WATERMARK

RESIDENTIAL PLANNED

UNIT DEVELOPMENT

(RPUD)

October 12, 2018

Revised: January 3, 2019

Prepared by:

Lucido & Associates
701 E. Ocean Boulevard
Stuart, FL 34994

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Exhibit 1 - Project Narrative

Background

Watermark Residential is under contract to purchase the identified 11.34 acre parcel formerly referred to as Phase VIII Multi Family on the Pineapple Plantation Master Plan (Amended Exhibit "D", OR Book 1221, Page 1051). The property currently has Neighborhood Special District Future Land Use and Residential Planned Unit Development RPUD Zoning. As part of this application, the applicant is requesting an amended RPUD zoning designation and Master Plan approval that is specific only to the 11.34 acre property. The applicant is also pursuing a Major Land Use Change from Neighborhood Special District to Multi Family Residential under a separate application concurrent with this request.

Proposal

The applicant is requesting RPUD Master Plan approval for 284 multifamily units on 11.34 acres which will be comprised of two four-story apartment buildings. In addition to the proposed apartment buildings, there will be amenities such as a clubhouse, pool, individual parking garages, and other accessory structures. The residents will have an opportunity to rent a garage for the automobile if desired. The apartment access may be privately gated.

Surrounding Uses and Access

The property is bounded to the east by Windemere, a single-family residential community which is within both Martin County and City of Stuart jurisdiction. To the north is Pineapple Commons, a commercial planned unit development (Best Buy/Petsmart/City Furniture) located within the City of Stuart. To the west is US Highway 1 and the existing Grenada Plaza, which is within unincorporated Martin County, and to the south – an existing commercial used car sales use. Access to the property will be from US Highway 1, which the applicant plans to make significant improvements consisting of a right-turn lane (north bound) to allow for better access for the community. The proposed roadway improvements will be coordinated with the City of Stuart Public Works Department as well as with the Florida Department of Transportation (FDOT). This application contains the FDOT Pre-application determination letter for reference.

Exhibit 2 - Location Map

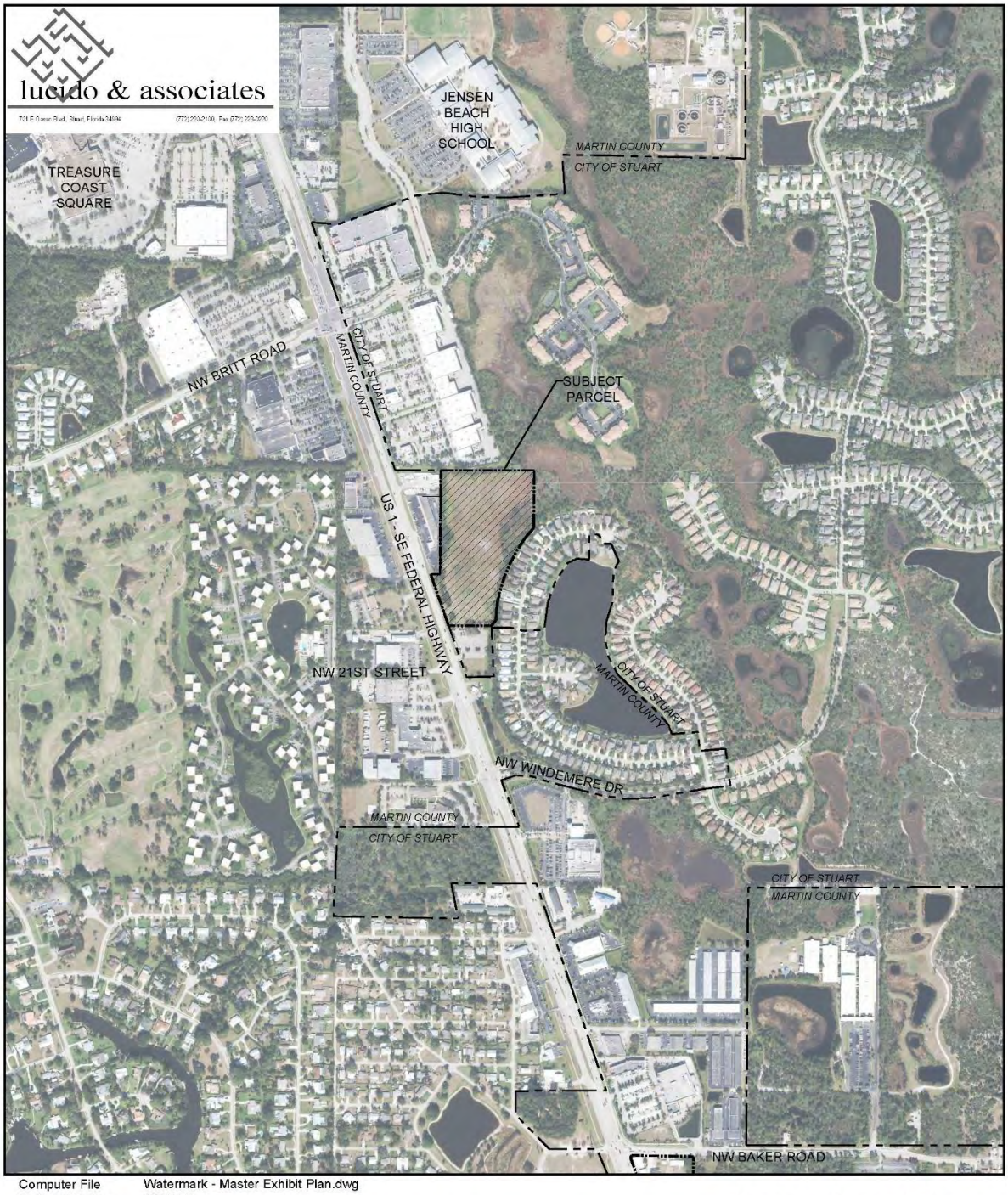


Exhibit 3 - Aerial Map



ALTA/NSPS LAND TITLE SURVEY
BOUNDARY AND TOPOGRAPHIC SURVEY
PORTION OF LOTS 5, 6 AND 8, BLOCK 2, PLAT NO. 1, ST. LUCIE GARDENS
PLAT BOOK 1, PAGE 35
LYING IN SECTION 29, TOWNSHIP 37 SOUTH, RANGE 41 EAST
MARTIN COUNTY, FLORIDA

LEGAL DESCRIPTION (FROM TITLE COMMITMENT)

A PARCEL OF LAND LYING IN A PORTION OF LOTS 5, 6 AND 8, BLOCK 2, AS SHOWN ON PLAT NO. 1, ST. LUCIE GARDENS, AS RECORDED IN PLAT BOOK 1, PAGE 35, PUBLIC RECORDS OF ST. LUCIE (NOW MARTIN) COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGIN AT THE NORTHWEST CORNER OF SAID LOT 5, BLOCK 2; PROCEED SOUTH 00 DEGREES 39 MINUTES 29 SECONDS EAST ALONG THE NORTH LINE OF SAID LOTS 5 AND 6, A DISTANCE OF 600.62 FEET TO A POINT ON A LINE 660 FEET EAST OF AND PARALLEL WITH AS MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID LOT 5; THENCE SOUTH 00 DEGREES 45 MINUTES 42 SECONDS WEST, DEPARTING SAID NORTH LINE AND ALONG SAID PARALLEL LINE, A DISTANCE OF 996.10 FEET, TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF OF 475.50 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 41 DEGREES 13 MINUTES 45 SECONDS EAST; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 11 DEGREES 11 MINUTES 17 SECONDS, A DISTANCE OF 92.94 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 825.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 17 DEGREES 57 MINUTES 28 SECONDS, A DISTANCE OF 258.49 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 825.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 21 DEGREES 19 MINUTES 17 SECONDS, A DISTANCE OF 661.15 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 825.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 16 DEGREES 57 MINUTES 28 SECONDS, A DISTANCE OF 110.38 FEET; THENCE SOUTH 46 DEGREES 00 MINUTES 00 SECONDS WEST, A DISTANCE OF 40.17 FEET TO THE NORTHWEST CORNER OF PINEAPPLE PLANTATION PLAT NO. 1, AS RECORDED AT PLAT BOOK 14, PAGE 4, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA; THENCE NORTH 89 DEGREES 36 MINUTES 16 SECONDS WEST, A DISTANCE OF 275.25 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF US HIGHWAY NO. 1 (S.R. 5) (A 200.00 FOOT RIGHT-OF-WAY); THENCE NORTH 19 DEGREES 41 MINUTES 22 SECONDS WEST ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 346.23 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 8; THENCE SOUTH 89 DEGREES 36 MINUTES 16 SECONDS EAST ALONG THE SAID NORTHERLY LINE OF SAID LOT 8 AND DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 89.19 FEET TO A POINT ON SAID WESTERLY LINE OF LOT 6; THENCE NORTH 00 DEGREES 39 MINUTES 42 SECONDS EAST, ALONG SAID WESTERLY LINE OF LOT 6 A DISTANCE OF 465.74 FEET TO THE POINT OF BEGINNING.

CONTAINING 493907 SQUARE FEET OR 11.34 ACRES, MORE OR LESS

A.L.T.A. COMMITMENT
OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
SCHEDULE B II
TITLE COMMITMENT FILE NO. 3017746NCT, DATED MAY 8, 2018 AT 5:45PM

1. INTERESTS, LIENS, ENCUMBRANCES, ADVERSES, CLAIMS OR OTHER MATTERS, IF ANY CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT.
NOT A SURVEY MATTER.
2. FACTS WHICH WOULD BE DISCLOSED BY AN ACCURATE AND COMPREHENSIVE SURVEY OF THE PREMISES HEREIN DESCRIBED.
THE FOLLOWING ARE APPARENT PHYSICAL USES:
A.P.U. #1 - THERE ARE MULTIPLE FENCES THAT CROSS THE EAST BOUNDARY LINE.
A.P.U. #2 - THERE IS A WOOD RETAINING WALL THAT CROSSES THE EAST BOUNDARY LINE.
A.P.U. #3 - THERE IS A SIDEWALK THAT CROSSES THE EAST BOUNDARY LINE.
3. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION.
NOT A SURVEY MATTER.
4. CONSTRUCTION, MECHANICS, CONTRACTORS' OR MATERIALMEN'S LIEN CLAIMS, IF ANY, WHERE NO NOTICE THEREOF APPEARS OF RECORD.
NOT A SURVEY MATTER.
5. EASEMENTS OR CLAIMS OF EASEMENTS NOT SHOWN BY THE PUBLIC RECORDS.
ALL EASEMENTS THAT WERE PROVIDED ARE SHOWN.
6. GENERAL OR SPECIAL TAXES AND ASSESSMENTS REQUIRED TO BE PAID IN THE YEAR 2018 AND SUBSEQUENT YEARS.
NOT A SURVEY MATTER.
7. EIGHTH EQUUR PUBLIC FACILITIES EXEMPTION NO. 93-01 RECORDED OCTOBER 14, 1993 IN OFFICIAL RECORDS BOOK 1022, PAGE 1410, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS A PORTION OF THE PROPERTY. NOTHING TO PLOT.
8. RESOLUTION NO. 98-4-9 OF THE BOARD OF COUNTY COMMISSIONERS OF MARTIN COUNTY, FLORIDA, RECORDED FEBRUARY 5, 1998 IN OFFICIAL RECORDS BOOK 1160, PAGE 1740, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
9. COVENANTS, CONDITIONS AND OTHER MATTER SET FORTH IN THAT PINEAPPLE PLANTATION PLANNED UNIT DEVELOPMENT ZONING AGREEMENT RECORDED IN BRUNETT 5, 1998 IN OFFICIAL RECORDS BOOK 1160, PAGE 1749, AS AMENDED BY FIRST AMENDMENT TO PLANNED UNIT DEVELOPMENT ZONING AGREEMENT FOR PINEAPPLE PLANTATION RECORDED FEBRUARY 20, 1997 IN OFFICIAL RECORDS BOOK 1221, PAGE 1048, AS AMENDED BY SECOND AMENDMENT TO PLANNED UNIT DEVELOPMENT ZONING AGREEMENT FOR PINEAPPLE PLANTATION RECORDED DECEMBER 31, 1998 IN OFFICIAL RECORDS BOOK 1423, PAGE 4, AS AMENDED BY THIRD AMENDMENT TO PLANNED UNIT DEVELOPMENT ZONING AGREEMENT FOR PINEAPPLE PLANTATION RECORDED MAY 30, 2000 IN OFFICIAL RECORDS BOOK 1463, PAGE 2084, AND AS AMENDED BY FOURTH AMENDMENT TO PLANNED UNIT DEVELOPMENT ZONING AGREEMENT FOR PINEAPPLE PLANTATION RECORDED MAY 31, 2005 IN OFFICIAL RECORDS BOOK 2010, PAGE 470, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
10. COVENANTS, CONDITIONS AND OTHER MATTERS SET FORTH IN THAT AFFIDAVIT AND COVENANT DEFERRING CERTIFICATE OF PUBLIC FACILITIES RESERVATION RECORDED FEBRUARY 5, 1998, IN OFFICIAL RECORDS BOOK 1160, PAGE 1778, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
11. COVENANTS, CONDITIONS AND OTHER MATTERS SET FORTH IN THAT IRRIGATION AGREEMENT RECORDED JUNE 23, 1997 IN OFFICIAL RECORDS BOOK 1045, PAGE 734, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
12. EASEMENT GRANTED TO FLORIDA POWER & LIGHT COMPANY RECORDED SEPTEMBER 10, 1997 IN OFFICIAL RECORDS BOOK 1260, PAGE 35, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY AS SHOWN.
13. EASEMENT GRANTED TO FLORIDA POWER & LIGHT COMPANY RECORDED SEPTEMBER 10, 1997 IN OFFICIAL RECORDS BOOK 1260, PAGE 50, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY AS SHOWN.
14. TERMS, PROVISIONS, CONDITIONS AND OTHER MATTERS SET FORTH IN THAT AGREEMENT BY AND BETWEEN PULTE HOME CORPORATION AND PINEAPPLE PLANTATION JOINT VENTURE RECORDED SEPTEMBER 7, 1999 IN OFFICIAL RECORDS BOOK 1431, PAGE 2498, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
15. COVENANTS, CONDITIONS AND OTHER MATTERS SET FORTH IN THAT CONSENT AGREEMENT AND ORDER RECORDED DECEMBER 16, 2004 IN OFFICIAL RECORDS BOOK 2364, PAGE 2358, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
NOT A SURVEY MATTER.
16. TERMS, COVENANTS, CONDITIONS AND OTHER MATTERS CONTAINED IN ANY UNRECORDED LEASE(S) AND ALL RIGHTS THEREUNDER OF THE LESSEE(S) AND OF ANY PERSON CLAIMING BY, THROUGH OR UNDER THE LESSEE(S).
NOTE: LANDS WITHDRAWN FROM DECLARATION OF COVENANTS, CONDITION AND RESTRICTIONS FOR PINEAPPLE PLANTATION RECORDED IN OFFICIAL RECORDS BOOK 1198, PAGE 2545, AS AMENDED, BY SUPPLEMENT TO DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR PINEAPPLE PLANTATION RECORDED OCTOBER 19, 2006 IN OFFICIAL RECORDS BOOK 2197, PAGE 1287, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
AFFECTS THE PROPERTY. NOTHING TO PLOT.
17. TERMS, PROVISIONS, RESTRICTIONS AND EASEMENTS CONTAINED IN THAT CERTAIN DEED OF CONSERVATION EASEMENT GRANTED TO THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT RECORDED FEBRUARY 4, 2009 IN OFFICIAL RECORDS BOOK 2575, PAGE 2167, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA.
ONLY WETLAND-30 BUFFER AFFECTS THE PROPERTY AS SHOWN.
18. ANY RIGHTS, INTERESTS, CLAIMS OR EASEMENTS ARISING FROM THE FOLLOWING MATTERS SHOWN ON SURVEY PREPARED BY BOWMAN CONSULTING GROUP, LTD., INC., DATED FEBRUARY 20, 2018, UNDER JOB NO. 0564-01-002:
   a) THE SURVEY DOES NOT DEPICT THE EASEMENTS RECORDED IN OFFICIAL RECORDS BOOK 1978, PAGE 2107.
   THE ONLY EASEMENT THAT AFFECTS THE PROPERTY HAS BEEN ADDED TO THE SURVEY.
   b) ENCROACHMENTS OF FENCE, SIDEWALKS AND RETAINING WALLS OVER AND ACROSS THE EAST BOUNDARY LINE.
   c) ENCROACHMENT OF PAVEMENT OVER AND ACROSS THE WEST PROPERTY LINE.
   d) UTILITY POLE, OVERHEAD UTILITY LINES AND GUY ANCHORS ARE DEPICTED OUTSIDE OF ANY EASEMENTS OR AGREEMENTS OF RECORD.
   e) A RETENTION POND IS DEPICTED OVER AND ACROSS THE EAST PROPERTY LINE.
   SURVEY NOTE: NO RETENTION POND WAS OBSERVED. THERE ARE LOW LYING WET AREAS ALONG AND ACROSS THE EAST BOUNDARY.



SITE/CONTROL MAP



KEY MAP NOT TO SCALE

LOCATION MAP NOT TO SCALE

LEGEND

ALTA	= AMERICAN LAND TITLE ASSOCIATION	LTD	= LIMITED	PLS	= PROFESSIONAL LAND SURVEYOR
APPX	= APPARENT/ APPROX.	(M)	= MEASURED	PRM	= PERMANENT REFERENCE MONUMENT
BTM	= BOTTOM	M	= METER	PVC	= POLYVINYL CHLORIDE PIPE
(C)	= CALCULATED	M.C.	= MARTIN COUNTY	R	= RADIUS
CBS	= CONCRETE BLOCK AND STUCCO	(M)	= MEASURED	RCP	= REINFORCED CONCRETE PIPE
CCR	= CERTIFIED CORNER RECORD	MI	= MILE	R.T.K.	= REAL TIME KINEMATIC
CMP	= CORRUGATED METAL PIPE	N/A	= NON APPLICABLE	T.B.M.	= TEMPORARY BENCHMARK
(D)	= DEED	NAD	= NORTH AMERICAN DATUM	T.E.	= TITLE EXCEPTION
D.E.	= DRAINAGE EASEMENT	N.A.V.D	= NORTH AMERICAN VERTICAL DATUM	TYP.	= TYPICAL
E.A.E.	= EMERGENCY ACCESS EASEMENT	NGS	= NATIONAL GEODETIC SURVEY	U.E.	= UTILITY EASEMENT
EL.	= ELEVATION	NO.	= NUMBER		= WOOD/ CPI PREVENTER
FDOT	= FLORIDA DEPARTMENT OF NATURAL RESOURCES	#	= NUMBER		= BENCHMARK
FPL	= FLORIDA POWER & LIGHT	NSPS	= NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS		= CATCH BASIN
FT	= FEET	O.R.B.	= OFFICIAL RECORDS BOOK		= CENTRAL ANGLE
G.P.S.	= GLOBAL POSITIONING SYSTEM	P.A.E.	= FIELD/MAIN ACCESS EASEMENT		= CONCRETE
I.D.	= IDENTIFICATION	P.B.	= PLAT BOOK		= CONCRETE UTILITY POLE
INC.	= INCORPORATED	PG.	= PAGE		= ELECTRIC METER
INV.	= INVERT	PID	= POINT IDENTIFIER		= EXISTING ELEVATION
KM	= KILOMETER	PK	= PARKER KALON		= FENCE
L	= ARC LENGTH				= FIRE HYDRANT
LB	= LICENSED BUSINESS				= GUY WIRE & ANCHOR
					= IRRIGATION VALVE
					= OVERHEAD UTILITY LINE
					= SEPTIC ACCESS
					= SIGN
					= STORM MANHOLE
					= WATER METER
					= WATER VALVE
					= CEDAR TREE WITH DIAMETER
					= OAK TREE WITH DIAMETER
					= PALM TREE WITH DIAMETER
					= PINE TREE WITH DIAMETER
					= FOUND 5/8" IRON ROD
					= FOUND CONCRETE MONUMENT
					= SET 5/8" IRON ROD AND CAP STAMPED "BOWMAN CO LB 8007"

SHEET INDEX

SHEET 1 — LEGAL DESCRIPTION, SURVEYOR'S NOTES, LEGEND, TITLE COMMITMENT AND SURVEYOR'S CERTIFICATION
SHEETS 2 & 3 — BOUNDARY AND TOPOGRAPHIC SURVEY

SURVEYOR'S NOTES:

1. THIS IS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DEFINED IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE. THE BOUNDARY SURVEY SHOWN HEREON WAS PREPARED IN ACCORDANCE WITH THE "STANDARDS OF PRACTICE" FOR SURVEYING AND MAPPING IN THE STATE OF FLORIDA AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17.05, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES. THIS SURVEY WAS PREPARED FOLLOWING THE TITLE POLICY SHOWN HEREON. THERE MAY BE OTHER MATTERS IN THIS PUBLIC RECORDS THAT AFFECT THIS PROPERTY. NO SEARCH OF THE PUBLIC RECORDS HAS BEEN PERFORMED BY THIS OFFICE.

2. THE BEARINGS, DISTANCES AND COORDINATES SHOWN HEREON REFER TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, TRANSVERSE MERCATOR PROJECTION, EAST ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83) (2011 ADJUSTMENT). THE BASIS OF BEARING REFERS TO A BEARING OF SOUTH 89°39'59" EAST ALONG THE NORTH LINE OF LOTS 5 AND 6, BLOCK 2, PLAT NO. 1 OF LUCIE GARDENS AS RECORDED IN PLAT BOOK 1, PAGE 35 OF THE PUBLIC RECORDS OF ST. LUCIE, NOW MARTIN COUNTY, FLORIDA.

3. THE HORIZONTAL CONTROL POINT FOR THIS SURVEY IS AS FOLLOWS AND WAS PUBLISHED BY NATIONAL GEODETIC SURVEY (NGS):

"SCH 021"
PID: AJ2253
N = 1,953,709.04
E = 994,391.31

FOUND HORIZONTAL CONTROL DISK SET IN TOP OF CONCRETE MONUMENT STAMPED "SCH 021 2001". TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 1 AND JENSEN BEACH BOULEVARD, GO SOUTHEASTERLY ALONG U.S. HIGHWAY 1 FOR 1.8 MILES (1.1 MI) TO THE STATION ON THE LEFT. STATION IS LOCATED 2.5 M (8.2 FT) EAST OF THE EAST SIDE OF PAVEMENT OF THE NORTHBOUND LANE OF U.S. HIGHWAY 1, 15.8 M (51.8 FT) NORTH OF THE SOUTHERLY 7.0 M (23 FT) AND 0.3 M (1.2 FT) WEST OF CARSONITE WITNESS POST AND 0.2 M (0.7 FT) WEST OF THE WEST EDGE OF A CONCRETE WALK

4. THE COORDINATES AND ELEVATIONS SHOWN HEREON WERE ESTABLISHED BY R.T.K. GPS USING AN ONSITE BASE STATION AND ROVER UTILIZING TOPCON GRS GPS RECEIVERS AND TOUGH PAD DATA COLLECTORS OPERATING MAGNET SOFTWARE, AND HAS A HORIZONTAL AND VERTICAL POSITIONAL TOLERANCE OF 0.05 FEET.

5. THE ELEVATIONS SHOWN HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88) AND ARE BASED UPON THE FOLLOWING BENCHMARKS AS PUBLISHED BY MARTIN COUNTY ENGINEERING DEPARTMENT AND NATIONAL GEODETIC SURVEY (NGS):

"SET 21" (M.C.)
FOUND PK NAIL AND WASHER
N = 1,953,755
E = 994,324
EL = 13.70' (N.A.V.D. 88)

"NAIL 5" (NGS)
PID: AF9835
FOUND CONCRETE MONUMENT WITH 3.5" BRASS DISK STAMPED "FLUSH MAR 5 1990 BSM"
EL = 13.50' (N.A.V.D. 88)

THE ELEVATIONS SHOWN ON THE SITE CONTROL POINTS WERE ESTABLISHED BY CONVENTIONAL SURVEY LEVELING PROCEDURES.

6. THE LANDS BOUND BY THIS SURVEY ARE LOCATED IN FLOOD ZONE "X" PER FLOOD INSURANCE RATE MAP NUMBER 12085C0128G DATED MARCH 18, 2013.

7. THE EXPECTED USE OF THE LAND BOUNDARY THIS SURVEY, AS CLASSIFIED IN THE "MINIMUM STANDARD DETAIL REQUIREMENTS" IS "COMMERCIAL" WITH THE MINIMUM LINEAR CLOSURE FOR THIS TYPE OF BOUNDARY SURVEY IS 1:10,000. 1 FOOT IN 10,000 FEET (1:10,000). THE ACCURACY OBTAINED BY MEASUREMENT, OBSERVATION AND CALCULATION OF THE CLOSED GEOMETRIC FIGURE FOR THIS SURVEY WAS DETERMINED TO BE 0.00 FEET AND MEETS OR EXCEEDS THE REQUIREMENT.

8. SUBSURFACE OR UNDERGROUND UTILITIES HAVE NOT BEEN LOCATED AND ARE NOT A PART OF THE SURVEY.

9. ALL DISTANCES SHOWN HEREON ARE IN U.S. SURVEY FEET AND DECIMALS THEREOF.

10. THE IMAGERY SHOWN HEREON WAS DOWNLOADED FROM WWW.LAIRS.ORG AND IS DATED 2016.

11. AS TO TABLE "A" ALTA REQUIREMENTS:
   6(B). ZONING REPORT OR LETTER WAS NOT PROVIDED BY THE CLIENT.
   7, 8, 9. PARCEL IS VACANT. THERE ARE, THERE IS NO BUILDINGS OR PARKING SPACES.
   16. THERE IS NO EVIDENCE OF RECENT EARTH MOVING WORK OR BUILDING CONSTRUCTION.
   17. NO EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED.
   18. NO FIELD DELINEATION OF WETLANDS WAS CONDUCTED.

12. THE WETLAND LINES SHOWN HEREON ARE TAKEN FROM STAKES THAT WERE FOUND IN THE FIELD. THE ORIGIN OF THOSE STAKES IS NOT KNOWN. STAKES ARE SHOWN ON THIS SURVEY DRAWING FOR INFORMATIONAL PURPOSES ONLY.

13. ADDITIONS OR DELETIONS TO THIS SURVEY MAP OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

13. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

14. OFFICIAL RECORDS BOOK 2167, PAGE 1541, FURNISHED BY CLIENT, WAS NOT ADDRESSED IN THE TITLE COMMITMENT. THE INSTRUMENT DOES NOT ENCUMBER THE SUBJECT PROPERTY. IT GRANTS TO THE PROPERTY CERTAIN DRAINAGE RIGHTS.

SURVEYOR'S CERTIFICATION:

TO: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
WATERMARK RESIDENTIAL

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, 6, 6(B), 7, 8, 9, 11, 13, 16, 17 AND 18 OF TABLE "A" THEREOF.

AS SET FORTH IN RULE 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE

FEBRUARY 20, 2018
DATE OF LAST FIELDWORK

RICHARD E. BARNES, JR.
FLORIDA SURVEYOR AND MAPPER
REGISTRATION No. 5173

BOWMAN CONSULTING GROUP, LTD., INC.
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER LB 8007
(LB 8007 = LICENSED BUSINESS NUMBER 8007)

RICHARD E. BARNES JR. 5173 STATE OF FLORIDA REGISTERED SURVEYOR AND MAPPER

Richard Barnes 2018.05.11 13:41:03 -04'00'

Bowman CONSULTING
PROFESSIONAL SURVEYING AND MAPPING, CERTIFICATE OF AUTHORIZATION NO. LB 8007
BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF AUTHORIZATION NO. EB 8949
Bowman Consulting Group, Ltd., Inc.
301 S.E. Ocean Blvd., Suite 301
Stuart, FL 34994
Phone: (772) 287-1410
Fax: (772) 220-2380
www.bowmanconsulting.com
© Bowman Consulting Group, Ltd.

