O'ROURKE
ENGINEERING & PLANNING

October 12, 2020

Mr. Richard T. Creech
Creech Consulting, Inc.
PO Box 327
Stuart, FL 34995

Re: Hidden Key

Dear Mr. Creech:

O'Rourke Engineering & Planning has completed the traffic analysis for the proposed residential development consisting of 28 multifamily residential dwelling units. The steps in the analysis and the ensuing results are presented herein.

For projects with less than 20 peak hour trips, only a limited traffic statement is required.

INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for the proposed residential development located east of Kanner Highway (SR-76) along a shared access road south of SE Hancock Place. **Attachment A** includes the project site plan. The purpose of this analysis is to determine the impact of the development on the roadway.

PROJECT DESCRIPTION

Hidden Key is located on the east side of Kanner Highway (SR-76) south of SE Hancock Street in Martin County. The development consists of 28 multifamily dwelling units. The project will take access off a shared roadway/access driveway with a right-in/right-out on Kanner Highway. The project is expected to be built out by 2022.

Trip Generation — Multifamily Residential (Low-Rise) rates from the ITE Trip Generation 10th Edition were applied to the 28 multifamily residential units.

The trip generation of the site is summarized in **Attachment B.**

As shown, the project will generate 14 AM peak hour trips with 3 in and 11 out and 19 PM peak hour trips with 12 in and 7 out.

PROJECT DISTRIBUTION/ ASSIGNMENT/ IMPACT

The project traffic was assigned as 100% northbound on Kanner Highway based on the right-in/right-out access at Kanner Highway with an ultimate distribution of 55% north and 45% south.

To determine the project impact in 2022, the existing counts, capacity and growth rates were taken from the Martin County 2019 Roadway Level of Service Report. The table summary is included as **Attachment C.** As shown, Kanner Highway will operate at an acceptable LOS at buildout.

The applicable pages from the Martin County 2019 Roadway Level of Service Report are included in Attachment C.

DRIVEWAY VOLUMES

The project will have immediate access to a shared roadway/drive immediately south of the project. That roadway has a right-in/right-out access onto Kanner Highway (SR-76). The driveway volumes are included in **Attachment D**. The driveway will accommodate the minor increase in traffic.

CONCURRENCY REVIEW/ CONCLUSION

The Hidden Keys development will have a traffic impact of 14 AM peak hour trips with 3 in and 11 out and 19 PM peak hour trips with 12 in and 7 out. These trips will not cause levels of service to fall below acceptable levels in the future. Given the traffic is less than 20 peak hour trips, the project does not require additional analysis and is deemed to be consistent with city transportation concurrency requirements.

It has been a pleasure working with you.

Respectfully submitted,
O'ROURKE ENGINEERING & PLANNING

Susan E. O'Rourke, P.E.
President

Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918	Professional Engineer Susan E. O'Rourke, P.E. Date signed and sealed: 10/12/2020 License #: 42684

