0.00	9.36	85.28	84.57	84.41	0.16	0.16	24	0.15	3.0										
D-14			0.00	0.00	0.00								0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	3.6		
			0.00	0.00	0.00								10.00	0.00	0.00	0.24		0.16	0.012	0.24	0.16	0.012	0.24	0.16	0.012	0.10	2.5		
D-14	TYPE -9	155.0	0.58	1.90	1.81	10.00	0.61	7.33	1.81	0.00	13.23	85.14	84.41	83.69	0.72	0.72	24	0.29	4.2										
D-15			0.00	0.00	0.00								0.00	0.00	0.28	1.0		0.28	1.0	0.28	1.0	0.28	1.0	0.28	1.0	0.26	4.0		
D-15			0.00	0.00	0.00								10.52	0.00	0.00	0.40		0.45	0.012	0.40	0.45	0.012	0.40	0.45	0.012	0.10	2.5		
D-15	TYPE -9	107.0	0.49	2.39	2.27	10.00	0.53	7.18	2.29	0.00	16.47	85.52	83.69	<b>83.40</b>	0.29	0.29	30	0.14	3.4										
D-16			0.08	0.08	0.02								0.00	0.00	0.14	0.8		0.14	0.8	0.14	0.8	0.14	0.8	0.14	0.8	0.05	2.0		
			0.00	0.00	0.00								11.13	0.00	0.00	0.05		0.15	0.012	0.05	0.15	0.012	0.05	0.15	0.012	0.08	2.5		

**83.4 10YR-24HR DHW**

# TRAFFIC IMPACT STUDY

Grocery Store

Northeast Corner of CR-466A (Miller Blvd.) & Micro Racetrack Road  
Lake County, Florida

January 18, 2020

Prepared for:

***Stafford Properties***

**Bowman**

# Traffic Impact Study

## Grocery Store Development

Northeast Corner of CR-466A (Miller Blvd.) & Micro Racetrack Road  
Lake County, Florida

Prepared January 18, 2020

Prepared for:  
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- Appendix A: Site Plan
- Appendix B: Scope/Methodology
- Appendix C: Data\_ Traffic Counts & Signal Phasing and Timings
- Appendix D: Traffic Volume and Traffic Distribution Exhibits
- Appendix E: Capacity Analysis Reports

## Executive Summary

- This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting Group (BCG) for the proposed Grocery Store & Retail located in the city of Fruitland Park, Lake County, Florida.
- The purpose of this study is to determine the potential impact (if any) to the existing traffic operations within the surrounding roadway network caused by the proposed development.
- The project is located at the northeast corner of the intersection of Miller Blvd. (County Road 466A) and Micro Racetrack Road, Lake County, Florida.
- The proposed development entails a 43,080 SF Grocery Store, a 8,750 SF Retail as well as a 5,200 SF Convenience Store and Gas Station with 20 Vehicle Fueling Positions.
- Access to the site would be provided via two (2) Full Access driveways along Micro Racetrack Road, one (1) Right-In/Right-Out driveway and one (1) right-in only driveway along County Road 466A (Miller Blvd.).
- A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from the Lake County and the City of Fruitland Park.
- The following intersections were analyzed in this report:
  - Miller Blvd (CR 466A) & Morse Drive - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Sembler Way/ Held way - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Farner Place - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Micro Racetrack Road - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Drake Drive - (Signalized Intersection)
  - Lake Ella Road & Micro Racetrack Road - (Unsignalized Intersection)
  - Miller Blvd (CR 466A) & Site Driveway 1 - (Unsignalized Intersection)
  - Miller Blvd (CR 466A) & Site Driveway 2 - (Unsignalized Intersection)
  - Micro Racetrack Road & Site Driveway 3 - (Unsignalized Intersection)
  - Micro Racetrack Road & Site Driveway 4 - (Unsignalized Intersection)
- Turning movement counts were collected Thursday, November 19, 2020 and December 03, 2020 for the morning (7:00 AM - 9:00 AM) and evening (4:00 PM - 6:00 PM) peak periods.
- The proposed development is expected to generate a total of 809 trips during the morning peak hour and 844 trips during the evening peak hour. It is anticipated that during the morning peak hour 231 of these are existing trips while the remaining 578 are expected to be primary trips while during the evening peak hour 222 of these trips are expected to be existing trips and 622 are expected to be new trips.



- For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2022.
- The following scenarios were evaluated as part of this study:
  - Existing Conditions 2020
  - Future Conditions (2022) without the proposed development (No Build)
  - Future Conditions (2022) with the proposed development (Build)
  - Future Conditions (2022) with the proposed development improvements (Build with improvements)
- To evaluate the traffic operations, intersection capacity analyses were completed. The results indicate the following:
  - The results of the capacity analysis comparison between the No Build and Build Conditions show that the intersections of: CR 466A and Morse Blvd, CR 466A and Sembler Way/Heald Way, CR 466A and Farnar Place, CR 466A and Micro Racetrack, CR 466A and Drake Drive/ Timbertop Road, CR 466A and Driveway 1, CR 466A and Driveway 2 are not expected to be adversely impacted with the inclusion of the proposed development.
  - The results of the capacity analysis comparison between the No Build and Build Conditions show that the intersections of: Micro Racetrack Road and Lake Ella Road, Micro Racetrack Road and Driveway 3 and Micro Racetrack Road and Driveway 4 are expected to be adversely impacted with the inclusion of the proposed development.
  - The results of the capacity analysis comparison between the No Build and Build with Improvement Conditions show only the westbound left turning movement (Driveway 3) of the intersection of site Driveway 3 and Micro Racetrack Road presents a LOS F under Build with improvement conditions. All other turning movements and approaches of the analysis intersections are expected to operate at acceptable Levels of Service, additionally the queues are not expected to exceed the available storage. Therefore, upon implementing the proposed improvements the surrounding roadway network is not expected to be adversely impacted with the inclusion of the proposed development.
- Left and right turn lane warrant analyses were conducted at each proposed site driveways to determine the need for the installation of auxiliary turning lanes into the site. The analyses were completed per the criteria presented in the Driveway Information Guide (Chapter 7) published by the Florida Department of Transportation.
- The results of the turn lane warrant analysis are as follows:
  - The proposed site driveways along CR 466A (Driveway 1 and Driveway 2) do not meet the criteria for the installation of a right turn lane. It should be noted that the proposed site Driveway 2 already has a right-turn lane in place.
  - Driveway 4 does not meet the criteria for the installation of a right turn lane.
  - Driveway 3 along Micro Racetrack Rd meets the criteria for the installation of a right turn lane for a speed limit of 45 MPH or less set by the FDOT Driveway Information Guide. The site trip distribution shows 131 AM Peak Hour right turns and 128 PM

peak hour right turns, exceeding the 125 right turns per hour threshold and therefore a right-turn lane will be warranted at this driveway.

- The installation of auxiliary left turn lanes into the site along Micro Racetrack Rd and Site Driveways 3 and 4 is not warranted under Build Conditions.
- Considering the results of the capacity analysis comparison No Build Vs Build, the following improvements are recommended for the build 2022 conditions:
  - Improvements on Micro Racetrack Road and Driveway 3
    - Northbound right turn lane.
    - Westbound right-turn lane
  - Improvements on Micro Racetrack Road and lake Ella Road
    - All way stop control

## Introduction

This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting Group (BCG) for the proposed Grocery Store & Retail located in the city of Fruitland Park, Lake County, Florida.

The purpose of this study is to determine the potential impact (if any) to the existing traffic operations within the surrounding roadway network caused by the proposed development.

## Background Information

The proposed development entails a 43,080 SF Grocery Store, a 8,750 SF Retail as well as a 5,200 SF Convenience Store and Gas Station with 20 Vehicle Fueling Positions. The project is located at the northeast corner of the intersection of Miller Blvd. (County Road 466A) and Micro Racetrack Road, Lake County, Florida. **Figure 1** depicts the site location.



**Figure 1.** Site location.

The development is proposed to be constructed on a vacant lot. Access to the site would be provided via two (2) Full Access driveways along Micro Racetrack Road, one (1) Right-In/Right-Out driveway and one (1) right-in only driveway along County Road 466A (Miller Blvd.). The site plan is presented in **Appendix A**.



## Traffic Impact Analysis Methodology

A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from Lake-Sumter County Metropolitan Planning Organization (Lake-Sumter MPO), Lake County and the City of Fruitland Park. A copy of the approved Traffic Impact Analysis Methodology Statement and proof of the coordination with the agencies is contained in **Appendix B**.

As shown in the Traffic Impact Analysis Methodology Statement and coordination the following items are to be analyzed in this report:

- Trip generation calculations (for both the existing and proposed site).
- Traffic assignment (trip distribution) for the proposed development.
- Capacity and queuing analyses.
- Left and right turn lane warrants at the proposed site driveways.

**Figure 2** depicts the study area.



**Figure 2** Study Area

For purposes of this analysis, the following intersections, requested by the Lake-Sumter MPO, Lake County and the City of Fruitland Park and were analyzed in this report:

1. Miller Blvd (CR 466A) & Morse Drive - (Signalized Intersection)
2. Miller Blvd (CR 466A) & Sembler Way/ Held way - (Signalized Intersection)
3. Miller Blvd (CR 466A) & Farner Place - (Signalized Intersection)
4. Miller Blvd (CR 466A) & Micro Racetrack Road - (Signalized Intersection)
5. Miller Blvd (CR 466A) & Drake Drive - (Signalized Intersection)
6. Lake Ella Road & Micro Racetrack Road - (Unsignalized Intersection)
7. Miller Blvd (CR 466A) & Site Driveway 1 - (Unsignalized Intersection)
8. Miller Blvd (CR 466A) & Site Driveway 2 - (Unsignalized Intersection)
9. Miller Blvd (CR 466A) & Site Driveway 3 - (Unsignalized Intersection)
10. Miller Blvd (CR 466A) & Site Driveway 4 - (Unsignalized Intersection)

To assess the traffic operation at the driveways, the following tasks were undertaken:

- Turning movement counts were collected during an average weekday (November 19, 2020 and December 03, 2020) for the morning (7:00 AM - 9:00 AM) and evening (4:00 PM - 6:00 PM) peak periods. These counts were used to identify peak hours, determine traffic patterns, and evaluate intersection Levels of Service.
- Trip generation calculations for the proposed development utilizing the ITE Trip Generation Manual, 10<sup>th</sup> Edition
- Trip Distribution for the existing and proposed development based on methodology.
- Capacity analyses were prepared to determine existing and projected Levels of Service (LOS) and maximum queue lengths.

## Roadway Network

*County Road 466A (Miller Blvd.):* Within the identified study area is a county-maintained four-lane divided roadway identified as an Urban Minor Arterial according to Lake-Sumter County Public Works Functional Classification Map. It has an east-west alignment with a posted speed limit of 45 miles per hour.

*Micro Racetrack Road:* Within the identified study area is a County Maintained two-lane undivided roadway, identified as an Urban Minor Collector according to Lake County Public Works Functional Classification Map. It has a north-south alignment and a 35 miles per hour posted speed limit.

*Sembler Way:* Within the identified study area is a County Maintained two-lane undivided local roadway. It has a north-south alignment and a 20 miles per hour posted speed limit.

*Heald Way:* Within the identified study area is a County Maintained two-lane lane undivided local roadway. It has a north-south alignment and a 20 miles per hour posted speed limit.

*Farner Place:* Within the identified study area is a County Maintained two-lane lane undivided local roadway. It has a north-south alignment and a 20 miles per hour posted speed limit.

*Morse Blvd:* Within the identified study area is a County Maintained four-lane divided roadway, identified as an Urban Major Collector according to FDOT Sumter County Functional Classification Map. It has a north-south alignment and a 35 miles per hour posted speed limit.

*Drake Drive:* Within the identified study area is a Private Maintained two-lane undivided/ (divided in the intersection) roadway. It has a north-south alignment and a 30 miles per hour posted speed limit.

*Timbertop Lane:* Within the identified study area is a local undivided and unpaved roadway. It has a north-south alignment and has no posted speed limit therefore the speed limit was assumed to be 20 miles per hour.

*Lake Ella Road:* Within the identified study area is a County Maintained two-lane undivided roadway, identified as a Rural Minor Collector according to Lake County Public Works Functional Classification Map. It has a north-south alignment and a 45 miles per hour posted speed limit.

## Intersection Characteristics

### Intersection of County Road 466A (Miller Blvd.) and Morse Blvd.

This intersection is currently a four-legged signalized intersection where Miller Blvd. has an east-west alignment, and Morse Blvd. has a north-south alignment as shown in **Figure 3**.



**Figure 3** Miller Blvd and Morse Blvd

All approaches consist of one exclusive left-turn, two exclusive through lanes and one exclusive right-turn lane.



## Intersection of CR 466A (Miller Blvd) and Sembler Way/Heald Way

This intersection is currently a four-legged signalized intersection where Miller Blvd. has an east-west alignment, and Sembler way and Heald Way have a north-south alignment as shown in **Figure 4**.



**Figure 4.** Miller blvd and sembler/heald way

The eastbound and westbound approaches consist of an exclusive left-turn lane, two through lanes and one exclusive right-turn lane. The northbound approach consists of an exclusive left-turn lane, and one shared through/right-turn lane. The southbound approach consists of one exclusive right-turn lane, and one shared through/left-turn lane.

## Intersection of CR 466A (Miller Blvd) and Farner Place

This intersection is currently a four-legged signalized intersection where Miller Blvd. Has an southeast-northwest alignment, and Farner Place has a northeast-southwest alignment as shown in **Figure 5**.



**Figure 5.** Miller Blvd and Farner Place

The southeast-bound approach and northwest-bound approaches have an exclusive left turn lane, two through lanes and one exclusive right-turn lane. The northeast-bound approach consists of a shared through/left/right-turn lane. The southwest-bound approach consists of one exclusive right-turn lane, and one shared through/left-turn lane.

### **Intersection of County Road 466A (Miller Blvd.) and Micro Racetrack Road**

This intersection is currently a four-legged signalized intersection where Miller Blvd. has an east-west alignment, and Micro Racetrack Road has a north-south alignment as shown in **Figure 6**.





**Figure 6.** Miller Blvd and Micro Racetrack Road

The eastbound approach consists of a shared through/right-turn lane, one exclusive through lane and one exclusive left-turn lane. The westbound approach consists of two exclusive through lanes, one exclusive left-turn lane and one exclusive right-turn lane. The northbound approach consists of a shared through/right/left-turn lane. The southbound approach consists of one exclusive right-turn lane, and one shared through/left-turn lane.

### Intersection of County Road 466A (Miller Blvd.) and Drake Drive/ Timbertop Lane

This intersection is currently a four-legged signalized intersection where Miller Blvd. has an east-west alignment, and Drake Drive and Timbertop Lane have a north-south alignment as shown in **Figure 7**.



**Figure 7** Miller Blvd and Drake Drive/Timbertop Lane



The westbound and eastbound approaches consist of one exclusive through lane, one shared through/right-turn lane and one exclusive left-turn lane. The northbound approach consists of a shared through/left-turn lane and an exclusive right-turn lane. The southbound approach consists of an unpaved shared through/left/right-turn lane.

## Intersection of Lake Ella Road and Micro Racetrack Road

This intersection is currently a four-legged unsignalized intersection where Lake Ella Road has an east-west alignment, and Micro Racetrack Road has a north-south alignment as shown in **Figure 8**.



**Figure 8** Lake Ella Road and Micro Racetrack Road

All approaches consist of a shared through/left/right-turn lane.

## Site Access Driveways

**Existing conditions.** Currently the existing site has four (4) access driveways. Two (2) full-access driveways along Micro Racetrack Road and two (2) right-in/right-out driveways located along CR 466A (Miller Blvd), the first provided with a 50 feet taper and the second driveway, closer to the intersection with Micro racetrack road, located within the turn lane.

**Proposed conditions.** As mentioned before, access to the site is proposed to remain as the four existing access driveways, two full access driveway along Micro racetrack road, one right-in/right-out driveway and one right-in driveway along C.R.466A. The site plan is depicted in **Appendix A**.

## Data Collection

For the purposes of this study the following data was collected:

- Inspections were conducted to obtain an inventory of existing roadway geometry, traffic control devices, and location of existing and proposed driveways.
- Published FDOT and Sumter and Lake county AADT counts and functional classification information.
- Signal Phasing and timings were retrieved from the Lake and Sumter County for the study intersections. The signal phasing and timings are presented in **Appendix C**.
- Turning movement counts were collected at the following intersection:
  - Miller Blvd (CR 466A) & Micro Racetrack Road - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Sembler Way/ Held way - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Farner Place - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Drake Drive - (Signalized Intersection)
  - Miller Blvd (CR 466A) & Citrus Blvd - (U.S. Hwy 441) (Signalized Intersection)
  - Miller Blvd (CR 466A) & Morse Drive - (Signalized Intersection)
  - Miller Blvd (CR466A) and Rose Avenue - (CR 468) - (Signalized Intersection)
  - Miller Blvd (CR466A) and Dixie Avenue - (CR 25A) - (Signalized Intersection)

The traffic counts were completed during an average weekday while schools were in session. The counts were completed on Thursday, November 19, 2020 and December 03, 2020 for the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods. These counts were used to identify peak hours, determine traffic patterns, and evaluate intersection Levels of Service. The turning movement counts are presented in **Appendix C**.

## Traffic Forecast and Background Traffic

For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2022. The following scenarios were evaluated as part of this study:

- Existing Conditions 2020
- Future Conditions (2022) without the proposed development (No Build)
- Future Conditions (2022) with the proposed development (Build)
- Future Conditions with improvements (2022) with the proposed development (Build with improvements)

The 2020 Existing Peak Hour Traffic Volumes are depicted on **Exhibit 1** in **Appendix D**.

To develop the 2022 traffic volumes, the first step was to determine a background growth rate applicable for the study area roadway segments. For each roadway segment, the annual growth rate was calculated using the historical AADT information provided by the Lake Sumter MPO Average Annual Daily Traffic & Historical Counts 2017-2019 information. A 2.0% minimum average annual growth rate was used for all traffic in the study area.

The historical study area roadway AADT information, as well as the applied growth rates utilized for the analysis, are presented in **Table 1**.

**Table 1** Historical AADT and Annual Growth Rates

Roadway	From	to	AADT			Growth		Average Growth rate	Applied Growth rate
			2017	2018	2019	2018	2019		
<b>Miller Blvd (CR 466A)</b>	Buenvista Blvd	Morse Blvd	17,032	17,959	18,028	5.4%	0.4%	2.9%	2.9%
<b>Miller Blvd (CR 466A)</b>	Buenvista Blvd	N Dixie Ave	18,230	18,968	13,377	4.0%	-29.5%	-12.7%	0.5%
<b>Miller Blvd (CR 466A)</b>	N Dixie Ave	Citrus Blvd SR 25 S	6,453	6,512	6,474	0.9%	-0.6%	0.2%	0.5%
<b>Morse Blvd</b>	CR 466A	Odell Circ	20,683	22,417	22,470	8.4%	0.2%	4.3%	4.3%
<b>Morse Blvd</b>	Moyer Loop	CR 466A	16,983	16,677	16,307	-1.8%	-2.2%	-2.0%	0.5%
<b>Micro Racetrack Rd</b>	CR 466A	Lake Ella Rd	8,714	9,147	9,401	5.0%	2.8%	3.9%	3.9%
<b>CR 468</b>	CR 466A	Urick St	4,080	3,991	3,637	-2.2%	-8.9%	-5.5%	0.5%
<b>N Dixie Av</b>	CR 466A	Citrus Blvd SR 25 S	8,371	7,858	7,541	-6.1%	-4.0%	-5.1%	0.5%
<b>N Dixie Ave</b>	CR 466A	Urick St	5,549	5,125	4,780	-7.6%	-6.7%	-7.2%	0.5%
<b>Lake Ella Road</b>	NE 90th St	Rolling Acres Rd	1,768	1,821	1,912	3.0%	5.0%	4.0%	4.0%

Source: Lake Sumter MPO Average Annual Daily Traffic & Historical Counts 2017-2019

These growth rates were applied to the 2020 Existing Traffic Volumes to develop the 2022 Projected Traffic Volumes, which are depicted on **Exhibit 2** in **Appendix D**.

## Trip Generation

The applicant is proposing to develop the site with the following land uses generating site traffic:

- 40,000 S.F. Grocery Store.
- 8,700 S.F. Retail.
- 5,200 S.F. convenience store with 20 vehicle fueling positions.

Comparable land uses for the proposed development as per the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* were used to determine the number of trips generated the proposed development. The comparable land uses are listed below:

- Supermarket (Land Use 850).
- Shopping Center (Land Use 960).
- Super Convenience Store with Gas Station (Land Use 960).

Pass-by Rates of 34% for (LU-820), 76% for (LU-960) & 36% For (LU-850) were extracted from The Institute of Transportation Engineers Trip Generation Handbook 3<sup>rd</sup> Edition. The pass-by trips calculated with the ITE pass-by trip rates exceed the allowable 10% of the adjacent street volume, therefore the pass-by trips were affected by a reduction factor to not exceed this percentage.

**Table 1** displays the trip generation for the proposed development and includes the morning and evening peak hour.



Table 2. Site Trip Generation

Description <sup>(1)</sup>	Time	Total Trips <sup>(1)</sup>			Pass-By Trips			Reduced Pass-By			Net New Trips <sup>(2)</sup>		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center (LU 820) 8,750 SQ.FT. GLA	Daily	573	574	1,147	195	195	390	86	86	172	487	488	975
	AM	97	59	156	33	20	53	15	9	24	82	50	132
	PM	43	47	90	15	16	31	7	7	14	36	40	76
Super Convenience Store with Gas (LU 960) 5,200 SQ.FT & 20 VFP	Daily	2,177	2,178	4,355	1,655	1,655	3,310	731	731	1,462	1,446	1,447	2,893
	AM	250	250	500	190	190	380	91	91	182	159	159	318
	PM	180	180	360	137	137	274	73	73	146	107	107	214
SuperMarket (LU 850) 40,000 SQ.FT. GLA	Daily	2,024	2,024	4,048	729	729	1,458	322	322	644	1,702	1,702	3,404
	AM	92	61	153	33	22	55	15	10	25	77	51	128
	PM	201	193	394	72	69	141	32	30	62	169	163	332
Total Trips	Daily	4,774	4,776	9,550	2,579	2,579	5,158	1,139	1,139	2,278	3,635	3,637	7,272
	AM	439	370	809	256	232	488	121	110	231	318	260	578
	PM	424	420	844	224	222	446	112	110	222	312	310	622

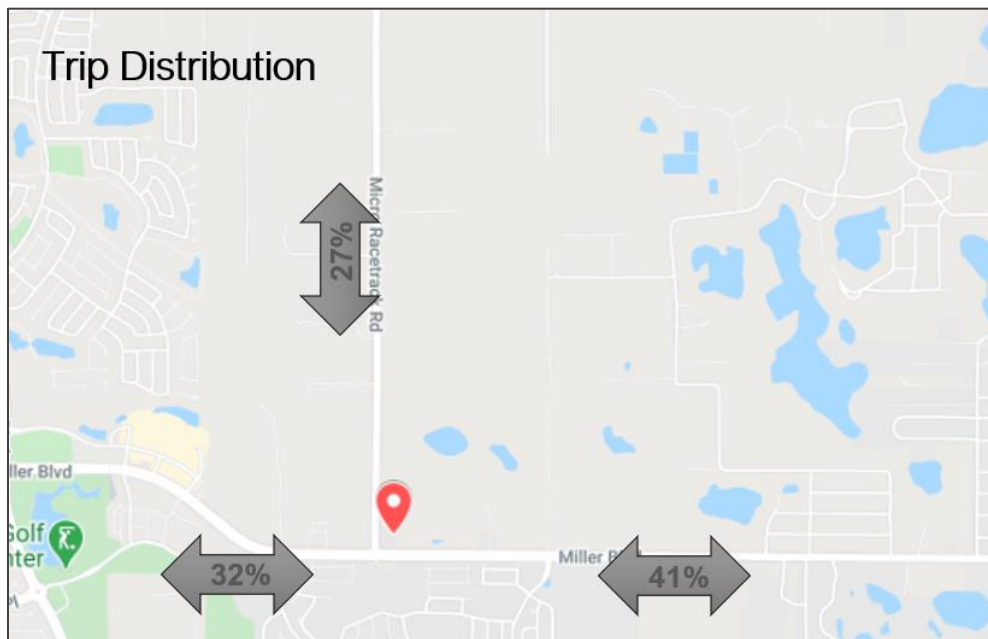
(1) Institute of Transportation Engineers Trip Generation (ITE), 10<sup>th</sup> Edition

(2) Pass-by Rates of 34% for (LU-820), 76% for (LU-960) & 36% For (LU-850) were extracted from the ITE Trip Generation Errata.

The proposed development is expected to generate a total of 809 trips during the morning peak hour and 844 trips during the evening peak hour. It is anticipated that during the morning peak hour 231 of these are existing trips while the remaining 578 are expected to be primary trips while during the evening peak hour 222 of these trips are expected to be existing trips and 622 are expected to be new trips.

## Trip Distribution

The trip distribution was developed based on the trip distribution agreed upon coordination with the agencies. The regional trip distribution is presented in **Figure 11**.



**Figure 11.** Regional Trip Distribution

The Site Trips are presented in **Exhibits 3** in **Appendix D**.

The Site Trips were added to the 2022 Projected Traffic Volumes to yield the 2022 Build Traffic Volumes presented in **Exhibit 4** in **Appendix D**.

## Capacity Analysis

The study intersections were analyzed for each scenario following the Highway Capacity Manual (HCM 6<sup>th</sup> edition) methodologies using the computer software package Synchro 10 with SimTraffic. The analysis uses capacity, Level of Service, and control delay as the criteria for the performance of the driveways.

Capacity, as defined by the HCM, is a measure of the maximum number of vehicles in an hour that can travel through an intersection or section of roadway under typical conditions. Level of Service (LOS) is a marker of the driving conditions and perception of drivers while traveling during the given time period. LOS ranges from LOS A which represents free flow conditions, to LOS F which represents breakdown conditions. **Table 3** shows the LOS for signalized and unsignalized intersections as defined by the HCM.

**Table 3 HCM Level of Service Criteria**

Unsignalized Intersections		Signalized Intersections	
Level of Service	Average Control Delay (sec/veh)	Level of Service	Average Control Delay (sec/veh)
A	≤10	A	≤10
B	>10-15	B	>10-20
C	>15-25	C	>20-35
D	>25-35	D	>35-55
E	>35-50	E	>55-80
F	≥50	F	≥80

Control delay is a measure of the total amount of delay experienced by an individual vehicle and includes delay related to deceleration, queue delay, stopped delay, and acceleration. **Table 3** displays the amount of control delay (in seconds per vehicle) that corresponds to the LOS for signalized and unsignalized intersections.

Capacity analyses were completed for the following scenarios for the morning and evening peak hours:

- Existing Conditions (2020)
- Future Conditions (2022) without the proposed development (No Build)
- Future Conditions (2022) with the proposed development (Build)

### Analysis of Existing Conditions (Year 2020)

A capacity analysis was conducted for the study intersections previously described in this report. This capacity analysis is based on traffic volumes, lane configurations, and intersection configurations. The capacity analysis results are included in **Appendix E**.

## Intersection of CR 466A and Morse Blvd

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of CR 466A and Morse Blvd. currently operates at an acceptable overall level of service "C" during both the morning and evening peak hours.

During the morning and evening peak hour all turning movements and approaches currently operate at Acceptable LOS D or better.

The capacity results are summarized in **Table 4**.

**Table 4 Existing Conditions (2020) Capacity Analysis - CR 466A and Morse Blvd**

2020 EXISTING CONDITIONS			AM Peak			PM Peak				
			Conditions			Conditions				
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*		
			Intersection #1: MORSE BLVD & CR 466A			EB	L	40.8	D	106
T	20.4	C					134	25.0	C	196
R	19.9	B					44	22.5	C	48
Approach	23.4	C					--	28.3	C	--
WB	L	43.9				D	121	45.7	D	168
	T	20.2				C	135	22.6	C	159
	R	19.3				B	47	21.7	C	52
	Approach	24.4				C	--	27.4	C	--
NB	L	25.6				C	85	26.5	C	101
	T	30.9				C	109	31.4	C	118
	R	29.5				C	25	30.8	C	44
	Approach	29.6				C	--	30.2	C	--
SB	L	25.3				C	87	25.7	C	103
	T	32.5				C	148	34.0	C	186
	R	32.7				C	69	30.5	C	68
	Approach	31.5				C	--	32.2	C	--
Intersection		-	27.1	C	--	29.4	C	--		

\*Extracted from SimTraffic simulation software

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

## Intersection of CR 466A and Sembler Way/Heald Way

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of CR 466A and Sembler Way/Heald Way currently operates at an acceptable overall LOS B during both the morning and evening peak hours.

All turning movements and approaches currently operate at a LOS C or better during both the morning and evening peak hour.

The capacity results are summarized in **Table 5**.



**Table 5 Existing Conditions (2020) Capacity Analysis - CR 466A and Sembler Way/Heald Way**

2020 EXISTING CONDITIONS			AM Peak			PM Peak		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #2: CR 466A & SEMBLER WAY/SEMBLER WAY	EB	L	13.6	B	53	14.2	B	56
		T	17.1	B	109	17.7	B	126
		R	16	B	40	16.5	B	41
		Approach	16.6	B	--	17.1	B	--
	WB	L	13.5	B	59	13.9	B	69
		T	17.0	B	103	17.7	B	133
		R	15.9	B	40	15.5	B	30
		Approach	16.3	B	--	17.0	B	--
	NB	L	17.4	B	80	17.9	B	96
		TR	15.7	B	92	15.2	B	83
		Approach	16.3	B	--	16.5	B	--
	SB	LT	22.6	C	90	23.6	C	102
		R	23.4	C	56	23.3	C	58
		Approach	23.0	C	--	23.5	C	--
	Intersection	-		17.1	B	--	17.7	B

\*Extracted from SimTraffic simulation software

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

### Intersection of CR 466A and Farner Place

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of CR 466A and Farner Place currently operates at an acceptable overall LOS B during both the morning and evening peak hours.

All turning movements and approaches currently operate at a LOS C or better during both the morning and evening peak hour.

The capacity results are summarized in **Table 6**.

**Table 6 Existing Conditions (2020) Capacity Analysis - CR 466A and Farner Place**

2020 EXISTING CONDITIONS			AM Peak			PM Peak		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #3: CR 466A & FARNER PL	EB	L	8.6	A	34	8.9	A	51
		T	11.9	B	100	12.0	B	129
		R	10.2	B	25	10.5	B	17
		Approach	11.7	B	--	12.0	B	--
	WB	L	10.2	B	48	10.2	B	57
		T	14.2	B	96	14.5	B	113
		R	12.4	B	31	12.9	B	45
		Approach	13.8	B	--	14.0	B	--
	NB	Approach	23.0	C	65	23.2	C	75
	SB	LT	224.0	F	62	23.0	C	87
		R	22.8	C	56	22.2	C	42
		Approach	22.6	C	--	22.7	C	--
	Intersection	-		14.1	B	--	14.6	B

\*Extracted from SimTraffic simulation software

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

## Intersection of CR 466A and Micro Racetrack Road

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of CR 466A and Micro Racetrack Road currently operates at an acceptable overall LOS B during both the morning and evening peak hours.

All turning movements and approaches currently operate at a LOS C or better during both the morning and evening peak hour.

The capacity results are summarized in **Table 7**.

**Table 7 Existing Conditions (2020) Capacity Analysis - CR 466A and Micro Racetrack Road**

2020 EXISTING CONDITIONS			AM Peak			PM Peak			
			Conditions			Conditions			
Intersection #4: CR 466A & MICRO RACETRACK RD	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
	EB		L	10.9	B	124	13.3	B	124
			T	6.5	A	65	13.6	B	95
			R	6.5	A	85	13.6	B	107
			Approach	8.4	A	--	13.5	B	--
	WB		L	0.0	A	0	15.5	B	21
			T	16.1	B	107	18.1	B	123
			TR	15.9	B	72	17.4	B	62
			Approach	16.0	B	--	18.0	B	--
	NB	Approach	18.1	B	33	17.2	B	15	
	SB		LT	20.5	C	107	20.6	C	137
			TR	24.0	C	102	23.8	C	114
			Approach	22.7	C	--	22.5	C	--
Intersection	-	14.6	B	--	17.5	B	--		

\*Extracted from SimTraffic simulation software

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

## Intersection of CR 466A and Drake Drive/ Timbertop Lane

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of CR 466A and Drake Drive/ Timbertop Lane currently operates at an acceptable overall LOS B during both the morning and evening peak hours.

All turning movements and approaches currently operate at a LOS C or better during both the morning and evening peak hour.

The capacity results are summarized in **Table 8**.

**Table 8 Existing Conditions (2020) Capacity Analysis - CR 501 and Warm Springs Ave**

2020 EXISTING CONDITIONS			AM Peak			PM Peak			
			Conditions			Conditions			
Intersection #5: CR 466A & DRAKE DR/ TIMBERTOP LN	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
	EB	L		8.8	A	11	8.2	A	18
		T		11.5	B	115	11.7	B	133
		TR		11.5	B	68	11.7	B	84
		Approach		11.5	B	--	11.6	B	--
	WB	L		10.8	B	39	9.9	A	41
		T		13.6	B	55	13.0	B	47
		TR		13.6	B	82	13.0	B	76
		Approach		13.4	B	--	12.7	B	--
	NB	LT		19.6	B	84	19.3	B	62
		R		19.2	B	58	19.4	B	56
		Approach		19.5	B	--	19.3	B	--
	SB	Approach		17.7	B	22	18.4	B	29
	Intersection	-		13.6	B	--	12.7	B	--

*\*Extracted from SimTraffic simulation software*

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

### Intersection of Lake Ella Road and Micro Racetrack Road

Based on the results of the capacity analysis under 2020 Existing Conditions, the intersection of Lake Ella Road and Micro Racetrack Road currently operates at an acceptable overall LOS A during the morning peak hour and LOS B during the evening peak hour.

During the morning peak hour, the northbound approach currently to operates at LOS D, all other turning movements and approaches currently operate at a LOS C or better for the morning and evening peak hour.

The capacity results are summarized in **Table 9**.

**Table 9 Existing Conditions (2020) Capacity Analysis - Lake Ella Road and Micro Racetrack Road**

2020 EXISTING CONDITIONS			AM Peak			PM Peak			
			Conditions			Conditions			
Intersection #2: CR 466A & SEMBLER WAY/SEMBLER WAY	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
	EB	L		13.6	B	53	14.2	B	56
		T		17.1	B	109	17.7	B	126
		R		16	B	40	16.5	B	41
		Approach		16.6	B	--	17.1	B	--
	WB	L		13.5	B	59	13.9	B	69
		T		17.0	B	103	17.7	B	133
		R		15.9	B	40	15.5	B	30
		Approach		16.3	B	--	17.0	B	--
	NB	L		17.4	B	80	17.9	B	96
		TR		15.7	B	92	15.2	B	83
		Approach		16.3	B	--	16.5	B	--
	SB	LT		22.6	C	90	23.6	C	102
		R		23.4	C	56	23.3	C	58
Approach			23.0	C	--	23.5	C	--	
Intersection	-		17.1	B	--	17.7	B	--	

*\*Extracted from SimTraffic simulation software*



The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes during either the morning or evening peak hours.

## Capacity Analysis Comparison – No Build vs Build Conditions (Year 2022)

Capacity Analyses were conducted for the No Build and Build conditions (year 2022). The primary purpose for this approach was to compare the results in order to identify areas impacted by the proposed development. The capacity results are included in **Appendix E**.

### Intersection of CR 466A and Morse Blvd

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Morse Blvd is projected to operate at an acceptable overall LOS C during both the No Build and Build Conditions, with an increase in overall delay of only 0.8 seconds for the morning and 1.1 seconds for the evening peak hour.

All turning movements are projected to operate at acceptable LOS D or better during both the No Build and Build Conditions. All approaches are projected to operate at acceptable LOS C or better during both the No Build and Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 10**.

**Table 10 2022 AM Peak Hour Capacity Analysis - CR 466A and Morse Blvd**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #1: MORSE BLVD & CR 466A	EB	L	41.6	D	106	42.7	D	105
		T	20.9	C	137	22.0	C	166
		R	20.5	C	47	21.3	C	48
		Approach	24.0	C	--	24.9	C	--
	WB	L	44.8	D	125	44.9	D	155
		T	20.8	C	133	20.8	C	158
		R	19.9	B	49	20.2	C	56
		Approach	25.0	C	--	25.5	C	--
	NB	L	25.4	C	87	26.4	C	95
		T	30.7	C	115	32.2	C	119
		R	29.3	C	30	32.0	C	42
		Approach	29.4	C	--	31.0	C	--
	SB	L	25.0	C	93	26.6	C	117
		T	32.4	C	155	33.2	C	163
		R	32.6	C	77	33.3	C	77
		Approach	31.4	C	--	31.9	C	--
Intersection	-	27.4	C	--	28.2	C	--	

\*Extracted from SimTraffic simulation software

The capacity results for the evening peak hour are summarized in **Table 11**.

**Table 11 2022 PM Peak Hour Capacity Analysis - CR 466A and Morse Blvd**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #1: MORSE BLVD & CR 466A	EB	L	48	D	147	49.2	D	139
		T	26	C	208	27.7	C	225
		R	23.2	C	49	24.3	C	51
		Approach	29.1	C	--	30.5	C	--
	WB	L	46.4	D	170	46.2	D	204
		T	23.5	C	157	23.6	C	166
		R	22.6	C	57	23.1	C	72
		Approach	28.3	C	--	28.6	C	--
	NB	L	26.4	C	96	28.4	C	114
		T	31.1	C	123	33.6	C	131
		R	30.5	C	47	34.5	C	62
		Approach	30.0	C	--	32.7	C	--
	SB	L	25.5	C	108	27.4	C	147
		T	34.0	C	208	35.1	D	200
		R	30.3	C	64	31.3	C	76
		Approach	32.2	C	--	33.0	C	--
Intersection	-	29.9	C	--	31.0	C	--	

\*Extracted from SimTraffic simulation software

### Intersection of CR 466A and Sembler Way/Heald Way

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Sembler Way/Heald Way is projected to operate at an acceptable overall LOS B during both the No Build and Build Conditions, with an increase in overall delay of less than one second.

All turning movements and approaches are projected to operate at acceptable LOS C or better during both the No Build and Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 12**.

**Table 12 2022 AM Peak Hour Capacity Analysis - CR 466A and Sembler Way/Heald Way**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #2: CR 466A & SEMBLER WAY/SEMBLER WAY	EB	L	13.7	B	54	13.7	B	51
		T	17.2	B	115	18.0	B	136
		R	16	B	38	15.9	B	40
		Approach	16.6	B	--	17.3	B	--
	WB	L	13.5	B	59	13.6	B	61
		T	17.0	B	110	17.6	B	133
		R	15.9	B	41	15.8	B	35
		Approach	16.4	B	--	16.9	B	--
	NB	L	17.5	B	82	17.7	B	81
		TR	15.7	B	89	16.0	B	93
		Approach	16.4	B	--	16.6	B	--
	SB	LT	23.4	C	95	22.9	C	92
		R	22.5	C	56	23.8	C	55
		Approach	23.1	C	--	23.4	C	--
	Intersection	-	17.2	B	--	17.6	B	--

*\*Extracted from SimTraffic simulation software*

The capacity results for the evening peak hour are summarized in **Table 13**.

**Table 13 2022 PM Peak Hour Capacity Analysis - CR 466A and Sembler Way/Heald Way**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #2: CR 466A & SEMBLER WAY/SEMBLER WAY	EB	L	14.4	B	84	14.1	B	97
		T	18.5	B	163	18.4	B	179
		R	16.3	B	42	155.0	F	40
		Approach	17.6	B	--	17.5	B	--
	WB	L	14.3	B	77	14.0	B	74
		T	18.8	B	145	18.7	B	175
		R	16.4	B	31	15.6	B	31
		Approach	17.9	B	--	17.8	B	--
	NB	L	18.4	B	105	20.3	C	103
		TR	1.8	A	91	17.5	B	99
		Approach	17.0	B	--	18.8	B	--
	SB	LT	24.3	C	105	26.6	C	104
		R	24.0	C	58	26.3	C	59
		Approach	24.2	C	--	26.5	C	--
	Intersection	-	18.3	B	--	18.6	B	--

*\*Extracted from SimTraffic simulation software*

### Intersection of CR 466A and Farner Place

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Farner Place is projected to operate at an acceptable overall LOS B during both the No Build and Build Conditions, with an increase in overall delay of less than one second.

All turning movements and approaches are projected to operate at acceptable LOS C or better during both the No Build and Build Conditions for both the morning and evening peak hours.



The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 14**.

**Table 14 2022 AM Peak Hour Capacity Analysis - CR 466A and Farnar Place**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #3: CR 466A & FARNER PL	EB	L	8.6	A	38	8.8	A	41
		T	11.9	B	103	12.4	B	121
		R	10.2	B	26	10.2	B	20
		Approach	11.7	B	--	12.2	B	--
	WB	L	10.2	B	47	10.3	B	45
		T	14.3	B	103	14.8	B	120
		R	12.4	B	32	12.4	B	32
	NB	Approach	13.8	B	--	14.3	B	--
		Approach	23.0	C	66	23.0	C	64
	SB	LT	22.4	C	55	22.4	C	59
		R	22.8	C	52	22.8	C	53
	Approach	22.6	C	--	22.6	C	--	
Intersection	-	14.1	B	--	14.4	B	--	

\*Extracted from SimTraffic simulation software

The capacity results for the evening peak hour are summarized in **Table 15**.

**Table 15 2022 PM Peak Hour Capacity Analysis - CR 466A and Farnar Place**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #3: CR 466A & FARNER PL	EB	L	8.9	A	51	9.1	A	53
		T	12.3	B	128	12.8	B	159
		R	10.5	B	15	10.5	B	18
		Approach	12.0	B	--	12.5	B	--
	WB	L	10.2	B	50	10.4	B	60
		T	14.5	B	109	151.0	F	133
		R	12.9	B	45	12.9	B	45
	NB	Approach	14.0	B	--	14.6	B	--
		Approach	23.2	C	73	23.2	C	78
	SB	LT	23.0	C	86	23.0	C	86
		R	22.2	C	41	22.2	C	42
	Approach	22.7	C	--	22.7	C	--	
Intersection	-	14.6	B	--	14.9	B	--	

\*Extracted from SimTraffic simulation software

## Intersection of CR 466A and Micro Racetrack Road

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Micro Racetrack Road is projected to operate at an acceptable overall LOS B during both the No Build and Build Conditions, with an increase in overall delay of 4.6 seconds for the morning and 5.4 seconds for the evening peak hour

All turning movements and approaches are projected to operate at acceptable LOS C or better during both the No Build and Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 16**.

**Table 16 2022 AM Peak Hour Capacity Analysis - CR 466A and Micro Racetrack Road**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #4: CR 466A & MICRO RACETRACK RD	EB	L	10.9	B	137	16.0	B	202
		T	6.5	A	68	8.4	A	78
		R	6.5	A	80	8.4	A	91
		Approach	8.4	A	--	12.6	B	--
	WB	L	0.0	A	0	0.0	A	0
		T	16.0	B	110	23.2	C	152
		TR	15.9	B	70	21.8	C	71
	Approach		16.1	B	--	22.9	C	--
		NB	Approach	18.2	B	33	18.6	B
	SB	LT	20.5	C	106	25.1	C	172
		TR	24.0	C	99	22.6	C	82
		Approach	22.7	C	--	24.0	C	--
	Intersection	-	14.6	B	--	19.2	B	--

*\*Extracted from SimTraffic simulation software*

The capacity results for the evening peak hour are summarized in **Table 17**.

**Table 17 2022 PM Peak Hour Capacity Analysis - CR 466A and Micro Racetrack Road**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #4: CR 466A & MICRO RACETRACK RD	EB	L	13.3	B	126	18.8	B	203
		T	13.6	B	95	16.1	B	109
		R	13.6	B	111	16.1	B	118
		Approach	13.5	B	--	17.3	B	--
	WB	L	15.5	B	22	21.6	C	22
		T	18.2	B	114	26.6	C	151
		TR	17.5	B	70	24.0	C	66
	Approach		18.0	B	--	26.1	C	--
		NB	Approach	17.2	B	15	27.8	C
	SB	LT	20.6	C	134	28.6	C	227
		TR	23.9	C	107	23.9	C	100
		Approach	22.6	C	--	26.4	C	--
	Intersection	-	17.5	B	--	22.9	C	--

*\*Extracted from SimTraffic simulation software*

## Intersection of CR 466A and Drake Drive/ Timbertop Lane

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Drake Drive/ Timbertop Lane is projected to operate at an

acceptable overall LOS B during both the No Build and Build Conditions, with an increase in overall delay of less than one second.

All turning movements and approaches are projected to operate at acceptable LOS B or better during both the No Build and Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 18**.

**Table 18 2022 AM Peak Hour Capacity Analysis - CR 466A and Drake Drive/ Timbertop Lane**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #5: CR 466A & DRAKE DR/ TIMBERTOP LN	EB	L	8.8	A	10	9.0	A	14
		T	12.3	B	133	13.0	B	144
		TR	12.4	B	73	13.0	B	94
		Approach	12.3	B	--	13.0	B	--
	WB	L	10.4	B	51	10.5	B	50
		T	13.7	B	55	14.5	B	69
		TR	13.6	B	84	14.5	B	102
		Approach	13.2	B	--	14.1	B	--
	NB	LT	19.6	B	93	19.6	B	92
		R	19.2	B	57	19.2	B	59
		Approach	19.5	B	--	19.5	B	--
	SB	Approach	17.7	B	20	17.7	B	26
	Intersection	-	13.9	B	--	14.3	B	--

*\*Extracted from SimTraffic simulation software*

The capacity results for the evening peak hour are summarized in **Table 19**.

**Table 19 2022 PM Peak Hour Capacity Analysis - CR 466A and Drake Drive/ Timbertop Lane**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #5: CR 466A & DRAKE DR/ TIMBERTOP LN	EB	L	8.2	A	17	8.4	A	18
		T	11.7	B	128	12.5	B	158
		TR	11.8	B	76	12.6	B	115
		Approach	11.7	B	--	12.5	B	--
	WB	L	9.9	A	42	10.1	B	43
		T	13.0	B	53	13.9	B	64
		TR	13.0	B	71	13.8	B	97
		Approach	12.7	B	--	13.5	B	--
	NB	LT	19.3	B	61	19.3	B	63
		R	19.4	B	56	19.4	B	58
		Approach	19.3	B	--	19.3	B	--
	SB	Approach	18.4	B	32	18.4	B	32
	Intersection	-	12.7	B	--	13.4	B	--

*\*Extracted from SimTraffic simulation software*



## Intersection of Lake Ella Road and Micro Racetrack Road

Based on the results of the capacity analysis during the morning peak hour, the intersection of Lake Ella Road and Micro Racetrack Road is projected to operate at an acceptable overall LOS B during the No Build and LOS C under Build Conditions, with an increase in overall delay of 5.7 seconds.

The northbound approach is expected to operate at LOS C during no Build and D under build conditions. All other turning movements and approaches are projected to operate at acceptable LOS C or better during both the No Build and Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 20**.

**Table 20 2022 AM Peak Hour Capacity Analysis - Lake Ella Road and Micro Racetrack Road**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Intersection #6: MICRO RACETRACK RD & LAKE ELLA RD	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	EB	Approach	0.0	A	7	0.0	A	12
	WB	Approach	7.0	A	60	7.8	A	70
	NB	Approach	16.4	C	114	28.0	D	191
	SB	Approach	14.8	B	17	18.6	C	16
	Intersection	-	10.4	B	--	16.1	C	--

*\*Extracted from SimTraffic simulation software*

Based on the results of the capacity analysis during the evening peak hour, the intersection of Lake Ella Road and Micro Racetrack Road is projected to operate at an acceptable overall LOS C during the No Build and LOS F under Build Conditions, with an increase in overall delay of 5.7 seconds.

The northbound approach is expected to operate at LOS E during no Build and LOS F under build conditions. All other turning movements and approaches are projected to operate at acceptable LOS A during both the No Build and Build Conditions.

The capacity results for the evening peak hour are summarized in **Table 21**.

**Table 21 2022 PM Peak Hour Capacity Analysis - Lake Ella Road and Micro Racetrack Road**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Intersection #6: MICRO RACETRACK RD & LAKE ELLA RD	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	EB	Approach	0.0	A	10	0.0	A	20
	WB	Approach	8.0	A	88	8.3	A	101
	NB	Approach	45.2	E	213	162.9	F	337
	SB	Approach	0.0	A	0	0.0	A	0
	Intersection	-	19.9	C	--	69.3	F	--

*\*Extracted from SimTraffic simulation software*

## Intersection of CR 466A and Driveway 1

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Driveway 1 is projected to operate at an acceptable overall LOS A during the Build Conditions, with an increase in overall delay of less than one second.

All turning movements and approaches are projected to operate at acceptable LOS B or better during the Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 22**.

**Table 22 2022 AM Peak Hour Capacity Analysis - CR 466A and Driveway 1**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Intersection #7: CR 466A & DRIVEWAY 1	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	WB	T	0	A	0	0.0	A	0
		TR	0	A	0	0.0	A	7
	SB	Approach	0.0	A	--	0.0	A	--
		Approach	0.0	A	0	11.6	B	56
Intersection	-	0.0	A	--	0.9	A	--	

*\*Extracted from SimTraffic simulation software*

The capacity results for the evening peak hour are summarized in **Table 23**.

**Table 23 2022 PM Peak Hour Capacity Analysis - CR 466A and Driveway 1**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Intersection #7: CR 466A & DRIVEWAY 1	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	WB	T	0	A	0	0.0	A	0
		TR	0	A	0	0.0	A	5
	SB	Approach	0.0	A	--	0.0	A	--
		Approach	0.0	A	0	11.7	B	61
Intersection	-	0.0	A	--	0.9	A	--	

*\*Extracted from SimTraffic simulation software*

## Intersection of CR 466A and Driveway 2

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of CR 466A and Driveway 2 is projected to operate at an acceptable overall LOS B during the Build Conditions.

All turning movements and approaches are projected to operate at acceptable LOS A during the Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic do not appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions.

The capacity results for the morning peak hour are summarized in **Table 24**.

**Table 24 2022 AM Peak Hour Capacity Analysis - CR 466A and Driveway 2**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #8: CR 466A & DRIVEWAY 2	WB	T	0	A	0	0.0	A	0
		R	0	A	0	0.0	A	11
		Approach	0.0	A	--	0.0	A	--
	Intersection	-	0.0	A	--	0.0	A	--

\*Extracted from SimTraffic simulation software

The capacity results for the evening peak hour are summarized in **Table 25**.

**Table 25 2022 PM Peak Hour Capacity Analysis - CR 466A and Driveway 2**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #8: CR 466A & DRIVEWAY 2	WB	T	0	A	0	0.0	A	0
		R	0	A	0	0.0	A	18
		Approach	0.0	A	--	0.0	A	--
	Intersection	-	0.0	A	--	0.0	A	--

\*Extracted from SimTraffic simulation software

### Intersection of Micro Racetrack Road and Driveway 3

Based on the results of the capacity analysis during the morning peak hour, the intersection of Micro Racetrack Road and Driveway 3 is projected to operate at an acceptable overall LOS B during the Build Conditions.

The westbound approach is expected to operate at failing LOS F under Build Conditions. All other turning movements and approaches are projected to operate at acceptable LOS A during the Build Conditions for the morning peak hour.

The queue results from SimTraffic exceed the available storage for the auxiliary lanes under Build Conditions for the southbound and westbound approaches.

The capacity results for the morning peak hour are summarized in **Table 26**.

**Table 26 2022 AM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 3**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Approach	Movement		DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
Intersection #9: MICRORACETRACK RD & DRIVEWAY 3	WB	Approach	0.0	A	0	60.7	F	181
	NB	Approach	0.0	A	0	0.0	A	8
	SB	Approach	0.0	A	0	2.5	A	129
	Intersection	-	0.0	A	--	15.0	B	--

\*Extracted from SimTraffic simulation software



Based on the results of the capacity analysis during the evening peak hour, the intersection of Micro Racetrack Road and Driveway 3 is projected to operate at an acceptable overall LOS D during the Build Conditions.

The westbound approach is expected to operate at failing LOS F under Build Conditions. All other turning movements and approaches are projected to operate at acceptable LOS A during the Build Conditions for the evening peak hour.

The queue results from SimTraffic exceed the available storage for the auxiliary lanes under Build Conditions on all the approaches.

The capacity results for the evening peak hour are summarized in **Table 27**.

**Table 27 2022 PM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 3**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Intersection #9: MICRORACETRACK RD & DRIVEWAY 3	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	WB	Approach	0.0	A	0	136.1	F	234
	NB	Approach	0.0	A	0	0.0	A	14
	SB	Approach	0.0	A	0	1.6	A	149
	Intersection	-	0.0	A	--	32.4	D	--

*\*Extracted from SimTraffic simulation software*

## Intersection of Micro Racetrack Road and Driveway 4

Based on the results of the capacity analysis during the morning and evening peak hour, the intersection of Micro Racetrack Road and Driveway 4 is projected to operate at an acceptable overall LOS A during the Build Conditions.

All turning movements and approaches are projected to operate at acceptable LOS C or better during the Build Conditions for both the morning and evening peak hours.

The queue results from SimTraffic appear to exceed the available storage for the auxiliary lanes in either the No Build or Build Conditions for the southbound approach.

The capacity results for the morning peak hour are summarized in **Table 28**.

**Table 28 2022 AM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 4**

2022 CONDITIONS - (AM)			No Build			Build		
			Conditions			Conditions		
Intersection #10: MICRORACETRACK RD & DRIVEWAY 4	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	WB	Approach	0.0	A	0	13.9	B	37
	NB	Approach	0.0	A	0	0.0	A	0
	SB	Approach	0.0	A	0	0.2	A	31
	Intersection	-	0.0	A	--	0.3	A	--

*\*Extracted from SimTraffic simulation software*

The capacity results for the evening peak hour are summarized in **Table 29**.

**Table 29 2022 PM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 4**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Intersection #10: MICRORACETRACK RD & DRIVEWAY 4	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	WB	Approach	0.0	A	0	15.1	C	37
	NB	Approach	0.0	A	0	0.0	A	0
	SB	Approach	0.0	A	0	0.1	A	29
	Intersection	-	0.0	A	--	0.3	A	--

\*Extracted from SimTraffic simulation software

## Capacity Analysis Comparison – No Build vs Build with Improvements Conditions (Year 2022)

Capacity Analyses were conducted for the No Build and Build With improvements conditions (year 2022). The primary purpose for this approach was to evaluate the results of the proposed improvements. The capacity results are included in **Appendix E**.

### Intersection of Lake Ella Road and Micro Racetrack Road

Based on the results of the capacity analysis during the morning peak hour, the intersection of Lake Ella Road and Micro Racetrack Road is projected to operate at an acceptable overall LOS B during both the No Build and Build With Improvement Conditions, with an increase in overall delay of 4.1 seconds.

All turning movements and approaches are projected to operate at acceptable LOS C or better during both the No Build and Build with Improvements Conditions.

The capacity results for the morning peak hour are summarized in **Table 30**.

**Table 30 2022 AM Peak Hour Capacity Analysis - Lake Ella Road and Micro Racetrack Road**

2022 CONDITIONS - (AM)			No Build			Build WI		
			Conditions			Conditions		
Intersection #6: MICRO RACETRACK RD & LAKE ELLA RD	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	EB	Approach	0.0	A	7	10.7	B	67
	WB	Approach	7.0	A	60	13.9	B	85
	NB	Approach	16.4	C	114	16.3	C	152
	SB	Approach	14.8	B	17	8.9	A	12
	Intersection	-	10.4	B	--	14.5	B	--

\*Extracted from SimTraffic simulation software

Based on the results of the capacity analysis during the evening peak hour, the intersection of Lake Ella Road and Micro Racetrack Road is projected to operate at an acceptable overall LOS C during both the No Build and Build With Improvement Conditions.

All turning movements and approaches are projected to operate at acceptable LOS C or better during the Build with Improvements Conditions.

The capacity results for the evening peak hour are summarized in **Table 31**.

**Table 31 2022 PM Peak Hour Capacity Analysis - Lake Ella Road and Micro Racetrack Road**

2022 CONDITIONS - (PM)			No Build			Build		
			Conditions			Conditions		
Intersection #6: MICRO RACETRACK RD & LAKE ELLA RD	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*
	EB	Approach	0.0	A	10	10.7	B	75
	WB	Approach	8.0	A	88	23.7	C	144
	NB	Approach	45.2	E	213	18.3	C	169
	SB	Approach	0.0	A	0	0.0	A	0
Intersection		-	19.9	C	--	19.4	C	--

*\*Extracted from SimTraffic simulation software*

### Intersection of Micro Racetrack Road and Driveway 3

Based on the results of the capacity analysis during the morning peak hour, the intersection of Micro Racetrack Road and Driveway 3 is projected to operate at an acceptable overall LOS A during the Build with Improvement Conditions.

The westbound left turn (site driveway 3) is expected to operate at LOS D under Build with Improvement Conditions. All other turning movements and approaches are projected to operate at acceptable LOS A during the Build Conditions.

The queue results from SimTraffic exceed the available storage for the auxiliary lanes under Build Conditions for the northbound and westbound approaches.

The capacity results for the morning peak hour are summarized in **Table 32**.

**Table 32 2022 AM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 3**

2022 CONDITIONS - (AM)			No Build			Build WI			
			Conditions			Conditions			
Intersection #9: MICRORACETRACK RD & DRIVEWAY 3	Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
	WB	L					39.6	E	105
		R					11.1	B	54
		Approach		0.0	A	0	28.8	D	--
	NB	T					0.0	A	0
		R					0.0	A	26
	Approach		0.0	A	0	0.0	A	--	
	SB	Approach		0.0	A	0	2.5	A	126
Intersection		-	0.0	A	--	7.6	A	--	

*\*Extracted from SimTraffic simulation software*

Based on the results of the capacity analysis during the evening peak hour, the intersection of Micro Racetrack Road and Driveway 3 is projected to operate at an overall LOS B during the Build with Improvement Conditions.

The westbound approach is expected to operate at LOS F under Build with Improvement Conditions. All other turning movements and approaches are projected to operate at acceptable LOS B or better during the Build Conditions for both the morning and evening peak hours.



The queue results from SimTraffic exceed the available storage for the auxiliary lanes under Build Conditions on all the approaches.

The capacity results for the evening peak hour are summarized in **Table 33**.

**Table 33 2022 PM Peak Hour Capacity Analysis - Micro Racetrack Road and Driveway 3**

2022 CONDITIONS - (PM)			No Build			Build W/		
			Conditions			Conditions		
Approach	Movement	DELAY (S)	LOS	95th % Queue (ft)*	DELAY (S)	LOS	95th % Queue (ft)*	
Intersection #9: MICRORACETRACK RD & DRIVEWAY 3	WB	L			77.0	F	142	
		R			10.7	B	52	
	Approach	0.0	A	0	51.9	F	--	
	NB	T			0.0	A	12	
		R			0.0	A	25	
	Approach	0.0	A	0	0.0	A	--	
	SB	Approach	0.0	A	0	1.6	A	142
	Intersection	-	0.0	A	--	11.5	B	--

\*Extracted from SimTraffic simulation software

## Turn Lane Warrant Analysis

Left and right turn lane warrant analyses were conducted at each proposed site driveways to determine the need for the installation of auxiliary turning lanes into the site. The analyses were completed per the criteria set forth in the Driveway Information Guide (Chapter 7) published by the Florida Department of Transportation.

### Right Turn Lane Warrant Analysis

The forecasted right turn volumes at the site driveways were evaluated to determine the need for the installation of auxiliary right turn lanes to access the proposed site as showed on the total development site-generated trips depicted on **Exhibit 7** in **Appendix G**.

The proposed site driveways are projected to generate the following number of entering right turns:

- CR 466A and Driveway 1
  - AM Peak Hour - 93
  - PM Peak Hour - 90
- CR 466A and Driveway 2
  - AM Peak Hour - 89
  - PM Peak Hour - 84
- Micro Racetrack Rd and Driveway 3
  - AM Peak Hour - 131
  - PM Peak Hour - 128

- Micro Racetrack Rd and Driveway 4
  - AM Peak Hour - 8
  - PM Peak Hour - 8

As previously mentioned, the analysis was completed per the criteria set forth in the Driveway Information Guide (Chapter 7) published by the Florida Department of Transportation.

**Table 12** outlines the criteria required to meet the installation of an auxiliary right turning lane.

**Table 34 Right Turn Lane Warrant Criteria Results at Proposed Site Driveways**

Criteria	Source	Driveway 1	Driveway 2	Driveway 3	Driveway 4
		Criteria Met?	Criteria Met?	Criteria Met?	Criteria Met?
45 MPH or less - more than 80-125 right turns per hour*	(1)	No	No	Yes	No
Over 45 MPH - more than 35-55 right turns per hour	(1)	N/A	N/A	N/A	N/A
Facilities having a high volume of buses, trucks, or trailers (2 or 3 per hour)	(2)	No	No	No	No
Poor internal design of a driveway facility causing potential backups in the through lanes	(2)	No	No	No	No
Heavier than normal peak flows on the main roadway	(2)	No	No	No	No
Very high operating speeds (such as 55 MPH or above) and in rural areas where turns are not expected by through drivers	(2)	No	No	No	No
Highways with curves or hills where sight distance is impacted	(2)	No	No	No	No
Gated entrances	(2)	No	No	No	No
Crash experience, especially rear-end collisions	(2)	No	No	No	No
Intersections or driveways just after signalized intersections where acceleration or driver expectancy would make a separate right turn lane desirable (this would also be the case downstream soon after a dual left turn lane onto a four-lane road)	(2)	No	No	No	No
Severe skewed angle of intersection requiring right turn vehicle to stop greatly	(2)	No	No	No	No

(1) FDOT Driveway Information Guide

(2) FDOT Driveway Information Guide, Additional Criteria

\*The 125 right turn vehicles per hour upper would be most appropriate on lower volume roadways or driveways with a large entry radius (50 feet or greater)

As shown in **Table 12**, the two proposed site driveways along CR 466A (Driveway 1 and Driveway 2) do not meet the criteria for the installation of a right turn lane. It should be noted that the proposed site Driveway 2 already has a right-turn lane in place.