WATERMARK APARTMENTS
ALTA/NSPS LAND TITLE SURVEY
MARTIN COUNTY FLORIDA

PROJECT NO
0564-01-002

PLAN STATUS

DATE	DESCRIPTION
5/11/18	REV PER NEW TITLE

DATE	DESCRIPTION	FIELD BOOK	PAGE
15-156		14-19, 23	

D.A.L.	R.E.B.
DRAWN	CHKD

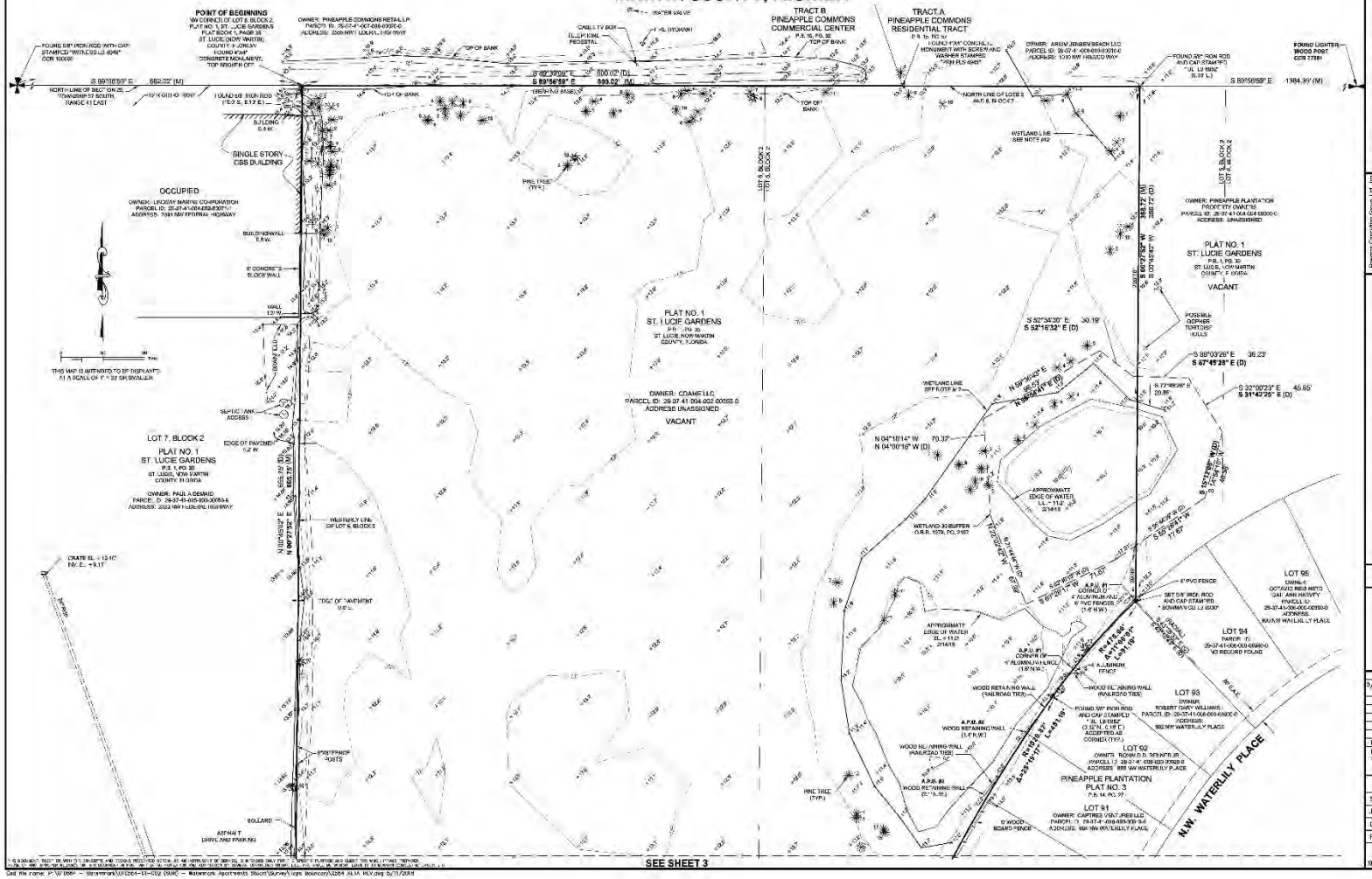
SCALE 1": AS SHOWN
2: N/A
JOB No. 0564-01-002
DATE FEB. 20, 2018
FILE No. 0564 ALTA
SHEET 1 OF 3

Exhibit 4 – Survey

THE INFORMATION CONTAINED HEREIN AND CONTAINED IN ANY OTHER DOCUMENTS OR FORMATS, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. USE OF, OR RELIANCE UPON, THIS INFORMATION BY ANYONE OTHER THAN THE SPECIFIC CLIENT FOR WHICH IT WAS PREPARED, OR MODIFICATION OF THIS INFORMATION WITHOUT WRITTEN AUTHORIZATION BY BOWMAN CONSULTING GROUP, LTD., INC. SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO BOWMAN CONSULTING GROUP, LTD., INC.

File name: P:\0\0554 – Watermark\05564-01-002 (SUE) – Watermark Apartments Stuart\Survey\Topo Boundary\0564 ALTA REV.dwg 5/11/2018

ALTA/NSPS LAND TITLE SURVEY
BOUNDARY AND TOPOGRAPHIC SURVEY
PORTION OF LOTS 5, 6 AND 8, BLOCK 2, PLAT NO. 1, ST. LUCIE GARDENS, PLAT BOOK 1, PAGE 35
LYING IN SECTION 29, TOWNSHIP 37 SOUTH, RANGE 41 EAST
MARTIN COUNTY, FLORIDA



Bowman CONSULTING

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Fax: (772) 220-1160
www.bowmanconsultinggroup.com
Florida Licensed Business No. 8191

WATERMARK APARTMENTS
ALTA/NSPS LAND TITLE SURVEY
FLORIDA
MARTIN COUNTY

PROJECT NO. 0130564-01-007

PLAN STATUS	
5/11/18	REV. PER NEW TITLE

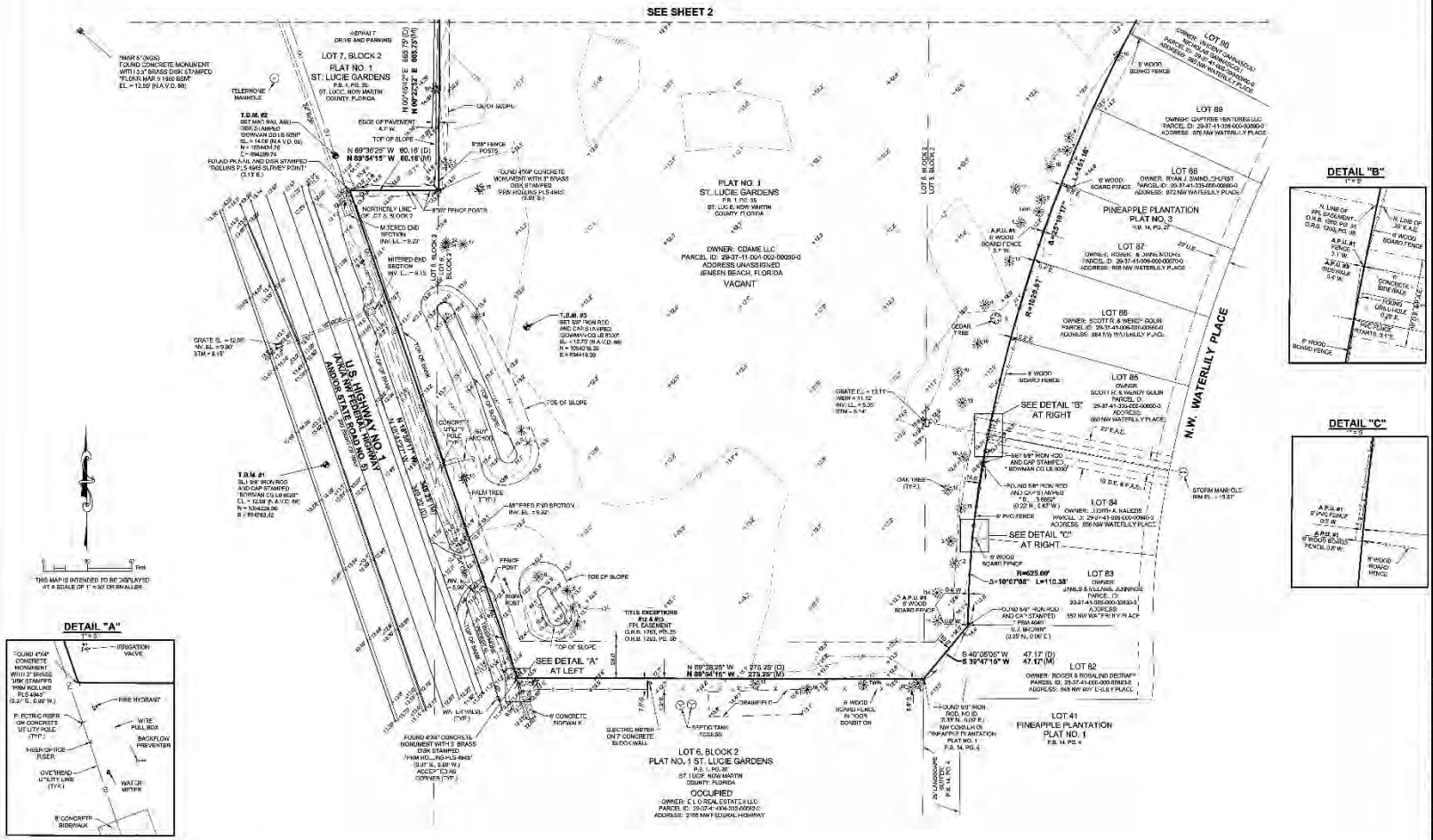
DATE	DESCRIPTION
FIELD BOOK 19-156	PAGE 14-19, 23

D.A.L.	R.E.B.
DRAWN	CHKD

SCALE: H: 1" = 60' V: N/A
JOB No. 0564-01-002
DATE: FEB. 20, 2018
FILE No. 0564 ALTA

SHEET 2 OF 3

ALTA/NSPS LAND TITLE SURVEY
BOUNDARY AND TOPOGRAPHIC SURVEY
PORTION OF LOTS 5, 6 AND 8, BLOCK 2, PLAT NO. 1, ST. LUCIE GARDENS, PLAT BOOK 1, PAGE 35
LYING IN SECTION 29, TOWNSHIP 37 SOUTH, RANGE 41 EAST
MARTIN COUNTY, FLORIDA



Bowman CONSULTING

Bowman Consulting Group, Ltd.
301 S.E. Osceola Street, Suite 201
Stuart, FL 34994
Phone: (772) 283-1410
Fax: (772) 220-7880
www.bowmanconsulting.com
A Sawvel Consulting Group, Ltd.

WATERMARK APARTMENTS
ALTA/NSPS LAND TITLE SURVEY
MARTIN COUNTY FLORIDA

PROJECT NO
010564-01-002

PLAN STATUS	
5/11/18	REV PER NEW TITLE

DATE	DESCRIPTION

FIELD BOOK	PAGE
18-158	14-18, 23

D.A.L. DRAWN	R.E.B. CHKD
SCALE: H: 1" = 50' V: N/A	
JOB No. 0564-01-002	
DATE: FEB. 20, 2018	
FILE No. 0564 ALTA	

SHEET 3 OF 3

Old file name: P:\010564 - Watermark\010564-01-002 (SUE) - Watermark Apartments Stuart\Survey\Topo Boundary\0564 ALTA (ELV).dwg 5/11/2018

Exhibit 5 - Future Land Use Map – Existing

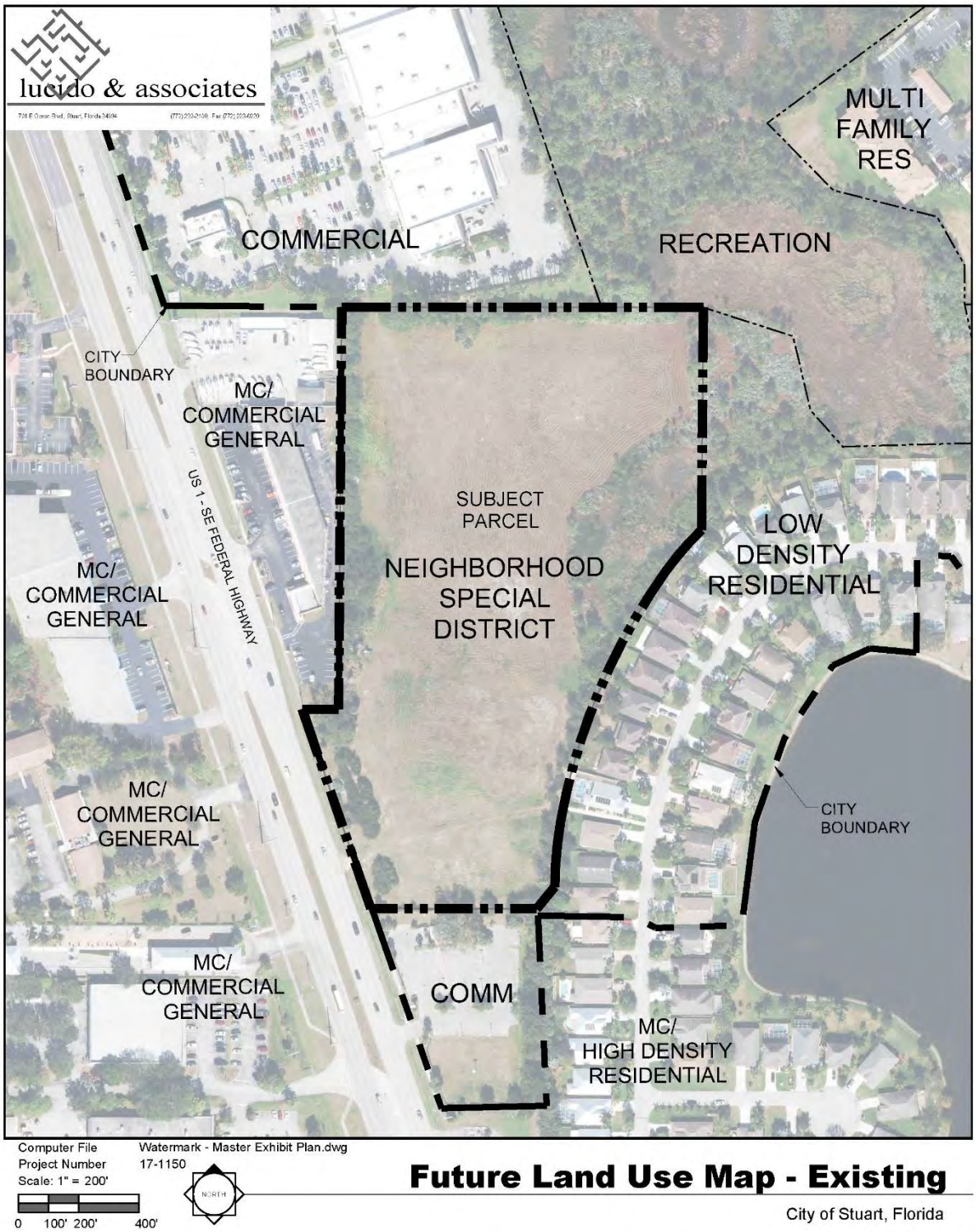


Exhibit 6 - Future Land Use Map – Proposed

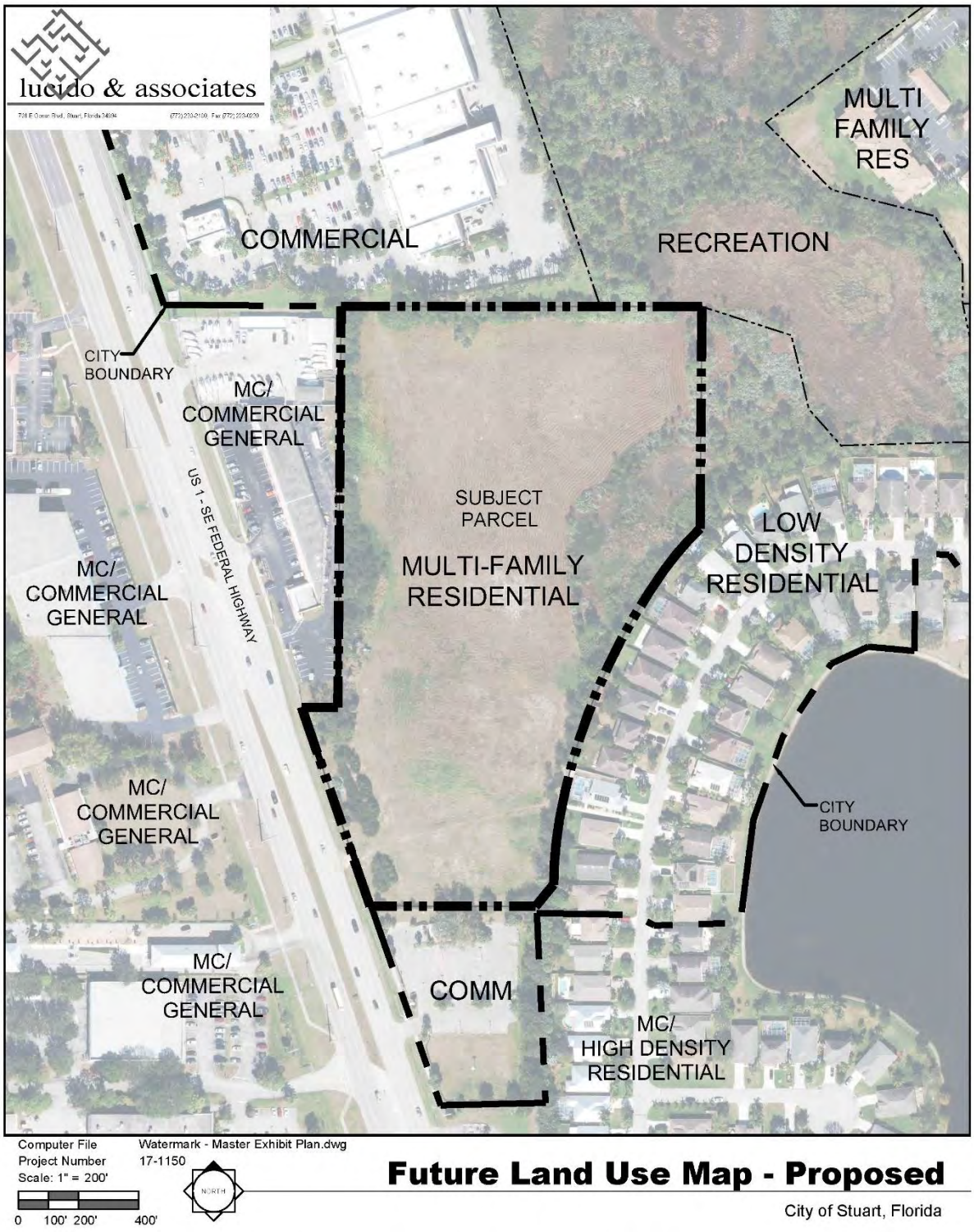


Exhibit 7 - Zoning Map

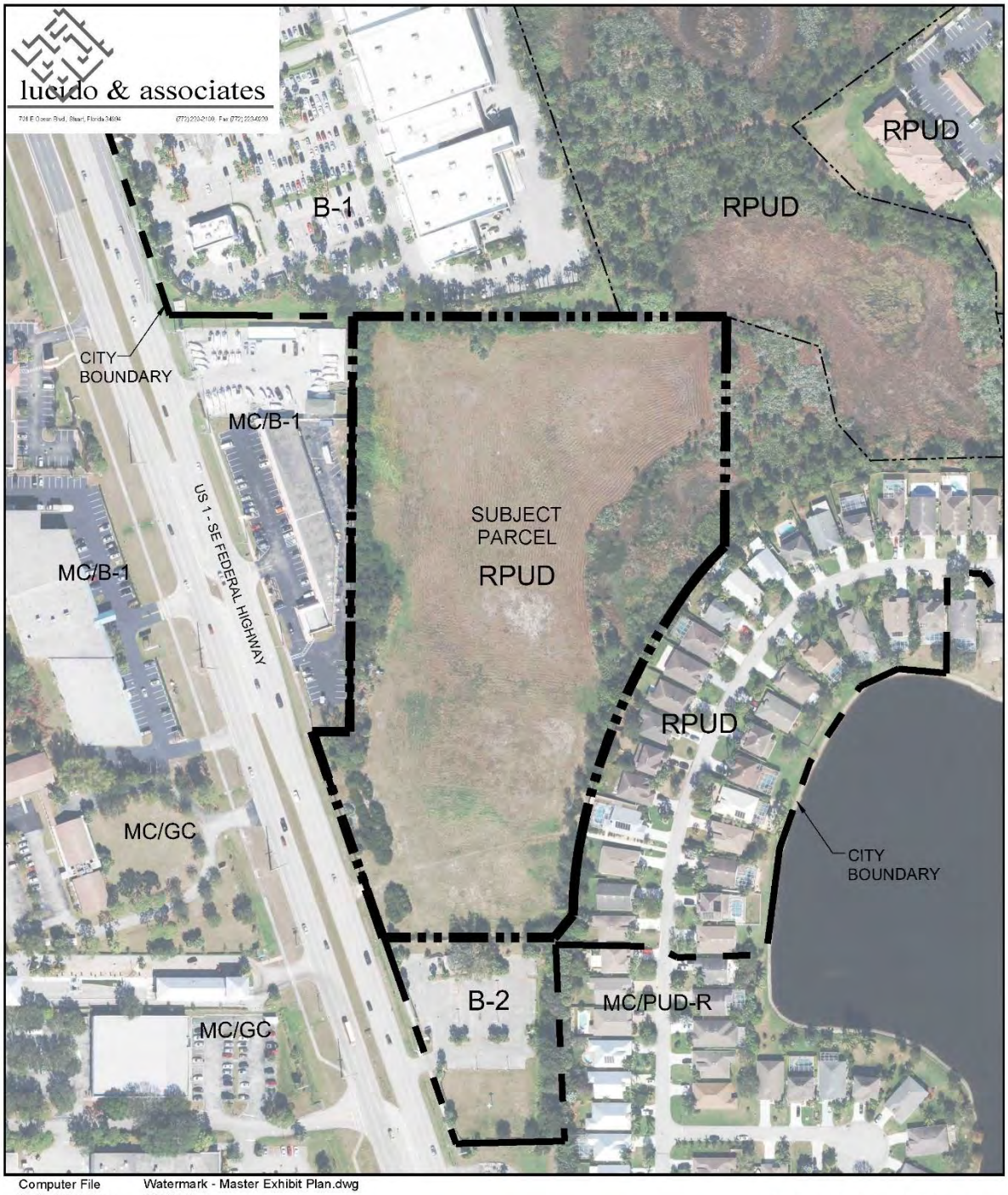
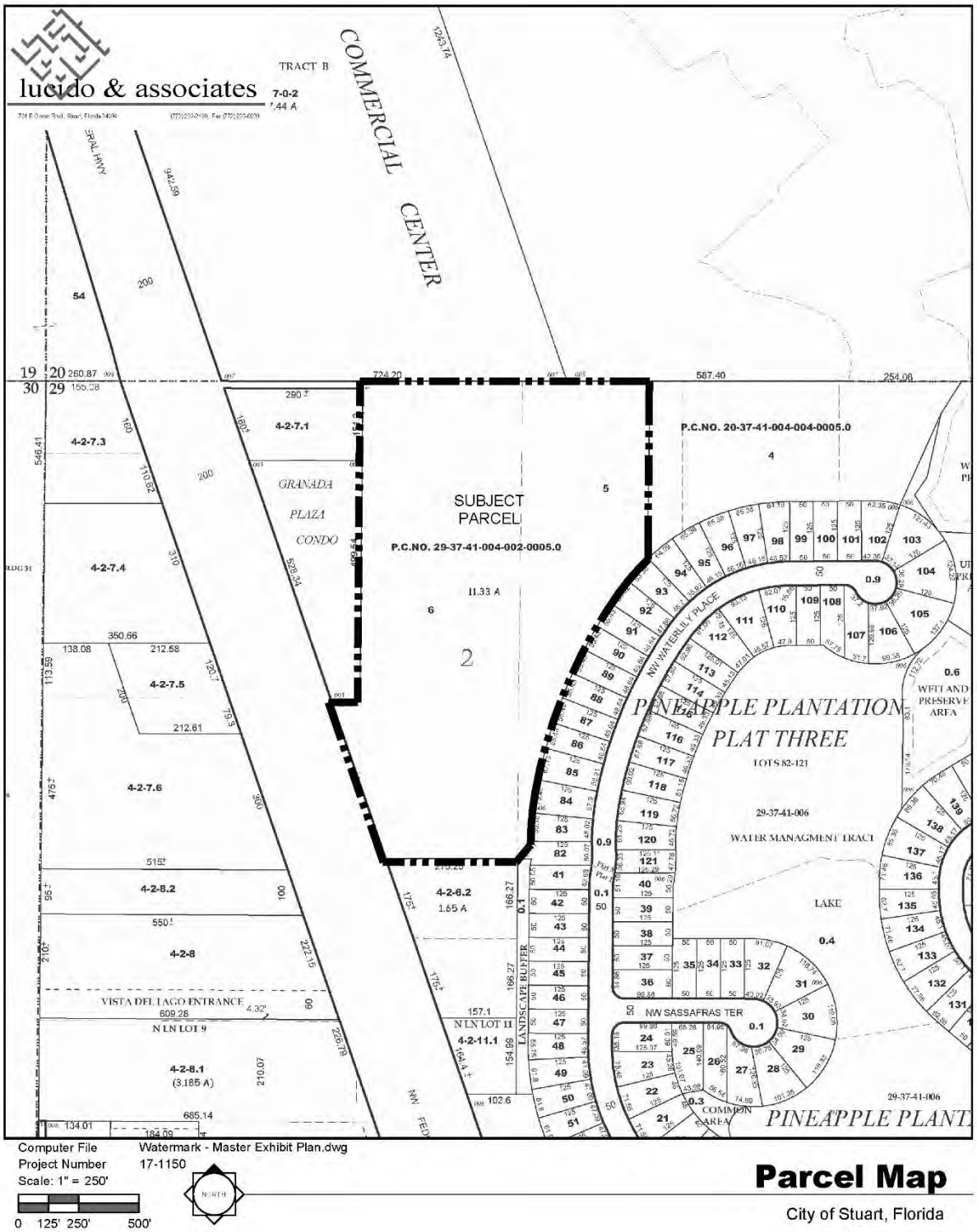


Exhibit 8 - Parcel Map



Parcel Map

City of Stuart, Florida

Exhibit 9 – Ownership Certification

INSTR # 2242039
OR BK 02485 PG 0617
Pss 0617 - 619; (3pss)
RECORDED 11/08/2010 09:20:11 AM
MARSHA EWING
CLERK OF MARTIN COUNTY FLORIDA
DEED DOC TAX 0.70
RECORDED BY C Oliveri

Prepared by and return to:
Terence P. McCarthy, Esq.

McCarthy, Summers, Bobko, Wood,
Norman, Bass & Taylor, P.A.
2400 S.E. Federal Highway Fourth Floor
Stuart, FL 34994
772-286-1700
File Number: **giacobbe**
Will Call No.: **50**
Parcel Identification No.

[Space Above This Line For Recording Data]

Warranty Deed

(STATUTORY FORM - SECTION 689.02, F.S.)

Unofficial Copy

This Indenture made this 4th day of November, 2010, between Woodlands Building Company, a Florida corporation for itself and as Sole Joint Venturer of **Pineapple Plantation Joint Venture**, a Florida joint venture and **Pineapple Plantation Joint Venture, a Florida joint venture** whose post office address is **721 NW Sunset Drive, Stuart, FL 34994** of the County of **Martin**, State of **Florida**, grantor*, and **CDAME, LLC, a Florida limited liability company**, whose post office address is **721 NW Sunset Drive, Stuart, FL 34994** of the County of **Martin**, State of **Florida**, grantee*,

Witnesseth that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in **Martin County, Florida**, to-wit:

See Exhibit "A" attached hereto and made a part hereof as if fully set forth herein.

Subject to taxes for 2010, and subsequent years; covenants, conditions, restrictions, easements, reservations and limitations of record, if any.

This is a conveyance of unencumbered property with no change of beneficial ownership and no exchange of value. Pursuant to Crescent Miami Center, LLC v. Florida Department of Revenue and subsequent Technical Assistance Advisements issued by the State of Florida Department of Revenue only minimum documentary stamp tax is due.

This Deed was prepared without the benefit of title examination.

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

* "Grantor" and "Grantee" are used for singular or plural, as context requires.

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

DoubleTime®

Signed, sealed and delivered in our presence:

Witness Name: _____

Witness Name: Pam Heiges

TERENCE P. MCCARTHY
MY COMMISSION # DD 992078
EXPIRES: June 20, 2014
Bonded Thru Notary Public Underwriters

Woodlands Building Company, a Florida corporation

By: _____
Frank J. Giacobbe, President

(Corporate Seal)

State of Florida
County of Martin

The foregoing instrument was acknowledged before me this 4th day of November, 2010, by Frank J. Giacobbe, President of Woodlands Building Company, a Florida corporation, on behalf of the corporation. He [X] is personally known to me or [ ] has produced a driver's license as identification.

[Notary Seal]

TERENCE P. MCCARTHY
MY COMMISSION # DD 992078
EXPIRES: June 20, 2014
Bonded Thru Notary Public Underwriters

Notary Public
Printed Name: Terence P. McCarthy

My Commission Expires: _____

Unofficial Copy

Pineapple Plantation Joint Venture, a Florida joint venture

By: Woodlands Building Company, a Florida corporation, its sole Joint Venturer

By: _____
Frank J. Giacobbe, President

(Corporate Seal)

Witness Name: Terence P. McCarthy

Witness Name: Pam Heiges

State of Florida
County of Martin

The foregoing instrument was acknowledged before me this 4th day of November, 2010, by Frank J. Giacobbe, President of Woodlands Building Company, a Florida corporation, being sole Joint Venturer of Pineapple Plantation Joint Venture, a Florida joint venture on behalf of the corporation and the joint venture. He [X] is personally known to me or [_] has produced a driver's license as identification.