ATTACHMENT A

Site Plan

DATE: 6/23/2020, 11:16:27 AM

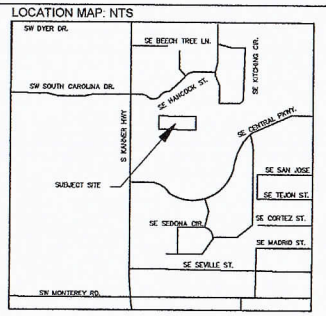
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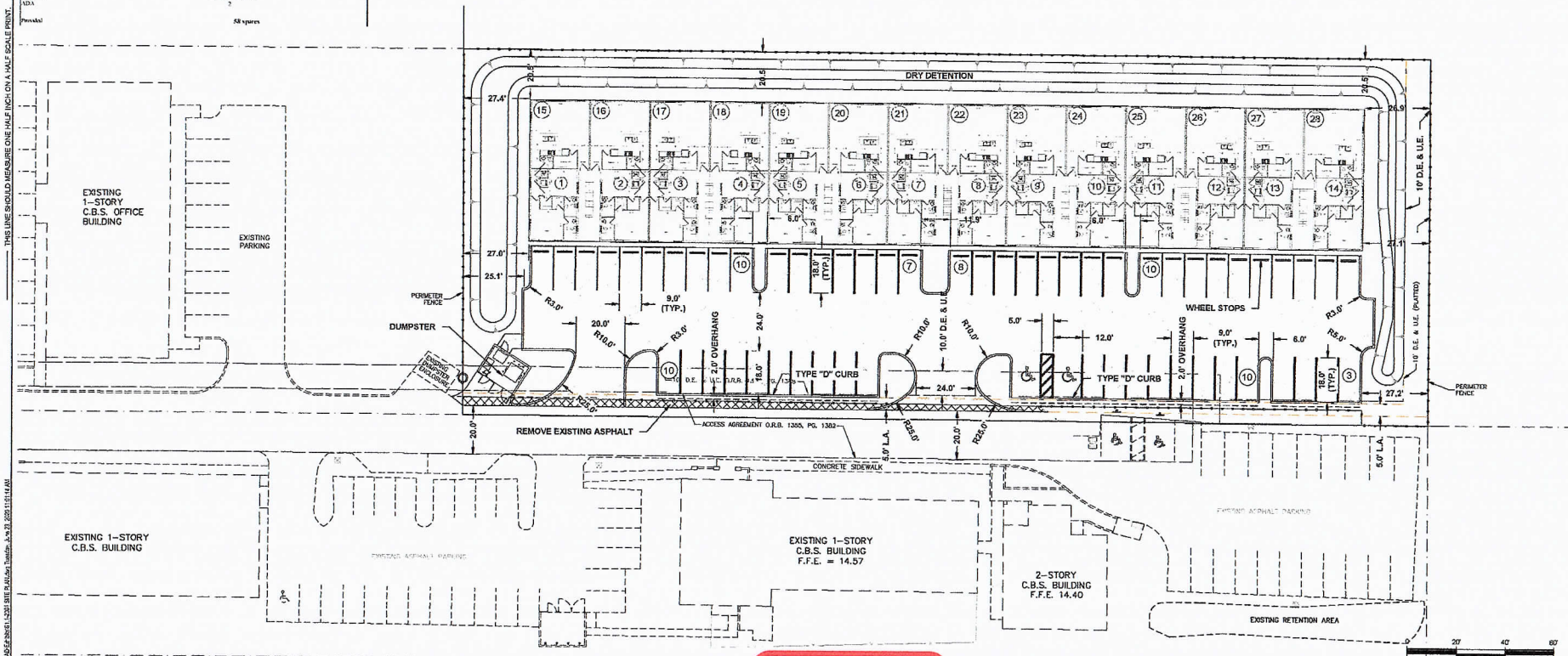
FILE: P:\Projects\2001 Creech John Rev\CAD\Engineering\1-1301 SITE PLAN.dwg, 6/23/2020 11:16:14 AM

HIDDEN KEY

		Sq. ft	Ac.	%
SITE DATA			(% of total site area)	
Total site area		59,241.60	1.36	100%
Zoning	Multifamily/Office			
Future Land Use	Office- Residential			
PCN	9384102400000200000			
Proposed/Existing use	Multifamily/Vacant			
OPEN SPACE				
Total open space				
	Required			
	Provided	10,869	0.25	18%
Setbacks	Front	Side	Rear	
	25'	15'	20'	
IMPERVIOUS AREA				
Total developed area				
	Building	19,978	0.459	34%
	Pavers	19,465	0.447	33%
	Concrete / Dumpster	496	0.011	1%
	Pavement	1,838	0.042	1%
Dry Detention		7,611	0.175	13%
BUILDING DATA				
Total gross floor area				
Building coverage Density		19,978	0.459	34%
Height (s- stories)	(Max) 3 stories			
PARKING				
Required	2 unit = 56 spaces			
ADA	2			
Provided	58 spaces			

LOCATION MAP: NTS





PRELIMINARY PROGRESS PLAN 6/23/20

REV. No.	DATE	DESCRIPTION

SEAL

FL P.E. No. 38592
RICHARD CREECH

CREECH CONSULTING, INC.
P.O. Box 267
Palm City, FL 34605
Certificate of Authorization 5139
Certificate LB-0006705

LAT 27°10'50.92"N
LON 80°16'6.20"W

MARTIN COUNTY, FLORIDA

SITE DEVELOPMENT PLANS
HIDDEN KEY
LOT 2, KANNER MINOR PLAT, STUART

SITE PLAN

PROJ. NO.: 2001
DRAWN BY: RC
DATE: 00/00/00
SHEET: S1.1

ATTACHMENT B

Trip Generation

Table 1 - Trip Generation

Table 1a: Daily

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Multifamily Housing (Low-Rise)	220	28	DU	T = 7.56(X) - 40.86	50%	50%	86	85	171

Source: ITE 10th Edition Trip Generation Rates

Table 1b: AM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Multifamily Housing (Low-Rise)	220	28	DU	Ln(T) = 0.95Ln(X) - 0.51	23%	77%	3	11	14