Driveway 3 along Micro Racetrack Rd meets the criteria for the installation of a right turn lane for a speed limit of 45 MPH or less set by the FDOT Driveway Information Guide. The site trip distribution shows 131 AM Peak Hour right turns and 128 PM peak hour right turns, exceeding the 125 right turns per hour threshold and therefore a right-turn lane will be warranted at this driveway.

## Left Turn Lane Warrant Analysis

The forecasted left turn volumes at the site driveways were evaluated to determine the need for the installation of auxiliary left turn lanes to access the proposed site.

The proposed site driveways are projected to generate the following number of entering left turns:

- Micro Racetrack Rd and Driveway 3
  - AM Peak Hour - 110
  - PM Peak Hour - 106
- Micro Racetrack Rd and Driveway 4
  - AM Peak Hour - 8
  - PM Peak Hour - 8

As previously mentioned, the analysis was completed per the criteria set forth in the Driveway Information Guide (Chapter 7) published by the Florida Department of Transportation.

**Table 13** outlines the criteria required to meet the installation of an auxiliary left turning lane.

**Table 35 Left Turn Lane Warrant Criteria Results at Proposed Site Driveways**

Criteria	Source	Driveway 3	Driveway 4
		Criteria Met?	Criteria Met?
Driveway served by a multilane roadway with a median	(1)	No	No
Two-lane roadway with speeds over 45 MPH	(1)	No	No

(1) FDOT Driveway Information Guide

As shown in **Table 13**, the installation of auxiliary left turn lanes into the site along Micro Racetrack Rd and Site Driveways 3 and 4 is not warranted under Build Conditions.

## Proposed Improvements

Considering the results of the capacity analysis comparison No Build Vs Build, the following improvements are recommended for the build 2022 conditions:

### Improvements on Micro Racetrack Road and Driveway 3

- Northbound right turn lane.
- Westbound right-turn lane

### Improvements on Micro Racetrack Road and Lake Ella Road

- All way stop control

## Conclusions and Recommendations

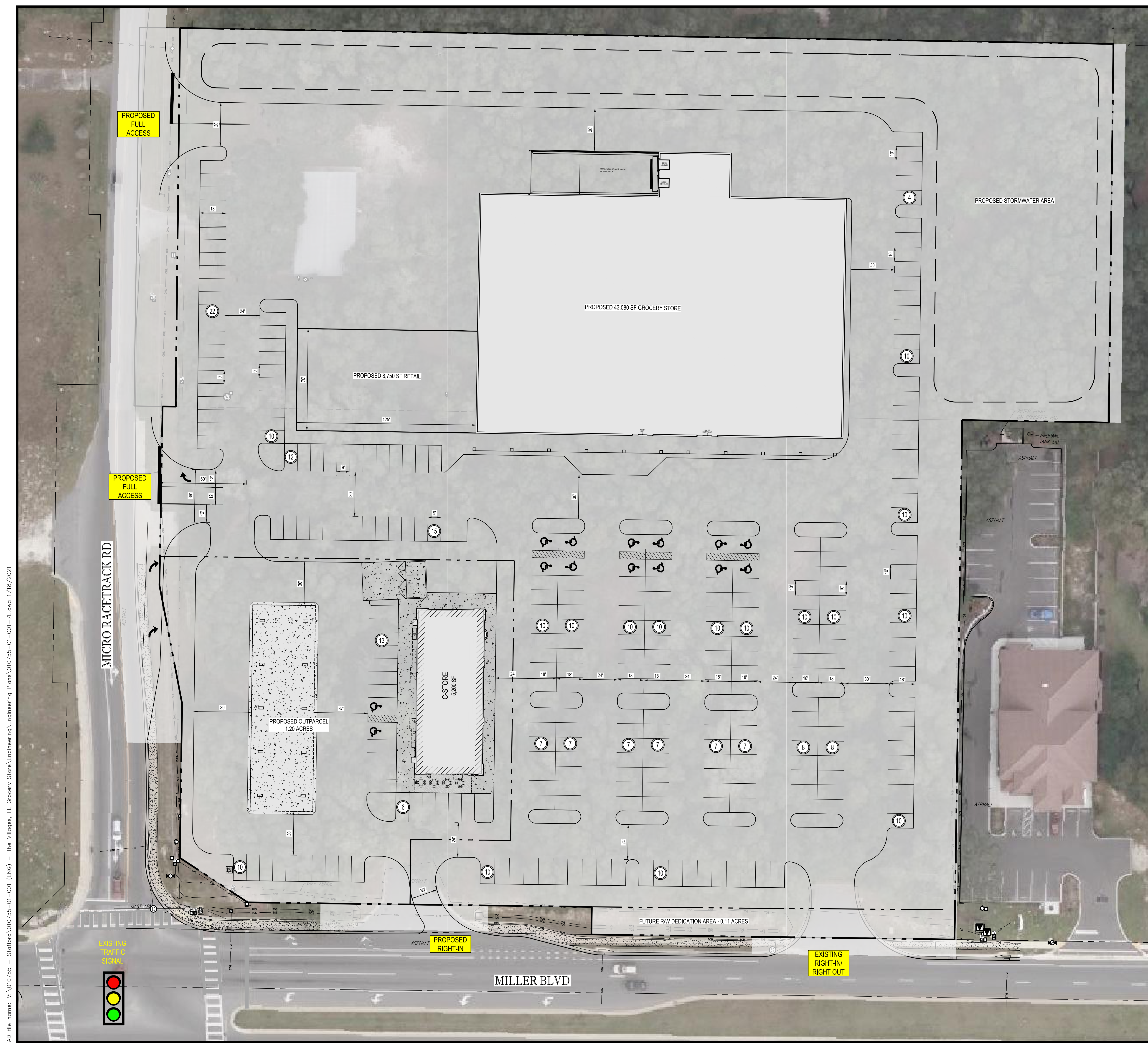
- The proposed development is expected to generate a total of 809 trips during the morning peak hour and 844 trips during the evening peak hour. It is anticipated that during the morning peak hour 231 of these are existing trips while the remaining 578 are expected to be primary trips while during the evening peak hour 222 of these trips are expected to be existing trips and 622 are expected to be new trips.
- To evaluate the traffic operations, intersection capacity analyses were completed. The results indicate the following:
  - The results of the capacity analysis comparison between the No Build and Build Conditions show that the intersections of: CR 466A and Morse Blvd, CR 466A and Sembler Way/Heald Way, CR 466A and Farner Place, CR 466A and Micro Racetrack, CR 466A and Drake Drive/Timbertop Road, CR 466A and Driveway 1, CR 466A and Driveway 2 are not expected to be adversely impacted with the inclusion of the proposed development.
  - The results of the capacity analysis comparison between the No Build and Build Conditions show that the intersections of: Micro Racetrack Road and Lake Ella Road, Micro Racetrack Road and Driveway 3 and Micro Racetrack Road and Driveway 4 are expected to be adversely impacted with the inclusion of the proposed development.



- The results of the capacity analysis comparison between the No Build and Build with Improvement Conditions show only the westbound left turning movement (Driveway 3) of the intersection of site Driveway 3 and Micro Racetrack Road presents a LOS F under Build with improvement conditions during the evening peak hour. All other turning movements and approaches of the analysis intersections are expected to operate at acceptable Levels of Service, additionally the queues are not expected to exceed the available storage. Therefore, upon implementing the proposed improvements the surrounding roadway network is not expected to be adversely impacted with the inclusion of the proposed development.
- The results of the turn lane warrant analysis are as follows:
  - The proposed site driveways along CR 466A (Driveway 1 and Driveway 2) do not meet the criteria for the installation of a right turn lane. It should be noted that the proposed site Driveway 2 already has a right-turn lane in place.
  - Driveway 4 does not meet the criteria for the installation of a right turn lane.
  - Driveway 3 along Micro Racetrack Rd meets the criteria for the installation of a right turn lane for a speed limit of 45 MPH or less set by the FDOT Driveway Information Guide. The site trip distribution shows 131 AM Peak Hour right turns and 128 PM peak hour right turns, exceeding the 125 right turns per hour threshold and therefore a right-turn lane will be warranted at this driveway.
  - The installation of auxiliary left turn lanes into the site along Micro Racetrack Rd and Site Driveways 3 and 4 is not warranted under Build Conditions.
- Considering the results of the capacity analysis comparison No Build Vs Build, the following improvements are recommended for the build 2022 conditions:
  - Improvements on Micro Racetrack Road and Driveway 3
    - Northbound 50 feet right turn lane.
    - Westbound 60 feet right-turn lane
  - Improvements on Micro Racetrack Road and Lake Ella Road
    - All way stop control

# **APPENDIX A**





**CONCEPTUAL PLAN NOTES:**

CONDITIONS MAY EXIST THAT COULD RESTRICT THE DEVELOPMENT OF THIS SITE AS SHOWN. THIS DRAWING IS INTENDED TO BE CONCEPTUAL ONLY AND ADDITIONAL RESEARCH AND DESIGN WOULD BE REQUIRED FOR THE PREPARATION OF A SITE PLAN THAT MEETS LOCAL JURISDICTIONAL CODES.

BCG DOES NOT PURPORT THAT THIS SITE CAN BE DEVELOPED AS SHOWN. THE PURCHASE OF THIS SITE SHALL BE AT THE OWNER/DEVELOPER'S SOLE EXPENSE.

STORMWATER MANAGEMENT FACILITY SHOWN ON THIS PLAN ARE PURELY CONCEPTUAL AND IS SUBJECT TO CHANGE UPON FINAL CIVIL DESIGN. BCG DOES NOT PURPORT THAT WHAT IS SHOWN IS ADEQUATE TO MEET ALL JURISDICTIONAL REQUIREMENTS.

NO SITE VISITS HAVE BEEN PERFORMED TO ENSURE THE ACCURACY OF THE AERIAL IMAGE SHOWN HEREON.

THIS EXHIBIT IS NOT INTENDED TO BE USED AS A CONSTRUCTION DOCUMENT, AND SHOULD NOT BE CONSTRUED IN ANYWAY TO BE USED FOR CONSTRUCTION PURPOSES.

**PARKING SUMMARY**

REQUIRED CENTER:	RETAIL: 1 SPACE PER 200 SQ FEET
	PROPOSED BUILDING SIZE = 51,830 SF
	51,830 SQ FEET / 200 = 259.2
	REQUIRED = 260 SPACES
PROPOSED CENTER:	STANDARD (10'X18') = 191 (FRONT AND SIDE GROCERY STORE)
	STANDARD (9'X18') = 59 (LOCAL RETAIL AREA)
	ADA SPACE (12'X18') = 12
	PROVIDED = 262 SPACES
REQUIRED OUTPARCEL:	RETAIL: 1 SPACE PER 200 SQ FEET
	PROPOSED BUILDING SIZE = 5,200 SF
	5,200 SQ FEET / 200 = 26
	REQUIRED = 26 SPACES
PROPOSED OUTPARCEL:	STANDARD (9'X18') = 27
	ADA SPACE (12'X18') = 2
	PROVIDED = 29 SPACES

**PROPOSED LEGEND**

	PROPERTY LINE		HEAVY DUTY CONCRETE
	BUILDING SETBACK LINE		PATIO AREA (± SF)
	LANDSCAPE BUFFER		STANDARD DUTY CONCRETE (SIDEWALK)
	EASEMENT		
#	PARKING COUNT		
C	COMPACT PARKING SPACES		
	PROPOSED BUILDING		
	ASPHALT PAVEMENT		

**CONCEPTUAL EXHIBIT**

Bowman Consulting Group, Ltd.  
 4450 W. Eau Gallie Blvd  
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 Melbourne, FL 32934  
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 © Bowman Consulting Group, Ltd.

CONCEPTUAL DESIGN  
**GROCERY STORE**  
 NEC MILLER BLVD & MICRO RACETRACK RD  
 THE VILLAGES, FLORIDA 34731  
 LAKE COUNTY

**Bowman**  
 CONSULTING  
 Certificate of Authorization License No. 30462

VB	PMP	TJ
DSGN	DRAWN	CHKD
010755-01-001		
PROJECT NUMBER		
SCALE 1" = 30'		
VERSION	7E	

CAD file name: V:\010755-01-001 (ENG) - The Villages, FL Grocery Store\Engineering\Plans\010755-01-001-7E.dwg 1/18/2021



# **APPENDIX B**



# Memorandum

**To:** Lake-Sumter County MPO, Lake County, City of Fruitland Park

**From:** Andrew Petersen, P.E.

Bowman Consulting Group, Ltd.

Daniela Jurado

Bowman Consulting Group, Ltd.

**Date:** December 13, 2020

**Re:** Proposed Grocery Store and Retail

Traffic Impact Analysis Methodology Statement

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This memorandum documents the proposed methodology for the preparation of the Traffic Impact Analysis (TIA) for the proposed Development located on the northeast corner of the intersection of Miller Blvd (CR 466A) and Micro Racetrack Rd. This methodology statement has been prepared in accordance with Lake-Sumter County MPO *Traffic Impact Analysis Methodology Guidelines, 2017* and City of Fruitland Park Code of Ordinances chapters 162 *Transportation Standards* and Chapter 153 *Concurrency management System*.

## **Traffic Impact Analysis Methodology Statement**

**Land Uses Being Analyzed:** The proposed development consists of:

- 40,000 S.F. Grocery Store.
- 8,700 S.F. Retail.
- 5,200 S.F. convenience store with 20 vehicle fueling positions.

The Concept Plan is presented in **Attachment A**.

**Build-Out Schedule:** The proposed development is expected to be constructed and fully operational prior to the end of year 2022.

**Conceptual Site Plan/Proposed Access Description:** Access to the site is proposed via one (1) Right-in driveway Along Miller Blvd, one (1) Right-in/Right-out driveway Along Miller Blvd and two (1) proposed full-access driveways along Micro Racetrack Rd. The conceptual plan for the proposed site is depicted in **Attachment A**.

Access points revised per pre application meeting comments to be (1) right-in right out driveway along CR 466A, one (1) Right-in only along CR 466A, two (2) Full Access Driveway along Micro Racetrack Road.

**Site Location Map:** The proposed development is located at the northeastern corner of the intersection of Miller Blvd (CR 466A) and Micro Racetrack Rd. The site location map is depicted in **Attachment B**.

**Analysis Periods:** The following time periods will be analyzed in the TIA for the proposed build out year of 2022:

- AM Peak Hour (7:00 AM – 9:00 AM)
- PM Peak Hour (4:00 PM – 6:00 PM)

**Proposed Project Trip Generation:** The weekday, AM peak hour, and PM peak hour trip generation for the proposed development will be calculated using Institute of Transportation Engineers Trip Generation (ITE), 10<sup>th</sup> Edition. A pass-by trip rates of 34% for LU-820, 76% for LU-960 & 36% For LU-850 extracted from the ITE Trip Generation Handbook will be used to calculate the pass-by trips for the proposed development.

The projected trip generation for the development is depicted in **Attachment C**.

**Proposed Project Trip Distribution and Assignment:** The expected traffic distribution for the proposed site will be developed based on the Lake Sumter MPO Average Annual Daily Traffic & Historical Counts information. The expected traffic distribution and expected trips are depicted in **Attachment D**.

**Analysis Map:** The one-mile radius study area is depicted in **Attachment D**.

**Intersections to be analyzed:** The following intersections will be analyzed in the TIA for the proposed build out year of 2022:

- Miller Blvd (CR 466A) & Sembler Way/ Held way
- Miller Blvd (CR 466A) & Farmer Pl
- Miller Blvd (CR 466A) & Micro Racetrack Rd
- Miller Blvd (CR 466A) & Drake Dr
- Miller Blvd (CR466A) and Morse Blvd
- Lake Ella Road & Micro Racetrack Rd
- Miller Blvd (CR 466A) & Driveway 1 (Right-in Right-out Driveway)
- Miller Blvd (CR 466A) & Driveway 2 (Right-in Driveway)
- Micro Racetrack Rd & Driveway 3 (Full-Access Driveway)
- Micro Racetrack Rd & Driveway 4 (Full-Access Driveway)

**Lake Ella Road & Micro Racetrack Road (Revised)**

**Turning Moments Counts & data:** Turning movement counts are proposed to be collected at the following intersections:

- Miller Blvd (CR 466A) & Sembler Way/ Held way
- Miller Blvd (CR 466A) & Farmer Pl



- Miller Blvd (CR 466A) & Micro Racetrack Rd
- Miller Blvd (CR 466A) & Drake Dr
- Miller Blvd (CR466A) & Morse Blvd
- Lake Ella Road & Micro Racetrack Rd

For the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods.

**Background Traffic/Build-Out Traffic:** The proposed traffic background growth rate was calculated for all study area roadway segments based on historical traffic growth trends using the 2016-2019 Lake Sumter MPO Average Annual Daily Traffic & Historical Counts information. A minimum growth value of 2.0% will be applied in the TIA.

The study area roadway segments growth rates are depicted in **Attachment E**.

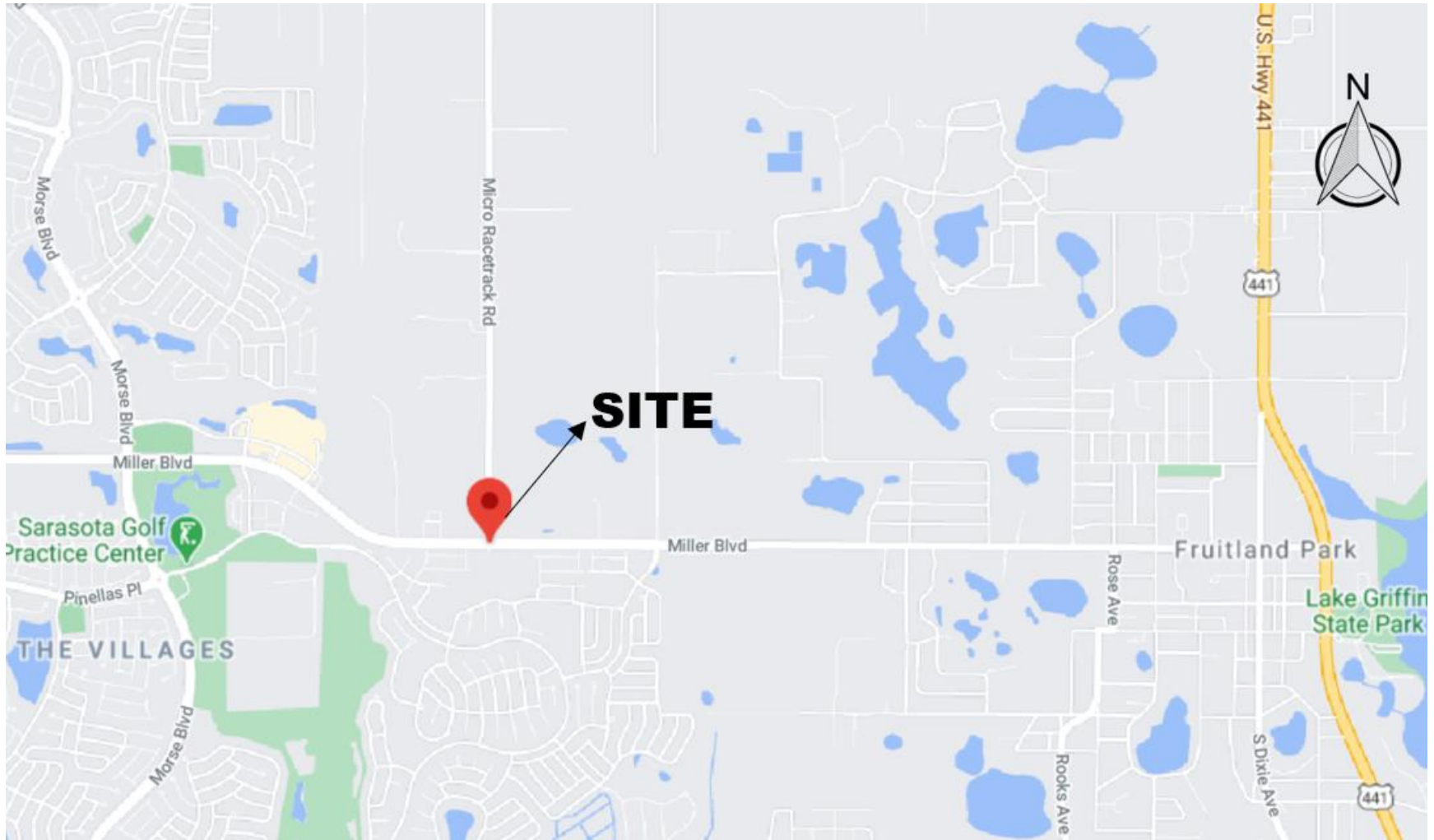
**Intersection Analysis:** The study intersections will be analyzed following the Highway Capacity Manual (HCM 6<sup>th</sup> Edition) methodologies using the computer software package Synchro 10 with SimTraffic.

**Transportation Improvements:** If required based on findings of the TIA, roadway and intersection improvements will be identified and discussed.

Turn lane warrants will be evaluated at the proposed site driveways using the FDOT and the city of Fruitland Park turn lane criteria contained in the Driveway Information Guide and the Land Development Code respectively.

**Concurrency Mitigation Strategy:** If necessary, a proportionate share mitigation will be identified for deficient roadways.

## Attachment B: Site location





Micro Racetrack Rd

(FA) Driveway 4

(RI/RO) Driveway 3

**SITE**

CR 466A (Miller Blvd.)

~~(RI/RO) Driveway 2~~

RI Driveway (revised)

(RI/RO) Driveway 1

© Google Earth, 2020





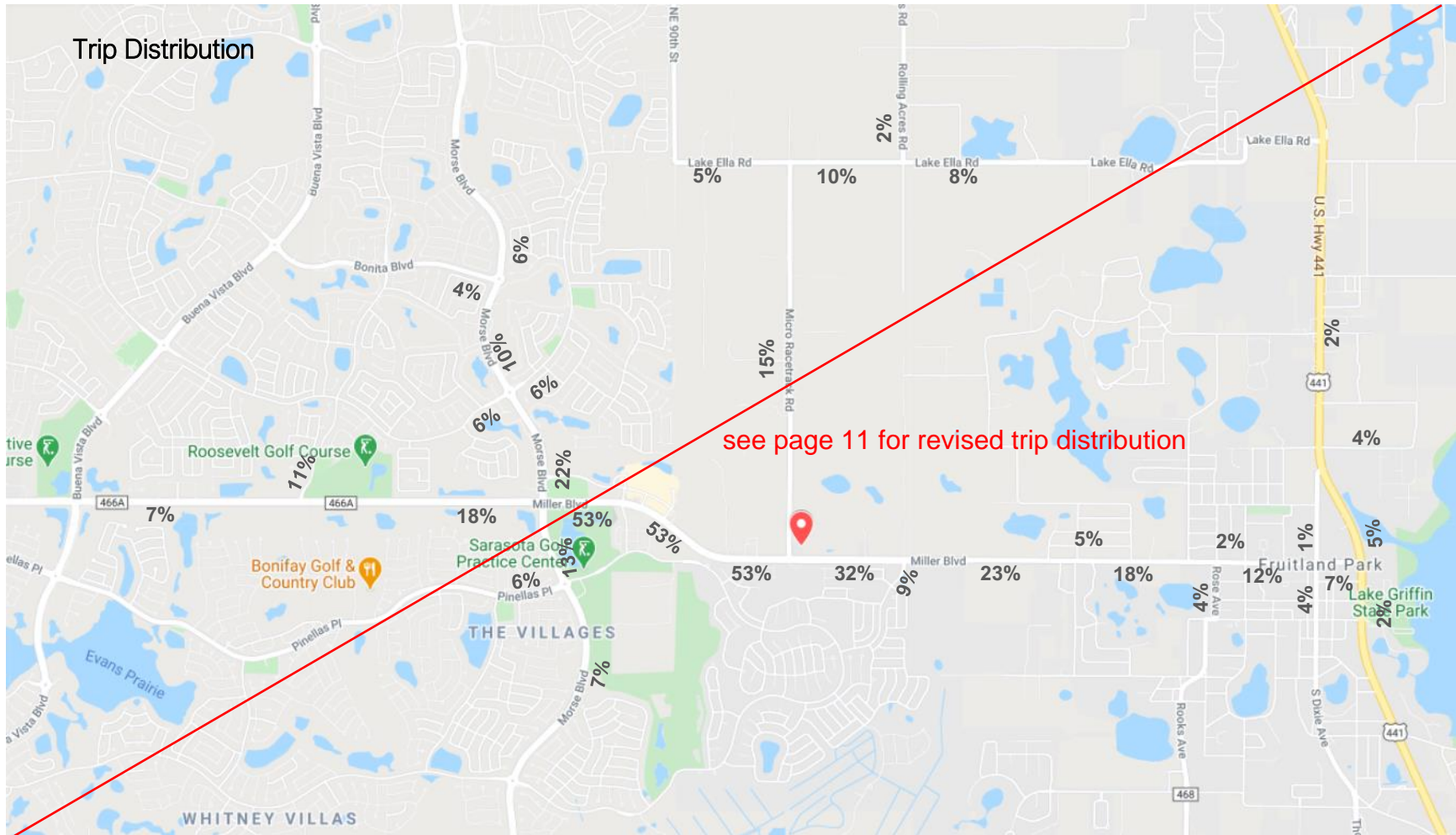
## Attachment C: Trip Generation

Description <sup>(1)</sup>	Time	Total Trips <sup>(1)</sup>			Pass-By Trips			Reduced Pass-By			Net New Trips <sup>(2)</sup>		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Shopping Center (LU 820) 8,750 SQ.FT. GLA	Daily	573	574	1,147	195	195	390	86	86	172	487	488	975
	AM	97	59	156	33	20	53	15	9	24	82	50	132
	PM	43	47	90	15	16	31	7	7	14	36	40	76
Super Convenience Store with Gas (LU 960) 5,200 SQ.FT & 20 VFP	Daily	2,177	2,178	4,355	1,655	1,655	3,310	731	731	1,462	1,446	1,447	2,893
	AM	271	270	541	206	205	411	91	91	182	180	179	359
	PM	218	217	435	166	165	331	73	73	146	145	144	289
SuperMarket (LU 850) 40,000 SQ.FT. GLA	Daily	2,024	2,024	4,048	729	729	1,458	322	322	644	1,702	1,702	3,404
	AM	92	61	153	33	22	55	15	10	25	77	51	128
	PM	201	193	394	72	69	141	32	30	62	169	163	332
Total Trips	Daily	4,774	4,776	9,550	2,579	2,579	5,158	1,139	1,139	2,278	3,635	3,637	7,272
	AM	460	390	850	272	247	519	121	110	231	339	280	619
	PM	462	457	919	253	250	503	112	110	222	350	347	697

(1) Institute of Transportation Engineers Trip Generation (ITE), 10<sup>th</sup> Edition

(2) Pass-by Rates of 34% for (LU-820), 76% for (LU-960) & 36% For (LU-850) were extracted from the ITE Trip Generation Errata.

# Attachment D: Trip Distribution



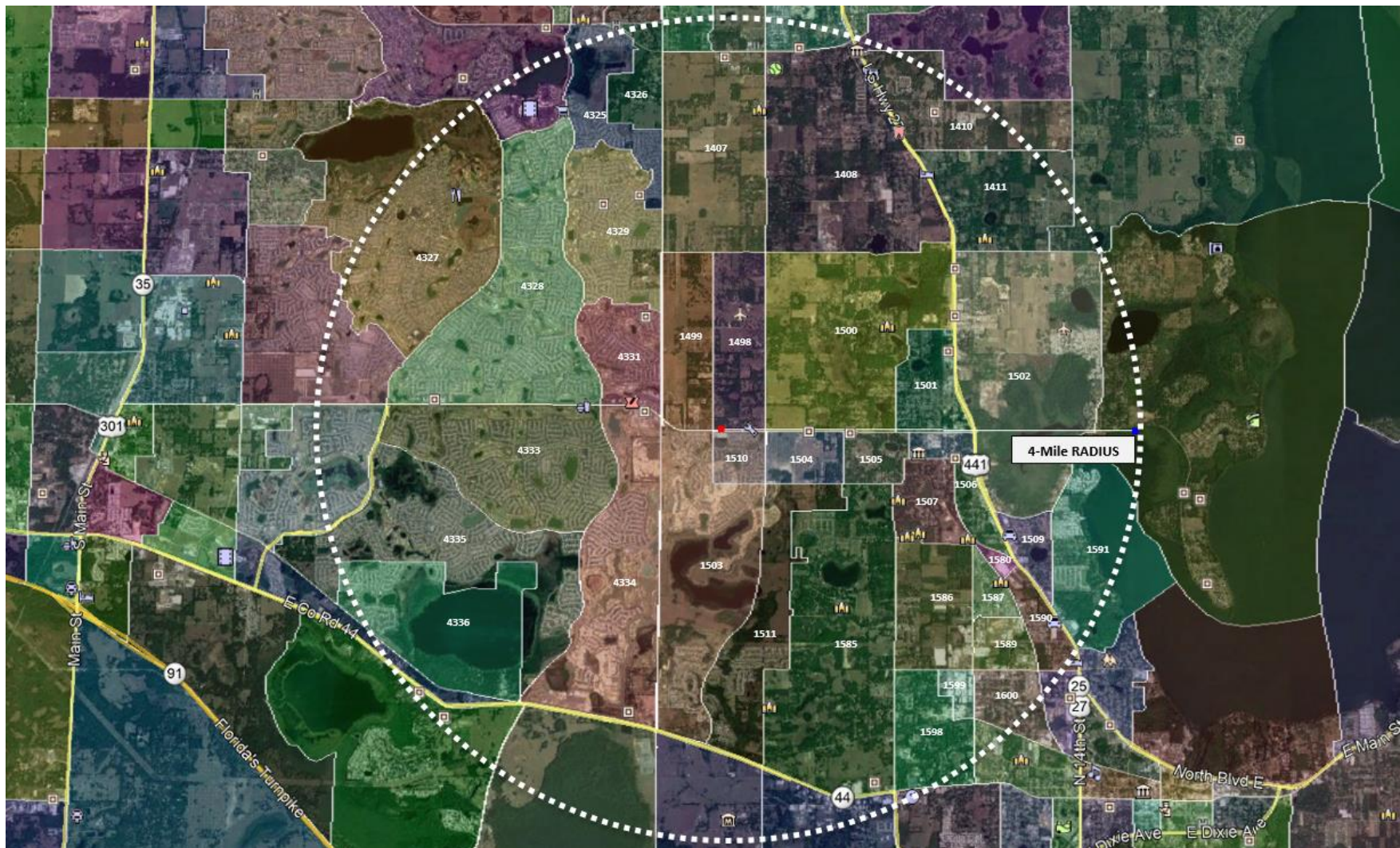
TAZ	SFDU	MFDU	HMDU	Dist	# TRIPS SF	# TRIPS MF	# TRIPS HM	# TRIPS TOT	SITE TRIPS	%TIJ	N	S	E	W	TIJ%-N	TIJ%-S	TIJ%-E	TIJ%-W
1407	737	598	0	1.92	6531	4480	0	11011	7272	5%	1	0	0	0	5%	0%	0%	0%
1408	1228	688	108	2.11	10447	5160	375	15982	7272	6%	1	0	0	0	6%	0%	0%	0%
1410	749	88	18	3.1	6629	624	62	7315	7272	2%	0.5	0	0.5	0	1%	0%	1%	0%
1411	348	176	0	2.96	3275	1290	0	4565	7272	1%	0.5	0	0.5	0	1%	0%	1%	0%
1498	114	3	0	2.84	1173	0	0	1173	7272	0%	0	0	0	0	0%	0%	0%	0%
1499	92	4	0	0.53	963	0	0	963	7272	2%	1	0	0	0	2%	0%	0%	0%
1500	789	0	0	1.12	6954	0	0	6954	7272	5%	0	0	1	0	0%	0%	5%	0%
1501	474	149	0	1.93	4352	1086	0	5438	7272	2%	0	0	1	0	0%	0%	2%	0%
1502	1067	1	0	1.89	9180	0	0	9180	7272	4%	0	0	1	0	0%	0%	4%	0%
1503	558	0	0	2.66	5056	0	0	5056	7272	2%	0	1	0	0	0%	2%	0%	0%
1504	123	43	0	1.36	1258	284	0	1542	7272	1%	0	1	0	0	0%	1%	0%	0%
1505	203	0	0	1.76	1995	0	0	1995	7272	1%	0	0	1	0	0%	0%	1%	0%
1506	107	38	0	2.2	1107	246	0	1353	7272	1%	0	0	1	0	0%	0%	1%	0%
1507	311	40	0	2.39	2953	262	0	3215	7272	1%	0	0	1	0	0%	0%	1%	0%
1509	170	0	92	3.44	1694	0	319	2013	7272	0%	0	0	1	0	0%	0%	0%	0%
1510	219	0	0	1.1	2139	0	0	2139	7272	2%	0	1	0	0	0%	2%	0%	0%
1511	764	0	0	2.25	6751	0	0	6751	7272	3%	0	1	0	0	0%	3%	0%	0%
1580	0	0	0	3.32	0	0	0	0	7272	0%	0	0	1	0	0%	0%	0%	0%
1585	717	55	0	2.31	6368	375	0	6743	7272	2%	0	1	0	0	0%	2%	0%	0%
1586	316	48	0	3.22	2997	322	0	3319	7272	1%	0	0	1	0	0%	0%	1%	0%
1587	105	333	0	3.48	1088	2477	0	3565	7272	1%	0	0	1	0	0%	0%	1%	0%
1589	58	15	0	3.88	630	73	0	703	7272	0%	0	0	1	0	0%	0%	0%	0%
1590	382	358	86	4	3568	2666	298	6532	7272	1%	0	0	1	0	0%	0%	1%	0%
1591	505	16	0	4	4613	80	0	4693	7272	1%	0	0	1	0	0%	0%	1%	0%
1598	315	153	0	4	2988	1116	0	4104	7272	1%	0	0	1	0	0%	0%	1%	0%
1599	3	0	0	3.94	41	0	0	41	7272	0%	0	0	1	0	0%	0%	0%	0%
1600	312	404	0	3.96	2962	3013	0	5975	7272	1%	0	0	1	0	0%	0%	1%	0%
4325	990	0	0	2.65	8569	0	0	8569	7272	3%	0	0	0	1	0%	0%	0%	3%
4326	53	0	0	2.75	580	0	0	580	7272	0%	0	0	0	1	0%	0%	0%	0%
4327	3795	0	0	3.41	29499	0	0	29499	7272	7%	0	0	0	1	0%	0%	0%	7%
4328	5776	0	0	2.13	43425	0	0	43415	7272	17%	0	0	0	1	0%	0%	0%	17%
4329	2483	0	0	1.6	19967	0	0	19967	7272	11%	0	0	0	1	0%	0%	0%	11%
4331	1181	0	0	1.1	10079	0	0	10079	7272	8%	0	0	0	1	0%	0%	0%	8%
4333	896	0	0	2.48	7817	0	0	7817	7272	3%	0	0	0	1	0%	0%	0%	3%
4334	472	262	0	2.52	4335	1940	0	6275	7272	2%	0	0	0	1	0%	0%	0%	2%
4335	768	0	0	3.46	6784	0	0	6784	7272	2%	0	0	0	1	0%	0%	0%	2%
4336	41	0	0	3.96	458	0	0	458	7272	0%	0	0	0	1	0%	0%	0%	0%

**15% 9% 23% 53%**

<b>TAZ</b>	Traffic Analysis Zone
<b>SFDU/MF D/ HMDU</b>	Dwelling units
<b>Dist</b>	Distance
<b>TRIPS SF/ MF/ H</b>	Number of Trips
<b>SITE TRIPS</b>	Number of trips fo proposed development
<b>%TIJ</b>	Percentaje of trips
<b>N / S/ E / W</b>	Cardinal Distribution from the project site



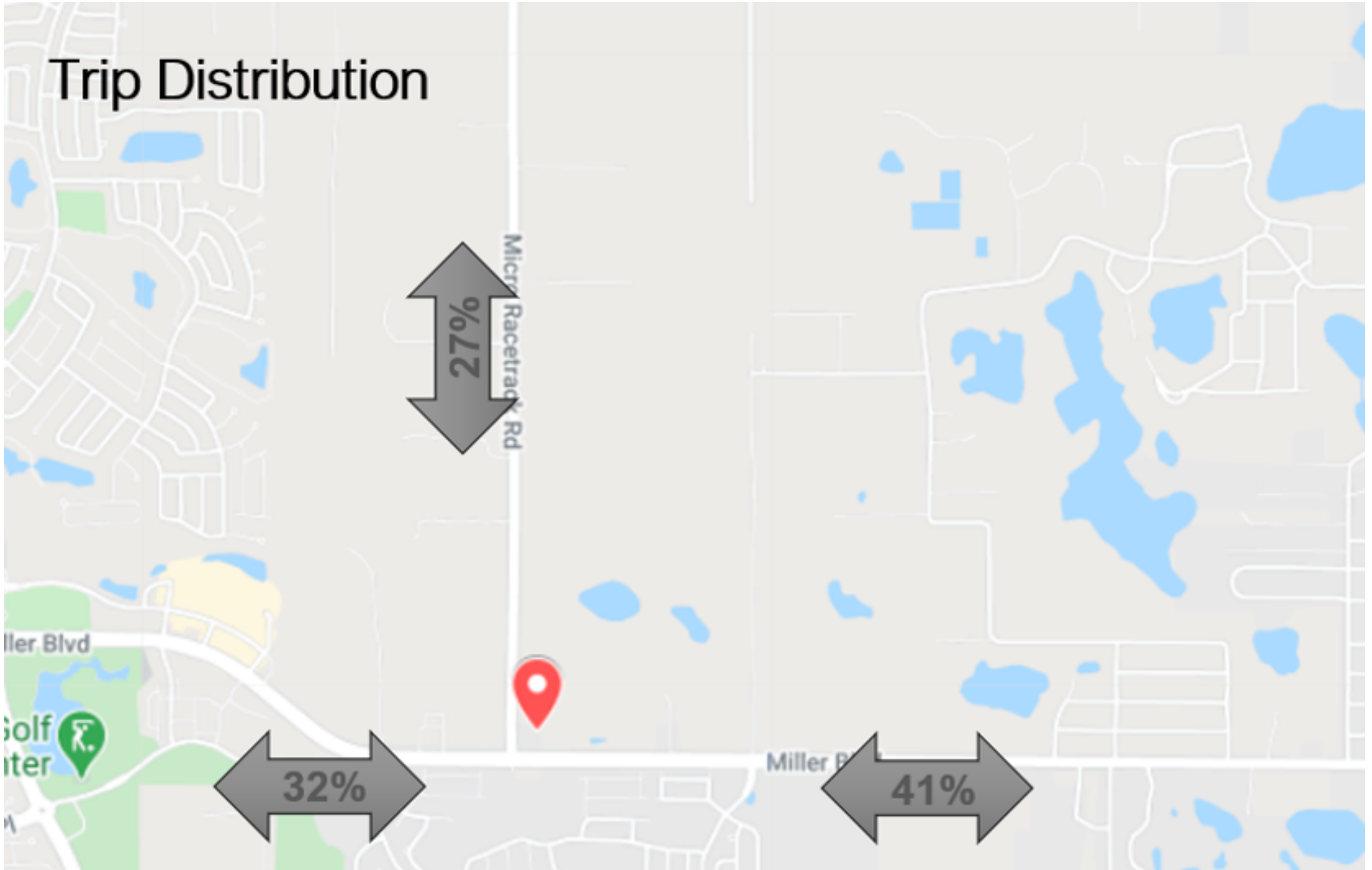
## Attachment E: 4 Mile Radius TAZ Evaluated for trip distribution



## Attachment F: Applicable Growth Rates

Roadway	From	to	AADT			Growth		Average Growth rate	Applied Growth rate
			2017	2018	2019	2018	2019		
<b>Miller Blvd (CR 466A)</b>	Buenavista Blvd	Morse Blvd	17,032	17,959	18,028	5.4%	0.4%	2.9%	2.9%
<b>Miller Blvd (CR 466A)</b>	Buenavista Blvd	N Dixie Ave	18,230	18,968	13,377	4.0%	-29.5%	-12.7%	0.5%
<b>Miller Blvd (CR 466A)</b>	N Dixie Ave	Citrus Blvd SR 25 S	6,453	6,512	6,474	0.9%	-0.6%	0.2%	0.5%
<b>Morse Blvd</b>	CR 466A	Odell Circ	20,683	22,417	22,470	8.4%	0.2%	4.3%	4.3%
<b>Morse Blvd</b>	Moyer Loop	CR 466A	16,983	16,677	16,307	-1.8%	-2.2%	-2.0%	0.5%
<b>Micro Racetrack Rd</b>	CR 466A	Lake Ella Rd	8,714	9,147	9,401	5.0%	2.8%	3.9%	3.9%
<b>CR 468</b>	CR 466A	Urick St	4,080	3,991	3,637	-2.2%	-8.9%	-5.5%	0.5%
<b>N Dixie Av</b>	CR 466A	Citrus Blvd SR 25 S	8,371	7,858	7,541	-6.1%	-4.0%	-5.1%	0.5%
<b>N Dixie Ave</b>	CR 466A	Urick St	5,549	5,125	4,780	-7.6%	-6.7%	-7.2%	0.5%
<b>Lake Ella Road</b>	NE 90th St	Rolling Acres Rd	1,768	1,821	1,912	3.0%	5.0%	4.0%	4.0%

**REVISED TRIP DISTRIBUTION**  
BASED ON LAKE COUNTY COMMENTS





# **APPENDIX C**

**From:** Lewis, Sharon E <SELewis@lakecountyfl.gov>  
**Sent:** Friday, December 11, 2020 12:14 PM  
**To:** Andrew Petersen  
**Cc:** Woods, Michael; Daniela Jurado; Lynch, Seth; Gadiel, George  
**Subject:** RE: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

Andrew,

Per our conversation in the absence of the FSUTMS software and engineering judgment the distribution from the site going north and east should be increased and the west significantly decrease. Also the intersection of Lake Ella and Micro Racetrack should be included in "Intersections to be Analyzed".

Thanks

---

**From:** Andrew Petersen [<mailto:apetersen@bowmanconsulting.com>]  
**Sent:** Friday, December 11, 2020 11:25 AM  
**To:** Lewis, Sharon E <[SELewis@lakecountyfl.gov](mailto:SELewis@lakecountyfl.gov)>  
**Cc:** Woods, Michael <[mwoods@lakesumtermpto.com](mailto:mwoods@lakesumtermpto.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

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Good Morning Sharon,

Just wanted to touch base with you on the methodology changes. We need your approval on this before going on the full study.

Please let us know when a good time to discuss would be. Thanks,



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 255-5434 | D: (321) 270-8983 | M: (321) 426-6496

[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Andrew Petersen  
**Sent:** Wednesday, December 9, 2020 2:50 PM  
**To:** Lewis, Sharon E <[SELewis@lakecountyfl.gov](mailto:SELewis@lakecountyfl.gov)>  
**Cc:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

Good Afternoon Sharon,

Just wanted to touch base with you and see if you had a chance to review further. We are available for a call the rest of the afternoon starting at 3:00 pm.

Thanks,



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

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[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Lewis, Sharon E <[SELewis@lakecountyfl.gov](mailto:SELewis@lakecountyfl.gov)>  
**Sent:** Tuesday, December 8, 2020 5:04 PM  
**To:** Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>  
**Cc:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

I am currently working from home I will give you a call tomorrow to discuss Thanks



SHARON E LEWIS, MSCTM  
*Traffic Project Engineer*

**PUBLIC WORKS**  
*Engineering*

*A P.O Box 7800, Tavares, FL 32778*

*P 352-253-9050 | F 352-253-6016*

*E [selewis@lakecountyfl.gov](mailto:selewis@lakecountyfl.gov) | W [www.lakecountyfl.gov](http://www.lakecountyfl.gov)*



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---

**From:** Andrew Petersen [<mailto:apetersen@bowmanconsulting.com>]  
**Sent:** Tuesday, December 8, 2020 5:00 PM  
**To:** Lewis, Sharon E <[SELewis@lakecountyfl.gov](mailto:SELewis@lakecountyfl.gov)>  
**Cc:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

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Good Afternoon Sharon,

We have been trying to contact you to discuss the following approach to your concerns regarding the methodology statement for the proposed grocery store at Micro Racetrack and CR 466A .

I left a voicemail this morning and I am sending this email as a follow up with more details.

We have made some adjustments based on your concerns regarding our initial proposed trip distribution. The trip distribution was recalculated using the FSUTMS TAZ and data base information within a 4-mile radius of the development. We do not have the software to run the FSUTMS model, but used the database from within it to create the trip generations. Please see attached the revised methodology.

Please let us know if this approach will suffice the county requirements for this traffic study.

Thank you in advance,



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 255-5434 | D: (321) 270-8983 | M: (321) 426-6496

[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Lewis, Sharon E <[SELewis@lakecountyfl.gov](mailto:SELewis@lakecountyfl.gov)>  
**Sent:** Thursday, December 3, 2020 4:37 PM  
**To:** Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Cc:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>  
**Subject:** Re: Response to Methodology - Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

- 1) Trip Distribution should be analyze utilizing the FDOT FSUTMS model
- 2) Trip length is greater than 1 mile
- 3) Yes the intersection at Micro Race Track Rd and Lake Ella Rd need to be evaluated
- 4) Please advise



SHARON E LEWIS, MSCTM  
*Traffic Project Engineer*

**PUBLIC WORKS**  
*Engineering*

*A P.O Box 7800, Tavares, FL 32778*  
*P 352-253-9050 | F 352-253-6016*  
*E [selewis@lakecountyfl.gov](mailto:selewis@lakecountyfl.gov) | W [www.lakecountyfl.gov](http://www.lakecountyfl.gov)*

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---

**From:** Andrew Petersen [<mailto:apetersen@bowmanconsulting.com>]  
**Sent:** Thursday, December 3, 2020 8:58 AM  
**To:** Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org); Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>  
**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

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Good Morning George,

Just wanted to check back with you and see if you can provide the signal timings and phases of the Lake County-maintained signals on Miller Blvd. Also, we spoke with Seth earlier in the week and want to confirm that our Traffic Study does not need to analyze the intersection at Micro Race Track Rd. & Lake Ella Rd. There is not a connection for residents of the Villages to access our proposed site from Lake Ella Rd.

Please let us know if you have any questions or concerns. Thanks,



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 255-5434 | D: (321) 270-8983 | M: (321) 426-6496

[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>

**Sent:** Monday, November 30, 2020 9:13 AM

**To:** Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Woods, Michael <[mwoods@lakesumtermpto.com](mailto:mwoods@lakesumtermpto.com)>; Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org)

**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

Perfect!

Thank you,

**Daniela Jurado | Bowman Consulting Group**

---

**From:** Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>

**Sent:** Monday, November 30, 2020 8:57 AM

**To:** Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Woods, Michael <[mwoods@lakesumtermpto.com](mailto:mwoods@lakesumtermpto.com)>; Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org)

**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

We need to verify the signal timings and then we will get them to you. Sorry for the delay.

Thank You,



**GEORGE GADIEL, P.E.**

*Senior Traffic Engineer*

PUBLIC WORKS

*Engineering Division*

**A** 350 N. Sinclair Ave. Tavares, FL 32778

**P** 352-253-9092 | **F** 352-253-9065

**E** [ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov) | **W** [www.lakecountyfl.gov](http://www.lakecountyfl.gov)



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Your email communications may be subject to public disclosure.*

---

**From:** Daniela Jurado [<mailto:djurado@bowmanconsulting.com>]  
**Sent:** Monday, November 30, 2020 8:43 AM  
**To:** Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>  
**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org); Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

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Good Morning Seth,

I just wanted to follow up on my previous email and see if there is any additional information you require for the scope/methodology of this Traffic Impact Study.

Thank you in advance,

**Daniela Jurado | Bowman Consulting Group**

---

**From:** Daniela Jurado  
**Sent:** Monday, November 23, 2020 4:25 PM  
**To:** Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>; Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>  
**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org); Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>  
**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro Racetrack Rd. - Methodology

Good Afternoon Seth,

Per our conversation this afternoon please see attached the scope/methodology statement for the Traffic Impact Study for the proposed grocery store and retail project.

Will this satisfy the County's requirements?

Can you also share with us the signal phasing and timings of the following intersections:

- Miller Blvd (CR 466A) & Micro Racetrack Rd
- Miller Blvd (CR 466A) & Drake Dr

Please do not hesitate to contact us if you have any question or require any additional clarification.

Thank you in advance,



**DANIELA JURADO**

Engineer I | **BOWMAN**

4450 W. Eau Gallie Blvd, Suite 144, Melbourne, FL 32934

D: (321) 270-2762 | D: (786) 370-.2762

[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>

**Sent:** Monday, November 23, 2020 12:12 PM

**To:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>; Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org); Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Nim Robinson <[nrobinson@bowmanconsulting.com](mailto:nrobinson@bowmanconsulting.com)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>

**Subject:** Re: Proposed Grocery Store - Miller Blvd (CR466A) & Micro RaceTrack Rd. - Methodology

Andrew, I am in the field no ow but you can call me at 2:30 today.... 352-253-9052

thanks,  
Seth

---

**From:** Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>

**Sent:** Monday, November 23, 2020 11:53:49 AM

**To:** Woods, Michael <[mwoods@lakesumtermpo.com](mailto:mwoods@lakesumtermpo.com)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org) <[rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org)>; Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Nim Robinson <[nrobinson@bowmanconsulting.com](mailto:nrobinson@bowmanconsulting.com)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>

**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro RaceTrack Rd. - Methodology

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Thanks for the call earlier Michael. Do you also have the phone numbers for George and Seth at Lake County?

Thanks for your help!



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

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O: (321) 255-5434 | D: (321) 270-8983 | M: (321) 426-6496

[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



---

**From:** Woods, Michael <[mwoods@lakesumtermpto.com](mailto:mwoods@lakesumtermpto.com)>

**Sent:** Monday, November 23, 2020 11:52 AM

**To:** Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>; Gadiel, George <[ggadiel@lakecountyfl.gov](mailto:ggadiel@lakecountyfl.gov)>; Lynch, Seth <[SLynch@lakecountyfl.gov](mailto:SLynch@lakecountyfl.gov)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org); Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>; Nim Robinson <[nrobinson@bowmanconsulting.com](mailto:nrobinson@bowmanconsulting.com)>

**Subject:** RE: Proposed Grocery Store - Miller Blvd (CR466A) & Micro RaceTrack Rd. - Methodology

Lake County Public Works contacts.

----- Original message -----

**From:** Andrew Petersen <[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com)>

**Date:** 11/20/20 10:06 AM (GMT-05:00)

**To:** "Woods, Michael" <[mwoods@lakesumtermpto.com](mailto:mwoods@lakesumtermpto.com)>

**Cc:** [rdicus@fruitlandpark.org](mailto:rdicus@fruitlandpark.org), Daniela Jurado <[djurado@bowmanconsulting.com](mailto:djurado@bowmanconsulting.com)>, Nim Robinson <[nrobinson@bowmanconsulting.com](mailto:nrobinson@bowmanconsulting.com)>

**Subject:** Proposed Grocery Store - Miller Blvd (CR466A) & Micro RaceTrack Rd. - Methodology

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Good Morning Michael,

I am sending this email to outline the methodology/scope of a study for a proposed development located on the city of Fruitland Park. The subject project is located at the northeast corner of Miller Blvd (CR 466A) and Micro Racetrack Rd. The applicant is proposing to develop a 40,00 sf grocery store along with 8,750 SQ.FT of Retail and an outparcel with a 5,200 SF convenience store with 20 fueling positions.

Attached to this email you will find a Memorandum with the Methodology for this Development.

We would like set up a joint coordination meeting with the MPO and the city to coordinate the scope of the study.



Please let me know if you have any questions or need any further clarification.

Thank you in advance for your assistance with this project.



**ANDREW J. PETERSEN, P.E.**

Chief Engineer | **BOWMAN**

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[apetersen@bowmanconsulting.com](mailto:apetersen@bowmanconsulting.com) | [bowmanconsulting.com](http://bowmanconsulting.com)



# **APPENDIX D**

# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	4	20	33	13	66	19	98	14	6	16	36	9	60	11	80	247
07:15 AM	11	6	24	41	14	80	21	115	12	5	19	36	11	52	16	79	271
07:30 AM	17	3	32	52	16	91	17	124	16	9	26	51	17	68	11	96	323
07:45 AM	14	2	25	41	17	101	19	137	20	11	20	51	14	66	16	96	325
Total	51	15	101	167	60	338	76	474	62	31	81	174	51	246	54	351	1166
08:00 AM	17	6	20	43	19	91	23	133	21	13	24	58	14	105	15	134	368
08:15 AM	11	4	24	39	17	91	19	127	17	9	26	52	10	77	18	105	323
08:30 AM	11	7	20	38	13	84	22	119	19	9	21	49	13	87	19	119	325
08:45 AM	13	8	23	44	11	60	18	89	19	8	19	46	16	76	17	109	288
Total	52	25	87	164	60	326	82	468	76	39	90	205	53	345	69	467	1304
04:00 PM	13	16	8	37	16	67	13	96	16	9	11	36	28	97	11	136	305
04:15 PM	11	9	10	30	14	94	14	122	26	12	16	54	31	103	17	151	357
04:30 PM	11	13	12	36	21	109	10	140	21	13	19	53	27	122	22	171	400
04:45 PM	17	11	16	44	20	104	13	137	21	10	13	44	25	95	17	137	362
Total	52	49	46	147	71	374	50	495	84	44	59	187	111	417	67	595	1424
05:00 PM	14	11	19	44	26	103	14	143	37	15	14	66	35	121	14	170	423
05:15 PM	15	4	11	30	16	114	15	145	22	19	11	52	21	114	16	151	378
05:30 PM	12	10	7	29	22	89	9	120	22	16	12	50	28	78	22	128	327
05:45 PM	13	8	10	31	21	91	9	121	16	13	11	40	24	74	13	111	303
Total	54	33	47	134	85	397	47	529	97	63	48	208	108	387	65	560	1431
Grand Total	209	122	281	612	276	1435	255	1966	319	177	278	774	323	1395	255	1973	5325
Aprch %	34.2	19.9	45.9		14	73	13		41.2	22.9	35.9		16.4	70.7	12.9		
Total %	3.9	2.3	5.3	11.5	5.2	26.9	4.8	36.9	6	3.3	5.2	14.5	6.1	26.2	4.8	37.1	
Automobiles	202	116	275	593	271	1368	246	1885	311	172	273	756	315	1310	247	1872	5106
% Automobiles	96.7	95.1	97.9	96.9	98.2	95.3	96.5	95.9	97.5	97.2	98.2	97.7	97.5	93.9	96.9	94.9	95.9
Commercial	7	6	6	19	5	67	9	81	8	5	5	18	8	85	8	101	219
% Commercial	3.3	4.9	2.1	3.1	1.8	4.7	3.5	4.1	2.5	2.8	1.8	2.3	2.5	6.1	3.1	5.1	4.1



# DE TRAFFIC

386-341-4186

Sembler Way/Heald Way at CR 466A  
Sumter County, FL

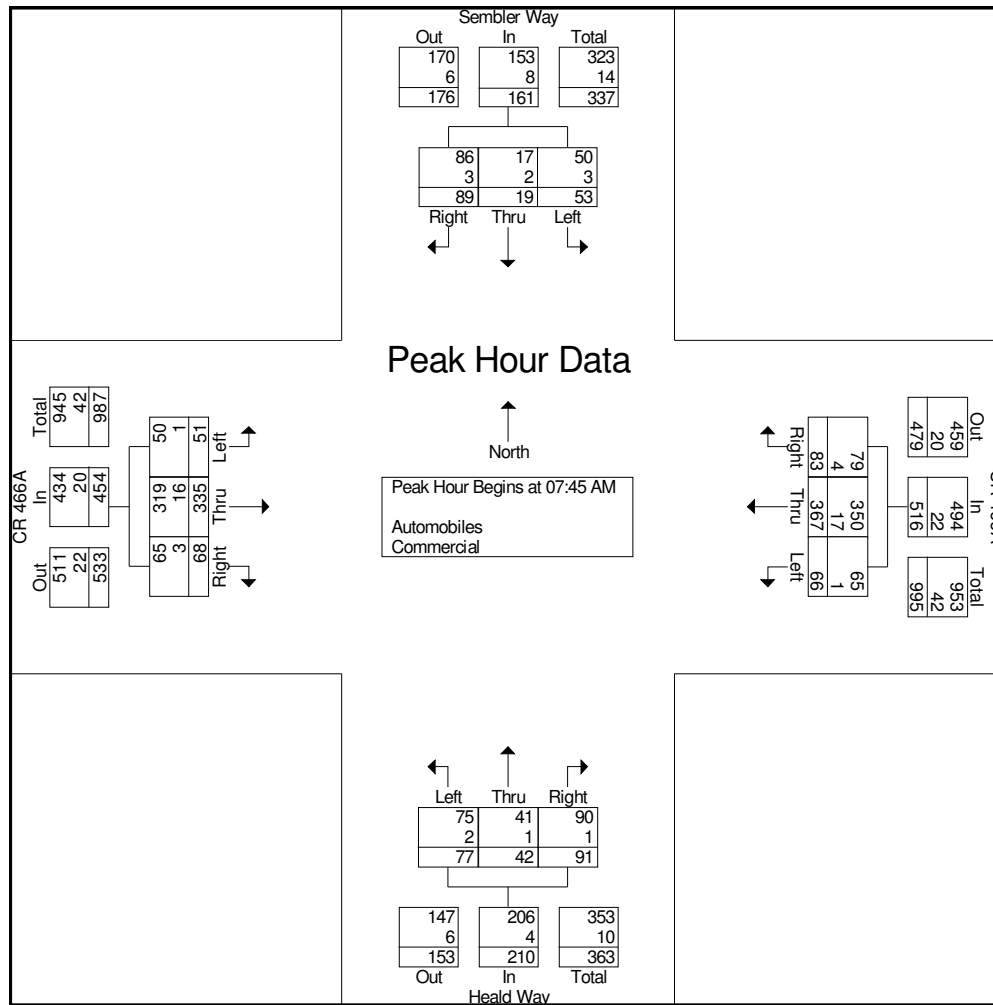
File Name : sembler at 466a  
Site Code : 00000004  
Start Date : 11/19/2020  
Page No : 2

Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	14	2	25	41	17	101	19	137	20	11	20	51	14	66	16	96	325
08:00 AM	17	6	20	43	19	91	23	133	21	13	24	58	14	105	15	134	368
08:15 AM	11	4	24	39	17	91	19	127	17	9	26	52	10	77	18	105	323
08:30 AM	11	7	20	38	13	84	22	119	19	9	21	49	13	87	19	119	325
Total Volume	53	19	89	161	66	367	83	516	77	42	91	210	51	335	68	454	1341
% App. Total	32.9	11.8	55.3		12.8	71.1	16.1		36.7	20	43.3		11.2	73.8	15		
PHF	.779	.679	.890	.936	.868	.908	.902	.942	.917	.808	.875	.905	.911	.798	.895	.847	.911
Automobiles	50	17	86	153	65	350	79	494	75	41	90	206	50	319	65	434	1287
% Automobiles	94.3	89.5	96.6	95.0	98.5	95.4	95.2	95.7	97.4	97.6	98.9	98.1	98.0	95.2	95.6	95.6	96.0
Commercial	3	2	3	8	1	17	4	22	2	1	1	4	1	16	3	20	54
% Commercial	5.7	10.5	3.4	5.0	1.5	4.6	4.8	4.3	2.6	2.4	1.1	1.9	2.0	4.8	4.4	4.4	4.0

# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 4

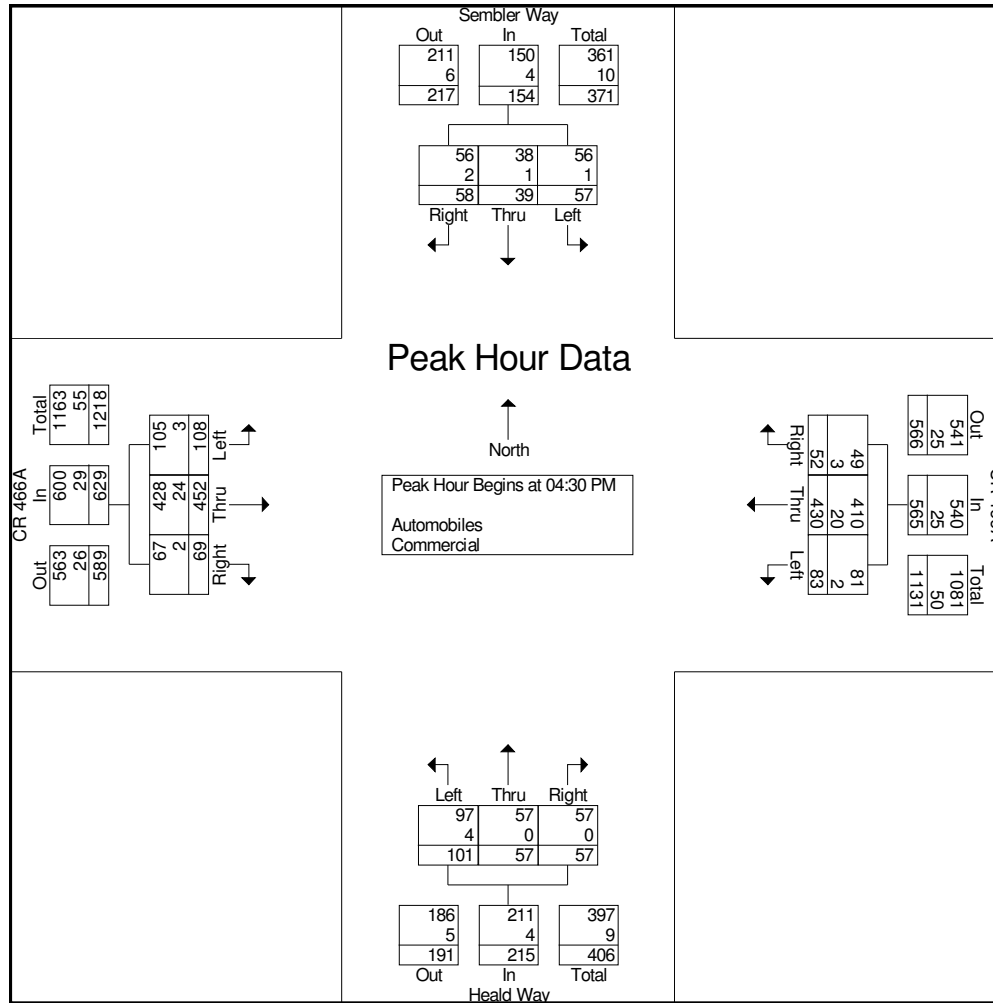
Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	11	13	12	36	21	109	10	140	21	13	19	53	27	122	22	171	400
04:45 PM	17	11	16	44	20	104	13	137	21	10	13	44	25	95	17	137	362
05:00 PM	14	11	19	44	26	103	14	143	37	15	14	66	35	121	14	170	423
05:15 PM	15	4	11	30	16	114	15	145	22	19	11	52	21	114	16	151	378
Total Volume	57	39	58	154	83	430	52	565	101	57	57	215	108	452	69	629	1563
% App. Total	37	25.3	37.7		14.7	76.1	9.2		47	26.5	26.5		17.2	71.9	11		
PHF	.838	.750	.763	.875	.798	.943	.867	.974	.682	.750	.750	.814	.771	.926	.784	.920	.924
Automobiles	56	38	56	150	81	410	49	540	97	57	57	211	105	428	67	600	1501
% Automobiles	98.2	97.4	96.6	97.4	97.6	95.3	94.2	95.6	96.0	100	100	98.1	97.2	94.7	97.1	95.4	96.0
Commercial	1	1	2	4	2	20	3	25	4	0	0	4	3	24	2	29	62
% Commercial	1.8	2.6	3.4	2.6	2.4	4.7	5.8	4.4	4.0	0	0	1.9	2.8	5.3	2.9	4.6	4.0



# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	4	20	33	13	66	19	98	14	6	16	36	9	60	11	80	247
07:15 AM	11	6	24	41	14	80	21	115	12	5	19	36	11	52	16	79	271
07:30 AM	17	3	32	52	16	91	17	124	16	9	26	51	17	68	11	96	323
07:45 AM	14	2	25	41	17	101	19	137	20	11	20	51	14	66	16	96	325
Total	51	15	101	167	60	338	76	474	62	31	81	174	51	246	54	351	1166
08:00 AM	17	6	20	43	19	91	23	133	21	13	24	58	14	105	15	134	368
08:15 AM	11	4	24	39	17	91	19	127	17	9	26	52	10	77	18	105	323
08:30 AM	11	7	20	38	13	84	22	119	19	9	21	49	13	87	19	119	325
08:45 AM	13	8	23	44	11	60	18	89	19	8	19	46	16	76	17	109	288
Total	52	25	87	164	60	326	82	468	76	39	90	205	53	345	69	467	1304
04:00 PM	13	16	8	37	16	67	13	96	16	9	11	36	28	97	11	136	305
04:15 PM	11	9	10	30	14	94	14	122	26	12	16	54	31	103	17	151	357
04:30 PM	11	13	12	36	21	109	10	140	21	13	19	53	27	122	22	171	400
04:45 PM	17	11	16	44	20	104	13	137	21	10	13	44	25	95	17	137	362
Total	52	49	46	147	71	374	50	495	84	44	59	187	111	417	67	595	1424
05:00 PM	14	11	19	44	26	103	14	143	37	15	14	66	35	121	14	170	423
05:15 PM	15	4	11	30	16	114	15	145	22	19	11	52	21	114	16	151	378
05:30 PM	12	10	7	29	22	89	9	120	22	16	12	50	28	78	22	128	327
05:45 PM	13	8	10	31	21	91	9	121	16	13	11	40	24	74	13	111	303
Total	54	33	47	134	85	397	47	529	97	63	48	208	108	387	65	560	1431
Grand Total	209	122	281	612	276	1435	255	1966	319	177	278	774	323	1395	255	1973	5325
Aprch %	34.2	19.9	45.9		14	73	13		41.2	22.9	35.9		16.4	70.7	12.9		
Total %	3.9	2.3	5.3	11.5	5.2	26.9	4.8	36.9	6	3.3	5.2	14.5	6.1	26.2	4.8	37.1	
Automobiles	202	116	275	593	271	1368	246	1885	311	172	273	756	315	1310	247	1872	5106
% Automobiles	96.7	95.1	97.9	96.9	98.2	95.3	96.5	95.9	97.5	97.2	98.2	97.7	97.5	93.9	96.9	94.9	95.9
Commercial	7	6	6	19	5	67	9	81	8	5	5	18	8	85	8	101	219
% Commercial	3.3	4.9	2.1	3.1	1.8	4.7	3.5	4.1	2.5	2.8	1.8	2.3	2.5	6.1	3.1	5.1	4.1

# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 2

Groups Printed- Automobiles

Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	3	19	31	13	62	19	94	14	6	16	36	9	56	11	76	237
07:15 AM	11	6	24	41	14	75	21	110	11	4	18	33	11	47	16	74	258
07:30 AM	16	3	32	51	15	89	17	121	16	8	24	48	16	65	10	91	311
07:45 AM	14	2	24	40	17	95	18	130	19	11	19	49	14	61	16	91	310
Total	50	14	99	163	59	321	75	455	60	29	77	166	50	229	53	332	1116
08:00 AM	15	5	19	39	19	87	21	127	21	13	24	58	13	101	13	127	351
08:15 AM	11	4	24	39	16	86	19	121	17	8	26	51	10	72	18	100	311
08:30 AM	10	6	19	35	13	82	21	116	18	9	21	48	13	85	18	116	315
08:45 AM	13	8	23	44	11	57	18	86	19	8	19	46	16	73	17	106	282
Total	49	23	85	157	59	312	79	450	75	38	90	203	52	331	66	449	1259
04:00 PM	13	16	8	37	16	63	13	92	16	9	11	36	26	88	11	125	290
04:15 PM	10	9	10	29	13	92	13	118	25	11	15	51	31	95	16	142	340
04:30 PM	11	13	11	35	21	104	10	135	19	13	19	51	26	114	22	162	383
04:45 PM	16	11	16	43	19	98	11	128	21	10	13	44	24	89	16	129	344
Total	50	49	45	144	69	357	47	473	81	43	58	182	107	386	65	558	1357
05:00 PM	14	10	19	43	25	99	13	137	36	15	14	65	34	115	13	162	407
05:15 PM	15	4	10	29	16	109	15	140	21	19	11	51	21	110	16	147	367
05:30 PM	11	8	7	26	22	83	8	113	22	15	12	49	27	71	21	119	307
05:45 PM	13	8	10	31	21	87	9	117	16	13	11	40	24	68	13	105	293
Total	53	30	46	129	84	378	45	507	95	62	48	205	106	364	63	533	1374
Grand Total	202	116	275	593	271	1368	246	1885	311	172	273	756	315	1310	247	1872	5106
Apprch %	34.1	19.6	46.4		14.4	72.6	13.1		41.1	22.8	36.1		16.8	70	13.2		
Total %	4	2.3	5.4	11.6	5.3	26.8	4.8	36.9	6.1	3.4	5.3	14.8	6.2	25.7	4.8	36.7	



# DE TRAFFIC

386-341-4186  
Sembler Way/Heald Way at CR 466A  
Sumter County, FL

File Name : sembler at 466a  
Site Code : 00000004  
Start Date : 11/19/2020  
Page No : 3

## Groups Printed- Commercial

Start Time	Sembler Way Southbound				CR 466A Westbound				Heald Way Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	4	0	4	0	0	0	0	0	4	0	4	10
07:15 AM	0	0	0	0	0	5	0	5	1	1	1	3	0	5	0	5	13
07:30 AM	1	0	0	1	1	2	0	3	0	1	2	3	1	3	1	5	12
07:45 AM	0	0	1	1	0	6	1	7	1	0	1	2	0	5	0	5	15
Total	1	1	2	4	1	17	1	19	2	2	4	8	1	17	1	19	50
08:00 AM	2	1	1	4	0	4	2	6	0	0	0	0	1	4	2	7	17
08:15 AM	0	0	0	0	1	5	0	6	0	1	0	1	0	5	0	5	12
08:30 AM	1	1	1	3	0	2	1	3	1	0	0	1	0	2	1	3	10
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
Total	3	2	2	7	1	14	3	18	1	1	0	2	1	14	3	18	45
04:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	2	9	0	11	15
04:15 PM	1	0	0	1	1	2	1	4	1	1	1	3	0	8	1	9	17
04:30 PM	0	0	1	1	0	5	0	5	2	0	0	2	1	8	0	9	17
04:45 PM	1	0	0	1	1	6	2	9	0	0	0	0	1	6	1	8	18
Total	2	0	1	3	2	17	3	22	3	1	1	5	4	31	2	37	67
05:00 PM	0	1	0	1	1	4	1	6	1	0	0	1	1	6	1	8	16
05:15 PM	0	0	1	1	0	5	0	5	1	0	0	1	0	4	0	4	11
05:30 PM	1	2	0	3	0	6	1	7	0	1	0	1	1	7	1	9	20
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	6	0	6	10
Total	1	3	1	5	1	19	2	22	2	1	0	3	2	23	2	27	57
Grand Total	7	6	6	19	5	67	9	81	8	5	5	18	8	85	8	101	219
Apprch %	36.8	31.6	31.6		6.2	82.7	11.1		44.4	27.8	27.8		7.9	84.2	7.9		
Total %	3.2	2.7	2.7	8.7	2.3	30.6	4.1	37	3.7	2.3	2.3	8.2	3.7	38.8	3.7	46.1	

# DE TRAFFIC

386-341-4186  
 Sembler Way/Heald Way at CR 466A  
 Sumter County, FL

File Name : sembler at 466a  
 Site Code : 00000004  
 Start Date : 11/19/2020  
 Page No : 4

## Groups Printed- Peds

Start Time	Sembler Way Southbound					CR 466A Westbound					Heald Way Northbound					CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total		
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total					
Grand Total	0	0	0	0	0	0	0	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			0	0			
Total %																						0	0		

# DE TRAFFIC

386-341-4186  
Farmer PI at CR 466A  
Sumter County, FL

File Name : farmer at 466a  
Site Code : 00000001  
Start Date : 11/19/2020  
Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	3	6	18	9	89	6	104	3	3	6	12	6	72	3	81	215
07:15 AM	11	6	4	21	6	103	4	113	4	2	7	13	4	69	4	77	224
07:30 AM	7	3	10	20	5	108	6	119	6	2	10	18	6	98	5	109	266
07:45 AM	9	4	13	26	8	118	5	131	3	2	9	14	2	90	3	95	266
Total	36	16	33	85	28	418	21	467	16	9	32	57	18	329	15	362	971
08:00 AM	9	2	14	25	13	110	10	133	8	4	8	20	6	133	3	142	320
08:15 AM	7	1	10	18	10	112	13	135	6	2	8	16	5	102	4	111	280
08:30 AM	8	2	13	23	7	104	12	123	4	2	7	13	8	106	6	120	279
08:45 AM	9	3	11	23	8	69	13	90	5	3	9	17	6	98	2	106	236
Total	33	8	48	89	38	395	48	481	23	11	32	66	25	439	15	479	1115
04:00 PM	12	2	6	20	9	82	19	110	8	9	8	25	8	104	1	113	268
04:15 PM	17	2	5	24	11	114	16	141	9	6	9	24	8	111	6	125	314
04:30 PM	18	4	8	30	10	133	11	154	7	4	10	21	10	129	2	141	346
04:45 PM	16	4	9	29	15	118	19	152	3	8	14	25	10	105	3	118	324
Total	63	12	28	103	45	447	65	557	27	27	41	95	36	449	12	497	1252
05:00 PM	15	5	8	28	11	127	20	158	4	9	12	25	10	130	4	144	355
05:15 PM	15	6	7	28	10	129	23	162	5	7	13	25	11	123	5	139	354
05:30 PM	13	4	10	27	11	102	19	132	2	8	16	26	10	93	3	106	291
05:45 PM	10	8	8	26	10	105	21	136	3	9	10	22	13	82	3	98	282
Total	53	23	33	109	42	463	83	588	14	33	51	98	44	428	15	487	1282
Grand Total	185	59	142	386	153	1723	217	2093	80	80	156	316	123	1645	57	1825	4620
Aprch %	47.9	15.3	36.8		7.3	82.3	10.4		25.3	25.3	49.4		6.7	90.1	3.1		
Total %	4	1.3	3.1	8.4	3.3	37.3	4.7	45.3	1.7	1.7	3.4	6.8	2.7	35.6	1.2	39.5	
Automobiles	179	58	136	373	145	1653	208	2006	75	78	149	302	118	1567	53	1738	4419
% Automobiles	96.8	98.3	95.8	96.6	94.8	95.9	95.9	95.8	93.8	97.5	95.5	95.6	95.9	95.3	93	95.2	95.6
Commercial	6	1	6	13	8	70	9	87	5	2	7	14	5	78	4	87	201
% Commercial	3.2	1.7	4.2	3.4	5.2	4.1	4.1	4.2	6.2	2.5	4.5	4.4	4.1	4.7	7	4.8	4.4



# DE TRAFFIC

386-341-4186

Farmer PI at CR 466A

Sumter County, FL

File Name : farmer at 466a

Site Code : 00000001

Start Date : 11/19/2020

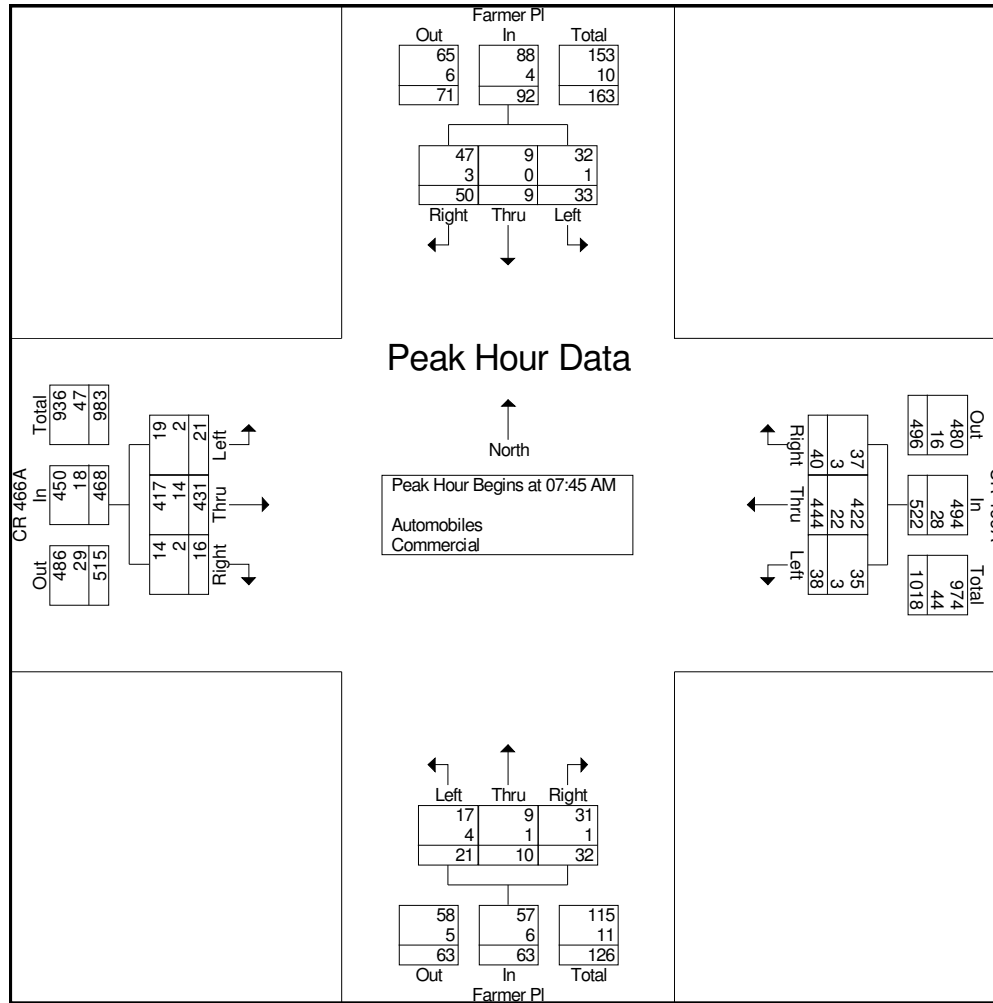
Page No : 2

Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	9	4	13	26	8	118	5	131	3	2	9	14	2	90	3	95	266
08:00 AM	9	2	14	25	13	110	10	133	8	4	8	20	6	133	3	142	320
08:15 AM	7	1	10	18	10	112	13	135	6	2	8	16	5	102	4	111	280
08:30 AM	8	2	13	23	7	104	12	123	4	2	7	13	8	106	6	120	279
Total Volume	33	9	50	92	38	444	40	522	21	10	32	63	21	431	16	468	1145
% App. Total	35.9	9.8	54.3		7.3	85.1	7.7		33.3	15.9	50.8		4.5	92.1	3.4		
PHF	.917	.563	.893	.885	.731	.941	.769	.967	.656	.625	.889	.788	.656	.810	.667	.824	.895
Automobiles	32	9	47	88	35	422	37	494	17	9	31	57	19	417	14	450	1089
% Automobiles	97.0	100	94.0	95.7	92.1	95.0	92.5	94.6	81.0	90.0	96.9	90.5	90.5	96.8	87.5	96.2	95.1
Commercial	1	0	3	4	3	22	3	28	4	1	1	6	2	14	2	18	56
% Commercial	3.0	0	6.0	4.3	7.9	5.0	7.5	5.4	19.0	10.0	3.1	9.5	9.5	3.2	12.5	3.8	4.9

# DE TRAFFIC

386-341-4186  
 Farmer PI at CR 466A  
 Sumter County, FL

File Name : farmer at 466a  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186

Farmer PI at CR 466A

Sumter County, FL

File Name : farmer at 466a

Site Code : 00000001

Start Date : 11/19/2020

Page No : 4

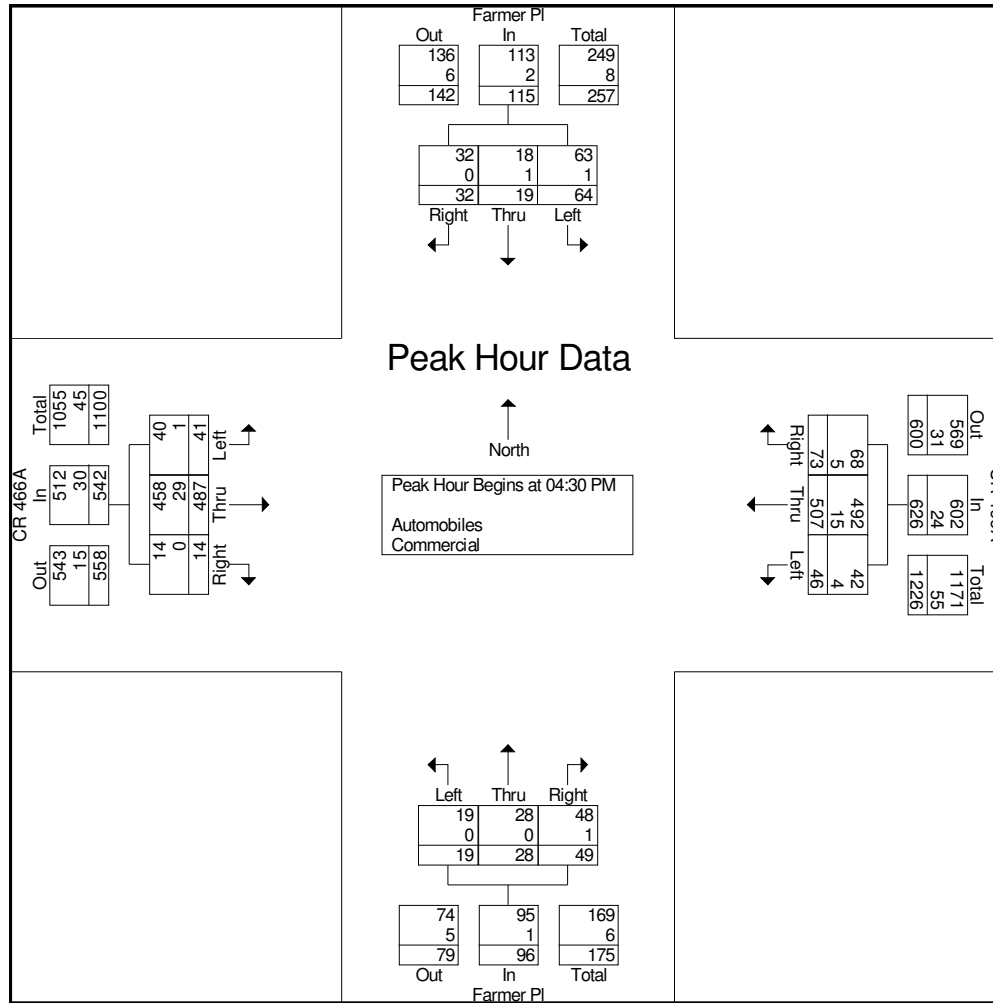
Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	18	4	8	30	10	133	11	154	7	4	10	21	10	129	2	141	346
04:45 PM	16	4	9	29	15	118	19	152	3	8	14	25	10	105	3	118	324
05:00 PM	15	5	8	28	11	127	20	158	4	9	12	25	10	130	4	144	355
05:15 PM	15	6	7	28	10	129	23	162	5	7	13	25	11	123	5	139	354
Total Volume	64	19	32	115	46	507	73	626	19	28	49	96	41	487	14	542	1379
% App. Total	55.7	16.5	27.8		7.3	81	11.7		19.8	29.2	51		7.6	89.9	2.6		
PHF	.889	.792	.889	.958	.767	.953	.793	.966	.679	.778	.875	.960	.932	.937	.700	.941	.971
Automobiles	63	18	32	113	42	492	68	602	19	28	48	95	40	458	14	512	1322
% Automobiles	98.4	94.7	100	98.3	91.3	97.0	93.2	96.2	100	100	98.0	99.0	97.6	94.0	100	94.5	95.9
Commercial	1	1	0	2	4	15	5	24	0	0	1	1	1	29	0	30	57
% Commercial	1.6	5.3	0	1.7	8.7	3.0	6.8	3.8	0	0	2.0	1.0	2.4	6.0	0	5.5	4.1



# DE TRAFFIC

386-341-4186  
 Farmer PI at CR 466A  
 Sumter County, FL

File Name : farmer at 466a  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
Farmer PI at CR 466A  
Sumter County, FL

File Name : farmer at 466a  
Site Code : 00000001  
Start Date : 11/19/2020  
Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	3	6	18	9	89	6	104	3	3	6	12	6	72	3	81	215
07:15 AM	11	6	4	21	6	103	4	113	4	2	7	13	4	69	4	77	224
07:30 AM	7	3	10	20	5	108	6	119	6	2	10	18	6	98	5	109	266
07:45 AM	9	4	13	26	8	118	5	131	3	2	9	14	2	90	3	95	266
Total	36	16	33	85	28	418	21	467	16	9	32	57	18	329	15	362	971
08:00 AM	9	2	14	25	13	110	10	133	8	4	8	20	6	133	3	142	320
08:15 AM	7	1	10	18	10	112	13	135	6	2	8	16	5	102	4	111	280
08:30 AM	8	2	13	23	7	104	12	123	4	2	7	13	8	106	6	120	279
08:45 AM	9	3	11	23	8	69	13	90	5	3	9	17	6	98	2	106	236
Total	33	8	48	89	38	395	48	481	23	11	32	66	25	439	15	479	1115
04:00 PM	12	2	6	20	9	82	19	110	8	9	8	25	8	104	1	113	268
04:15 PM	17	2	5	24	11	114	16	141	9	6	9	24	8	111	6	125	314
04:30 PM	18	4	8	30	10	133	11	154	7	4	10	21	10	129	2	141	346
04:45 PM	16	4	9	29	15	118	19	152	3	8	14	25	10	105	3	118	324
Total	63	12	28	103	45	447	65	557	27	27	41	95	36	449	12	497	1252
05:00 PM	15	5	8	28	11	127	20	158	4	9	12	25	10	130	4	144	355
05:15 PM	15	6	7	28	10	129	23	162	5	7	13	25	11	123	5	139	354
05:30 PM	13	4	10	27	11	102	19	132	2	8	16	26	10	93	3	106	291
05:45 PM	10	8	8	26	10	105	21	136	3	9	10	22	13	82	3	98	282
Total	53	23	33	109	42	463	83	588	14	33	51	98	44	428	15	487	1282
Grand Total	185	59	142	386	153	1723	217	2093	80	80	156	316	123	1645	57	1825	4620
Aprch %	47.9	15.3	36.8		7.3	82.3	10.4		25.3	25.3	49.4		6.7	90.1	3.1		
Total %	4	1.3	3.1	8.4	3.3	37.3	4.7	45.3	1.7	1.7	3.4	6.8	2.7	35.6	1.2	39.5	
Automobiles	179	58	136	373	145	1653	208	2006	75	78	149	302	118	1567	53	1738	4419
% Automobiles	96.8	98.3	95.8	96.6	94.8	95.9	95.9	95.8	93.8	97.5	95.5	95.6	95.9	95.3	93	95.2	95.6
Commercial	6	1	6	13	8	70	9	87	5	2	7	14	5	78	4	87	201
% Commercial	3.2	1.7	4.2	3.4	5.2	4.1	4.1	4.2	6.2	2.5	4.5	4.4	4.1	4.7	7	4.8	4.4

# DE TRAFFIC

386-341-4186  
Farmer PI at CR 466A  
Sumter County, FL

File Name : farmer at 466a  
Site Code : 00000001  
Start Date : 11/19/2020  
Page No : 2

## Groups Printed- Automobiles

Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	3	6	18	9	83	6	98	3	3	6	12	6	69	3	78	206
07:15 AM	11	6	4	21	6	99	4	109	4	1	7	12	4	65	4	73	215
07:30 AM	6	3	9	18	4	106	5	115	5	2	9	16	5	93	5	103	252
07:45 AM	9	4	11	24	8	113	5	126	2	1	9	12	2	88	2	92	254
Total	35	16	30	81	27	401	20	448	14	7	31	52	17	315	14	346	927
08:00 AM	8	2	13	23	11	103	8	122	6	4	7	17	4	130	3	137	299
08:15 AM	7	1	10	18	9	108	13	130	5	2	8	15	5	98	4	107	270
08:30 AM	8	2	13	23	7	98	11	116	4	2	7	13	8	101	5	114	266
08:45 AM	9	3	11	23	8	65	13	86	5	3	9	17	6	95	2	103	229
Total	32	8	47	87	35	374	45	454	20	11	31	62	23	424	14	461	1064
04:00 PM	11	2	6	19	9	79	19	107	8	9	6	23	8	98	1	107	256
04:15 PM	16	2	4	22	11	106	16	133	9	6	8	23	7	107	5	119	297
04:30 PM	18	3	8	29	10	127	9	146	7	4	9	20	10	121	2	133	328
04:45 PM	16	4	9	29	13	114	19	146	3	8	14	25	10	101	3	114	314
Total	61	11	27	99	43	426	63	532	27	27	37	91	35	427	11	473	1195
05:00 PM	14	5	8	27	10	125	19	154	4	9	12	25	9	121	4	134	340
05:15 PM	15	6	7	28	9	126	21	156	5	7	13	25	11	115	5	131	340
05:30 PM	13	4	9	26	11	98	19	128	2	8	15	25	10	86	2	98	277
05:45 PM	9	8	8	25	10	103	21	134	3	9	10	22	13	79	3	95	276
Total	51	23	32	106	40	452	80	572	14	33	50	97	43	401	14	458	1233
Grand Total	179	58	136	373	145	1653	208	2006	75	78	149	302	118	1567	53	1738	4419
Apprch %	48	15.5	36.5		7.2	82.4	10.4		24.8	25.8	49.3		6.8	90.2	3		
Total %	4.1	1.3	3.1	8.4	3.3	37.4	4.7	45.4	1.7	1.8	3.4	6.8	2.7	35.5	1.2	39.3	



# DE TRAFFIC

386-341-4186  
Farmer PI at CR 466A  
Sumter County, FL

File Name : farmer at 466a  
Site Code : 00000001  
Start Date : 11/19/2020  
Page No : 3

## Groups Printed- Commercial

Start Time	Farmer PI Southbound				CR 466A Westbound				Farmer PI Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
07:15 AM	0	0	0	0	0	4	0	4	0	1	0	1	0	4	0	4	9
07:30 AM	1	0	1	2	1	2	1	4	1	0	1	2	1	5	0	6	14
07:45 AM	0	0	2	2	0	5	0	5	1	1	0	2	0	2	1	3	12
Total	1	0	3	4	1	17	1	19	2	2	1	5	1	14	1	16	44
08:00 AM	1	0	1	2	2	7	2	11	2	0	1	3	2	3	0	5	21
08:15 AM	0	0	0	0	1	4	0	5	1	0	0	1	0	4	0	4	10
08:30 AM	0	0	0	0	0	6	1	7	0	0	0	0	0	5	1	6	13
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Total	1	0	1	2	3	21	3	27	3	0	1	4	2	15	1	18	51
04:00 PM	1	0	0	1	0	3	0	3	0	0	2	2	0	6	0	6	12
04:15 PM	1	0	1	2	0	8	0	8	0	0	1	1	1	4	1	6	17
04:30 PM	0	1	0	1	0	6	2	8	0	0	1	1	0	8	0	8	18
04:45 PM	0	0	0	0	2	4	0	6	0	0	0	0	0	4	0	4	10
Total	2	1	1	4	2	21	2	25	0	0	4	4	1	22	1	24	57
05:00 PM	1	0	0	1	1	2	1	4	0	0	0	0	1	9	0	10	15
05:15 PM	0	0	0	0	1	3	2	6	0	0	0	0	0	8	0	8	14
05:30 PM	0	0	1	1	0	4	0	4	0	0	1	1	0	7	1	8	14
05:45 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	3	0	3	6
Total	2	0	1	3	2	11	3	16	0	0	1	1	1	27	1	29	49
Grand Total	6	1	6	13	8	70	9	87	5	2	7	14	5	78	4	87	201
Apprch %	46.2	7.7	46.2		9.2	80.5	10.3		35.7	14.3	50		5.7	89.7	4.6		
Total %	3	0.5	3	6.5	4	34.8	4.5	43.3	2.5	1	3.5	7	2.5	38.8	2	43.3	

# DE TRAFFIC

386-341-4186  
Farmer PI at CR 466A  
Sumter County, FL

File Name : farmer at 466a  
Site Code : 00000001  
Start Date : 11/19/2020  
Page No : 4

## Groups Printed- Peds

Start Time	Farmer PI Southbound					CR 466A Westbound					Farmer PI Northbound					CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total				
Grand Total	0	0	0	0	0	0	0	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			0	0		
Total %																					0	0		

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	0	32	48	0	73	19	92	0	0	2	2	26	64	0	90	232
07:15 AM	12	0	36	48	0	75	25	100	1	0	0	1	26	58	0	84	233
07:30 AM	32	0	42	74	0	91	34	125	2	0	1	3	36	80	0	116	318
07:45 AM	28	0	35	63	0	100	28	128	0	0	2	2	53	55	1	109	302
Total	88	0	145	233	0	339	106	445	3	0	5	8	141	257	1	399	1085
08:00 AM	24	0	50	74	0	84	25	109	2	0	3	5	70	81	0	151	339
08:15 AM	36	0	53	89	0	88	34	122	0	0	1	1	51	71	0	122	334
08:30 AM	25	0	46	71	0	82	43	125	1	0	2	3	45	81	0	126	325
08:45 AM	19	0	28	47	0	64	37	101	0	0	1	1	37	89	0	126	275
Total	104	0	177	281	0	318	139	457	3	0	7	10	203	322	0	525	1273
04:00 PM	37	0	42	79	2	67	19	88	0	0	0	0	45	79	0	124	291
04:15 PM	42	0	54	96	0	78	34	112	0	0	1	1	36	99	1	136	345
04:30 PM	37	0	54	91	1	102	26	129	0	0	0	0	42	104	2	148	368
04:45 PM	41	0	72	113	2	80	26	108	1	0	0	1	34	95	0	129	351
Total	157	0	222	379	5	327	105	437	1	0	1	2	157	377	3	537	1355
05:00 PM	47	0	60	107	3	102	27	132	0	1	0	1	60	93	2	155	395
05:15 PM	49	0	71	120	1	93	30	124	0	0	0	0	47	104	0	151	395
05:30 PM	32	0	49	81	2	84	23	109	0	0	1	1	43	82	1	126	317
05:45 PM	24	0	54	78	0	88	17	105	0	0	0	0	34	70	0	104	287
Total	152	0	234	386	6	367	97	470	0	1	1	2	184	349	3	536	1394
Grand Total	501	0	778	1279	11	1351	447	1809	7	1	14	22	685	1305	7	1997	5107
Aprch %	39.2	0	60.8		0.6	74.7	24.7		31.8	4.5	63.6		34.3	65.3	0.4		
Total %	9.8	0	15.2	25	0.2	26.5	8.8	35.4	0.1	0	0.3	0.4	13.4	25.6	0.1	39.1	
Automobiles	486	0	759	1245	11	1272	426	1709	7	1	14	22	660	1235	6	1901	4877
% Automobiles	97	0	97.6	97.3	100	94.2	95.3	94.5	100	100	100	100	96.4	94.6	85.7	95.2	95.5
Commercial	15	0	19	34	0	79	21	100	0	0	0	0	25	70	1	96	230
% Commercial	3	0	2.4	2.7	0	5.8	4.7	5.5	0	0	0	0	3.6	5.4	14.3	4.8	4.5



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

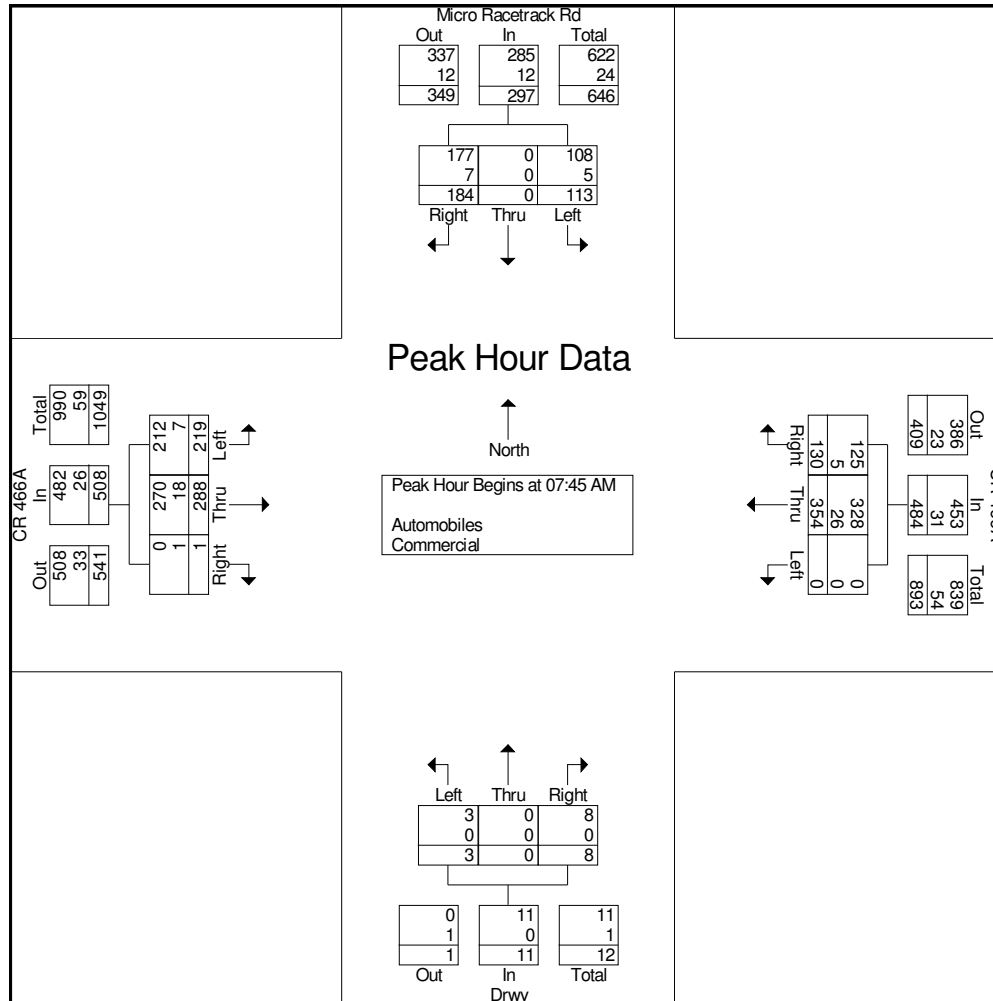
File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 2

Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	28	0	35	63	0	100	28	128	0	0	2	2	53	55	1	109	302
08:00 AM	24	0	50	74	0	84	25	109	2	0	3	5	70	81	0	151	339
08:15 AM	36	0	53	89	0	88	34	122	0	0	1	1	51	71	0	122	334
08:30 AM	25	0	46	71	0	82	43	125	1	0	2	3	45	81	0	126	325
Total Volume	113	0	184	297	0	354	130	484	3	0	8	11	219	288	1	508	1300
% App. Total	38	0	62		0	73.1	26.9		27.3	0	72.7		43.1	56.7	0.2		
PHF	.785	.000	.868	.834	.000	.885	.756	.945	.375	.000	.667	.550	.782	.889	.250	.841	.959
Automobiles	108	0	177	285	0	328	125	453	3	0	8	11	212	270	0	482	1231
% Automobiles	95.6	0	96.2	96.0	0	92.7	96.2	93.6	100	0	100	100	96.8	93.8	0	94.9	94.7
Commercial	5	0	7	12	0	26	5	31	0	0	0	0	7	18	1	26	69
% Commercial	4.4	0	3.8	4.0	0	7.3	3.8	6.4	0	0	0	0	3.2	6.3	100	5.1	5.3

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 4

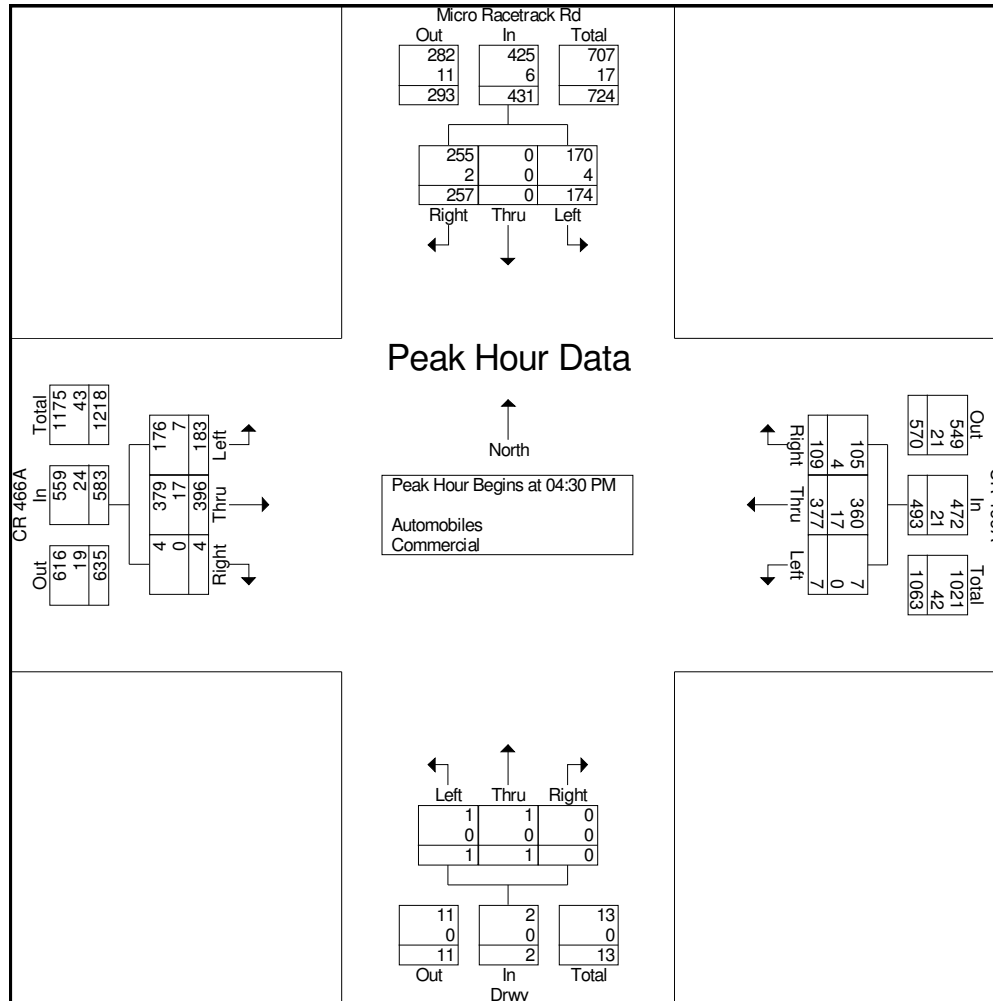
Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	37	0	54	91	1	102	26	129	0	0	0	0	42	104	2	148	368
04:45 PM	41	0	72	113	2	80	26	108	1	0	0	1	34	95	0	129	351
05:00 PM	47	0	60	107	3	102	27	132	0	1	0	1	60	93	2	155	395
05:15 PM	49	0	71	120	1	93	30	124	0	0	0	0	47	104	0	151	395
Total Volume	174	0	257	431	7	377	109	493	1	1	0	2	183	396	4	583	1509
% App. Total	40.4	0	59.6		1.4	76.5	22.1		50	50	0		31.4	67.9	0.7		
PHF	.888	.000	.892	.898	.583	.924	.908	.934	.250	.250	.000	.500	.763	.952	.500	.940	.955
Automobiles	170	0	255	425	7	360	105	472	1	1	0	2	176	379	4	559	1458
% Automobiles	97.7	0	99.2	98.6	100	95.5	96.3	95.7	100	100	0	100	96.2	95.7	100	95.9	96.6
Commercial	4	0	2	6	0	17	4	21	0	0	0	0	7	17	0	24	51
% Commercial	2.3	0	0.8	1.4	0	4.5	3.7	4.3	0	0	0	0	3.8	4.3	0	4.1	3.4



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	0	32	48	0	73	19	92	0	0	2	2	26	64	0	90	232
07:15 AM	12	0	36	48	0	75	25	100	1	0	0	1	26	58	0	84	233
07:30 AM	32	0	42	74	0	91	34	125	2	0	1	3	36	80	0	116	318
07:45 AM	28	0	35	63	0	100	28	128	0	0	2	2	53	55	1	109	302
Total	88	0	145	233	0	339	106	445	3	0	5	8	141	257	1	399	1085
08:00 AM	24	0	50	74	0	84	25	109	2	0	3	5	70	81	0	151	339
08:15 AM	36	0	53	89	0	88	34	122	0	0	1	1	51	71	0	122	334
08:30 AM	25	0	46	71	0	82	43	125	1	0	2	3	45	81	0	126	325
08:45 AM	19	0	28	47	0	64	37	101	0	0	1	1	37	89	0	126	275
Total	104	0	177	281	0	318	139	457	3	0	7	10	203	322	0	525	1273
04:00 PM	37	0	42	79	2	67	19	88	0	0	0	0	45	79	0	124	291
04:15 PM	42	0	54	96	0	78	34	112	0	0	1	1	36	99	1	136	345
04:30 PM	37	0	54	91	1	102	26	129	0	0	0	0	42	104	2	148	368
04:45 PM	41	0	72	113	2	80	26	108	1	0	0	1	34	95	0	129	351
Total	157	0	222	379	5	327	105	437	1	0	1	2	157	377	3	537	1355
05:00 PM	47	0	60	107	3	102	27	132	0	1	0	1	60	93	2	155	395
05:15 PM	49	0	71	120	1	93	30	124	0	0	0	0	47	104	0	151	395
05:30 PM	32	0	49	81	2	84	23	109	0	0	1	1	43	82	1	126	317
05:45 PM	24	0	54	78	0	88	17	105	0	0	0	0	34	70	0	104	287
Total	152	0	234	386	6	367	97	470	0	1	1	2	184	349	3	536	1394
Grand Total	501	0	778	1279	11	1351	447	1809	7	1	14	22	685	1305	7	1997	5107
Aprch %	39.2	0	60.8		0.6	74.7	24.7		31.8	4.5	63.6		34.3	65.3	0.4		
Total %	9.8	0	15.2	25	0.2	26.5	8.8	35.4	0.1	0	0.3	0.4	13.4	25.6	0.1	39.1	
Automobiles	486	0	759	1245	11	1272	426	1709	7	1	14	22	660	1235	6	1901	4877
% Automobiles	97	0	97.6	97.3	100	94.2	95.3	94.5	100	100	100	100	96.4	94.6	85.7	95.2	95.5
Commercial	15	0	19	34	0	79	21	100	0	0	0	0	25	70	1	96	230
% Commercial	3	0	2.4	2.7	0	5.8	4.7	5.5	0	0	0	0	3.6	5.4	14.3	4.8	4.5

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 2

## Groups Printed- Automobiles

Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	16	0	29	45	0	67	19	86	0	0	2	2	26	61	0	87	220
07:15 AM	11	0	34	45	0	71	24	95	1	0	0	1	24	54	0	78	219
07:30 AM	31	0	41	72	0	84	34	118	2	0	1	3	35	75	0	110	303
07:45 AM	26	0	34	60	0	95	26	121	0	0	2	2	51	52	0	103	286
Total	84	0	138	222	0	317	103	420	3	0	5	8	136	242	0	378	1028
08:00 AM	24	0	49	73	0	76	24	100	2	0	3	5	67	76	0	143	321
08:15 AM	34	0	51	85	0	81	34	115	0	0	1	1	51	67	0	118	319
08:30 AM	24	0	43	67	0	76	41	117	1	0	2	3	43	75	0	118	305
08:45 AM	16	0	26	42	0	56	35	91	0	0	1	1	36	81	0	117	251
Total	98	0	169	267	0	289	134	423	3	0	7	10	197	299	0	496	1196
04:00 PM	36	0	41	77	2	64	16	82	0	0	0	0	42	75	0	117	276
04:15 PM	42	0	53	95	0	76	32	108	0	0	1	1	34	97	1	132	336
04:30 PM	36	0	54	90	1	97	24	122	0	0	0	0	41	101	2	144	356
04:45 PM	41	0	72	113	2	76	26	104	1	0	0	1	34	91	0	125	343
Total	155	0	220	375	5	313	98	416	1	0	1	2	151	364	3	518	1311
05:00 PM	45	0	59	104	3	99	26	128	0	1	0	1	55	88	2	145	378
05:15 PM	48	0	70	118	1	88	29	118	0	0	0	0	46	99	0	145	381
05:30 PM	32	0	49	81	2	82	20	104	0	0	1	1	41	76	1	118	304
05:45 PM	24	0	54	78	0	84	16	100	0	0	0	0	34	67	0	101	279
Total	149	0	232	381	6	353	91	450	0	1	1	2	176	330	3	509	1342
Grand Total	486	0	759	1245	11	1272	426	1709	7	1	14	22	660	1235	6	1901	4877
Apprch %	39	0	61		0.6	74.4	24.9		31.8	4.5	63.6		34.7	65	0.3		
Total %	10	0	15.6	25.5	0.2	26.1	8.7	35	0.1	0	0.3	0.5	13.5	25.3	0.1	39	



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 3

Groups Printed- Commercial

Start Time	Micro Racetrack Rd Southbound				CR 466A Westbound				Drwy Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	3	3	0	6	0	6	0	0	0	0	0	3	0	3	12
07:15 AM	1	0	2	3	0	4	1	5	0	0	0	0	2	4	0	6	14
07:30 AM	1	0	1	2	0	7	0	7	0	0	0	0	1	5	0	6	15
07:45 AM	2	0	1	3	0	5	2	7	0	0	0	0	2	3	1	6	16
Total	4	0	7	11	0	22	3	25	0	0	0	0	5	15	1	21	57
08:00 AM	0	0	1	1	0	8	1	9	0	0	0	0	3	5	0	8	18
08:15 AM	2	0	2	4	0	7	0	7	0	0	0	0	0	4	0	4	15
08:30 AM	1	0	3	4	0	6	2	8	0	0	0	0	2	6	0	8	20
08:45 AM	3	0	2	5	0	8	2	10	0	0	0	0	1	8	0	9	24
Total	6	0	8	14	0	29	5	34	0	0	0	0	6	23	0	29	77
04:00 PM	1	0	1	2	0	3	3	6	0	0	0	0	3	4	0	7	15
04:15 PM	0	0	1	1	0	2	2	4	0	0	0	0	2	2	0	4	9
04:30 PM	1	0	0	1	0	5	2	7	0	0	0	0	1	3	0	4	12
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
Total	2	0	2	4	0	14	7	21	0	0	0	0	6	13	0	19	44
05:00 PM	2	0	1	3	0	3	1	4	0	0	0	0	5	5	0	10	17
05:15 PM	1	0	1	2	0	5	1	6	0	0	0	0	1	5	0	6	14
05:30 PM	0	0	0	0	0	2	3	5	0	0	0	0	2	6	0	8	13
05:45 PM	0	0	0	0	0	4	1	5	0	0	0	0	0	3	0	3	8
Total	3	0	2	5	0	14	6	20	0	0	0	0	8	19	0	27	52
Grand Total	15	0	19	34	0	79	21	100	0	0	0	0	25	70	1	96	230
Apprch %	44.1	0	55.9		0	79	21		0	0	0	0	26	72.9	1		
Total %	6.5	0	8.3	14.8	0	34.3	9.1	43.5	0	0	0	0	10.9	30.4	0.4	41.7	

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at CR 466A  
 Lake County, FL

File Name : Micro at 466A  
 Site Code : 00000003  
 Start Date : 11/19/2020  
 Page No : 4

## Groups Printed- Peds

Start Time	Micro Racetrack Rd Southbound					CR 466A Westbound					Drwy Northbound					CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total			
Grand Total	0	0	0	0	0	0	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 %																					0	0	

# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	10	69	0	79	19	0	9	28	0	73	9	82	189
07:15 AM	1	0	1	2	17	75	1	93	25	0	8	33	1	61	11	73	201
07:30 AM	0	0	3	3	17	101	0	118	24	0	12	36	0	101	14	115	272
07:45 AM	0	0	1	1	17	92	1	110	36	0	15	51	1	75	16	92	254
Total	1	0	5	6	61	337	2	400	104	0	44	148	2	310	50	362	916
08:00 AM	1	0	0	1	20	81	1	102	28	0	19	47	1	99	17	117	267
08:15 AM	0	0	2	2	16	99	0	115	24	0	16	40	2	91	17	110	267
08:30 AM	0	0	0	0	12	104	2	118	21	0	16	37	1	96	14	111	266
08:45 AM	0	0	1	1	16	75	0	91	21	0	14	35	0	93	11	104	231
Total	1	0	3	4	64	359	3	426	94	0	65	159	4	379	59	442	1031
04:00 PM	0	0	1	1	16	73	1	90	11	0	11	22	1	92	29	122	235
04:15 PM	1	0	2	3	10	103	0	113	18	0	8	26	2	120	20	142	284
04:30 PM	1	0	0	1	13	118	1	132	12	0	9	21	2	110	29	141	295
04:45 PM	0	0	3	3	13	100	0	113	12	0	8	20	3	110	25	138	274
Total	2	0	6	8	52	394	2	448	53	0	36	89	8	432	103	543	1088
05:00 PM	0	0	1	1	10	107	0	117	16	0	6	22	4	114	21	139	279
05:15 PM	1	0	1	2	13	100	1	114	15	0	7	22	2	123	19	144	282
05:30 PM	0	0	2	2	10	92	0	102	12	0	9	21	3	87	25	115	240
05:45 PM	0	0	0	0	9	91	0	100	9	0	9	18	2	76	16	94	212
Total	1	0	4	5	42	390	1	433	52	0	31	83	11	400	81	492	1013
Grand Total	5	0	18	23	219	1480	8	1707	303	0	176	479	25	1521	293	1839	4048
Aprch %	21.7	0	78.3		12.8	86.7	0.5		63.3	0	36.7		1.4	82.7	15.9		
Total %	0.1	0	0.4	0.6	5.4	36.6	0.2	42.2	7.5	0	4.3	11.8	0.6	37.6	7.2	45.4	
Automobiles	5	0	16	21	212	1417	8	1637	292	0	157	449	25	1439	285	1749	3856
% Automobiles	100	0	88.9	91.3	96.8	95.7	100	95.9	96.4	0	89.2	93.7	100	94.6	97.3	95.1	95.3
Commercial	0	0	2	2	7	63	0	70	11	0	19	30	0	82	8	90	192
% Commercial	0	0	11.1	8.7	3.2	4.3	0	4.1	3.6	0	10.8	6.3	0	5.4	2.7	4.9	4.7

# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 2

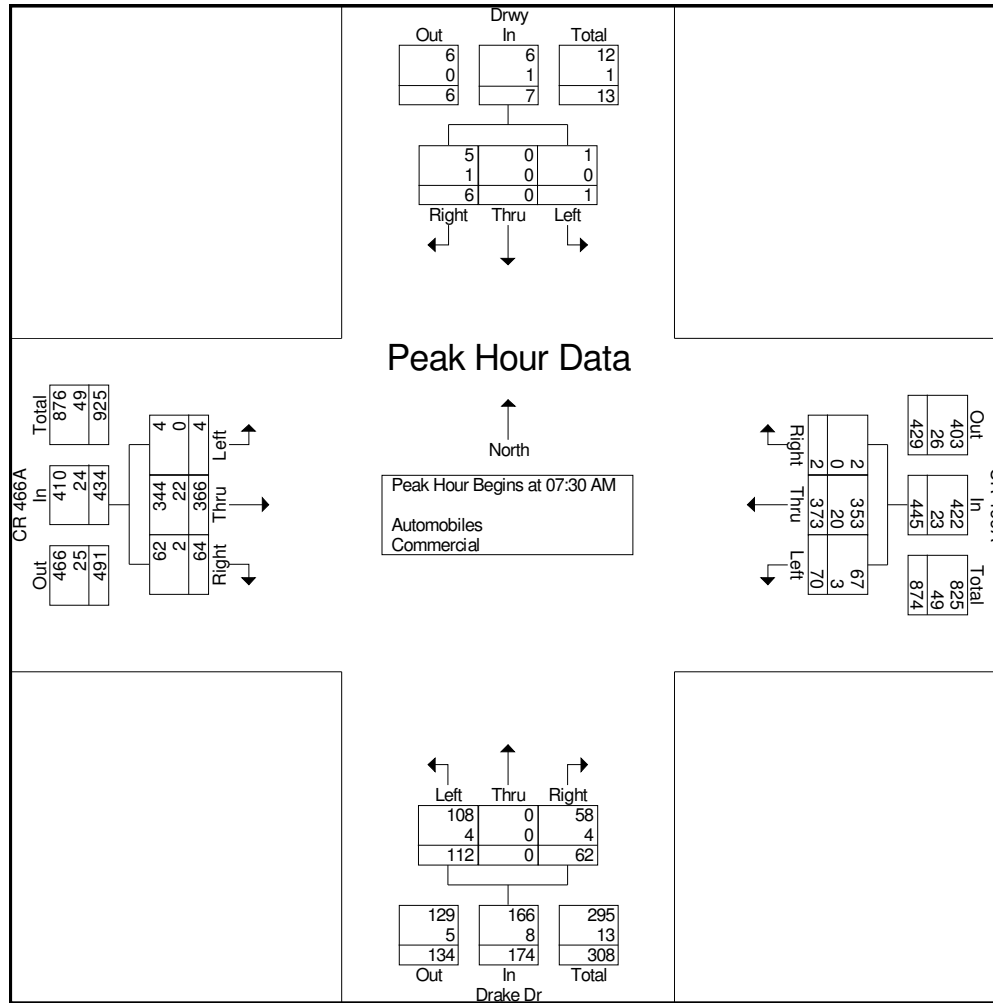
Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	3	3	17	101	0	118	24	0	12	36	0	101	14	115	272
07:45 AM	0	0	1	1	17	92	1	110	36	0	15	51	1	75	16	92	254
08:00 AM	1	0	0	1	20	81	1	102	28	0	19	47	1	99	17	117	267
08:15 AM	0	0	2	2	16	99	0	115	24	0	16	40	2	91	17	110	267
Total Volume	1	0	6	7	70	373	2	445	112	0	62	174	4	366	64	434	1060
% App. Total	14.3	0	85.7		15.7	83.8	0.4		64.4	0	35.6		0.9	84.3	14.7		
PHF	.250	.000	.500	.583	.875	.923	.500	.943	.778	.000	.816	.853	.500	.906	.941	.927	.974
Automobiles	1	0	5	6	67	353	2	422	108	0	58	166	4	344	62	410	1004
% Automobiles	100	0	83.3	85.7	95.7	94.6	100	94.8	96.4	0	93.5	95.4	100	94.0	96.9	94.5	94.7
Commercial	0	0	1	1	3	20	0	23	4	0	4	8	0	22	2	24	56
% Commercial	0	0	16.7	14.3	4.3	5.4	0	5.2	3.6	0	6.5	4.6	0	6.0	3.1	5.5	5.3



# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

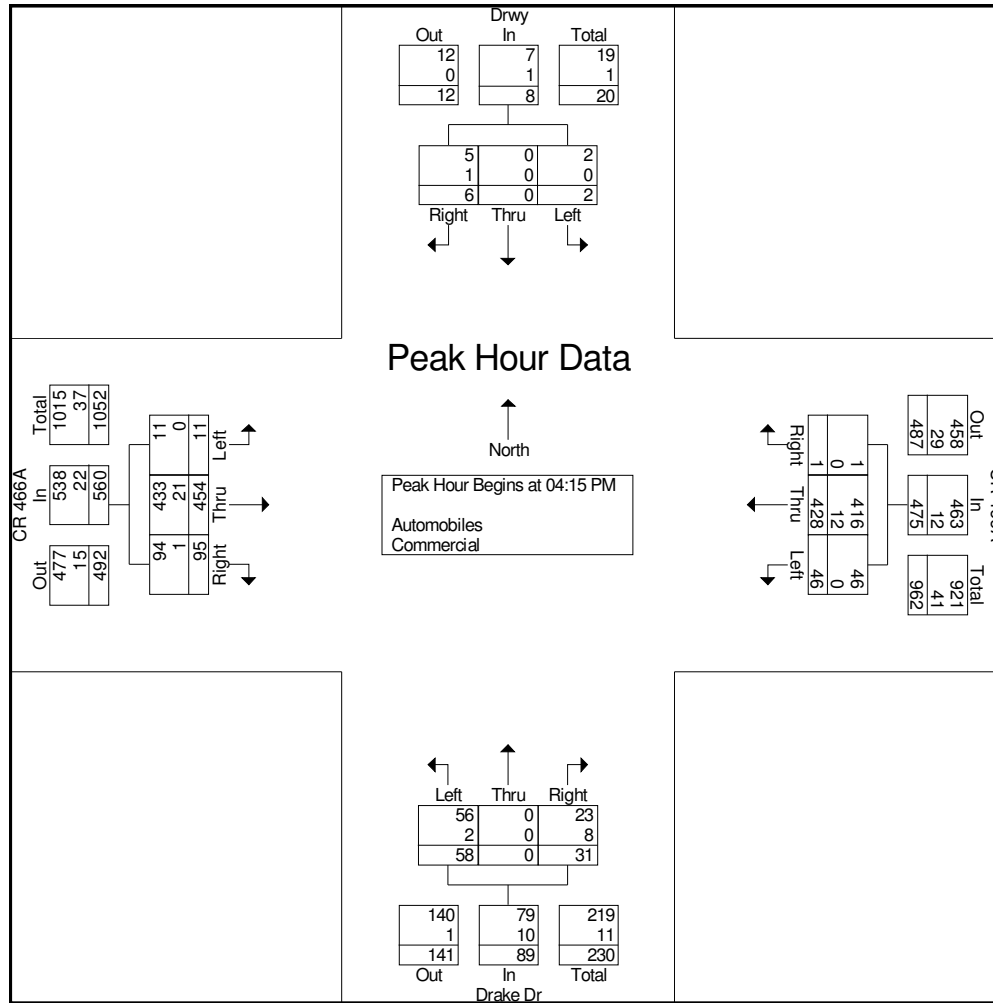
File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 4

Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	1	0	2	3	10	103	0	113	18	0	8	26	2	120	20	142	284
04:30 PM	1	0	0	1	13	118	1	132	12	0	9	21	2	110	29	141	295
04:45 PM	0	0	3	3	13	100	0	113	12	0	8	20	3	110	25	138	274
05:00 PM	0	0	1	1	10	107	0	117	16	0	6	22	4	114	21	139	279
Total Volume	2	0	6	8	46	428	1	475	58	0	31	89	11	454	95	560	1132
% App. Total	25	0	75		9.7	90.1	0.2		65.2	0	34.8		2	81.1	17		
PHF	.500	.000	.500	.667	.885	.907	.250	.900	.806	.000	.861	.856	.688	.946	.819	.986	.959
Automobiles	2	0	5	7	46	416	1	463	56	0	23	79	11	433	94	538	1087
% Automobiles	100	0	83.3	87.5	100	97.2	100	97.5	96.6	0	74.2	88.8	100	95.4	98.9	96.1	96.0
Commercial	0	0	1	1	0	12	0	12	2	0	8	10	0	21	1	22	45
% Commercial	0	0	16.7	12.5	0	2.8	0	2.5	3.4	0	25.8	11.2	0	4.6	1.1	3.9	4.0

# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	10	69	0	79	19	0	9	28	0	73	9	82	189
07:15 AM	1	0	1	2	17	75	1	93	25	0	8	33	1	61	11	73	201
07:30 AM	0	0	3	3	17	101	0	118	24	0	12	36	0	101	14	115	272
07:45 AM	0	0	1	1	17	92	1	110	36	0	15	51	1	75	16	92	254
Total	1	0	5	6	61	337	2	400	104	0	44	148	2	310	50	362	916
08:00 AM	1	0	0	1	20	81	1	102	28	0	19	47	1	99	17	117	267
08:15 AM	0	0	2	2	16	99	0	115	24	0	16	40	2	91	17	110	267
08:30 AM	0	0	0	0	12	104	2	118	21	0	16	37	1	96	14	111	266
08:45 AM	0	0	1	1	16	75	0	91	21	0	14	35	0	93	11	104	231
Total	1	0	3	4	64	359	3	426	94	0	65	159	4	379	59	442	1031
04:00 PM	0	0	1	1	16	73	1	90	11	0	11	22	1	92	29	122	235
04:15 PM	1	0	2	3	10	103	0	113	18	0	8	26	2	120	20	142	284
04:30 PM	1	0	0	1	13	118	1	132	12	0	9	21	2	110	29	141	295
04:45 PM	0	0	3	3	13	100	0	113	12	0	8	20	3	110	25	138	274
Total	2	0	6	8	52	394	2	448	53	0	36	89	8	432	103	543	1088
05:00 PM	0	0	1	1	10	107	0	117	16	0	6	22	4	114	21	139	279
05:15 PM	1	0	1	2	13	100	1	114	15	0	7	22	2	123	19	144	282
05:30 PM	0	0	2	2	10	92	0	102	12	0	9	21	3	87	25	115	240
05:45 PM	0	0	0	0	9	91	0	100	9	0	9	18	2	76	16	94	212
Total	1	0	4	5	42	390	1	433	52	0	31	83	11	400	81	492	1013
Grand Total	5	0	18	23	219	1480	8	1707	303	0	176	479	25	1521	293	1839	4048
Aprch %	21.7	0	78.3		12.8	86.7	0.5		63.3	0	36.7		1.4	82.7	15.9		
Total %	0.1	0	0.4	0.6	5.4	36.6	0.2	42.2	7.5	0	4.3	11.8	0.6	37.6	7.2	45.4	
Automobiles	5	0	16	21	212	1417	8	1637	292	0	157	449	25	1439	285	1749	3856
% Automobiles	100	0	88.9	91.3	96.8	95.7	100	95.9	96.4	0	89.2	93.7	100	94.6	97.3	95.1	95.3
Commercial	0	0	2	2	7	63	0	70	11	0	19	30	0	82	8	90	192
% Commercial	0	0	11.1	8.7	3.2	4.3	0	4.1	3.6	0	10.8	6.3	0	5.4	2.7	4.9	4.7



# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 2

Groups Printed- Automobiles

Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	9	63	0	72	19	0	9	28	0	69	9	78	178
07:15 AM	1	0	1	2	16	72	1	89	24	0	7	31	1	56	10	67	189
07:30 AM	0	0	2	2	17	95	0	112	24	0	11	35	0	95	14	109	258
07:45 AM	0	0	1	1	15	88	1	104	34	0	15	49	1	71	15	87	241
Total	1	0	4	5	57	318	2	377	101	0	42	143	2	291	48	341	866
08:00 AM	1	0	0	1	19	75	1	95	26	0	17	43	1	91	16	108	247
08:15 AM	0	0	2	2	16	95	0	111	24	0	15	39	2	87	17	106	258
08:30 AM	0	0	0	0	11	99	2	112	19	0	16	35	1	91	13	105	252
08:45 AM	0	0	1	1	16	69	0	85	21	0	13	34	0	87	10	97	217
Total	1	0	3	4	62	338	3	403	90	0	61	151	4	356	56	416	974
04:00 PM	0	0	1	1	15	71	1	87	11	0	7	18	1	86	28	115	221
04:15 PM	1	0	2	3	10	99	0	109	17	0	7	24	2	116	20	138	274
04:30 PM	1	0	0	1	13	113	1	127	12	0	6	18	2	105	28	135	281
04:45 PM	0	0	2	2	13	98	0	111	11	0	6	17	3	103	25	131	261
Total	2	0	5	7	51	381	2	434	51	0	26	77	8	410	101	519	1037
05:00 PM	0	0	1	1	10	106	0	116	16	0	4	20	4	109	21	134	271
05:15 PM	1	0	1	2	13	98	1	112	15	0	7	22	2	119	19	140	276
05:30 PM	0	0	2	2	10	89	0	99	10	0	8	18	3	81	24	108	227
05:45 PM	0	0	0	0	9	87	0	96	9	0	9	18	2	73	16	91	205
Total	1	0	4	5	42	380	1	423	50	0	28	78	11	382	80	473	979
Grand Total	5	0	16	21	212	1417	8	1637	292	0	157	449	25	1439	285	1749	3856
Apprch %	23.8	0	76.2		13	86.6	0.5		65	0	35		1.4	82.3	16.3		
Total %	0.1	0	0.4	0.5	5.5	36.7	0.2	42.5	7.6	0	4.1	11.6	0.6	37.3	7.4	45.4	

# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 3

## Groups Printed- Commercial

Start Time	Drwy Southbound				CR 466A Westbound				Drake Dr Northbound				CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	6	0	7	0	0	0	0	0	4	0	4	11
07:15 AM	0	0	0	0	1	3	0	4	1	0	1	2	0	5	1	6	12
07:30 AM	0	0	1	1	0	6	0	6	0	0	1	1	0	6	0	6	14
07:45 AM	0	0	0	0	2	4	0	6	2	0	0	2	0	4	1	5	13
Total	0	0	1	1	4	19	0	23	3	0	2	5	0	19	2	21	50
08:00 AM	0	0	0	0	1	6	0	7	2	0	2	4	0	8	1	9	20
08:15 AM	0	0	0	0	0	4	0	4	0	0	1	1	0	4	0	4	9
08:30 AM	0	0	0	0	1	5	0	6	2	0	0	2	0	5	1	6	14
08:45 AM	0	0	0	0	0	6	0	6	0	0	1	1	0	6	1	7	14
Total	0	0	0	0	2	21	0	23	4	0	4	8	0	23	3	26	57
04:00 PM	0	0	0	0	1	2	0	3	0	0	4	4	0	6	1	7	14
04:15 PM	0	0	0	0	0	4	0	4	1	0	1	2	0	4	0	4	10
04:30 PM	0	0	0	0	0	5	0	5	0	0	3	3	0	5	1	6	14
04:45 PM	0	0	1	1	0	2	0	2	1	0	2	3	0	7	0	7	13
Total	0	0	1	1	1	13	0	14	2	0	10	12	0	22	2	24	51
05:00 PM	0	0	0	0	0	1	0	1	0	0	2	2	0	5	0	5	8
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
05:30 PM	0	0	0	0	0	3	0	3	2	0	1	3	0	6	1	7	13
05:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Total	0	0	0	0	0	10	0	10	2	0	3	5	0	18	1	19	34
Grand Total	0	0	2	2	7	63	0	70	11	0	19	30	0	82	8	90	192
Apprch %	0	0	100		10	90	0		36.7	0	63.3		0	91.1	8.9		
Total %	0	0	1	1	3.6	32.8	0	36.5	5.7	0	9.9	15.6	0	42.7	4.2	46.9	

# DE TRAFFIC

386-341-4186  
 Drake Dr at CR 466A  
 Lake County, FL

File Name : drake at cr 466  
 Site Code : 00000001  
 Start Date : 11/19/2020  
 Page No : 4

Groups Printed- Peds

Start Time	Drwy Southbound					CR 466A Westbound					Drake Dr Northbound					CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total		
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total					
Grand Total	0	0	0	0	0	0	0	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			0	0			
Total %																						0	0		

# DE TRAFFIC

386-341-4186  
Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	43	20	72	27	70	26	123	23	67	11	101	16	56	12	84	380
07:15 AM	12	52	25	89	26	75	16	117	22	86	12	120	19	47	19	85	411
07:30 AM	17	65	27	109	22	97	46	165	14	76	13	103	22	66	22	110	487
07:45 AM	15	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
Total	53	242	107	402	100	336	109	545	79	312	51	442	75	229	77	381	1770
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
08:45 AM	25	53	16	94	16	75	16	107	24	75	12	111	17	69	26	112	424
Total	80	290	96	466	90	333	86	509	88	323	52	463	75	317	109	501	1939
04:00 PM	29	91	16	136	18	71	16	105	23	87	17	127	34	83	18	135	503
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
Total	113	405	60	578	129	349	94	572	100	294	79	473	120	417	79	616	2239
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
05:15 PM	25	87	19	131	28	86	35	149	18	55	21	94	23	112	19	154	528
05:30 PM	27	77	12	116	27	82	43	152	22	47	19	88	17	103	19	139	495
05:45 PM	16	84	13	113	24	66	34	124	19	53	16	88	26	77	19	122	447
Total	86	364	62	512	111	332	139	582	81	228	77	386	93	422	76	591	2071
Grand Total	332	1301	325	1958	430	1350	428	2208	348	1157	259	1764	363	1385	341	2089	8019
Aprch %	17	66.4	16.6		19.5	61.1	19.4		19.7	65.6	14.7		17.4	66.3	16.3		
Total %	4.1	16.2	4.1	24.4	5.4	16.8	5.3	27.5	4.3	14.4	3.2	22	4.5	17.3	4.3	26.1	
Automobiles	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
% Automobiles	95.8	98.8	94.8	97.7	96.5	95.2	96	95.6	95.4	98.6	95.8	97.6	95.9	94.1	95.3	94.6	96.3
Commercial	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
% Commercial	4.2	1.2	5.2	2.3	3.5	4.8	4	4.4	4.6	1.4	4.2	2.4	4.1	5.9	4.7	5.4	3.7



# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

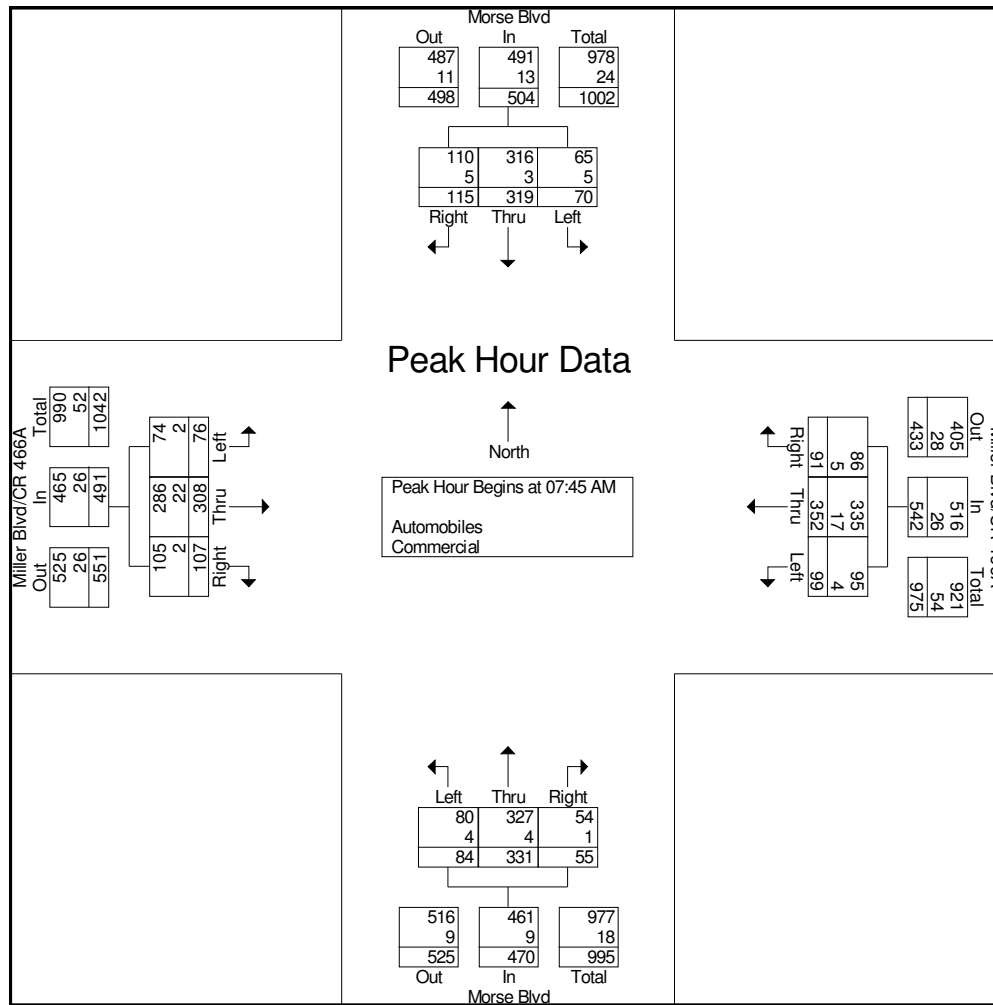
File Name : Morse at 466A  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
Total Volume	70	319	115	504	99	352	91	542	84	331	55	470	76	308	107	491	2007
% App. Total	13.9	63.3	22.8		18.3	64.9	16.8		17.9	70.4	11.7		15.5	62.7	21.8		
PHF	.921	.949	.821	.955	.750	.936	.910	.941	.955	.962	.859	.971	.864	.837	.836	.877	.974
Automobiles	65	316	110	491	95	335	86	516	80	327	54	461	74	286	105	465	1933
% Automobiles	92.9	99.1	95.7	97.4	96.0	95.2	94.5	95.2	95.2	98.8	98.2	98.1	97.4	92.9	98.1	94.7	96.3
Commercial	5	3	5	13	4	17	5	26	4	4	1	9	2	22	2	26	74
% Commercial	7.1	0.9	4.3	2.6	4.0	4.8	5.5	4.8	4.8	1.2	1.8	1.9	2.6	7.1	1.9	5.3	3.7

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

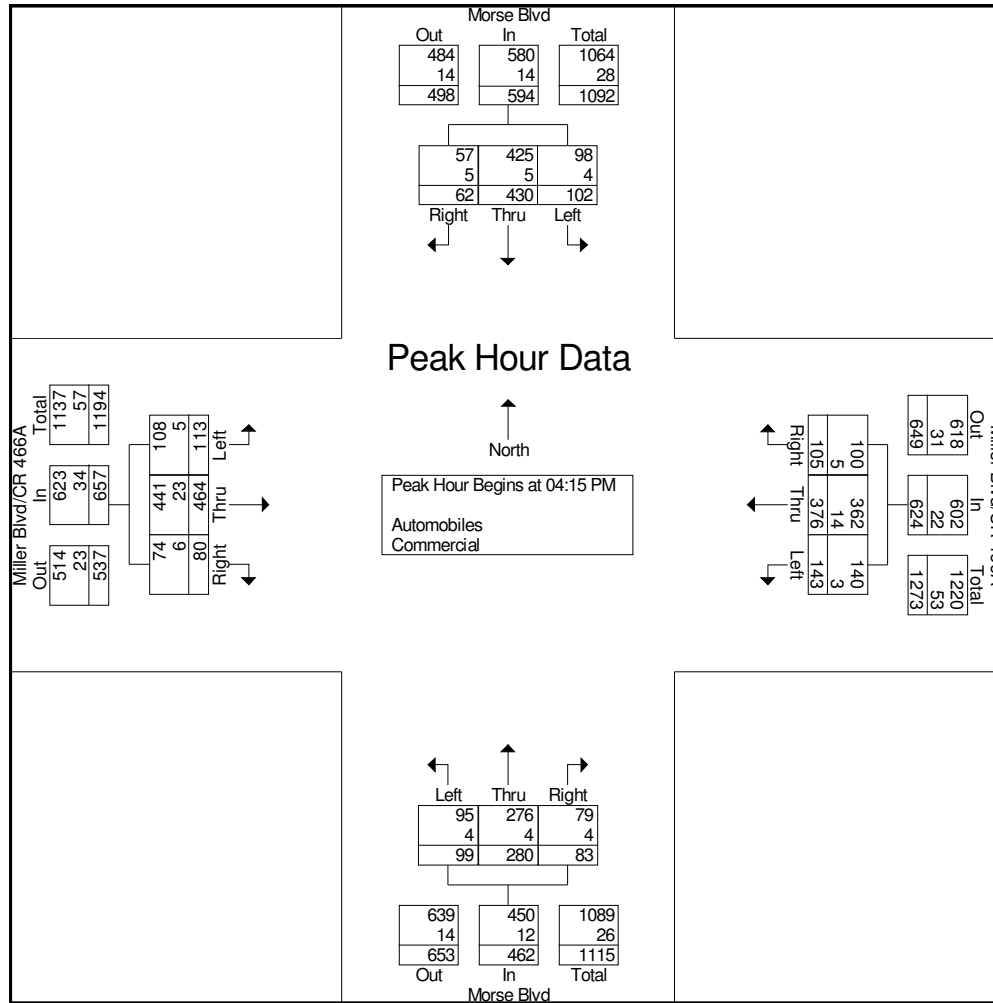
File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
Total Volume	102	430	62	594	143	376	105	624	99	280	83	462	113	464	80	657	2337
% App. Total	17.2	72.4	10.4		22.9	60.3	16.8		21.4	60.6	18		17.2	70.6	12.2		
PHF	.750	.927	.861	.958	.851	.825	.938	.852	.798	.946	.943	.963	.856	.892	.909	.933	.953
Automobiles	98	425	57	580	140	362	100	602	95	276	79	450	108	441	74	623	2255
% Automobiles	96.1	98.8	91.9	97.6	97.9	96.3	95.2	96.5	96.0	98.6	95.2	97.4	95.6	95.0	92.5	94.8	96.5
Commercial	4	5	5	14	3	14	5	22	4	4	4	12	5	23	6	34	82
% Commercial	3.9	1.2	8.1	2.4	2.1	3.7	4.8	3.5	4.0	1.4	4.8	2.6	4.4	5.0	7.5	5.2	3.5

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 5





# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A

Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	43	20	72	27	70	26	123	23	67	11	101	16	56	12	84	380
07:15 AM	12	52	25	89	26	75	16	117	22	86	12	120	19	47	19	85	411
07:30 AM	17	65	27	109	22	97	46	165	14	76	13	103	22	66	22	110	487
07:45 AM	15	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
Total	53	242	107	402	100	336	109	545	79	312	51	442	75	229	77	381	1770
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
08:45 AM	25	53	16	94	16	75	16	107	24	75	12	111	17	69	26	112	424
Total	80	290	96	466	90	333	86	509	88	323	52	463	75	317	109	501	1939
04:00 PM	29	91	16	136	18	71	16	105	23	87	17	127	34	83	18	135	503
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
Total	113	405	60	578	129	349	94	572	100	294	79	473	120	417	79	616	2239
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
05:15 PM	25	87	19	131	28	86	35	149	18	55	21	94	23	112	19	154	528
05:30 PM	27	77	12	116	27	82	43	152	22	47	19	88	17	103	19	139	495
05:45 PM	16	84	13	113	24	66	34	124	19	53	16	88	26	77	19	122	447
Total	86	364	62	512	111	332	139	582	81	228	77	386	93	422	76	591	2071
Grand Total	332	1301	325	1958	430	1350	428	2208	348	1157	259	1764	363	1385	341	2089	8019
Aprch %	17	66.4	16.6		19.5	61.1	19.4		19.7	65.6	14.7		17.4	66.3	16.3		
Total %	4.1	16.2	4.1	24.4	5.4	16.8	5.3	27.5	4.3	14.4	3.2	22	4.5	17.3	4.3	26.1	
Automobiles	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
% Automobiles	95.8	98.8	94.8	97.7	96.5	95.2	96	95.6	95.4	98.6	95.8	97.6	95.9	94.1	95.3	94.6	96.3
Commercial	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
% Commercial	4.2	1.2	5.2	2.3	3.5	4.8	4	4.4	4.6	1.4	4.2	2.4	4.1	5.9	4.7	5.4	3.7

# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 2

## Groups Printed- Automobiles

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	42	19	70	27	66	26	119	23	67	11	101	16	51	11	78	368
07:15 AM	11	51	24	86	24	70	15	109	21	84	11	116	19	43	19	81	392
07:30 AM	16	63	26	105	21	95	46	162	12	75	13	100	21	61	21	103	470
07:45 AM	15	81	34	130	24	91	19	134	19	81	15	115	18	54	24	96	475
Total	51	237	103	391	96	322	106	524	75	307	50	432	74	209	75	358	1705
08:00 AM	16	76	26	118	31	81	24	136	21	86	14	121	19	72	26	117	492
08:15 AM	18	84	24	126	24	76	24	124	19	84	10	113	16	84	31	131	494
08:30 AM	16	75	26	117	16	87	19	122	21	76	15	112	21	76	24	121	472
08:45 AM	24	52	16	92	16	70	15	101	23	73	11	107	16	66	26	108	408
Total	74	287	92	453	87	314	82	483	84	319	50	453	72	298	107	477	1866
04:00 PM	29	90	15	134	16	67	15	98	22	87	16	125	33	78	17	128	485
04:15 PM	34	106	13	153	34	75	26	135	19	68	21	108	32	96	19	147	543
04:30 PM	24	98	13	135	34	84	23	141	24	72	18	114	24	106	21	151	541
04:45 PM	24	106	15	145	41	110	26	177	31	64	19	114	26	113	16	155	591
Total	111	400	56	567	125	336	90	551	96	291	74	461	115	393	73	581	2160
05:00 PM	16	115	16	147	31	93	25	149	21	72	21	114	26	126	18	170	580
05:15 PM	24	87	17	128	26	81	34	141	16	53	19	88	21	106	16	143	500
05:30 PM	26	76	11	113	26	76	41	143	21	46	18	85	16	98	17	131	472
05:45 PM	16	84	13	113	24	63	33	120	19	53	16	88	24	73	19	116	437
Total	82	362	57	501	107	313	133	553	77	224	74	375	87	403	70	560	1989
Grand Total	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
Apprch %	16.6	67.3	16.1		19.7	60.9	19.5		19.3	66.3	14.4		17.6	65.9	16.4		
Total %	4.1	16.7	4	24.8	5.4	16.6	5.3	27.3	4.3	14.8	3.2	22.3	4.5	16.9	4.2	25.6	

# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 3

## Groups Printed- Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	4	0	4	0	0	0	0	0	5	1	6	12
07:15 AM	1	1	1	3	2	5	1	8	1	2	1	4	0	4	0	4	19
07:30 AM	1	2	1	4	1	2	0	3	2	1	0	3	1	5	1	7	17
07:45 AM	0	1	1	2	1	3	2	6	1	2	0	3	0	6	0	6	17
Total	2	5	4	11	4	14	3	21	4	5	1	10	1	20	2	23	65
08:00 AM	2	1	1	4	2	5	1	8	0	0	0	0	1	4	0	5	17
08:15 AM	1	0	2	3	1	5	0	6	2	1	0	3	0	8	1	9	21
08:30 AM	2	1	1	4	0	4	2	6	1	1	1	3	1	4	1	6	19
08:45 AM	1	1	0	2	0	5	1	6	1	2	1	4	1	3	0	4	16
Total	6	3	4	13	3	19	4	26	4	4	2	10	3	19	2	24	73
04:00 PM	0	1	1	2	2	4	1	7	1	0	1	2	1	5	1	7	18
04:15 PM	0	2	0	2	1	2	2	5	1	1	1	3	1	6	2	9	19
04:30 PM	1	0	2	3	0	3	0	3	2	2	2	6	2	5	1	8	20
04:45 PM	1	2	1	4	1	4	1	6	0	0	1	1	1	8	2	11	22
Total	2	5	4	11	4	13	4	21	4	3	5	12	5	24	6	35	79
05:00 PM	2	1	2	5	1	5	2	8	1	1	0	2	1	4	1	6	21
05:15 PM	1	0	2	3	2	5	1	8	2	2	2	6	2	6	3	11	28
05:30 PM	1	1	1	3	1	6	2	9	1	1	1	3	1	5	2	8	23
05:45 PM	0	0	0	0	0	3	1	4	0	0	0	0	2	4	0	6	10
Total	4	2	5	11	4	19	6	29	4	4	3	11	6	19	6	31	82
Grand Total	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
Apprch %	30.4	32.6	37		15.5	67	17.5		37.2	37.2	25.6		13.3	72.6	14.2		
Total %	4.7	5	5.7	15.4	5	21.7	5.7	32.4	5.4	5.4	3.7	14.4	5	27.4	5.4	37.8	

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

## Groups Printed- Peds

Start Time	Morse Blvd Southbound					Miller Blvd/CR 466A Westbound					Morse Blvd Northbound					Miller Blvd/CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total			
Grand Total	0	0	0	0	0	0	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 %																					0	0	



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	20	7	0	27	13	0	42	55	0	5	16	21	103
07:15 AM	0	0	0	0	24	4	0	28	12	0	51	63	0	10	20	30	121
07:30 AM	0	1	0	1	42	9	0	51	16	0	55	71	0	6	25	31	154
07:45 AM	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
Total	0	1	1	2	131	24	0	155	61	0	195	256	0	27	86	113	526
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
08:45 AM	0	0	0	0	31	5	0	36	13	0	42	55	0	5	24	29	120
Total	1	0	0	1	171	28	0	199	79	0	241	320	0	20	99	119	639
04:00 PM	0	0	0	0	54	7	0	61	15	0	45	60	0	9	35	44	165
04:15 PM	0	0	0	0	81	5	1	87	21	0	55	76	0	2	29	31	194
04:30 PM	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
Total	0	0	0	0	309	23	1	333	97	0	210	307	0	31	109	140	780
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
05:30 PM	0	0	0	0	76	5	1	82	26	0	49	75	0	10	15	25	182
05:45 PM	0	0	0	0	55	8	0	63	16	0	28	44	0	8	13	21	128
Total	0	0	0	0	311	24	1	336	85	0	183	268	0	40	74	114	718
Grand Total	1	1	1	3	922	99	2	1023	322	0	829	1151	0	118	368	486	2663
Apprch %	33.3	33.3	33.3		90.1	9.7	0.2		28	0	72		0	24.3	75.7		
Total %	0	0	0	0.1	34.6	3.7	0.1	38.4	12.1	0	31.1	43.2	0	4.4	13.8	18.3	
Automobiles	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
% Automobiles	100	100	100	100	97.2	90.9	100	96.6	97.5	0	96.7	97	0	89.8	94	93	96.1
Commercial	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
% Commercial	0	0	0	0	2.8	9.1	0	3.4	2.5	0	3.3	3	0	10.2	6	7	3.9

# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

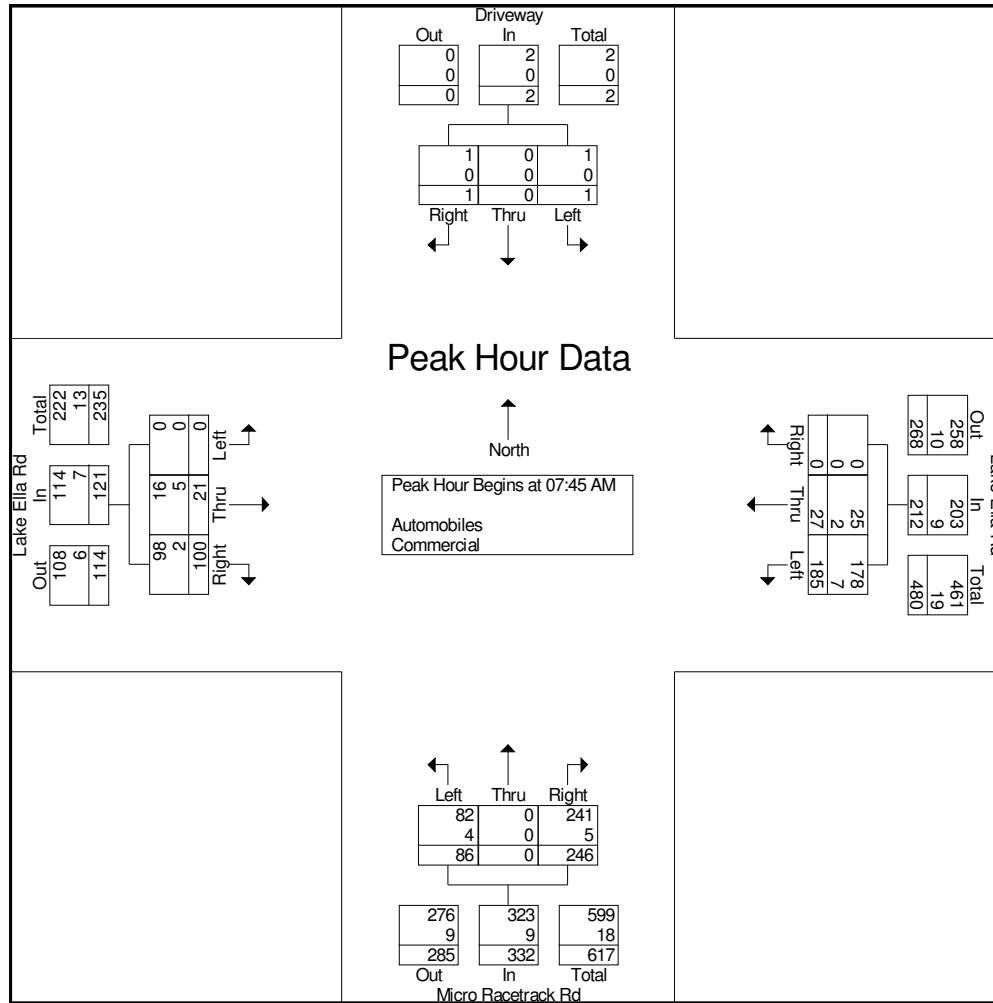
File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
Total Volume	1	0	1	2	185	27	0	212	86	0	246	332	0	21	100	121	667
% App. Total	50	0	50		87.3	12.7	0		25.9	0	74.1		0	17.4	82.6		
PHF	.250	.000	.250	.500	.889	.675	.000	.914	.860	.000	.842	.847	.000	.750	.806	.796	.921
Automobiles	1	0	1	2	178	25	0	203	82	0	241	323	0	16	98	114	642
% Automobiles	100	0	100	100	96.2	92.6	0	95.8	95.3	0	98.0	97.3	0	76.2	98.0	94.2	96.3
Commercial	0	0	0	0	7	2	0	9	4	0	5	9	0	5	2	7	25
% Commercial	0	0	0	0	3.8	7.4	0	4.2	4.7	0	2.0	2.7	0	23.8	2.0	5.8	3.7

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 4

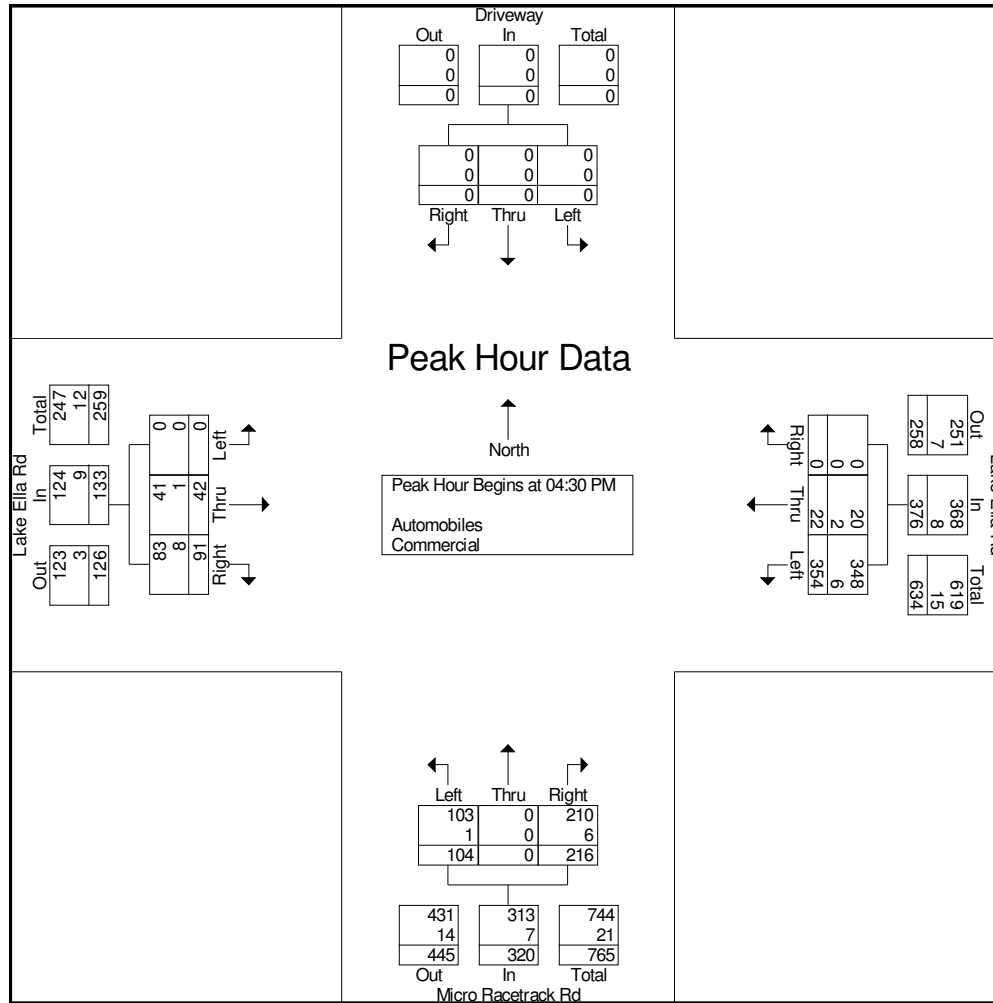
Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
Total Volume	0	0	0	0	354	22	0	376	104	0	216	320	0	42	91	133	829
% App. Total	0	0	0	0	94.1	5.9	0		32.5	0	67.5		0	31.6	68.4		
PHF	.000	.000	.000	.000	.859	.786	.000	.879	.743	.000	.857	.816	.000	.750	.875	.831	.968
Automobiles	0	0	0	0	348	20	0	368	103	0	210	313	0	41	83	124	805
% Automobiles	0	0	0	0	98.3	90.9	0	97.9	99.0	0	97.2	97.8	0	97.6	91.2	93.2	97.1
Commercial	0	0	0	0	6	2	0	8	1	0	6	7	0	1	8	9	24
% Commercial	0	0	0	0	1.7	9.1	0	2.1	1.0	0	2.8	2.2	0	2.4	8.8	6.8	2.9



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	20	7	0	27	13	0	42	55	0	5	16	21	103
07:15 AM	0	0	0	0	24	4	0	28	12	0	51	63	0	10	20	30	121
07:30 AM	0	1	0	1	42	9	0	51	16	0	55	71	0	6	25	31	154
07:45 AM	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
Total	0	1	1	2	131	24	0	155	61	0	195	256	0	27	86	113	526
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
08:45 AM	0	0	0	0	31	5	0	36	13	0	42	55	0	5	24	29	120
Total	1	0	0	1	171	28	0	199	79	0	241	320	0	20	99	119	639
04:00 PM	0	0	0	0	54	7	0	61	15	0	45	60	0	9	35	44	165
04:15 PM	0	0	0	0	81	5	1	87	21	0	55	76	0	2	29	31	194
04:30 PM	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
Total	0	0	0	0	309	23	1	333	97	0	210	307	0	31	109	140	780
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
05:30 PM	0	0	0	0	76	5	1	82	26	0	49	75	0	10	15	25	182
05:45 PM	0	0	0	0	55	8	0	63	16	0	28	44	0	8	13	21	128
Total	0	0	0	0	311	24	1	336	85	0	183	268	0	40	74	114	718
Grand Total	1	1	1	3	922	99	2	1023	322	0	829	1151	0	118	368	486	2663
Apprch %	33.3	33.3	33.3		90.1	9.7	0.2		28	0	72		0	24.3	75.7		
Total %	0	0	0	0.1	34.6	3.7	0.1	38.4	12.1	0	31.1	43.2	0	4.4	13.8	18.3	
Automobiles	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
% Automobiles	100	100	100	100	97.2	90.9	100	96.6	97.5	0	96.7	97	0	89.8	94	93	96.1
Commercial	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
% Commercial	0	0	0	0	2.8	9.1	0	3.4	2.5	0	3.3	3	0	10.2	6	7	3.9

# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

Groups Printed- Automobiles

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	19	6	0	25	13	0	41	54	0	4	16	20	99
07:15 AM	0	0	0	0	24	4	0	28	11	0	51	62	0	8	19	27	117
07:30 AM	0	1	0	1	41	8	0	49	16	0	53	69	0	6	24	30	149
07:45 AM	0	0	1	1	43	4	0	47	19	0	46	65	0	4	24	28	141
Total	0	1	1	2	127	22	0	149	59	0	191	250	0	22	83	105	506
08:00 AM	0	0	0	0	51	5	0	56	23	0	73	96	0	5	19	24	176
08:15 AM	1	0	0	1	43	10	0	53	24	0	69	93	0	2	24	26	173
08:30 AM	0	0	0	0	41	6	0	47	16	0	53	69	0	5	31	36	152
08:45 AM	0	0	0	0	29	5	0	34	13	0	41	54	0	4	24	28	116
Total	1	0	0	1	164	26	0	190	76	0	236	312	0	16	98	114	617
04:00 PM	0	0	0	0	53	6	0	59	15	0	42	57	0	8	33	41	157
04:15 PM	0	0	0	0	75	4	1	80	20	0	51	71	0	2	24	26	177
04:30 PM	0	0	0	0	95	5	0	100	26	0	46	72	0	9	21	30	202
04:45 PM	0	0	0	0	76	5	0	81	34	0	62	96	0	11	19	30	207
Total	0	0	0	0	299	20	1	320	95	0	201	296	0	30	97	127	743
05:00 PM	0	0	0	0	101	4	0	105	19	0	43	62	0	13	24	37	204
05:15 PM	0	0	0	0	76	6	0	82	24	0	59	83	0	8	19	27	192
05:30 PM	0	0	0	0	76	4	1	81	25	0	46	71	0	9	14	23	175
05:45 PM	0	0	0	0	53	8	0	61	16	0	26	42	0	8	11	19	122
Total	0	0	0	0	306	22	1	329	84	0	174	258	0	38	68	106	693
Grand Total	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
Apprch %	33.3	33.3	33.3		90.7	9.1	0.2		28.1	0	71.9		0	23.5	76.5		
Total %	0	0	0	0.1	35	3.5	0.1	38.6	12.3	0	31.3	43.6	0	4.1	13.5	17.7	

# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 3

## Groups Printed- Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	3	4
07:30 AM	0	0	0	0	1	1	0	2	0	0	2	2	0	0	1	1	5
07:45 AM	0	0	0	0	2	0	0	2	1	0	1	2	0	2	1	3	7
Total	0	0	0	0	4	2	0	6	2	0	4	6	0	5	3	8	20
08:00 AM	0	0	0	0	1	1	0	2	2	0	0	2	0	1	0	1	5
08:15 AM	0	0	0	0	3	0	0	3	1	0	2	3	0	0	1	1	7
08:30 AM	0	0	0	0	1	1	0	2	0	0	2	2	0	2	0	2	6
08:45 AM	0	0	0	0	2	0	0	2	0	0	1	1	0	1	0	1	4
Total	0	0	0	0	7	2	0	9	3	0	5	8	0	4	1	5	22
04:00 PM	0	0	0	0	1	1	0	2	0	0	3	3	0	1	2	3	8
04:15 PM	0	0	0	0	6	1	0	7	1	0	4	5	0	0	5	5	17
04:30 PM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	2	2	5
04:45 PM	0	0	0	0	1	1	0	2	1	0	1	2	0	0	3	3	7
Total	0	0	0	0	10	3	0	13	2	0	9	11	0	1	12	13	37
05:00 PM	0	0	0	0	2	0	0	2	0	0	2	2	0	1	2	3	7
05:15 PM	0	0	0	0	1	1	0	2	0	0	2	2	0	0	1	1	5
05:30 PM	0	0	0	0	0	1	0	1	1	0	3	4	0	1	1	2	7
05:45 PM	0	0	0	0	2	0	0	2	0	0	2	2	0	0	2	2	6
Total	0	0	0	0	5	2	0	7	1	0	9	10	0	2	6	8	25
Grand Total	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
Apprch %	0	0	0	0	74.3	25.7	0		22.9	0	77.1		0	35.3	64.7		
Total %	0	0	0	0	25	8.7	0	33.7	7.7	0	26	33.7	0	11.5	21.2	32.7	



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

Groups Printed- Peds

Start Time	Driveway Southbound					Lake Ella Rd Westbound					Micro Racetrack Rd Northbound					Lake Ella Rd Eastbound					Exclu. Total	Inclu. Total	Int. Total		
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total					
Grand Total	0	0	0	0	0	0	0	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			0	0			
Total %																						0	0		

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	20	7	0	27	13	0	42	55	0	5	16	21	103
07:15 AM	0	0	0	0	24	4	0	28	12	0	51	63	0	10	20	30	121
07:30 AM	0	1	0	1	42	9	0	51	16	0	55	71	0	6	25	31	154
07:45 AM	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
Total	0	1	1	2	131	24	0	155	61	0	195	256	0	27	86	113	526
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
08:45 AM	0	0	0	0	31	5	0	36	13	0	42	55	0	5	24	29	120
Total	1	0	0	1	171	28	0	199	79	0	241	320	0	20	99	119	639
04:00 PM	0	0	0	0	54	7	0	61	15	0	45	60	0	9	35	44	165
04:15 PM	0	0	0	0	81	5	1	87	21	0	55	76	0	2	29	31	194
04:30 PM	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
Total	0	0	0	0	309	23	1	333	97	0	210	307	0	31	109	140	780
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
05:30 PM	0	0	0	0	76	5	1	82	26	0	49	75	0	10	15	25	182
05:45 PM	0	0	0	0	55	8	0	63	16	0	28	44	0	8	13	21	128
Total	0	0	0	0	311	24	1	336	85	0	183	268	0	40	74	114	718
Grand Total	1	1	1	3	922	99	2	1023	322	0	829	1151	0	118	368	486	2663
Apprch %	33.3	33.3	33.3		90.1	9.7	0.2		28	0	72		0	24.3	75.7		
Total %	0	0	0	0.1	34.6	3.7	0.1	38.4	12.1	0	31.1	43.2	0	4.4	13.8	18.3	
Automobiles	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
% Automobiles	100	100	100	100	97.2	90.9	100	96.6	97.5	0	96.7	97	0	89.8	94	93	96.1
Commercial	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
% Commercial	0	0	0	0	2.8	9.1	0	3.4	2.5	0	3.3	3	0	10.2	6	7	3.9

# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

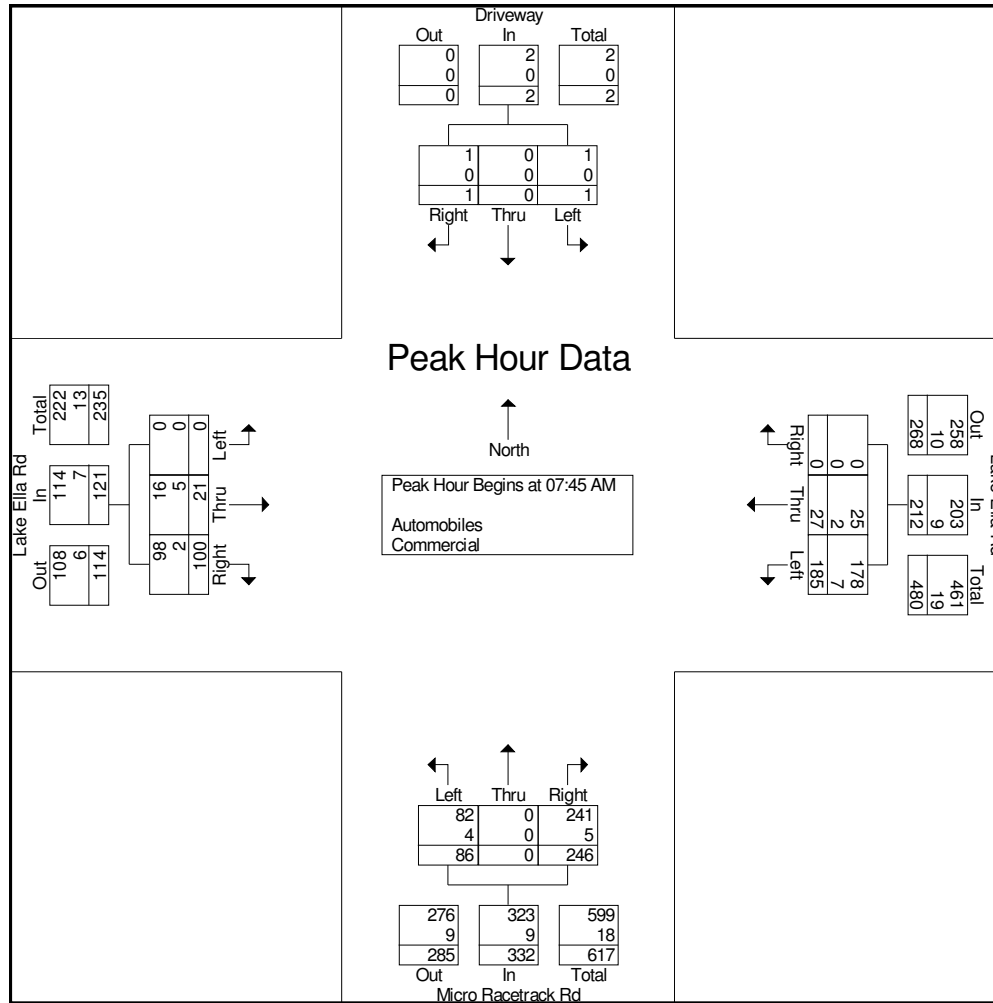
File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
Total Volume	1	0	1	2	185	27	0	212	86	0	246	332	0	21	100	121	667
% App. Total	50	0	50		87.3	12.7	0		25.9	0	74.1		0	17.4	82.6		
PHF	.250	.000	.250	.500	.889	.675	.000	.914	.860	.000	.842	.847	.000	.750	.806	.796	.921
Automobiles	1	0	1	2	178	25	0	203	82	0	241	323	0	16	98	114	642
% Automobiles	100	0	100	100	96.2	92.6	0	95.8	95.3	0	98.0	97.3	0	76.2	98.0	94.2	96.3
Commercial	0	0	0	0	7	2	0	9	4	0	5	9	0	5	2	7	25
% Commercial	0	0	0	0	3.8	7.4	0	4.2	4.7	0	2.0	2.7	0	23.8	2.0	5.8	3.7

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 3





# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

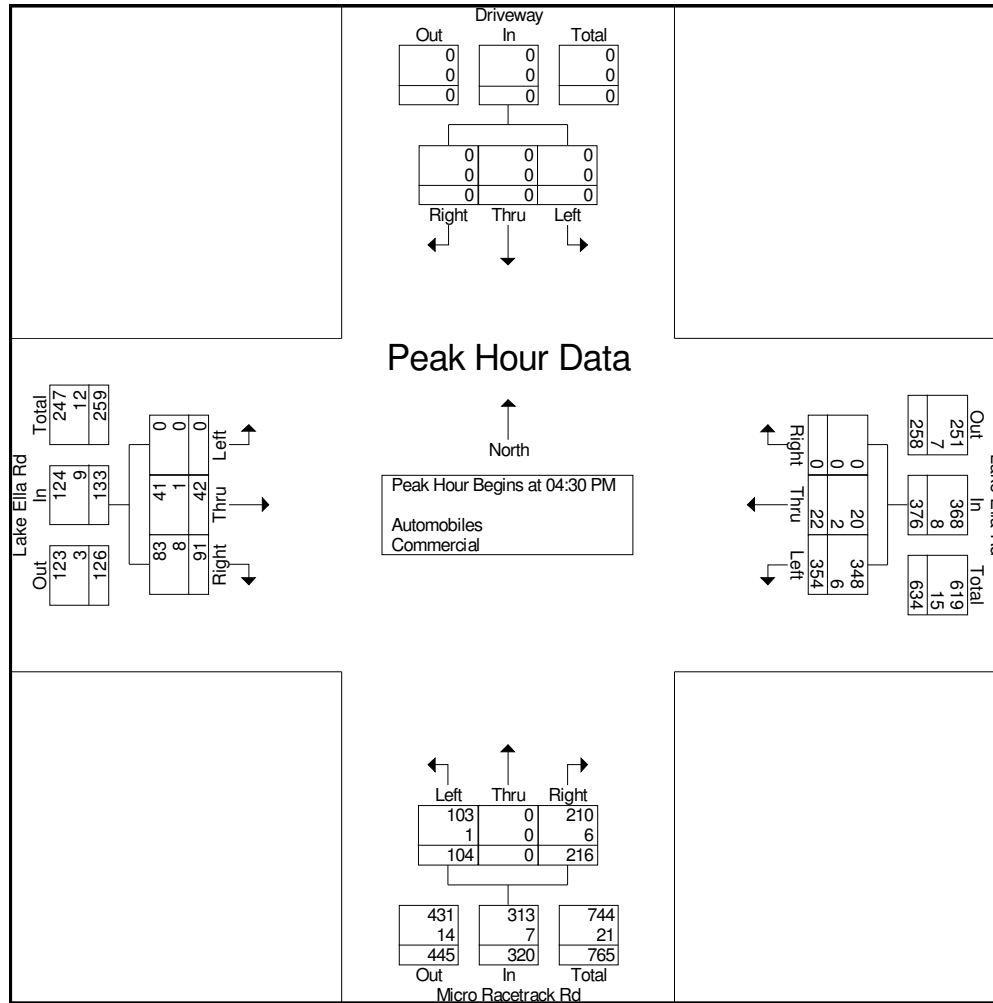
File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 4

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
Total Volume	0	0	0	0	354	22	0	376	104	0	216	320	0	42	91	133	829
% App. Total	0	0	0	0	94.1	5.9	0		32.5	0	67.5		0	31.6	68.4		
PHF	.000	.000	.000	.000	.859	.786	.000	.879	.743	.000	.857	.816	.000	.750	.875	.831	.968
Automobiles	0	0	0	0	348	20	0	368	103	0	210	313	0	41	83	124	805
% Automobiles	0	0	0	0	98.3	90.9	0	97.9	99.0	0	97.2	97.8	0	97.6	91.2	93.2	97.1
Commercial	0	0	0	0	6	2	0	8	1	0	6	7	0	1	8	9	24
% Commercial	0	0	0	0	1.7	9.1	0	2.1	1.0	0	2.8	2.2	0	2.4	8.8	6.8	2.9

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	20	7	0	27	13	0	42	55	0	5	16	21	103
07:15 AM	0	0	0	0	24	4	0	28	12	0	51	63	0	10	20	30	121
07:30 AM	0	1	0	1	42	9	0	51	16	0	55	71	0	6	25	31	154
07:45 AM	0	0	1	1	45	4	0	49	20	0	47	67	0	6	25	31	148
Total	0	1	1	2	131	24	0	155	61	0	195	256	0	27	86	113	526
08:00 AM	0	0	0	0	52	6	0	58	25	0	73	98	0	6	19	25	181
08:15 AM	1	0	0	1	46	10	0	56	25	0	71	96	0	2	25	27	180
08:30 AM	0	0	0	0	42	7	0	49	16	0	55	71	0	7	31	38	158
08:45 AM	0	0	0	0	31	5	0	36	13	0	42	55	0	5	24	29	120
Total	1	0	0	1	171	28	0	199	79	0	241	320	0	20	99	119	639
04:00 PM	0	0	0	0	54	7	0	61	15	0	45	60	0	9	35	44	165
04:15 PM	0	0	0	0	81	5	1	87	21	0	55	76	0	2	29	31	194
04:30 PM	0	0	0	0	97	5	0	102	26	0	47	73	0	9	23	32	207
04:45 PM	0	0	0	0	77	6	0	83	35	0	63	98	0	11	22	33	214
Total	0	0	0	0	309	23	1	333	97	0	210	307	0	31	109	140	780
05:00 PM	0	0	0	0	103	4	0	107	19	0	45	64	0	14	26	40	211
05:15 PM	0	0	0	0	77	7	0	84	24	0	61	85	0	8	20	28	197
05:30 PM	0	0	0	0	76	5	1	82	26	0	49	75	0	10	15	25	182
05:45 PM	0	0	0	0	55	8	0	63	16	0	28	44	0	8	13	21	128
Total	0	0	0	0	311	24	1	336	85	0	183	268	0	40	74	114	718
Grand Total	1	1	1	3	922	99	2	1023	322	0	829	1151	0	118	368	486	2663
Apprch %	33.3	33.3	33.3		90.1	9.7	0.2		28	0	72		0	24.3	75.7		
Total %	0	0	0	0.1	34.6	3.7	0.1	38.4	12.1	0	31.1	43.2	0	4.4	13.8	18.3	
Automobiles	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
% Automobiles	100	100	100	100	97.2	90.9	100	96.6	97.5	0	96.7	97	0	89.8	94	93	96.1
Commercial	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
% Commercial	0	0	0	0	2.8	9.1	0	3.4	2.5	0	3.3	3	0	10.2	6	7	3.9

# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

Groups Printed- Automobiles

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	19	6	0	25	13	0	41	54	0	4	16	20	99
07:15 AM	0	0	0	0	24	4	0	28	11	0	51	62	0	8	19	27	117
07:30 AM	0	1	0	1	41	8	0	49	16	0	53	69	0	6	24	30	149
07:45 AM	0	0	1	1	43	4	0	47	19	0	46	65	0	4	24	28	141
Total	0	1	1	2	127	22	0	149	59	0	191	250	0	22	83	105	506
08:00 AM	0	0	0	0	51	5	0	56	23	0	73	96	0	5	19	24	176
08:15 AM	1	0	0	1	43	10	0	53	24	0	69	93	0	2	24	26	173
08:30 AM	0	0	0	0	41	6	0	47	16	0	53	69	0	5	31	36	152
08:45 AM	0	0	0	0	29	5	0	34	13	0	41	54	0	4	24	28	116
Total	1	0	0	1	164	26	0	190	76	0	236	312	0	16	98	114	617
04:00 PM	0	0	0	0	53	6	0	59	15	0	42	57	0	8	33	41	157
04:15 PM	0	0	0	0	75	4	1	80	20	0	51	71	0	2	24	26	177
04:30 PM	0	0	0	0	95	5	0	100	26	0	46	72	0	9	21	30	202
04:45 PM	0	0	0	0	76	5	0	81	34	0	62	96	0	11	19	30	207
Total	0	0	0	0	299	20	1	320	95	0	201	296	0	30	97	127	743
05:00 PM	0	0	0	0	101	4	0	105	19	0	43	62	0	13	24	37	204
05:15 PM	0	0	0	0	76	6	0	82	24	0	59	83	0	8	19	27	192
05:30 PM	0	0	0	0	76	4	1	81	25	0	46	71	0	9	14	23	175
05:45 PM	0	0	0	0	53	8	0	61	16	0	26	42	0	8	11	19	122
Total	0	0	0	0	306	22	1	329	84	0	174	258	0	38	68	106	693
Grand Total	1	1	1	3	896	90	2	988	314	0	802	1116	0	106	346	452	2559
Apprch %	33.3	33.3	33.3		90.7	9.1	0.2		28.1	0	71.9		0	23.5	76.5		
Total %	0	0	0	0.1	35	3.5	0.1	38.6	12.3	0	31.3	43.6	0	4.1	13.5	17.7	



# DE TRAFFIC

386-341-4186

Micro Racetrack Rd at Lake Ella Rd  
Lake County, FL

File Name : Micro at Lake  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 3

## Groups Printed- Commercial

Start Time	Driveway Southbound				Lake Ella Rd Westbound				Micro Racetrack Rd Northbound				Lake Ella Rd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	1	0	2	0	0	1	1	0	1	0	1	4
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	3	4
07:30 AM	0	0	0	0	1	1	0	2	0	0	2	2	0	0	1	1	5
07:45 AM	0	0	0	0	2	0	0	2	1	0	1	2	0	2	1	3	7
Total	0	0	0	0	4	2	0	6	2	0	4	6	0	5	3	8	20
08:00 AM	0	0	0	0	1	1	0	2	2	0	0	2	0	1	0	1	5
08:15 AM	0	0	0	0	3	0	0	3	1	0	2	3	0	0	1	1	7
08:30 AM	0	0	0	0	1	1	0	2	0	0	2	2	0	2	0	2	6
08:45 AM	0	0	0	0	2	0	0	2	0	0	1	1	0	1	0	1	4
Total	0	0	0	0	7	2	0	9	3	0	5	8	0	4	1	5	22
04:00 PM	0	0	0	0	1	1	0	2	0	0	3	3	0	1	2	3	8
04:15 PM	0	0	0	0	6	1	0	7	1	0	4	5	0	0	5	5	17
04:30 PM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	2	2	5
04:45 PM	0	0	0	0	1	1	0	2	1	0	1	2	0	0	3	3	7
Total	0	0	0	0	10	3	0	13	2	0	9	11	0	1	12	13	37
05:00 PM	0	0	0	0	2	0	0	2	0	0	2	2	0	1	2	3	7
05:15 PM	0	0	0	0	1	1	0	2	0	0	2	2	0	0	1	1	5
05:30 PM	0	0	0	0	0	1	0	1	1	0	3	4	0	1	1	2	7
05:45 PM	0	0	0	0	2	0	0	2	0	0	2	2	0	0	2	2	6
Total	0	0	0	0	5	2	0	7	1	0	9	10	0	2	6	8	25
Grand Total	0	0	0	0	26	9	0	35	8	0	27	35	0	12	22	34	104
Apprch %	0	0	0	0	74.3	25.7	0		22.9	0	77.1		0	35.3	64.7		
Total %	0	0	0	0	25	8.7	0	33.7	7.7	0	26	33.7	0	11.5	21.2	32.7	

# DE TRAFFIC

386-341-4186  
 Micro Racetrack Rd at Lake Ella Rd  
 Lake County, FL

File Name : Micro at Lake  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

Groups Printed- Peds

Start Time	Driveway Southbound					Lake Ella Rd Westbound					Micro Racetrack Rd Northbound					Lake Ella Rd Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total				
Grand Total	0	0	0	0	0	0	0	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			0	0		
Total %																					0	0		

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	43	20	72	27	70	26	123	23	67	11	101	16	56	12	84	380
07:15 AM	12	52	25	89	26	75	16	117	22	86	12	120	19	47	19	85	411
07:30 AM	17	65	27	109	22	97	46	165	14	76	13	103	22	66	22	110	487
07:45 AM	15	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
Total	53	242	107	402	100	336	109	545	79	312	51	442	75	229	77	381	1770
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
08:45 AM	25	53	16	94	16	75	16	107	24	75	12	111	17	69	26	112	424
Total	80	290	96	466	90	333	86	509	88	323	52	463	75	317	109	501	1939
04:00 PM	29	91	16	136	18	71	16	105	23	87	17	127	34	83	18	135	503
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
Total	113	405	60	578	129	349	94	572	100	294	79	473	120	417	79	616	2239
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
05:15 PM	25	87	19	131	28	86	35	149	18	55	21	94	23	112	19	154	528
05:30 PM	27	77	12	116	27	82	43	152	22	47	19	88	17	103	19	139	495
05:45 PM	16	84	13	113	24	66	34	124	19	53	16	88	26	77	19	122	447
Total	86	364	62	512	111	332	139	582	81	228	77	386	93	422	76	591	2071
Grand Total	332	1301	325	1958	430	1350	428	2208	348	1157	259	1764	363	1385	341	2089	8019
Aprch %	17	66.4	16.6		19.5	61.1	19.4		19.7	65.6	14.7		17.4	66.3	16.3		
Total %	4.1	16.2	4.1	24.4	5.4	16.8	5.3	27.5	4.3	14.4	3.2	22	4.5	17.3	4.3	26.1	
Automobiles	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
% Automobiles	95.8	98.8	94.8	97.7	96.5	95.2	96	95.6	95.4	98.6	95.8	97.6	95.9	94.1	95.3	94.6	96.3
Commercial	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
% Commercial	4.2	1.2	5.2	2.3	3.5	4.8	4	4.4	4.6	1.4	4.2	2.4	4.1	5.9	4.7	5.4	3.7

# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A  
Site Code : 00000001  
Start Date : 12/3/2020  
Page No : 2

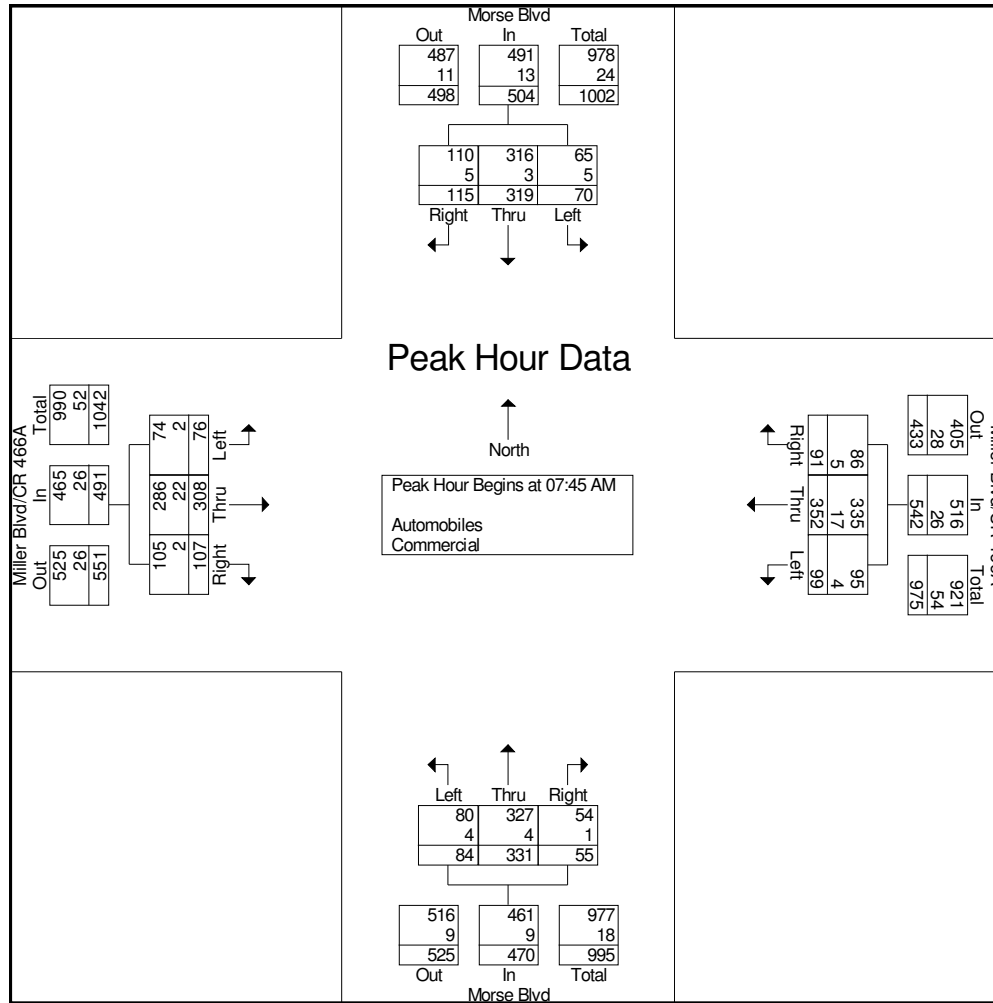
Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	15	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
Total Volume	70	319	115	504	99	352	91	542	84	331	55	470	76	308	107	491	2007
% App. Total	13.9	63.3	22.8		18.3	64.9	16.8		17.9	70.4	11.7		15.5	62.7	21.8		
PHF	.921	.949	.821	.955	.750	.936	.910	.941	.955	.962	.859	.971	.864	.837	.836	.877	.974
Automobiles	65	316	110	491	95	335	86	516	80	327	54	461	74	286	105	465	1933
% Automobiles	92.9	99.1	95.7	97.4	96.0	95.2	94.5	95.2	95.2	98.8	98.2	98.1	97.4	92.9	98.1	94.7	96.3
Commercial	5	3	5	13	4	17	5	26	4	4	1	9	2	22	2	26	74
% Commercial	7.1	0.9	4.3	2.6	4.0	4.8	5.5	4.8	4.8	1.2	1.8	1.9	2.6	7.1	1.9	5.3	3.7



# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 3



# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

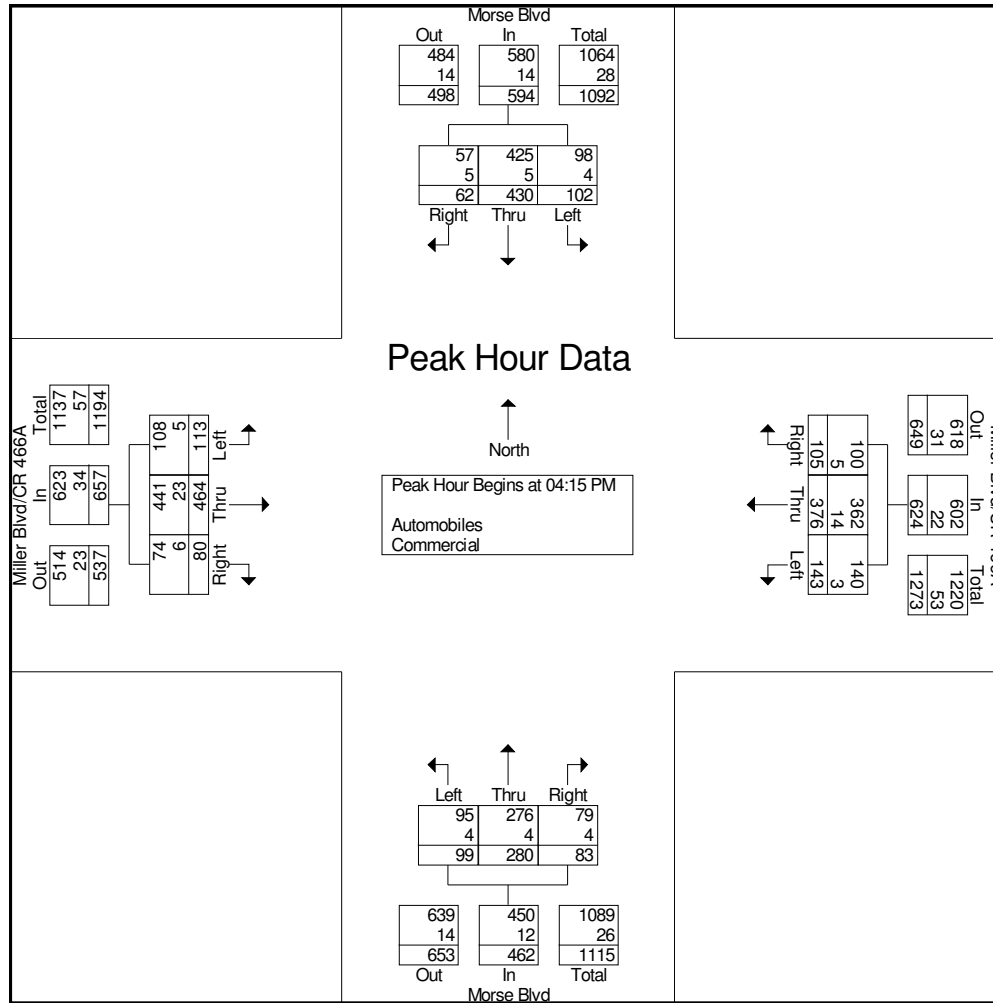
File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
Total Volume	102	430	62	594	143	376	105	624	99	280	83	462	113	464	80	657	2337
% App. Total	17.2	72.4	10.4		22.9	60.3	16.8		21.4	60.6	18		17.2	70.6	12.2		
PHF	.750	.927	.861	.958	.851	.825	.938	.852	.798	.946	.943	.963	.856	.892	.909	.933	.953
Automobiles	98	425	57	580	140	362	100	602	95	276	79	450	108	441	74	623	2255
% Automobiles	96.1	98.8	91.9	97.6	97.9	96.3	95.2	96.5	96.0	98.6	95.2	97.4	95.6	95.0	92.5	94.8	96.5
Commercial	4	5	5	14	3	14	5	22	4	4	4	12	5	23	6	34	82
% Commercial	3.9	1.2	8.1	2.4	2.1	3.7	4.8	3.5	4.0	1.4	4.8	2.6	4.4	5.0	7.5	5.2	3.5

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 5



# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A

Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 1

## Groups Printed- Automobiles - Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	43	20	72	27	70	26	123	23	67	11	101	16	56	12	84	380
07:15 AM	12	52	25	89	26	75	16	117	22	86	12	120	19	47	19	85	411
07:30 AM	17	65	27	109	22	97	46	165	14	76	13	103	22	66	22	110	487
07:45 AM	15	82	35	132	25	94	21	140	20	83	15	118	18	60	24	102	492
Total	53	242	107	402	100	336	109	545	79	312	51	442	75	229	77	381	1770
08:00 AM	18	77	27	122	33	86	25	144	21	86	14	121	20	76	26	122	509
08:15 AM	19	84	26	129	25	81	24	130	21	85	10	116	16	92	32	140	515
08:30 AM	18	76	27	121	16	91	21	128	22	77	16	115	22	80	25	127	491
08:45 AM	25	53	16	94	16	75	16	107	24	75	12	111	17	69	26	112	424
Total	80	290	96	466	90	333	86	509	88	323	52	463	75	317	109	501	1939
04:00 PM	29	91	16	136	18	71	16	105	23	87	17	127	34	83	18	135	503
04:15 PM	34	108	13	155	35	77	28	140	20	69	22	111	33	102	21	156	562
04:30 PM	25	98	15	138	34	87	23	144	26	74	20	120	26	111	22	159	561
04:45 PM	25	108	16	149	42	114	27	183	31	64	20	115	27	121	18	166	613
Total	113	405	60	578	129	349	94	572	100	294	79	473	120	417	79	616	2239
05:00 PM	18	116	18	152	32	98	27	157	22	73	21	116	27	130	19	176	601
05:15 PM	25	87	19	131	28	86	35	149	18	55	21	94	23	112	19	154	528
05:30 PM	27	77	12	116	27	82	43	152	22	47	19	88	17	103	19	139	495
05:45 PM	16	84	13	113	24	66	34	124	19	53	16	88	26	77	19	122	447
Total	86	364	62	512	111	332	139	582	81	228	77	386	93	422	76	591	2071
Grand Total	332	1301	325	1958	430	1350	428	2208	348	1157	259	1764	363	1385	341	2089	8019
Aprch %	17	66.4	16.6		19.5	61.1	19.4		19.7	65.6	14.7		17.4	66.3	16.3		
Total %	4.1	16.2	4.1	24.4	5.4	16.8	5.3	27.5	4.3	14.4	3.2	22	4.5	17.3	4.3	26.1	
Automobiles	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
% Automobiles	95.8	98.8	94.8	97.7	96.5	95.2	96	95.6	95.4	98.6	95.8	97.6	95.9	94.1	95.3	94.6	96.3
Commercial	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
% Commercial	4.2	1.2	5.2	2.3	3.5	4.8	4	4.4	4.6	1.4	4.2	2.4	4.1	5.9	4.7	5.4	3.7



# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 2

## Groups Printed- Automobiles

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	42	19	70	27	66	26	119	23	67	11	101	16	51	11	78	368
07:15 AM	11	51	24	86	24	70	15	109	21	84	11	116	19	43	19	81	392
07:30 AM	16	63	26	105	21	95	46	162	12	75	13	100	21	61	21	103	470
07:45 AM	15	81	34	130	24	91	19	134	19	81	15	115	18	54	24	96	475
Total	51	237	103	391	96	322	106	524	75	307	50	432	74	209	75	358	1705
08:00 AM	16	76	26	118	31	81	24	136	21	86	14	121	19	72	26	117	492
08:15 AM	18	84	24	126	24	76	24	124	19	84	10	113	16	84	31	131	494
08:30 AM	16	75	26	117	16	87	19	122	21	76	15	112	21	76	24	121	472
08:45 AM	24	52	16	92	16	70	15	101	23	73	11	107	16	66	26	108	408
Total	74	287	92	453	87	314	82	483	84	319	50	453	72	298	107	477	1866
04:00 PM	29	90	15	134	16	67	15	98	22	87	16	125	33	78	17	128	485
04:15 PM	34	106	13	153	34	75	26	135	19	68	21	108	32	96	19	147	543
04:30 PM	24	98	13	135	34	84	23	141	24	72	18	114	24	106	21	151	541
04:45 PM	24	106	15	145	41	110	26	177	31	64	19	114	26	113	16	155	591
Total	111	400	56	567	125	336	90	551	96	291	74	461	115	393	73	581	2160
05:00 PM	16	115	16	147	31	93	25	149	21	72	21	114	26	126	18	170	580
05:15 PM	24	87	17	128	26	81	34	141	16	53	19	88	21	106	16	143	500
05:30 PM	26	76	11	113	26	76	41	143	21	46	18	85	16	98	17	131	472
05:45 PM	16	84	13	113	24	63	33	120	19	53	16	88	24	73	19	116	437
Total	82	362	57	501	107	313	133	553	77	224	74	375	87	403	70	560	1989
Grand Total	318	1286	308	1912	415	1285	411	2111	332	1141	248	1721	348	1303	325	1976	7720
Apprch %	16.6	67.3	16.1		19.7	60.9	19.5		19.3	66.3	14.4		17.6	65.9	16.4		
Total %	4.1	16.7	4	24.8	5.4	16.6	5.3	27.3	4.3	14.8	3.2	22.3	4.5	16.9	4.2	25.6	

# DE TRAFFIC

386-341-4186

Morse Blvd at Miller Blvd/CR 466A  
Sumter County, FL

File Name : Morse at 466A

Site Code : 00000001

Start Date : 12/3/2020

Page No : 3

## Groups Printed- Commercial

Start Time	Morse Blvd Southbound				Miller Blvd/CR 466A Westbound				Morse Blvd Northbound				Miller Blvd/CR 466A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	1	2	0	4	0	4	0	0	0	0	0	5	1	6	12
07:15 AM	1	1	1	3	2	5	1	8	1	2	1	4	0	4	0	4	19
07:30 AM	1	2	1	4	1	2	0	3	2	1	0	3	1	5	1	7	17
07:45 AM	0	1	1	2	1	3	2	6	1	2	0	3	0	6	0	6	17
Total	2	5	4	11	4	14	3	21	4	5	1	10	1	20	2	23	65
08:00 AM	2	1	1	4	2	5	1	8	0	0	0	0	1	4	0	5	17
08:15 AM	1	0	2	3	1	5	0	6	2	1	0	3	0	8	1	9	21
08:30 AM	2	1	1	4	0	4	2	6	1	1	1	3	1	4	1	6	19
08:45 AM	1	1	0	2	0	5	1	6	1	2	1	4	1	3	0	4	16
Total	6	3	4	13	3	19	4	26	4	4	2	10	3	19	2	24	73
04:00 PM	0	1	1	2	2	4	1	7	1	0	1	2	1	5	1	7	18
04:15 PM	0	2	0	2	1	2	2	5	1	1	1	3	1	6	2	9	19
04:30 PM	1	0	2	3	0	3	0	3	2	2	2	6	2	5	1	8	20
04:45 PM	1	2	1	4	1	4	1	6	0	0	1	1	1	8	2	11	22
Total	2	5	4	11	4	13	4	21	4	3	5	12	5	24	6	35	79
05:00 PM	2	1	2	5	1	5	2	8	1	1	0	2	1	4	1	6	21
05:15 PM	1	0	2	3	2	5	1	8	2	2	2	6	2	6	3	11	28
05:30 PM	1	1	1	3	1	6	2	9	1	1	1	3	1	5	2	8	23
05:45 PM	0	0	0	0	0	3	1	4	0	0	0	0	2	4	0	6	10
Total	4	2	5	11	4	19	6	29	4	4	3	11	6	19	6	31	82
Grand Total	14	15	17	46	15	65	17	97	16	16	11	43	15	82	16	113	299
Apprch %	30.4	32.6	37		15.5	67	17.5		37.2	37.2	25.6		13.3	72.6	14.2		
Total %	4.7	5	5.7	15.4	5	21.7	5.7	32.4	5.4	5.4	3.7	14.4	5	27.4	5.4	37.8	

# DE TRAFFIC

386-341-4186  
 Morse Blvd at Miller Blvd/CR 466A  
 Sumter County, FL

File Name : Morse at 466A  
 Site Code : 00000001  
 Start Date : 12/3/2020  
 Page No : 4

## Groups Printed- Peds

Start Time	Morse Blvd Southbound					Miller Blvd/CR 466A Westbound					Morse Blvd Northbound					Miller Blvd/CR 466A Eastbound					Exclu. Total	Inclu. Total	Int. Total		
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total					
Grand Total	0	0	0	0	0	0	0	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			0	0			
Total %																						0	0		



NB Approach



SB Approach



EB Approach



WB Approach



CR 466A  
at Sembler Way/Heald Way

Sumter County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-02

Sheet  
Number: 1





NB Approach



SB Approach



EB Approach



WB Approach



CR 466A  
at Farmer Pl

Sumter County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-02

Sheet  
Number: 2



NB Approach



SB Approach



EB Approach



WB Approach



CR 466A  
at Micro Racetrack Rd

Lake County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-02

Sheet  
Number: 3





NB Approach



SB Approach



EB Approach



WB Approach



CR 466A  
at Drake Dr

Lake County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-02

Sheet  
Number: 4



NB Approach



SB Approach



EB Approach



WB Approach



Miller Blvd/CR 466A  
at Morse Blvd

Sumter County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-05

Sheet  
Number: 1





NB Approach



EB Approach



WB Approach



Micro Racetrack Rd  
at Lake Ella Rd

Lake County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-03

Sheet  
Number: 1



NB Approach



SB Approach



EB Approach



WB Approach



Miller Blvd/CR 466A  
at Morse Blvd

Sumter County

[www.de-traffic.com](http://www.de-traffic.com)

299 McGregor Rd. DeLand FL. 32720

Project  
Number: B20-05

Sheet  
Number: 1



# EAGLE EPAC TIMING SHEET

## COORDINATION SETTINGS

### CONTROLLER SETTINGS

Dial 1 AVC	Dial 2/AM	Dial 3/PM
---------------	-----------	-----------

Mvmt.	Timing Function	Min	Green	Max	Green	Yellow	All	Walk	F.D.W.	Recall	Det.	Split	Split	Split
		Initial	Passage	I	II	Clear	Red				Func.			
1		7	3.5	30	30	4.8	3.9				Lock			
2		25	4.0	60	50	4.8	2.0			min	Non Lock			
3		7	3.5	30	30	4.0	3.8				Lock			
4		7	4.0	35	50	4.0	2.0				Non Lock			
5		7	3.5	40	30	4.8	3.9				Lock			
6		25	4.0	60	50	4.8	2.0			min	Non Lock			
7		7	3.5	30	30	4.0	3.8				Lock			
8		7	4.0	35	50	4.0	2.0				Non Lock			

5033  
 INTERSECTION:  
 CR466A & Morse Blv

DATE: June 2019

Off Set			
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# EAGLE EPAC TIMING SHEET

## COORDINATION SETTINGS

### CONTROLLER SETTINGS

Dial 1 AVC	Dial 2/AM	Dial 3/PM
---------------	-----------	-----------

Mvmt.	Timing Function	Min	Green	Max	Green	Yellow	All	Walk	F.D.W.	Recall	Det.	Split	Split	Split	
		Initial	Passage	I	II	Clear	Red				Func.	Sec	Sec	Sec	
1		5	4.0	25	30	4.8	3.1				Lock				
2		15	5.0	35	50	4.8	2.0			min	Non Lock				
3		5	4.0	25	30	4.0	1.0			.	Lock				
4		8	5.0	35	50	3.4	2.5				Non Lock				
5		5	4.0	25	30	4.8	3.1				Lock				
6		15	5.0	35	50	4.8	2.0			min	Non Lock				
7		5	4.0	25	30	4.0	1.0				Lock				
8		8	5.0	35	50	3.4	2.4				Non Lock				
S 034												Off Set			
INTERSECTION: CR 466A @ Sembler Way / Herald Way															
DATE: June 2019															





# EAGLE EPAC TIMING SHEET

## COORDINATION SETTINGS

### CONTROLLER SETTINGS

Mvmt.	Timing Function	Min	Green	Max	Green	Yellow	All	Walk	F.D.W.	Recall	Det.	Dial 1	Dial	Dial	
		Initial	Passage	I	II	Clear	Red					AVC	2/AM	3/PM	
1		7	2.7	20	20	4.8	2.7				Lock				
2		25	4.0	40	55	4.8	2.0			min	Non Lock				
3											Lock				
4		12	2.7	25	25	3.7	2.0				Non Lock				
5		7	2.7	12	20	4.8	2.7				Lock				
6		25	4.0	55	55	4.8	2.8			min	Non Lock				
7											Lock				
8		12	2.7	25	20	3.7	2.0				Non Lock				
												Off Set			

S032  
 INTERSECTION: CR466A & Farnen Place

DATE: June 2019

LAKE COUNTY - TRAFFIC SIGNAL OPERATIONS

<b>CARTEGRAPH ID: FP-S-422</b>				<b>DATE: 08/20/2015</b>				
<b>INTERSECTION NAME AND ID#: CR 466A &amp; Micro Racetrack Rd</b>								
<b>PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
	<b>EBL</b>	<b>WB</b>	<b>SB/SBL</b>	<b>NB</b>	<b>WBL</b>	<b>EB</b>		
<b>INITIAL</b>	5	15	8	8	5	15		
<b>PASSAGE</b>	3.0	3.0	3.0	3.0	3.0	3.0		
<b>YELLOW</b>	4.7	4.7	4.0	4.0	4.7	4.7		
<b>RED CLEAR</b>	2.5	3.0	3.4	3.0	2.5	3.0		
<b>MAX 1</b>	25	45	30	30	25	45		
<b>MAX 2</b>								
<b>WALK</b>		7	7	7		7		
<b>DON'T WALK</b>		25	32	33		26		
<b>RECALL</b>		Min				Min		
<b>DET. FUNC.</b>		L				L		
<b>COORDINATED SYSTEM TIMING</b>								
<b>PATTERN</b>	<b>CYCLE SEC.</b>	<b>OFFSET SEC.</b>	<b>COORDINATED Phase</b>	<b>COORDINATED Sequence</b>	<b>BASE DAY 1 Mon.-Fri.</b>	<b>BASE DAY 2 Sat - Sun</b>		
<b>SPLIT ALLOCATION - Sec.</b>								
<b>PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>NOTES: Naztec 980 A0100 - V61.2P</b>								
Split sides 3&4								

LAKE COUNTY - TRAFFIC SIGNAL OPERATIONS

<b>CARTEGRAPH ID: FP-S-423</b>				<b>DATE: 08/20/2015</b>				
<b>INTERSECTION NAME AND ID#: CR 466A &amp; Timbertop Ln</b>								
<b>PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
	EBL	WB	SB/SBL	NB	WBL	EB		
<b>INITIAL</b>	5	15	8	8	5	15		
<b>PASSAGE</b>	3.0	3.0	3.0	3.0	3.0	3.0		
<b>YELLOW</b>	4.7	4.7	4.0	4.0	4.7	4.7		
<b>RED CLEAR</b>	2.3	2.7	3.0	3.2	2.3	2.7		
<b>MAX 1</b>	20	45	32	30	20	45		
<b>MAX 2</b>								
<b>WALK</b>		7	7	7		7		
<b>DON'T WALK</b>		19	30	30		36		
<b>RECALL</b>		Min				Min		
<b>DET. FUNC.</b>		L				L		
<b>COORDINATED SYSTEM TIMING</b>								
<b>PATTERN</b>	<b>CYCLE SEC.</b>	<b>OFFSET SEC.</b>	<b>COORDINATED Phase</b>	<b>COORDINATED Sequence</b>	<b>BASE DAY 1 Mon.-Fri.</b>	<b>BASE DAY 2 Sat - Sun</b>		
<b>SPLIT ALLOCATION - Sec.</b>								
<b>PHASE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

**NOTES: Naztec 980 A0100 - V61.2P**  
Split sides 3&4

Micro Racetrack Rd

IN OUT  
AM 318 / (260)  
PM 312 / (310)

Lake Ella Rd

Driveway 4

Driveway 3

Driveway 2

Driveway 1

Morse Blvd

Sembler Way

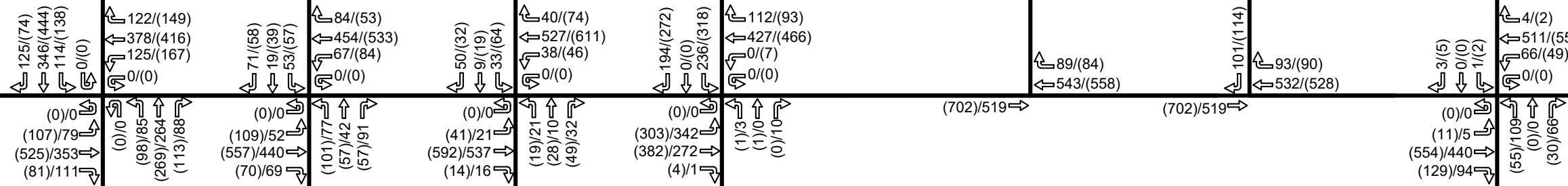
Farner Pl

Timbertop Ln

Heald Way

Drake Dr

CR 466A



PROPOSED LEGEND

- ➔ REPRESENTS ONE TURNING MOVEMENT
- XX/YY: AM/PM PEAK HOUR TRAFFIC

Bowman Consulting Group, Ltd.  
4450 W Eau Gallie Blvd  
Suite 144  
Melbourne, FL 32934  
Phone: (321) 255-5434  
Fax: (321) 255-7751  
www.bowmanconsulting.com  
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**BUILD 2022**  
**GROCERY STORE**  
NEC C.R. 466A & MICRORACETRACK RD.  
THE VILLAGES, FLORIDA

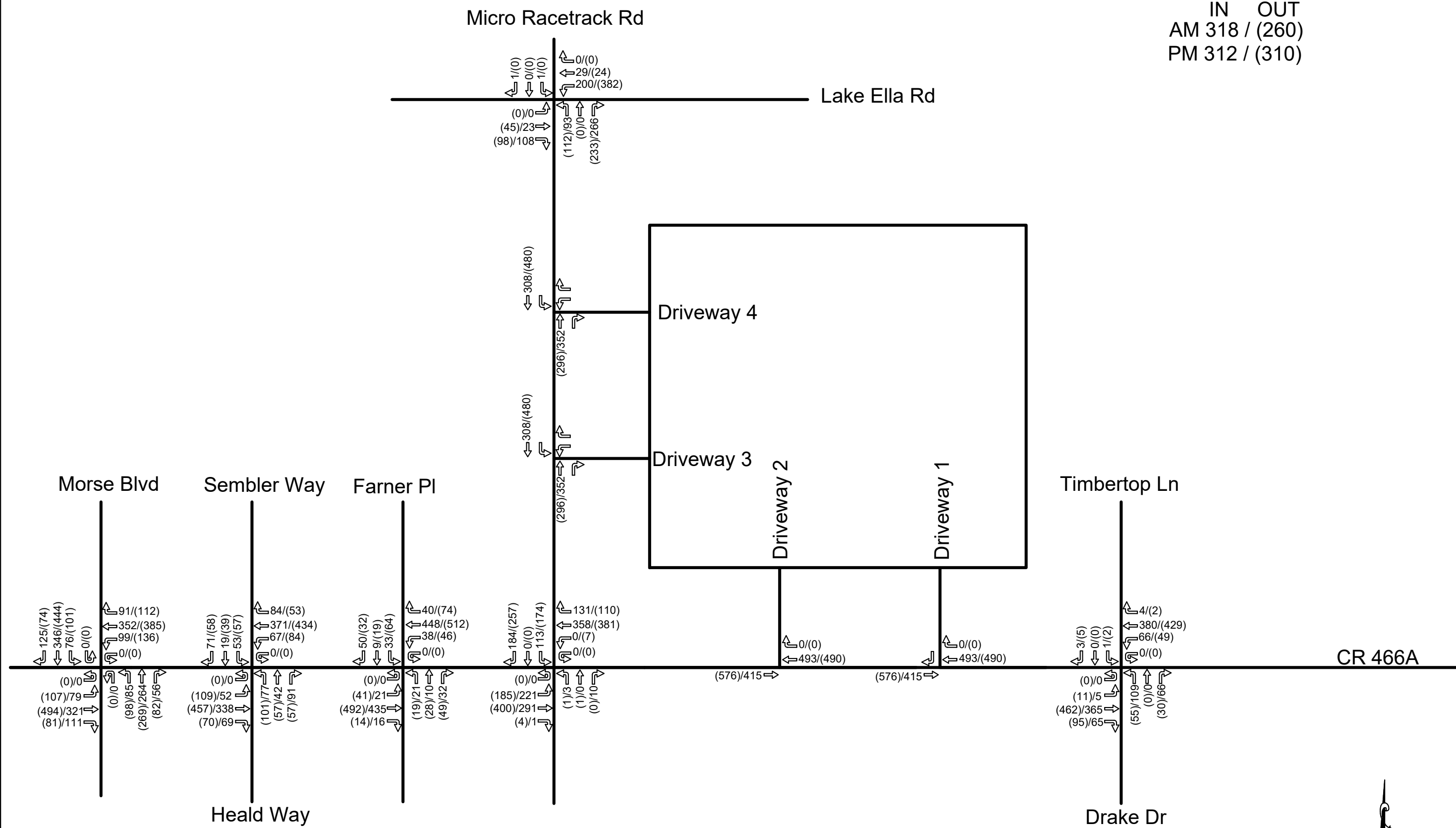


DJ DSGN	RM DRAWN	DJ CHKD
010755-01-001 PROJECT NUMBER		
SCALE		Non Scale
SHEET		4





IN OUT  
 AM 318 / (260)  
 PM 312 / (310)



**PROPOSED LEGEND**

- REPRESENTS ONE TURNING MOVEMENT
- XX/YY: AM/PM PEAK HOUR TRAFFIC

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**NO BUILD 2022  
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 NEC C.R. 466A & MICRORACETRACK RD.  
 THE VILLAGES, FLORIDA

**Bowman**  
 CONSULTING  
 Certificate of Authorization License No. 30462

DJ DSGN	RM DRAWN	DJ CHKD
010755-01-001 PROJECT NUMBER		
SCALE		Non Scale
SHEET		2

Micro Racetrack Rd

IN OUT  
AM 318 / (260)  
PM 312 / (310)

Lake Ella Rd

0/(0)  
0/(0)  
0/(0)  
(0)/0  
(0)/0  
(31)/32

52/(51)  
8/(8)  
7/(8)  
7/(8)

(75)/59  
(8)/8

-25/-(22)  
110/(106)

97/(110)  
158/(181)  
-19/(17)  
69/(85)

-(27)/-30  
(128)/131

10/(15)  
0/(0)  
123/(144)  
10/(15)  
0/(0)  
118/121  
-18/-19  
(0)/0

0/(0)  
83/(99)  
0/(0)  
0/(0)

0/(0)  
0/(0)  
0/(0)

(126)/104

19/(17)  
69/(85)  
0/(0)

101/(114)  
93/(90)  
39/(38)

(126)/104

0/(0)  
0/(0)  
0/(0)  
0/(0)  
0/(0)  
0/(0)  
(92)/75  
(34)/29

0/(0)  
131/(128)  
0/(0)  
0/(0)

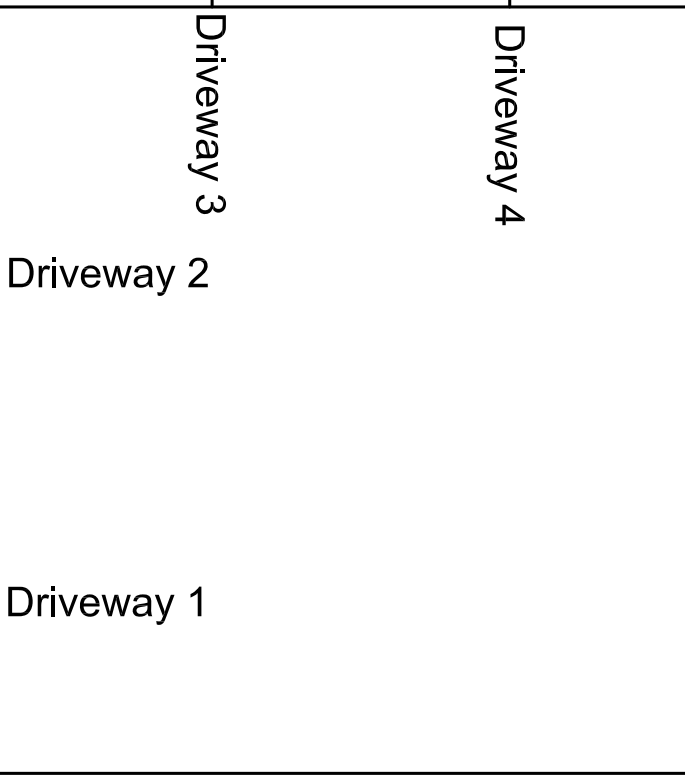
CR 466A

Morse Blvd

Sembler Way

Farner Pl

Driveway 3



Driveway 2

Driveway 1

Heald Way

PROPOSED LEGEND

REPRESENTS ONE  
TURNING MOVEMENT

XX/YY: AM/PM  
PEAK HOUR TRAFFIC



SITE TRIPS  
GROCERY STORE  
NEC C.R. 466A & MICRORACETRACK RD.  
THE VILLAGES, FLORIDA

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DJ DSN RM DU  
DRAWN CHKO  
010755-01-001  
PROJECT NUMBER  
SCALE Non Scale  
SHEET 3

IN OUT  
 AM 318 / (260)  
 PM 312 / (310)

Micro Racetrack Rd

Lake Ella Rd

Driveway 4

Driveway 3

Driveway 2

Driveway 1

Timbertop Ln

CR 466A

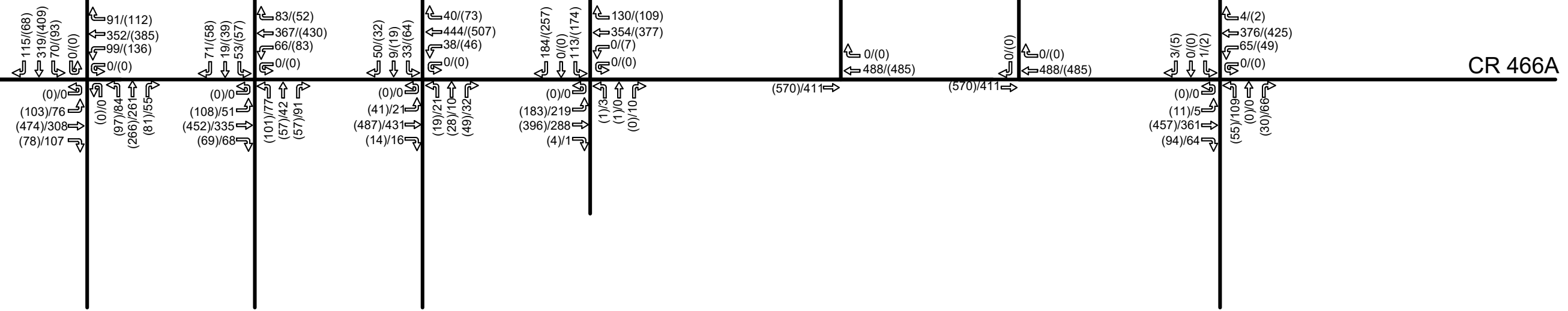
Morse Blvd

Sembler Way

Farner Pl

Heald Way

Drake Dr



**PROPOSED LEGEND**

- ➔ REPRESENTS ONE TURNING MOVEMENT
- XX/YY: AM/PM PEAK HOUR TRAFFIC

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**TRAFFIC COUNTS  
 GROCERY STORE**  
 NEC C.R. 466A & MICRORACETRACK RD.  
 THE VILLAGES, FLORIDA



DJ DSGN	RM DRAWN	DJ CHKD
010755-01-001 PROJECT NUMBER		
SCALE		Non Scale
SHEET		1

# **APPENDIX E**



Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

1-EXISTING-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	76	308	107	99	352	91	84	261	55	70	319	115
Future Volume (vph)	76	308	107	99	352	91	84	261	55	70	319	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	7%	2%	4%	5%	6%	5%	1%	2%	7%	1%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	10.2	25.6	25.6	11.5	31.1	31.1	21.1	15.6	15.6	21.1	15.6	15.6
Actuated g/C Ratio	0.12	0.29	0.29	0.13	0.35	0.35	0.24	0.18	0.18	0.24	0.18	0.18
v/c Ratio	0.38	0.32	0.20	0.45	0.30	0.14	0.29	0.42	0.13	0.23	0.52	0.27
Control Delay	44.6	28.3	5.1	44.7	26.3	0.5	24.2	35.8	0.6	23.2	37.2	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	28.3	5.1	44.7	26.3	0.5	24.2	35.8	0.6	23.2	37.2	2.1
LOS	D	C	A	D	C	A	C	D	A	C	D	A
Approach Delay		25.7			25.3			28.5			27.3	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 87.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.52

Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

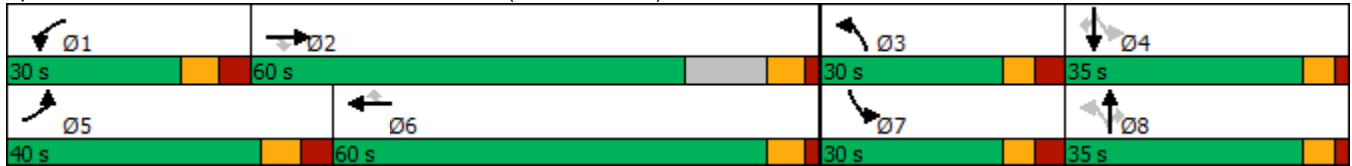
1-EXISTING-AM

01/04/2021

Intersection Signal Delay: 26.6  
Intersection Capacity Utilization 65.6%  
Analysis Period (min) 15

Intersection LOS: C  
ICU Level of Service C

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

1-EXISTING-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↷	↶	↷	↷	↶	↷	↷	↶	↷	↷
Traffic Volume (veh/h)	76	308	107	99	352	91	84	261	55	70	319	115
Future Volume (veh/h)	76	308	107	99	352	91	84	261	55	70	319	115
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	1856	1796	1870	1841	1826	1811	1826	1885	1870	1796	1885	1841
Adj Flow Rate, veh/h	78	318	110	102	363	94	87	269	57	72	329	119
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	7	2	4	5	6	5	1	2	7	1	4
Cap, veh/h	129	1086	504	139	1127	499	286	569	252	304	550	240
Arrive On Green	0.07	0.32	0.32	0.08	0.32	0.32	0.08	0.16	0.16	0.07	0.15	0.15
Sat Flow, veh/h	1767	3413	1585	1753	3469	1535	1739	3582	1585	1711	3582	1560
Grp Volume(v), veh/h	78	318	110	102	363	94	87	269	57	72	329	119
Grp Sat Flow(s),veh/h/ln	1767	1706	1585	1753	1735	1535	1739	1791	1585	1711	1791	1560
Q Serve(g_s), s	3.4	5.5	4.0	4.5	6.2	3.5	3.2	5.4	2.5	2.7	6.7	5.5
Cycle Q Clear(g_c), s	3.4	5.5	4.0	4.5	6.2	3.5	3.2	5.4	2.5	2.7	6.7	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	129	1086	504	139	1127	499	286	569	252	304	550	240
V/C Ratio(X)	0.61	0.29	0.22	0.73	0.32	0.19	0.30	0.47	0.23	0.24	0.60	0.50
Avail Cap(c_a), veh/h	704	2311	1073	475	2349	1039	646	1322	585	667	1322	576
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	20.1	19.6	35.3	20.0	19.1	24.9	30.1	28.8	24.8	31.0	30.5
Incr Delay (d2), s/veh	5.4	0.2	0.3	8.6	0.2	0.3	0.7	0.9	0.6	0.5	1.5	2.3
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	1.6	2.0	1.4	2.1	2.3	1.2	1.3	2.3	0.9	1.1	2.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	20.4	19.9	43.9	20.2	19.3	25.6	30.9	29.5	25.3	32.5	32.7
LnGrp LOS	D	C	B	D	C	B	C	C	C	C	C	C
Approach Vol, veh/h		506			559			413			520	
Approach Delay, s/veh		23.4			24.4			29.6			31.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	31.8	13.8	18.1	14.4	32.3	13.3	18.5				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	6.5	7.5	5.2	8.7	5.4	8.2	4.7	7.4				
Green Ext Time (p_c), s	0.2	3.6	0.2	3.3	0.2	4.0	0.2	2.5				

Intersection Summary

HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	335	68	66	367	83	77	42	91	53	19	71
Future Volume (vph)	51	335	68	66	367	83	77	42	91	53	19	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
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
Heavy Vehicles (%)	2%	5%	4%	2%	5%	5%	3%	2%	1%	6%	11%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effect Green (s)	24.0	18.9	18.9	24.2	19.0	19.0	24.4	23.5			13.0	13.0
Actuated g/C Ratio	0.35	0.28	0.28	0.35	0.28	0.28	0.36	0.34			0.19	0.19
v/c Ratio	0.13	0.40	0.15	0.17	0.42	0.19	0.19	0.23			0.35	0.20
Control Delay	13.6	25.2	3.2	13.9	25.2	5.1	17.2	8.8			33.5	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	13.6	25.2	3.2	13.9	25.2	5.1	17.2	8.8			33.5	4.0
LOS	B	C	A	B	C	A	B	A			C	A
Approach Delay		20.6			20.5			11.9			18.9	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	68.4
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated



Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-AM

01/04/2021

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 19.0

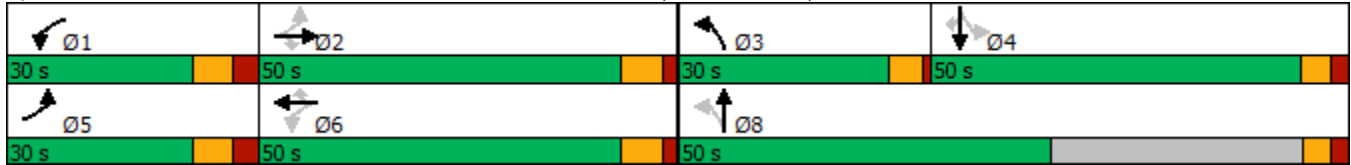
Intersection LOS: B

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗	↖	↖	↗			↖↗	↖↗
Traffic Volume (veh/h)	51	335	68	66	367	83	77	42	91	53	19	71
Future Volume (veh/h)	51	335	68	66	367	83	77	42	91	53	19	71
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	1826	1841	1870	1826	1826	1856	1870	1870	1737	1737	1856
Adj Flow Rate, veh/h	56	368	75	73	403	91	85	46	100	58	21	78
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	5	4	2	5	5	3	2	2	11	11	3
Cap, veh/h	388	937	421	411	967	431	362	157	340	233	66	224
Arrive On Green	0.05	0.27	0.27	0.06	0.28	0.28	0.07	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1781	3469	1560	1781	3469	1547	1767	525	1140	845	464	1572
Grp Volume(v), veh/h	56	368	75	73	403	91	85	0	146	79	0	78
Grp Sat Flow(s),veh/h/ln	1781	1735	1560	1781	1735	1547	1767	0	1665	1309	0	1572
Q Serve(g_s), s	1.2	4.8	2.0	1.6	5.3	2.5	2.1	0.0	3.7	2.2	0.0	2.5
Cycle Q Clear(g_c), s	1.2	4.8	2.0	1.6	5.3	2.5	2.1	0.0	3.7	2.9	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	0.73		1.00
Lane Grp Cap(c), veh/h	388	937	421	411	967	431	362	0	497	299	0	224
V/C Ratio(X)	0.14	0.39	0.18	0.18	0.42	0.21	0.23	0.00	0.29	0.26	0.00	0.35
Avail Cap(c_a), veh/h	1004	2698	1213	1012	2698	1203	1041	0	1325	1124	0	1248
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	13.4	16.6	15.6	13.2	16.4	15.4	16.9	0.0	15.0	21.6	0.0	21.5
Incr Delay (d2), s/veh	0.2	0.6	0.4	0.3	0.6	0.5	0.5	0.0	0.7	1.0	0.0	2.0
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	0.4	1.7	0.7	0.5	1.8	0.8	0.8	0.0	1.4	1.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	17.1	16.0	13.5	17.0	15.9	17.4	0.0	15.7	22.6	0.0	23.4
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		499			567			231				157
Approach Delay, s/veh		16.6			16.3			16.3				23.0
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	21.8	8.7	13.8	10.8	22.3		22.5				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	3.6	6.8	4.1	4.9	3.2	7.3		5.7				
Green Ext Time (p_c), s	0.2	5.2	0.3	1.6	0.1	5.9		1.9				

Intersection Summary

HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

1-EXISTING-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	431	16	38	444	40	21	10	32	33	9	50
Future Volume (vph)	21	431	16	38	444	40	21	10	32	33	9	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	3%	12%	8%	5%	8%	19%	10%	3%	3%	0%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.1	34.3	34.3	33.4	36.2	36.2		12.8			12.8	12.8
Actuated g/C Ratio	0.62	0.66	0.66	0.64	0.70	0.70		0.25			0.25	0.25
v/c Ratio	0.04	0.21	0.02	0.07	0.21	0.04		0.19			0.15	0.12
Control Delay	5.8	9.3	0.1	5.7	7.7	0.1		14.5			21.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	5.8	9.3	0.1	5.7	7.7	0.1		14.5			21.7	0.5
LOS	A	A	A	A	A	A		B			C	A
Approach Delay		8.9			6.9			14.5			10.2	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100

Actuated Cycle Length: 51.9	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.21	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

1-EXISTING-AM  
 01/04/2021



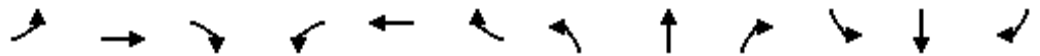
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↖	↗
Traffic Volume (veh/h)	21	431	16	38	444	40	21	10	32	33	9	50
Future Volume (veh/h)	21	431	16	38	444	40	21	10	32	33	9	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	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	1752	1856	1722	1781	1826	1781	1752	1752	1752	1900	1900	1811
Adj Flow Rate, veh/h	24	484	18	43	499	45	24	11	36	37	10	56
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	3	12	8	5	8	10	10	10	0	0	6
Cap, veh/h	525	1550	642	510	1350	587	134	71	134	305	71	274
Arrive On Green	0.11	0.44	0.44	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1668	3526	1459	1697	3469	1510	333	398	752	1147	399	1535
Grp Volume(v), veh/h	24	484	18	43	499	45	71	0	0	47	0	56
Grp Sat Flow(s),veh/h/ln	1668	1763	1459	1697	1735	1510	1483	0	0	1546	0	1535
Q Serve(g_s), s	0.5	5.7	0.4	0.9	6.6	1.2	0.0	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	0.5	5.7	0.4	0.9	6.6	1.2	2.4	0.0	0.0	1.4	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	0.34		0.51	0.79		1.00
Lane Grp Cap(c), veh/h	525	1550	642	510	1350	587	339	0	0	376	0	274
V/C Ratio(X)	0.05	0.31	0.03	0.08	0.37	0.08	0.21	0.00	0.00	0.13	0.00	0.20
Avail Cap(c_a), veh/h	668	2644	1095	741	2559	1114	403	0	0	555	0	461
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	11.7	10.2	10.1	14.0	12.4	22.7	0.0	0.0	22.2	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.2	0.1	0.3	0.0	0.0	0.1	0.0	0.3
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	0.1	1.8	0.1	0.3	2.2	0.4	0.9	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	11.9	10.2	10.2	14.2	12.4	23.0	0.0	0.0	22.4	0.0	22.8
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		526			587			71				103
Approach Delay, s/veh		11.7			13.8			23.0				22.6
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	35.8		17.2	14.5	32.6		17.2				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	2.9	7.7		4.0	2.5	8.6		4.4				
Green Ext Time (p_c), s	0.0	4.8		0.3	0.0	5.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	219	288	1	0	354	130	3	0	10	113	0	184
Future Volume (vph)	219	288	1	0	354	130	3	0	10	113	0	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	100%	0%	7%	4%	0%	0%	0%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	32.4	31.9			15.4	15.4		8.9				9.1
Actuated g/C Ratio	0.58	0.57			0.27	0.27		0.16				0.16
v/c Ratio	0.40	0.16			0.41	0.26		0.04				0.52
Control Delay	8.3	6.1			19.1	5.6		0.2				12.6
Queue Delay	0.0	0.0			0.0	0.0		0.0				0.0
Total Delay	8.3	6.1			19.1	5.6		0.2				12.6
LOS	A	A			B	A		A				B
Approach Delay		7.0			15.5			0.3				12.6
Approach LOS		A			B			A				B

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 56.2

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 11.4

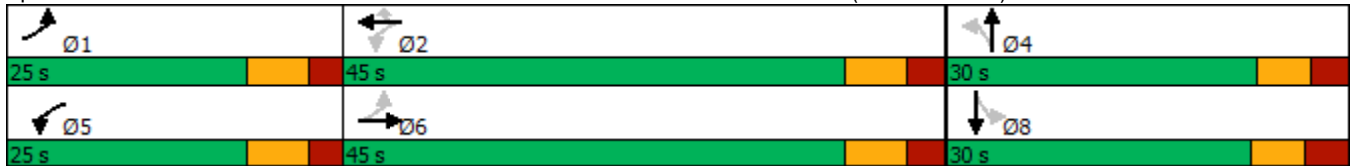
Intersection LOS: B

Intersection Capacity Utilization 56.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary

1-EXISTING-AM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	
Traffic Volume (veh/h)	219	288	1	0	354	130	3	0	10	113	0	184
Future Volume (veh/h)	219	288	1	0	354	130	3	0	10	113	0	184
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	1856	1811	1811	1900	1796	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	228	300	1	0	369	135	3	0	10	118	0	192
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	6	6	0	7	4	0	0	0	0	0	0
Cap, veh/h	522	1882	6	441	947	433	104	35	188	363	0	272
Arrive On Green	0.12	0.54	0.54	0.00	0.28	0.28	0.19	0.00	0.19	0.19	0.00	0.19
Sat Flow, veh/h	1767	3518	12	1810	3413	1560	117	187	1013	1237	0	1465
Grp Volume(v), veh/h	228	147	154	0	369	135	13	0	0	118	0	192
Grp Sat Flow(s),veh/h/ln	1767	1721	1809	1810	1706	1560	1318	0	0	1237	0	1465
Q Serve(g_s), s	4.5	2.3	2.3	0.0	4.7	3.7	0.0	0.0	0.0	0.0	0.0	6.6
Cycle Q Clear(g_c), s	4.5	2.3	2.3	0.0	4.7	3.7	6.7	0.0	0.0	5.1	0.0	6.6
Prop In Lane	1.00		0.01	1.00		1.00	0.23		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	522	921	968	441	947	433	326	0	0	363	0	272
V/C Ratio(X)	0.44	0.16	0.16	0.00	0.39	0.31	0.04	0.00	0.00	0.33	0.00	0.71
Avail Cap(c_a), veh/h	884	1187	1248	1033	2355	1076	685	0	0	695	0	613
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	6.4	6.4	0.0	15.8	15.4	18.1	0.0	0.0	20.0	0.0	20.6
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.0	0.3	0.4	0.0	0.0	0.0	0.5	0.0	3.4
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	0.6	0.6	0.0	1.5	1.1	0.1	0.0	0.0	1.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	6.5	6.5	0.0	16.1	15.9	18.1	0.0	0.0	20.5	0.0	24.0
LnGrp LOS	B	A	A	A	B	B	B	A	A	C	A	C
Approach Vol, veh/h		529			504			13				310
Approach Delay, s/veh		8.4			16.0			18.1				22.7
Approach LOS		A			B			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	22.7		17.4	0.0	36.6		17.4				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	6.5	6.7		8.7	0.0	4.3		8.6				
Green Ext Time (p_c), s	0.5	2.7		0.0	0.0	1.6		1.5				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Traffic Volume (vph)	5	361	64	35	376	4	109	0	66	1	0	3
Future Volume (vph)	5	361	64	35	376	4	109	0	66	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	6%	3%	4%	5%	0%	4%	0%	7%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	21.9	21.4		23.7	24.0			10.2	10.2			10.3
Actuated g/C Ratio	0.48	0.47		0.52	0.52			0.22	0.22			0.22
v/c Ratio	0.01	0.28		0.07	0.23			0.38	0.16			0.01
Control Delay	7.2	12.8		7.2	10.4			21.5	1.9			0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	7.2	12.8		7.2	10.4			21.5	1.9			0.0
LOS	A	B		A	B			C	A			A
Approach Delay		12.7			10.1			14.1				
Approach LOS		B			B			B				

Intersection Summary

Area Type: Other  
Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-AM

01/04/2021

Actuated Cycle Length: 45.8

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 11.8

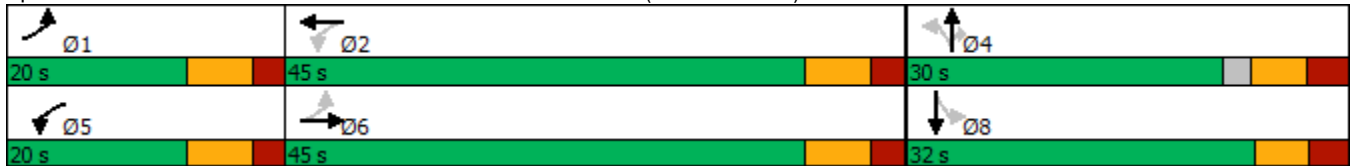
Intersection LOS: B

Intersection Capacity Utilization 47.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↕	
Traffic Volume (veh/h)	5	361	64	35	376	4	109	0	66	1	0	3
Future Volume (veh/h)	5	361	64	35	376	4	109	0	66	1	0	3
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	1900	1811	1811	1841	1826	1826	1900	1900	1796	1900	1900	1900
Adj Flow Rate, veh/h	5	372	66	36	388	4	112	0	68	1	0	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	6	6	4	5	5	0	0	7	0	0	0
Cap, veh/h	554	1079	190	475	1078	11	363	0	228	119	33	181
Arrive On Green	0.10	0.37	0.37	0.04	0.31	0.31	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1810	2925	514	1753	3518	36	1441	0	1522	180	223	1208
Grp Volume(v), veh/h	5	217	221	36	191	201	112	0	68	4	0	0
Grp Sat Flow(s),veh/h/ln	1810	1721	1719	1753	1735	1819	1441	0	1522	1610	0	0
Q Serve(g_s), s	0.1	4.5	4.5	0.7	4.2	4.2	3.4	0.0	1.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.5	4.5	0.7	4.2	4.2	3.5	0.0	1.9	0.1	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.02	1.00		1.00	0.25		0.75
Lane Grp Cap(c), veh/h	554	635	634	475	532	558	363	0	228	334	0	0
V/C Ratio(X)	0.01	0.34	0.35	0.08	0.36	0.36	0.31	0.00	0.30	0.01	0.00	0.00
Avail Cap(c_a), veh/h	850	1322	1320	871	1333	1398	817	0	709	888	0	0
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	0.00
Uniform Delay (d), s/veh	8.8	11.2	11.2	10.7	13.2	13.2	19.1	0.0	18.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.3	0.1	0.4	0.4	0.5	0.0	0.7	0.0	0.0	0.0
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	0.0	1.3	1.3	0.2	1.3	1.4	1.1	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	11.5	11.5	10.8	13.6	13.6	19.6	0.0	19.2	17.7	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		443			428			180				4
Approach Delay, s/veh		11.5			13.4			19.5				17.7
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		14.5	8.9	25.5		14.5				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.1	6.2		5.5	2.7	6.5		2.1				
Green Ext Time (p_c), s	0.0	2.1		0.7	0.0	2.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

1-EXISTING-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	21	100	185	27	0	86	0	246	1	0	1
Future Volume (vph)	0	21	100	185	27	0	86	0	246	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	24%	2%	4%	7%	0%	5%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.2% ICU Level of Service A
Analysis Period (min)	15



Intersection												
Int Delay, s/veh	9.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	21	100	185	27	0	86	0	246	1	0	1
Future Vol, veh/h	0	21	100	185	27	0	86	0	246	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
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, %	0	24	2	4	7	0	5	0	2	0	0	0
Mvmt Flow	0	23	109	201	29	0	93	0	267	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	29	0	0	132	0	0	510	509	78	642	563	29
Stage 1	-	-	-	-	-	-	78	78	-	431	431	-
Stage 2	-	-	-	-	-	-	432	431	-	211	132	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.15	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.545	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1597	-	-	1441	-	-	469	470	983	390	438	1052
Stage 1	-	-	-	-	-	-	923	834	-	607	586	-
Stage 2	-	-	-	-	-	-	596	586	-	796	791	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1597	-	-	1441	-	-	417	403	983	253	376	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	403	-	253	376	-
Stage 1	-	-	-	-	-	-	923	834	-	607	503	-
Stage 2	-	-	-	-	-	-	511	503	-	579	791	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			6.9			14.7			13.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	727	1597	-	-	1441	-	-	408
HCM Lane V/C Ratio	0.496	-	-	-	0.14	-	-	0.005
HCM Control Delay (s)	14.7	0	-	-	7.9	0	-	13.9
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	2.8	0	-	-	0.5	-	-	0

Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1

1-EXISTING-AM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	411	488	0	0	0
Future Volume (vph)	0	411	488	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.8% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	411	488	0	0	0
Future Vol, veh/h	0	411	488	0	0	0
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	0	447	530	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 265
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.32
Pot Cap-1 Maneuver	0	-	-	-	0 733
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 733
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

1-EXISTING-AM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↑		↑
Traffic Volume (vph)	0	411	488	0	0	0
Future Volume (vph)	0	411	488	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.7%
Analysis Period (min)	15
	ICU Level of Service A



Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	411	488	0	0	0
Future Vol, veh/h	0	411	488	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	24	-	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	0	447	530	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 265
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.92
Pot Cap-1 Maneuver	0	-	-	-	0 625
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 625
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3

1-EXISTING-AM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	349	0	0	285
Future Volume (vph)	0	0	349	0	0	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	0	349	0	0	285
Future Vol, veh/h	0	0	349	0	0	285
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	-	-	-	-	-
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	0	0	379	0	0	310

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	689	379	0	0	379	0
Stage 1	379	-	-	-	-	-
Stage 2	310	-	-	-	-	-
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	412	668	-	-	1179	-
Stage 1	692	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	412	668	-	-	1179	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1179
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings  
 10: MICRO RACETRACK RD & Driveway 4

1-EXISTING-AM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	349	0	0	285
Future Volume (vph)	0	0	349	0	0	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.7%
Analysis Period (min)	15
	ICU Level of Service A



Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	349	0	0	285
Future Vol, veh/h	0	0	349	0	0	285
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	-	-	-	-	-
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	0	0	379	0	0	310

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	689	379	0	0	379	0
Stage 1	379	-	-	-	-	-
Stage 2	310	-	-	-	-	-
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	412	668	-	-	1179	-
Stage 1	692	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	412	668	-	-	1179	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1179
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	134	157	142	57	136	148	160	68	106	118	117	40
Average Queue (ft)	54	79	57	21	64	67	76	18	42	67	52	10
95th Queue (ft)	106	134	116	44	121	126	135	47	85	109	99	25
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	106	160	147	82
Average Queue (ft)	42	98	75	40
95th Queue (ft)	87	148	133	69
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	65	135	134	54	80	107	124	55	100	118	109	65
Average Queue (ft)	22	52	53	16	26	41	51	15	40	49	48	30
95th Queue (ft)	53	109	113	40	59	89	103	40	80	92	90	56
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	48	133	120	44	69	107	108	47	88	75	68
Average Queue (ft)	10	45	42	5	17	35	44	8	28	26	26
95th Queue (ft)	34	100	95	25	48	83	96	31	65	62	56
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB	
Directions Served	L	T	TR	T	T	R	LTR	LT	TR	
Maximum Queue (ft)	151	90	121	120	124	86	37	124	129	
Average Queue (ft)	69	23	38	63	59	38	11	57	56	
95th Queue (ft)	124	65	85	107	106	72	33	107	102	
Link Distance (ft)		1394	1394	161	161	161	678	264	264	
Upstream Blk Time (%)				0	0					
Queuing Penalty (veh)				0	0					
Storage Bay Dist (ft)	500									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	TR	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	21	131	101	54	71	106	112	67	39	
Average Queue (ft)	2	62	27	14	21	38	46	28	4	
95th Queue (ft)	11	115	68	39	55	82	84	58	22	
Link Distance (ft)		2103	2103		1078	1078	641		3412	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	240			400				160		
Storage Blk Time (%)							0			
Queuing Penalty (veh)							0			

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	11	70	182	30
Average Queue (ft)	0	19	86	2
95th Queue (ft)	7	53	142	14
Link Distance (ft)	2603	2539	8606	706
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)



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Intersection: 9: MICRO RACETRACK RD & Driveway 3

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Intersection: 10: MICRO RACETRACK RD & Driveway 4

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Network Summary

Network wide Queuing Penalty: 0

Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

1-EXISTING-PM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	103	474	78	136	385	112	97	266	81	93	409	68
Future Volume (vph)	103	474	78	136	385	112	97	266	81	93	409	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	5%	8%	2%	4%	5%	4%	1%	5%	4%	1%	8%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	12.6	26.7	26.7	14.5	28.6	28.6	27.7	19.5	19.5	28.6	19.9	19.9
Actuated g/C Ratio	0.12	0.26	0.26	0.14	0.28	0.28	0.27	0.19	0.19	0.28	0.20	0.20
v/c Ratio	0.50	0.55	0.17	0.56	0.41	0.21	0.35	0.41	0.19	0.28	0.61	0.16
Control Delay	51.7	36.2	2.1	50.9	32.3	1.2	26.8	38.5	0.9	25.2	41.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.7	36.2	2.1	50.9	32.3	1.2	26.8	38.5	0.9	25.2	41.8	0.8
LOS	D	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		34.6			30.8			29.1			34.2	
Approach LOS		C			C			C			C	

Intersection Summary

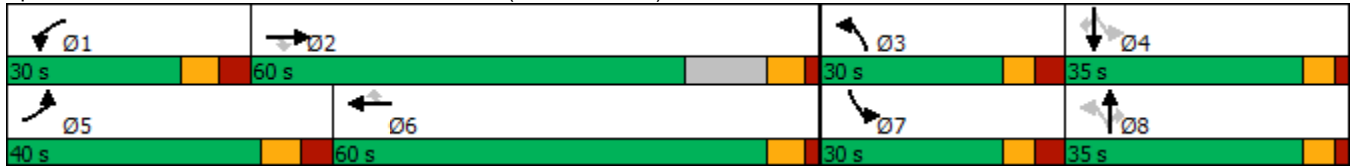
Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 101  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.61

Lanes, Volumes, Timings  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021





























Intersection Signal Delay: 32.4 Intersection LOS: C  
 Intersection Capacity Utilization 69.9% ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	103	474	78	136	385	112	97	266	81	93	409	68
Future Volume (veh/h)	103	474	78	136	385	112	97	266	81	93	409	68
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	1841	1826	1781	1870	1841	1826	1841	1885	1826	1841	1885	1781
Adj Flow Rate, veh/h	108	499	82	143	405	118	102	280	85	98	431	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	5	8	2	4	5	4	1	5	4	1	8
Cap, veh/h	142	1025	446	182	1108	490	277	650	281	328	647	273
Arrive On Green	0.08	0.30	0.30	0.10	0.32	0.32	0.08	0.18	0.18	0.07	0.18	0.18
Sat Flow, veh/h	1753	3469	1510	1781	3497	1547	1753	3582	1547	1753	3582	1510
Grp Volume(v), veh/h	108	499	82	143	405	118	102	280	85	98	431	72
Grp Sat Flow(s),veh/h/ln	1753	1735	1510	1781	1749	1547	1753	1791	1547	1753	1791	1510
Q Serve(g_s), s	5.1	10.0	3.4	6.6	7.6	4.8	3.9	5.9	4.0	3.7	9.5	3.5
Cycle Q Clear(g_c), s	5.1	10.0	3.4	6.6	7.6	4.8	3.9	5.9	4.0	3.7	9.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	1025	446	182	1108	490	277	650	281	328	647	273
V/C Ratio(X)	0.76	0.49	0.18	0.78	0.37	0.24	0.37	0.43	0.30	0.30	0.67	0.26
Avail Cap(c_a), veh/h	649	2181	949	448	2199	973	606	1228	530	657	1228	517
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	24.5	22.2	37.1	22.3	21.4	25.5	30.7	30.0	25.1	32.3	29.8
Incr Delay (d2), s/veh	9.7	0.5	0.3	8.6	0.3	0.4	1.0	0.6	0.9	0.6	1.7	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	2.5	3.9	1.2	3.2	2.9	1.7	1.6	2.5	1.5	1.5	4.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.8	25.0	22.5	45.7	22.6	21.7	26.5	31.4	30.8	25.7	34.0	30.5
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		689			666			467			601	
Approach Delay, s/veh		28.3			27.4			30.2			32.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	31.8	14.2	21.3	15.5	33.6	14.1	21.4				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	8.6	12.0	5.9	11.5	7.1	9.6	5.7	7.9				
Green Ext Time (p_c), s	0.3	5.4	0.3	3.8	0.3	4.5	0.2	2.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				29.4								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	335	68	83	430	52	101	57	57	57	39	58
Future Volume (vph)	51	335	68	83	430	52	101	57	57	57	39	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969			1249	
Travel Time (s)		10.0			15.6			26.4			34.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	5%	3%	2%	5%	6%	4%	0%	0%	2%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8		5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effct Green (s)	25.1	19.6	19.6	26.1	20.1	20.1	30.1	29.3			14.0	14.0
Actuated g/C Ratio	0.33	0.26	0.26	0.35	0.27	0.27	0.40	0.39			0.19	0.19
v/c Ratio	0.15	0.42	0.16	0.21	0.51	0.12	0.23	0.17			0.42	0.17
Control Delay	14.7	26.9	3.2	15.1	27.4	1.2	18.3	13.1			36.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	14.7	26.9	3.2	15.1	27.4	1.2	18.3	13.1			36.1	2.0
LOS	B	C	A	B	C	A	B	B			D	A
Approach Delay		22.0			23.1			15.5			23.2	
Approach LOS		C			C			B			C	