[Notary Seal]

TERENCE P. MCCARTHY
MY COMMISSION # DD 992078
EXPIRES: June 20, 2014
Bonded Thru Notary Public Underwriters

Notary Public
Printed Name: Terence P. McCarthy

My Commission Expires: _____

EXHIBIT "A"

TOGETHER WITH THE FOLLOWING DESCRIBED PARCEL (MULTI-FAMILY)

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN A PORTION OF LOTS 5, 6 AND 8, BLOCK 2, AS SHOWN ON PLAT NO 1, ST LUCIE GARDENS, AS RECORDED IN PLAT BOOK 1, PAGE 35, PUBLIC RECORDS OF ST LUCIE (NOW MARTIN) COUNTY, FLORIDA; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF SAID LOT 6, BLOCK 2; PROCEED SOUTH 89°39'09" EAST ALONG THE NORTH LINE OF SAID LOTS 5 AND 6, A DISTANCE OF 600.02 FEET TO A POINT ON A LINE 600 FEET EAST OF AND PARALLEL WITH AS MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID LOT 6; THENCE SOUTH 00°45'42" WEST, DEPARTING SAID NORTH LINE AND ALONG SAID PARALLEL LINE, A DISTANCE OF 368.72 FEET, TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 475.00 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 43°10'43" EAST; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 11°00'01", A DISTANCE OF 91.19 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 1020.87 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 25°19'17", A DISTANCE OF 451.16 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 625.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 10°07'08", A DISTANCE OF 110.38 FEET; THENCE SOUTH 40°05'05" WEST, A DISTANCE OF 47.17 FEET TO THE NORTHWEST CORNER OF PINEAPPLE PLANTATION PLAT NO 1, AS RECORDED AT PLAT 14 PAGE 4 PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA; THENCE NORTH 89°36'25" WEST, A DISTANCE OF 275.25 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF US HIGHWAY NO 1 (S.R. 5) (A 200.00 FOOT RIGHT-OF-WAY); THENCE NORTH 18°41'27" WEST ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 349.23 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 8; THENCE SOUTH 89°36'25" EAST ALONG SAID NORTHERLY LINE OF SAID LOT 8 AND DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 60.16 FEET TO A POINT ON SAID WESTERLY LINE OF LOT 6; THENCE NORTH 00°45'42" EAST, ALONG SAID WESTERLY LINE OF LOT 6 A DISTANCE OF 665.74 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 11.340 ACRES, MORE OR LESS.

OR BK 1421 PG 1646 5. THIS IS NOT A SURVE

Exhibit 10 - Conceptual Site Plan



Exhibit 11 - Preliminary Development Plan

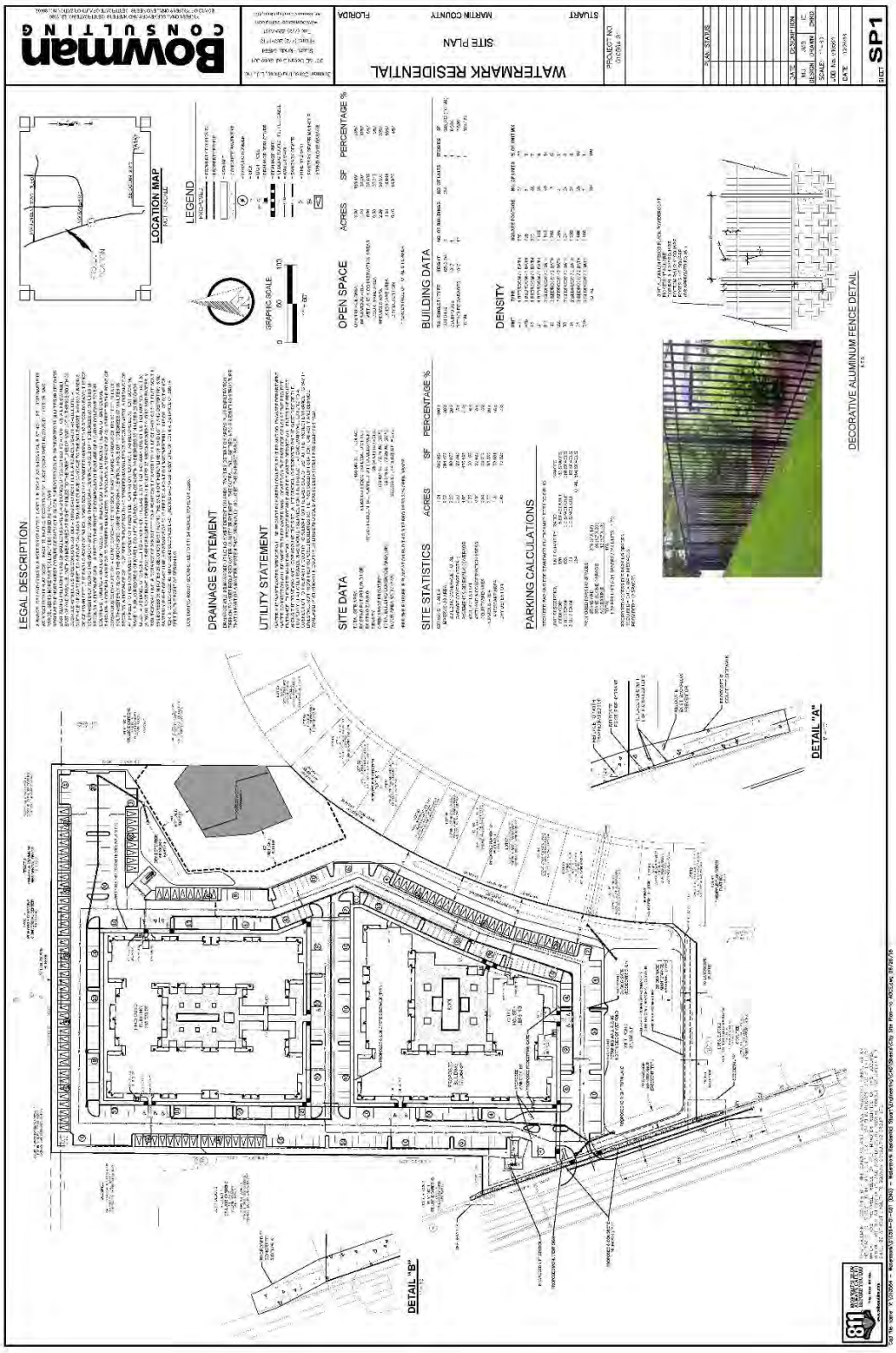


Exhibit 12 - Timetable of Development

This development will be constructed in a multiple phases. The time frame within which final development plan approval of shall be obtained is as follows:

PHASE	DATE OF FINAL DEVELOPMENT PLAN APPROVAL	CONSTRUCTION TIMEFRAME	CO ISSUED
I	September 2019	September 2019 - December 2022	January 2023

The development construction schedule is as follows:

Building permits for shall be obtained within eight months of final development plan approval and construction shall be completed on or before the completion date indicated above.

Construction of roads, utilities, drainage improvements and other common elements shall be finalized at the time of completion of all units for which they are intended to serve.

Final development orders for the property are subject to a determination and reservation of adequate capacity of Category A and Category C public facilities pursuant to the City of Stuart Comprehensive Plan. No rights to obtain final development orders, nor any other right to develop the subject property have been granted or implied by the City's approval of this preliminary development order without a determination and reservation of capacity for Category A and C public facilities.

The approval of this development order by the CITY shall not be used by the OWNER, or their successors in title, in any way whatsoever as committing to the CITY legally through the theory of equitable estoppel or any other legal theory, to approve any final development order for the project without a determination and reservation of capacity of Category A and C public facilities pursuant to the City of Stuart Comprehensive Plan.

Exhibit 13 - Special Conditions

1. Access:
The development parcel shall be accessed along the western boundary from US Hwy 1, SE Federal Highway. Traffic improvements to US 1 include the addition of a right-turn lane for the northbound lane. Pedestrian access and circulation shall be a priority of the site plan. A sidewalk shall be constructed within the US 1 right-of-way along the western property boundary to connect the existing adjacent sidewalks to the north and south of the property entrance. The proposed sidewalk width shall match the width of the existing sidewalk widths within the right-of-way. Sidewalks internal to the development shall have a minimum width of 6'.

2. Density and Intensity:

Total Allowable Building Area:	395,000 sf
Proposed Density:	30 DU/Ac

Building areas indicated on the Conceptual Development Plan Exhibit are approximate and may increase or decrease based upon the development program; however, total allowable impervious area shall not exceed 80% of the developable area of the site.

3. Drainage:
Drainage will be managed utilizing a wet detention area, two dry detention areas, plus exfiltration trenches to meet required water quality treatment. The outfall will be tied into an existing structure that is part of a master system that originally included the subject parcel.

4. Endangered Species:
In the event it is determined that any representative of a plant or animal species that is Federally or State designated as Endangered, Threatened, or Species of a Special Concern is resident on or otherwise is significantly dependent upon the property, the Developer shall cease all activities which might negatively affect that individual or population and immediately notify the City of Stuart, the Florida Game and Freshwater Fish Commission, and the U.S. Fish and Wildlife Service. Proper protection to the satisfaction of all agencies shall be provided by the Developer. Construction shall cease until all agencies are satisfied as to the protection of protected species.

5. Fire Protection:
All structures, which are in excess of 5,000 square feet or two stories or greater in height, shall be provided with a sprinkler system installed in accordance with NFPA 13, Standards for Automatic Sprinkler Protection, and NFPA 14, Standards for Standpipes. All other provisions of the National Fire Protection Association shall be complied with.

The City of Stuart shall provide fire flow in addition to potable water for this project.

6. Hauling of Fill:
There will be no hauling of unsuitable soils and no hauling of soils off site. The site may require some import of fill material. The Developer shall coordinate with the City Engineer the routes and timing of any fill to be hauled to the site of this project, and shall comply with all City excavation and fill regulations.

7. Irrigation:
Prior to Final Plan approval the Developer shall submit a groundwater flow model showing the extent of the one foot groundwater drawdown to demonstrate that the irrigation withdrawal will not adversely impact the wetlands or cause significant inland migration of salt water. The analysis should be based upon a maximum daily withdrawal scenario with 90 days no recharge from precipitation. A water use permit from SFWMD shall be obtained for any wells to be installed for the purpose of providing irrigation water.

Low volume drip irrigation, drought tolerant vegetation and more than 50% native plants shall be used in the landscaping plans for the PUD.

Owner agrees to accept wastewater effluent for irrigation purposes, when available in sufficient quality and quantity in accordance with the South Florida Water Management District and Department of Environmental Regulation rules, at such rates and charges as may then be charged by the utility designated by the County. For purposes of this condition "when available" means when the City notifies the Owner that sufficient capacity exists to service the subject property and the IQ lines are within one-quarter mile of the subject property. Notwithstanding this condition, the City is not required to service the project with IQ water.

8. Landscaping:
Landscaping of the project shall include low volume drip irrigation, drought tolerant vegetation and fifty percent (50%) of more native plant materials.

A landscape strip 10' wide (minimum) shall be required along all perimeter RPUD parcel boundaries abutting commercially zoned properties. A landscape strip 40' wide (minimum) shall be required along all perimeter RPUD parcel boundaries abutting residentially zoned properties.

Perimeter tree quantities shall be based upon a requirement of 1 tree per every 30 linear feet of perimeter parcel boundary.

A landscaped strip of land no less than 5' wide on average shall be provided between the building foundation walls and parking areas. Required canopy shade trees within the foundation landscaped strip may be located within perimeter landscape buffer areas. Tree

quantities shall be determined at a rate of 1 tree for every 20 linear feet of required foundation landscape area, with no less than 50% being shade trees.

9. Off Street Parking:
Parking rates shall support multi-family residential. A rate of 1.65 spaces per dwelling unit shall be provided as a minimum. Garage spaces shall count towards required off-street parking. Standard perpendicular parking stalls shall measure 9' wide by 18' deep. Up to 10% of the proposed parking may be compact perpendicular stalls with minimum stall dimensions of 8.5' wide by 16' deep.

10. Potable Water:
An existing water main shall be extended along the east side of the US 1 right-of-way to the proposed development. All public water system modifications and service connections shall be coordinated, designed, and agreed upon in accordance with the Martin County. Owner shall complete the appropriate utility service agreement with Martin County.

The appropriate water distribution permit(s) shall be obtained from the Florida Department of Environmental Protection (FDEP). All public portions of the proposed water system shall be inspected and certified prior to turnover to the City of Stuart. All public portions of the proposed water system constructed on private property shall be located within appropriate utility easements. All easements shall be recorded prior to turnover to the City of Stuart.

11. Preserve Areas:
The habitat is primarily open land that was previously cleared for future development and has been maintained by mowing. The area is primarily comprised of bahia grass, broomsedge, and gallberry along the buffer areas of the wet prairie.

12. Signage:
A monument sign may be located in proximity of the point of ingress/egress of the project site along US Highway 1. Monument signs shall have a setback of 10' from any right-of-way line. Monument sign area may be up to, but shall not exceed 100 sf per face, with 2-faces per sign, and a maximum height of 15'. The monument sign and any internal signage shall be designed and constructed in similar methods to create a cohesive aesthetic theme in concert with the building architecture.

Internal development wayfinding-type signs shall be permitted in accordance with City of Stuart Development Regulations.

13. Temporary Construction Office:
The Developer may establish and maintain on the property a temporary construction office during the period that the property is being developed and until one (1) year following the issuance of the last Certificate of Occupancy for a unit. A bond for the removal of construction office shall be provided to the City.

14. Traffic:
Owner shall construct the following turn lanes at the entrances to the RPUD property:

- Right-turn lane into the entrance on northbound US Highway 1

15. Wastewater:
Watermark RPUD shall provide utilities to the project site. See Conceptual Master Utilities Plan Exhibit. An existing force main will be extended along the eastern side of the US Highway 1 right-of-way and routed to the rear of the proposed development. A lift station shall be constructed to serve the proposed development. All public wastewater system modifications and service connections shall be coordinated, designed, and agreed upon in accordance with Martin County. Owner shall complete the appropriate utility service agreement with Martin County. The appropriate wastewater collection permit(s) will be obtained from the Florida Department of Environmental Protection (FDEP). All public portions of the proposed wastewater system shall be inspected and certified prior to turnover to Martin County All portions of the proposed wastewater system constructed on private property shall be located within appropriate utility easements. All easements shall be recorded prior to turnover to Martin County.

16. Wetland Mitigation:
The site includes one wetland falling under the jurisdiction of the South Florida Water Management District. Avoidance and minimization of wetland impacts was reviewed as part of the site planning efforts for this project. No state wetlands will be impacted by the project. The preserved wetlands and buffers will be protected by a Preserve Area Management Plan that will include protection measures and monitoring of the wetlands and buffers. An average 50-foot (min) buffer is provided on all preserved wetlands on site. The buffers will be vegetated with native vegetation. The project has avoided impacts to state wetlands and therefore no mitigation is required.

17. Construction Fencing:
A temporary 6’ chain link fence with fabric of uniform color or other visual barrier material approved by the development director shall be provided along the site perimeter boundaries prior to the initiation of the construction phase. All temporary fencing shall be removed prior to issuance of certificate of occupancy.

18. Solid Waste and Recycling:
Solid waste and recycling receptacles with enclosures shall be provided. A compactor for solid waste may be utilized to minimize the quantity of waste receptacles.

19. Architectural Standards:

Building Design:

- The project will include two multifamily apartment buildings, with a clubhouse integrated into the southern building. There will be several accessory structures, including a mail kiosk, a dumpster, and private detached garages.

- The proposed buildings will be 4-stories with varying building massing in height and width to help break up the roof line and to provide architectural interest. Maximum building height shall not exceed 45' as measured and defined within the City of Stuart Land Development Code. Current plans indicate the eave heights range between 42' and 43'-2" but may extend to the maximum building height of 45'.

- Care will be taken to avoid blank wall areas on building facades.

- All facades will have repeating patterns providing rhythm to the building architecture.

- The buildings will be treated to fit the vernacular architecture of Stuart.

- The exterior building skin will be a combination of masonry (brick and/or stone), fiber cement panel, fiber cement siding, and/or stucco, with vinyl windows at residential units and storefront windows at amenity areas and building entries.

- The proposed color palette for exterior walls will be generally light in color with muted pastel and/or earth-tone shades.

- Rooftop mechanical equipment will be screened from view below.

- Building roofs will be clad in 30-year architectural grade asphalt shingles or better. Roof slopes will be greater than 2:12 and are proposed to be 6:12.

- All apartments will be provided with a balcony. Balcony construction will include treated wood plank flooring and painted metal guardrails.

- Where used, perimeter fencing will be painted metal.

Exhibit 14 – Architectural Elevations and Floor Plans



Color 4 - View 2



STUDIO M
ARCHITECTURE & PLANNING

BUILDING A
FIRST FLOOR PLAN

WATERMARK
STUART, FL

JUNE 28, 2018

BUILDING A - FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

STUDIO M
ARCHITECTURE & PLANNING

BUILDING A
UPPER FLOOR PLAN

WATERMARK
STUART, FL

JUNE 29, 2018

BUILDING A - UPPER FLOOR PLAN
SCALE: 1/16" = 1'-0"

STUDIO M
ARCHITECTURE & PLANNING

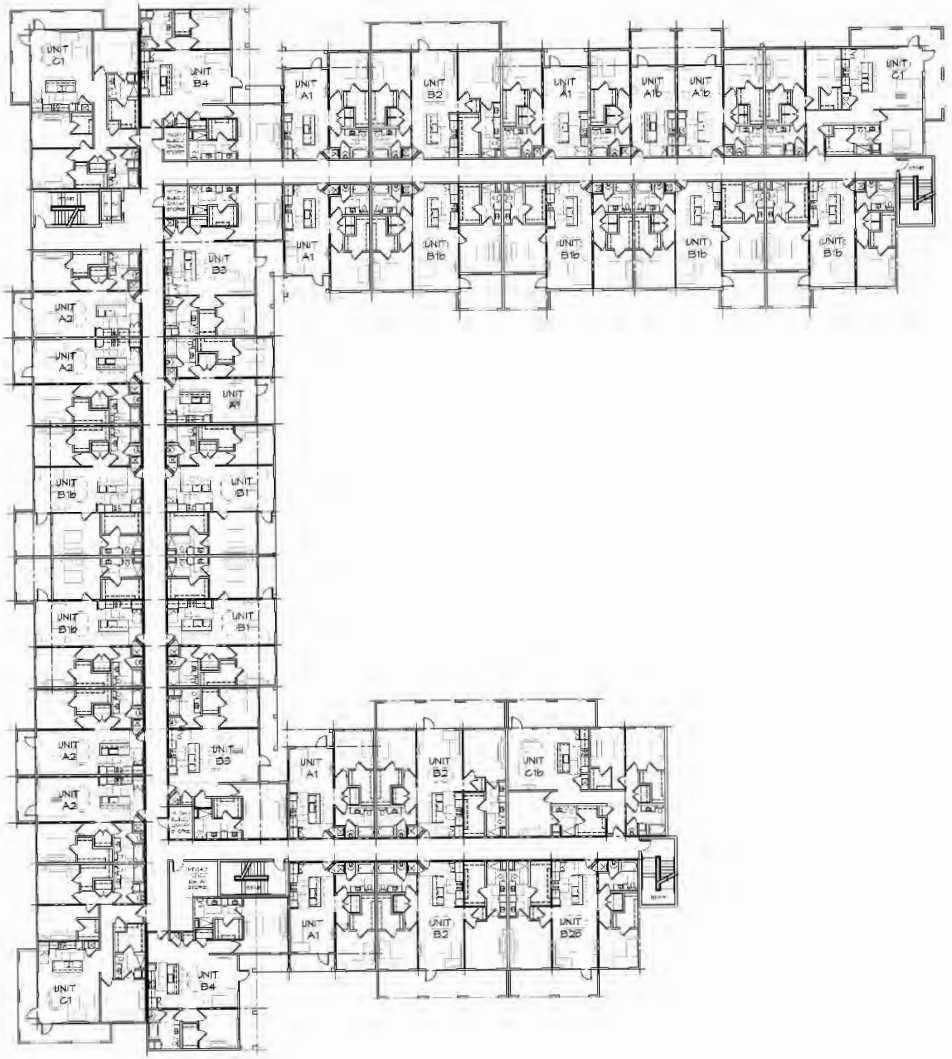
BUILDING B
FIRST FLOOR PLAN

WATERMARK
STUART, FL

JUNE 28, 2018

BUILDING B - FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"



BUILDING B - UPPER FLOOR PLAN

SCALE: 1/16" = 1'-0"

STUDIO M
ARCHITECTURE & PLANNING

BUILDING B
UPPER FLOOR PLAN

WATERMARK
STUART, FL.

JUNE 28, 2018

Exhibit 15 – Landscape Buffer





Exhibit 16 – Conceptual Signage

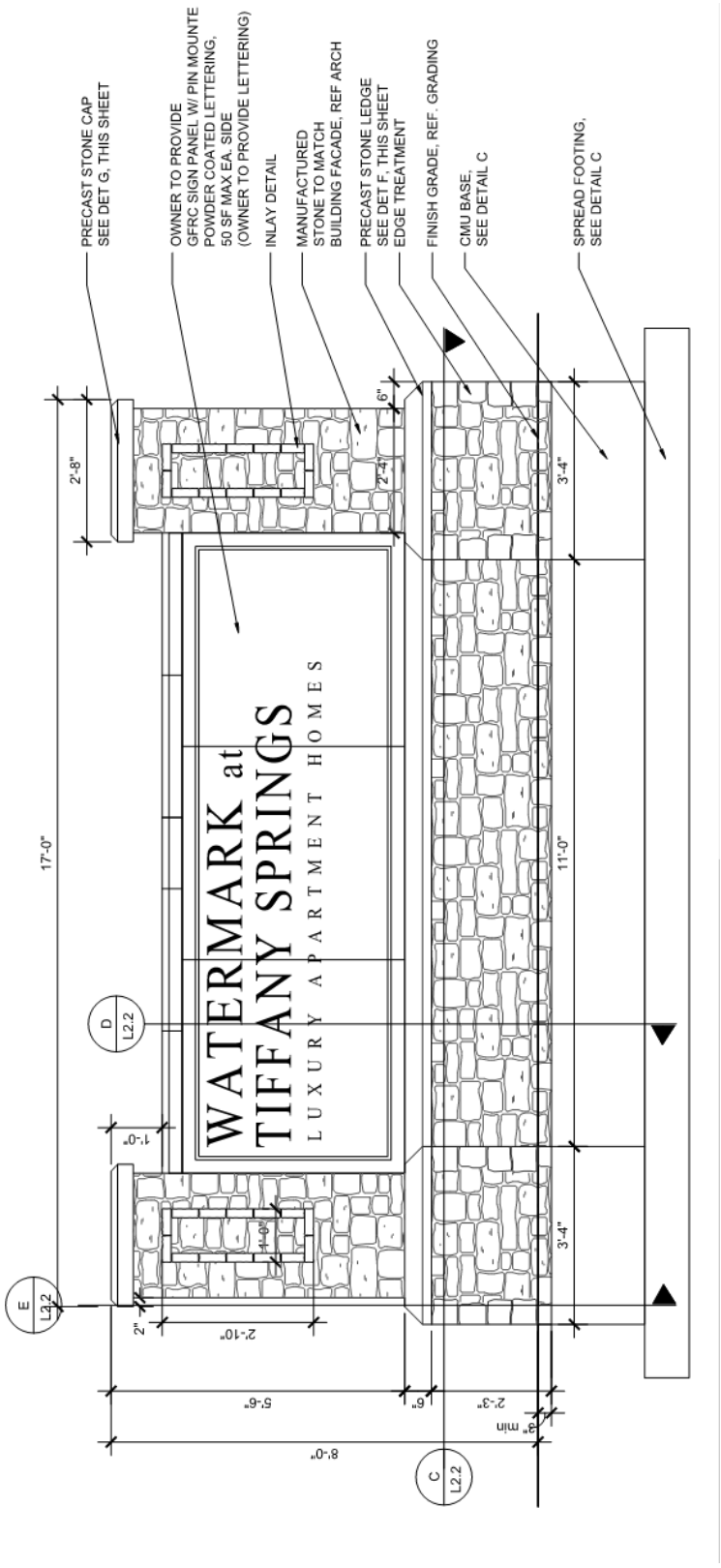


Exhibit 17 – FDOT Pre-Application Letter

Florida Department of Transportation

RICK SCOTT
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

MIKE DEW
SECRETARY

April 26, 2018

THIS PRE-APPLICATION LETTER IS VALID UNTIL – **April 26, 2019**
THIS LETTER IS NOT A PERMIT APPROVAL

Howard Ehrsam
Bowman Consulting Group
10815 SW Tradition Square
Port St Lucie, FL 34987

Dear Howard Ehrsam:

RE: **April 26, 2018** - Pre-application Meeting for **Category D Driveway**
Martin County - City of Stuart, Urban; SR 5; Sec. # 89010; MP: 22.10
Access Class - 03; Posted Speed - 45 mph; SIS - N; Ref. Project:
Request: Right-in/right-out driveway on SR 5/ NW Federal Highway located approximately 1120 feet north of NW Windemere Drive.

SITE SPECIFIC INFORMATION
Project Name & Address: **Watermark - NW Federal Highway, Stuart, FL 34994**
Applicant/Property Owner: **CDAME, LLC**
Parcel Size: **11.34 Acres** Development Size: **290 Dwelling Units**

WE APPROVE YOUR REQUEST

This decision is based on your presentation of the facts, site plan and survey - please see the **conditions** and **comments** below. You may choose to review this concept further with the District Access Management Review Committee (AMRC).

Conditions:
- **A minimum driveway length of 25 feet, as measured from the ultimate right-of-way line to the first conflict point shall be provided. If a gate is installed a minimum driveway length of 100 feet is required.**
- **A right turn lane is required and must meet FDOT design standards and include space for bicycle lane.**

Comments:

- Drainage mitigation is required for any impacts within FDOT right-of-way (i.e. increased runoff or reduction of existing storage). A Storm Water Pollution Prevention Plan must be submitted with the application for more than one acre of "disturbed area" as defined by the Florida Department of Environmental Protection (FDEP).
- The applicant shall donate the right-of-way to the Department if right-of-way dedication is required to implement the improvements.
- All driveways not approved in this letter must be fully removed and the area restored.
- Dimensions between driveways are measured from the near edge of pavement to near edge of pavement and for median openings are measured from centerline to centerline unless otherwise indicated.

The purpose of this Pre-Application letter is to document the conceptual review of the approximate location of driveway(s) to the State Highway system and to note required improvements, if any. This letter shall be submitted with any further reviews and for permitting. The Department's personnel shall review permit plans for compliance with this letter as well as current Department standards and/or specifications. Final design must consider the existing roadway profile and any impacts to the existing drainage system. **Note, this letter does not guarantee permit approval.** The permit may be denied based on the review of the submitted engineering plans. Be aware that any approved median openings may be modified (or closed) in the future, at the sole discretion of the Department. For right-of-way dedication requirements go to: https://gis.dot.state.fl.us/OneStopPermitting; click on Statewide Permit News; Scroll down to District 4; Scroll down to Additional Information and Examples and choose Right-of-way Donations/Dedications.

Please contact Geysa Sosa, P.E. at the District Permits Office with any questions regarding permits – Tel. # 954-777-4377, or e-mail: geysa.sosa@dot.state.fl.us

Sincerely,

Aidin Massahi, Ph.D.
District Access Management Manager

cc: Nesa Y. Harden

S:\Transportation Operations\Traffic Operations\Access Management\1. Pre-Apps and Variance\2018-04-26\3. 89010 MP 22.100 SR 5_Watermark\89010 MP 22.100 SR 5_Watermark.docx

Exhibit 18 – Traffic Report

June 4, 2018

Mr. Stephen Mayer, Senior Planner
City of Stuart
Development Department
121 SW Flagler Avenue
Stuart, Florida 34994

RE: Watermark Multi-Family

Dear Mr. Mayer:

Bowman Consulting Group, Ltd. has prepared a traffic impact study in accordance with City of Stuart guidelines as presented in our Traffic Methodology Statement approved by you on May 29, 2018. The proposed development is a 284-unit multi-family residential project on the east side of US 1 north of NW Windemere Drive. The existing project site is undeveloped with no pre-existing use.

Trip Generation

Trip generation for the site was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition.* Land Use Code 221 (Multifamily Housing (Mid-Rise)) was used to determine the daily, a.m., and p.m. peak hour trip generation for the proposed development.

The proposed project will not benefit from passby or internal capture trip reductions.