Source: ITE 10th Edition Trip Generation Rates

Table 1c: PM Peak Hour

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Net New Trips		
					In	Out	In	Out	Total
Multifamily Housing (Low-Rise)	220	28	DU	Ln(T) = 0.89Ln(X) - 0.02	63%	37%	12	7	19

Source: ITE 10th Edition Trip Generation Rates

ATTACHMENT C

Link Analysis

Table 2a: Link Analysis - AM Peak Hour

Segment	From	To	Is Project Traffic 1% or More of Capacity?	2019 AADT	2019 Volume Peak Hour Peak Direction	Growth Rate	2022 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	SR-714	Project Entrance	no	25,158	1006	1.005	1021	3020	3	100%	0.10%	1024	Yes
	Project Entrance	SR-5	no	25,158	1006	1.005	1021	3020	11	100%	0.36%	1032	Yes

In:	3
Out:	11
Years Grown:	3

Table 2b: Link Analysis - PM Peak Hour

Segment	From	To	Is Project Traffic 1% or More of Capacity?	2019 AADT	2019 Volume Peak Hour Peak Direction	Growth Rate	2022 Volume Peak Hour Peak Direction	LOS D Directional Peak Hour	Directional Peak Project Volume	Project Percent Assignment	Directional Percent Project of Capacity	Total Traffic (Peak Direction)	Does Project Meet Concurrency?
Kanner Highway (SR-76)	SR-714	Project Entrance	no	25,158	1006	1.005	1021	3020	12	100%	0.40%	1033	Yes
	Project Entrance	SR-5	no	25,158	1006	1.005	1021	3020	7	100%	0.23%	1028	Yes

In:	12
Out:	7
Years Grown:	3

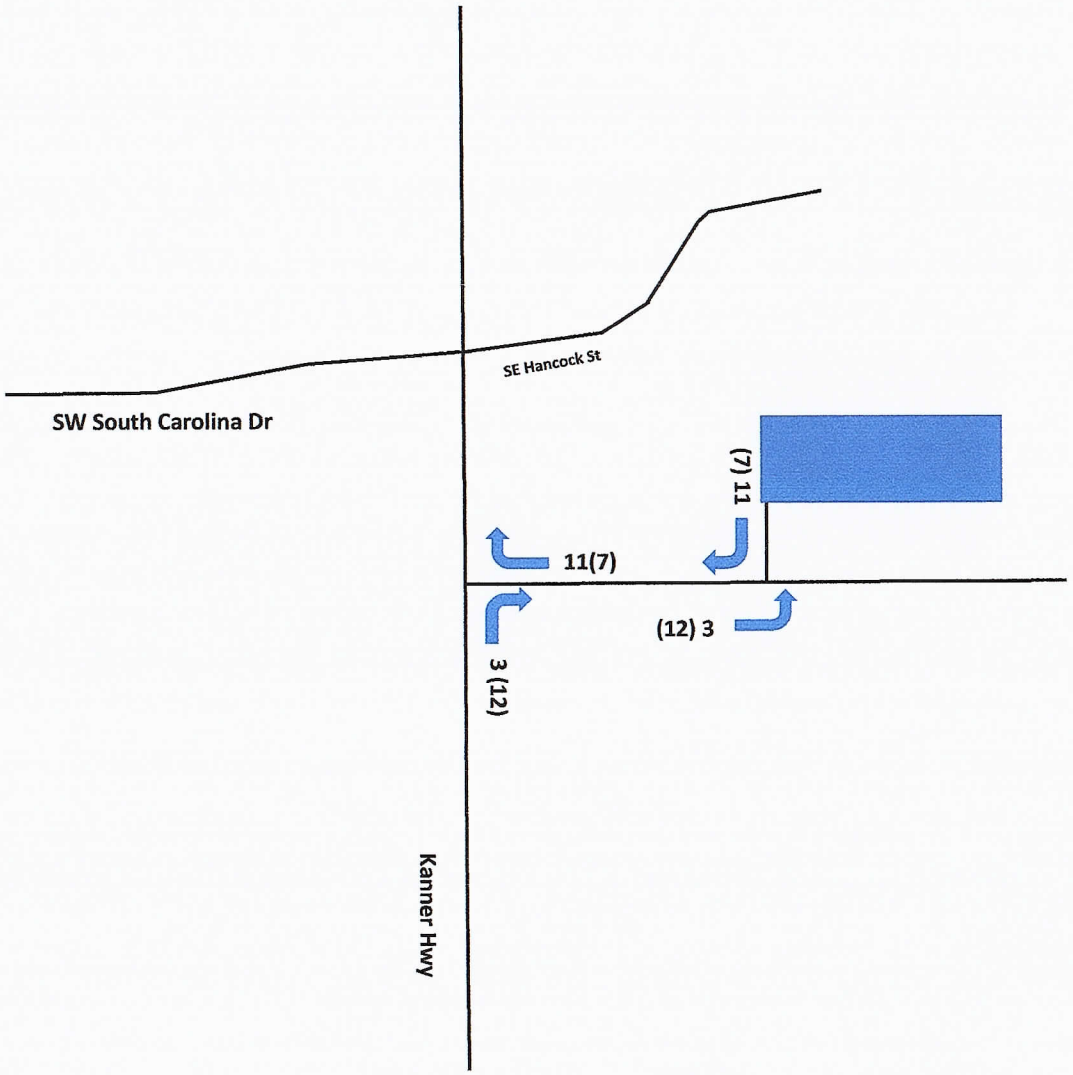
Martin County 2019 Roadway Level of Service Inventory Report