Intersection Summary	
Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	75.2
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-PM

01/04/2021

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 21.6

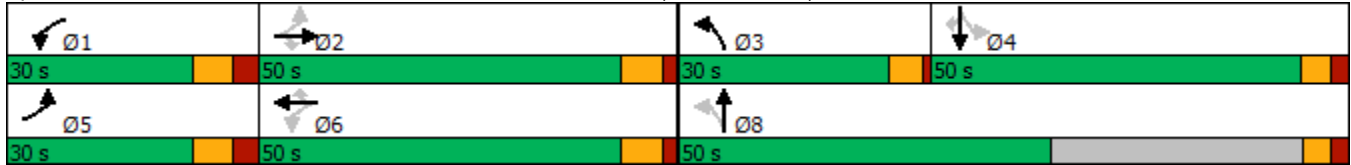
Intersection LOS: C

Intersection Capacity Utilization 46.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↗	↘
Traffic Volume (veh/h)	51	335	68	83	430	52	101	57	57	57	39	58
Future Volume (veh/h)	51	335	68	83	430	52	101	57	57	57	39	58
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	1856	1826	1856	1870	1826	1811	1841	1900	1900	1856	1856	1856
Adj Flow Rate, veh/h	55	364	74	90	467	57	110	62	62	62	42	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	5	3	2	5	6	4	0	0	3	3	3
Cap, veh/h	365	919	417	416	974	431	363	265	265	202	111	220
Arrive On Green	0.05	0.26	0.26	0.07	0.28	0.28	0.08	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1767	3469	1572	1781	3469	1535	1753	872	872	718	795	1572
Grp Volume(v), veh/h	55	364	74	90	467	57	110	0	124	104	0	63
Grp Sat Flow(s),veh/h/ln	1767	1735	1572	1781	1735	1535	1753	0	1743	1514	0	1572
Q Serve(g_s), s	1.2	4.9	2.1	2.0	6.3	1.6	2.8	0.0	3.0	2.1	0.0	2.0
Cycle Q Clear(g_c), s	1.2	4.9	2.1	2.0	6.3	1.6	2.8	0.0	3.0	3.4	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	0.60		1.00
Lane Grp Cap(c), veh/h	365	919	417	416	974	431	363	0	531	313	0	220
V/C Ratio(X)	0.15	0.40	0.18	0.22	0.48	0.13	0.30	0.00	0.23	0.33	0.00	0.29
Avail Cap(c_a), veh/h	964	2647	1200	992	2647	1171	1003	0	1361	1237	0	1225
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	14.0	17.1	16.1	13.5	16.9	15.2	17.2	0.0	14.7	22.3	0.0	21.8
Incr Delay (d2), s/veh	0.3	0.6	0.4	0.4	0.8	0.3	0.7	0.0	0.5	1.3	0.0	1.5
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	0.4	1.7	0.7	0.7	2.2	0.5	1.1	0.0	1.2	1.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	17.7	16.5	13.9	17.7	15.5	17.9	0.0	15.2	23.6	0.0	23.3
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		493			614			234				167
Approach Delay, s/veh		17.1			17.0			16.5				23.5
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	21.8	9.3	13.8	10.8	22.7		23.1				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	4.0	6.9	4.8	5.4	3.2	8.3		5.0				
Green Ext Time (p_c), s	0.3	5.2	0.4	1.8	0.1	6.5		1.5				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

1-EXISTING-PM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	487	14	46	507	73	19	28	49	64	19	32
Future Volume (vph)	41	487	14	46	507	73	19	28	49	64	19	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	6%	0%	9%	3%	7%	0%	0%	2%	2%	5%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.9	31.5	31.5	34.3	33.6	33.6		12.4			12.4	12.4
Actuated g/C Ratio	0.56	0.54	0.54	0.59	0.57	0.57		0.21			0.21	0.21
v/c Ratio	0.07	0.27	0.02	0.09	0.26	0.08		0.27			0.28	0.08
Control Delay	6.0	12.2	0.0	6.1	10.8	1.8		15.9			25.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	6.0	12.2	0.0	6.1	10.8	1.8		15.9			25.0	0.3
LOS	A	B	A	A	B	A		B			C	A
Approach Delay		11.4			9.4			15.9			18.2	
Approach LOS		B			A			B			B	

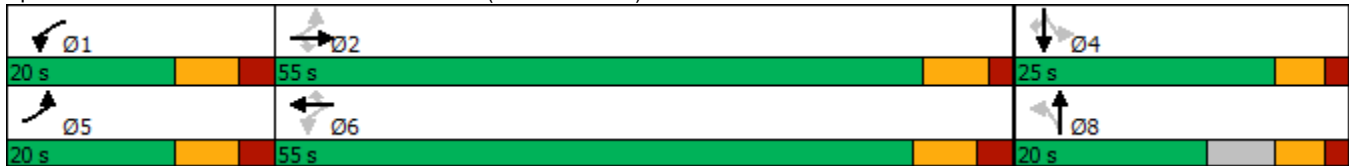
Intersection Summary

Area Type: Other  
Cycle Length: 100



Actuated Cycle Length: 58.5	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	487	14	46	507	73	19	28	49	64	19	32
Future Volume (veh/h)	41	487	14	46	507	73	19	28	49	64	19	32
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	1811	1900	1767	1856	1796	1900	1900	1900	1826	1826	1900
Adj Flow Rate, veh/h	42	502	14	47	523	75	20	29	51	66	20	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	6	0	9	3	7	0	0	0	5	5	0
Cap, veh/h	535	1493	699	497	1365	589	98	118	156	294	76	293
Arrive On Green	0.11	0.43	0.43	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3441	1610	1682	3526	1522	173	649	856	1070	418	1610
Grp Volume(v), veh/h	42	502	14	47	523	75	100	0	0	86	0	33
Grp Sat Flow(s),veh/h/ln	1781	1721	1610	1682	1763	1522	1679	0	0	1489	0	1610
Q Serve(g_s), s	0.8	6.2	0.3	1.0	6.9	2.1	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	0.8	6.2	0.3	1.0	6.9	2.1	3.2	0.0	0.0	2.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.51	0.77		1.00
Lane Grp Cap(c), veh/h	535	1493	699	497	1365	589	373	0	0	370	0	293
V/C Ratio(X)	0.08	0.34	0.02	0.09	0.38	0.13	0.27	0.00	0.00	0.23	0.00	0.11
Avail Cap(c_a), veh/h	686	2569	1202	719	2588	1118	437	0	0	531	0	481
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	12.1	10.4	10.2	14.2	12.8	22.9	0.0	0.0	22.7	0.0	22.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.3	0.0	0.1
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	0.2	2.0	0.1	0.3	2.3	0.6	1.3	0.0	0.0	1.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	12.3	10.5	10.2	14.5	12.9	23.2	0.0	0.0	23.0	0.0	22.2
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		558			645			100				119
Approach Delay, s/veh		12.0			14.0			23.2				22.7
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.6		17.5	14.5	32.6		17.5				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	3.0	8.2		4.7	2.8	8.9		5.2				
Green Ext Time (p_c), s	0.0	5.0		0.4	0.0	5.5		0.3				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↕		↙	↕	↗		↕			↕	
Traffic Volume (vph)	183	396	4	7	377	109	1	1	0	174	0	257
Future Volume (vph)	183	396	4	7	377	109	1	1	0	174	0	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	0%	0%	4%	4%	0%	0%	0%	2%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	32.4	29.7		21.8	15.6	15.6		9.5				10.6
Actuated g/C Ratio	0.56	0.51		0.38	0.27	0.27		0.16				0.18
v/c Ratio	0.35	0.24		0.02	0.44	0.22		0.01				0.63
Control Delay	8.6	9.9		7.9	20.3	5.2		21.0				13.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Delay	8.6	9.9		7.9	20.3	5.2		21.0				13.2
LOS	A	A		A	C	A		C				B
Approach Delay		9.5			16.7			21.0				13.2
Approach LOS		A			B			C				B

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 57.8

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 12.9

Intersection LOS: B

Intersection Capacity Utilization 58.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary

1-EXISTING-PM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	396	4	7	377	109	1	1	0	174	0	257
Future Volume (veh/h)	183	396	4	7	377	109	1	1	0	174	0	257
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	1841	1841	1841	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	193	417	4	7	397	115	1	1	0	183	0	271
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	4	4	0	0	0	0	0	0
Cap, veh/h	465	1287	12	397	909	406	143	114	0	416	0	354
Arrive On Green	0.11	0.36	0.36	0.01	0.26	0.26	0.24	0.24	0.00	0.24	0.00	0.24
Sat Flow, veh/h	1753	3549	34	1810	3497	1560	203	474	0	1207	0	1465
Grp Volume(v), veh/h	193	205	216	7	397	115	2	0	0	183	0	271
Grp Sat Flow(s),veh/h/ln	1753	1749	1835	1810	1749	1560	677	0	0	1207	0	1465
Q Serve(g_s), s	4.4	4.9	4.9	0.2	5.5	3.4	0.0	0.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	4.4	4.9	4.9	0.2	5.5	3.4	9.9	0.0	0.0	8.6	0.0	9.9
Prop In Lane	1.00		0.02	1.00		1.00	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	634	665	397	909	406	257	0	0	416	0	354
V/C Ratio(X)	0.41	0.32	0.32	0.02	0.44	0.28	0.01	0.00	0.00	0.44	0.00	0.77
Avail Cap(c_a), veh/h	810	1131	1186	938	2261	1009	479	0	0	633	0	574
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	13.3	13.3	15.5	17.8	17.1	17.2	0.0	0.0	19.9	0.0	20.4
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.0	0.3	0.4	0.0	0.0	0.0	0.7	0.0	3.5
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	1.4	1.6	1.7	0.1	1.9	1.1	0.0	0.0	0.0	2.1	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	13.6	13.6	15.5	18.1	17.4	17.2	0.0	0.0	20.6	0.0	23.8
LnGrp LOS	B	B	B	B	B	B	B	A	A	C	A	C
Approach Vol, veh/h		614			519			2				454
Approach Delay, s/veh		13.5			18.0			17.2				22.5
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	22.7		21.3	7.7	28.6		21.3				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	6.4	7.5		11.9	2.2	6.9		11.9				
Green Ext Time (p_c), s	0.4	2.8		0.0	0.0	2.3		2.0				

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Traffic Volume (vph)	11	457	94	49	425	2	55	0	30	2	0	5
Future Volume (vph)	11	457	94	49	425	2	55	0	30	2	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	5%	1%	0%	3%	0%	3%	0%	26%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	27.7	28.0		31.4	33.5			8.9	8.9			9.0
Actuated g/C Ratio	0.58	0.58		0.65	0.70			0.19	0.19			0.19
v/c Ratio	0.02	0.29		0.08	0.19			0.21	0.09			0.02
Control Delay	5.9	12.1		5.4	7.4			22.0	0.6			0.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	5.9	12.1		5.4	7.4			22.0	0.6			0.1
LOS	A	B		A	A			C	A			A
Approach Delay		11.9			7.2			14.4				0.1
Approach LOS		B			A			B				A

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-PM

01/04/2021

Actuated Cycle Length: 48

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 10.1

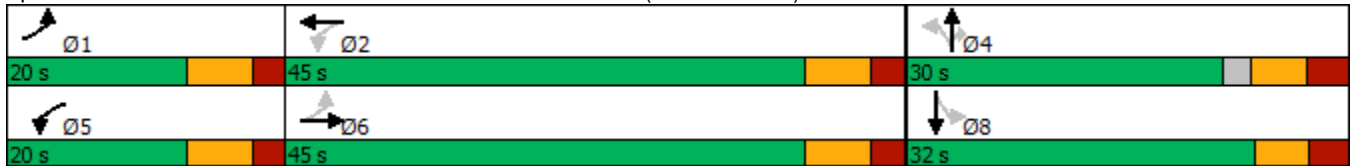
Intersection LOS: B

Intersection Capacity Utilization 47.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

1-EXISTING-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	
Traffic Volume (veh/h)	11	457	94	49	425	2	55	0	30	2	0	5
Future Volume (veh/h)	11	457	94	49	425	2	55	0	30	2	0	5
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	1900	1826	1826	1900	1856	1856	1900	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	11	476	98	51	443	2	57	0	31	2	0	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	3	3	0	0	26	0	0	0
Cap, veh/h	556	1064	218	454	1141	5	326	0	155	122	31	139
Arrive On Green	0.11	0.37	0.37	0.05	0.32	0.32	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1810	2868	587	1810	3599	16	1445	0	1284	203	260	1157
Grp Volume(v), veh/h	11	287	287	51	217	228	57	0	31	7	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1720	1810	1763	1853	1445	0	1284	1619	0	0
Q Serve(g_s), s	0.2	5.9	6.0	0.9	4.5	4.5	1.5	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.9	6.0	0.9	4.5	4.5	1.7	0.0	1.0	0.2	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.01	1.00		1.00	0.29		0.71
Lane Grp Cap(c), veh/h	556	644	638	454	559	587	326	0	155	293	0	0
V/C Ratio(X)	0.02	0.45	0.45	0.11	0.39	0.39	0.17	0.00	0.20	0.02	0.00	0.00
Avail Cap(c_a), veh/h	862	1379	1367	858	1401	1473	845	0	619	923	0	0
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	0.00
Uniform Delay (d), s/veh	8.1	11.2	11.2	9.8	12.6	12.6	19.0	0.0	18.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.5	0.1	0.4	0.4	0.3	0.0	0.6	0.0	0.0	0.0
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	0.0	1.7	1.7	0.3	1.4	1.5	0.5	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	11.7	11.7	9.9	13.0	13.0	19.3	0.0	19.4	18.4	0.0	0.0
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	A
Approach Vol, veh/h		585			496			88				7
Approach Delay, s/veh		11.6			12.7			19.3				18.4
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		12.9	9.4	25.0		12.9				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.2	6.5		3.7	2.9	8.0		2.2				
Green Ext Time (p_c), s	0.0	2.4		0.3	0.0	3.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

1-EXISTING-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	42	91	354	22	0	104	0	216	0	0	0
Future Volume (vph)	0	42	91	354	22	0	104	0	216	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	9%	2%	9%	0%	1%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.6% ICU Level of Service B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	14.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	42	91	354	22	0	104	0	216	0	0	0
Future Vol, veh/h	0	42	91	354	22	0	104	0	216	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	2	9	2	9	0	1	0	3	0	0	0
Mvmt Flow	0	43	94	365	23	0	107	0	223	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	137	0	0	843	843	90	955	890	23
Stage 1	-	-	-	-	-	-	90	90	-	753	753	-
Stage 2	-	-	-	-	-	-	753	753	-	202	137	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1605	-	-	1447	-	-	285	303	965	240	284	1060
Stage 1	-	-	-	-	-	-	920	824	-	405	420	-
Stage 2	-	-	-	-	-	-	403	420	-	805	787	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1605	-	-	1447	-	-	229	226	965	148	212	1060
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	226	-	148	212	-
Stage 1	-	-	-	-	-	-	920	824	-	405	313	-
Stage 2	-	-	-	-	-	-	300	313	-	619	787	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.8	28.5	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	472	1605	-	-	1447	-	-	-
HCM Lane V/C Ratio	0.699	-	-	-	0.252	-	-	-
HCM Control Delay (s)	28.5	0	-	-	8.3	0	-	0
HCM Lane LOS	D	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	5.4	0	-	-	1	-	-	-

Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1

1-EXISTING-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	570	485	0	0	0
Future Volume (vph)	0	570	485	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	570	485	0	0	0
Future Vol, veh/h	0	570	485	0	0	0
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	0	620	527	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

1-EXISTING-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↗		↗
Traffic Volume (vph)	0	570	485	0	0	0
Future Volume (vph)	0	570	485	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	570	485	0	0	0
Future Vol, veh/h	0	570	485	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	24	-	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	0	620	527	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 264
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.92
Pot Cap-1 Maneuver	0	-	-	-	0 626
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 626
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3

1-EXISTING-PM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	293	0	0	445
Future Volume (vph)	0	0	293	0	0	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.8% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	0	293	0	0	445
Future Vol, veh/h	0	0	293	0	0	445
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	-	-	-	-	-
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	0	0	318	0	0	484

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	802	318	0	0	318	0
Stage 1	318	-	-	-	-	-
Stage 2	484	-	-	-	-	-
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	353	723	-	-	1242	-
Stage 1	738	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	353	723	-	-	1242	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	620	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1242
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings  
 10: MICRO RACETRACK RD & Driveway 4

1-EXISTING-PM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	293	0	0	445
Future Volume (vph)	0	0	293	0	0	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	26.8%
Analysis Period (min)	15
	ICU Level of Service A



Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	293	0	0	445
Future Vol, veh/h	0	0	293	0	0	445
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	-	-	-	-	-
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	0	0	318	0	0	484

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	802	318	0	0	318	0
Stage 1	318	-	-	-	-	-
Stage 2	484	-	-	-	-	-
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	353	723	-	-	1242	-
Stage 1	738	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	353	723	-	-	1242	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	620	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1242
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	179	227	212	64	216	176	188	70	133	131	134	67
Average Queue (ft)	76	128	105	21	93	81	93	22	52	70	56	18
95th Queue (ft)	143	196	179	48	168	145	159	52	101	118	106	44
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	126	208	197	87
Average Queue (ft)	55	127	113	32
95th Queue (ft)	103	186	180	68
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	69	144	159	57	91	151	169	52	106	99	129	69
Average Queue (ft)	25	56	57	16	32	56	64	9	53	43	57	28
95th Queue (ft)	56	121	126	41	69	119	133	30	96	83	102	58
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	65	168	161	24	79	131	139	60	96	101	41
Average Queue (ft)	20	61	53	3	23	50	55	17	37	47	17
95th Queue (ft)	51	129	123	17	57	106	113	45	75	87	42
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LTR	LT	TR
Maximum Queue (ft)	153	121	132	31	143	149	70	27	166	146
Average Queue (ft)	69	42	54	4	68	66	34	2	78	66
95th Queue (ft)	124	95	107	21	119	123	62	15	137	114
Link Distance (ft)		1394	1394	161	161	161	161	678	264	264
Upstream Blk Time (%)					0	0			0	
Queuing Penalty (veh)					0	0			0	
Storage Bay Dist (ft)	500									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	LT	R	LTR
Maximum Queue (ft)	26	179	133	50	74	95	77	69	42
Average Queue (ft)	4	64	32	17	16	33	30	21	6
95th Queue (ft)	18	133	84	41	47	76	62	56	29
Link Distance (ft)		2103	2103		1078	1078	641		3412
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	240			400			160		
Storage Blk Time (%)		0							
Queuing Penalty (veh)		0							

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	18	100	213
Average Queue (ft)	1	39	98
95th Queue (ft)	8	79	171
Link Distance (ft)	2603	2539	8606
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

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Intersection: 9: MICRO RACETRACK RD & Driveway 3

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Intersection: 10: MICRO RACETRACK RD & Driveway 4

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Network Summary

Network wide Queuing Penalty: 1



Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

2-NO BUILD-AM  
01/04/2021

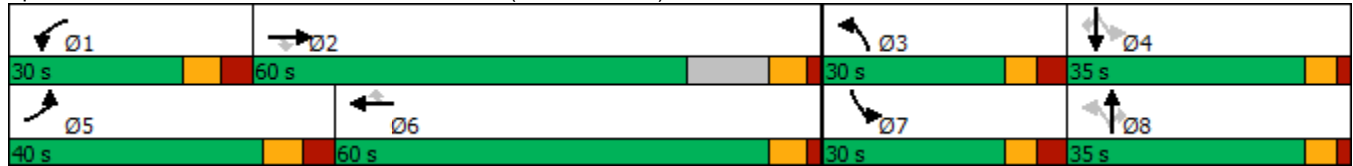


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↗	↘	↗↗	↗	↘	↗↗	↗	↘	↗↗	↗
Traffic Volume (vph)	79	321	111	99	352	91	85	264	56	76	346	125
Future Volume (vph)	79	321	111	99	352	91	85	264	56	76	346	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	7%	2%	4%	5%	6%	5%	1%	2%	7%	1%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	10.5	25.2	25.2	11.6	29.9	29.9	25.3	19.5	19.5	23.9	16.3	16.3
Actuated g/C Ratio	0.11	0.27	0.27	0.13	0.33	0.33	0.28	0.21	0.21	0.26	0.18	0.18
v/c Ratio	0.41	0.36	0.22	0.47	0.32	0.15	0.29	0.36	0.12	0.23	0.56	0.30
Control Delay	45.6	29.7	5.5	45.8	27.5	0.5	23.9	34.5	0.5	23.0	38.5	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	29.7	5.5	45.8	27.5	0.5	23.9	34.5	0.5	23.0	38.5	2.9
LOS	D	C	A	D	C	A	C	C	A	C	D	A
Approach Delay		26.9			26.3			27.6			28.2	
Approach LOS		C			C			C			C	

Intersection Summary	
Area Type:	Other
Cycle Length:	165
Actuated Cycle Length:	91.8
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.56

Intersection Signal Delay: 27.2 Intersection LOS: C  
 Intersection Capacity Utilization 66.4% ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	79	321	111	99	352	91	85	264	56	76	346	125
Future Volume (veh/h)	79	321	111	99	352	91	85	264	56	76	346	125
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	1856	1796	1870	1841	1826	1811	1826	1885	1870	1796	1885	1841
Adj Flow Rate, veh/h	81	331	114	102	363	94	88	272	58	78	357	129
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	7	2	4	5	6	5	1	2	7	1	4
Cap, veh/h	130	1072	498	138	1109	491	284	596	264	313	585	255
Arrive On Green	0.07	0.31	0.31	0.08	0.32	0.32	0.08	0.17	0.17	0.07	0.16	0.16
Sat Flow, veh/h	1767	3413	1585	1753	3469	1535	1739	3582	1585	1711	3582	1560
Grp Volume(v), veh/h	81	331	114	102	363	94	88	272	58	78	357	129
Grp Sat Flow(s),veh/h/ln	1767	1706	1585	1753	1735	1535	1739	1791	1585	1711	1791	1560
Q Serve(g_s), s	3.5	5.9	4.2	4.5	6.3	3.5	3.2	5.4	2.5	2.9	7.4	6.0
Cycle Q Clear(g_c), s	3.5	5.9	4.2	4.5	6.3	3.5	3.2	5.4	2.5	2.9	7.4	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	130	1072	498	138	1109	491	284	596	264	313	585	255
V/C Ratio(X)	0.63	0.31	0.23	0.74	0.33	0.19	0.31	0.46	0.22	0.25	0.61	0.51
Avail Cap(c_a), veh/h	695	2282	1060	469	2320	1026	639	1306	578	667	1306	569
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	20.7	20.2	35.8	20.6	19.6	24.7	29.9	28.7	24.5	30.9	30.4
Incr Delay (d2), s/veh	5.8	0.2	0.3	8.9	0.2	0.3	0.7	0.8	0.6	0.5	1.5	2.2
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	1.6	2.2	1.5	2.2	2.4	1.2	1.3	2.3	1.0	1.2	3.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	20.9	20.5	44.8	20.8	19.9	25.4	30.7	29.3	25.0	32.4	32.6
LnGrp LOS	D	C	C	D	C	B	C	C	C	C	C	C
Approach Vol, veh/h		526			559			418			564	
Approach Delay, s/veh		24.0			25.0			29.4			31.4	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	31.8	13.8	19.0	14.5	32.2	13.6	19.2				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	6.5	7.9	5.2	9.4	5.5	8.3	4.9	7.4				
Green Ext Time (p_c), s	0.2	3.7	0.2	3.6	0.2	4.0	0.2	2.5				

Intersection Summary

HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	338	69	67	371	84	77	42	91	71	19	53
Future Volume (vph)	52	338	69	67	371	84	77	42	91	71	19	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
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
Heavy Vehicles (%)	2%	5%	4%	2%	5%	5%	3%	2%	1%	6%	11%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effect Green (s)	24.6	19.4	19.4	24.8	19.5	19.5	26.2	25.3			14.8	14.8
Actuated g/C Ratio	0.35	0.27	0.27	0.35	0.28	0.28	0.37	0.36			0.21	0.21
v/c Ratio	0.14	0.41	0.16	0.17	0.43	0.19	0.19	0.22			0.41	0.14
Control Delay	14.6	26.4	3.3	14.8	26.4	5.4	17.1	8.7			34.6	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	14.6	26.4	3.3	14.8	26.4	5.4	17.1	8.7			34.6	1.2
LOS	B	C	A	B	C	A	B	A			C	A
Approach Delay		21.6			21.5			11.8			22.3	
Approach LOS		C			C			B			C	

**Intersection Summary**  
 Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 70.9  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 20.1

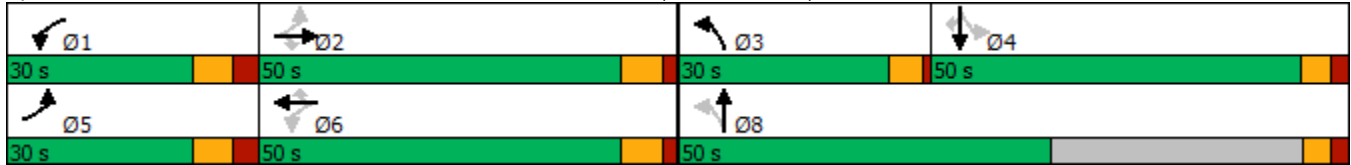
Intersection LOS: C

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↗			↘	↗
Traffic Volume (veh/h)	52	338	69	67	371	84	77	42	91	71	19	53
Future Volume (veh/h)	52	338	69	67	371	84	77	42	91	71	19	53
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	1826	1841	1870	1826	1826	1856	1870	1870	1737	1737	1856
Adj Flow Rate, veh/h	57	371	76	74	408	92	85	46	100	78	21	58
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	5	4	2	5	5	3	2	2	11	11	3
Cap, veh/h	387	936	421	411	966	431	341	156	340	246	52	224
Arrive On Green	0.05	0.27	0.27	0.06	0.28	0.28	0.07	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1781	3469	1560	1781	3469	1547	1767	525	1140	912	363	1572
Grp Volume(v), veh/h	57	371	76	74	408	92	85	0	146	99	0	58
Grp Sat Flow(s),veh/h/ln	1781	1735	1560	1781	1735	1547	1767	0	1665	1275	0	1572
Q Serve(g_s), s	1.2	4.9	2.1	1.6	5.3	2.5	2.1	0.0	3.7	3.4	0.0	1.8
Cycle Q Clear(g_c), s	1.2	4.9	2.1	1.6	5.3	2.5	2.1	0.0	3.7	3.9	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	0.79		1.00
Lane Grp Cap(c), veh/h	387	936	421	411	966	431	341	0	497	298	0	224
V/C Ratio(X)	0.15	0.40	0.18	0.18	0.42	0.21	0.25	0.00	0.29	0.33	0.00	0.26
Avail Cap(c_a), veh/h	1001	2696	1212	1010	2696	1203	1019	0	1324	1106	0	1248
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	13.4	16.6	15.6	13.2	16.4	15.4	17.0	0.0	15.0	22.0	0.0	21.2
Incr Delay (d2), s/veh	0.2	0.6	0.4	0.3	0.6	0.5	0.5	0.0	0.7	1.4	0.0	1.3
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	0.4	1.7	0.7	0.6	1.8	0.8	0.9	0.0	1.4	1.2	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	17.2	16.0	13.5	17.0	15.9	17.5	0.0	15.7	23.4	0.0	22.5
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		504			574			231				157
Approach Delay, s/veh		16.6			16.4			16.4				23.1
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	21.8	8.7	13.8	10.8	22.3		22.5				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	3.6	6.9	4.1	5.9	3.2	7.3		5.7				
Green Ext Time (p_c), s	0.2	5.3	0.3	1.7	0.2	6.0		1.9				

Intersection Summary

HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 3: FARNER PL & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	435	16	38	448	40	21	10	32	33	9	50
Future Volume (vph)	21	435	16	38	448	40	21	10	32	33	9	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	3%	12%	8%	5%	8%	19%	10%	3%	3%	0%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.1	34.3	34.3	33.4	36.2	36.2		12.8			12.8	12.8
Actuated g/C Ratio	0.62	0.66	0.66	0.64	0.70	0.70		0.25			0.25	0.25
v/c Ratio	0.04	0.21	0.02	0.07	0.21	0.04		0.19			0.15	0.12
Control Delay	5.8	9.4	0.1	5.7	7.7	0.1		14.5			21.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	5.8	9.4	0.1	5.7	7.7	0.1		14.5			21.7	0.5
LOS	A	A	A	A	A	A		B			C	A
Approach Delay		8.9			7.0			14.5			10.2	
Approach LOS		A			A			B			B	

**Intersection Summary**  
 Area Type: Other  
 Cycle Length: 100

Actuated Cycle Length: 51.9	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.21	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

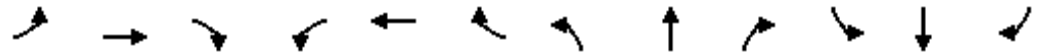
Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↖	↗
Traffic Volume (veh/h)	21	435	16	38	448	40	21	10	32	33	9	50
Future Volume (veh/h)	21	435	16	38	448	40	21	10	32	33	9	50
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	1752	1856	1722	1781	1826	1781	1752	1752	1752	1900	1900	1811
Adj Flow Rate, veh/h	24	489	18	43	503	45	24	11	36	37	10	56
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	3	12	8	5	8	10	10	10	0	0	6
Cap, veh/h	523	1550	642	508	1350	587	134	71	134	305	71	274
Arrive On Green	0.11	0.44	0.44	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1668	3526	1459	1697	3469	1510	333	398	752	1147	399	1535
Grp Volume(v), veh/h	24	489	18	43	503	45	71	0	0	47	0	56
Grp Sat Flow(s),veh/h/ln	1668	1763	1459	1697	1735	1510	1483	0	0	1546	0	1535
Q Serve(g_s), s	0.5	5.8	0.4	0.9	6.7	1.2	0.0	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	0.5	5.8	0.4	0.9	6.7	1.2	2.4	0.0	0.0	1.4	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	0.34		0.51	0.79		1.00
Lane Grp Cap(c), veh/h	523	1550	642	508	1350	587	339	0	0	376	0	274
V/C Ratio(X)	0.05	0.32	0.03	0.08	0.37	0.08	0.21	0.00	0.00	0.13	0.00	0.20
Avail Cap(c_a), veh/h	666	2644	1095	739	2559	1114	403	0	0	555	0	461
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	11.7	10.2	10.1	14.0	12.4	22.7	0.0	0.0	22.2	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.2	0.1	0.3	0.0	0.0	0.1	0.0	0.3
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	0.1	1.9	0.1	0.3	2.2	0.4	0.9	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	11.9	10.2	10.2	14.3	12.4	23.0	0.0	0.0	22.4	0.0	22.8
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		531			591			71				103
Approach Delay, s/veh		11.7			13.8			23.0				22.6
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	35.8		17.2	14.5	32.6		17.2				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	2.9	7.8		4.0	2.5	8.7		4.4				
Green Ext Time (p_c), s	0.0	4.8		0.3	0.0	5.1		0.2				

Intersection Summary

HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	291	1	0	358	131	3	0	10	113	0	184
Future Volume (vph)	221	291	1	0	358	131	3	0	10	113	0	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	100%	0%	7%	4%	0%	0%	0%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	32.5	32.0			15.4	15.4		8.9				9.1
Actuated g/C Ratio	0.58	0.57			0.27	0.27		0.16				0.16
v/c Ratio	0.41	0.16			0.42	0.26		0.04				0.52
Control Delay	8.3	6.1			19.2	5.6		0.2				12.6
Queue Delay	0.0	0.0			0.0	0.0		0.0				0.0
Total Delay	8.3	6.1			19.2	5.6		0.2				12.6
LOS	A	A			B	A		A				B
Approach Delay		7.1			15.5			0.3				12.6
Approach LOS		A			B			A				B

Intersection Summary

Area Type: Other

Cycle Length: 100



Actuated Cycle Length: 56.3

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 11.4

Intersection LOS: B

Intersection Capacity Utilization 56.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

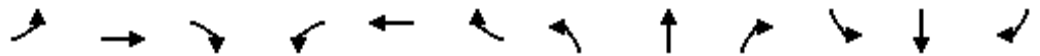


HCM 6th Signalized Intersection Summary

2-NO BUILD-AM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖		↕			↗	↖
Traffic Volume (veh/h)	221	291	1	0	358	131	3	0	10	113	0	184
Future Volume (veh/h)	221	291	1	0	358	131	3	0	10	113	0	184
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	1856	1811	1811	1900	1796	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	230	303	1	0	373	136	3	0	10	118	0	192
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	6	6	0	7	4	0	0	0	0	0	0
Cap, veh/h	521	1884	6	439	946	432	104	35	188	362	0	272
Arrive On Green	0.13	0.54	0.54	0.00	0.28	0.28	0.19	0.00	0.19	0.19	0.00	0.19
Sat Flow, veh/h	1767	3518	12	1810	3413	1560	117	187	1013	1236	0	1465
Grp Volume(v), veh/h	230	148	156	0	373	136	13	0	0	118	0	192
Grp Sat Flow(s),veh/h/ln	1767	1721	1809	1810	1706	1560	1317	0	0	1236	0	1465
Q Serve(g_s), s	4.5	2.4	2.4	0.0	4.8	3.7	0.0	0.0	0.0	0.0	0.0	6.6
Cycle Q Clear(g_c), s	4.5	2.4	2.4	0.0	4.8	3.7	6.7	0.0	0.0	5.1	0.0	6.6
Prop In Lane	1.00		0.01	1.00		1.00	0.23		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	521	921	969	439	946	432	326	0	0	362	0	272
V/C Ratio(X)	0.44	0.16	0.16	0.00	0.39	0.31	0.04	0.00	0.00	0.33	0.00	0.71
Avail Cap(c_a), veh/h	881	1186	1247	1031	2352	1075	684	0	0	694	0	612
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	6.4	6.4	0.0	15.9	15.5	18.1	0.0	0.0	20.0	0.0	20.7
Incr Delay (d2), s/veh	0.6	0.1	0.1	0.0	0.3	0.4	0.0	0.0	0.0	0.5	0.0	3.4
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	0.6	0.6	0.0	1.6	1.1	0.1	0.0	0.0	1.3	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	6.5	6.5	0.0	16.1	15.9	18.2	0.0	0.0	20.5	0.0	24.0
LnGrp LOS	B	A	A	A	B	B	B	A	A	C	A	C
Approach Vol, veh/h		534			509			13				310
Approach Delay, s/veh		8.4			16.1			18.2				22.7
Approach LOS		A			B			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	22.7		17.4	0.0	36.7		17.4				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	6.5	6.8		8.7	0.0	4.4		8.6				
Green Ext Time (p_c), s	0.5	2.8		0.0	0.0	1.6		1.5				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Traffic Volume (vph)	5	365	65	66	380	4	109	0	66	1	0	3
Future Volume (vph)	5	365	65	66	380	4	109	0	66	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	6%	3%	4%	5%	0%	4%	0%	7%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	23.4	22.0		27.6	27.7			10.4	10.4			10.5
Actuated g/C Ratio	0.47	0.45		0.56	0.56			0.21	0.21			0.21
v/c Ratio	0.01	0.30		0.12	0.21			0.40	0.17			0.01
Control Delay	7.2	14.7		7.0	9.7			24.1	2.0			0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	7.2	14.7		7.0	9.7			24.1	2.0			0.0
LOS	A	B		A	A			C	A			A
Approach Delay		14.6			9.3			15.8				
Approach LOS		B			A			B				

Intersection Summary

Area Type: Other  
Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-AM

01/04/2021

Actuated Cycle Length: 49.4

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 12.5

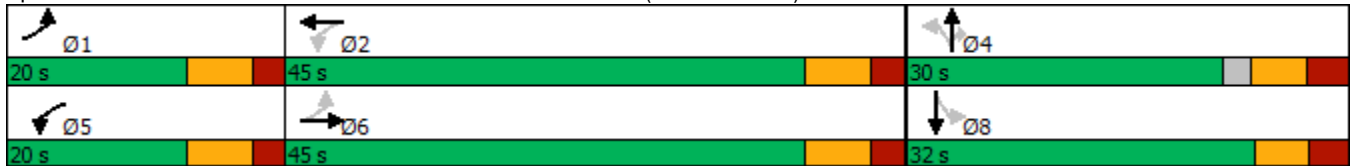
Intersection LOS: B

Intersection Capacity Utilization 47.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↑	↗		↖	
Traffic Volume (veh/h)	5	365	65	66	380	4	109	0	66	1	0	3
Future Volume (veh/h)	5	365	65	66	380	4	109	0	66	1	0	3
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	1900	1811	1811	1841	1826	1826	1900	1900	1796	1900	1900	1900
Adj Flow Rate, veh/h	5	376	67	68	392	4	112	0	68	1	0	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	6	6	4	5	5	0	0	7	0	0	0
Cap, veh/h	552	1014	179	488	1078	11	363	0	228	119	33	181
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1810	2923	516	1753	3518	36	1441	0	1522	180	223	1208
Grp Volume(v), veh/h	5	220	223	68	193	203	112	0	68	4	0	0
Grp Sat Flow(s),veh/h/ln	1810	1721	1718	1753	1735	1819	1441	0	1522	1610	0	0
Q Serve(g_s), s	0.1	4.7	4.8	1.2	4.3	4.3	3.4	0.0	1.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.7	4.8	1.2	4.3	4.3	3.5	0.0	1.9	0.1	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.02	1.00		1.00	0.25		0.75
Lane Grp Cap(c), veh/h	552	597	596	488	532	558	363	0	228	334	0	0
V/C Ratio(X)	0.01	0.37	0.37	0.14	0.36	0.36	0.31	0.00	0.30	0.01	0.00	0.00
Avail Cap(c_a), veh/h	848	1322	1320	845	1333	1398	817	0	709	888	0	0
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	0.00
Uniform Delay (d), s/veh	8.8	12.0	12.0	10.2	13.2	13.2	19.1	0.0	18.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	0.1	0.4	0.4	0.5	0.0	0.7	0.0	0.0	0.0
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	0.0	1.4	1.4	0.4	1.3	1.4	1.1	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	12.3	12.4	10.4	13.7	13.6	19.6	0.0	19.2	17.7	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		448			464			180				4
Approach Delay, s/veh		12.3			13.2			19.5				17.7
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		14.5	10.0	24.4		14.5				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.1	6.3		5.5	3.2	6.8		2.1				
Green Ext Time (p_c), s	0.0	2.1		0.7	0.1	2.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

2-NO BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	23	108	200	29	0	93	0	266	1	0	1
Future Volume (vph)	0	23	108	200	29	0	93	0	266	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	24%	2%	4%	7%	0%	5%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

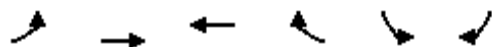
Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.5% ICU Level of Service A
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	23	108	200	29	0	93	0	266	1	0	1
Future Vol, veh/h	0	23	108	200	29	0	93	0	266	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
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, %	0	24	2	4	7	0	5	0	2	0	0	0
Mvmt Flow	0	25	117	217	32	0	101	0	289	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	142	0	0	551	550	84	694	608	32
Stage 1	-	-	-	-	-	-	84	84	-	466	466	-
Stage 2	-	-	-	-	-	-	467	466	-	228	142	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.15	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.545	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1593	-	-	1429	-	-	440	446	975	360	413	1048
Stage 1	-	-	-	-	-	-	917	829	-	581	566	-
Stage 2	-	-	-	-	-	-	570	566	-	779	783	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1593	-	-	1429	-	-	387	377	975	223	349	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	387	377	-	223	349	-
Stage 1	-	-	-	-	-	-	917	829	-	581	478	-
Stage 2	-	-	-	-	-	-	481	478	-	548	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7	16.4	14.8
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	700	1593	-	-	1429	-	-	368
HCM Lane V/C Ratio	0.557	-	-	-	0.152	-	-	0.006
HCM Control Delay (s)	16.4	0	-	-	8	0	-	14.8
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	3.5	0	-	-	0.5	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	415	493	0	0	0
Future Volume (vph)	0	415	493	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.0% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	415	493	0	0	0
Future Vol, veh/h	0	415	493	0	0	0
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	0	451	536	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 268
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.32
Pot Cap-1 Maneuver	0	-	-	-	0 730
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 730
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

2-NO BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↗		↗
Traffic Volume (vph)	0	415	493	0	0	0
Future Volume (vph)	0	415	493	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	14.8%
Analysis Period (min)	15
	ICU Level of Service A



Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	415	493	0	0	0
Future Vol, veh/h	0	415	493	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	24	-	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	0	451	536	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	- 268
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	- 7.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	- 3.92
Pot Cap-1 Maneuver	0	-	-	-	0 622
Stage 1	0	-	-	-	0 -
Stage 2	0	-	-	-	0 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	- 622
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3

2-NO BUILD-AM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	2352	0	0	308
Future Volume (vph)	0	0	2352	0	0	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	127.1% ICU Level of Service H
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	2352	0	0	308
Future Vol, veh/h	0	0	2352	0	0	308
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	-	-	-	-	-
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	0	0	2557	0	0	335

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2892	2557	0
Stage 1	2557	-	-
Stage 2	335	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	18	34	-
Stage 1	59	-	-
Stage 2	725	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	18	34	-
Mov Cap-2 Maneuver	18	-	-
Stage 1	59	-	-
Stage 2	725	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	173	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	0

Lanes, Volumes, Timings  
 10: MICRO RACETRACK RD & Driveway 4

2-NO BUILD-AM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	352	0	0	308
Future Volume (vph)	0	0	352	0	0	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	21.9% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	0	0	352	0	0	308
Future Vol, veh/h	0	0	352	0	0	308
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	-	-	-	-	-
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	0	0	383	0	0	335

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	718	383	0	0	383	0
Stage 1	383	-	-	-	-	-
Stage 2	335	-	-	-	-	-
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	396	664	-	-	1175	-
Stage 1	689	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	396	664	-	-	1175	-
Mov Cap-2 Maneuver	396	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1175
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0



Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	136	152	151	64	145	144	148	79	117	131	126	41
Average Queue (ft)	54	80	63	23	65	66	74	19	41	67	52	12
95th Queue (ft)	106	137	129	47	125	126	133	49	87	115	103	30
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	112	175	158	89
Average Queue (ft)	49	104	85	43
95th Queue (ft)	93	155	144	77
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	75	140	147	50	80	127	128	58	103	112	120	69
Average Queue (ft)	22	50	52	14	26	44	54	15	41	49	51	26
95th Queue (ft)	54	107	115	38	59	97	110	41	82	89	95	56
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	55	126	116	48	60	120	130	49	91	58	62
Average Queue (ft)	11	47	42	5	17	36	47	9	29	25	23
95th Queue (ft)	38	103	100	26	47	90	103	32	66	55	52
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	TR
Maximum Queue (ft)	181	92	99	131	125	87	40	127	118
Average Queue (ft)	73	23	37	63	60	38	11	58	57
95th Queue (ft)	137	68	80	107	110	70	33	106	99
Link Distance (ft)		1394	1394	161	161	161	678	264	264
Upstream Blk Time (%)				0	0				
Queuing Penalty (veh)				0	0				
Storage Bay Dist (ft)	500								
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	LT	R	LTR
Maximum Queue (ft)	19	159	100	71	76	109	124	66	35
Average Queue (ft)	2	69	30	23	20	39	47	29	3
95th Queue (ft)	10	133	73	51	55	84	93	57	20
Link Distance (ft)		2103	2103		1078	1078	641		3412
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	240			400				160	
Storage Blk Time (%)							0		
Queuing Penalty (veh)							0		

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	14	79	134	30
Average Queue (ft)	1	24	72	3
95th Queue (ft)	7	60	114	17
Link Distance (ft)	2603	2539	8606	706
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

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Intersection: 9: MICRO RACETRACK RD & Driveway 3

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Intersection: 10: MICRO RACETRACK RD & Driveway 4

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

---

Network Summary

Network wide Queuing Penalty: 0

Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	107	494	81	136	385	112	98	269	82	101	444	74
Future Volume (vph)	107	494	81	136	385	112	98	269	82	101	444	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	5%	8%	2%	4%	5%	4%	1%	5%	4%	1%	8%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	13.0	27.1	27.1	14.7	28.8	28.8	28.8	20.4	20.4	30.3	21.2	21.2
Actuated g/C Ratio	0.13	0.26	0.26	0.14	0.28	0.28	0.28	0.20	0.20	0.29	0.21	0.21
v/c Ratio	0.52	0.58	0.17	0.57	0.42	0.21	0.36	0.40	0.19	0.29	0.64	0.17
Control Delay	53.0	37.5	2.4	52.2	33.3	1.2	27.1	38.6	0.9	25.4	42.4	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.0	37.5	2.4	52.2	33.3	1.2	27.1	38.6	0.9	25.4	42.4	0.8
LOS	D	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		35.8			31.7			29.2			34.6	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 103  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.64



Lanes, Volumes, Timings  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

2-NO BUILD-PM

01/04/2021

Intersection Signal Delay: 33.2

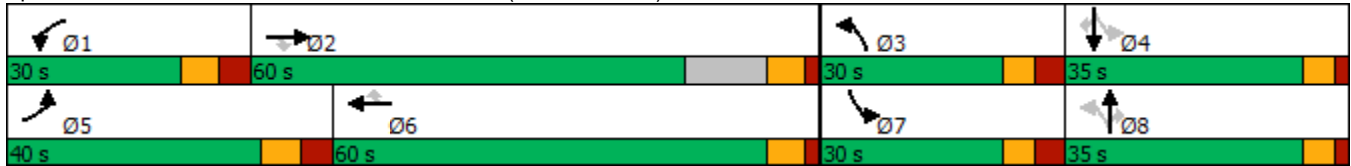
Intersection LOS: C

Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

2-NO BUILD-PM

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	107	494	81	136	385	112	98	269	82	101	444	74
Future Volume (veh/h)	107	494	81	136	385	112	98	269	82	101	444	74
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	1841	1826	1781	1870	1841	1826	1841	1885	1826	1841	1885	1781
Adj Flow Rate, veh/h	113	520	85	143	405	118	103	283	86	106	467	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	5	8	2	4	5	4	1	5	4	1	8
Cap, veh/h	148	1009	439	182	1080	478	274	685	296	337	686	289
Arrive On Green	0.08	0.29	0.29	0.10	0.31	0.31	0.07	0.19	0.19	0.07	0.19	0.19
Sat Flow, veh/h	1753	3469	1510	1781	3497	1547	1753	3582	1547	1753	3582	1510
Grp Volume(v), veh/h	113	520	85	143	405	118	103	283	86	106	467	78
Grp Sat Flow(s),veh/h/ln	1753	1735	1510	1781	1749	1547	1753	1791	1547	1753	1791	1510
Q Serve(g_s), s	5.4	10.7	3.6	6.7	7.8	4.9	3.9	6.0	4.1	4.1	10.4	3.8
Cycle Q Clear(g_c), s	5.4	10.7	3.6	6.7	7.8	4.9	3.9	6.0	4.1	4.1	10.4	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	1009	439	182	1080	478	274	685	296	337	686	289
V/C Ratio(X)	0.77	0.52	0.19	0.79	0.38	0.25	0.38	0.41	0.29	0.31	0.68	0.27
Avail Cap(c_a), veh/h	638	2147	934	441	2165	958	596	1209	522	658	1209	509
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	25.4	22.9	37.7	23.2	22.2	25.3	30.5	29.8	24.9	32.3	29.6
Incr Delay (d2), s/veh	9.5	0.6	0.3	8.7	0.3	0.4	1.0	0.6	0.8	0.6	1.7	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	2.6	4.2	1.3	3.2	3.0	1.8	1.7	2.5	1.5	1.7	4.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	26.0	23.2	46.4	23.5	22.6	26.4	31.1	30.5	25.5	34.0	30.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		718			666			472			651	
Approach Delay, s/veh		29.1			28.3			30.0			32.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	31.8	14.2	22.5	15.9	33.3	14.2	22.4				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	8.7	12.7	5.9	12.4	7.4	9.8	6.1	8.0				
Green Ext Time (p_c), s	0.3	5.6	0.3	4.1	0.3	4.5	0.3	2.8				

Intersection Summary

HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	457	70	84	434	53	101	57	57	57	39	58
Future Volume (vph)	109	457	70	84	434	53	101	57	57	57	39	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	5%	3%	2%	5%	6%	4%	0%	0%	2%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effct Green (s)	34.0	26.1	26.1	28.7	20.5	20.5	30.5	29.7			14.4	14.4
Actuated g/C Ratio	0.41	0.32	0.32	0.35	0.25	0.25	0.37	0.36			0.17	0.17
v/c Ratio	0.29	0.47	0.14	0.23	0.55	0.13	0.25	0.19			0.45	0.18
Control Delay	15.5	26.8	2.9	15.4	30.4	1.4	20.1	13.9			39.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	15.5	26.8	2.9	15.4	30.4	1.4	20.1	13.9			39.1	2.0
LOS	B	C	A	B	C	A	C	B			D	A
Approach Delay		22.2			25.5			16.8			25.1	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	82.3
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-PM

01/04/2021

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 23.0

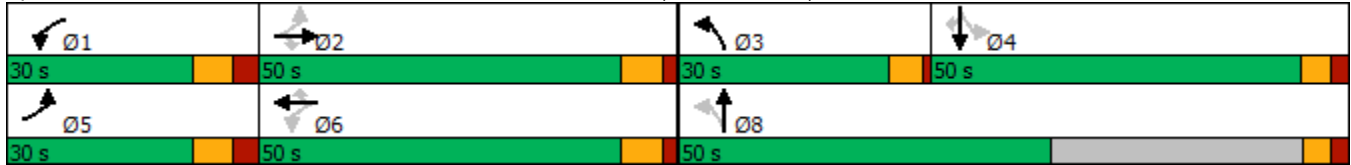
Intersection LOS: C

Intersection Capacity Utilization 47.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	457	70	84	434	53	101	57	57	57	39	58
Future Volume (veh/h)	109	457	70	84	434	53	101	57	57	57	39	58
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	1856	1826	1856	1870	1826	1811	1841	1900	1900	1856	1856	1856
Adj Flow Rate, veh/h	118	497	76	91	472	58	110	62	62	62	42	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	5	3	2	5	6	4	0	0	3	3	3
Cap, veh/h	390	963	437	374	933	413	356	261	261	198	108	215
Arrive On Green	0.08	0.28	0.28	0.07	0.27	0.27	0.08	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1767	3469	1572	1781	3469	1535	1753	872	872	721	790	1572
Grp Volume(v), veh/h	118	497	76	91	472	58	110	0	124	104	0	63
Grp Sat Flow(s),veh/h/ln	1767	1735	1572	1781	1735	1535	1753	0	1743	1512	0	1572
Q Serve(g_s), s	2.7	7.0	2.1	2.1	6.7	1.7	2.9	0.0	3.1	2.2	0.0	2.1
Cycle Q Clear(g_c), s	2.7	7.0	2.1	2.1	6.7	1.7	2.9	0.0	3.1	3.5	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	0.60		1.00
Lane Grp Cap(c), veh/h	390	963	437	374	933	413	356	0	523	307	0	215
V/C Ratio(X)	0.30	0.52	0.17	0.24	0.51	0.14	0.31	0.00	0.24	0.34	0.00	0.29
Avail Cap(c_a), veh/h	933	2591	1174	937	2591	1146	980	0	1332	1210	0	1199
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	17.6	15.9	13.9	17.9	16.1	17.7	0.0	15.3	22.9	0.0	22.4
Incr Delay (d2), s/veh	0.6	0.9	0.4	0.5	0.9	0.3	0.7	0.0	0.5	1.4	0.0	1.6
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	0.9	2.4	0.8	0.7	2.3	0.5	1.2	0.0	1.2	1.4	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	18.5	16.3	14.3	18.8	16.4	18.4	0.0	15.8	24.3	0.0	24.0
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		691			621			234				167
Approach Delay, s/veh		17.6			17.9			17.0				24.2
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	22.9	9.4	13.8	12.2	22.4		23.2				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	4.1	9.0	4.9	5.5	4.7	8.7		5.1				
Green Ext Time (p_c), s	0.3	7.1	0.4	1.8	0.4	6.5		1.5				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	492	14	46	512	74	19	28	49	64	19	32
Future Volume (vph)	41	492	14	46	512	74	19	28	49	64	19	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	6%	0%	9%	3%	7%	0%	0%	2%	2%	5%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.9	31.5	31.5	34.3	33.6	33.6		12.4			12.4	12.4
Actuated g/C Ratio	0.56	0.54	0.54	0.59	0.57	0.57		0.21			0.21	0.21
v/c Ratio	0.07	0.28	0.02	0.09	0.26	0.09		0.27			0.28	0.08
Control Delay	6.0	12.2	0.0	6.1	10.8	1.8		15.9			25.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	6.0	12.2	0.0	6.1	10.8	1.8		15.9			25.0	0.3
LOS	A	B	A	A	B	A		B			C	A
Approach Delay		11.4			9.4			15.9			18.2	
Approach LOS		B			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100

Actuated Cycle Length: 58.5	
Natural Cycle: 85	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
 01/04/2021



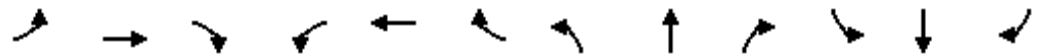
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	492	14	46	512	74	19	28	49	64	19	32
Future Volume (veh/h)	41	492	14	46	512	74	19	28	49	64	19	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1811	1900	1767	1856	1796	1900	1900	1900	1826	1826	1900
Adj Flow Rate, veh/h	42	507	14	47	528	76	20	29	51	66	20	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	6	0	9	3	7	0	0	0	5	5	0
Cap, veh/h	532	1493	699	495	1365	589	98	118	156	294	76	293
Arrive On Green	0.11	0.43	0.43	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3441	1610	1682	3526	1522	173	649	856	1070	418	1610
Grp Volume(v), veh/h	42	507	14	47	528	76	100	0	0	86	0	33
Grp Sat Flow(s),veh/h/ln	1781	1721	1610	1682	1763	1522	1679	0	0	1489	0	1610
Q Serve(g_s), s	0.8	6.3	0.3	1.0	7.0	2.1	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	0.8	6.3	0.3	1.0	7.0	2.1	3.2	0.0	0.0	2.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.51	0.77		1.00
Lane Grp Cap(c), veh/h	532	1493	699	495	1365	589	373	0	0	370	0	293
V/C Ratio(X)	0.08	0.34	0.02	0.09	0.39	0.13	0.27	0.00	0.00	0.23	0.00	0.11
Avail Cap(c_a), veh/h	684	2569	1202	717	2588	1118	437	0	0	531	0	481
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	12.1	10.4	10.2	14.3	12.8	22.9	0.0	0.0	22.7	0.0	22.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.3	0.0	0.1
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	0.2	2.0	0.1	0.3	2.4	0.6	1.3	0.0	0.0	1.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	12.3	10.5	10.2	14.5	12.9	23.2	0.0	0.0	23.0	0.0	22.2
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		563			651			100				119
Approach Delay, s/veh		12.0			14.0			23.2				22.7
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.6		17.5	14.5	32.6		17.5				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	3.0	8.3		4.7	2.8	9.0		5.2				
Green Ext Time (p_c), s	0.0	5.0		0.4	0.0	5.6		0.3				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	185	400	4	7	381	110	1	1	0	174	0	257
Future Volume (vph)	185	400	4	7	381	110	1	1	0	174	0	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	0%	0%	4%	4%	0%	0%	0%	2%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	32.7	30.1		22.1	15.8	15.8		9.5				10.6
Actuated g/C Ratio	0.56	0.52		0.38	0.27	0.27		0.16				0.18
v/c Ratio	0.35	0.24		0.02	0.44	0.23		0.01				0.63
Control Delay	8.6	9.8		7.7	20.2	5.2		21.5				13.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Delay	8.6	9.8		7.7	20.2	5.2		21.5				13.4
LOS	A	A		A	C	A		C				B
Approach Delay		9.4			16.7			21.5				13.4
Approach LOS		A			B			C				B

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 58.2

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 13.0

Intersection LOS: B

Intersection Capacity Utilization 58.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

 Ø1 25 s	 Ø2 45 s	 Ø4 30 s
 Ø5 25 s	 Ø6 45 s	 Ø8 30 s



HCM 6th Signalized Intersection Summary

2-NO BUILD-PM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	400	4	7	381	110	1	1	0	174	0	257
Future Volume (veh/h)	185	400	4	7	381	110	1	1	0	174	0	257
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	1841	1841	1841	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	195	421	4	7	401	116	1	1	0	183	0	271
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	4	4	0	0	0	0	0	0
Cap, veh/h	465	1289	12	395	908	405	142	114	0	416	0	354
Arrive On Green	0.11	0.36	0.36	0.01	0.26	0.26	0.24	0.24	0.00	0.24	0.00	0.24
Sat Flow, veh/h	1753	3550	34	1810	3497	1560	203	473	0	1207	0	1465
Grp Volume(v), veh/h	195	207	218	7	401	116	2	0	0	183	0	271
Grp Sat Flow(s),veh/h/ln	1753	1749	1835	1810	1749	1560	676	0	0	1207	0	1465
Q Serve(g_s), s	4.4	4.9	5.0	0.2	5.5	3.4	0.0	0.0	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	4.4	4.9	5.0	0.2	5.5	3.4	10.0	0.0	0.0	8.6	0.0	9.9
Prop In Lane	1.00		0.02	1.00		1.00	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	465	635	666	395	908	405	257	0	0	416	0	354
V/C Ratio(X)	0.42	0.33	0.33	0.02	0.44	0.29	0.01	0.00	0.00	0.44	0.00	0.77
Avail Cap(c_a), veh/h	807	1129	1185	936	2258	1007	478	0	0	632	0	573
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	13.3	13.3	15.5	17.9	17.1	17.2	0.0	0.0	19.9	0.0	20.4
Incr Delay (d2), s/veh	0.6	0.3	0.3	0.0	0.3	0.4	0.0	0.0	0.0	0.7	0.0	3.5
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	1.5	1.6	1.7	0.1	1.9	1.1	0.0	0.0	0.0	2.1	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	13.6	13.6	15.5	18.2	17.5	17.2	0.0	0.0	20.6	0.0	23.9
LnGrp LOS	B	B	B	B	B	B	B	A	A	C	A	C
Approach Vol, veh/h		620			524			2				454
Approach Delay, s/veh		13.5			18.0			17.2				22.6
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	22.7		21.3	7.7	28.7		21.3				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	6.4	7.5		12.0	2.2	7.0		11.9				
Green Ext Time (p_c), s	0.4	2.9		0.0	0.0	2.3		2.0				

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	462	95	49	429	2	55	0	30	2	0	5
Future Volume (vph)	11	462	95	49	429	2	55	0	30	2	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	5%	1%	0%	3%	0%	3%	0%	26%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	27.8	28.1		31.4	33.6			8.9	8.9			9.0
Actuated g/C Ratio	0.58	0.58		0.65	0.70			0.19	0.19			0.19
v/c Ratio	0.02	0.29		0.08	0.19			0.21	0.09			0.02
Control Delay	5.8	12.1		5.4	7.4			22.1	0.6			0.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	5.8	12.1		5.4	7.4			22.1	0.6			0.1
LOS	A	B		A	A			C	A			A
Approach Delay		12.0			7.2			14.5				0.1
Approach LOS		B			A			B				A

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-PM

01/04/2021

Actuated Cycle Length: 48.1

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.29

Intersection Signal Delay: 10.1

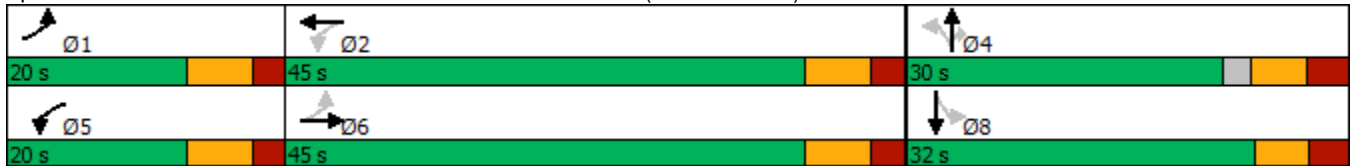
Intersection LOS: B

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

2-NO BUILD-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	
Traffic Volume (veh/h)	11	462	95	49	429	2	55	0	30	2	0	5
Future Volume (veh/h)	11	462	95	49	429	2	55	0	30	2	0	5
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	1900	1826	1826	1900	1856	1856	1900	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	11	481	99	51	447	2	57	0	31	2	0	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	3	3	0	0	26	0	0	0
Cap, veh/h	554	1064	218	452	1141	5	326	0	155	122	31	139
Arrive On Green	0.11	0.37	0.37	0.05	0.32	0.32	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1810	2868	587	1810	3599	16	1445	0	1284	203	260	1157
Grp Volume(v), veh/h	11	290	290	51	219	230	57	0	31	7	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1720	1810	1763	1853	1445	0	1284	1619	0	0
Q Serve(g_s), s	0.2	6.0	6.0	0.9	4.6	4.6	1.5	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.0	6.0	0.9	4.6	4.6	1.7	0.0	1.0	0.2	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.01	1.00		1.00	0.29		0.71
Lane Grp Cap(c), veh/h	554	644	638	452	559	587	326	0	155	293	0	0
V/C Ratio(X)	0.02	0.45	0.45	0.11	0.39	0.39	0.17	0.00	0.20	0.02	0.00	0.00
Avail Cap(c_a), veh/h	860	1379	1367	856	1401	1473	845	0	619	923	0	0
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	0.00
Uniform Delay (d), s/veh	8.2	11.2	11.3	9.8	12.6	12.6	19.0	0.0	18.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.5	0.1	0.4	0.4	0.3	0.0	0.6	0.0	0.0	0.0
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	0.0	1.7	1.7	0.3	1.4	1.5	0.5	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	11.7	11.8	9.9	13.0	13.0	19.3	0.0	19.4	18.4	0.0	0.0
LnGrp LOS	A	B	B	A	B	B	B	A	B	B	A	A
Approach Vol, veh/h		591			500			88				7
Approach Delay, s/veh		11.7			12.7			19.3				18.4
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		12.9	9.4	25.0		12.9				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.2	6.6		3.7	2.9	8.0		2.2				
Green Ext Time (p_c), s	0.0	2.4		0.3	0.0	3.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