The proposed development is expected to generate a total of 19 p.m. peak hour trips using the average rate of 3.46 trips per 1,000 gross floor area. The directional distribution during the p.m. peak hour is estimated as 28% entering and 72% exiting. The trip generation is summarized below:

Land Use	ITE Code	Time Period	Unit	Quantity	Rate	Entering	Exiting
Multifamily Housing (Mid-Rise)	221	Daily AM Peak PM Peak	Dwelling Units	284	5.44 0.36 0.44	773 vpd 27 vph 76 vph	772 vpd 75 vph 49 vph

1301 Riverplace Boulevard, Suite 800, Jacksonville, Florida 32207
p: 904.432.1210 | f: 904.562.1361
www.bowmanconsulting.com

Trip Distribution and Assignment

Trip distribution was based on relative peak hour traffic volumes on US 1 north and south of the project entrance. Traffic volumes were taken from the FDOT Online Traffic web site and result in the following distribution patterns:

Roadway Segment	AM Peak	PM Peak	AM % To/From	PM % To/From
US 1, north of CR 732/Jensen Beach Blvd.	2933 SB 1055 NB	1985 SB 2809 NB	74% 26%	41% 59%
US 1, north of Wright Blvd.	2946 SB 1250 NB	1920 SB 2902 NB	70% 30%	40% 60%

Project trips are expected to split in accordance with these distribution percentages. This distribution coupled with the peak hour directional distribution results in the following trip assignments for the U-turning project traffic at the directional median opening north of the project at Family Furniture and in the southbound left turn lane at NW Windemere Drive:

Intersection	Northbound				Southbound				Eastbound			Westbound		
	U	L	T	R	U	L	T	R	L	T	R	L	T	R
Directional Median Opening at Family Furniture -- am	52	0	18	0	0	0	0	0	0	0	0	0	0	0
NW Windemere Drive -- am	0	0	8	0	17	0	52	0	0	0	0	0	0	0
Directional Median Opening at Family Furniture -- pm	19	0	28	0	0	0	0	0	0	0	0	0	0	0
NW Windemere Drive -- pm	0	0	44	0	30	0	19	0	0	0	0	0	0	0

Existing turning movement counts at the intersection of NW Windemere were collected on May 31, 2018 from 4:00 p.m. until 6:00 p.m. The peak hour during the AM Peak was found to be from 7:30 – 8:30 a.m. The peak hour during the PM Peak was found to be from 4:45 – 5:45 p.m. The existing turning movement counts are summarized below:

Intersection	Northbound				Southbound				Eastbound			Westbound		
	U	L	T	R	U	L	T	R	L	T	R	L	T	R
Directional Median Opening at Family Furniture -- am	7	3	1144	0	1	1	2823	3	0	0	0	0	0	1
NW Windemere Drive -- am	46	7	1096	16	10	51	2772	0	4	0	16	70	0	32
Directional Median Opening at Family Furniture -- pm	2	1	2950	3	2	0	1715	2	0	0	7	0	0	0
NW Windemere Drive -- pm	39	10	2886	51	31	71	1643	1	18	1	1	61	0	46

The seasonal adjustment factor for data collected on May 31st equals 1.08 and the Martin County annual growth rate of traffic equals 3%, therefore the projected turning movements at the time of project opening (2019) are summarized in the table below:

Intersection	Northbound				Southbound				Eastbound			Westbound		
	U	L	T	R	U	L	T	R	L	T	R	L	T	R
Directional Median Opening at Family Furniture -- am	60	3	1291	0	1	1	3140	3	0	0	0	0	0	1
NW Windemere Drive -- am	51	8	1227	18	28	57	3136	0	4	0	18	78	0	36
Directional Median Opening at Family Furniture -- pm	21	1	3310	3	2	0	1908	2	0	0	8	0	0	1
NW Windemere Drive -- pm	43	11	3254	57	64	79	1847	1	20	1	1	68	0	51

Capacity Analysis

The intersection of US 1 and the Family Furniture driveway is controlled by a directional median opening that allows northbound and southbound u-turns but prevents left-turn movements into the side road driveways. This geometry was tested for adequate capacity with the SYNCHRO software and the above turning movements for an unsignalized intersection.

The SYNCHRO 10 analysis reports excessive delays for the northbound U-turn/left turn movement during the AM Peak Hour for both baseline and future conditions with project traffic. Other movements at this intersection are similar for both baseline and future conditions with project traffic:

	US 1 and Family Furniture – AM Peak Hour							
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	60[1]	-	-	-	368	371	-	-
	58[2]	-	-	-	326	314	-	-
HCM Lane v/c ratio	0.181	-	-	-	0.003	0.006	-	-
	1.181	-	-	-	0.003	0.007	-	-
HCM Control Delay (s)	77.6	-	-	0	14.8	14.7	-	-
	292.1	-	-	0	16.1	16.5	-	-
HCM Lane LOS	F	-	-	A	B	B	-	-
	F	-	-	A	C	C	-	-
HCM 95th %tile Q (veh)	0.6	-	-	-	0	0	-	-
	5.8	-	-	-	0	0	-	-

[1]Baseline "existing" conditions
[2]Future plus project traffic

The SYNCHRO 10 analysis reports minor increases in delays for the northbound U-turn/left turn movement during the PM Peak Hour for both baseline and future conditions with project traffic. Other movements at this intersection are similar for both baseline and future conditions with project traffic:

US 1 and Family Furniture – PM Peak Hour								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	210[1] 208[2]	- -	- -	230 196	81 59	75 52	- -	- -
HCM Lane v/c ratio	0.016 0.115	- -	- -	0.033 0.044	0.027 0.018	0.029 0.042	- -	- -
HCM Control Delay (s)	22.4 24.5	- -	- -	21.2 24.2	50.7 67.2	54.4 77.2	- -	- -
HCM Lane LOS	C C	- -	- -	C C	F F	F F	- -	- -
HCM 95th %tile Q (veh)	0 0.4	- -	- -	0.1 0.1	0.1 0.1	0.1 0.1	- -	- -

[1]Baseline "existing" conditions
[2]Future plus project traffic

The signalized intersection of US 1 and NW Windemere Drive was also analyzed for both baseline and future conditions with project traffic. The following tables represent a summary of the SYNCHRO 10 capacity analysis of these conditions for the movements where project traffic is expected to be present:

US 1 and NW Windemere Drive – AM Peak Hour Conditions				
Movement/MOE	**SBU**	**SBT**	**NBT**	**Max Intersection**
V/C Ratio	0.59[1] 0.84[2]	0.78 0.89	0.31 0.35	0.81 0.89
Total Delay	94.5 124.3	13.6 18.4	6.8 7.1	15.8 20.2
LOS	F F	B B	A A	B C
Queue, 95th Percentile	133 206	668 927	153 177	-

[1]Baseline "existing" conditions
[2]Future plus project traffic

US 1 and NW Windemere Drive – PM Peak Hour Conditions				
Movement/MOE	**SBU**	**SBT**	**NBT**	**Max Intersection**
V/C Ratio	0.46[1] 0.68[2]	0.50 0.56	0.92 1.04	0.92 1.04
Total Delay (s)	75.9 85.1	12.4 13.5	29.9 54.5	26.0 41.4
LOS	E F	B B	C D	C D
Queue, 95th Percentile (ft)	133 324	346 415	1105 1591	-

[1]Baseline "existing" conditions
[2]Future plus project traffic

In addition to this traffic operations perspective, the projected traffic is also negligible from a traffic concurrency standpoint. The *Martin County 2017 Roadway Level of Service Inventory Report* tabulates a generalized service capacity of 3,020 vehicles per hour in the peak direction on the link of US 1 between Baker Road and Britt Road. This capacity is compared to a 2017 peak hour directional volume of 2,309 vehicles per hour. On US 1 the peak hour directional volume is 118 vehicles per hour (northbound). Even growing the 2017 peak hour directional volume to 2019 (3% annual growth rate), resulting in 2,450 vehicles per hour, there is adequate capacity reserve to absorb the 118 vehicles per hour from this project.

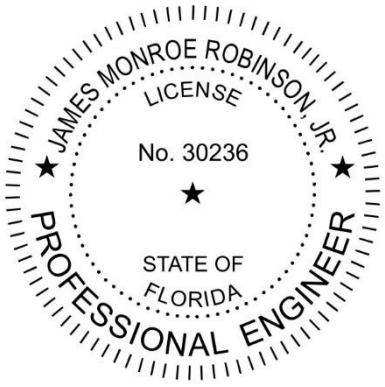
Conclusion

Both from a traffic operations standpoint as well as a concurrency perspective, the proposed multifamily housing project does not have any negative impacts that require traffic mitigation of any kind. One exception is the northbound right turn lane into the project. Based on earlier discussions with FDOT, agreement was reached to add a 185-foot turn lane in addition to a 50-foot taper.

Thank you for the opportunity of presenting this data and analysis as part of the project permitting. Should you have any questions, please do not hesitate to contact me.

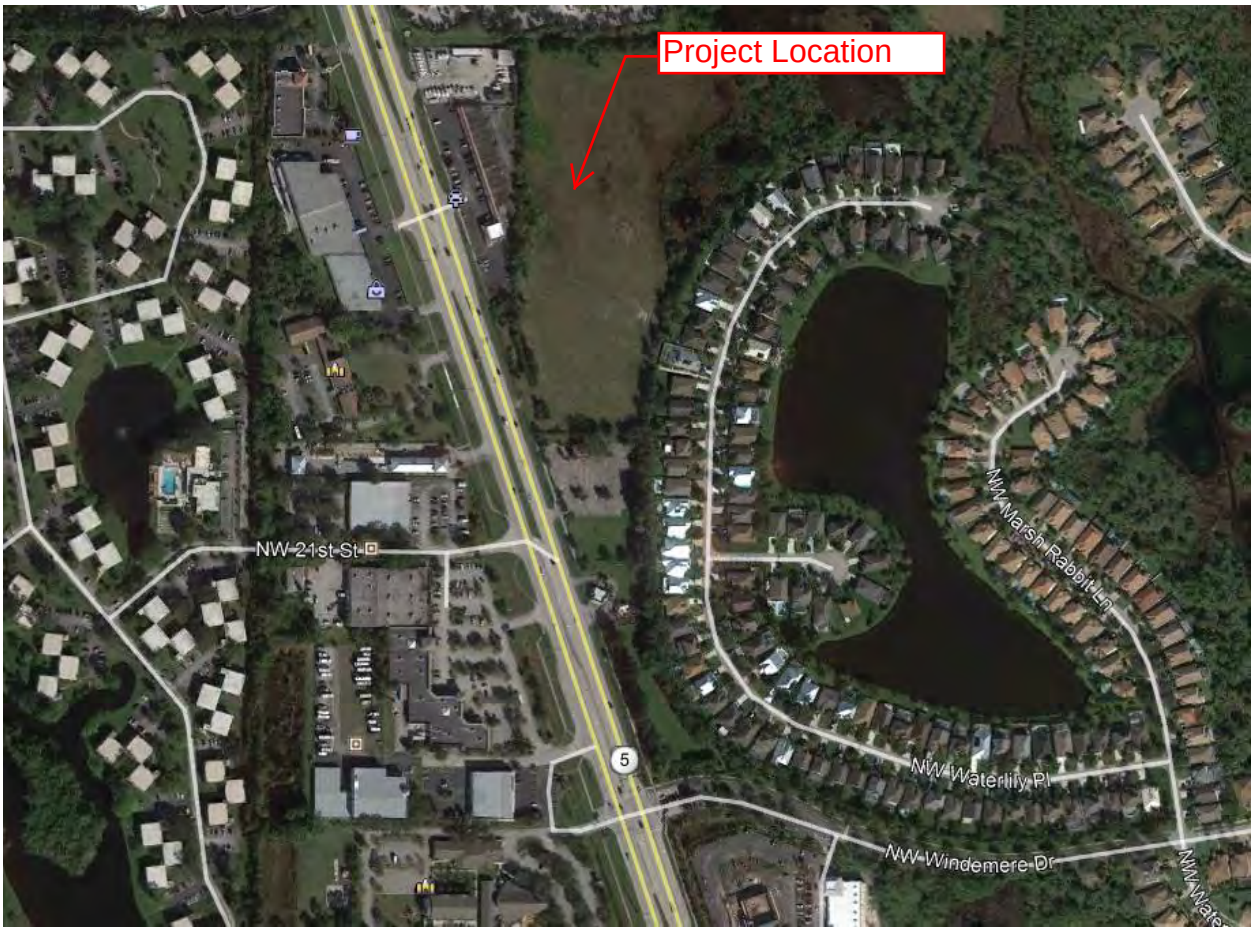
Regards,
BOWMAN CONSULTING GROUP, LTD.

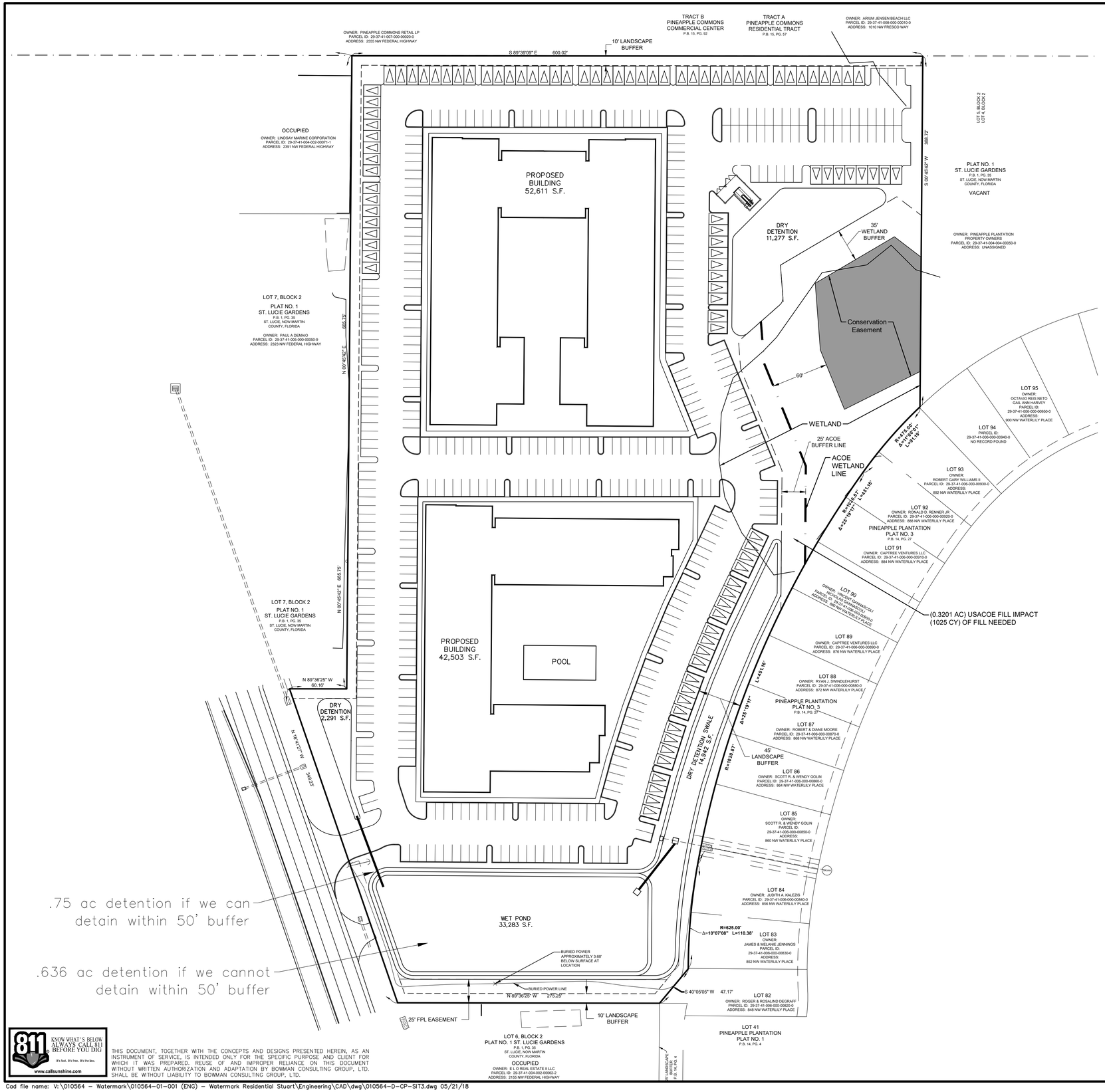




James M. Robinson, P.E.
North Florida Engineering Director

Enclosures


Project Location
NW-21st-St
5
NW-Marsh-Rabbit-Ln
NW-Waterlily-Pl
NW-Windemere-Dr



SITE DATA

Total Site Area	493,967 s.f. / 11.34 ac.
Existing Future Land Use	Neighborhood / Special District
Existing Zoning	RPUD Residential PUD
Density	29.55 Units / Acre
Open Space Provided	124,979 s.f. / 2.87 ac. (25%)

SITE DATA

	ACRES	SF	PERCENTAGE %
Gross Site Area	11.34	493,967	100%
Impervious Area	7.87	342,658	69%
Building Coverage (Total)	2.19	95,144	19%
Garage Coverage (Total)	0.54	23,520	4%
Pavement & Sidewalk Coverage	3.41	148,299	30%
Wet Retention	0.76	33,283	7%
Wetland and Conservation Areas	0.34	14,872	3%
Wetland and Conservation Buffers	0.63	27,570	6%
Pervious Area	3.47	151,309	31%
Open Space	2.90	126,515	26%
Dry Detention	0.57	24,794	5%

PARKING CALCULATIONS

Required Parking for standard Multi-Family per LDC 6.01.13

Unit Description	Unit Quantity	Ratio	Spaces
1 Bedroom:	120	1.5 space/unit	180 spaces
2 Bedroom:	132	2.0 space/unit	264 spaces
3 Bedroom:	32	2.0 space/unit	64 spaces
	284		Total: 508 spaces

Proposed Parking Spaces

Standard	381
Stand Alone Garage	98
Accessible	10
Total	489

1.14 per Unit (489 spaces / 284 units = 1.72)

Proposed Accessible Parking Spaces
Required = 0.02 x 489 = 10 spaces
Provided = 10 spaces

LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN A PORTION OF LOTS 5, 6 AND 8, BLOCK 2, AS SHOWN ON PLAT NO. 1, ST. LUCIE GARDENS, AS RECORDED IN PLAT BOOK 1, PAGE 35, PUBLIC RECORDS OF ST. LUCIE (NOW MARTIN) COUNTY, FLORIDA; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGIN AT THE NORTHWEST CORNER OF SAID LOT 6, BLOCK 2; PROCEED SOUTH 89 DEGREES 39 MINUTES 09 SECONDS EAST ALONG THE NORTH LINE OF SAID LOTS 5 AND 6, A DISTANCE OF 600.02 FEET TO A POINT ON A LINE 600 FEET EAST OF AND PARALLEL WITH AS MEASURED AT RIGHT ANGLES TO THE WEST LINE OF SAID LOT 6; THENCE SOUTH 00 DEGREES 45 MINUTES 42 SECONDS WEST, DEPARTING SAID NORTH LINE AND ALONG SAID PARALLEL LINE, A DISTANCE OF 368.72 FEET, TO A POINT ON A NON-TANGENT CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF OF 475.00 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 43 DEGREES 10 MINUTES 43 SECONDS EAST; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 00 MINUTES 01 SECONDS, A DISTANCE OF 91.19 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 1020.87 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 25 DEGREES 19 MINUTES 17 SECONDS, A DISTANCE OF 451.16 FEET TO THE POINT OF COMPOUND CURVATURE OF A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 625.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 10 DEGREES 07 MINUTES 08 SECONDS, A DISTANCE OF 110.38 FEET; THENCE SOUTH 40 DEGREES 05 MINUTES 05 SECONDS WEST, A DISTANCE OF 47.17 FEET TO THE NORTHWEST CORNER OF PINEAPPLE PLANTATION PLAT NO. 1, AS RECORDED AT PLAT BOOK 14, PAGE 4, PUBLIC RECORDS OF MARTIN COUNTY, FLORIDA; THENCE NORTH 89 DEGREES 36 MINUTES 25 SECONDS WEST, A DISTANCE OF 275.25 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF US HIGHWAY NO. 1 (S.R. 5) (A 200.00 FOOT RIGHT-OF-WAY); THENCE NORTH 18 DEGREES 41 MINUTES 27 SECONDS WEST ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 349.23 FEET TO A POINT ON THE NORTHERLY LINE OF SAID LOT 8; THENCE SOUTH 89 DEGREES 36 MINUTES 25 SECONDS EAST ALONG THE SAID NORTHERLY LINE OF SAID LOT 8 AND DEPARTING SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 60.16 FEET TO A POINT ON SAID WESTERLY LINE OF LOT 6; THENCE NORTH 00 DEGREES 45 MINUTES 42 SECONDS EAST, ALONG SAID WESTERLY LINE OF LOT 6 A DISTANCE OF 665.74 FEET TO THE POINT OF BEGINNING.

CONTAINING 493967 SQUARE FEET OR 11.34 ACRES, MORE OR LESS.

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WATERMARK RESIDENTIAL
AREA CALCULATIONS

FLORIDA
MARTIN COUNTY

PROJECT NO
010564-01

PLAN STATUS	
DATE	DESCRIPTION
MU DESIGN	JMB DRAWN	LL CHKD
SCALE: 1" = 50'	
JOB No. 010564	
DATE 05/18/18	

SHEET **SP1**

Cad file name: V:\010564 – Watermark\010564-01-001 (ENG) – Watermark Residential Stuart\Engineering\CAD\dwg\010564-D-CP-SIT3.dwg 05/21/18

Multifamily Housing (Mid-Rise)
(221)

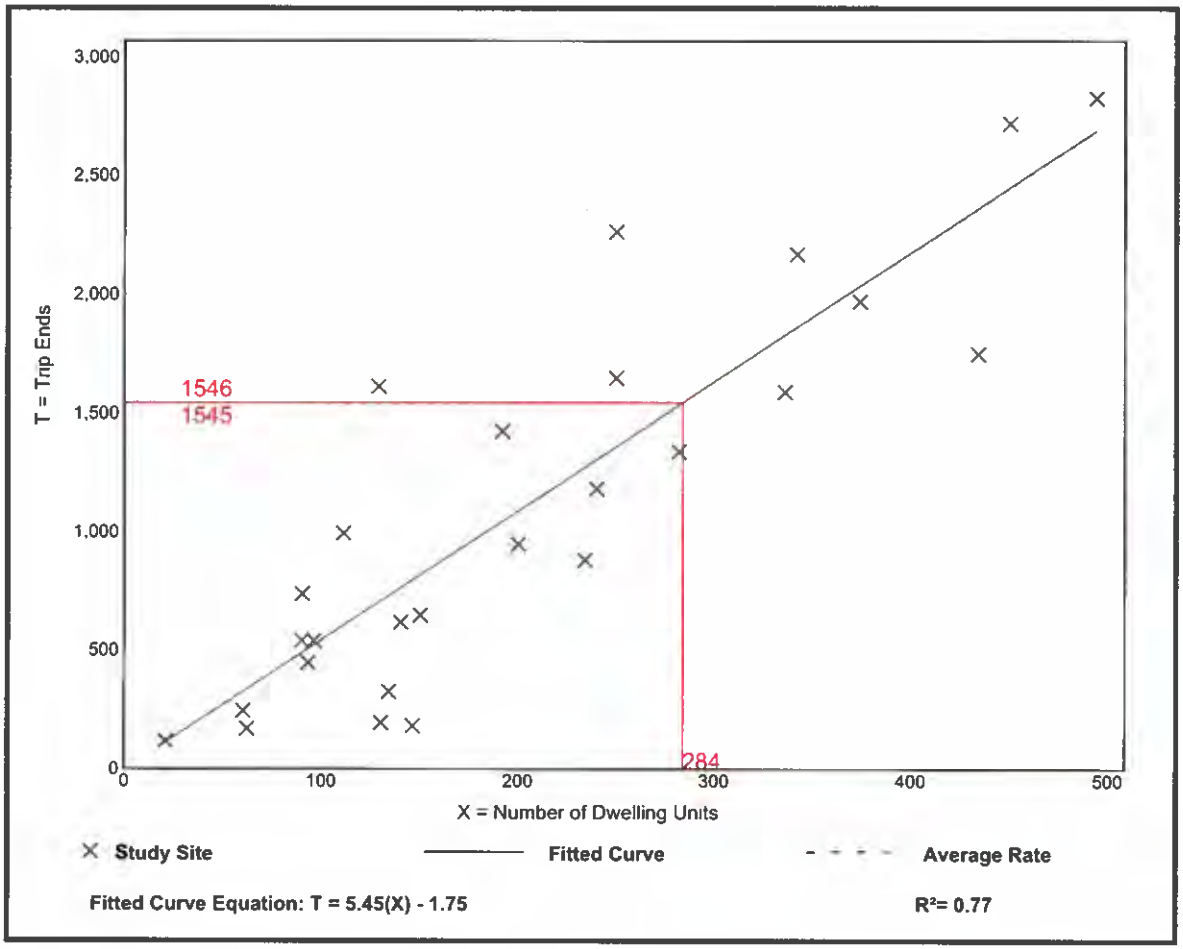
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5 44	1 27 - 12 50	2 03

Data Plot and Equation



Trip Generation Manual 10th Edition • Institute of Transportation Engineers

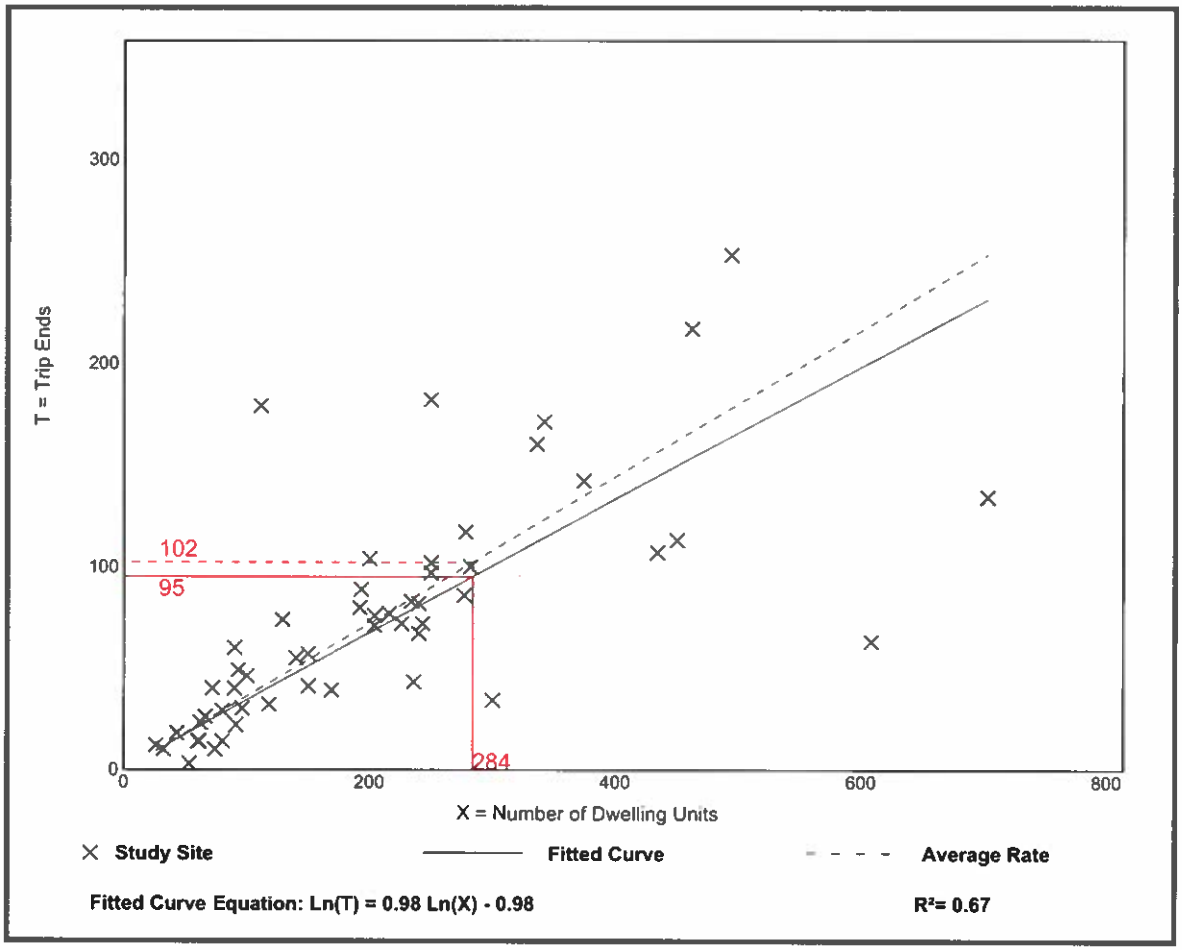
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. Num. of Dwelling Units: 207
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



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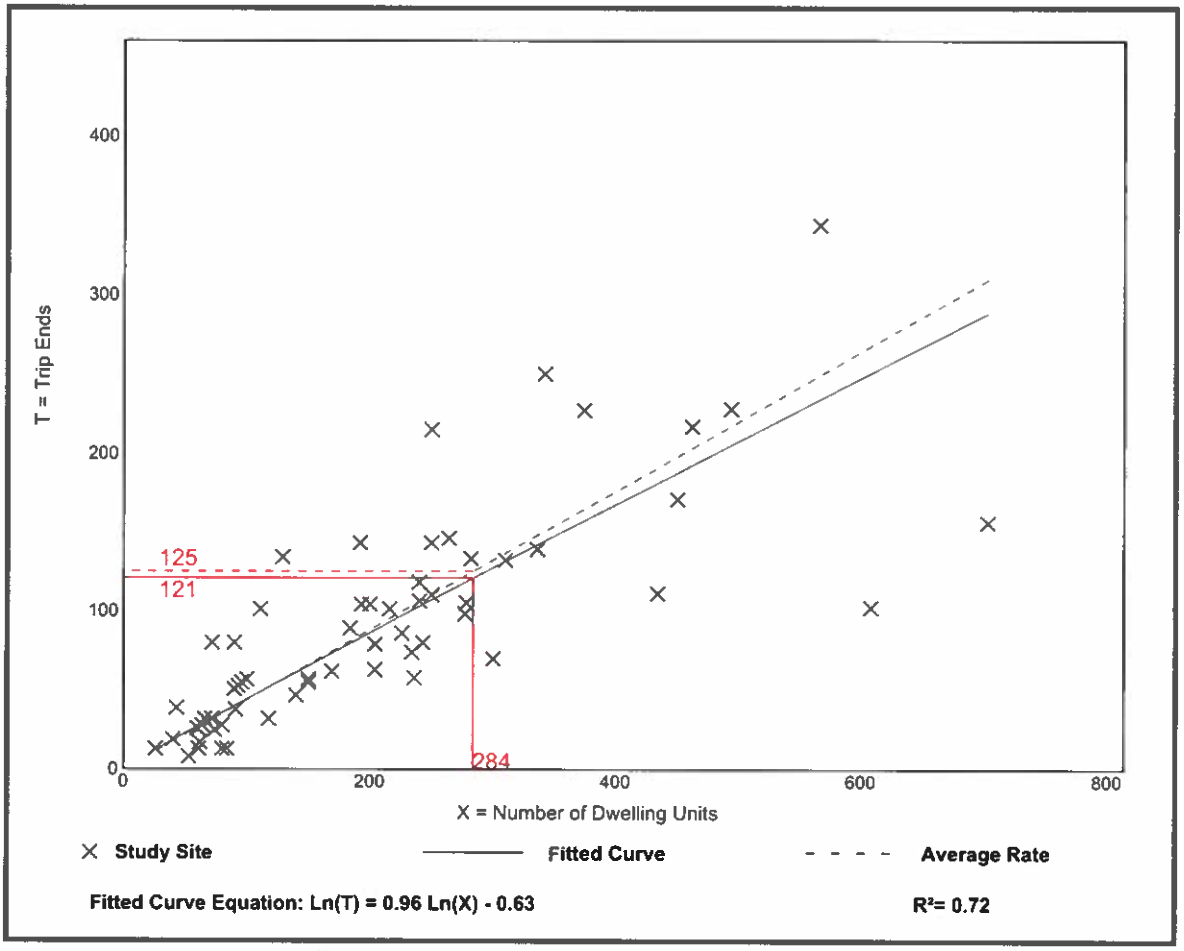
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