Road Name	From	To	Type	Generalized Service Capacity	2019 Average Annual Daily Traffic	2019 Peak Hour Directional Volume	2019 Generalized LOS	Avg. Annual Growth Rate
SR-732 (Jensen Beach Blvd)	SR-5	Green River Pkwy	Class I: 4-Ln Divided	2000	25,949	1,349	C	0.5%
SR-732 (Jensen Beach Blvd)	Green River Pkwy	CR-723	Class I: 4-Ln Divided	2000	23,804	1,154	C	0.5%
SR-76 (Kanner Hwy)	SR-15	SR-710	Uninterrupted Rural Hwy: 2-Ln Undivided	740	2,134	111	A/B	6.1%
SR-76 (Kanner Hwy)	SR-710	CR-708	Uninterrupted Rural Hwy: 2-Ln Undivided	740	3,412	151	A/B	0.9%
SR-76 (Kanner Hwy)	CR-708	CR-711/CR-76A	Transitional 2-Ln Uninter /Undivided Flow	1200	2,889	168	A/B	0.5%
SR-76 (Kanner Hwy)	CR-711/CR76A	Locks Rd	Class I: 4-Ln Divided	2000	13,401	831	C	1.7%
SR-76 (Kanner Hwy)	Locks Rd	Jack James	Class I: 4-Ln Divided	2000	19,231	920	C	0.5%
SR-76 (Kanner Hwy)	Jack James	Cove Rd	Class I: 6-Ln Divided	3020	43,880	2,372	C	0.6%
SR-76 (Kanner Hwy)	Cove Rd	Salerno Rd	Class I: 6-Ln Divided	3020	34,493	1,495	C	1.0%
SR-76 (Kanner Hwy)	Salerno Rd	Indian St	Class I: 6-Ln Divided	3020	30,912	1,293	C	2.6%
SR-76 (Kanner Hwy)	Indian St	SR-714	Class I: 6-Ln Divided	3020	21,116	993	C	0.5%
SR-76 (Kanner Hwy)	SR-714	SR-5	Class I: 6-Ln Divided	3020	25,158	1,006	C	0.5%
SR-A1A (Ocean Blvd)	SR-714	St Lucie Blvd	Class II: 4-Ln Divided	1630	19,437	1,081	D	0.6%
SR-A1A (Ocean Blvd)	St Lucie Blvd	Sewalls Point Rd	Class I: 4-Ln Divided	2000	23,060	1,127	C	1.0%
SR-A1A (Ocean Blvd)	Sewalls Point Rd	Macarthur Blvd	Class I: 2-Ln Divided	925	13,597	845	C	0.5%
SR-A1A (Ocean Blvd)	MacArthur Blvd	SR-732	2-Ln Uninter /Undivided Flow	1190	8,532	407	A/B	3.1%
SR-A1A (Ocean Blvd)	SR-732	St Lucie County	2-Ln Uninter /Undivided Flow	1190	14,752	870	D	1.8%
St Lucie Blvd	CR-A1A	Indian St	2-Ln Undivided Non-State	675	3,305	172	C	0.5%
St Lucie Blvd	Indian St	SR-A1A	2-Ln Undivided Non-State	675	7,524	429	D	3.3%
Westmoreland Blvd	St Lucie County	SR-5	Class II: 2-Ln Divided	790	12,271	601	D	1.0%
Willoughby Blvd	Cove Rd	Salerno Rd	Class I: 2-Ln Undivided	880	4,332	214	C	8.0%

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

ATTACHMENT D

Driveway Volumes



NTS

O'ROURKE ENGINEERING & PLANNING

22 SE Seminole Street
Stuart, Fl, 34994

Job Number:

Date: 10-6-20

Legend

= Project Location

XX (XX) = AM (PM)

Figure 1

Driveway Volumes

Hidden Key