2-NO BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	45	98	382	24	0	112	0	233	0	0	0
Future Volume (vph)	0	45	98	382	24	0	112	0	233	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	9%	2%	9%	0%	1%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.4% ICU Level of Service B
Analysis Period (min)	15



Intersection												
Int Delay, s/veh	19.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	45	98	382	24	0	112	0	233	0	0	0
Future Vol, veh/h	0	45	98	382	24	0	112	0	233	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	2	9	2	9	0	1	0	3	0	0	0
Mvmt Flow	0	46	101	394	25	0	115	0	240	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	147	0	0	910	910	97	1030	960	25
Stage 1	-	-	-	-	-	-	97	97	-	813	813	-
Stage 2	-	-	-	-	-	-	813	813	-	217	147	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1435	-	-	256	277	956	214	259	1057
Stage 1	-	-	-	-	-	-	912	819	-	375	395	-
Stage 2	-	-	-	-	-	-	374	395	-	790	779	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1435	-	-	201	200	956	126	187	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	201	200	-	126	187	-
Stage 1	-	-	-	-	-	-	912	819	-	375	285	-
Stage 2	-	-	-	-	-	-	270	285	-	592	779	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8	42.2	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	431	1603	-	-	1435	-	-	-
HCM Lane V/C Ratio	0.825	-	-	-	0.274	-	-	-
HCM Control Delay (s)	42.2	0	-	-	8.5	0	-	0
HCM Lane LOS	E	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	7.8	0	-	-	1.1	-	-	-

Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1

2-NO BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	576	0	0	0	0
Future Volume (vph)	0	576	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	576	0	0	0	0
Future Vol, veh/h	0	576	0	0	0	0
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	0	626	0	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

2-NO BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Volume (vph)	0	576	0	0	0	0
Future Volume (vph)	0	576	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	1
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		↑
Traffic Vol, veh/h	0	576	0	0	0	0
Future Vol, veh/h	0	576	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	24	-	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	0	626	0	0	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	1
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	917
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	917
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-



Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3

2-NO BUILD-PM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	296	0	0	480
Future Volume (vph)	0	0	296	0	0	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	0	296	0	0	480
Future Vol, veh/h	0	0	296	0	0	480
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	-	-	-	-	-
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	0	0	322	0	0	522

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	844	322	0	0	322	0
Stage 1	322	-	-	-	-	-
Stage 2	522	-	-	-	-	-
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	334	719	-	-	1238	-
Stage 1	735	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	334	719	-	-	1238	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1238
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings  
 10: MICRO RACETRACK RD & Driveway 4

2-NO BUILD-PM  
 01/04/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	296	0	0	480
Future Volume (vph)	0	0	296	0	0	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	28.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	0	0	296	0	0	480
Future Vol, veh/h	0	0	296	0	0	480
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	-	-	-	-	-
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	0	0	322	0	0	522

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	844	322	0	0	322	0
Stage 1	322	-	-	-	-	-
Stage 2	522	-	-	-	-	-
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	334	719	-	-	1238	-
Stage 1	735	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	334	719	-	-	1238	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	595	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1238
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	172	228	214	67	199	172	184	81	116	138	131	66
Average Queue (ft)	81	133	109	21	94	81	91	23	50	74	61	19
95th Queue (ft)	147	208	188	49	170	145	157	57	96	123	116	47
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	147	229	222	75
Average Queue (ft)	64	138	127	32
95th Queue (ft)	118	208	200	64
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)			1	
Queuing Penalty (veh)			1	

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	101	192	203	56	101	166	168	48	124	117	125	76
Average Queue (ft)	43	74	75	16	35	68	76	11	55	47	57	28
95th Queue (ft)	84	161	163	42	77	135	145	31	105	91	105	58
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									



Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	71	162	166	25	65	130	126	61	96	97	41
Average Queue (ft)	20	54	53	3	20	51	55	17	36	44	15
95th Queue (ft)	51	128	126	15	50	106	109	45	73	86	41
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)	0										
Queuing Penalty (veh)	0										

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LTR	LT	TR	
Maximum Queue (ft)	159	114	130	28	109	111	83	27	162	125	
Average Queue (ft)	68	43	59	5	85	61	38	2	77	63	
95th Queue (ft)	126	95	111	22	114	111	70	15	134	107	
Link Distance (ft)		1394	1394					678	264	264	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	500										
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	TR	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	24	159	112	56	70	92	71	70	48	
Average Queue (ft)	4	64	29	18	21	31	32	22	8	
95th Queue (ft)	17	128	76	42	53	71	61	56	32	
Link Distance (ft)		2103	2103		1078	1078	641		3412	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	240			400			160			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	20	112	265
Average Queue (ft)	1	45	115
95th Queue (ft)	10	88	213
Link Distance (ft)	2603	2539	8606
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

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Intersection: 9: MICRO RACETRACK RD & Driveway 3

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

---

Intersection: 10: MICRO RACETRACK RD & Driveway 4

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Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

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Network Summary

Network wide Queuing Penalty: 1

Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

3-BUILD-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘
Traffic Volume (vph)	79	353	111	125	378	122	85	264	88	114	346	125
Future Volume (vph)	79	353	111	125	378	122	85	264	88	114	346	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1899			1179			1979				1760
Travel Time (s)		28.8			17.9			38.6				34.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	7%	2%	4%	5%	6%	5%	1%	2%	7%	1%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	10.6	25.2	25.2	13.2	31.5	31.5	22.0	14.5	14.5	26.3	16.7	16.7
Actuated g/C Ratio	0.11	0.27	0.27	0.14	0.34	0.34	0.23	0.15	0.15	0.28	0.18	0.18
v/c Ratio	0.41	0.40	0.22	0.53	0.34	0.20	0.30	0.49	0.22	0.35	0.56	0.30
Control Delay	46.9	31.5	5.7	46.7	27.5	1.8	25.3	40.4	1.3	25.4	39.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	31.5	5.7	46.7	27.5	1.8	25.3	40.4	1.3	25.4	39.6	2.9
LOS	D	C	A	D	C	A	C	D	A	C	D	A
Approach Delay		28.5			26.3			29.6			29.0	
Approach LOS		C			C			C			C	

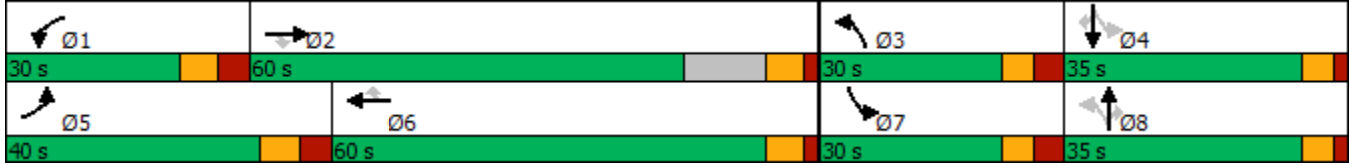
Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 94  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.56

Lanes, Volumes, Timings  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘	↘	↗↗	↘
Traffic Volume (veh/h)	79	353	111	125	378	122	85	264	88	114	346	125
Future Volume (veh/h)	79	353	111	125	378	122	85	264	88	114	346	125
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	1856	1796	1870	1841	1826	1811	1826	1885	1870	1796	1885	1841
Adj Flow Rate, veh/h	81	364	114	129	390	126	88	272	91	118	357	129
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	7	2	4	5	6	5	1	2	7	1	4
Cap, veh/h	128	1051	488	166	1146	507	279	559	247	311	580	253
Arrive On Green	0.07	0.31	0.31	0.09	0.33	0.33	0.07	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	1767	3413	1585	1753	3469	1535	1739	3582	1585	1711	3582	1560
Grp Volume(v), veh/h	81	364	114	129	390	126	88	272	91	118	357	129
Grp Sat Flow(s),veh/h/ln	1767	1706	1585	1753	1735	1535	1739	1791	1585	1711	1791	1560
Q Serve(g_s), s	3.6	6.7	4.4	5.8	6.9	4.9	3.3	5.6	4.2	4.6	7.5	6.1
Cycle Q Clear(g_c), s	3.6	6.7	4.4	5.8	6.9	4.9	3.3	5.6	4.2	4.6	7.5	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	1051	488	166	1146	507	279	559	247	311	580	253
V/C Ratio(X)	0.63	0.35	0.23	0.78	0.34	0.25	0.31	0.49	0.37	0.38	0.62	0.51
Avail Cap(c_a), veh/h	681	2237	1039	460	2273	1006	626	1280	566	641	1280	557
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	21.8	20.9	35.9	20.5	19.8	25.7	31.3	30.7	25.7	31.7	31.1
Incr Delay (d2), s/veh	6.1	0.3	0.3	9.0	0.2	0.4	0.8	0.9	1.3	0.9	1.5	2.3
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	1.7	2.5	1.6	2.8	2.6	1.7	1.4	2.4	1.6	1.9	3.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	22.0	21.3	44.9	20.8	20.2	26.4	32.2	32.0	26.6	33.2	33.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		559			645			451			604	
Approach Delay, s/veh		24.9			25.5			31.0			31.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.4	31.8	13.8	19.1	14.6	33.6	14.3	18.7				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	7.8	8.7	5.3	9.5	5.6	8.9	6.6	7.6				
Green Ext Time (p_c), s	0.3	4.1	0.2	3.6	0.2	4.4	0.3	2.7				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	440	69	67	454	84	77	42	91	53	19	71
Future Volume (vph)	52	440	69	67	454	84	77	42	91	53	19	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
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
Heavy Vehicles (%)	2%	5%	4%	2%	5%	5%	3%	2%	1%	6%	11%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effect Green (s)	27.0	21.8	21.8	27.0	21.8	21.8	25.1	24.2			13.6	13.6
Actuated g/C Ratio	0.37	0.30	0.30	0.37	0.30	0.30	0.35	0.34			0.19	0.19
v/c Ratio	0.14	0.48	0.14	0.18	0.48	0.18	0.19	0.23			0.35	0.21
Control Delay	13.5	25.6	3.0	13.8	25.4	4.8	19.0	9.7			35.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	13.5	25.6	3.0	13.8	25.4	4.8	19.0	9.7			35.8	4.1
LOS	B	C	A	B	C	A	B	A			D	A
Approach Delay		21.7			21.3			13.1			20.0	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 72.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-AM

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Maximum v/c Ratio: 0.48

Intersection Signal Delay: 20.2

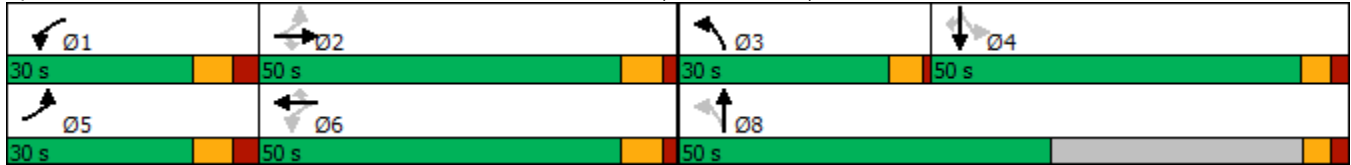
Intersection LOS: C

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	440	69	67	454	84	77	42	91	53	19	71
Future Volume (veh/h)	52	440	69	67	454	84	77	42	91	53	19	71
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	1826	1841	1870	1826	1826	1856	1870	1870	1737	1737	1856
Adj Flow Rate, veh/h	57	484	76	74	499	92	85	46	100	58	21	78
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	5	4	2	5	5	3	2	2	11	11	3
Cap, veh/h	358	960	431	372	989	441	358	155	337	231	65	222
Arrive On Green	0.05	0.28	0.28	0.06	0.29	0.29	0.07	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1781	3469	1560	1781	3469	1547	1767	525	1140	845	464	1572
Grp Volume(v), veh/h	57	484	76	74	499	92	85	0	146	79	0	78
Grp Sat Flow(s),veh/h/ln	1781	1735	1560	1781	1735	1547	1767	0	1665	1309	0	1572
Q Serve(g_s), s	1.2	6.6	2.1	1.6	6.7	2.5	2.2	0.0	3.8	2.2	0.0	2.5
Cycle Q Clear(g_c), s	1.2	6.6	2.1	1.6	6.7	2.5	2.2	0.0	3.8	2.9	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	0.73		1.00
Lane Grp Cap(c), veh/h	358	960	431	372	989	441	358	0	492	296	0	222
V/C Ratio(X)	0.16	0.50	0.18	0.20	0.50	0.21	0.24	0.00	0.30	0.27	0.00	0.35
Avail Cap(c_a), veh/h	965	2669	1200	965	2669	1190	1030	0	1310	1112	0	1235
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	13.4	17.1	15.4	13.3	16.8	15.3	17.2	0.0	15.3	21.9	0.0	21.8
Incr Delay (d2), s/veh	0.3	0.9	0.4	0.4	0.9	0.5	0.5	0.0	0.7	1.0	0.0	2.0
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	0.4	2.3	0.7	0.6	2.3	0.8	0.9	0.0	1.4	1.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	18.0	15.9	13.6	17.6	15.8	17.7	0.0	16.0	22.9	0.0	23.8
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		617			665			231				157
Approach Delay, s/veh		17.3			16.9			16.6				23.4
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	22.3	8.7	13.8	10.8	22.8		22.5				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	3.6	8.6	4.2	4.9	3.2	8.7		5.8				
Green Ext Time (p_c), s	0.2	6.9	0.3	1.6	0.2	7.3		1.9				

Intersection Summary

HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

3-BUILD-AM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	537	16	38	527	40	21	10	32	33	9	50
Future Volume (vph)	21	537	16	38	527	40	21	10	32	33	9	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	3%	12%	8%	5%	8%	19%	10%	3%	3%	0%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.1	34.3	34.3	33.4	36.2	36.2		12.8			12.8	12.8
Actuated g/C Ratio	0.62	0.66	0.66	0.64	0.70	0.70		0.25			0.25	0.25
v/c Ratio	0.04	0.26	0.02	0.07	0.25	0.04		0.19			0.15	0.12
Control Delay	5.9	9.6	0.1	5.7	7.9	0.1		14.5			21.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	5.9	9.6	0.1	5.7	7.9	0.1		14.5			21.7	0.5
LOS	A	A	A	A	A	A		B			C	A
Approach Delay		9.2			7.2			14.5			10.2	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100



Actuated Cycle Length: 51.9

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.26

Intersection Signal Delay: 8.6

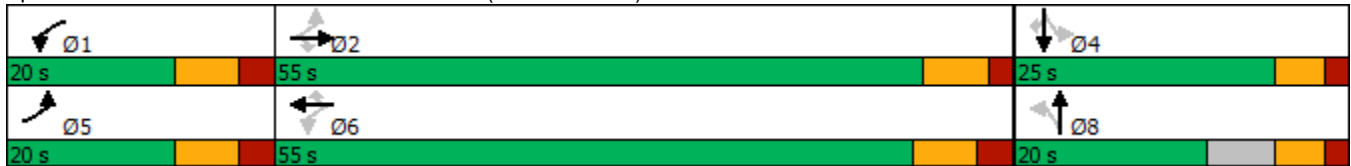
Intersection LOS: A

Intersection Capacity Utilization 56.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗		↕			↕	↗
Traffic Volume (veh/h)	21	537	16	38	527	40	21	10	32	33	9	50
Future Volume (veh/h)	21	537	16	38	527	40	21	10	32	33	9	50
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	1752	1856	1722	1781	1826	1781	1752	1752	1752	1900	1900	1811
Adj Flow Rate, veh/h	24	603	18	43	592	45	24	11	36	37	10	56
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	3	12	8	5	8	10	10	10	0	0	6
Cap, veh/h	489	1550	642	459	1350	587	134	71	134	305	71	274
Arrive On Green	0.11	0.44	0.44	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1668	3526	1459	1697	3469	1510	333	398	752	1147	399	1535
Grp Volume(v), veh/h	24	603	18	43	592	45	71	0	0	47	0	56
Grp Sat Flow(s),veh/h/ln	1668	1763	1459	1697	1735	1510	1483	0	0	1546	0	1535
Q Serve(g_s), s	0.5	7.4	0.4	0.9	8.1	1.2	0.0	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	0.5	7.4	0.4	0.9	8.1	1.2	2.4	0.0	0.0	1.4	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	0.34		0.51	0.79		1.00
Lane Grp Cap(c), veh/h	489	1550	642	459	1350	587	339	0	0	376	0	274
V/C Ratio(X)	0.05	0.39	0.03	0.09	0.44	0.08	0.21	0.00	0.00	0.13	0.00	0.20
Avail Cap(c_a), veh/h	632	2644	1095	690	2559	1114	403	0	0	555	0	461
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	12.2	10.2	10.2	14.5	12.4	22.7	0.0	0.0	22.2	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.1	0.0	0.3
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	0.1	2.4	0.1	0.3	2.7	0.4	0.9	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	12.4	10.2	10.3	14.8	12.4	23.0	0.0	0.0	22.4	0.0	22.8
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		645			680			71				103
Approach Delay, s/veh		12.2			14.3			23.0				22.6
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	35.8		17.2	14.5	32.6		17.2				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	2.9	9.4		4.0	2.5	10.1		4.4				
Green Ext Time (p_c), s	0.0	6.1		0.3	0.0	6.2		0.2				

Intersection Summary

HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	342	272	1	0	427	112	3	0	10	236	0	194
Future Volume (vph)	342	272	1	0	427	112	3	0	10	236	0	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	100%	0%	7%	4%	0%	0%	0%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	37.9	37.4			17.0	17.0		10.2				12.9
Actuated g/C Ratio	0.58	0.57			0.26	0.26		0.16				0.20
v/c Ratio	0.60	0.15			0.53	0.24		0.04				0.67
Control Delay	12.7	7.3			24.8	5.6		0.2				19.5
Queue Delay	0.0	0.0			0.0	0.0		0.0				0.0
Total Delay	12.7	7.3			24.8	5.6		0.2				19.5
LOS	B	A			C	A		A				B
Approach Delay		10.3			20.8			0.3				19.5
Approach LOS		B			C			A				B

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 65.8

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.3

Intersection LOS: B

Intersection Capacity Utilization 69.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

 Ø1 25 s	 Ø2 45 s	 Ø4 30 s
 Ø5 25 s	 Ø6 45 s	 Ø8 30 s

HCM 6th Signalized Intersection Summary

3-BUILD-AM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕	↗		↕			↕	↖
Traffic Volume (veh/h)	342	272	1	0	427	112	3	0	10	236	0	194
Future Volume (veh/h)	342	272	1	0	427	112	3	0	10	236	0	194
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	1856	1811	1811	1900	1796	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	356	283	1	0	445	117	3	0	10	246	0	202
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	6	6	0	7	4	0	0	0	0	0	0
Cap, veh/h	523	1821	6	366	777	355	113	35	268	419	0	370
Arrive On Green	0.18	0.52	0.52	0.00	0.23	0.23	0.25	0.00	0.25	0.25	0.00	0.25
Sat Flow, veh/h	1767	3517	12	1810	3413	1560	182	137	1061	1226	0	1465
Grp Volume(v), veh/h	356	138	146	0	445	117	13	0	0	246	0	202
Grp Sat Flow(s),veh/h/ln	1767	1721	1809	1810	1706	1560	1380	0	0	1226	0	1465
Q Serve(g_s), s	9.3	2.8	2.8	0.0	7.6	4.1	0.0	0.0	0.0	5.2	0.0	7.9
Cycle Q Clear(g_c), s	9.3	2.8	2.8	0.0	7.6	4.1	7.9	0.0	0.0	13.1	0.0	7.9
Prop In Lane	1.00		0.01	1.00		1.00	0.23		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	523	891	937	366	777	355	416	0	0	419	0	370
V/C Ratio(X)	0.68	0.16	0.16	0.00	0.57	0.33	0.03	0.00	0.00	0.59	0.00	0.55
Avail Cap(c_a), veh/h	681	975	1025	852	1933	884	560	0	0	548	0	503
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	8.3	8.3	0.0	22.6	21.2	18.6	0.0	0.0	23.8	0.0	21.3
Incr Delay (d2), s/veh	1.8	0.1	0.1	0.0	0.7	0.5	0.0	0.0	0.0	1.3	0.0	1.3
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	3.2	0.8	0.8	0.0	2.8	1.4	0.1	0.0	0.0	3.5	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	8.4	8.4	0.0	23.2	21.8	18.6	0.0	0.0	25.1	0.0	22.6
LnGrp LOS	B	A	A	A	C	C	B	A	A	C	A	C
Approach Vol, veh/h		640			562			13				448
Approach Delay, s/veh		12.6			22.9			18.6				24.0
Approach LOS		B			C			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	22.7		24.0	0.0	41.8		24.0				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	11.3	9.6		9.9	0.0	4.8		15.1				
Green Ext Time (p_c), s	0.6	3.2		0.0	0.0	1.5		1.6				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Traffic Volume (vph)	5	440	94	66	511	4	109	0	66	1	0	3
Future Volume (vph)	5	440	94	66	511	4	109	0	66	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	6%	3%	4%	5%	0%	4%	0%	7%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	24.4	23.0		28.6	28.8			10.6	10.6			10.8
Actuated g/C Ratio	0.48	0.45		0.56	0.57			0.21	0.21			0.21
v/c Ratio	0.01	0.36		0.13	0.28			0.40	0.17			0.01
Control Delay	7.0	15.0		7.1	9.9			24.9	1.9			0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	7.0	15.0		7.1	9.9			24.9	1.9			0.0
LOS	A	B		A	A			C	A			A
Approach Delay		14.9			9.6			16.2				
Approach LOS		B			A			B				

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021

Actuated Cycle Length: 50.7

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 12.7

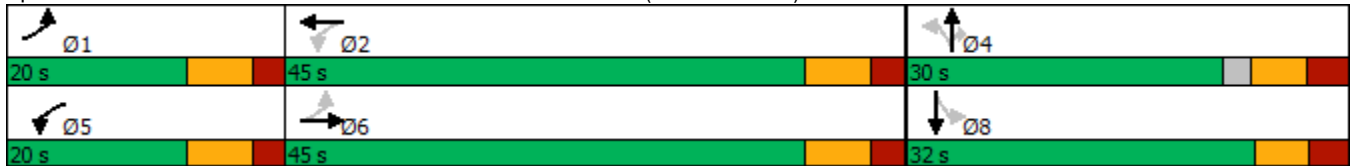
Intersection LOS: B

Intersection Capacity Utilization 50.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-AM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↗		↕	↗
Traffic Volume (veh/h)	5	440	94	66	511	4	109	0	66	1	0	3
Future Volume (veh/h)	5	440	94	66	511	4	109	0	66	1	0	3
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	1900	1811	1811	1841	1826	1826	1900	1900	1796	1900	1900	1900
Adj Flow Rate, veh/h	5	454	97	68	527	4	112	0	68	1	0	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	6	6	4	5	5	0	0	7	0	0	0
Cap, veh/h	496	980	208	441	1082	8	363	0	228	119	33	181
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1810	2824	599	1753	3529	27	1441	0	1522	180	223	1208
Grp Volume(v), veh/h	5	275	276	68	259	272	112	0	68	4	0	0
Grp Sat Flow(s),veh/h/ln	1810	1721	1703	1753	1735	1821	1441	0	1522	1610	0	0
Q Serve(g_s), s	0.1	6.1	6.2	1.2	6.0	6.0	3.4	0.0	1.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.1	6.2	1.2	6.0	6.0	3.5	0.0	1.9	0.1	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.01	1.00		1.00	0.25		0.75
Lane Grp Cap(c), veh/h	496	597	591	441	532	558	363	0	228	334	0	0
V/C Ratio(X)	0.01	0.46	0.47	0.15	0.49	0.49	0.31	0.00	0.30	0.01	0.00	0.00
Avail Cap(c_a), veh/h	791	1322	1308	799	1333	1399	817	0	709	888	0	0
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	0.00
Uniform Delay (d), s/veh	8.9	12.4	12.5	10.4	13.8	13.8	19.2	0.0	18.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.2	0.7	0.7	0.5	0.0	0.7	0.0	0.0	0.0
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	0.0	1.8	1.8	0.4	1.9	2.0	1.1	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	13.0	13.0	10.5	14.5	14.5	19.6	0.0	19.2	17.7	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		556			599			180				4
Approach Delay, s/veh		13.0			14.1			19.5				17.7
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		14.5	10.0	24.4		14.5				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.1	8.0		5.5	3.2	8.2		2.1				
Green Ext Time (p_c), s	0.0	3.0		0.7	0.1	3.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

3-BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	23	140	254	29	0	115	0	310	1	0	1
Future Volume (vph)	0	23	140	254	29	0	115	0	310	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	24%	2%	4%	7%	0%	5%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	62.8% ICU Level of Service B
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	16.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	23	140	254	29	0	115	0	310	1	0	1
Future Vol, veh/h	0	23	140	254	29	0	115	0	310	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
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, %	0	24	2	4	7	0	5	0	2	0	0	0
Mvmt Flow	0	25	152	276	32	0	125	0	337	1	0	1

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	32	0	0	177	0	0	686	685	101	854	761	32
Stage 1	-	-	-	-	-	-	101	101	-	584	584	-
Stage 2	-	-	-	-	-	-	585	584	-	270	177	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.15	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.236	-	-	3.545	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1593	-	-	1387	-	-	358	373	954	281	337	1048
Stage 1	-	-	-	-	-	-	898	815	-	501	501	-
Stage 2	-	-	-	-	-	-	492	501	-	740	756	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1593	-	-	1387	-	-	302	297	954	153	269	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	297	-	153	269	-
Stage 1	-	-	-	-	-	-	898	815	-	501	399	-
Stage 2	-	-	-	-	-	-	392	399	-	479	756	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.4	28	18.6
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	602	1593	-	-	1387	-	-	267
HCM Lane V/C Ratio	0.767	-	-	-	0.199	-	-	0.008
HCM Control Delay (s)	28	0	-	-	8.2	0	-	18.6
HCM Lane LOS	D	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	7.1	0	-	-	0.7	-	-	0



Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1

3-BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	519	532	93	0	101
Future Volume (vph)	0	519	532	93	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	30.6%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	519	532	93	0	101
Future Vol, veh/h	0	519	532	93	0	101
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	0	564	578	101	0	110

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	340
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	656
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	656
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	656
HCM Lane V/C Ratio	-	-	-	0.167
HCM Control Delay (s)	-	-	-	11.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.6

Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

3-BUILD-AM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↗		
Traffic Volume (vph)	0	519	543	89	0	0
Future Volume (vph)	0	519	543	89	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	158	97	322	131	110	283
Future Volume (vph)	158	97	322	131	110	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	70.6% ICU Level of Service C
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	15					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	158	97	322	131	110	283
Future Vol, veh/h	158	97	322	131	110	283
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	-	-	-	-	-
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	172	105	350	142	120	308

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	969	421	0	0	492
Stage 1	421	-	-	-	-
Stage 2	548	-	-	-	-
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	281	632	-	-	1071
Stage 1	662	-	-	-	-
Stage 2	579	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	243	632	-	-	1071
Mov Cap-2 Maneuver	243	-	-	-	-
Stage 1	662	-	-	-	-
Stage 2	501	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	60.7	0	2.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	317	1071
HCM Lane V/C Ratio	-	-	0.874	0.112
HCM Control Delay (s)	-	-	60.7	8.8
HCM Lane LOS	-	-	F	A
HCM 95th %tile Q(veh)	-	-	8	0.4





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	411	8	8	360
Future Volume (vph)	7	7	411	8	8	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	411	8	8	360
Future Vol, veh/h	7	7	411	8	8	360
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	-	-	-	-	-
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	8	447	9	9	391

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	861	452	0	0	456
Stage 1	452	-	-	-	-
Stage 2	409	-	-	-	-
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	326	608	-	-	1105
Stage 1	641	-	-	-	-
Stage 2	671	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	323	608	-	-	1105
Mov Cap-2 Maneuver	323	-	-	-	-
Stage 1	641	-	-	-	-
Stage 2	664	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	422	1105
HCM Lane V/C Ratio	-	-	0.036	0.008
HCM Control Delay (s)	-	-	13.9	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	129	192	168	58	187	181	184	73	129	138	132	57
Average Queue (ft)	54	97	75	22	85	78	90	25	46	73	57	18
95th Queue (ft)	105	166	144	45	155	149	158	56	95	119	112	42
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	139	182	174	99
Average Queue (ft)	66	108	91	42
95th Queue (ft)	117	163	153	77
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	71	171	159	55	78	148	160	52	96	113	113	64
Average Queue (ft)	21	64	61	15	27	56	66	14	42	51	46	31
95th Queue (ft)	51	136	132	40	61	121	133	35	81	93	92	55
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	54	161	142	33	62	126	145	48	84	70	60
Average Queue (ft)	13	54	46	4	16	43	55	9	30	25	24
95th Queue (ft)	41	121	106	20	45	102	120	32	64	59	53
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	TR
Maximum Queue (ft)	247	100	111	175	172	88	34	196	97
Average Queue (ft)	119	30	44	94	90	39	8	103	47
95th Queue (ft)	202	78	91	152	149	71	28	172	82
Link Distance (ft)		1394	1394	171	171	171	678	264	264
Upstream Blk Time (%)				0	0				
Queuing Penalty (veh)				0	0				
Storage Bay Dist (ft)	500								
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	LT	R	LTR
Maximum Queue (ft)	22	173	135	64	96	129	111	72	48
Average Queue (ft)	2	79	40	23	28	52	50	30	5
95th Queue (ft)	14	144	94	50	69	102	92	59	26
Link Distance (ft)		2103	2103		1078	1078	641		3412
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	240			400			160		
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	22	91	233	30
Average Queue (ft)	2	34	113	2
95th Queue (ft)	12	70	191	16
Link Distance (ft)	2603	2539	8606	706
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	8	67
Average Queue (ft)	0	34
95th Queue (ft)	7	56
Link Distance (ft)	2103	542
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	21
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	24
Storage Blk Time (%)	0
Queuing Penalty (veh)	0



Intersection: 9: MICRO RACETRACK RD & Driveway 3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	232	14	174
Average Queue (ft)	92	1	54
95th Queue (ft)	181	8	129
Link Distance (ft)	424	264	184
Upstream Blk Time (%)			0
Queuing Penalty (veh)			1
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: MICRO RACETRACK RD & Driveway 4

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	39	69
Average Queue (ft)	12	5
95th Queue (ft)	37	31
Link Distance (ft)	426	8606
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 2
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Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

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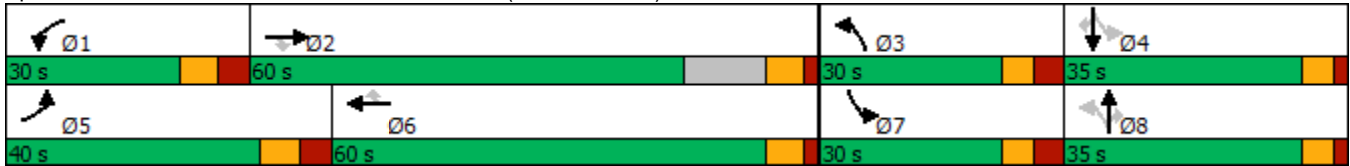
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (vph)	107	525	81	167	416	149	98	269	113	138	444	74
Future Volume (vph)	107	525	81	167	416	149	98	269	113	138	444	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	5%	8%	2%	4%	5%	4%	1%	5%	4%	1%	8%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	13.3	27.8	27.8	17.1	31.6	31.6	27.3	18.8	18.8	33.0	21.6	21.6
Actuated g/C Ratio	0.12	0.26	0.26	0.16	0.30	0.30	0.26	0.18	0.18	0.31	0.20	0.20
v/c Ratio	0.52	0.62	0.18	0.62	0.43	0.27	0.38	0.45	0.28	0.39	0.65	0.17
Control Delay	55.1	39.6	2.4	53.9	33.2	3.9	29.0	42.9	1.7	28.3	44.3	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	39.6	2.4	53.9	33.2	3.9	29.0	42.9	1.7	28.3	44.3	0.8
LOS	E	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		37.7			32.0			30.4			36.0	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 106.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.65

Intersection Signal Delay: 34.3                                  Intersection LOS: C  
Intersection Capacity Utilization 72.6%                      ICU Level of Service C  
Analysis Period (min) 15

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

3-BUILD-PM  
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	107	525	81	167	416	149	98	269	113	138	444	74
Future Volume (veh/h)	107	525	81	167	416	149	98	269	113	138	444	74
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	1841	1826	1781	1870	1841	1826	1841	1885	1826	1841	1885	1781
Adj Flow Rate, veh/h	113	553	85	176	438	157	103	283	119	145	467	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	5	8	2	4	5	4	1	5	4	1	8
Cap, veh/h	147	983	428	217	1123	497	267	616	266	338	680	286
Arrive On Green	0.08	0.28	0.28	0.12	0.32	0.32	0.07	0.17	0.17	0.09	0.19	0.19
Sat Flow, veh/h	1753	3469	1510	1781	3497	1547	1753	3582	1547	1753	3582	1510
Grp Volume(v), veh/h	113	553	85	176	438	157	103	283	119	145	467	78
Grp Sat Flow(s),veh/h/ln	1753	1735	1510	1781	1749	1547	1753	1791	1547	1753	1791	1510
Q Serve(g_s), s	5.6	12.0	3.8	8.5	8.6	6.8	4.2	6.3	6.1	5.9	10.7	3.9
Cycle Q Clear(g_c), s	5.6	12.0	3.8	8.5	8.6	6.8	4.2	6.3	6.1	5.9	10.7	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	983	428	217	1123	497	267	616	266	338	680	286
V/C Ratio(X)	0.77	0.56	0.20	0.81	0.39	0.32	0.39	0.46	0.45	0.43	0.69	0.27
Avail Cap(c_a), veh/h	622	2092	910	430	2109	933	581	1177	509	620	1177	496
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.0	24.0	37.7	23.2	22.6	27.3	32.9	32.8	26.4	33.3	30.5
Incr Delay (d2), s/veh	9.6	0.7	0.3	8.4	0.3	0.5	1.1	0.8	1.7	1.0	1.8	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	2.7	4.7	1.3	4.0	3.3	2.4	1.8	2.7	2.3	2.5	4.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	27.7	24.3	46.2	23.6	23.1	28.4	33.6	34.5	27.4	35.1	31.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	D	C
Approach Vol, veh/h		751			771			505			690	
Approach Delay, s/veh		30.5			28.6			32.7			33.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	31.8	14.2	22.7	16.1	35.1	15.8	21.2				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	10.5	14.0	6.2	12.7	7.6	10.6	7.9	8.3				
Green Ext Time (p_c), s	0.4	6.0	0.3	4.0	0.3	5.2	0.4	2.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			31.0									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	557	70	84	533	53	101	57	57	57	39	58
Future Volume (vph)	109	557	70	84	533	53	101	57	57	57	39	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	5%	3%	2%	5%	6%	4%	0%	0%	2%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effct Green (s)	38.3	30.4	30.4	32.7	24.6	24.6	31.4	30.6			14.9	14.9
Actuated g/C Ratio	0.44	0.35	0.35	0.37	0.28	0.28	0.36	0.35			0.17	0.17
v/c Ratio	0.31	0.52	0.13	0.25	0.60	0.12	0.25	0.19			0.46	0.18
Control Delay	15.5	27.0	2.6	15.3	30.8	1.0	22.3	15.4			42.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	15.5	27.0	2.6	15.3	30.8	1.0	22.3	15.4			42.2	1.9
LOS	B	C	A	B	C	A	C	B			D	A
Approach Delay		23.0			26.5			18.7			27.0	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	87.5
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated



Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-PM

01/04/2021

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 24.1

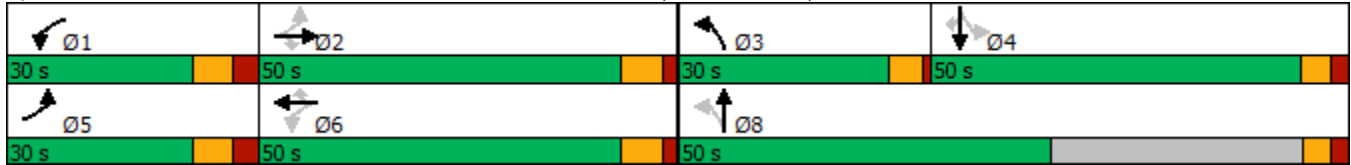
Intersection LOS: C

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↗	↘
Traffic Volume (veh/h)	109	557	70	84	533	53	101	57	57	57	39	58
Future Volume (veh/h)	109	557	70	84	533	53	101	57	57	57	39	58
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	1856	1826	1856	1870	1826	1811	1841	1900	1900	1856	1856	1856
Adj Flow Rate, veh/h	118	605	76	91	579	58	110	62	62	62	42	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	5	3	2	5	6	4	0	0	3	3	3
Cap, veh/h	377	1097	497	361	1069	473	335	249	249	188	99	202
Arrive On Green	0.07	0.32	0.32	0.06	0.31	0.31	0.08	0.29	0.29	0.13	0.13	0.13
Sat Flow, veh/h	1767	3469	1572	1781	3469	1535	1753	872	872	736	770	1572
Grp Volume(v), veh/h	118	605	76	91	579	58	110	0	124	104	0	63
Grp Sat Flow(s),veh/h/ln	1767	1735	1572	1781	1735	1535	1753	0	1743	1505	0	1572
Q Serve(g_s), s	2.7	8.9	2.1	2.1	8.6	1.7	3.2	0.0	3.4	2.7	0.0	2.2
Cycle Q Clear(g_c), s	2.7	8.9	2.1	2.1	8.6	1.7	3.2	0.0	3.4	3.8	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	0.60		1.00
Lane Grp Cap(c), veh/h	377	1097	497	361	1069	473	335	0	499	287	0	202
V/C Ratio(X)	0.31	0.55	0.15	0.25	0.54	0.12	0.33	0.00	0.25	0.36	0.00	0.31
Avail Cap(c_a), veh/h	882	2428	1100	885	2428	1074	911	0	1248	1133	0	1123
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	13.4	17.5	15.2	13.5	17.7	15.4	19.4	0.0	16.9	25.0	0.0	24.4
Incr Delay (d2), s/veh	0.7	0.9	0.3	0.5	0.9	0.2	0.8	0.0	0.6	1.6	0.0	1.8
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	1.0	3.1	0.8	0.7	3.0	0.5	1.3	0.0	1.4	1.5	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	18.4	15.5	14.0	18.7	15.6	20.3	0.0	17.5	26.6	0.0	26.3
LnGrp LOS	B	B	B	B	B	B	C	A	B	C	A	C
Approach Vol, veh/h		799			728			234				167
Approach Delay, s/veh		17.5			17.8			18.8				26.5
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	26.3	9.7	13.8	12.4	25.8		23.6				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	4.1	10.9	5.2	5.8	4.7	10.6		5.4				
Green Ext Time (p_c), s	0.3	8.6	0.4	1.8	0.4	8.1		1.5				

Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

3-BUILD-PM  
01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	592	14	46	611	74	19	28	49	64	19	32
Future Volume (vph)	41	592	14	46	611	74	19	28	49	64	19	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	6%	0%	9%	3%	7%	0%	0%	2%	2%	5%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	33.1	31.7	31.7	34.5	33.7	33.7		12.5			12.5	12.5
Actuated g/C Ratio	0.56	0.54	0.54	0.59	0.57	0.57		0.21			0.21	0.21
v/c Ratio	0.08	0.33	0.02	0.09	0.31	0.09		0.27			0.28	0.08
Control Delay	6.1	12.6	0.0	6.2	11.2	1.8		16.0			25.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	6.1	12.6	0.0	6.2	11.2	1.8		16.0			25.1	0.3
LOS	A	B	A	A	B	A		B			C	A
Approach Delay		12.0			9.9			16.0			18.2	
Approach LOS		B			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100

Actuated Cycle Length: 58.7

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 11.7

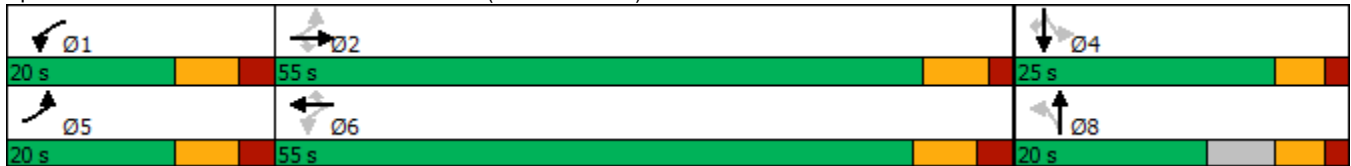
Intersection LOS: B

Intersection Capacity Utilization 56.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	592	14	46	611	74	19	28	49	64	19	32
Future Volume (veh/h)	41	592	14	46	611	74	19	28	49	64	19	32
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	1811	1900	1767	1856	1796	1900	1900	1900	1826	1826	1900
Adj Flow Rate, veh/h	42	610	14	47	630	76	20	29	51	66	20	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	6	0	9	3	7	0	0	0	5	5	0
Cap, veh/h	493	1493	699	451	1365	589	98	118	156	294	76	293
Arrive On Green	0.11	0.43	0.43	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3441	1610	1682	3526	1522	173	649	856	1070	418	1610
Grp Volume(v), veh/h	42	610	14	47	630	76	100	0	0	86	0	33
Grp Sat Flow(s),veh/h/ln	1781	1721	1610	1682	1763	1522	1679	0	0	1489	0	1610
Q Serve(g_s), s	0.8	7.9	0.3	1.0	8.6	2.1	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	0.8	7.9	0.3	1.0	8.6	2.1	3.2	0.0	0.0	2.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.51	0.77		1.00
Lane Grp Cap(c), veh/h	493	1493	699	451	1365	589	373	0	0	370	0	293
V/C Ratio(X)	0.09	0.41	0.02	0.10	0.46	0.13	0.27	0.00	0.00	0.23	0.00	0.11
Avail Cap(c_a), veh/h	645	2569	1202	673	2588	1118	437	0	0	531	0	481
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	12.6	10.4	10.3	14.8	12.8	22.9	0.0	0.0	22.7	0.0	22.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.3	0.0	0.1
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	0.2	2.5	0.1	0.3	2.9	0.6	1.3	0.0	0.0	1.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	12.8	10.5	10.4	15.1	12.9	23.2	0.0	0.0	23.0	0.0	22.2
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		666			753			100				119
Approach Delay, s/veh		12.5			14.6			23.2				22.7
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.6		17.5	14.5	32.6		17.5				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	3.0	9.9		4.7	2.8	10.6		5.2				
Green Ext Time (p_c), s	0.0	6.2		0.4	0.0	6.8		0.3				

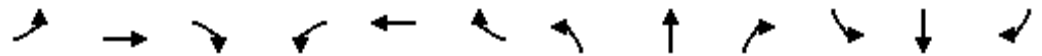
Intersection Summary

HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	382	4	7	466	93	1	1	0	318	0	272
Future Volume (vph)	303	382	4	7	466	93	1	1	0	318	0	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	0%	0%	4%	4%	0%	0%	0%	2%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	39.1	36.4		24.1	17.9	17.9		10.7				17.9
Actuated g/C Ratio	0.54	0.51		0.34	0.25	0.25		0.15				0.25
v/c Ratio	0.58	0.23		0.02	0.59	0.20		0.01				0.76
Control Delay	14.3	11.8		10.4	28.1	3.9		26.5				24.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Delay	14.3	11.8		10.4	28.1	3.9		26.5				24.1
LOS	B	B		B	C	A		C				C
Approach Delay		12.9			23.9			26.5				24.1
Approach LOS		B			C			C				C

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 71.9

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 19.9

Intersection LOS: B

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

 Ø1	 Ø2	 Ø4
25 s	45 s	30 s
 Ø5	 Ø6	 Ø8
25 s	45 s	30 s

HCM 6th Signalized Intersection Summary

3-BUILD-PM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↖		↕			↕	↖
Traffic Volume (veh/h)	303	382	4	7	466	93	1	1	0	318	0	272
Future Volume (veh/h)	303	382	4	7	466	93	1	1	0	318	0	272
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	1841	1841	1841	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	402	4	7	491	98	1	1	0	335	0	286
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	4	4	0	0	0	0	0	0
Cap, veh/h	462	1312	13	329	741	331	173	150	0	477	0	448
Arrive On Green	0.17	0.37	0.37	0.01	0.21	0.21	0.31	0.31	0.00	0.31	0.00	0.31
Sat Flow, veh/h	1753	3548	35	1810	3497	1560	315	491	0	1228	0	1465
Grp Volume(v), veh/h	319	198	208	7	491	98	2	0	0	335	0	286
Grp Sat Flow(s),veh/h/ln	1753	1749	1834	1810	1749	1560	806	0	0	1228	0	1465
Q Serve(g_s), s	9.3	5.7	5.7	0.2	9.1	3.7	0.0	0.0	0.0	7.1	0.0	11.9
Cycle Q Clear(g_c), s	9.3	5.7	5.7	0.2	9.1	3.7	11.9	0.0	0.0	19.0	0.0	11.9
Prop In Lane	1.00		0.02	1.00		1.00	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	462	647	679	329	741	331	323	0	0	477	0	448
V/C Ratio(X)	0.69	0.31	0.31	0.02	0.66	0.30	0.01	0.00	0.00	0.70	0.00	0.64
Avail Cap(c_a), veh/h	610	921	967	768	1843	822	349	0	0	497	0	468
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	15.8	15.8	21.6	25.6	23.5	17.8	0.0	0.0	24.3	0.0	21.2
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	1.0	0.5	0.0	0.0	0.0	4.2	0.0	2.7
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	3.4	2.0	2.1	0.1	3.5	1.3	0.0	0.0	0.0	5.5	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	16.1	16.1	21.6	26.6	24.0	17.8	0.0	0.0	28.6	0.0	23.9
LnGrp LOS	B	B	B	C	C	C	B	A	A	C	A	C
Approach Vol, veh/h		725			596			2				621
Approach Delay, s/veh		17.3			26.1			17.8				26.4
Approach LOS		B			C			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	22.7		29.1	7.8	33.9		29.1				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	11.3	11.1		13.9	2.2	7.7		21.0				
Green Ext Time (p_c), s	0.5	3.4		0.0	0.0	2.2		0.6				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	554	129	49	557	2	55	0	30	2	0	5
Future Volume (vph)	11	554	129	49	557	2	55	0	30	2	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	5%	1%	0%	3%	0%	3%	0%	26%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	29.7	30.3		33.4	35.7			9.1	9.1			9.2
Actuated g/C Ratio	0.59	0.60		0.67	0.71			0.18	0.18			0.18
v/c Ratio	0.02	0.35		0.09	0.24			0.21	0.09			0.02
Control Delay	5.6	12.1		5.3	7.3			23.6	0.6			0.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	5.6	12.1		5.3	7.3			23.6	0.6			0.1
LOS	A	B		A	A			C	A			A
Approach Delay		12.0			7.1			15.5				0.1
Approach LOS		B			A			B				A

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021

Actuated Cycle Length: 50.1

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 10.0

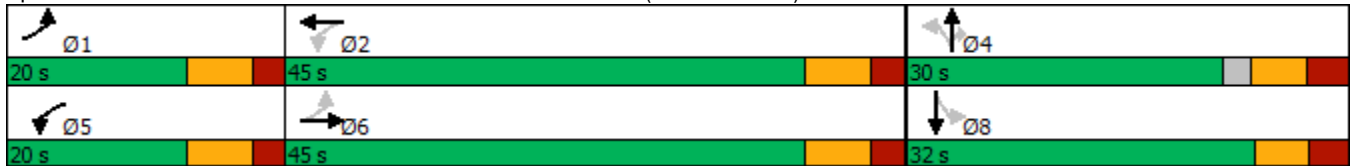
Intersection LOS: B

Intersection Capacity Utilization 50.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

3-BUILD-PM  
 01/04/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↘		↗	↗↘			↖	↖		↖↗	
Traffic Volume (veh/h)	11	554	129	49	557	2	55	0	30	2	0	5
Future Volume (veh/h)	11	554	129	49	557	2	55	0	30	2	0	5
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	1900	1826	1826	1900	1856	1856	1900	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	11	577	134	51	580	2	57	0	31	2	0	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	3	3	0	0	26	0	0	0
Cap, veh/h	501	1038	240	401	1143	4	326	0	155	122	31	139
Arrive On Green	0.11	0.37	0.37	0.05	0.32	0.32	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1810	2796	648	1810	3604	12	1445	0	1284	203	260	1157
Grp Volume(v), veh/h	11	357	354	51	284	298	57	0	31	7	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1709	1810	1763	1853	1445	0	1284	1619	0	0
Q Serve(g_s), s	0.2	7.7	7.8	0.9	6.2	6.2	1.5	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	7.7	7.8	0.9	6.2	6.2	1.7	0.0	1.0	0.2	0.0	0.0
Prop In Lane	1.00		0.38	1.00		0.01	1.00		1.00	0.29		0.71
Lane Grp Cap(c), veh/h	501	644	634	401	559	588	326	0	155	293	0	0
V/C Ratio(X)	0.02	0.55	0.56	0.13	0.51	0.51	0.17	0.00	0.20	0.02	0.00	0.00
Avail Cap(c_a), veh/h	807	1379	1359	805	1401	1473	845	0	619	923	0	0
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	0.00
Uniform Delay (d), s/veh	8.3	11.8	11.8	10.0	13.1	13.1	19.0	0.0	18.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.1	0.7	0.7	0.3	0.0	0.6	0.0	0.0	0.0
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	0.0	2.2	2.2	0.3	1.9	2.0	0.5	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	12.5	12.6	10.1	13.9	13.8	19.3	0.0	19.4	18.4	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		722			633			88				7
Approach Delay, s/veh		12.5			13.5			19.3				18.4
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		12.9	9.4	25.0		12.9				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.2	8.2		3.7	2.9	9.8		2.2				
Green Ext Time (p_c), s	0.0	3.3		0.3	0.0	4.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

3-BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	45	129	435	24	0	142	0	286	0	0	0
Future Volume (vph)	0	45	129	435	24	0	142	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8657			734	
Travel Time (s)		39.9			38.9			168.6			16.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	9%	2%	9%	0%	1%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.1% ICU Level of Service C
Analysis Period (min)	15

Intersection												
Int Delay, s/veh	69.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	45	129	435	24	0	142	0	286	0	0	0
Future Vol, veh/h	0	45	129	435	24	0	142	0	286	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	2	9	2	9	0	1	0	3	0	0	0
Mvmt Flow	0	46	133	448	25	0	146	0	295	0	0	0

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	25	0	0	179	0	0	1034	1034	113	1181	1100	25
Stage 1	-	-	-	-	-	-	113	113	-	921	921	-
Stage 2	-	-	-	-	-	-	921	921	-	260	179	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.11	6.5	6.23	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.11	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.509	4	3.327	3.5	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1397	-	-	211	234	937	168	214	1057
Stage 1	-	-	-	-	-	-	894	806	-	327	352	-
Stage 2	-	-	-	-	-	-	326	352	-	749	755	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1397	-	-	158	158	937	86	144	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	158	-	86	144	-
Stage 1	-	-	-	-	-	-	894	806	-	327	238	-
Stage 2	-	-	-	-	-	-	220	238	-	513	755	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.3	162.9	0
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	355	1603	-	-	1397	-	-	-
HCM Lane V/C Ratio	1.243	-	-	-	0.321	-	-	-
HCM Control Delay (s)	162.9	0	-	-	8.8	0	-	0
HCM Lane LOS	F	A	-	-	A	A	-	A
HCM 95th %tile Q(veh)	19.3	0	-	-	1.4	-	-	-

Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1

3-BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	702	528	90	0	114
Future Volume (vph)	0	702	528	90	0	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	31.2%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	702	528	90	0	114
Future Vol, veh/h	0	702	528	90	0	114
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	0	763	574	98	0	124

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	336
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	660
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	660
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	660
HCM Lane V/C Ratio	-	-	-	0.188
HCM Control Delay (s)	-	-	-	11.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.7



Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2

3-BUILD-PM  
 01/04/2021



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		
Traffic Volume (vph)	0	702	558	84	0	0
Future Volume (vph)	0	702	558	84	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	110	269	128	106	458
Future Volume (vph)	181	110	269	128	106	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Confl. Peds. (#/hr)	1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	78.7%		ICU Level of Service D			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	32.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	181	110	269	128	106	458
Future Vol, veh/h	181	110	269	128	106	458
Conflicting Peds, #/hr	1	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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	197	120	292	139	115	498

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1091	362	0	0	431
Stage 1	362	-	-	-	-
Stage 2	729	-	-	-	-
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	238	683	-	-	1129
Stage 1	704	-	-	-	-
Stage 2	477	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	204	683	-	-	1129
Mov Cap-2 Maneuver	204	-	-	-	-
Stage 1	704	-	-	-	-
Stage 2	409	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	136.1	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	278	1129
HCM Lane V/C Ratio	-	-	1.138	0.102
HCM Control Delay (s)	-	-	136.1	8.6
HCM Lane LOS	-	-	F	A
HCM 95th %tile Q(veh)	-	-	13.5	0.3

Lanes, Volumes, Timings  
 10: MICRO RACETRACK RD & Driveway 4



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	8	371	8	8	531
Future Volume (vph)	8	8	371	8	8	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			8657
Travel Time (s)	10.3		4.7			168.6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	8	8	371	8	8	531
Future Vol, veh/h	8	8	371	8	8	531
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	-	-	-	-	-
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	9	9	403	9	9	577

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1003	408	0	0	412	0
Stage 1	408	-	-	-	-	-
Stage 2	595	-	-	-	-	-
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	268	643	-	-	1147	-
Stage 1	671	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	265	643	-	-	1147	-
Mov Cap-2 Maneuver	265	-	-	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	544	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	375	1147
HCM Lane V/C Ratio	-	-	0.046	0.008
HCM Control Delay (s)	-	-	15.1	8.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0



Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	152	247	241	75	249	180	188	110	141	148	143	92
Average Queue (ft)	79	151	127	23	118	86	96	31	56	82	67	26
95th Queue (ft)	139	225	209	51	204	158	166	72	114	131	124	62
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)	0											
Queuing Penalty (veh)	0											

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	176	234	223	97
Average Queue (ft)	83	137	126	35
95th Queue (ft)	147	200	194	76
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)	1			
Queuing Penalty (veh)	1			

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	118	222	217	58	95	194	205	43	122	124	120	74
Average Queue (ft)	47	88	90	15	35	78	88	11	56	51	58	29
95th Queue (ft)	97	179	179	40	74	164	175	31	103	99	104	59
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)	0											
Queuing Penalty (veh)	0											

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	63	203	178	25	76	156	159	61	104	102	43
Average Queue (ft)	22	70	64	4	24	58	65	16	38	46	18
95th Queue (ft)	53	159	145	18	60	129	133	45	78	86	42
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LTR	LT	TR	
Maximum Queue (ft)	249	139	144	34	172	170	78	23	254	122	
Average Queue (ft)	118	50	62	5	99	98	33	2	138	57	
95th Queue (ft)	203	109	118	22	151	151	66	13	227	100	
Link Distance (ft)		1394	1394	171	171	171	171	678	264	264	
Upstream Blk Time (%)					0	0					0
Queuing Penalty (veh)					0	0					1
Storage Bay Dist (ft)	500										
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	
Directions Served	L	T	TR	L	T	TR	LT	R	LTR	
Maximum Queue (ft)	24	187	165	57	82	118	76	67	52	
Average Queue (ft)	4	82	46	19	24	44	31	23	8	
95th Queue (ft)	18	158	115	43	64	97	63	58	32	
Link Distance (ft)		2103	2103		1078	1078	641		3412	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	240			400			160			
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	40	130	390
Average Queue (ft)	3	52	173
95th Queue (ft)	20	101	337
Link Distance (ft)	2603	2539	8606
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	5	70
Average Queue (ft)	0	36
95th Queue (ft)	5	61
Link Distance (ft)	2103	542
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	41
Average Queue (ft)	2
95th Queue (ft)	18
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	24
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 9: MICRO RACETRACK RD & Driveway 3

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	294	28	197
Average Queue (ft)	121	2	59
95th Queue (ft)	234	14	149
Link Distance (ft)	424	264	184
Upstream Blk Time (%)	0		0
Queuing Penalty (veh)	0		2
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: MICRO RACETRACK RD & Driveway 4

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	39	60
Average Queue (ft)	12	4
95th Queue (ft)	37	29
Link Distance (ft)	426	8606
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 4
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Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	353	111	125	378	122	85	264	88	114	346	125
Future Volume (vph)	79	353	111	125	378	122	85	264	88	114	346	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35			35	
Link Distance (ft)		1899			1179			1979			1760	
Travel Time (s)		28.8			17.9			38.6			34.3	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	7%	2%	4%	5%	6%	5%	1%	2%	7%	1%	4%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	10.6	25.2	25.2	13.2	31.5	31.5	22.0	14.5	14.5	26.3	16.7	16.7
Actuated g/C Ratio	0.11	0.27	0.27	0.14	0.34	0.34	0.23	0.15	0.15	0.28	0.18	0.18
v/c Ratio	0.41	0.40	0.22	0.53	0.34	0.20	0.30	0.49	0.22	0.35	0.56	0.30
Control Delay	46.9	31.5	5.7	46.7	27.5	1.8	25.3	40.4	1.3	25.4	39.6	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	31.5	5.7	46.7	27.5	1.8	25.3	40.4	1.3	25.4	39.6	2.9
LOS	D	C	A	D	C	A	C	D	A	C	D	A
Approach Delay		28.5			26.3			29.6			29.0	
Approach LOS		C			C			C			C	

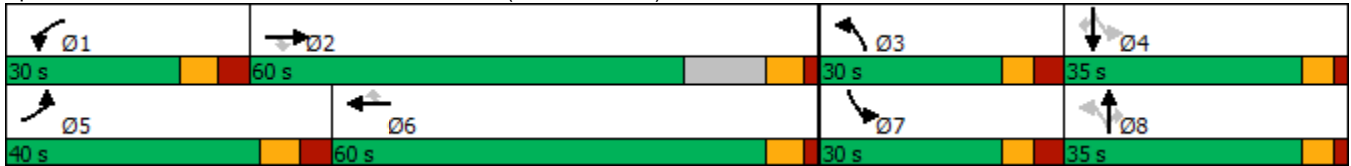
Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 94  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.56



Intersection Signal Delay: 28.2	Intersection LOS: C
Intersection Capacity Utilization 67.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	79	353	111	125	378	122	85	264	88	114	346	125
Future Volume (veh/h)	79	353	111	125	378	122	85	264	88	114	346	125
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	1856	1796	1870	1841	1826	1811	1826	1885	1870	1796	1885	1841
Adj Flow Rate, veh/h	81	364	114	129	390	126	88	272	91	118	357	129
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	7	2	4	5	6	5	1	2	7	1	4
Cap, veh/h	128	1051	488	166	1146	507	279	559	247	311	580	253
Arrive On Green	0.07	0.31	0.31	0.09	0.33	0.33	0.07	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	1767	3413	1585	1753	3469	1535	1739	3582	1585	1711	3582	1560
Grp Volume(v), veh/h	81	364	114	129	390	126	88	272	91	118	357	129
Grp Sat Flow(s),veh/h/ln	1767	1706	1585	1753	1735	1535	1739	1791	1585	1711	1791	1560
Q Serve(g_s), s	3.6	6.7	4.4	5.8	6.9	4.9	3.3	5.6	4.2	4.6	7.5	6.1
Cycle Q Clear(g_c), s	3.6	6.7	4.4	5.8	6.9	4.9	3.3	5.6	4.2	4.6	7.5	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	1051	488	166	1146	507	279	559	247	311	580	253
V/C Ratio(X)	0.63	0.35	0.23	0.78	0.34	0.25	0.31	0.49	0.37	0.38	0.62	0.51
Avail Cap(c_a), veh/h	681	2237	1039	460	2273	1006	626	1280	566	641	1280	557
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	21.8	20.9	35.9	20.5	19.8	25.7	31.3	30.7	25.7	31.7	31.1
Incr Delay (d2), s/veh	6.1	0.3	0.3	9.0	0.2	0.4	0.8	0.9	1.3	0.9	1.5	2.3
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	1.7	2.5	1.6	2.8	2.6	1.7	1.4	2.4	1.6	1.9	3.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	22.0	21.3	44.9	20.8	20.2	26.4	32.2	32.0	26.6	33.2	33.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		559			645			451			604	
Approach Delay, s/veh		24.9			25.5			31.0			31.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.4	31.8	13.8	19.1	14.6	33.6	14.3	18.7				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	7.8	8.7	5.3	9.5	5.6	8.9	6.6	7.6				
Green Ext Time (p_c), s	0.3	4.1	0.2	3.6	0.2	4.4	0.3	2.7				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	440	69	67	454	84	77	42	91	53	19	71
Future Volume (vph)	52	440	69	67	454	84	77	42	91	53	19	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
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
Heavy Vehicles (%)	2%	5%	4%	2%	5%	5%	3%	2%	1%	6%	11%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effct Green (s)	27.0	21.8	21.8	27.0	21.8	21.8	25.1	24.2			13.6	13.6
Actuated g/C Ratio	0.37	0.30	0.30	0.37	0.30	0.30	0.35	0.34			0.19	0.19
v/c Ratio	0.14	0.48	0.14	0.18	0.48	0.18	0.19	0.23			0.35	0.21
Control Delay	13.5	25.6	3.0	13.8	25.4	4.8	19.0	9.7			35.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	13.5	25.6	3.0	13.8	25.4	4.8	19.0	9.7			35.8	4.1
LOS	B	C	A	B	C	A	B	A			D	A
Approach Delay		21.7			21.3			13.1			20.0	
Approach LOS		C			C			B			C	