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COUNTY: 89
STATION: 0100
DESCRIPTION: SR 5/US 1 - N OF CR 732/JENSEN BCH BLVD(COUNTY LIN
START DATE: 03/07/2017
START TIME: 0000

	DIRECTION: N					DIRECTION: S					COMBINED
TIME	1ST	2ND	3RD	4TH	TOTAL	1ST	2ND	3RD	4TH	TOTAL	TOTAL
0000	74	66	54	46	240	32	28	24	19	103	343
0100	50	28	27	22	127	26	19	15	17	77	204
0200	15	17	18	16	66	16	20	19	24	79	145
0300	18	18	20	20	76	16	22	32	30	100	176
0400	22	12	20	38	92	44	69	110	104	327	419
0500	28	48	48	78	202	126	166	233	280	805	1007
0600	100	137	136	190	563	264	408	509	567	1748	2311
0700	174	250	261	256	941	577	695	768	760	2800	3741
0800	288	286	278	316	1168	710	655	634	630	2629	3797
0900	276	320	355	333	1284	448	484	576	552	2060	3344
1000	334	387	444	346	1511	426	579	529	562	2096	3607
1100	444	418	468	539	1869	544	520	580	534	2178	4047
1200	465	538	494	489	1986	558	569	559	521	2207	4193
1300	504	506	533	556	2099	591	523	542	531	2187	4286
1400	563	636	598	549	2346	524	557	548	522	2151	4497
1500	669	738	625	554	2586	495	468	518	486	1967	4553
1600	716	651	658	678	2703	468	460	452	553	1933	4636
1700	757	716	614	652	2739	452	514	510	504	1980	4719
1800	624	539	552	458	2173	461	390	422	382	1655	3828
1900	446	446	437	362	1691	320	316	280	248	1164	2855
2000	377	388	315	357	1437	248	174	161	154	737	2174
2100	344	364	268	258	1234	134	101	156	122	513	1747
2200	234	220	158	113	725	102	102	87	71	362	1087
2300	156	152	111	94	513	58	46	47	39	190	703
24-HOUR TOTALS:					30371					32048	62419

PEAK VOLUME INFORMATION

	DIRECTION: N		DIRECTION: S		COMBINED DIRECTIONS	
	HOUR	VOLUME	HOUR	VOLUME	HOUR	VOLUME
A.M.	845	1267	715	2933	715	3988
P.M.	1630	2809	1215	2240	1645	4794
DAILY	1630	2809	715	2933	1645	4794

COUNTY: 89
STATION: 0101
DESCRIPTION: SR 5 / US 1 - N OF WRIGHT BLVD - N OF ROOSEVELT BR
START DATE: 02/15/2017
START TIME: 0000

TIME	DIRECTION: N 1ST	2ND	3RD	4TH	TOTAL	DIRECTION: S 1ST	2ND	3RD	4TH	TOTAL	COMBINED TOTAL
0000	73	56	39	40	208	33	22	28	25	108	316
0100	38	27	33	21	119	26	30	9	18	83	202
0200	30	16	22	18	86	16	20	15	14	65	151
0300	9	16	10	9	44	14	16	23	29	82	126
0400	23	16	19	35	93	44	41	91	82	258	351
0500	35	39	65	82	221	109	122	209	240	680	901
0600	102	118	173	181	574	250	344	406	570	1570	2144
0700	249	291	284	272	1096	544	707	775	797	2823	3919
0800	371	391	349	435	1546	667	639	592	572	2470	4016
0900	353	396	359	430	1538	439	409	474	465	1787	3325
1000	413	403	471	467	1754	388	470	466	456	1780	3534
1100	467	522	415	508	1912	496	449	514	462	1921	3833
1200	527	491	535	450	2003	487	474	489	494	1944	3947
1300	497	572	462	576	2107	500	468	518	502	1988	4095
1400	508	517	562	562	2149	539	538	503	559	2139	4288
1500	582	663	561	617	2423	515	529	519	510	2073	4496
1600	620	700	617	732	2669	482	472	434	498	1886	4555
1700	697	713	760	643	2813	461	473	488	421	1843	4656
1800	557	567	429	456	2009	404	390	408	363	1565	3574
1900	431	401	343	322	1497	299	255	269	282	1105	2602
2000	299	323	231	235	1088	211	218	204	169	802	1890
2100	217	263	194	177	851	181	178	154	147	660	1511
2200	153	149	122	101	525	113	91	89	78	371	896
2300	109	107	82	76	374	53	40	48	30	171	545
24-HOUR TOTALS:					29699					30174	59873

PEAK VOLUME INFORMATION

	DIRECTION: N HOUR	VOLUME	DIRECTION: S HOUR	VOLUME	COMBINED DIRECTIONS HOUR	VOLUME
A.M.	800	1546	715	2946	730	4196
P.M.	1645	2902	1400	2139	1645	4822
DAILY	1645	2902	715	2946	1645	4822

TRUCK PERCENTAGE 3.21 4.00 3.61

CLASSIFICATION SUMMARY DATABASE

DIR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTTRK	TOTVOL
N	75	24016	4655	126	610	40	7	107	59	4	0	0	0	0	0	953	29699
S	192	23649	5127	69	1005	21	7	69	28	6	0	0	1	0	0	1206	30174

MARTIN COUNTY TRAFFIC

LOCATION: **26** **SR-5 (US1) @ WINDEMERE DR**

Day Plan

Day 2 = Weekdays Day 1 = Weekends

DAY	START	GROUP 1 C/S/O	COBALT Group
1	8:30	3/3/1	1
1	19:30	0/0/4	99
2	6:00	4/1/1	3
2	9:30	3/1/1	5
2	15:00	4/2/1	7
2	18:30	3/4/1	9
2	19:45	3/2/1	10
2	21:30	0/0/4	99

Plan		3	7		5	10	1	9
DIAL		4	4		3	3	3	3
SPLIT		1	2		1	2	3	4
OFFSET		74	12		85	36	72	110
CYCLE LENGTH		160	170		160	130	160	150
Cobalt Sequence								
PHASE		SPLITS (SECONDS)						
1	NBLT	15	15		18	18	18	20
2	SB	126	125		112	83	117	97
3		0	0		0	0	0	0
4	WB	19	30		30	29	25	33
5	SBLT	16	20		32	18	22	20
6	NB	125	120		98	83	113	97
7		0	0		0	0	0	0
8	EB	19	30		30	29	25	33

Printed 06/01/18

KMF Traffic Group, LLC
(772) 221-7971, Stuart, FL
kmf@kmftraffic.net

Manual Traffic Count - All Traffic
US1 and Family Furniture Driveway
Stuart, FL

File Name : US1FF
Site Code : BC1801
Start Date : 5/31/2018
Page No : 1

Groups Printed- All Traffic

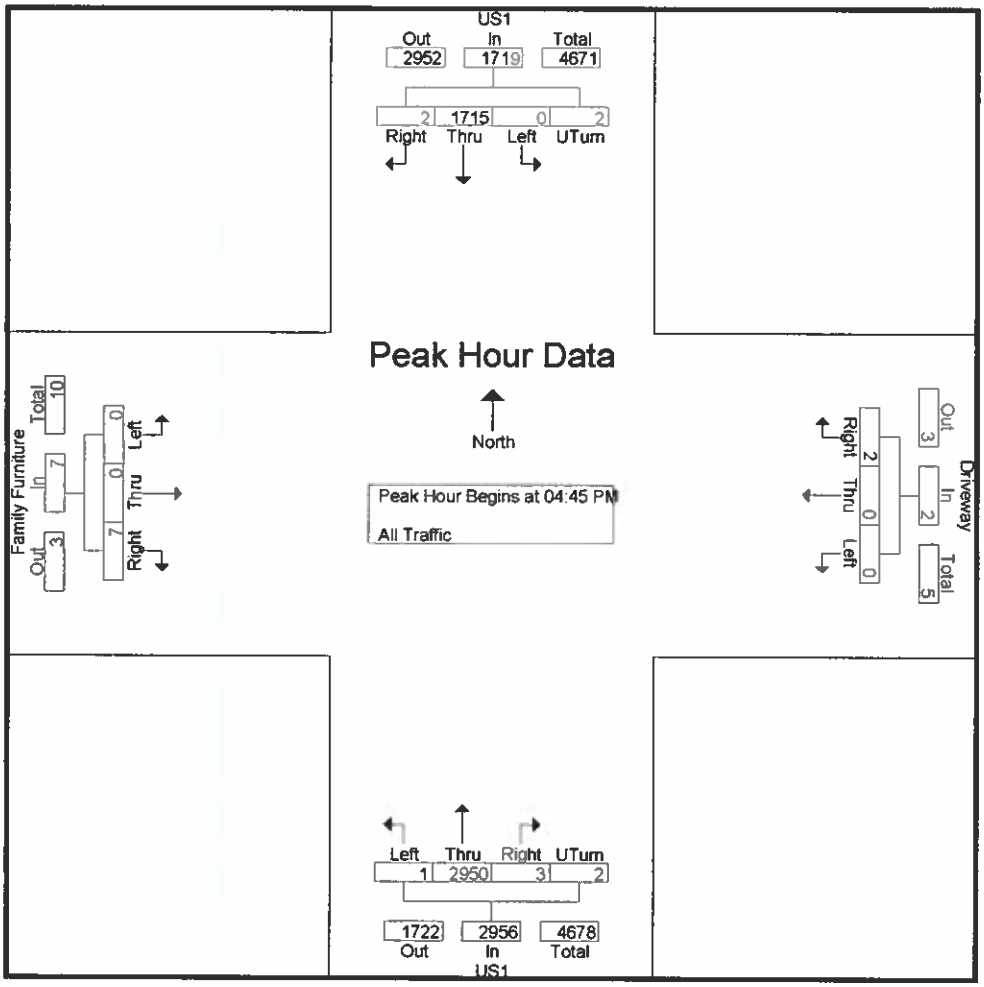
	US1 NB					US1 SB					Family Furniture EB				Driveway WB				
Start Time	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	0	189	1	0	190	1	550	0	3	554	0	0	0	0	0	0	0	0	744
07:15 AM	1	243	0	0	244	0	696	0	4	700	0	0	0	0	2	0	0	2	946
07:30 AM	0	252	1	3	256	2	758	0	0	760	0	0	0	0	0	0	0	0	1016
07:45 AM	0	279	1	1	281	0	740	1	1	742	0	0	0	0	0	0	0	0	1023
Total	1	963	3	4	971	3	2744	1	8	2756	0	0	0	0	2	0	0	2	3729
08:00 AM	0	300	1	3	304	1	667	0	0	668	0	0	0	0	0	1	0	1	973
08:15 AM	0	313	0	0	313	0	658	0	0	658	0	0	0	0	0	0	0	0	971
08:30 AM	1	273	1	1	276	1	607	2	1	611	0	0	0	0	1	0	0	1	888
08:45 AM	0	320	5	3	328	4	576	1	4	585	1	0	0	1	0	0	0	0	914
Total	1	1206	7	7	1221	6	2508	3	5	2522	1	0	0	1	1	1	0	2	3746
*** BREAK ***																			
04:00 PM	0	649	0	0	649	0	471	0	0	471	0	1	0	1	0	0	0	0	1121
04:15 PM	0	714	0	0	714	0	415	0	0	415	0	0	0	0	0	0	0	0	1129
04:30 PM	0	639	1	0	640	0	433	0	0	433	0	0	0	0	0	0	0	0	1073
04:45 PM	0	705	0	1	706	1	442	0	0	443	0	0	0	0	1	0	0	1	1150
Total	0	2707	1	1	2709	1	1761	0	0	1762	0	1	0	1	1	0	0	1	4473
05:00 PM	0	742	1	0	743	1	440	0	2	443	0	0	0	0	0	0	0	0	1186
05:15 PM	2	741	0	1	744	0	412	0	0	412	2	0	0	2	0	0	0	0	1158
05:30 PM	1	762	0	0	763	0	421	0	0	421	5	0	0	5	1	0	0	1	1190
05:45 PM	0	625	0	0	625	1	390	0	1	392	1	0	0	1	1	0	0	1	1019
Total	3	2870	1	1	2875	2	1663	0	3	1668	8	0	0	8	2	0	0	2	4553
Grand Total	5	7746	12	13	7776	12	8676	4	16	8708	9	1	0	10	6	1	0	7	16501
Apprch %	0.1	99.6	0.2	0.2		0.1	99.6	0	0.2		90	10	0		85.7	14.3	0		
Total %	0	46.9	0.1	0.1	47.1	0.1	52.6	0	0.1	52.8	0.1	0	0	0.1	0	0	0	0	

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Manual Traffic Count - All Traffic
US1 and Family Furniture Driveway
Stuart, FL

File Name : US1FF
Site Code : BC1801
Start Date : 5/31/2018
Page No : 3

	US1 NB					US1 SB					Family Furniture EB				Driveway WB				
Start Time	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	0	705	0	1	706	1	442	0	0	443	0	0	0	0	1	0	0	1	1150
05:00 PM	0	742	1	0	743	1	440	0	2	443	0	0	0	0	0	0	0	0	1186
05:15 PM	2	741	0	1	744	0	412	0	0	412	2	0	0	2	0	0	0	0	1158
05:30 PM	1	762	0	0	763	0	421	0	0	421	5	0	0	5	1	0	0	1	1190
Total Volume	3	2950	1	2	2956	2	1715	0	2	1719	7	0	0	7	2	0	0	2	4684
% App. Total																			
PHF	.375	.968	.250	.500	.969	.500	.970	.000	.250	.970	.350	.000	.000	.350	.500	.000	.000	.500	.984



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Manuall Traffic Count - All Traffic
US1 and NW Windemere Dr
Stuart, FL

File Name : US1WN
Site Code : BC1801
Start Date : 5/31/2018
Page No : 1

Groups Printed- All Traffic

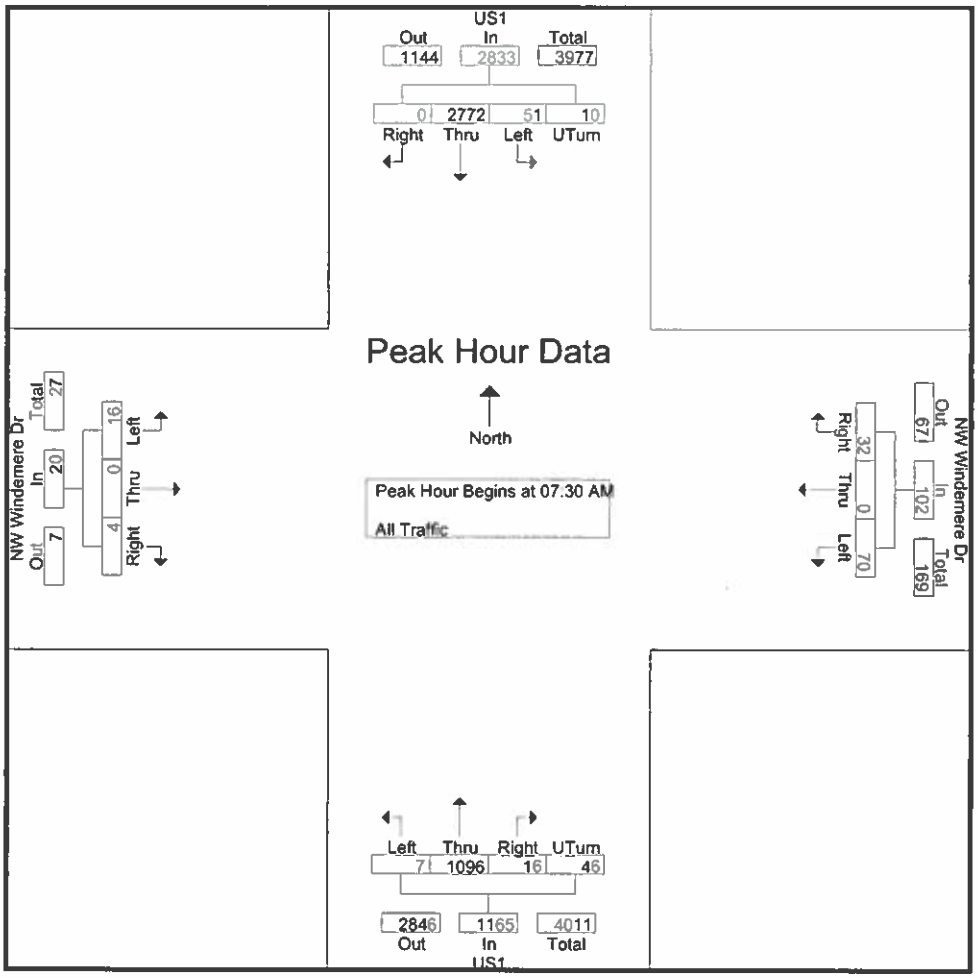
	US1 NB					US1 SB					NW Windemere Dr EB				NW Windemere Dr WB				
Start Time	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	UTurn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	2	183	0	13	198	0	533	17	5	555	0	1	0	1	6	0	17	23	777
07:15 AM	1	233	2	8	244	0	686	10	3	699	1	0	0	1	10	0	10	20	964
07:30 AM	5	241	0	13	259	0	752	6	3	761	0	0	1	1	10	0	20	30	1051
07:45 AM	5	267	1	19	292	0	716	24	0	740	3	0	4	7	8	0	16	24	1063
Total	13	924	3	53	993	0	2687	57	11	2755	4	1	5	10	34	0	63	97	3855
08:00 AM	3	295	1	8	307	0	654	13	5	672	0	0	2	2	3	0	21	24	1005
08:15 AM	3	293	5	6	307	0	650	8	2	660	1	0	9	10	11	0	13	24	1001
08:30 AM	5	260	2	10	277	0	576	31	10	617	0	0	2	2	11	0	15	26	922
08:45 AM	10	305	6	14	335	0	553	23	12	588	1	1	4	6	11	0	17	28	957
Total	21	1153	14	38	1226	0	2433	75	29	2537	2	1	17	20	36	0	66	102	3885
*** BREAK ***																			
04:00 PM	8	636	3	7	654	0	450	21	9	480	2	0	7	9	6	0	7	13	1156
04:15 PM	16	699	3	6	724	0	396	19	14	429	1	1	5	7	10	0	9	19	1179
04:30 PM	14	626	1	5	646	0	396	37	17	450	1	2	11	14	2	0	23	25	1135
04:45 PM	13	685	0	8	706	0	428	14	10	452	0	0	7	7	13	0	16	29	1194
Total	51	2646	7	26	2730	0	1670	91	50	1811	4	3	30	37	31	0	55	86	4664
05:00 PM	19	725	5	14	763	1	419	20	7	447	1	0	6	7	11	0	9	20	1237
05:15 PM	6	731	1	7	745	0	400	12	4	416	0	0	4	4	6	0	21	27	1192
05:30 PM	13	745	4	10	772	0	396	25	10	431	0	1	1	2	16	0	15	31	1236
05:45 PM	13	610	0	8	631	0	372	18	9	399	2	0	3	5	12	0	12	24	1059
Total	51	2811	10	39	2911	1	1587	75	30	1693	3	1	14	18	45	0	57	102	4724
Grand Total	136	7534	34	156	7860	1	8377	298	120	8796	13	6	66	85	146	0	241	387	17128
Apprch %	1 7	95 9	0.4	2		0	95.2	3.4	1.4		15 3	7.1	77.6		37.7	0	62 3		
Total %	0 8	44	0 2	0 9	45 9	0	48.9	1.7	0.7	51.4	0.1	0	0.4	0.5	0 9	0	1 4	2 3	

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Manuall Traffic Count - All Traffic
US1 and NW Windemere Dr
Stuart, FL

File Name : US1WN
Site Code : BC1801
Start Date : 5/31/2018
Page No : 2

	US1 NB					US1 SB					NW Windemere Dr EB				NW Windemere Dr WB				
Start Time	Right	Thru	Left	UTurn	App Total	Right	Thru	Left	UTurn	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	5	241	0	13	259	0	**752**	6	3	**761**	0	0	1	1	10	0	20	**30**	1051
07:45 AM	5	267	1	**19**	292	0	716	**24**	0	740	**3**	0	4	7	8	0	16	24	**1063**
08:00 AM	3	**295**	1	8	**307**	0	654	13	**5**	672	0	0	2	2	3	0	**21**	24	1005
08:15 AM	3	293	**5**	6	307	0	650	8	2	660	1	0	**9**	**10**	**11**	0	13	24	1001
Total Volume	16	1096	7	46	1165	0	2772	51	10	2833	4	0	16	20	32	0	70	102	4120
% App. Total																			
PHF	.800	.929	.350	.605	.949	.000	.922	.531	.500	.931	.333	.000	.444	.500	.727	.000	.833	.850	.969

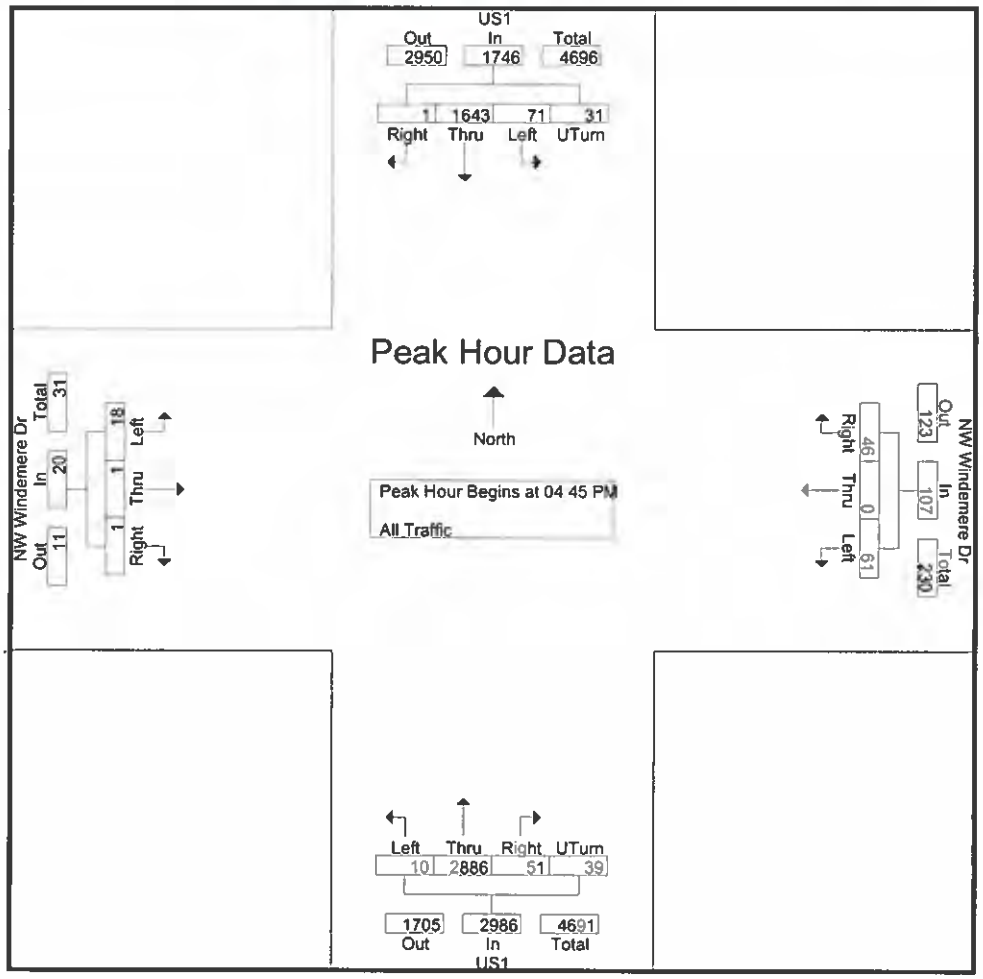


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Manuall Traffic Count - All Traffic
US1 and NW Windemere Dr
Stuart, FL

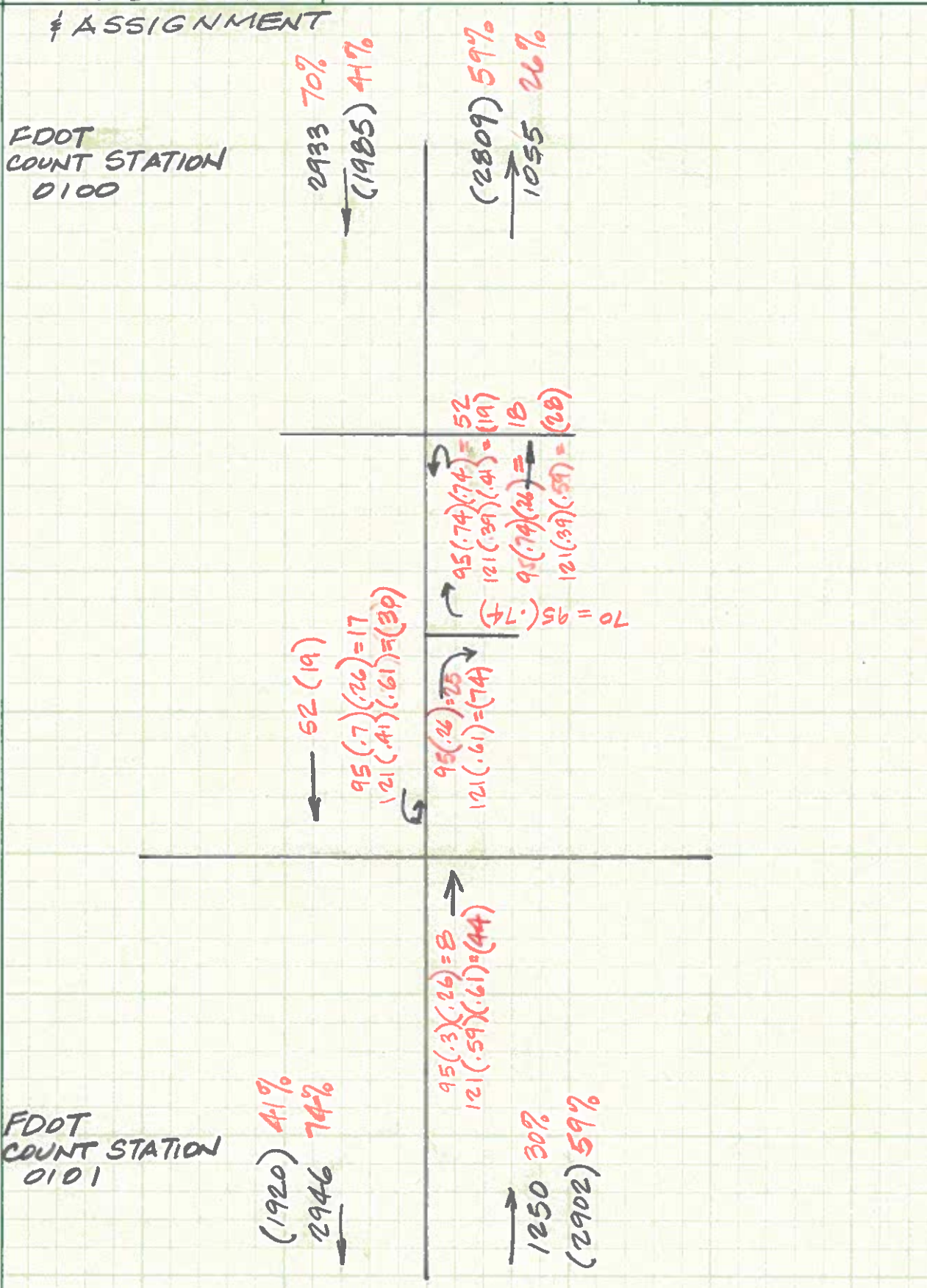
File Name : US1WN
Site Code : BC1801
Start Date : 5/31/2018
Page No : 3

	US1 NB					US1 SB					NW Windemere Dr EB				NW Windemere Dr WB				
Start Time	Right	Thru	Left	UTurn	App Total	Right	Thru	Left	UTurn	App Total	Right	Thru	Left	App Total	Right	Thru	Left	App Total	Int. Total
Peak Hour Analysis From 04.00 PM to 05.45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	13	685	0	8	706	0	**428**	14	**10**	**452**	0	0	7	7	13	0	16	29	1194
05:00 PM	**19**	725	**5**	**14**	763	**1**	419	20	7	447	**1**	0	6	7	11	0	9	20	**1237**
05:15 PM	6	731	1	7	745	0	400	12	**4**	416	0	0	4	4	6	0	**21**	27	1192
05:30 PM	13	**745**	**4**	10	**772**	0	396	**25**	10	431	0	**1**	**1**	**2**	**16**	0	15	**31**	1236
Total Volume	51	2886	10	39	2986	1	1643	71	31	1746	1	1	18	20	46	0	61	107	4859
% App. Total																			
PHF	.671	.968	.500	.696	.967	.250	.960	.710	.775	.966	.250	.250	.643	.714	.719	.000	.726	.863	.982



TRIP DISTRIBUTION & ASSIGNMENT

WATERMARK



1250 - AM
(2902) - PM

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

Intersection Traffic Volume Worksheet

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Existing Traffic (2018)																
Raw Turning Movements	0	0	0	0	0	0	0	1	7	3	1144	0	1	1	2823	3
Peak Season Correction Factor	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080
Existing Conditions (2018)	0	0	0	0	0	0	0	1	8	3	1236	0	1	1	3049	3
Background Traffic																
Years to Buildout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Annual Growth Rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	37	0	0	0	91	0
Total Background Traffic	0	0	0	0	0	0	0	1	8	3	1273	0	1	1	3140	3
Project Traffic																
Net New	0	0	0	0	0	0	0	0	52	0	18	0	0	0	0	0
Total Traffic	0	0	0	0	0	0	0	1	60	3	1291	0	1	1	3140	3

Intersection Traffic Volume Worksheet

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Existing Traffic (2018)																
Raw Turning Movements	0	0	0	7	0	0	0	1	2	1	2950	3	2	0	1715	2
Peak Season Correction Factor	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080
Existing Conditions (2018)	0	0	0	8	0	0	0	1	2	1	3186	3	2	0	1852	2
Background Traffic																
Years to Buildout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Annual Growth Rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	96	0	0	0	56	0
Total Background Traffic	0	0	0	8	0	0	0	1	2	1	3282	3	2	0	1908	2
Project Traffic																
Net New	0	0	0	0	0	0	0	0	19	0	28	0	0	0	0	0
Total Traffic	0	0	0	8	0	0	0	1	21	1	3310	3	2	0	1908	2

Intersection Traffic Volume Worksheet

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Existing Traffic (2018)																
Raw Turning Movements	0	4	0	16	0	70	0	32	46	7	1096	16	10	51	2772	0
Peak Season Correction Factor	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080
Existing Conditions (2018)	0	4	0	17	0	76	0	35	50	8	1184	17	11	55	2994	0
Background Traffic																
Years to Buildout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Annual Growth Rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Background Traffic Growth	0	0	0	1	0	2	0	1	1	0	36	1	0	2	90	0
Total Background Traffic	0	4	0	18	0	78	0	36	51	8	1219	18	11	57	3084	0
Project Traffic																
Net New	0	0	0	0	0	0	0	0	0	0	8	0	17	0	52	0
Total Traffic	0	4	0	18	0	78	0	36	51	8	1227	18	28	57	3136	0

Intersection Traffic Volume Worksheet

	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Existing Traffic (2018)																
Raw Turning Movements	0	18	1	1	0	61	0	46	39	10	2886	51	31	71	1643	1
Peak Season Correction Factor	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080	1.080
Existing Conditions (2018)	0	19	1	1	0	66	0	50	42	11	3117	55	33	77	1774	1
Background Traffic																
Years to Buildout	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Annual Growth Rate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Background Traffic Growth	0	1	0	0	0	2	0	1	1	0	94	2	1	2	53	0
Total Background Traffic	0	20	1	1	0	68	0	51	43	11	3210	57	34	79	1828	1
Project Traffic																
Net New	0	0	0	0	0	0	0	0	0	0	44	0	30	0	19	0
Total Traffic	0	20	1	1	0	68	0	51	43	11	3254	57	64	79	1847	1

Bowman CONSULTING

US 1 and NW Windemere
June 5, 2018
PM Peak Hour

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	0	0	0	0	0	1	7	3	1144	0	1	1	2823	3
Future Vol, veh/h	0	0	0	0	0	1	7	3	1144	0	1	1	2823	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	0	-	-	0	-	175	-	175	-	175	-	-
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	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	8	3	1243	0	1	1	3068	3

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	-	-	1536	-	-	622	2242	3071	0	0	908	1243	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	5.64	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	2.32	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	0	0	90	0	0	368	87	35	-	-	494	298	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	-	-	90	-	-	368	60	60	-	-	371	371	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	14.8	0.7	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	60	-	-	-	368	371	-	-
HCM Lane V/C Ratio	0.181	-	-	-	0.003	0.006	-	-
HCM Control Delay (s)	77.6	-	-	0	14.8	14.7	-	-
HCM Lane LOS	F	-	-	A	B	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	0	0	0	0	0	1	60	3	1291	0	1	1	3140	3
Future Vol, veh/h	0	0	0	0	0	1	60	3	1291	0	1	1	3140	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	0	-	-	0	-	175	-	175	-	175	-	-
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	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	65	3	1403	0	1	1	3413	3

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	-	-	1708	-	-	702	2494	3416	0	0	1024	1403	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	5.64	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	2.32	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	0	0	68	0	0	326	~ 63	23	-	-	426	249	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	-	-	68	-	-	326	~ 58	58	-	-	314	314	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	16.1	13.6	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	58	-	-	-	326	314	-	-
HCM Lane V/C Ratio	1.181	-	-	-	0.003	0.007	-	-
HCM Control Delay (s)	292.1	-	-	0	16.1	16.5	-	-
HCM Lane LOS	F	-	-	A	C	C	-	-
HCM 95th %tile Q(veh)	5.8	-	-	-	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	0	0	7	0	0	2	2	1	2950	3	2	0	1715	2
Future Vol, veh/h	0	0	7	0	0	2	2	1	2950	3	2	0	1715	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	0	-	-	0	-	175	-	175	-	175	-	-
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	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	0	0	2	2	1	3207	3	2	0	1864	2

Major/Minor	Minor2			Minor1			Major1				Major2				
Conflicting Flow All	-	-	933	-	-	1604	1362	1866	0	0	2341	3210	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	5.64	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	2.32	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	0	0	230	0	0	81	276	146	-	-	77	29	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	-	-	230	-	-	81	210	210	-	-	75	75	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.2	50.7	0	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	210	-	-	230	81	75	-	-
HCM Lane V/C Ratio	0.016	-	-	0.033	0.027	0.029	-	-
HCM Control Delay (s)	22.4	-	-	21.2	50.7	54.4	-	-
HCM Lane LOS	C	-	-	C	F	F	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	0	0	8	0	0	1	21	1	3310	3	2	0	1908	2
Future Vol, veh/h	0	0	8	0	0	1	21	1	3310	3	2	0	1908	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	0	-	-	0	-	175	-	175	-	175	-	-
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	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	9	0	0	1	23	1	3598	3	2	0	2074	2

Major/Minor	Minor2			Minor1			Major1				Major2			
Conflicting Flow All	-	-	1038	-	-	1799	1516	2076	0	0	2626	3601	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	7.14	5.64	5.34	-	-	5.64	5.34	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.92	2.32	3.12	-	-	2.32	3.12	-	-
Pot Cap-1 Maneuver	0	0	196	0	0	59	226	114	-	-	53	18	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-			-	-
Mov Cap-1 Maneuver	-	-	196	-	-	59	208	208	-	-	52	52	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.2	67.2	0.2	0.1
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	208	-	-	196	59	52	-	-
HCM Lane V/C Ratio	0.115	-	-	0.044	0.018	0.042	-	-
HCM Control Delay (s)	24.5	-	-	24.2	67.2	77.2	-	-
HCM Lane LOS	C	-	-	C	F	F	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	0.1	0.1	-	-

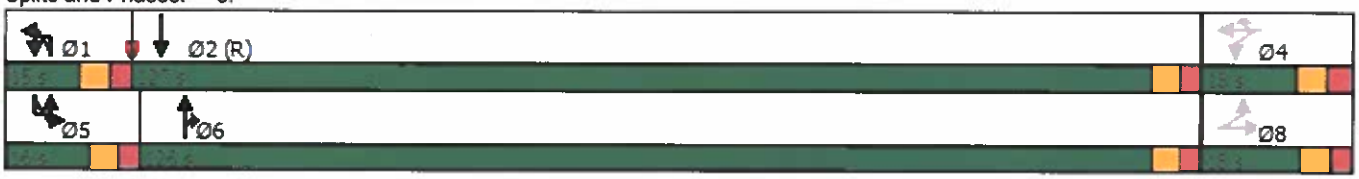
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	4	0	16	70	0	32	46	7	1096	16	10	51
Future Volume (vph)	4	0	16	70	0	32	46	7	1096	16	10	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		160		0		325
Storage Lanes	0		0	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.891				0.850				0.850		
Flt Protected		0.991			0.950			0.950				0.950
Satd. Flow (prot)	0	1645	0	0	1770	1583	0	1770	5085	1583	0	1770
Flt Permitted		0.930			0.744			0.950				0.950
Satd. Flow (perm)	0	1544	0	0	1386	1583	0	1770	5085	1583	0	1770
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		63				63				68		
Link Speed (mph)		30			30				30			
Link Distance (ft)		650			735				770			
Travel Time (s)		14.8			16.7				17.5			
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
Adj. Flow (vph)	4	0	17	76	0	35	50	8	1191	17	11	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	0	0	76	35	0	58	1191	17	0	66
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2		1	2	1	1	1	2	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100		20	100	20	20	20	100	20	20	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	custom	NA		custom	NA	custom	Prot	Prot	NA	Prot	Prot	Prot
Protected Phases							1	1	6	6	5	5
Permitted Phases	8	8		4	4	4						

Lane Group	SBT	SBR
Lane Configurations	↑↑↑	
Traffic Volume (vph)	2772	0
Future Volume (vph)	2772	0
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	0.91	0.91
Frt		
Flt Protected		
Satd. Flow (prot)	5085	0
Flt Permitted		
Satd. Flow (perm)	5085	0
Right Turn on Red		Yes
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	682	
Travel Time (s)	15.5	
Peak Hour Factor	0.92	0.92
Adj. Flow (vph)	3013	0
Shared Lane Traffic (%)		
Lane Group Flow (vph)	3013	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	2	
Permitted Phases		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Detector Phase	8	8		4	4	4	1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	5.5	5.5		10.0	10.0	10.0	7.0	7.0	7.0	7.0	9.9	9.9
Minimum Split (s)	11.9	11.9		18.0	18.0	18.0	15.0	15.0	125.0	125.0	16.0	16.0
Total Split (s)	18.0	18.0		18.0	18.0	18.0	15.0	15.0	126.0	126.0	16.0	16.0
Total Split (%)	11.3%	11.3%		11.3%	11.3%	11.3%	9.4%	9.4%	78.8%	78.8%	10.0%	10.0%
Maximum Green (s)	11.6	11.6		11.1	11.1	11.1	8.9	8.9	119.9	119.9	9.9	9.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.9	2.9		3.4	3.4	3.4	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4			6.9	6.9		6.1	6.1	6.1		6.1
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	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	3.0	3.0
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)				5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)				32.0	32.0	32.0	24.0	24.0	24.0	24.0	12.0	12.0
Pedestrian Calls (#/hr)				0	0	0	0	0	0	0	0	0
Act Effct Green (s)		11.4			10.9	10.9		9.1	119.9	119.9		10.1
Actuated g/C Ratio		0.07			0.07	0.07		0.06	0.75	0.75		0.06
v/c Ratio		0.12			0.81	0.21		0.58	0.31	0.01		0.59
Control Delay		1.5			123.2	6.0		96.0	6.8	0.0		94.5
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay		1.5			123.2	6.0		96.0	6.8	0.0		94.5
LOS		A			F	A		F	A	A		F
Approach Delay		1.5			86.3				10.8			
Approach LOS		A			F				B			

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Green			
Natural Cycle: 160			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 74.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3:



Lane Group	SBT	SBR
Detector Phase	2	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	126.0	
Total Split (s)	127.0	
Total Split (%)	79.4%	
Maximum Green (s)	120.9	
Yellow Time (s)	3.5	
All-Red Time (s)	2.6	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.1	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
Walk Time (s)	7.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	120.9	
Actuated g/C Ratio	0.76	
v/c Ratio	0.78	
Control Delay	13.6	
Queue Delay	0.0	
Total Delay	13.6	
LOS	B	
Approach Delay	15.4	
Approach LOS	B	

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	21	76	35	58	1191	17	66	3013
v/c Ratio	0.12	0.81	0.21	0.58	0.31	0.01	0.59	0.78
Control Delay	1.5	123.2	6.0	96.0	6.8	0.0	94.5	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.5	123.2	6.0	96.0	6.8	0.0	94.5	13.6
Queue Length 50th (ft)	0	80	0	60	134	0	69	623
Queue Length 95th (ft)	0	#178	10	#121	153	0	#133	668
Internal Link Dist (ft)	570	655			690			602
Turn Bay Length (ft)				160			325	
Base Capacity (vph)	170	96	168	100	3810	1203	111	3842
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.79	0.21	0.58	0.31	0.01	0.59	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

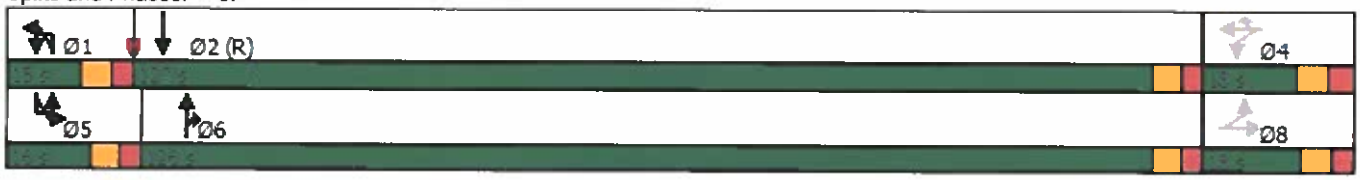
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	4	0	18	78	0	36	51	8	1227	18	28	57
Future Volume (vph)	4	0	18	78	0	36	51	8	1227	18	28	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		160		0		325
Storage Lanes	0		0	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.887				0.850				0.850		
Flt Protected		0.992			0.950			0.950				0.950
Satd. Flow (prot)	0	1639	0	0	1770	1583	0	1770	5085	1583	0	1770
Flt Permitted		0.938			0.742			0.950				0.950
Satd. Flow (perm)	0	1550	0	0	1382	1583	0	1770	5085	1583	0	1770
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		63				63				68		
Link Speed (mph)		30			30				30			
Link Distance (ft)		650			735				770			
Travel Time (s)		14.8			16.7				17.5			
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
Adj. Flow (vph)	4	0	20	85	0	39	55	9	1334	20	30	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	85	39	0	64	1334	20	0	92
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2		1	2	1	1	1	2	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100		20	100	20	20	20	100	20	20	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	custom	NA		custom	NA	custom	Prot	Prot	NA	Prot	Prot	Prot
Protected Phases							1	1	6	6	5	5
Permitted Phases	8	8		4	4	4						

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	3136	0
Future Volume (vph)	3136	0
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	0.91	0.91
Frt		
Flt Protected		
Satd. Flow (prot)	5085	0
Flt Permitted		
Satd. Flow (perm)	5085	0
Right Turn on Red		Yes
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	682	
Travel Time (s)	15.5	
Peak Hour Factor	0.92	0.92
Adj. Flow (vph)	3409	0
Shared Lane Traffic (%)		
Lane Group Flow (vph)	3409	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	2	
Permitted Phases		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Detector Phase	8	8		4	4	4	1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	5.5	5.5		10.0	10.0	10.0	7.0	7.0	7.0	7.0	9.9	9.9
Minimum Split (s)	11.9	11.9		18.0	18.0	18.0	15.0	15.0	125.0	125.0	16.0	16.0
Total Split (s)	18.0	18.0		18.0	18.0	18.0	15.0	15.0	126.0	126.0	16.0	16.0
Total Split (%)	11.3%	11.3%		11.3%	11.3%	11.3%	9.4%	9.4%	78.8%	78.8%	10.0%	10.0%
Maximum Green (s)	11.6	11.6		11.1	11.1	11.1	8.9	8.9	119.9	119.9	9.9	9.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.9	2.9		3.4	3.4	3.4	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4			6.9	6.9		6.1	6.1	6.1		6.1
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	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	3.0	3.0
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)				5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)				32.0	32.0	32.0	24.0	24.0	24.0	24.0	12.0	12.0
Pedestrian Calls (#/hr)				0	0	0	0	0	0	0	0	0
Act Effct Green (s)		11.6			11.1	11.1		8.9	119.9	119.9		9.9
Actuated g/C Ratio		0.07			0.07	0.07		0.06	0.75	0.75		0.06
v/c Ratio		0.14			0.89	0.23		0.65	0.35	0.02		0.84
Control Delay		1.7			138.6	8.2		102.9	7.1	0.0		124.3
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay		1.7			138.6	8.2		102.9	7.1	0.0		124.3
LOS		A			F	A		F	A	A		F
Approach Delay		1.7			97.6				11.3			
Approach LOS		A			F				B			

Intersection Summary			
Area Type:	Other		
Cycle Length: 160			
Actuated Cycle Length: 160			
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Green			
Natural Cycle: 160			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 92.5%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3:



Lane Group	SBT	SBR
Detector Phase	2	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	126.0	
Total Split (s)	127.0	
Total Split (%)	79.4%	
Maximum Green (s)	120.9	
Yellow Time (s)	3.5	
All-Red Time (s)	2.6	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.1	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
Walk Time (s)	7.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	120.9	
Actuated g/C Ratio	0.76	
v/c Ratio	0.89	
Control Delay	18.4	
Queue Delay	0.0	
Total Delay	18.4	
LOS	B	
Approach Delay	21.2	
Approach LOS	C	

Intersection Summary



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	85	39	64	1334	20	92	3409
v/c Ratio	0.14	0.89	0.23	0.65	0.35	0.02	0.84	0.89
Control Delay	1.7	138.6	8.2	102.9	7.1	0.0	124.3	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	138.6	8.2	102.9	7.1	0.0	124.3	18.4
Queue Length 50th (ft)	0	90	0	67	157	0	97	872
Queue Length 95th (ft)	0	#202	16	#138	177	0	#206	927
Internal Link Dist (ft)	570	655			690			602
Turn Bay Length (ft)				160			325	
Base Capacity (vph)	170	95	168	98	3810	1203	109	3842
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.89	0.23	0.65	0.35	0.02	0.84	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

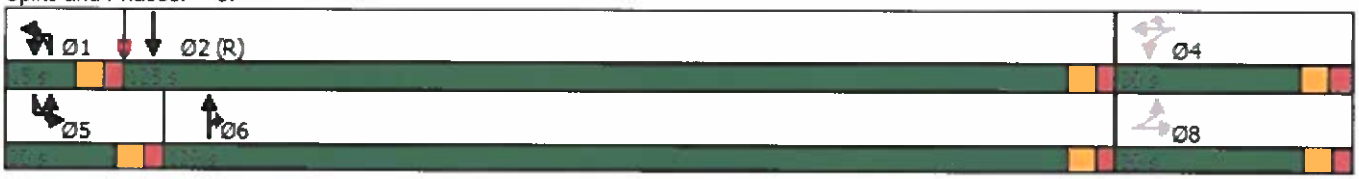
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	18	1	1	61	0	46	39	10	2886	51	31	71
Future Volume (vph)	18	1	1	61	0	46	39	10	2886	51	31	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		160		0		325
Storage Lanes	0		0	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.994				0.850				0.850		
Flt Protected		0.957			0.950			0.950				0.950
Satd. Flow (prot)	0	1772	0	0	1770	1583	0	1770	5085	1583	0	1770
Flt Permitted		0.698			0.743			0.950				0.950
Satd. Flow (perm)	0	1292	0	0	1384	1583	0	1770	5085	1583	0	1770
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		1				59				64		
Link Speed (mph)		30			30				30			
Link Distance (ft)		650			735				770			
Travel Time (s)		14.8			16.7				17.5			
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
Adj. Flow (vph)	20	1	1	66	0	50	42	11	3137	55	34	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	0	0	66	50	0	53	3137	55	0	111
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2		1	2	1	1	1	2	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100		20	100	20	20	20	100	20	20	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	custom	NA		custom	NA	custom	Prot	Prot	NA	Prot	Prot	Prot
Protected Phases							1	1	6	6	5	5
Permitted Phases	8	8		4	4	4						

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1643	1
Future Volume (vph)	1643	1
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	0.91	0.91
Frt		
Flt Protected		
Satd. Flow (prot)	5085	0
Flt Permitted		
Satd. Flow (perm)	5085	0
Right Turn on Red		Yes
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	682	
Travel Time (s)	15.5	
Peak Hour Factor	0.92	0.92
Adj. Flow (vph)	1786	1
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1787	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	2	
Permitted Phases		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Detector Phase	8	8		4	4	4	1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	5.5	5.5		10.0	10.0	10.0	7.0	7.0	7.0	7.0	9.9	9.9
Minimum Split (s)	11.9	11.9		18.0	18.0	18.0	15.0	15.0	125.0	125.0	16.0	16.0
Total Split (s)	30.0	30.0		30.0	30.0	30.0	15.0	15.0	120.0	120.0	20.0	20.0
Total Split (%)	17.6%	17.6%		17.6%	17.6%	17.6%	8.8%	8.8%	70.6%	70.6%	11.8%	11.8%
Maximum Green (s)	23.6	23.6		23.1	23.1	23.1	8.9	8.9	113.9	113.9	13.9	13.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.9	2.9		3.4	3.4	3.4	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4			6.9	6.9		6.1	6.1	6.1		6.1
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	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	3.0	3.0
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)				5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)				32.0	32.0	32.0	24.0	24.0	24.0	24.0	12.0	12.0
Pedestrian Calls (#/hr)				0	0	0	0	0	0	0	0	0
Act Effct Green (s)		14.4			13.9	13.9		18.1	113.9	113.9		23.1
Actuated g/C Ratio		0.08			0.08	0.08		0.11	0.67	0.67		0.14
v/c Ratio		0.20			0.58	0.27		0.28	0.92	0.05		0.46
Control Delay		72.5			94.9	14.9		76.1	29.9	1.6		75.9
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay		72.5			94.9	14.9		76.1	29.9	1.6		75.9
LOS		E			F	B		E	C	A		E
Approach Delay		72.5			60.4				30.2			
Approach LOS		E			E				C			

Intersection Summary			
Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 170			
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Green			
Natural Cycle: 160			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 26.0		Intersection LOS: C	
Intersection Capacity Utilization 98.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3:



Lane Group	SBT	SBR
Detector Phase	2	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	126.0	
Total Split (s)	125.0	
Total Split (%)	73.5%	
Maximum Green (s)	118.9	
Yellow Time (s)	3.5	
All-Red Time (s)	2.6	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.1	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
Walk Time (s)	7.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	118.9	
Actuated g/C Ratio	0.70	
v/c Ratio	0.50	
Control Delay	12.4	
Queue Delay	0.0	
Total Delay	12.4	
LOS	B	
Approach Delay	16.2	
Approach LOS	B	

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	22	66	50	53	3137	55	111	1787
v/c Ratio	0.20	0.58	0.27	0.28	0.92	0.05	0.46	0.50
Control Delay	72.5	94.9	14.9	76.1	29.9	1.6	75.9	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.5	94.9	14.9	76.1	29.9	1.6	75.9	12.4
Queue Length 50th (ft)	22	72	0	55	1044	0	115	316
Queue Length 95th (ft)	53	125	36	108	1105	13	193	346
Internal Link Dist (ft)	570	655			690			602
Turn Bay Length (ft)				160			325	
Base Capacity (vph)	180	188	266	188	3406	1081	240	3556
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.35	0.19	0.28	0.92	0.05	0.46	0.50

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	20	1	1	68	0	51	43	11	3254	57	64	79
Future Volume (vph)	20	1	1	68	0	51	43	11	3254	57	64	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0		160		0		325
Storage Lanes	0		0	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	0.91	1.00	0.91	1.00
Frt		0.994				0.850				0.850		
Flt Protected		0.956			0.950			0.950				0.950
Satd. Flow (prot)	0	1770	0	0	1770	1583	0	1770	5085	1583	0	1770
Flt Permitted		0.691			0.742			0.950				0.950
Satd. Flow (perm)	0	1279	0	0	1382	1583	0	1770	5085	1583	0	1770
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		1				59				64		
Link Speed (mph)		30			30				30			
Link Distance (ft)		650			735				770			
Travel Time (s)		14.8			16.7				17.5			
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
Adj. Flow (vph)	22	1	1	74	0	55	47	12	3537	62	70	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	74	55	0	59	3537	62	0	156
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2		1	2	1	1	1	2	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100		20	100	20	20	20	100	20	20	20
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	custom	NA		custom	NA	custom	Prot	Prot	NA	Prot	Prot	Prot
Protected Phases							1	1	6	6	5	5
Permitted Phases	8	8		4	4	4						

Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1847	1
Future Volume (vph)	1847	1
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Lane Util. Factor	0.91	0.91
Frt		
Flt Protected		
Satd. Flow (prot)	5085	0
Flt Permitted		
Satd. Flow (perm)	5085	0
Right Turn on Red		Yes
Satd. Flow (RTOR)		
Link Speed (mph)	30	
Link Distance (ft)	682	
Travel Time (s)	15.5	
Peak Hour Factor	0.92	0.92
Adj. Flow (vph)	2008	1
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2009	0
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	
Detector Template	Thru	
Leading Detector (ft)	100	
Trailing Detector (ft)	0	
Detector 1 Position(ft)	0	
Detector 1 Size(ft)	6	
Detector 1 Type	Cl+Ex	
Detector 1 Channel		
Detector 1 Extend (s)	0.0	
Detector 1 Queue (s)	0.0	
Detector 1 Delay (s)	0.0	
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	
Protected Phases	2	
Permitted Phases		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Detector Phase	8	8		4	4	4	1	1	6	6	5	5
Switch Phase												
Minimum Initial (s)	5.5	5.5		10.0	10.0	10.0	7.0	7.0	7.0	7.0	9.9	9.9
Minimum Split (s)	11.9	11.9		18.0	18.0	18.0	15.0	15.0	125.0	125.0	16.0	16.0
Total Split (s)	30.0	30.0		30.0	30.0	30.0	15.0	15.0	120.0	120.0	20.0	20.0
Total Split (%)	17.6%	17.6%		17.6%	17.6%	17.6%	8.8%	8.8%	70.6%	70.6%	11.8%	11.8%
Maximum Green (s)	23.6	23.6		23.1	23.1	23.1	8.9	8.9	113.9	113.9	13.9	13.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.9	2.9		3.4	3.4	3.4	2.6	2.6	2.6	2.6	2.6	2.6
Lost Time Adjust (s)		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Lost Time (s)		6.4			6.9	6.9		6.1	6.1	6.1		6.1
Lead/Lag							Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?							Yes	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	3.0	3.0
Recall Mode	None	None		None	None	None	Max	Max	Max	Max	Max	Max
Walk Time (s)				5.0	5.0	5.0	7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)				32.0	32.0	32.0	24.0	24.0	24.0	24.0	12.0	12.0
Pedestrian Calls (#/hr)				0	0	0	0	0	0	0	0	0
Act Effct Green (s)		15.3			14.8	14.8		17.2	113.9	113.9		22.2
Actuated g/C Ratio		0.09			0.09	0.09		0.10	0.67	0.67		0.13
v/c Ratio		0.21			0.62	0.29		0.33	1.04	0.06		0.68
Control Delay		71.7			95.7	17.1		78.5	54.5	2.0		85.1
Queue Delay		0.0			0.0	0.0		0.0	0.0	0.0		0.0
Total Delay		71.7			95.7	17.1		78.5	54.5	2.0		85.1
LOS		E			F	B		E	D	A		F
Approach Delay		71.7			62.2				54.0			
Approach LOS		E			E				D			

Intersection Summary			
Area Type:	Other		
Cycle Length: 170			
Actuated Cycle Length: 170			
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Green			
Natural Cycle: 160			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 41.4		Intersection LOS: D	
Intersection Capacity Utilization 105.3%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3:



Lane Group	SBT	SBR
Detector Phase	2	
Switch Phase		
Minimum Initial (s)	15.0	
Minimum Split (s)	126.0	
Total Split (s)	125.0	
Total Split (%)	73.5%	
Maximum Green (s)	118.9	
Yellow Time (s)	3.5	
All-Red Time (s)	2.6	
Lost Time Adjust (s)	0.0	
Total Lost Time (s)	6.1	
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
Walk Time (s)	7.0	
Flash Dont Walk (s)	12.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	118.9	
Actuated g/C Ratio	0.70	
v/c Ratio	0.56	
Control Delay	13.5	
Queue Delay	0.0	
Total Delay	13.5	
LOS	B	
Approach Delay	18.6	
Approach LOS	B	

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	74	55	59	3537	62	156	2009
v/c Ratio	0.21	0.62	0.29	0.33	1.04	0.06	0.68	0.56
Control Delay	71.7	95.7	17.1	78.5	54.5	2.0	85.1	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.7	95.7	17.1	78.5	54.5	2.0	85.1	13.5
Queue Length 50th (ft)	24	81	0	62	~1549	0	168	381
Queue Length 95th (ft)	56	137	42	118	#1591	17	#324	415
Internal Link Dist (ft)	570	655			690			602
Turn Bay Length (ft)				160			325	
Base Capacity (vph)	178	187	266	179	3406	1081	231	3556
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.40	0.21	0.33	1.04	0.06	0.68	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Martin County 2017 Roadway Level of Service Inventory Report

Road Name	From	To	Generalized Service Capacity	2017 AADT	Peak Hour Factor K_{30}	Directional Distribution D_{100}	2017 Peak Hour Directional Volume	2017 Generalized LOS	Avg. Annual Growth Rate
SR-5 (US-1)	Monroe St	Indian St	3020	43,510	0.08	0.50	1,809	C	1.7%
SR-5 (US-1)	Indian St	SR-714	3020	44,676	0.10	0.52	2,212	C	0.6%
SR-5 (US-1)	SR-714	SR-5A	3020	37,801	0.09	0.50	1,772	C	0.6%
SR-5 (US-1)	SR-5A(Cut-off Rd)	SR-76	3020	37,383	0.08	0.51	1,492	C	1.2%
SR-5 (US-1)	SR-76	Palm City Rd	2520	48,535	0.08	0.53	2,013	D	1.1%
SR-5 (US-1)	Palm City Rd	Joan Jefferson Wy	2520	56,700	0.07	0.53	2,191	D	1.5%
SR-5 (US-1)	Joan Jefferson Wy	Wright Blvd	3020	60,449	0.09	0.60	3,286	F	1.4%
SR-5 (US-1)	Wright Blvd	Baker Rd	3020	52,000	0.08	0.51	2,174	C	0.5%
SR-5 (US-1)	Baker Rd	Britt Rd	3020	52,984	0.08	0.55	2,309	C	0.5%
SR-5 (US-1)	Britt Rd	SR-732	3020	55,861	0.09	0.51	2,681	C	0.5%
SR-5 (US-1)	SR-732	Westmoreland Blvd	4040	64,497	0.09	0.59	3,384	C	1.0%
SR-5 (US-1)	Westmoreland Blvd	St Lucie County	4040	65,901	0.07	0.62	2,638	C	2.9%
SR-710 (Warfield Blvd)	Okeechobee County	Fox Brown Rd	670	6,141	0.07	0.58	244	C	2.7%
SR-710 (Warfield Blvd)	Fox Brown Rd	CR-609 (Allapattah)	670	7,286	0.08	0.59	319	C	1.4%
SR-710 (Warfield Blvd)	CR-609 (Allapattah)	Van Buren	870	11,622	0.10	0.58	661	C	7.6%
SR-710 (Warfield Blvd)	Van Buren	CR-726 (Citrus)	765	11,622	0.10	0.58	661	C	7.6%
SR-710 (Warfield Blvd)	CR-726	SR-76 (Kanner)	2450	10,624	0.08	0.58	457	A/B	6.0%
SR-710 (Warfield Blvd)	SR-76	Palm Beach County	2450	6,769	0.07	0.53	262	A/B	1.4%
SR-714 (Martin Hwy)	I-95	CR-76A (Citrus)	1200	12,637	0.10	0.54	639	C	7.0%
SR-714 (Martin Hwy)	CR-76A (Citrus)	Florida's Turnpike	925	19,691	0.10	0.56	1,031	F	6.4%
SR-714 (Martin Downs Blvd)	Florida's Turnpike	CR-713	2000	19,879	0.08	0.53	897	C	1.2%

Segments with shaded LOS require additional analysis.
The peaks are: CR-A1A (PM/SB); Murphy Rd (PM/NB); SR-5 (PM/NB); and SR-714 (PM/WB).