**Intersection Summary**  
 Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 72.2  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 20.2

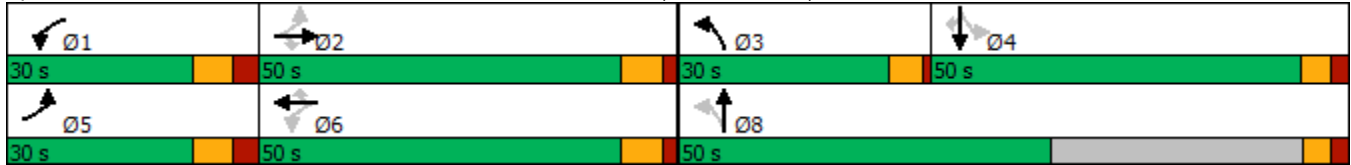
Intersection LOS: C

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗	↖	↖	↗			↖	↖
Traffic Volume (veh/h)	52	440	69	67	454	84	77	42	91	53	19	71
Future Volume (veh/h)	52	440	69	67	454	84	77	42	91	53	19	71
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	1826	1841	1870	1826	1826	1856	1870	1870	1737	1737	1856
Adj Flow Rate, veh/h	57	484	76	74	499	92	85	46	100	58	21	78
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	5	4	2	5	5	3	2	2	11	11	3
Cap, veh/h	358	960	431	372	989	441	358	155	337	231	65	222
Arrive On Green	0.05	0.28	0.28	0.06	0.29	0.29	0.07	0.30	0.30	0.14	0.14	0.14
Sat Flow, veh/h	1781	3469	1560	1781	3469	1547	1767	525	1140	845	464	1572
Grp Volume(v), veh/h	57	484	76	74	499	92	85	0	146	79	0	78
Grp Sat Flow(s),veh/h/ln	1781	1735	1560	1781	1735	1547	1767	0	1665	1309	0	1572
Q Serve(g_s), s	1.2	6.6	2.1	1.6	6.7	2.5	2.2	0.0	3.8	2.2	0.0	2.5
Cycle Q Clear(g_c), s	1.2	6.6	2.1	1.6	6.7	2.5	2.2	0.0	3.8	2.9	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	0.73		1.00
Lane Grp Cap(c), veh/h	358	960	431	372	989	441	358	0	492	296	0	222
V/C Ratio(X)	0.16	0.50	0.18	0.20	0.50	0.21	0.24	0.00	0.30	0.27	0.00	0.35
Avail Cap(c_a), veh/h	965	2669	1200	965	2669	1190	1030	0	1310	1112	0	1235
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	13.4	17.1	15.4	13.3	16.8	15.3	17.2	0.0	15.3	21.9	0.0	21.8
Incr Delay (d2), s/veh	0.3	0.9	0.4	0.4	0.9	0.5	0.5	0.0	0.7	1.0	0.0	2.0
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	0.4	2.3	0.7	0.6	2.3	0.8	0.9	0.0	1.4	1.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	18.0	15.9	13.6	17.6	15.8	17.7	0.0	16.0	22.9	0.0	23.8
LnGrp LOS	B	B	B	B	B	B	B	A	B	C	A	C
Approach Vol, veh/h		617			665			231				157
Approach Delay, s/veh		17.3			16.9			16.6				23.4
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	22.3	8.7	13.8	10.8	22.8		22.5				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	3.6	8.6	4.2	4.9	3.2	8.7		5.8				
Green Ext Time (p_c), s	0.2	6.9	0.3	1.6	0.2	7.3		1.9				

Intersection Summary

HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	537	16	38	527	40	21	10	32	33	9	50
Future Volume (vph)	21	537	16	38	527	40	21	10	32	33	9	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	10%	3%	12%	8%	5%	8%	19%	10%	3%	3%	0%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	32.1	34.3	34.3	33.4	36.2	36.2		12.8			12.8	12.8
Actuated g/C Ratio	0.62	0.66	0.66	0.64	0.70	0.70		0.25			0.25	0.25
v/c Ratio	0.04	0.26	0.02	0.07	0.25	0.04		0.19			0.15	0.12
Control Delay	5.9	9.6	0.1	5.7	7.9	0.1		14.5			21.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	5.9	9.6	0.1	5.7	7.9	0.1		14.5			21.7	0.5
LOS	A	A	A	A	A	A		B			C	A
Approach Delay		9.2			7.2			14.5			10.2	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100

Actuated Cycle Length: 51.9

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.26

Intersection Signal Delay: 8.6

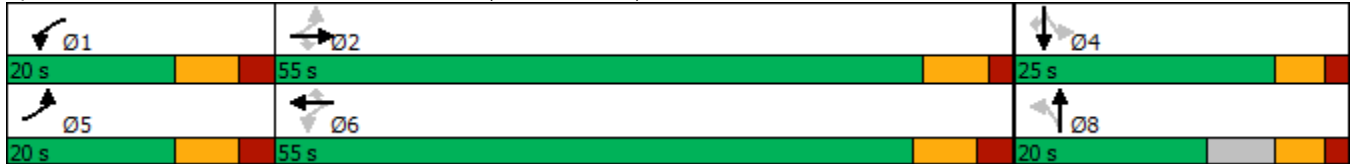
Intersection LOS: A

Intersection Capacity Utilization 56.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	537	16	38	527	40	21	10	32	33	9	50
Future Volume (veh/h)	21	537	16	38	527	40	21	10	32	33	9	50
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	1752	1856	1722	1781	1826	1781	1752	1752	1752	1900	1900	1811
Adj Flow Rate, veh/h	24	603	18	43	592	45	24	11	36	37	10	56
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	10	3	12	8	5	8	10	10	10	0	0	6
Cap, veh/h	489	1550	642	459	1350	587	134	71	134	305	71	274
Arrive On Green	0.11	0.44	0.44	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1668	3526	1459	1697	3469	1510	333	398	752	1147	399	1535
Grp Volume(v), veh/h	24	603	18	43	592	45	71	0	0	47	0	56
Grp Sat Flow(s),veh/h/ln	1668	1763	1459	1697	1735	1510	1483	0	0	1546	0	1535
Q Serve(g_s), s	0.5	7.4	0.4	0.9	8.1	1.2	0.0	0.0	0.0	0.0	0.0	2.0
Cycle Q Clear(g_c), s	0.5	7.4	0.4	0.9	8.1	1.2	2.4	0.0	0.0	1.4	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	0.34		0.51	0.79		1.00
Lane Grp Cap(c), veh/h	489	1550	642	459	1350	587	339	0	0	376	0	274
V/C Ratio(X)	0.05	0.39	0.03	0.09	0.44	0.08	0.21	0.00	0.00	0.13	0.00	0.20
Avail Cap(c_a), veh/h	632	2644	1095	690	2559	1114	403	0	0	555	0	461
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.7	12.2	10.2	10.2	14.5	12.4	22.7	0.0	0.0	22.2	0.0	22.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.1	0.0	0.3
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	0.1	2.4	0.1	0.3	2.7	0.4	0.9	0.0	0.0	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	12.4	10.2	10.3	14.8	12.4	23.0	0.0	0.0	22.4	0.0	22.8
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		645			680			71				103
Approach Delay, s/veh		12.2			14.3			23.0				22.6
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	35.8		17.2	14.5	32.6		17.2				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	2.9	9.4		4.0	2.5	10.1		4.4				
Green Ext Time (p_c), s	0.0	6.1		0.3	0.0	6.2		0.2				

Intersection Summary

HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	342	272	1	0	427	112	3	0	10	236	0	194
Future Volume (vph)	342	272	1	0	427	112	3	0	10	236	0	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	6%	100%	0%	7%	4%	0%	0%	0%	4%	0%	4%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	37.9	37.4			17.0	17.0		10.2				12.9
Actuated g/C Ratio	0.58	0.57			0.26	0.26		0.16				0.20
v/c Ratio	0.60	0.15			0.53	0.24		0.04				0.67
Control Delay	12.7	7.3			24.8	5.6		0.2				19.5
Queue Delay	0.0	0.0			0.0	0.0		0.0				0.0
Total Delay	12.7	7.3			24.8	5.6		0.2				19.5
LOS	B	A			C	A		A				B
Approach Delay		10.3			20.8			0.3				19.5
Approach LOS		B			C			A				B

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 65.8

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 16.3

Intersection LOS: B

Intersection Capacity Utilization 69.8%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

 Ø1	 Ø2	 Ø4
25 s	45 s	30 s
 Ø5	 Ø6	 Ø8
25 s	45 s	30 s

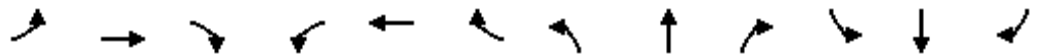


HCM 6th Signalized Intersection Summary

4-BUILD WI 2022-AM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕	↗		↕			↕	↖
Traffic Volume (veh/h)	342	272	1	0	427	112	3	0	10	236	0	194
Future Volume (veh/h)	342	272	1	0	427	112	3	0	10	236	0	194
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	1856	1811	1811	1900	1796	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	356	283	1	0	445	117	3	0	10	246	0	202
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	6	6	0	7	4	0	0	0	0	0	0
Cap, veh/h	523	1821	6	366	777	355	113	35	268	419	0	370
Arrive On Green	0.18	0.52	0.52	0.00	0.23	0.23	0.25	0.00	0.25	0.25	0.00	0.25
Sat Flow, veh/h	1767	3517	12	1810	3413	1560	182	137	1061	1226	0	1465
Grp Volume(v), veh/h	356	138	146	0	445	117	13	0	0	246	0	202
Grp Sat Flow(s),veh/h/ln	1767	1721	1809	1810	1706	1560	1380	0	0	1226	0	1465
Q Serve(g_s), s	9.3	2.8	2.8	0.0	7.6	4.1	0.0	0.0	0.0	5.2	0.0	7.9
Cycle Q Clear(g_c), s	9.3	2.8	2.8	0.0	7.6	4.1	7.9	0.0	0.0	13.1	0.0	7.9
Prop In Lane	1.00		0.01	1.00		1.00	0.23		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	523	891	937	366	777	355	416	0	0	419	0	370
V/C Ratio(X)	0.68	0.16	0.16	0.00	0.57	0.33	0.03	0.00	0.00	0.59	0.00	0.55
Avail Cap(c_a), veh/h	681	975	1025	852	1933	884	560	0	0	548	0	503
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	8.3	8.3	0.0	22.6	21.2	18.6	0.0	0.0	23.8	0.0	21.3
Incr Delay (d2), s/veh	1.8	0.1	0.1	0.0	0.7	0.5	0.0	0.0	0.0	1.3	0.0	1.3
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	3.2	0.8	0.8	0.0	2.8	1.4	0.1	0.0	0.0	3.5	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	8.4	8.4	0.0	23.2	21.8	18.6	0.0	0.0	25.1	0.0	22.6
LnGrp LOS	B	A	A	A	C	C	B	A	A	C	A	C
Approach Vol, veh/h		640			562			13				448
Approach Delay, s/veh		12.6			22.9			18.6				24.0
Approach LOS		B			C			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	22.7		24.0	0.0	41.8		24.0				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	11.3	9.6		9.9	0.0	4.8		15.1				
Green Ext Time (p_c), s	0.6	3.2		0.0	0.0	1.5		1.6				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕	↖		↕	↖
Traffic Volume (vph)	5	440	94	66	511	4	109	0	66	1	0	3
Future Volume (vph)	5	440	94	66	511	4	109	0	66	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	6%	3%	4%	5%	0%	4%	0%	7%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	24.4	23.0		28.6	28.8			10.6	10.6			10.8
Actuated g/C Ratio	0.48	0.45		0.56	0.57			0.21	0.21			0.21
v/c Ratio	0.01	0.36		0.13	0.28			0.40	0.17			0.01
Control Delay	7.0	15.0		7.1	9.9			24.9	1.9			0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	7.0	15.0		7.1	9.9			24.9	1.9			0.0
LOS	A	B		A	A			C	A			A
Approach Delay		14.9			9.6			16.2				
Approach LOS		B			A			B				

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM

01/17/2021

Actuated Cycle Length: 50.7

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 12.7

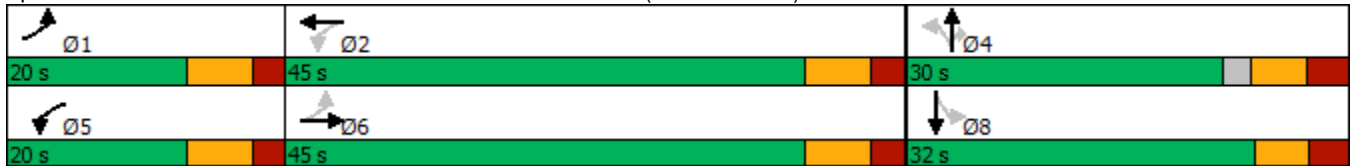
Intersection LOS: B

Intersection Capacity Utilization 50.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-AM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	
Traffic Volume (veh/h)	5	440	94	66	511	4	109	0	66	1	0	3
Future Volume (veh/h)	5	440	94	66	511	4	109	0	66	1	0	3
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	1900	1811	1811	1841	1826	1826	1900	1900	1796	1900	1900	1900
Adj Flow Rate, veh/h	5	454	97	68	527	4	112	0	68	1	0	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	6	6	4	5	5	0	0	7	0	0	0
Cap, veh/h	496	980	208	441	1082	8	363	0	228	119	33	181
Arrive On Green	0.10	0.35	0.35	0.06	0.31	0.31	0.15	0.00	0.15	0.15	0.00	0.15
Sat Flow, veh/h	1810	2824	599	1753	3529	27	1441	0	1522	180	223	1208
Grp Volume(v), veh/h	5	275	276	68	259	272	112	0	68	4	0	0
Grp Sat Flow(s),veh/h/ln	1810	1721	1703	1753	1735	1821	1441	0	1522	1610	0	0
Q Serve(g_s), s	0.1	6.1	6.2	1.2	6.0	6.0	3.4	0.0	1.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	6.1	6.2	1.2	6.0	6.0	3.5	0.0	1.9	0.1	0.0	0.0
Prop In Lane	1.00		0.35	1.00		0.01	1.00		1.00	0.25		0.75
Lane Grp Cap(c), veh/h	496	597	591	441	532	558	363	0	228	334	0	0
V/C Ratio(X)	0.01	0.46	0.47	0.15	0.49	0.49	0.31	0.00	0.30	0.01	0.00	0.00
Avail Cap(c_a), veh/h	791	1322	1308	799	1333	1399	817	0	709	888	0	0
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	0.00
Uniform Delay (d), s/veh	8.9	12.4	12.5	10.4	13.8	13.8	19.2	0.0	18.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.2	0.7	0.7	0.5	0.0	0.7	0.0	0.0	0.0
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	0.0	1.8	1.8	0.4	1.9	2.0	1.1	0.0	0.7	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.0	13.0	13.0	10.5	14.5	14.5	19.6	0.0	19.2	17.7	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		556			599			180				4
Approach Delay, s/veh		13.0			14.1			19.5				17.7
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		14.5	10.0	24.4		14.5				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.1	8.0		5.5	3.2	8.2		2.1				
Green Ext Time (p_c), s	0.0	3.0		0.7	0.1	3.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay	14.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

4-BUILD WI 2022-AM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	23	140	254	29	0	115	0	310	1	0	1
Future Volume (vph)	0	23	140	254	29	0	115	0	310	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8571			734	
Travel Time (s)		39.9			38.9			167.0			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	24%	2%	4%	7%	0%	5%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.8% ICU Level of Service B

Analysis Period (min) 15



Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	23	140	254	29	0	115	0	310	1	0	1
Future Vol, veh/h	0	23	140	254	29	0	115	0	310	1	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	24	2	4	7	0	5	0	2	0	0	0
Mvmt Flow	0	25	152	276	32	0	125	0	337	1	0	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	13.9	16.3	8.9
HCM LOS	B	B	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	0%	90%	50%
Vol Thru, %	0%	14%	10%	0%
Vol Right, %	73%	86%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	425	163	283	2
LT Vol	115	0	254	1
Through Vol	0	23	29	0
RT Vol	310	140	0	1
Lane Flow Rate	462	177	308	2
Geometry Grp	1	1	1	1
Degree of Util (X)	0.636	0.273	0.484	0.004
Departure Headway (Hd)	4.96	5.54	5.67	5.848
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	730	647	637	609
Service Time	2.995	3.583	3.708	3.909
HCM Lane V/C Ratio	0.633	0.274	0.484	0.003
HCM Control Delay	16.3	10.7	13.9	8.9
HCM Lane LOS	C	B	B	A
HCM 95th-tile Q	4.6	1.1	2.6	0

Lanes, Volumes, Timings  
 7: CR 466A (MILLER BLVD) & Driveway 1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Volume (vph)	0	519	532	93	0	101
Future Volume (vph)	0	519	532	93	0	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			10	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	519	532	93	0	101
Future Vol, veh/h	0	519	532	93	0	101
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	0	564	578	101	0	110

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	656
HCM Lane V/C Ratio	-	-	-	0.167
HCM Control Delay (s)	-	-	-	11.6
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.6

Lanes, Volumes, Timings  
 8: CR 466A (MILLER BLVD) & Driveway 2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑↑	↑		
Traffic Volume (vph)	0	519	543	89	0	0
Future Volume (vph)	0	519	543	89	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.7%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	158	97	322	131	110	283
Future Volume (vph)	158	97	322	131	110	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.7% ICU Level of Service B
Analysis Period (min)	15



Intersection						
Int Delay, s/veh	7.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗		↘
Traffic Vol, veh/h	158	97	322	131	110	283
Future Vol, veh/h	158	97	322	131	110	283
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	0	-	50	-	-
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	172	105	350	142	120	308

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	898	350	0	0	492
Stage 1	350	-	-	-	-
Stage 2	548	-	-	-	-
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	310	693	-	-	1071
Stage 1	713	-	-	-	-
Stage 2	579	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	268	693	-	-	1071
Mov Cap-2 Maneuver	268	-	-	-	-
Stage 1	713	-	-	-	-
Stage 2	501	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.8	0	2.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	268	693	1071	-
HCM Lane V/C Ratio	-	-	0.641	0.152	0.112	-
HCM Control Delay (s)	-	-	39.6	11.1	8.8	0
HCM Lane LOS	-	-	E	B	A	A
HCM 95th %tile Q(veh)	-	-	4	0.5	0.4	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	7	411	8	8	360
Future Volume (vph)	7	7	411	8	8	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			86
Travel Time (s)	10.3		4.7			1.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	35.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	7	7	411	8	8	360
Future Vol, veh/h	7	7	411	8	8	360
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	-	-	-	-	-
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	8	447	9	9	391

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	861	452	0	0	456
Stage 1	452	-	-	-	-
Stage 2	409	-	-	-	-
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	326	608	-	-	1105
Stage 1	641	-	-	-	-
Stage 2	671	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	323	608	-	-	1105
Mov Cap-2 Maneuver	323	-	-	-	-
Stage 1	641	-	-	-	-
Stage 2	664	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	422	1105
HCM Lane V/C Ratio	-	-	0.036	0.008
HCM Control Delay (s)	-	-	13.9	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	130	176	160	62	197	157	167	87	115	132	132	51
Average Queue (ft)	52	94	72	23	82	75	83	26	43	70	57	17
95th Queue (ft)	100	155	139	48	158	141	150	60	87	115	109	39
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	142	180	166	88
Average Queue (ft)	67	102	86	40
95th Queue (ft)	119	162	151	73
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)				0
Queuing Penalty (veh)				0

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	66	176	169	54	74	148	156	50	98	125	111	68
Average Queue (ft)	20	68	63	16	26	56	69	13	40	52	49	31
95th Queue (ft)	48	141	132	40	57	119	136	34	82	98	93	59
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	48	163	140	38	64	131	139	44	96	72	67
Average Queue (ft)	10	58	44	5	19	40	52	9	31	26	25
95th Queue (ft)	34	127	103	22	49	101	114	31	69	59	54
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)							0				
Queuing Penalty (veh)							0				

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	T	T	R	LTR	LT	TR
Maximum Queue (ft)	266	103	112	160	177	89	33	200	97
Average Queue (ft)	129	30	41	90	90	39	10	106	45
95th Queue (ft)	222	77	91	143	147	72	32	174	81
Link Distance (ft)		1394	1394	171	171	171	678	265	265
Upstream Blk Time (%)				0	0				
Queuing Penalty (veh)				0	0				
Storage Bay Dist (ft)	500								
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	LT	R	LTR
Maximum Queue (ft)	25	175	130	74	104	136	112	70	55
Average Queue (ft)	2	81	41	24	29	52	49	30	5
95th Queue (ft)	12	150	97	56	74	108	93	59	29
Link Distance (ft)		2103	2103		1078	1078	641		3412
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	240			400				160	
Storage Blk Time (%)		0					0		
Queuing Penalty (veh)		0					0		



Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	82	100	190	19
Average Queue (ft)	41	54	96	1
95th Queue (ft)	67	85	152	12
Link Distance (ft)	2603	2539	8515	706
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement	SB
Directions Served	R
Maximum Queue (ft)	61
Average Queue (ft)	31
95th Queue (ft)	52
Link Distance (ft)	542
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement	WB	WB
Directions Served	T	R
Maximum Queue (ft)	3	35
Average Queue (ft)	0	2
95th Queue (ft)	3	19
Link Distance (ft)	228	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		24
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	0	0

Intersection: 9: MICRO RACETRACK RD & Driveway 3

Movement	WB	WB	NB	SB
Directions Served	L	R	R	LT
Maximum Queue (ft)	136	77	43	170
Average Queue (ft)	58	28	5	53
95th Queue (ft)	105	54	26	126
Link Distance (ft)	412	412		172
Upstream Blk Time (%)				0
Queuing Penalty (veh)				1
Storage Bay Dist (ft)			50	
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 10: MICRO RACETRACK RD & Driveway 4

Movement	WB	SB	B32
Directions Served	LR	LT	T
Maximum Queue (ft)	31	71	15
Average Queue (ft)	11	6	0
95th Queue (ft)	34	37	10
Link Distance (ft)	426	36	8515
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		2	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 3
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Lanes, Volumes, Timings  
1: MORSE BLVD & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘	↘	↗	↘	↘	↗	↘
Traffic Volume (vph)	107	525	81	167	416	149	98	269	113	138	444	74
Future Volume (vph)	107	525	81	167	416	149	98	269	113	138	444	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	375		265	445		380	315		380	332		195
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	80			85			80			85		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			35				35
Link Distance (ft)		1899			1179			1979				1760
Travel Time (s)		28.8			17.9			38.6				34.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	5%	8%	2%	4%	5%	4%	1%	5%	4%	1%	8%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		8	4		4
Detector Phase	5	2	2	1	6	6	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	15.7	31.8	31.8	15.7	31.8	31.8	14.8	24.0	24.0	14.8	24.0	24.0
Total Split (s)	40.0	60.0	60.0	30.0	60.0	60.0	30.0	35.0	35.0	30.0	35.0	35.0
Total Split (%)	24.2%	36.4%	36.4%	18.2%	36.4%	36.4%	18.2%	21.2%	21.2%	18.2%	21.2%	21.2%
Maximum Green (s)	31.3	53.2	53.2	21.3	53.2	53.2	22.2	29.0	29.0	22.2	29.0	29.0
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.9	2.0	2.0	3.9	2.0	2.0	3.8	2.0	2.0	3.8	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	8.7	6.8	6.8	8.7	6.8	6.8	7.8	6.0	6.0	7.8	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
Recall Mode	None	Min	Min	None	None	None	None	None	None	None	Min	Min
Act Effct Green (s)	13.3	27.8	27.8	17.1	31.6	31.6	27.3	18.8	18.8	33.0	21.6	21.6
Actuated g/C Ratio	0.12	0.26	0.26	0.16	0.30	0.30	0.26	0.18	0.18	0.31	0.20	0.20
v/c Ratio	0.52	0.62	0.18	0.62	0.43	0.27	0.38	0.45	0.28	0.39	0.65	0.17
Control Delay	55.1	39.6	2.4	53.9	33.2	3.9	29.0	42.9	1.7	28.3	44.3	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	39.6	2.4	53.9	33.2	3.9	29.0	42.9	1.7	28.3	44.3	0.8
LOS	E	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		37.7			32.0			30.4			36.0	
Approach LOS		D			C			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 165  
 Actuated Cycle Length: 106.7  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.65

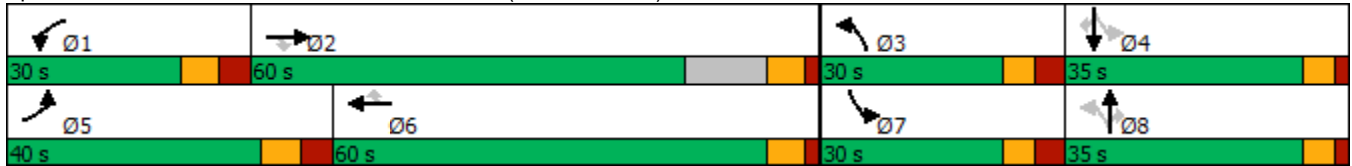
Lanes, Volumes, Timings  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM

01/17/2021

Intersection Signal Delay: 34.3      Intersection LOS: C  
 Intersection Capacity Utilization 72.6%      ICU Level of Service C  
 Analysis Period (min) 15

Splits and Phases: 1: MORSE BLVD & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 1: MORSE BLVD & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑	↗
Traffic Volume (veh/h)	107	525	81	167	416	149	98	269	113	138	444	74
Future Volume (veh/h)	107	525	81	167	416	149	98	269	113	138	444	74
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	1841	1826	1781	1870	1841	1826	1841	1885	1826	1841	1885	1781
Adj Flow Rate, veh/h	113	553	85	176	438	157	103	283	119	145	467	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	5	8	2	4	5	4	1	5	4	1	8
Cap, veh/h	147	983	428	217	1123	497	267	616	266	338	680	286
Arrive On Green	0.08	0.28	0.28	0.12	0.32	0.32	0.07	0.17	0.17	0.09	0.19	0.19
Sat Flow, veh/h	1753	3469	1510	1781	3497	1547	1753	3582	1547	1753	3582	1510
Grp Volume(v), veh/h	113	553	85	176	438	157	103	283	119	145	467	78
Grp Sat Flow(s),veh/h/ln	1753	1735	1510	1781	1749	1547	1753	1791	1547	1753	1791	1510
Q Serve(g_s), s	5.6	12.0	3.8	8.5	8.6	6.8	4.2	6.3	6.1	5.9	10.7	3.9
Cycle Q Clear(g_c), s	5.6	12.0	3.8	8.5	8.6	6.8	4.2	6.3	6.1	5.9	10.7	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	983	428	217	1123	497	267	616	266	338	680	286
V/C Ratio(X)	0.77	0.56	0.20	0.81	0.39	0.32	0.39	0.46	0.45	0.43	0.69	0.27
Avail Cap(c_a), veh/h	622	2092	910	430	2109	933	581	1177	509	620	1177	496
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.0	24.0	37.7	23.2	22.6	27.3	32.9	32.8	26.4	33.3	30.5
Incr Delay (d2), s/veh	9.6	0.7	0.3	8.4	0.3	0.5	1.1	0.8	1.7	1.0	1.8	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	2.7	4.7	1.3	4.0	3.3	2.4	1.8	2.7	2.3	2.5	4.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	27.7	24.3	46.2	23.6	23.1	28.4	33.6	34.5	27.4	35.1	31.3
LnGrp LOS	D	C	C	D	C	C	C	C	C	C	D	C
Approach Vol, veh/h		751			771			505			690	
Approach Delay, s/veh		30.5			28.6			32.7			33.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	31.8	14.2	22.7	16.1	35.1	15.8	21.2				
Change Period (Y+Rc), s	* 8.7	6.8	* 7.8	6.0	* 8.7	6.8	* 7.8	6.0				
Max Green Setting (Gmax), s	* 21	53.2	* 22	29.0	* 31	53.2	* 22	29.0				
Max Q Clear Time (g_c+I1), s	10.5	14.0	6.2	12.7	7.6	10.6	7.9	8.3				
Green Ext Time (p_c), s	0.4	6.0	0.3	4.0	0.3	5.2	0.4	2.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				31.0								
HCM 6th LOS				C								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



Lanes, Volumes, Timings  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	557	70	84	533	53	101	57	57	57	39	58
Future Volume (vph)	109	557	70	84	533	53	101	57	57	57	39	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	11	12	12	12	11	11	11
Storage Length (ft)	360		260	300		0	240		0	0		0
Storage Lanes	1		1	1		1	1		0	0		1
Taper Length (ft)	85			95			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		661			1030			969				1249
Travel Time (s)		10.0			15.6			26.4				34.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	5%	3%	2%	5%	6%	4%	0%	0%	2%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	3	8		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0	5.0	8.0		8.0	8.0	8.0
Minimum Split (s)	29.5	29.5	29.5	12.9	24.8	24.8	11.5	23.8		23.9	23.9	23.9
Total Split (s)	30.0	50.0	50.0	30.0	50.0	50.0	30.0	50.0		50.0	50.0	50.0
Total Split (%)	18.8%	31.3%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%		31.3%	31.3%	31.3%
Maximum Green (s)	22.1	43.2	43.2	22.1	43.2	43.2	25.0	44.2		44.1	44.1	44.1
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	4.0	3.4		3.4	3.4	3.4
All-Red Time (s)	3.1	2.0	2.0	3.1	2.0	2.0	1.0	2.4		2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	7.9	6.8	6.8	7.9	6.8	6.8	5.0	5.8			5.9	5.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes
Vehicle Extension (s)	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0		5.0	5.0	5.0
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Act Effct Green (s)	38.3	30.4	30.4	32.7	24.6	24.6	31.4	30.6			14.9	14.9
Actuated g/C Ratio	0.44	0.35	0.35	0.37	0.28	0.28	0.36	0.35			0.17	0.17
v/c Ratio	0.31	0.52	0.13	0.25	0.60	0.12	0.25	0.19			0.46	0.18
Control Delay	15.5	27.0	2.6	15.3	30.8	1.0	22.3	15.4			42.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	15.5	27.0	2.6	15.3	30.8	1.0	22.3	15.4			42.2	1.9
LOS	B	C	A	B	C	A	C	B			D	A
Approach Delay		23.0			26.5			18.7			27.0	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	87.5
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 24.1

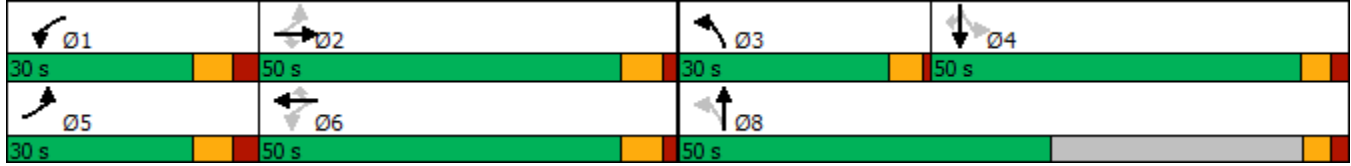
Intersection LOS: C

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)



HCM 6th Signalized Intersection Summary  
 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↗	↘
Traffic Volume (veh/h)	109	557	70	84	533	53	101	57	57	57	39	58
Future Volume (veh/h)	109	557	70	84	533	53	101	57	57	57	39	58
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	1856	1826	1856	1870	1826	1811	1841	1900	1900	1856	1856	1856
Adj Flow Rate, veh/h	118	605	76	91	579	58	110	62	62	62	42	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	5	3	2	5	6	4	0	0	3	3	3
Cap, veh/h	377	1097	497	361	1069	473	335	249	249	188	99	202
Arrive On Green	0.07	0.32	0.32	0.06	0.31	0.31	0.08	0.29	0.29	0.13	0.13	0.13
Sat Flow, veh/h	1767	3469	1572	1781	3469	1535	1753	872	872	736	770	1572
Grp Volume(v), veh/h	118	605	76	91	579	58	110	0	124	104	0	63
Grp Sat Flow(s),veh/h/ln	1767	1735	1572	1781	1735	1535	1753	0	1743	1505	0	1572
Q Serve(g_s), s	2.7	8.9	2.1	2.1	8.6	1.7	3.2	0.0	3.4	2.7	0.0	2.2
Cycle Q Clear(g_c), s	2.7	8.9	2.1	2.1	8.6	1.7	3.2	0.0	3.4	3.8	0.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	0.60		1.00
Lane Grp Cap(c), veh/h	377	1097	497	361	1069	473	335	0	499	287	0	202
V/C Ratio(X)	0.31	0.55	0.15	0.25	0.54	0.12	0.33	0.00	0.25	0.36	0.00	0.31
Avail Cap(c_a), veh/h	882	2428	1100	885	2428	1074	911	0	1248	1133	0	1123
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	13.4	17.5	15.2	13.5	17.7	15.4	19.4	0.0	16.9	25.0	0.0	24.4
Incr Delay (d2), s/veh	0.7	0.9	0.3	0.5	0.9	0.2	0.8	0.0	0.6	1.6	0.0	1.8
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	1.0	3.1	0.8	0.7	3.0	0.5	1.3	0.0	1.4	1.5	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	18.4	15.5	14.0	18.7	15.6	20.3	0.0	17.5	26.6	0.0	26.3
LnGrp LOS	B	B	B	B	B	B	C	A	B	C	A	C
Approach Vol, veh/h		799			728			234				167
Approach Delay, s/veh		17.5			17.8			18.8				26.5
Approach LOS		B			B			B				C
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	26.3	9.7	13.8	12.4	25.8		23.6				
Change Period (Y+Rc), s	7.9	6.8	5.0	5.9	7.9	6.8		* 5.9				
Max Green Setting (Gmax), s	22.1	43.2	25.0	44.1	22.1	43.2		* 44				
Max Q Clear Time (g_c+I1), s	4.1	10.9	5.2	5.8	4.7	10.6		5.4				
Green Ext Time (p_c), s	0.3	8.6	0.4	1.8	0.4	8.1		1.5				

Intersection Summary												
HCM 6th Ctrl Delay											18.6	
HCM 6th LOS											B	

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: FARNER PL & CR 466A (MILLER BLVD)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	592	14	46	611	74	19	28	49	64	19	32
Future Volume (vph)	41	592	14	46	611	74	19	28	49	64	19	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	12	11	12	12	12	11	11	11
Storage Length (ft)	325		285	230		235	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		1
Taper Length (ft)	75			45			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			25				25
Link Distance (ft)		1030			1776			914				1644
Travel Time (s)		15.6			26.9			24.9				44.8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	6%	0%	9%	3%	7%	0%	0%	2%	2%	5%	0%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8				4
Permitted Phases	2		2	6		6	8			4		4
Detector Phase	5	2	2	1	6	6	8	8		4	4	4
Switch Phase												
Minimum Initial (s)	7.0	25.0	25.0	7.0	25.0	25.0	12.0	12.0		12.0	12.0	12.0
Minimum Split (s)	25.5	31.8	31.8	14.5	32.6	32.6	23.7	23.7		23.7	23.7	23.7
Total Split (s)	20.0	55.0	55.0	20.0	55.0	55.0	20.0	20.0		25.0	25.0	25.0
Total Split (%)	20.0%	55.0%	55.0%	20.0%	55.0%	55.0%	20.0%	20.0%		25.0%	25.0%	25.0%
Maximum Green (s)	12.5	48.2	48.2	12.5	47.4	47.4	14.3	14.3		19.3	19.3	19.3
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.7	3.7		3.7	3.7	3.7
All-Red Time (s)	2.7	2.0	2.0	2.7	2.8	2.8	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	7.5	6.8	6.8	7.5	7.6	7.6		5.7			5.7	5.7
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	2.7	4.0	4.0	2.7	4.0	4.0	2.7	2.7		2.7	2.7	2.7
Recall Mode	None	Min	Min	None	Min	Min	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0		7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0	0	0		0	0	0
Act Effct Green (s)	33.1	31.7	31.7	34.5	33.7	33.7		12.5			12.5	12.5
Actuated g/C Ratio	0.56	0.54	0.54	0.59	0.57	0.57		0.21			0.21	0.21
v/c Ratio	0.08	0.33	0.02	0.09	0.31	0.09		0.27			0.28	0.08
Control Delay	6.1	12.6	0.0	6.2	11.2	1.8		16.0			25.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	6.1	12.6	0.0	6.2	11.2	1.8		16.0			25.1	0.3
LOS	A	B	A	A	B	A		B			C	A
Approach Delay		12.0			9.9			16.0			18.2	
Approach LOS		B			A			B			B	

Intersection Summary

Area Type: Other  
Cycle Length: 100

Actuated Cycle Length: 58.7

Natural Cycle: 85

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.33

Intersection Signal Delay: 11.7

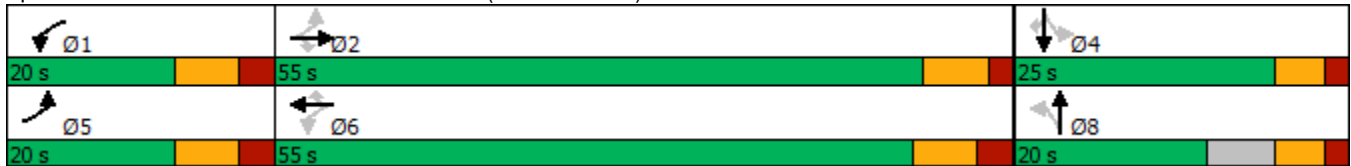
Intersection LOS: B

Intersection Capacity Utilization 56.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: FARNER PL & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 3: FARNER PL & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



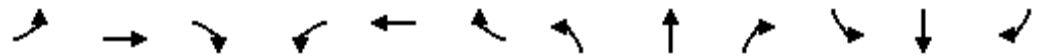
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗		↕			↖	↗
Traffic Volume (veh/h)	41	592	14	46	611	74	19	28	49	64	19	32
Future Volume (veh/h)	41	592	14	46	611	74	19	28	49	64	19	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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	1811	1900	1767	1856	1796	1900	1900	1900	1826	1826	1900
Adj Flow Rate, veh/h	42	610	14	47	630	76	20	29	51	66	20	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	6	0	9	3	7	0	0	0	5	5	0
Cap, veh/h	493	1493	699	451	1365	589	98	118	156	294	76	293
Arrive On Green	0.11	0.43	0.43	0.06	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	3441	1610	1682	3526	1522	173	649	856	1070	418	1610
Grp Volume(v), veh/h	42	610	14	47	630	76	100	0	0	86	0	33
Grp Sat Flow(s),veh/h/ln	1781	1721	1610	1682	1763	1522	1679	0	0	1489	0	1610
Q Serve(g_s), s	0.8	7.9	0.3	1.0	8.6	2.1	0.0	0.0	0.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	0.8	7.9	0.3	1.0	8.6	2.1	3.2	0.0	0.0	2.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	0.20		0.51	0.77		1.00
Lane Grp Cap(c), veh/h	493	1493	699	451	1365	589	373	0	0	370	0	293
V/C Ratio(X)	0.09	0.41	0.02	0.10	0.46	0.13	0.27	0.00	0.00	0.23	0.00	0.11
Avail Cap(c_a), veh/h	645	2569	1202	673	2588	1118	437	0	0	531	0	481
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	12.6	10.4	10.3	14.8	12.8	22.9	0.0	0.0	22.7	0.0	22.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.1	0.3	0.1	0.3	0.0	0.0	0.3	0.0	0.1
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	0.2	2.5	0.1	0.3	2.9	0.6	1.3	0.0	0.0	1.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	12.8	10.5	10.4	15.1	12.9	23.2	0.0	0.0	23.0	0.0	22.2
LnGrp LOS	A	B	B	B	B	B	C	A	A	C	A	C
Approach Vol, veh/h		666			753			100				119
Approach Delay, s/veh		12.5			14.6			23.2				22.7
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.6		17.5	14.5	32.6		17.5				
Change Period (Y+Rc), s	* 7.5	* 7.6		* 5.7	* 7.5	* 7.6		* 5.7				
Max Green Setting (Gmax), s	* 13	* 48		* 19	* 13	* 47		* 14				
Max Q Clear Time (g_c+I1), s	3.0	9.9		4.7	2.8	10.6		5.2				
Green Ext Time (p_c), s	0.0	6.2		0.4	0.0	6.8		0.3				

Intersection Summary

HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	382	4	7	466	93	1	1	0	318	0	272
Future Volume (vph)	303	382	4	7	466	93	1	1	0	318	0	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	12	12	12	12	12	12
Storage Length (ft)	500		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				35
Link Distance (ft)		1462			218			732				358
Travel Time (s)		22.2			3.3			16.6				7.0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	0%	0%	4%	4%	0%	0%	0%	2%	0%	1%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2		2	4			8		
Detector Phase	1	6		5	2	2	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0	15.0	8.0	8.0		8.0		8.0
Minimum Split (s)	12.2	40.7		12.2	39.7	39.7	47.0	47.0		46.4		46.4
Total Split (s)	25.0	45.0		25.0	45.0	45.0	30.0	30.0		30.0		30.0
Total Split (%)	25.0%	45.0%		25.0%	45.0%	45.0%	30.0%	30.0%		30.0%		30.0%
Maximum Green (s)	17.8	37.3		17.8	37.3	37.3	23.0	23.0		22.6		22.6
Yellow Time (s)	4.7	4.7		4.7	4.7	4.7	4.0	4.0		4.0		4.0
All-Red Time (s)	2.5	3.0		2.5	3.0	3.0	3.0	3.0		3.4		3.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Lost Time (s)	7.2	7.7		7.2	7.7	7.7		7.0				7.4
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	Min		None	Min	Min	None	None		None		None
Walk Time (s)		7.0			7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		26.0			25.0	25.0	33.0	33.0		32.0		32.0
Pedestrian Calls (#/hr)		0			0	0	0	0		0		0
Act Effct Green (s)	39.1	36.4		24.1	17.9	17.9		10.7				17.9
Actuated g/C Ratio	0.54	0.51		0.34	0.25	0.25		0.15				0.25
v/c Ratio	0.58	0.23		0.02	0.59	0.20		0.01				0.76
Control Delay	14.3	11.8		10.4	28.1	3.9		26.5				24.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0				0.0
Total Delay	14.3	11.8		10.4	28.1	3.9		26.5				24.1
LOS	B	B		B	C	A		C				C
Approach Delay		12.9			23.9			26.5				24.1
Approach LOS		B			C			C				C

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 71.9

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 19.9


Intersection LOS: B

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

 Ø1	 Ø2	 Ø4
25 s	45 s	30 s
 Ø5	 Ø6	 Ø8
25 s	45 s	30 s

HCM 6th Signalized Intersection Summary

4-BUILD WI 2022-PM

4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕	↗		↕			↕	↗
Traffic Volume (veh/h)	303	382	4	7	466	93	1	1	0	318	0	272
Future Volume (veh/h)	303	382	4	7	466	93	1	1	0	318	0	272
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	1841	1841	1841	1900	1841	1841	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	319	402	4	7	491	98	1	1	0	335	0	286
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	4	4	0	0	0	0	0	0
Cap, veh/h	462	1312	13	329	741	331	173	150	0	477	0	448
Arrive On Green	0.17	0.37	0.37	0.01	0.21	0.21	0.31	0.31	0.00	0.31	0.00	0.31
Sat Flow, veh/h	1753	3548	35	1810	3497	1560	315	491	0	1228	0	1465
Grp Volume(v), veh/h	319	198	208	7	491	98	2	0	0	335	0	286
Grp Sat Flow(s),veh/h/ln	1753	1749	1834	1810	1749	1560	806	0	0	1228	0	1465
Q Serve(g_s), s	9.3	5.7	5.7	0.2	9.1	3.7	0.0	0.0	0.0	7.1	0.0	11.9
Cycle Q Clear(g_c), s	9.3	5.7	5.7	0.2	9.1	3.7	11.9	0.0	0.0	19.0	0.0	11.9
Prop In Lane	1.00		0.02	1.00		1.00	0.50		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	462	647	679	329	741	331	323	0	0	477	0	448
V/C Ratio(X)	0.69	0.31	0.31	0.02	0.66	0.30	0.01	0.00	0.00	0.70	0.00	0.64
Avail Cap(c_a), veh/h	610	921	967	768	1843	822	349	0	0	497	0	468
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	15.8	15.8	21.6	25.6	23.5	17.8	0.0	0.0	24.3	0.0	21.2
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	1.0	0.5	0.0	0.0	0.0	4.2	0.0	2.7
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	3.4	2.0	2.1	0.1	3.5	1.3	0.0	0.0	0.0	5.5	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	16.1	16.1	21.6	26.6	24.0	17.8	0.0	0.0	28.6	0.0	23.9
LnGrp LOS	B	B	B	C	C	C	B	A	A	C	A	C
Approach Vol, veh/h		725			596			2				621
Approach Delay, s/veh		17.3			26.1			17.8				26.4
Approach LOS		B			C			B				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.0	22.7		29.1	7.8	33.9		29.1				
Change Period (Y+Rc), s	7.2	7.7		* 7.4	7.2	7.7		7.4				
Max Green Setting (Gmax), s	17.8	37.3		* 23	17.8	37.3		22.6				
Max Q Clear Time (g_c+I1), s	11.3	11.1		13.9	2.2	7.7		21.0				
Green Ext Time (p_c), s	0.5	3.4		0.0	0.0	2.2		0.6				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	554	129	49	557	2	55	0	30	2	0	5
Future Volume (vph)	11	554	129	49	557	2	55	0	30	2	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	11	11	12	12	12
Storage Length (ft)	240		0	400		0	0		160	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	50			50			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30				25
Link Distance (ft)		2178			1162			695				3458
Travel Time (s)		33.0			17.6			15.8				94.3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	5%	1%	0%	3%	0%	3%	0%	26%	0%	0%	17%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	1	6		5	2			4				8
Permitted Phases	6			2			4		4	8		
Detector Phase	1	6		5	2		4	4	4	8		8
Switch Phase												
Minimum Initial (s)	5.0	15.0		5.0	15.0		8.0	8.0	8.0	8.0		8.0
Minimum Split (s)	22.5	50.4		12.0	33.4		44.2	44.2	44.2	44.0		44.0
Total Split (s)	20.0	45.0		20.0	45.0		30.0	30.0	30.0	32.0		32.0
Total Split (%)	20.6%	46.4%		20.6%	46.4%		30.9%	30.9%	30.9%	33.0%		33.0%
Maximum Green (s)	13.0	37.6		13.0	37.6		22.8	22.8	22.8	25.0		25.0
Yellow Time (s)	4.7	4.7		4.7	4.7		4.0	4.0	4.0	4.0		4.0
All-Red Time (s)	2.3	2.7		2.3	2.7		3.2	3.2	3.2	3.0		3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)	7.0	7.4		7.0	7.4			7.2	7.2			7.0
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	Min		None	Min		None	None	None	None		None
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)		36.0			19.0		30.0	30.0	30.0	30.0		30.0
Pedestrian Calls (#/hr)		0			0		0	0	0	0		0
Act Effct Green (s)	29.7	30.3		33.4	35.7			9.1	9.1			9.2
Actuated g/C Ratio	0.59	0.60		0.67	0.71			0.18	0.18			0.18
v/c Ratio	0.02	0.35		0.09	0.24			0.21	0.09			0.02
Control Delay	5.6	12.1		5.3	7.3			23.6	0.6			0.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	5.6	12.1		5.3	7.3			23.6	0.6			0.1
LOS	A	B		A	A			C	A			A
Approach Delay		12.0			7.1			15.5				0.1
Approach LOS		B			A			B				A

Intersection Summary

Area Type: Other  
 Cycle Length: 97

Lanes, Volumes, Timings  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM

01/17/2021

Actuated Cycle Length: 50.1

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay: 10.0

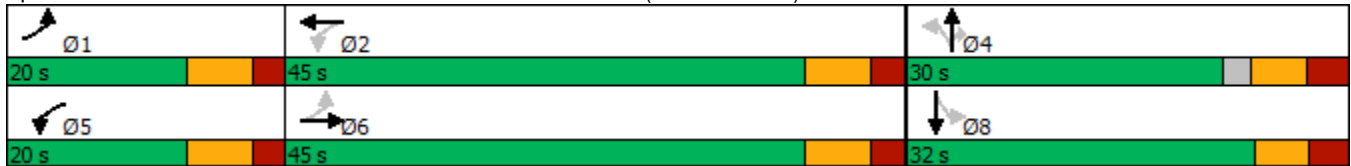
Intersection LOS: B

Intersection Capacity Utilization 50.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)





HCM 6th Signalized Intersection Summary  
 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

4-BUILD WI 2022-PM  
 01/17/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕			↕	↗		↕	↖
Traffic Volume (veh/h)	11	554	129	49	557	2	55	0	30	2	0	5
Future Volume (veh/h)	11	554	129	49	557	2	55	0	30	2	0	5
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	1900	1826	1826	1900	1856	1856	1900	1900	1515	1900	1900	1900
Adj Flow Rate, veh/h	11	577	134	51	580	2	57	0	31	2	0	5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	5	5	0	3	3	0	0	26	0	0	0
Cap, veh/h	501	1038	240	401	1143	4	326	0	155	122	31	139
Arrive On Green	0.11	0.37	0.37	0.05	0.32	0.32	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1810	2796	648	1810	3604	12	1445	0	1284	203	260	1157
Grp Volume(v), veh/h	11	357	354	51	284	298	57	0	31	7	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1709	1810	1763	1853	1445	0	1284	1619	0	0
Q Serve(g_s), s	0.2	7.7	7.8	0.9	6.2	6.2	1.5	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	7.7	7.8	0.9	6.2	6.2	1.7	0.0	1.0	0.2	0.0	0.0
Prop In Lane	1.00		0.38	1.00		0.01	1.00		1.00	0.29		0.71
Lane Grp Cap(c), veh/h	501	644	634	401	559	588	326	0	155	293	0	0
V/C Ratio(X)	0.02	0.55	0.56	0.13	0.51	0.51	0.17	0.00	0.20	0.02	0.00	0.00
Avail Cap(c_a), veh/h	807	1379	1359	805	1401	1473	845	0	619	923	0	0
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	0.00
Uniform Delay (d), s/veh	8.3	11.8	11.8	10.0	13.1	13.1	19.0	0.0	18.7	18.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.1	0.7	0.7	0.3	0.0	0.6	0.0	0.0	0.0
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	0.0	2.2	2.2	0.3	1.9	2.0	0.5	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	12.5	12.6	10.1	13.9	13.8	19.3	0.0	19.4	18.4	0.0	0.0
LnGrp LOS	A	B	B	B	B	B	B	A	B	B	A	A
Approach Vol, veh/h		722			633			88				7
Approach Delay, s/veh		12.5			13.5			19.3				18.4
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	22.4		12.9	9.4	25.0		12.9				
Change Period (Y+Rc), s	* 7	* 7.4		* 7.2	* 7	* 7.4		* 7.2				
Max Green Setting (Gmax), s	* 13	* 38		* 23	* 13	* 38		* 25				
Max Q Clear Time (g_c+I1), s	2.2	8.2		3.7	2.9	9.8		2.2				
Green Ext Time (p_c), s	0.0	3.3		0.3	0.0	4.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.  
 \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
 6: MICRO RACETRACK RD & LAKE ELLA RD

4-BUILD WI 2022-PM  
 01/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	45	129	435	24	0	142	0	286	0	0	0
Future Volume (vph)	0	45	129	435	24	0	142	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45			45			35			30	
Link Distance (ft)		2631			2567			8527			734	
Travel Time (s)		39.9			38.9			166.1			16.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	2%	9%	2%	9%	0%	1%	0%	3%	0%	0%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	71.1% ICU Level of Service C
Analysis Period (min)	15

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	45	129	435	24	0	142	0	286	0	0	0
Future Vol, veh/h	0	45	129	435	24	0	142	0	286	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	2	9	2	9	0	1	0	3	0	0	0
Mvmt Flow	0	46	133	448	25	0	146	0	295	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.7	23.7	18.3	0
HCM LOS	B	C	C	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	0%	95%	0%
Vol Thru, %	0%	26%	5%	100%
Vol Right, %	67%	74%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	428	174	459	0
LT Vol	142	0	435	0
Through Vol	0	45	24	0
RT Vol	286	129	0	0
Lane Flow Rate	441	179	473	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.659	0.276	0.747	0
Departure Headway (Hd)	5.378	5.546	5.684	6.736
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	671	644	634	0
Service Time	3.434	3.612	3.734	4.736
HCM Lane V/C Ratio	0.657	0.278	0.746	0
HCM Control Delay	18.3	10.7	23.7	9.7
HCM Lane LOS	C	B	C	N
HCM 95th-tile Q	4.9	1.1	6.6	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Volume (vph)	0	702	528	90	0	114
Future Volume (vph)	0	702	528	90	0	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		45	45		30	
Link Distance (ft)		286	2178		609	
Travel Time (s)		4.3	33.0		13.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	702	528	90	0	114
Future Vol, veh/h	0	702	528	90	0	114
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	0	763	574	98	0	124

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	336
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	660
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	660
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	660
HCM Lane V/C Ratio	-	-	-	0.188
HCM Control Delay (s)	-	-	-	11.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.7



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↑	↑		
Traffic Volume (vph)	0	702	558	84	0	0
Future Volume (vph)	0	702	558	84	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			24	0	0
Storage Lanes	0			1	0	0
Taper Length (ft)	25				25	
Link Speed (mph)		45	45		30	
Link Distance (ft)		218	286		322	
Travel Time (s)		3.3	4.3		7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	22.7% ICU Level of Service A
Analysis Period (min)	15



Lanes, Volumes, Timings  
 9: MICRO RACETRACK RD & Driveway 3



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	181	110	269	128	106	458
Future Volume (vph)	181	110	269	128	106	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	0	
Storage Lanes	1	1		1	0	
Taper Length (ft)	25				25	
Link Speed (mph)	30		35			35
Link Distance (ft)	452		358			240
Travel Time (s)	10.3		7.0			4.7
Confl. Peds. (#/hr)	1					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.2%
Analysis Period (min)	15
	ICU Level of Service C

Intersection						
Int Delay, s/veh	12.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗		↘
Traffic Vol, veh/h	181	110	269	128	106	458
Future Vol, veh/h	181	110	269	128	106	458
Conflicting Peds, #/hr	1	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	50	-	-
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	197	120	292	139	115	498

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1021	292	0	0	431	0
Stage 1	292	-	-	-	-	-
Stage 2	729	-	-	-	-	-
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	262	747	-	-	1129	-
Stage 1	758	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	225	747	-	-	1129	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	409	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	51.9	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	225	747	1129	-
HCM Lane V/C Ratio	-	-	0.874	0.16	0.102	-
HCM Control Delay (s)	-	-	77	10.7	8.6	0
HCM Lane LOS	-	-	F	B	A	A
HCM 95th %tile Q(veh)	-	-	7	0.6	0.3	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	8	8	371	8	8	531
Future Volume (vph)	8	8	371	8	8	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30		35			35
Link Distance (ft)	455		240			130
Travel Time (s)	10.3		4.7			2.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.3% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	8	371	8	8	531
Future Vol, veh/h	8	8	371	8	8	531
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	-	-	-	-	-
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	9	9	403	9	9	577

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1003	408	0	0	412
Stage 1	408	-	-	-	-
Stage 2	595	-	-	-	-
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	268	643	-	-	1147
Stage 1	671	-	-	-	-
Stage 2	551	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	265	643	-	-	1147
Mov Cap-2 Maneuver	265	-	-	-	-
Stage 1	671	-	-	-	-
Stage 2	544	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	375	1147
HCM Lane V/C Ratio	-	-	0.046	0.008
HCM Control Delay (s)	-	-	15.1	8.2
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	R
Maximum Queue (ft)	168	254	232	69	239	220	222	84	130	153	143	84
Average Queue (ft)	80	146	124	20	120	97	107	32	52	81	67	25
95th Queue (ft)	148	223	208	49	208	178	184	69	105	133	127	58
Link Distance (ft)		1825	1825			1085	1085			1908	1908	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	375			265	445			380	315			380
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 1: MORSE BLVD & CR 466A (MILLER BLVD)

Movement	SB	SB	SB	SB
Directions Served	L	T	T	R
Maximum Queue (ft)	182	235	228	99
Average Queue (ft)	83	138	126	34
95th Queue (ft)	147	207	204	73
Link Distance (ft)		1696	1696	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	332			195
Storage Blk Time (%)			1	
Queuing Penalty (veh)			1	

Intersection: 2: HEALD WAY/SEMBLER WAY & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LT	R
Maximum Queue (ft)	121	230	223	53	88	195	210	46	139	124	130	73
Average Queue (ft)	43	91	90	16	36	83	91	10	58	50	61	29
95th Queue (ft)	90	187	184	39	73	168	174	31	109	95	109	59
Link Distance (ft)		594	594			942	942	942		909	1188	1188
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			260	300				240			
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 3: FARNER PL & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LT	R
Maximum Queue (ft)	65	198	178	27	75	160	152	52	105	106	45
Average Queue (ft)	21	65	59	3	24	56	62	17	38	47	19
95th Queue (ft)	52	158	145	16	57	125	126	44	79	89	44
Link Distance (ft)		942	942			1713	1713		849	1583	1583
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	325			285	230			235			
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 4: STORAGE DRIVEWAY/MICRO RACETRACK RD & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LTR	LT	TR
Maximum Queue (ft)	252	132	145	32	173	178	78	27	251	125
Average Queue (ft)	121	46	57	5	99	99	33	3	144	61
95th Queue (ft)	206	106	116	23	153	157	65	15	233	104
Link Distance (ft)		1394	1394	171	171	171	171	678	265	265
Upstream Blk Time (%)					0	0			0	
Queuing Penalty (veh)					0	0			1	
Storage Bay Dist (ft)	500									
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 5: DRAKE DR/TIMBERTOP LN & CR 466A (MILLER BLVD)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	TR	L	T	TR	LT	R	LTR
Maximum Queue (ft)	24	183	129	49	96	133	91	79	55
Average Queue (ft)	4	81	41	18	22	45	30	24	8
95th Queue (ft)	17	154	96	42	63	103	66	61	34
Link Distance (ft)		2103	2103		1078	1078	641		3412
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	240			400			160		
Storage Blk Time (%)		0							
Queuing Penalty (veh)		0							



Intersection: 6: MICRO RACETRACK RD & LAKE ELLA RD

Movement	EB	WB	NB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	87	178	200
Average Queue (ft)	46	83	104
95th Queue (ft)	75	144	169
Link Distance (ft)	2603	2539	8471
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: CR 466A (MILLER BLVD) & Driveway 1

Movement	WB	SB
Directions Served	TR	R
Maximum Queue (ft)	3	74
Average Queue (ft)	0	35
95th Queue (ft)	3	59
Link Distance (ft)	2103	542
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: CR 466A (MILLER BLVD) & Driveway 2

Movement	WB
Directions Served	R
Maximum Queue (ft)	36
Average Queue (ft)	2
95th Queue (ft)	18
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	24
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 9: MICRO RACETRACK RD & Driveway 3

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	R	LT
Maximum Queue (ft)	185	63	22	47	195
Average Queue (ft)	73	30	1	5	56
95th Queue (ft)	142	52	12	25	142
Link Distance (ft)	412	412	265		172
Upstream Blk Time (%)					0
Queuing Penalty (veh)					2
Storage Bay Dist (ft)				50	
Storage Blk Time (%)			0	0	
Queuing Penalty (veh)			0	0	

Intersection: 10: MICRO RACETRACK RD & Driveway 4

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	39	46
Average Queue (ft)	12	3
95th Queue (ft)	37	24
Link Distance (ft)	426	80
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 4
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**DEVELOPMENT REVIEW LETTER  
CITY OF FRUITLAND PARK-GROCER  
MAJOR SITE PLAN  
JUNE 25, 2021**

**Property Owner(s):** Larry M. Phillips Trustee and Larry M. and Linda S. Phillips

**Engineer/Agent:** Tim Johnson, P.E. (Engineer)

**Phone:** 813-642-4924 (Engineer)

**Email:** mstorum@bowmanconsulting.com

**Mailing Address:** 1410 N Westshore Blvd., STE 111

**INCOMPLETE ADDRESS**

**Project Name:** City of Fruitland Park-Grocer

**Parcel ID:** 06-19-24-0004-000-02700 and 06-19-24-0004-000-02703

**Alt Key:** 1288151 and 1699665

**Project Address:** Vacant Land and 35326 Micro Racetrack Road

Micro Racetrack Road Fruitland Park, FL 34731

Fruitland Park, FL 34731

Mr. Johnon:

Contained herein are the comments following informal TRC review. The referenced project is tentatively scheduled before Technical Review Committee (TRC) on July 6, 2021 at 10:00AM.

**Development Review:**

The *initial application fees* are as follows:

Payment	Check #1258	\$2,600.00
City of Fruitland Park Application Fee		(250.00)
City Land Planner Application Fee		(750.00)
City Engineer Application Fee		(1,600.00)

Per City Ordinance 2008-023 these are the applicable fees as of date; however, there may be additional fees associated with the application(s) that will be passed to the applicant(s), including Contractual Services.

**City Attorney Review:**

No comment at time of review letter.

**City Engineer Review:**

See attached Staff Report

**City Land Planner Review:**

See attached Staff Report

**City Building Review:**

No comments.

**City Code Enforcement Review:**

No comment at time of review letter.

**City Fire Review:**

No comment at time of review letter.

**City Police Review:**

No comment at time of review letter.

**City Public Works Department Review:**

No comment at time of review letter.

**City of Leesburg Utilities Review:**

Natural gas is available for this site.

**Lake County Public Schools Review:**

No comments for this project.

**Lake County Public Works Review:**

No comment at time of review letter.

Enc (2)