Exhibit 19 – Environmental Elements

ENVIRONMENTAL ASSESSMENT REPORT
WATERMARK PARCEL
MARTIN COUNTY, FLORIDA

Revised August 30, 2018

Prepared by:

ECOLOGICAL CONSULTING OF FLORIDA
850 NW FEDERAL HIGHWAY, SUITE 109
STUART, FL 34994

1809.00

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1.0 INTRODUCTION

This assessment is in support of the Environmental Resources Permit (ERP) submittal to the South Water Management District (SFWMD) and the City of Stuart (CITY) for the subject ±11.34-acre site.

The development is a multifamily residential with associated parking, and stormwater areas.

2.0 SITE LOCATION

The project is located within Section 29, Township 37 South, Range 41 East within the City of Stuart, Martin County, Florida (Figure 1). Specifically the project is located 0.7 miles north of Baker Road on NW Federal Highway.

The parcel is a vacant tract that was previously part of the larger Pineapple Plantation development immediately east. Bordering land uses include commercial to the north, south and east, with residential and green space to the east.

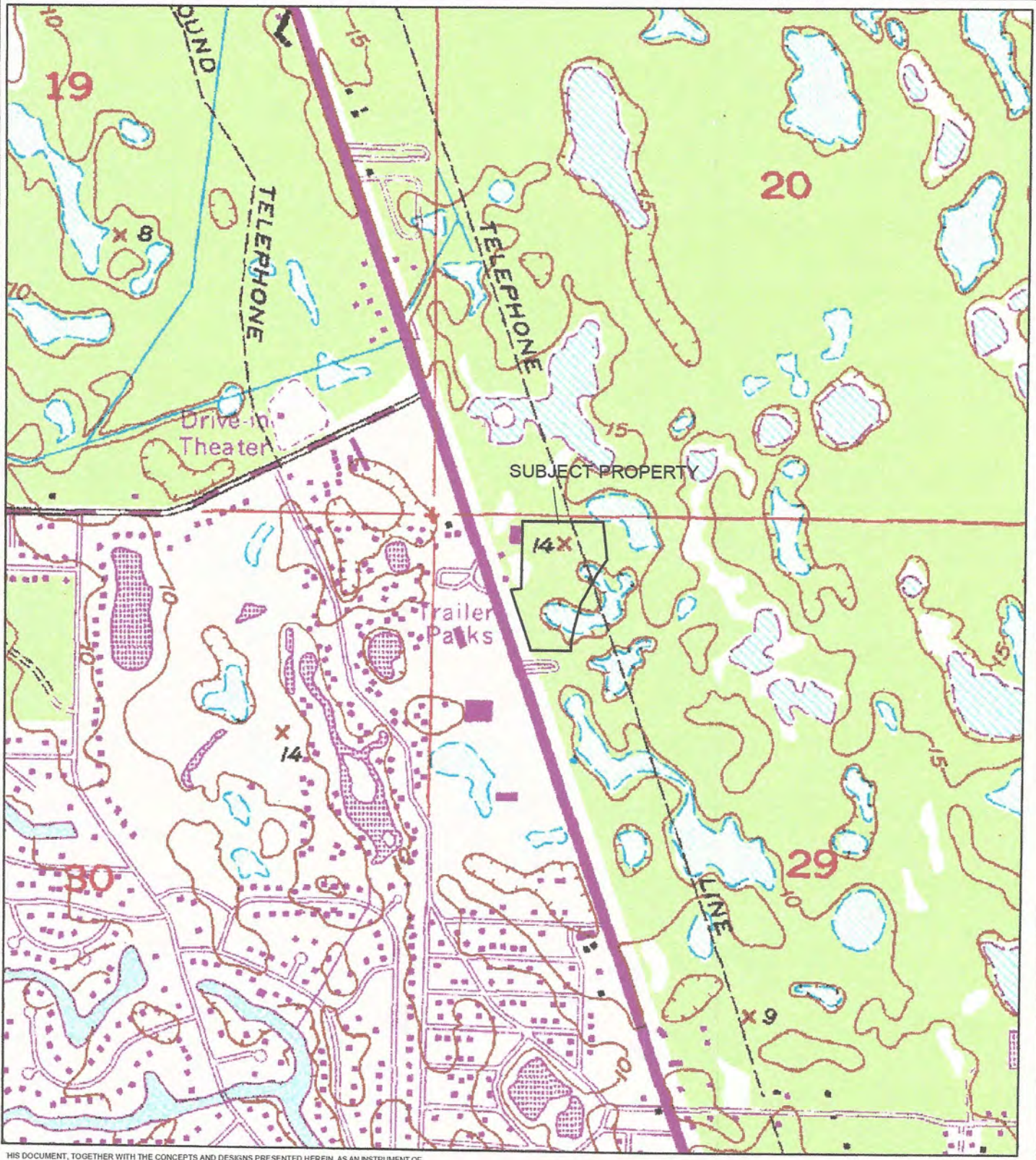
3.0 METHODOLOGY

The assessment methodology consisted of the review of topographic information, soils maps, and recent aerial photographs.

A field reconnaissance of the subject parcel was then conducted which included pedestrian and vehicular transects through the parcel to map and identify specific habitat and land uses and vegetative cover types. A perimeter transect was conducted to confirm features that extend off site. Field notes were taken and an aerial photograph was marked with land use and cover types and any environmental findings.

4.0 TOPOGRAPHY/HYDROLOGY

According to the U.S.G.S. topographic quadrangle (Palm City, FL), the site is relatively flat with an average elevation of 15. Two wetland areas are noted in the south east. No other features are observed on the map. Field reconnaissance confirms the quadrangle map.



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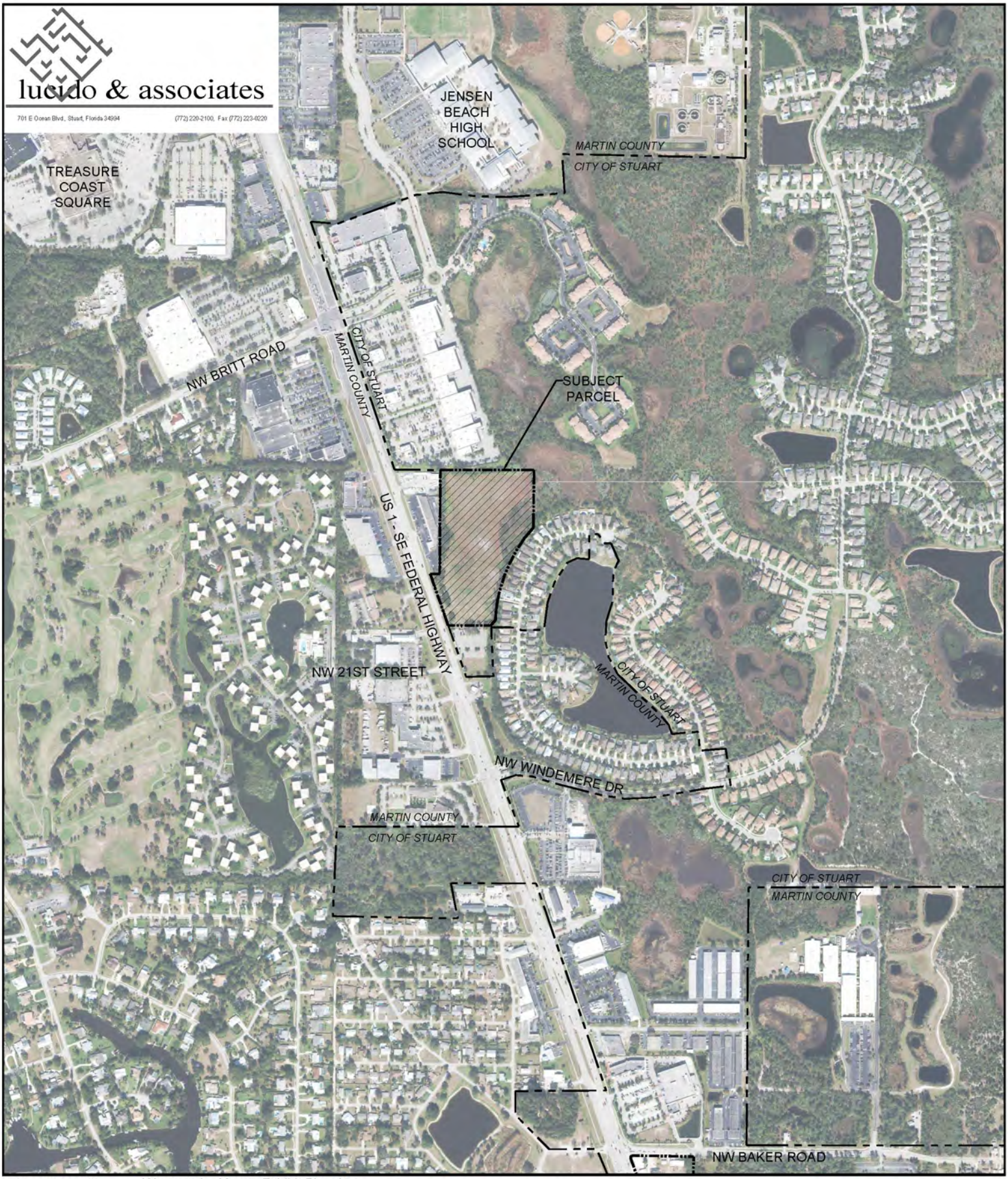
LOCATION MAP
WATERMARK STUART PROPERTY
MARTIN COUNTY FLORIDA

N
W E
S

SOURCE: LABINS

FIGURE 1
DATE: 7/2/18
PROJECT No. 1609.00

lucido & associates
701 E Ocean Blvd., Stuart, Florida 34994 (772) 220-2100, Fax (772) 223-0220



Computer File Watermark - Master Exhibit Plan.dwg
Project Number 17-1150
Scale: 1" = 800'

0 400' 800' 1,600'

NORTH

Location Map

City of Stuart, Florida

5.0 SOILS

According to the *Web Soil Survey of Martin County, FL* (NRCS – Web Soil Survey), the following soils are found on site (Figure 2).

1. Waveland and Immokalee fine sands (4). This soil is nearly level, and poorly drained and is found on broad flatwoods. The water table for this soil is within 10-inches for six months or more during most years. It is perched above the soil surface after heavy rainfall events. The water table recedes to depth more of more than 40 inches.
2. Waveland and Lawnwood fine sands depressional (5). This poorly drained soil is found in depressions within the flatwoods. The soil is ponded for 6 to 9 months in most years. Natural vegetation includes St. Johns wort, needlerush, pipewort, ferns, panicums, maidencane, and other water tolerant grasses.

On site reconnaissance indicates that the above described soils are consistent with the descriptions identified in the soil survey.

6.0 SITE CONDITIONS

An assessment of the extent, distribution and composition of vegetative communities for the site was conducted by Chris Sopotnick of Ecological Consulting of Florida (ECF), on February 1st through March 23, 2018.

Pedestrian and vehicular transects were conducted throughout the site with vegetative communities mapped on a recent aerial photograph.

A description of each community type is provided in the Habitat/Land Use section of this report

7.0 HABITAT/LAND USE

Onsite habitats and adjacent land uses have been characterized using the *Florida Land Use Cover and Forms Classifications System* (FDOT, 1985) (FLUCFCS), and are described below and depicted on the Land Use and Cover Map (Figure 3).

- 191 – Undeveloped Land within Urban Areas: This habitat is primarily open land that was previously cleared for future development and has been maintained by mowing. This area is primarily comprised of bahia grass (Paspalum notatum) and broomsedge (*Andropogon virginicus* with a few remanant saw palmetto (*Serenoa repens*) and gallberry (*Ilex glabra*) along the buffer areas of the wet prairie.



Notes:

4) Waveland and Immokalee fine sand
5) Waveland and Lawnwood fine sands, depressional

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SOILS MAP

WATERMARK STUART PROPERTY

MARTIN COUNTY FLORIDA

N W E S

SOURCE: GOOGLE EARTH & USDA/NRCS

FIGURE 2

DATE: 6/2/18

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LAND USE AND COVER MAP
WATERMARK STUART PROPERTY

MARTIN COUNTY FLORIDA

N W E S

SOURCE: GOOGLE EARTH

FIGURE 3

DATE: 8/3018 rev

PROJECT No. 1809.00

- 643 – Wet Prairie: The marsh is isolated and is generally characterized as a low, depressional area, and is vegetatively comprised of maidencane (*Panicum hemitomon)*, broomsedge, St. Johns wort (*Hypericum spp.*), yellow-eyed grass (*Xyris spp.)* and spikerush (*Eleocharis cellulosa*) and a few melaleuca (*Melaleuca quinquenervia*).

TABLE 1 – LAND USE AND COVER SUMMARY			
FLUCFCS CODE	COMMUNITY NAME	ACRES	PERCENT
191	Undeveloped Land	10.24	90.3
643	Wet Prairie	1.10	9.7
Total Area		11.34	100.0

8.0 CRITICAL HABITAT/ LISTED SPECIES OBSERVATION

The site was reviewed for the presence of habitat conducive to federal and state listed flora and fauna. An initial review documented vegetative communities and noted areas listed as potential habitat. A listed species survey meeting the FWC 5-day criteria was performed by ECF from March 19 – March 23, 2018, the methodology included meandering vehicular transects throughout the parcel as well as the surrounding perimeter with random stations monitored (Figure 4). Additional days were spent on site mapping habitats and delineating wetlands.

TABLE 2 – LISTED SPECIES SURVEY FIELD DATA					
Date	*3-19-18*	*3-20-18*	*3-21-18*	*3-22-18*	*3-23-18*
Survey Time	*07:00/10:30*	*07:30/10:30*	*07:30/10:30*	*07:30/10:30*	*07:30/10:30*
Temperature	*74^0*	*72^0*	*70^0*	*62^0*	*63^0*
Wind Speed/ Direction	*5 mph/SW*	*8 mph/SW*	*10 mph/W*	*5-8 mph/NW*	*5 mph/W*
Visibility	*clear*	*clear*	*cloudy*	*clear*	*clear*
Precipitation	*0%*	*0%*	*0%*	*0%*	*0%*



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LISTED SPECIES SURVEY
WATERMARK STUART PROPERTY

MARTIN COUNTY FLORIDA

N W E S

SOURCE: GOOGLE EARTH

FIGURE 4

DATE: 6/2/18

PROJECT No. 1809.00

Gopher tortoises were observed throughout the site. The gopher tortoise and its burrow is protected at the state level by FWC as a threatened species.

This review included a Florida Scrub Jay Survey. Two stations were located within the development footprint with recordings of each species played in the four cardinal directions. No Scrub Jays responded to calls on any of the survey events.

No other listed species were identified during any of the survey events. Non-listed wildlife or signs of species observed include black racer, bluejay, loggerheaded shriek, turkey buzzard, boat-tailed grackle, armadillo, white tailed deer, gray squirrel, red tail hawk, cottontail rabbit, and raccoon (tracks/scat). All species of wildlife observed are typical representatives of the different habitats on site. None are unusual for the Martin County area.

A database search of FWC records for documented bald eagle nests was conducted and none were noted for the property or within 0.5 mile of the site. A database search of USFWS for documented Crested Caracara nest was conducted and none were identified on site or within 0.5 mile of the site. A database search of USFWS for wood storks and wading bird rookeries was conducted and none were identified on site or within 0.5 mile of the site. It was noted that the project is within the core foraging area of two wood stork colonies (Sewel Point MC2-Bird Island, and North Fork St. Lucie River).

The Florida Natural Areas Inventory (FNAI) provides a matrix by County of rare and endangered species in Florida. Based on the known distribution and preferred habitats of certain species, the following listed wildlife has the potential to occur on site:

TABLE 3 – FNAI LISTED SPECIES

COMMON NAME	SCIENTIFIC NAME	EVIDENCE/SIGHTING	STATUS	
			FWC	USFWS
Eastern Indigo snake	*Drymarchon corias couperi*	Not observed	T	T
Gopher tortoise	*Gopherus polyphemus*	Observed	T	
Gopher frog	*Rana capito*	Not observed	SSC	
Florida pine snake	*Pituophis melanoleucus mugitus*	Not observed	SSC	
Florida Panther	*Puma concolor coryi*	Not observed	E	E
Burrowing owl	*Speotyto cunicularia*	Not observed	SSC	
Woodstork	*Mycteria Americana*	Not observed	E	E
American Alligator	*Alligator mississippiensis*	Not observed	T	T
Crested caracara	*Caracara cheriway*	Not observed	T	T
Florida scrub-jay	*Aphelocoma coeruluscens*	Not observed	T	T
Piping Plover	*Charadrius melodus*	Not observed	T	T
Red-cockaded woodpecker	*Picoides villosus*	Not observed	E	E
Southeastern American kestrel	*Falco sparverius paulus*	Not observed	T	
Florida sandhill crane	*Grus Canadensis pratensis*	Not observed	SSC	
Osprey	*Pandion haliaetus*	Not observed	SSC	
Snail kite	*Rostrhamus sociabilis plumbeous*	Not observed	E	E
Least tern	*Sterna antillarum*	Not observed	T	
Sherman's fox squirrel	*Sciurus niger shermani*	Not observed	SSC	
Manatee	*Trichechus manatus*	Not observed	E	E

Abbreviations:

SSC = Species of Special Concern, T = Threatened
USFWS = United States Fish and Wildlife Service, FWC = Florida Fish and Wildlife Conservation Commission,

9.0 WETLANDS AND SURFACE WATERS

The site includes one wetland falling under the jurisdiction of the South Florida Water Management District (SFWMD) (Figure 5). This wetland was previously delineated in accordance with the state unified methodology and was recorded in a conservation easement under the Pineapple Plantation development.

Attached as Appendix is a copy of the conservation easement and correspondence with SFWMD indicating that they will honor the previous easement for wetlands on this site.

In addition, the US Army Corps of Engineers (USACOE) claimed jurisdiction over the SFWMD wetland, as well as additional area to the south (Figure 5).

10.0 AVOIDANCE AND MINIMIZATION

Avoidance and minimization of SFWMD wetland impacts was reviewed as part of the site planning effort for this project. Through the planning process no state wetlands will be impacted by the project. The preserved wetlands and buffers will be protected by a Preserve Area Management Plan (PAMP) that will include protection measures and monitoring of the wetlands and buffers.

The USACOE wetlands will include 0.49 acre of impact and will qualify under a Nationwide permit. This permit has been applied for and is anticipated shortly.

11.0 SECONDARY AND CUMULATIVE IMPACTS

An average 50-foot buffer is being provided on all preserved wetlands on site. The buffers will be vegetated with native vegetation.



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADOPTATION BY ECOLOGICAL CONSULTING OF FLORIDA SHALL BE WITHOUT LIABILITY TO ECOLOGICAL CONSULTING OF FLORIDA.

NOT TO SCALE

ECF

WETLAND MAP

WATERMARK STUART PROPERTY

MARTIN COUNTY FLORIDA

N
W E
S

SOURCE: GOOGLE EARTH

FIGURE 5

DATE: 8/30/18 rev

PROJECT No. 1809.00

12.0 MITIGATION

The project has avoided impacts to state wetlands and therefore no mitigation is required.

Mitigation for USACOE wetlands is through the purchase of mitigation credits through a regional mitigation bank, which is the preference of the USACOE.

13.0 MAINTENANCE AND MONITORING

The onsite wetland has been dedicated as conservation area and recorded on county records. In order to insure the continued viability and integrity of the preserved wetlands in their present condition, a wetland monitoring and maintenance program is proposed. A monitoring plan shall be implemented to document the success of the maintenance program. The Applicant will be responsible for conducting the required monitoring and submission of annual reports, as well as undertaking the required maintenance activities. The reporting includes annual inspections for a period of three years with reports provide to the City of Stuart for review.

Appendix – Easement Coordination with SFWMD

sopotnick@ecf-llc.com

From: Raymond, Eve [sraymon@sfwmd.gov]
Sent: Friday, February 16, 2018 10:59 AM
To: sopotnick@ecf-llc.com
Subject: RE: Water Mark Property (previously Pineapple Plantation)

Chris,

After further discussion with Barb Conmy this morning, we agree with your position that the delineation of Wetland 30 as described in the sketch and legal description recorded with the Deed of Conservation Easement on 2/4/2005 (Instrument 1812262, OR BK 01979, PG 2121) is grandfathered for the following reasons:

1. Placement of Conservation Easement was required under Application 960703-13 for four wetlands (30, 31, 32 and 33);
2. Wetland 30 was surveyed (sketch and legal description) for the easement;
3. The easement is recorded in the Martin County public records;
4. Phase 3 of Pineapple Plantation was constructed and converted to operational phase. Although Phase 3b has not been constructed, the delineation of Wetland 30 is grandfathered under Application 960703-13.

Regards,
Eve

Eve Raymond | Staff Environmental Analyst 3 | Regulation Division | South Florida Water Management District
Ph: (863) 462-5260 Ext. 3007 | Fax: (863) 462-5269 | sraymon@sfwmd.gov

sfwmd.gov/ePermitting



NOTE:

While the District supports that it is commonplace and convenient to collaborate via email during the pre-application/application process, Permit Applications and Responses to a Request for Additional Information (RAI) submitted via email are not an official submittal (Section 4.4 of Environmental Resource Permit Applicant's Handbook Volume I). For timely and efficient processing of permit applications and RAI responses, please submit online using ePermitting (link above).

From: sopotnick@ecf-llc.com [mailto:sopotnick@ecf-llc.com]
Sent: Thursday, February 15, 2018 4:28 PM
To: Raymond, Eve <sraymon@sfwmd.gov>
Subject: Re: Water Mark Property (previously Pineapple Plantation)

I wasn't referring to the conceptual permit. There is a construction permit for phase 3 of pineapple plantation that placed this wetland under conservation easement. The construction occurred and the permit should have therefore been transferred to an operational phase. If this is the case wouldn't we be looking at the easement as the wetland line?

Chris

Sent from my iPhone

On Feb 15, 2018, at 4:20 PM, Raymond, Eve <sraymon@sfwmd.gov> wrote:

Chris,

The last permit modification that extended the conceptual authorization expired 1/15/2006. Since there are not any unexpired construction permits for this parcel, an application for new development will be reviewed under the current rules.

It is true the original conceptual required all wetlands to be preserved and placed under conservation easement (recorded 2/4/2005), but there is not a grandfather provision with regard to the wetland in the undeveloped parcel. The wetland boundary will need to be delineated under current conditions and a new conservation easement, sketch and legal description along with Form 1001 will need to be provided. You can choose to put the new easement on top of the old one or leave a donut hole where the existing easement coverage has already been recorded.

All the usual supporting documents will need to be submitted with the application: Section C, environmental assessment report, monitoring and maintenance plan, impact analysis (if needed), etc.

I spoke with Barb Conmy about this project and she concurred the wetland would be re-evaluated under current rules and a new easement would be placed over any new jurisdictional area plus buffer.

Sorry it took me a while to get back to you on this question.

Regards,
Eve

Eve Raymond | Staff Environmental Analyst 3 | Regulation Division | South Florida Water Management District
Ph: (863) 462-5260 Ext. 3007 | Fax: (863) 462-5269 | sraymon@sfwmd.gov
<image001.jpg>
NOTE:

While the District supports that it is commonplace and convenient to collaborate via email during the pre-application/application process, Permit Applications and Responses to a Request for Additional Information (RAI) submitted via email are not an official submittal (Section 4.4 of Environmental Resource Permit Applicant's Handbook Volume I). For timely and efficient processing of permit applications and RAI responses, please submit online using ePermitting (link above).

From: sopotnick@ecf-llc.com [mailto:sopotnick@ecf-llc.com]
Sent: Monday, February 12, 2018 9:22 AM
To: Raymond, Eve <sraymon@sfwmd.gov>
Subject: Water Mark Property (previously Pineapple Plantation)
Importance: High

Eve, I was doing some file research for my client on the property we met on in Martin County referenced above. In looking through the permits I found this modification to the construction permit that actually recorded the subject wetland in the easement (Wetland 30). Since this wetland was recorded under an easement, and the permit is now in operation, wouldn't the easement supercede current wetland rules?

I understand if it was just a conceptual, or the permit was never transferred to operation phase, but my thinking is that since this is now under operation the permit is still valid and the wetland limits are therefore as depicted in the permit and easement.

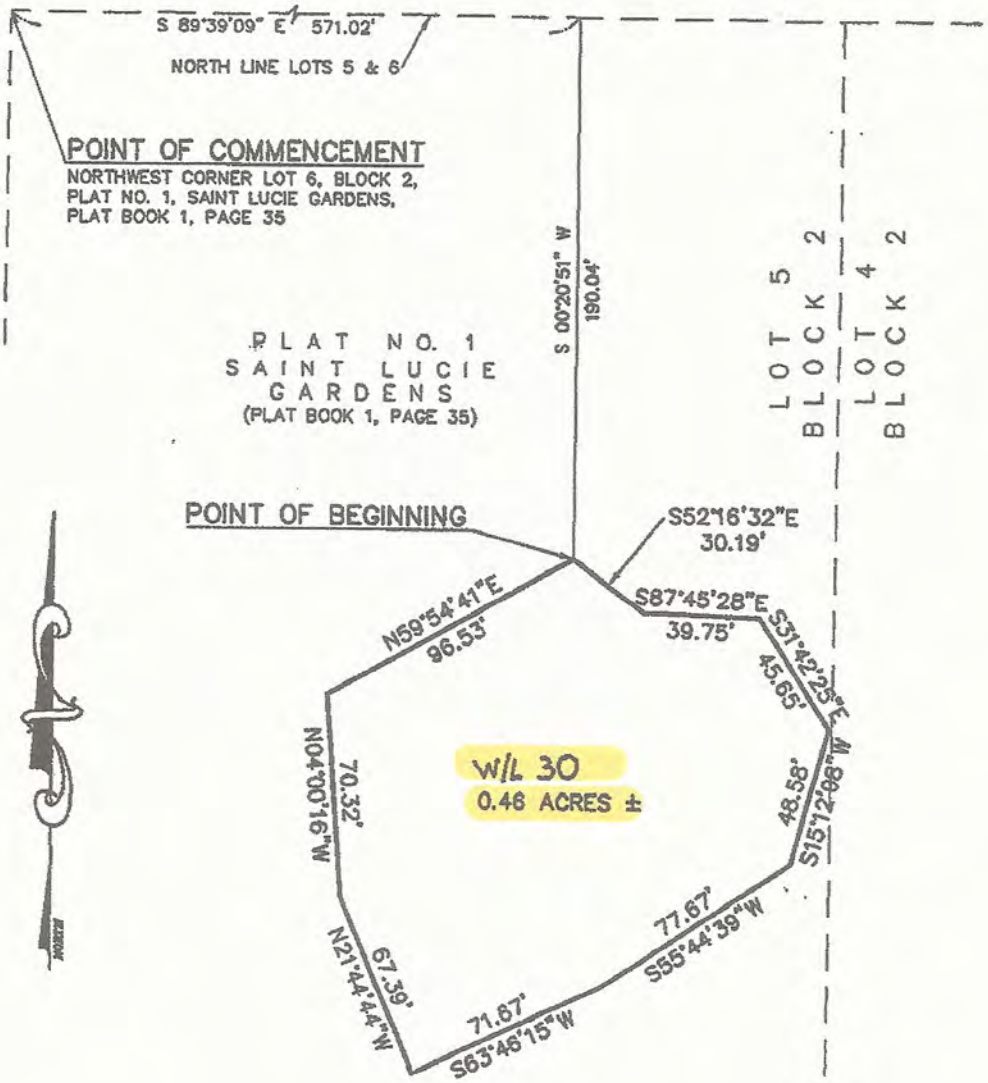
Please look at the highlighted easement on page 13.

Let me know your thoughts on this. Thanks

Chris Sopotnick
Ecological Consulting of Florida
850 NW Federal Highway, Suite 130
Stuart, FL 34994

772-220-7817 office
772-919-2385 mobile

sopotnick@ecf-llc.com



BEARING BASE:
THE NORTH LINE OF LOT 6, BLOCK 2, PLAT NO. 1, SAINT LUCIE GARDENS, PLAT BOOK 1, PAGE 35, PUBLIC RECORDS OF ST. LUCIE (NOW MARTIN) COUNTY, FLORIDA IS ASSUMED TO BEAR SOUTH 89°39'09" EAST AND ALL OTHER BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

EXHIBIT 9a

THIS IS NOT A SURVEY

SURVEYOR AND MAPPERS SIGNATURE

O. HOWARD DUKES
PROFESSIONAL SURVEYOR & MAPPER
STATE OF FLORIDA NO. 4933
L.B.F.H. CERTIFICATE NO. LB. 959

1. NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. NO SEARCH OF THE PUBLIC RECORDS HAS BEEN MADE BY THIS OFFICE.

2400 S.E. MONTEREY RD. STUART FL. 34996 (561) 288-3883

REVISIONS:

PROJECT NAME:
SKETCH AND LEGAL DESCRIPTION FO
PULTE HOMES

LINDAHL, BROWNING, FERRARI & HELLSTROM, INC.
CONSULTING ENGINEERS, PLANNERS & SURVEYORS
210 JUPITER LAKES BLVD. P.O. BOX 727 JUPITER, FLORIDA 33468
2222 COLONIAL ROAD SUITE 201 FORT PIERCE, FLORIDA 34950
2400 S.E. MONTEREY ROAD SUITE 300 STUART, FLORIDA 34996
2000 PALM BEACH LAKES BLVD. SUITE 701 WEST PALM BEACH, FLORIDA 33409

Scale		Sheet	Field Book	FILE NO.
1"=50'	Field	1 Of 2	Pg.	96041L1.DWG
Date 8-20-96	Computed BK / Checked HD	Drawing No. CONSERVATION EASEMENT	Work Order No. 96-041	

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN A PORTION OF LOT 5, BLOCK 2, AS SHOWN ON PLAT NO. 1, SAINT LUCIE GARDENS, AS RECORDED IN PLAT BOOK 1, PAGE 35, PUBLIC RECORDS OF ST. LUCIE (NOW MARTIN) COUNTY, FLORIDA; SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF LOT 6, BLOCK 2, AS SHOWN ON SAID PLAT NO. 1, SAINT LUCIE GARDENS; PROCEED SOUTH 89°39'09" EAST ALONG THE NORTH LINE OF SAID LOTS 5 AND 6, A DISTANCE OF 571.02 FEET; THENCE SOUTH 00°20'51" WEST, DEPARTING SAID NORTH LINE, A DISTANCE OF 190.04 FEET TO THE POINT OF BEGINNING OF THE HEREIN DESCRIBED PARCEL OF LAND;
THENCE SOUTH 52°16'32" EAST, A DISTANCE OF 30.19 FEET;
THENCE SOUTH 87°45'28" EAST, A DISTANCE OF 39.75 FEET;
THENCE SOUTH 31°42'25" EAST, A DISTANCE OF 45.65 FEET;
THENCE SOUTH 15°12'08" WEST, A DISTANCE OF 48.58 FEET;
THENCE SOUTH 55°44'39" WEST, A DISTANCE OF 77.67 FEET;
THENCE SOUTH 63°46'15" WEST, A DISTANCE OF 71.67 FEET;
THENCE NORTH 21°44'44" WEST, A DISTANCE OF 67.39 FEET;
THENCE NORTH 04°00'16" WEST, A DISTANCE OF 70.32 FEET;
THENCE NORTH 59°54'41" EAST, A DISTANCE OF 96.53 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 0.46 ACRES, MORE OR LESS.

EXHIBIT 9b

THIS IS NOT A SURVEY

REVISIONS:

PROJECT NAME:
SKETCH AND LEGAL DESCRIPTION FOR:
PULTE HOMES

LINDAHL, BROWNING, FERRARI & HELLSTROM, INC.
CONSULTING ENGINEERS, PLANNERS & SURVEYORS
210 JUPITER LAKES BLVD. P.O. BOX 727 JUPITER, FLORIDA 33468
2222 COLONIAL ROAD SUITE 201 FORT PIERCE, FLORIDA 34950
2400 S.E. MONTEREY ROAD SUITE 300 STUART, FLORIDA 34996
2000 PALM BEACH LAKES BLVD. SUITE 701 WEST PALM BEACH, FLORIDA 33409

Scale	Field	Sheet	Field Book	FILE NO.
NA	.	2 of 2	Pg. .	960411.DWG
Date	Computed BK	Drawing No. CONSERVATION EASEMENT	Work Order No. 96-041	
8-20-96	Checked HD			

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
4400 PGA BOULEVARD, SUITE 500
PALM BEACH GARDENS, FLORIDA 33410

September 18, 2018

REPLY TO ATTENTION OF

Regulatory Division
South Permits Branch
Palm Beach Gardens Permits Section
SAJ-1995-03793(NWP-VEK)

Watermark Residential
c/o Jesse Houghtalen
111 Monument Circle
Suite 1600
Indianapolis, IN 46204

Dear Mr. Houghtalen:

The U.S. Army Corps of Engineers (Corps) assigned your application for a Department of the Army permit, which the Corps received on June 5, 2018, the file number SAJ-1995-03793 (NWP-VEK). A review of the information and drawings provided indicates that the proposed work would result in the development of a vacant parcel for the purpose of a multifamily residential project. The project is located at Parcel ID# 293741004002000500 in Section 29, Township 37 South, Range 41 East, Stuart, Martin County, Florida.

Your project, as depicted on the enclosed drawings, is authorized by Nationwide Permit (NWP) Number 29. In addition, project specific conditions have been enclosed. This verification is valid until **March 18, 2022**. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. Please access the U.S. Army Corps of Engineers' (Corps) Jacksonville District's Regulatory Internet page to access Internet links to view the Final Nationwide Permits, Federal Register Vol. 82, dated January 6, 2017, specifically pages 1983 to 2008, and the table of Regional Conditions. The Internet page address is:

http://www.saj.usace.army.mil/Missions/Regulatory.aspx

Please be aware this Internet address is case sensitive and should be entered as it appears above. Once there you will need to click on “Source Book”; and, then click on “Nationwide Permits.” These files contain the description of the Nationwide Permit authorization, the Nationwide Permit general conditions, and the regional conditions, which apply specifically to this verification for NWP 29. Enclosed is a list of the six General Conditions, which apply to all Department of the Army authorizations. You

must comply with all of the special and general conditions and any project specific condition of this authorization or you may be subject to enforcement action. In the event you have not completed construction of your project within the specified time limit, a separate application or re-verification may be required.

The following special conditions are included with this verification:

1. Reporting Address: The Permittee shall submit all reports, notifications, documentation and correspondence required by the general and special conditions of this permit to the following address:

a. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, Special Projects and Enforcement Branch, 4400 PGA Boulevard, Suite 500, Palm Beach Gardens, Florida 33410.

b. For electronic mail SAJ-RD-Enforcement@usace.army.mil (not to exceed 10 MB).

The Permittee shall reference this permit number, SAJ-1995-03793 (NWP-VEK), on all submittals.

2. Self-Certification: Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the attached "Self-Certification Statement of Compliance" form (Attachment 3) and submit it to the Corps. In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the "Self-Certification Statement of Compliance" form. The description of any deviations on the "Self-Certification Statement of Compliance" form does not constitute approval of any deviations by the Corps.

3. Cultural Resources/Historic Properties:

a. No structure or work shall adversely affect impact or disturb properties listed in the *National Register of Historic Places* (NRHP) or those eligible for inclusion in the NRHP.

b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps within the same business day (8

hours). The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.

c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition ; and if deemed necessary by the SHPO, THPO(s), or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.

d. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist and from the Corps

4. Erosion Control: Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area into waters of the United States. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized.

5. Fill Material: The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

6. Eastern Indigo Snake Protection Measures and Inspection: The Permittee shall comply with U.S. Fish and Wildlife Service's "Standard Protection Measures for the Eastern Indigo Snake" dated August 12, 2013, as provided in Attachment 4 of this permit. All gopher tortoise burrows, active or inactive, shall be evacuated prior to site manipulation in the vicinity of the burrow. If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission (FWC) Authorized Gopher Tortoise Agent permit. The excavation method selected shall minimize the potential for injury of an indigo snake. The Permittee shall follow the excavation guidance provided in the most current FWC Gopher Tortoise Permitting Guidelines found at http://myfwc.com/gophertortoise. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Holes, cavities, and snake refugia other than gopher tortoise burrows shall be inspected each morning before planned site manipulation of a particular area, and if occupied by an indigo snake, no work shall commence until the snake has vacated the vicinity of the proposed work.

7. Agency Changes/Approvals: Should any other agency require and/or approve changes to the work authorized or obligated by this permit, the Permittee is advised a modification to this permit instrument is required prior to initiation of those changes. It is the Permittee's responsibility to request a modification of this permit from the Palm Beach Gardens Permits Section. The Corps reserves the right to fully evaluate, amend, and approve or deny the request for modification of this permit.

8. Wetland Avoidance Areas: The Permittee shall avoid the remaining 0.61 acres of onsite wetlands, as detailed on the Site Plan Drawings (Attachment 7). These wetland areas were avoided as part of this permit application review process; and, therefore, the remaining wetland areas will not be disturbed by any activities that would degrade the ecological integrity of the site including dredging, filling, land clearing, or other construction work whatsoever except as required or authorized by this permit. The Corps reserves the right to deny review of any requests for future impacts to these avoided wetland areas.

9. Mitigation Bank Credit Purchase: Within 30 days from the date of initiating the work authorized by this permit, the Permittee shall provide verification to the Corps that 0.32 Palustrine federal mitigation bank credits have been purchased from the Bluefield Ranch Mitigation Bank (SAJ- 2000-02935). The required verification shall reference this project's permit number (SAJ-1995-03793 (NWP-VEK)).

This letter of authorization does not obviate the necessity to obtain any other Federal, State, or local permits, which may be required. Prior to the initiation of any construction,

projects qualifying for this Nationwide permit must qualify for an exemption under section 403.813(1), Florida Statutes or 373.406, Florida Statutes, or otherwise be authorized by the applicable permit required under Part IV of Chapter 373, Florida Statutes, by the Department of Environmental Protection, a water management district under section 373.069, Florida Statutes, or a local government with delegated authority under section 373.441, Florida Statutes, and receive Water Quality Certification and applicable Coastal Zone Consistency Concurrence or waiver thereto, as well as any authorizations required for the use of state-owned submerged lands under Chapter 253, Florida Statutes, and, as applicable, Chapter 258, Florida Statutes. You should check State-permitting requirements with the Florida Department of Environmental Protection or the appropriate water management district.

This letter of authorization does not include conditions that would prevent the 'take' of a state-listed fish or wildlife species. These species are protected under sec. 379.411, Florida Statutes, and listed under Rule 68A-27, Florida Administrative Code. With regard to fish and wildlife species designated as species of special concern or threatened by the State of Florida, you are responsible for coordinating directly with the Florida Fish and Wildlife Conservation Commission (FWC). You can visit the FWC license and permitting webpage (http://www.myfwc.com/license/wildlife/) for more information, including a list of those fish and wildlife species designated as species of special concern or threatened. The Florida Natural Areas Inventory (http://www.fnai.org/) also maintains updated lists, by county, of documented occurrences of those species.

This letter of authorization does not give absolute Federal authority to perform the work as specified on your application. The proposed work may be subject to local building restrictions mandated by the National Flood Insurance Program. You should contact your local office that issues building permits to determine if your site is located in a flood-prone area, and if you must comply with the local building requirements mandated by the National Flood Insurance Program.

If you are unable to access the internet or require a hardcopy of any of the conditions, limitations, or expiration date for the above referenced NWP, please contact Virginia King by telephone at 561-472-3515.

Thank you for your cooperation with our permit program. The Corps Jacksonville District Regulatory Division is committed to improving service to our customers. We strive to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to complete our automated Customer Service Survey at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. Please be aware

this Internet address is case sensitive; and, you will need to enter it exactly as it appears above. Your input is appreciated – favorable or otherwise.

Sincerely,



Virginia King
Project Manager

Enclosures
Attachment 1: General Conditions
Attachment 2: Department of the Army Permit Transfer Request Form
Attachment 3: Self-Certification Statement of Compliance Form
Attachment 4: Eastern Indigo Snake Protection Measures
Attachment 5: Project Location Maps
Attachment 6: Wetlands Map
Attachment 7: Site Plan Drawing

Copy Furnished:

Chris Sopotnick; Ecological Consulting of Florida; sopotnick@ecf-llc.com

GENERAL CONDITIONS
33 CFR PART 320-330

1. The time limit for completing the work authorized ends on **March 18, 2022**.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort of if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

DEPARTMENT OF THE ARMY PERMIT TRANSFER REQUEST

PERMIT NUMBER: SAJ-1995-03793(NWP-VEK)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Section, Post Office Box 4970, Jacksonville, FL 32232-0019 or electronic mail at saj-rd-enforcement@usace.army.mil.

_____ _____

(TRANSFEREE-SIGNATURE) **(SUBDIVISION)**

_____ _____ _____

(DATE) **(LOT)** **(BLOCK)**

_____ _____

(NAME-PRINTED) **(STREET ADDRESS)**

_____

_____

(MAILING ADDRESS)

_____

(CITY, STATE, ZIP CODE)

SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Permit Number: NWP-29
Application Number: SAJ-1995-03793 (NWP-VEK)

Permittee's Name & Address (please print or type):_____

_____

_____

Telephone Number: _____

Location of the Work: _____

_____

Date Work Started: _____ Date Work Completed:
_____

PROPERTY IS INACCESSIBLE WITHOUT PRIOR NOTIFICATION: YES _____ NO_____

TO SCHEDULE AN INSPECTION PLEASE CONTACT _____ AT _____

Description of the Work (e.g. bank stabilization, residential or commercial filling, docks, dredging, etc.):_____

_____

_____

Acreage or Square Feet of Impacts to Waters of the United States: _____

Describe Mitigation completed (if applicable): _____

_____

_____

Describe any Deviations from Permit (attach drawing(s) depicting the deviations):

_____

_____

****

I certify that all work, and mitigation (if applicable) was done in accordance with the limitations and conditions as described in the permit. Any deviations as described above are depicted on the attached drawing(s).

_____
Signature of Permittee

_____
Date

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or "approval" from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or "approval" from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11" x 17" or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A <u>DEAD</u> EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336
Panama City Field Office – (850) 769-0552
South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.



ATTENTION:

THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

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- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
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South Florida Field Office – (772) 562-3909

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

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USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida ES Office – (904) 731-3336
Panama City ES Office – (850) 769-0552
South Florida ES Office – (772) 562-3909

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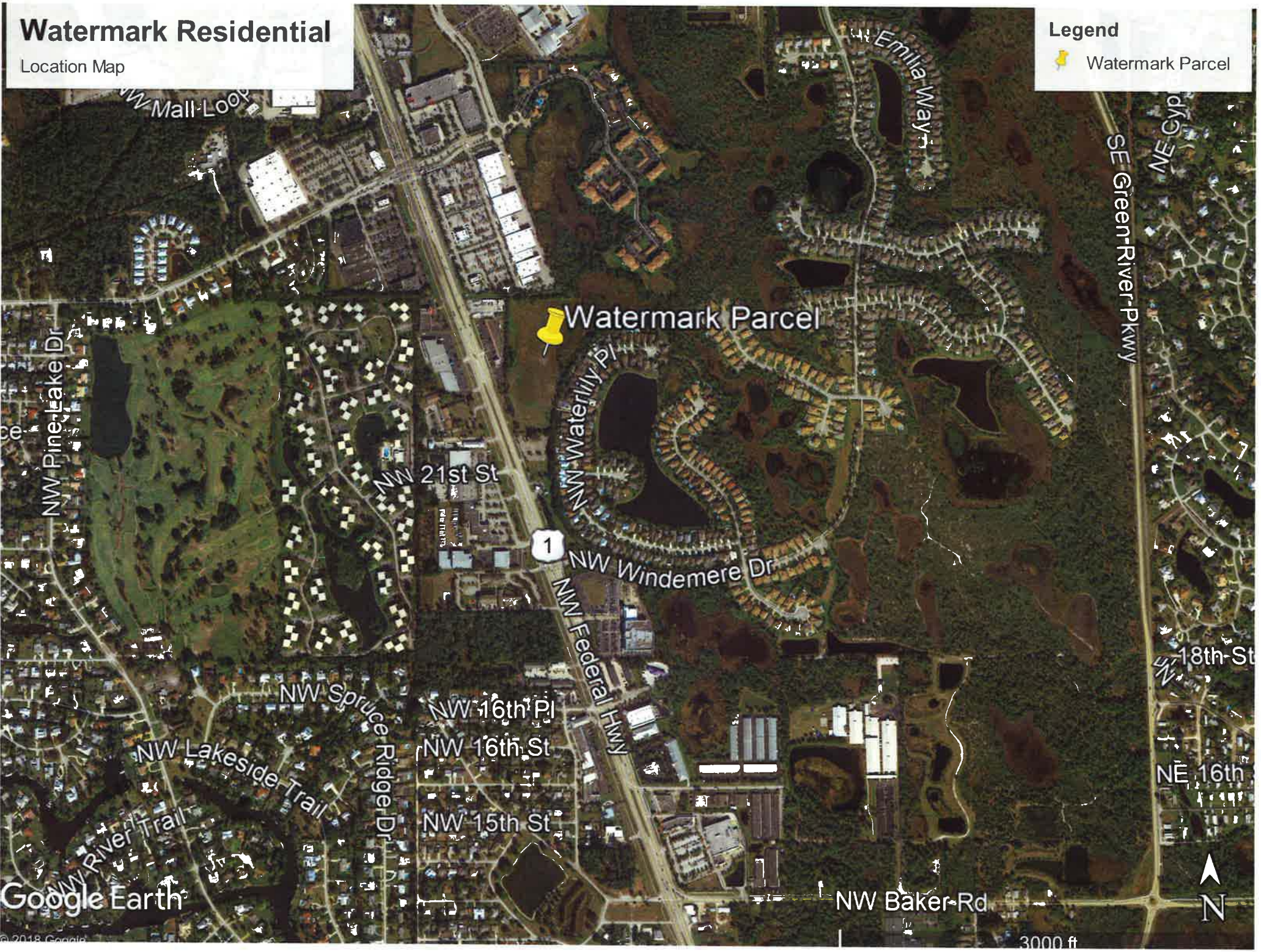
August 12, 2013

ATTENTION:

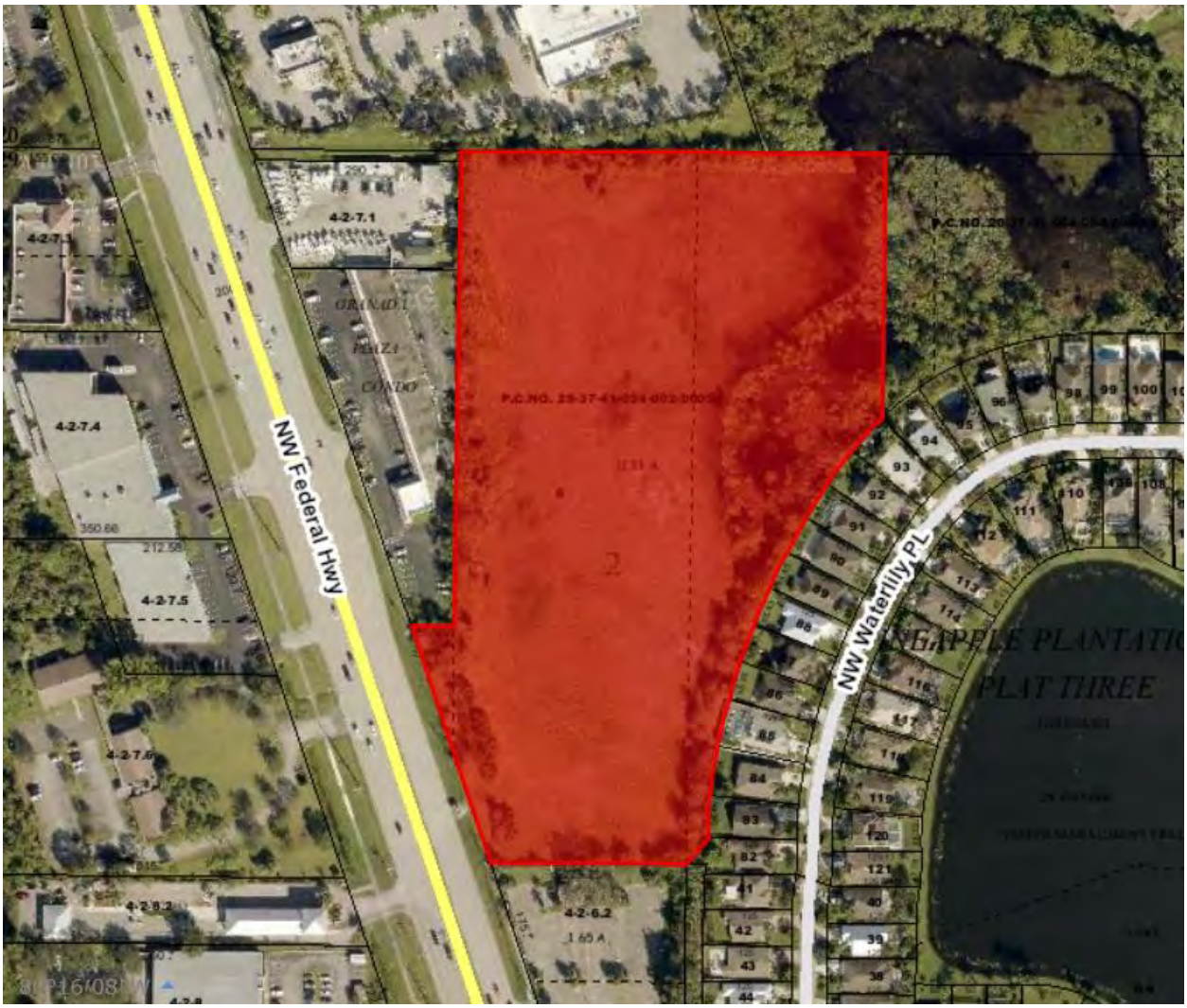
THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.


Watermark Residential
Location Map
Legend
Watermark Parcel
Watermark Parcel
NW Mall Loop
Emilia Way
SE Green River Pkwy
NE Cyp
NW Pine Lake Dr
NW 21st St
NW Waterlily Pl
NW Windemere Dr
NW Federal Hwy
1
NW Spruce Ridge Dr
NW 16th Pl
NW 16th St
NW 15th St
NW Lakeside Trail
NW River Trail
18th St
NE 16th
NW Baker Rd
Google Earth
N
3000 ft

SAJ-1995-03793 (NWP-VEK)
Project Location





HIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF
:ERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE
:F AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADOPTATION BY
:COLOGICAL CONSULTING OF FLORIDA SHALL BE WITHOUT LIABILITY TO ECOLOGICAL CONSULTING OF FLORIDA.

NOT TO SCALE

ECF

WETLANDS MAP

WATERMARK STUART PROPERTY

MARTIN COUNTY FLORIDA

N W E S

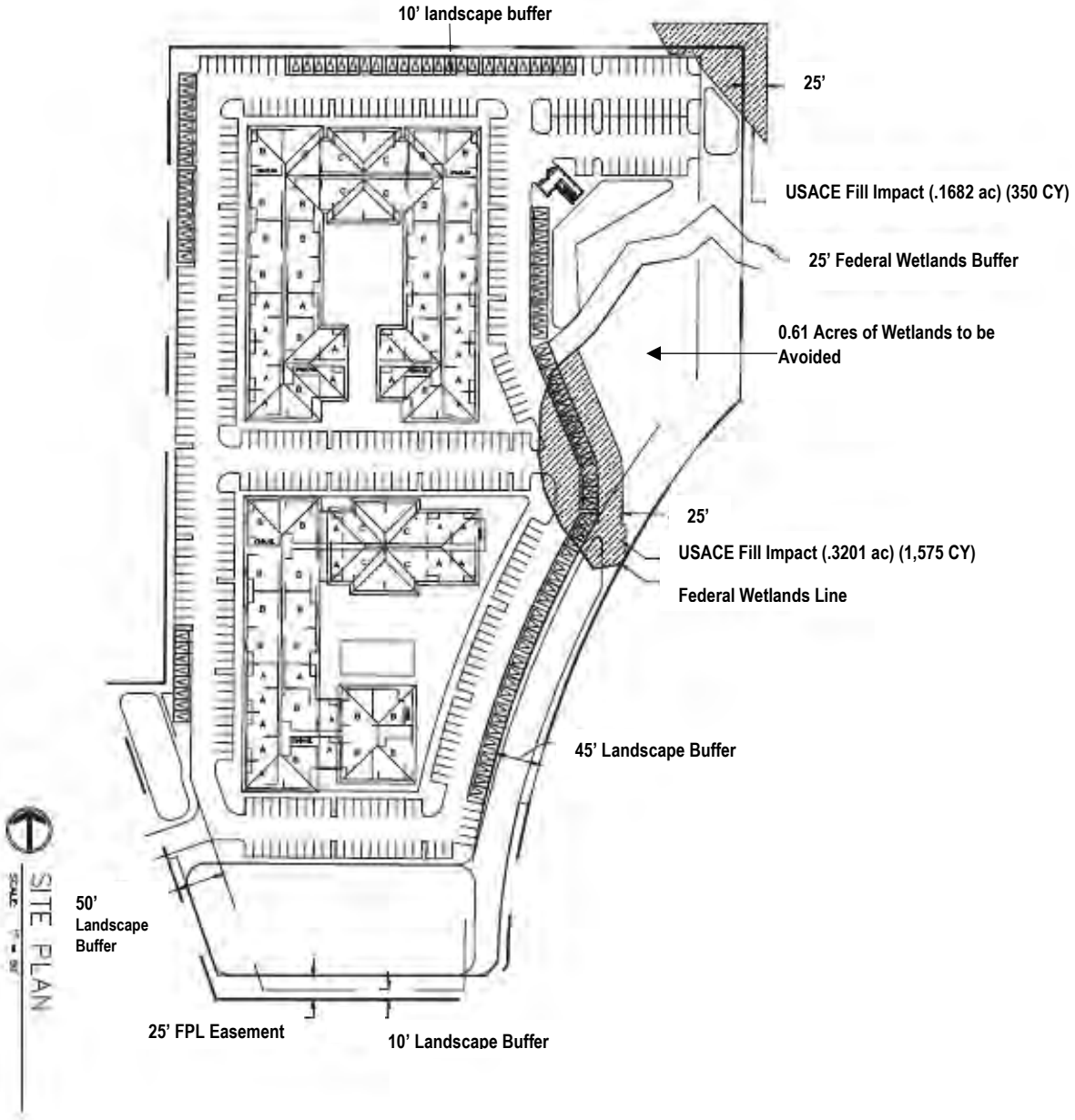
SOURCE: GOOGLE EARTH

FIGURE 1

DATE: 4/24/18

PROJECT No. 1803.00

SAJ-1995-03793
Site Plan Drawings



May 9, 2016

WATERMARK

STUART, FL

SITE PLAN